



1,680  
Miles...

# 2010 Bicycle Plan

*A Component of the City of Los Angeles'  
Transportation Element*





# Acknowledgements

## **Mayor**

Antonio Villaraigosa

## **City Council**

Ed P. Reyes, Council District 1  
Paul Krekorian, Council District 2  
Dennis P. Zine, Council District 3  
Tom LaBonge, Council District 4  
Paul Koretz, Council District 5  
Tony Cardenas, Council District 6  
Richard Alarcon, Council District 7  
Bernard C. Parks, Council District 8  
Jan Perry, Council District 9  
Herb J. Wesson Jr., Council District 10  
Bill Rosendahl, Council District 11  
Greig Smith, Council District 12  
Eric Garcetti, Council District 13  
Jose Huizar, Council District 14  
Janice Hahn, Council District 15

## **Department of City Planning**

### **Executive Office**

Michael J. LoGrande, Director  
S. Gail Goldberg, (Retired) Director  
Alan Bell, Deputy Director  
Vince Bertoni, Deputy Director  
Jane Blumenfeld, (Retired) Acting Deputy Director  
Eva Yuan-McDaniel, Deputy Director

### **City Planning Commission**

William Roschen, President  
Regina M Freer, Vice President  
Barbara Romero  
Diego Cardoso  
Fr. Spencer T. Kezios  
Michael Woo  
Sean Burton  
Yolanda Orozco

### **Project Staff**

Ken Bernstein, Principal Planner  
John Butcher, GIS Chief  
Elvia Hernandez, Graphics Designer III







Helene Bibas, (Retired) City Planner  
Claire Bowin, City Planner  
Jordann Turner, City Planning Associate  
Jane Choi, Planning Assistant

#### **Interns**

Avani Sheth  
Emily Dwyer  
Festus Nagbe

#### **Department of Transportation**

##### **Executive Office**

Amir Sedadi, Acting General Manager  
Rita Robinson, (Retired) General Manager  
John E. Fisher, Assistant General Manager  
Selwyn Hollis, Acting Assistant General Manager

##### **Bicycle Program**

Abbass Vajar  
Carlos Morales  
Carlos Rodriguez  
Howard Huang  
Michael Uyeno  
Michelle Mowery  
Paul Meshkin  
Ramon Larios  
Robert Sanchez  
Tim Fremaux  
Tina Backstrom

#### **Interns**

Brendan Keeler  
Chris Kidd  
Maria Lam  
Oliver Hou

#### **Technical Advisory Committee**

##### **Department of Recreation and Parks**

Camille D. Walls(Retired)  
Darryl Ford  
Melinda Gejer

##### **Information Technology Agency**

Gene Gamachi

##### **Department of Public Works**

Mark Chimielowiec-**Bureau of Engineering**  
Steven Chen-**Bureau of Engineering**  
Neil Guglielmo-**Bureau of Sanitation**  
Walter Bradley-**Bureau of Contract Admin.**  
Ferdy Chan-**Bureau of Street Services**  
Norma Isahakian-**Bureau of Street Lighting**

##### **Department of Building and Safety**

Nick Trotta  
Ken Gill

##### **Department of Environmental Affairs**

Wayne King

##### **Los Angeles Police Department**

Officer Bob Riebolt  
Officer David E. Baca  
Sargent David Krumer

##### **Los Angeles World Airports**

Pat Tomcheck

##### **Port of Los Angeles**

Guillermo Martinez Jr.

##### **Dept. of City Planning-Urban Design Studio**

Simon Pastucha

##### **Department of Transportation**

Robert Sanchez

##### **L. A. Police Dept.-Bicycle Coordination Unit**

Sgt. Eric Lee

##### **Bicycle Advisory Committee Representative**

Kent Strumpell, Council District 11

#### **Bicycle Advisory Committee**

Alex Baum, Chairperson Emeritus  
Glenn Bailey, Mayor's Office, Chairperson  
Jay Slater, Mayor's Office, Vice Chairperson  
David Wolfberg Mayor's Office  
Vacant, Council District 1  
Ayla Stern, Council District 2  
Barry Seybert, Council District 3  
Larry Hoffman, Council District 4  
Jonathan Weiss, Council District 5  
Aaron Kirsch, Council District 6  
Bart Reed, Council District 7  
Aubrey Provost, Council District 8  
Ron Skarin, Council District 9  
Jeff Jacobberger, Council District 10  
Kent Strumpell, Council District 11  
Donald Rosenberg, Council District 12  
Joe Linton, Council District 13  
Brian Frobisher, Council District 14  
Brad House, Council District 15

#### **Consultant Team**

##### **Alta Planning and Design**

Mia Birk, Principal  
Brett Hondorp, Principal  
Matt Benjamin, Project Manager  
Adrian Leung  
David Pulsipher  
Emily Duchon  
Joe Gilpin  
Kim Voros

##### **Bicycle Solutions**

##### **KOA Corporation**

##### **Leslie Scott Associates**

##### **The Osprey Group**







# Table of Contents

Executive Summary.....	9
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## Chapters

1: Orientation.....	17
2: Bicyclists.....	27
3: Bicycling.....	43
4: Policies and Programs.....	69
5: Implementation.....	107

## Technical Design Handbook *(bound separately)*

## Appendices

- A: Definitions and Glossary
- B: Funding Resources
- C: Bicycle Transportation Account Matrix
- D: Bikeway Matrix and Maps  
*(bound separately)*





*Photo Credit: Will Campbell*



# Executive Summary

The 2010 Bicycle Plan (2010 Plan) represents a new commitment by Los Angeles to complete streets. It is part of a move away from the auto-centric approach of the past, and toward a sustainable transportation system—a system which supports motor vehicle use, but also enables the use of streets by other modes, such as bicycling, walking, and transit, and acknowledges the use of streets for other purposes, such as recreation, retail and public gatherings.

Bicycling has an overwhelming positive benefit for public health: a bicyclist gets healthier every mile that he or she rides, rarely injures others in a collision, and doesn't pollute. Bicycling's claims on public space are substantially less than those of other modes. Bicycle lanes, for example, take about as much space as a sidewalk, and substantially less than a lane of parking, and bike parking takes up negligible square footage.

The 2010 Plan designates an ambitious 1680 mile bikeway system and introduces a comprehensive collection of programs and policies. Among the elements of the 2010 Plan are several innovations in bicycle planning for Los Angeles. Four of them deserve special mention: a Citywide Bikeway System comprised of three bikeway networks, Bicycle Friendly Streets, the bundling of programs and policies into ten categories, and a multi-pronged implementation strategy.

The 2010 Plan introduces three new bikeway Networks: the [Backbone](#), the [Neighborhood Network](#), and the [Green Network](#). The character, choice of street segments, and processes of implementation for these three networks are intertwined, and build off the existing 378 miles that have been installed over the past thirty plus years. These networks give life and character to the 2010 Plan's ambitious 1,680 bikeway system.

The 2010 Plan introduces the Bicycle Friendly Street (BFS.) A Bicycle Friendly Street uses a holistic engineering approach to render a neighborhood street extremely inviting to bicyclists (and pedestrians.) By introducing signage, pavement markings, bulb-outs or even traffic diverters, a BFS creates a pleasant and safe environment for relaxed riding, especially for bicyclists more sensitive to motor vehicle traffic. The creation of BFSs will restore

an environment where parents will, for the first time in decades, encourage their children to ride in Los Angeles.

Because the 2010 Plan is so comprehensive, the list of policies and programs is formidable. In order to organize these policies and programs, the plan sorts them into ten categories. These ten categories are based on the widely respected “Six E’s” of bicycle planning - [equity, engineering, education, enforcement, encouragement, and evaluation](#) - with two additional E’s added to the mix: [environment and economics](#). By building off the respected framework of the Six E’s, the specifics of the plan are easier to understand and readily compared with other cities.

Finally, the 2010 Plan comes with dynamic implementation procedures built in. The 2010 Plan includes a [Five-year Implementation Strategy](#) that details the sequencing and priorities for the selection and installation of new bikeway facilities. Since the circumstances affecting implementation of both infrastructure and non-infrastructure programs are unpredictable and shifting, the Plan introduces a dynamic solution. Two groups, the existing [City’s Bicycle Advisory Committee](#) along with a new entity, the [Bicycle Plan Implementation Team](#) will monitor, assist and advise the implementation efforts. These groups, comprised of city staff from relevant departments, cycling community members, as well as local agencies and municipalities, create an opportunity for bike plan stakeholders to develop a rapport and thus facilitate the implementation process.

Collectively, the various strategies and components of the 2010 assist the City to meet the three



Photo Credit: Will Campbell



goals that have been established by this Plan: **increase the number and types of bicyclists who bicycle in the City; make every street a safe place to ride a bicycle; and make the City of Los Angeles a bicycle friendly community.**

The 2010 Plan was created through intensive collaboration between the Department of City Planning, the Department of Transportation, members of a multi-agency Technical Advisory Committee, the bicycling community, and the City's consultant team, Alta Planning + Design. The 2010 Plan reflects best practices from cities around the country; it is the product of extensive public input, research, and detailed field work. Collectively the policies, programs, projects and recommendations in this 2010 Plan will create an environment that increases, improves and enhances bicycling in the City as a safe, healthy, and enjoyable means of transportation and recreation for bicyclists as diverse as the general population.

**Implementation of the 2010 Plan depends on four factors:**

1. *Political support;*
2. *Significant and sustained funding for projects and staff, particularly by prioritizing bicycle projects in federal, state, and local transportation programs;*
3. *A commitment by key city agencies to implement the recommended strategies;*
4. *A strong partnership with Los Angeles' bicycling community.*



*Photo Credit: Will Campbell*

## Plan Organization

The 2010 Bicycle Plan (2010 Plan) is organized into five chapters plus a Technical Design Handbook and all appendices.

### Orientation

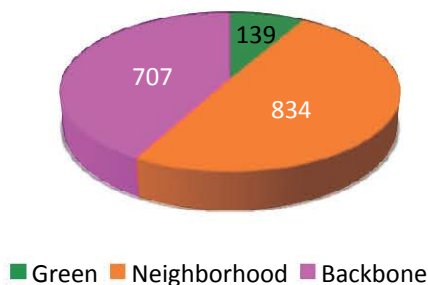
**1** This Chapter articulates the Purpose of the 2010 Plan to increase, improve and enhance bicycling in the City as a safe, healthy, and enjoyable means of transportation and recreation, and describes the 2010 Plan's relationship to other City and County plans.

### Bicyclists

**2** This Chapter describes, utilizing local and national statistics, the variety of existing as well as potential bicycle riders, and articulates the growing interest in transforming the City from a transportation system fixated on moving vehicles to a multi-modal approach to mobility. This Chapter further describes the recent legislative actions that are propelling the City and municipalities across the State to adopt this multi-modal approach to transportation. This new approach recognizes the role of bicyclists, pedestrians, and transit and the benefits to reducing greenhouse gas emissions, congestion, and obesity levels that result from shifting from an auto-centric approach to a multi-modal strategy.

### Bicycling

**3** This Chapter introduces the three new bikeway networks: the **Backbone Bikeway Network** (707 Miles), the **Neighborhood Bikeway Network** (834 miles), and the **Green Bikeway** (139 miles) that together comprise the Citywide Bikeway System. Each network has a distinctive character but they all work together to support a variety of bicyclists. This Chapter also provides a brief description of each of the ten topic areas (Equity:Streets, Equity:Parking, Equity:Transit, Encouragement, Education, Enforcement, Engineering and Maintenance, Economics:Financing, Evaluation and Cooperation, and Environment) around which the 2010 Plan's more than 200 programs are organized.





## Policies and Programs

**4** The 2010 Plan introduces new goals, objectives, policies and programs as well as updated and strengthened policies and programs from the 1996 Plan. The overarching commitment of the 2010 Plan is to increase, improve and enhance bicycling in the City as a safe, healthy, and enjoyable means of transportation and recreation. In order to fulfill this commitment the 2010 Plan establishes three goals:



**Goal:** Increase the number and types of bicyclists who bicycle in the City.



**Goal:** Make every street a safe place to ride a bicycle.



**Goal:** Make the City of Los Angeles a bicycle friendly community.

Each goal is supported by three to four objectives under which are organized a variety of policies and programs. Collectively the policies and programs increase bicycle ridership, increase awareness, implementation, and use of the bicycle networks, expand bicycle parking options, integrate bicycling with the transit system, introduce and identify locations for the Clean Mobility and Multi-Mobility Hubs, expand motorist and bicycle education, provide guidance to City departments regarding funding and the development, maintenance, and implementation of bikeways and support facilities.

## Implementation

**5** This Chapter describes the bikeway miles designated in the two previous bicycle plans of 1977 and 1996 along with the miles and funding allocated to date. The Chapter further describes the 5-Year Implementation Strategy and the funding and collaboration that will be needed to implement the three Networks and the mobility hubs.

## Appendices:

### Definitions and Glossary

**A** Appendix A provides a glossary of definitions and acronyms for commonly used terms in the 2010 Plan and bicycle planning generally.

### Funding Sources

**B** Appendix B provides a primer on the federal, state, county and local funding sources available for bicycle planning, engineering and implementation projects.

### Bicycle Transportation Account

**C** Appendix C demonstrates the City of Los Angeles' compliance with the State of California's Bicycle Transportation Account (BTA) requirements, and establishes the City's eligibility for applying for these funds.

### Matrix

**D** The matrix in Appendix D identifies each of the bikeway segments illustrated in the maps described below. The matrix identifies the name of the bikeway segments, the beginning and end points of each segment, the estimated mileage of the segment and its current status: existing, funded or future.

### Maps

The maps in Appendix D display the designated bicycle facilities in the 2010 Plan. The three map types are displayed at a citywide scale and each map type is described below:

The **Designated Bikeways Map** illustrates the vision for all existing, funded or future bicycle paths, bicycle lanes, bicycle routes and bicycle friendly streets throughout the City and their connections to surrounding geographic areas.

The **Citywide Bikeway System** illustrates the bicycle facilities designated on the Backbone and Neighborhood, and Green Bikeway Networks.

**Existing and Funded Bikeways Map** displays the bikeways built to date, and those that have been funded and slated for design and construction. All other designated facilities that are not existing or funded bikeways are future bikeways and are not included on this map.



*Photo Credit: Howard K. Broodwin*







# Chapter 1

## Orientation

This chapter describes the purpose of the 2010 Bicycle Plan (2010 Plan), the 2010 Plan's relationship to City and County plans, and the 2010 Plan's public participation process.

### Purpose

The purpose of the 2010 Plan is to increase, improve, and enhance bicycling in the City as a safe, healthy, and enjoyable means of transportation and recreation. Toward that end, the 2010 Plan establishes policies and programs to increase the number and type of bicyclists in the City, to make every street a safe place to ride a bicycle and to transform Los Angeles into a bicycle-friendly community.

The 2010 Plan is a comprehensive update of the City's existing Bicycle Plan. The existing Bicycle Plan was originally adopted by the City Council in 1996. Re-adopted in 2002 to update the document as required by the State of California's Bicycle Transportation Account (BTA) and re-adopted without additional changes in 2007. The 2010 Plan is a part of the Transportation Element of the City's General Plan and is the city's blueprint for meeting the needs of all bicyclists. It establishes long-range goals, objectives and policies at a citywide level and contains a broad range of programs that constitute the steps the City intends to take in order to become a more bicycle-friendly Los Angeles.

The goals, objectives, policies and programs of this 2010 Plan were influenced by community input and formulated to be consistent with City and regional plans as well as statewide policies. The 2010 Plan is to be used by: the City Council; the Mayor; the City Planning Commission; the Board of Transportation

#### *Bicycle Transportation Account*

*In September 1993 the State of California (State) adopted Senate Bill 1095 which established the Bicycle Transportation Account (BTA). In order to receive BTA funds a jurisdiction's Bicycle Plan is required to include data, maps, and information about bicycle commuters, land uses, bikeways, bicycle parking, transit, education, community engagement, relationship to other plans, proposed projects, and funding needs. In October 1997 the State adopted Assembly Bill 1020 which increased statewide funding for the BTA from \$1 million to \$7 million.*

Commissioners; the Board of Public Works; the City's Bicycle Advisory Committee; other concerned governmental agencies; residents and property owners throughout the City; and private organizations concerned with urban planning, civic betterment, transportation and recreation. For City policymakers this 2010 Plan provides: a reference to be used in connection with their actions on various City development matters as required by law; guidance for decisions regarding allocation of funding for bicycle projects and programs; and technical guidance for the development and implementation of facilities.

#### **Measure R**

*In November 2008, the voters in Los Angeles County approved Measure R, which provides an additional one-half cent sales tax increase for 30 years to make a variety of improvements to the County's transportation system. As part of this funding stream, the City receives a 15 percent Local Return share that is projected at an estimated \$2 billion over the life of Measure R initiative. Collection of the Measure R sales tax receipts began on July 1, 2009 and the Los Angeles County Metropolitan Transportation Authority (Metro) the administering agency, made the first disbursement of funds to the City in December 2009.*



*Photo Credit: Shannon Vasquez*



## Relationship to Other Plans

### General Plan

California state law requires that cities prepare and adopt a comprehensive, integrated, long-term General Plan to direct future growth and development. The General Plan is the fundamental policy document of a city. It defines how the City's physical and economic resources are to be managed and utilized over time. Decisions by a city with regard to the use of its land, design and character of buildings and open spaces, conservation of existing and provision of new housing, provision of supporting infrastructure and public and human services, and protection of residents from natural and man-caused hazards are guided by and must be consistent with the General Plan.

State law requires that the General Plan must contain seven elements: land use, transportation, housing, conservation, open space, noise, and safety. In addition, the City has adopted an overarching "Framework Element" discussed below. There must be internal consistency among the elements.

### Framework Element (2001)

The City's General Plan Framework Element is the citywide plan that establishes how Los Angeles will grow in the future. The Framework Element is a strategy for long-range growth and development, setting a citywide context for the update of Community Plans and citywide elements. The Framework Element responds to State and Federal mandates to plan for the future by providing goals, policies, and objectives on a variety of topics, such as land use, housing, urban form, open space, transportation, infrastructure, and public services.

### Transportation Element (1999) - Technical Update Approved (2002)

The Transportation Element of the General Plan guides the development of a citywide transportation system to provide for the efficient movement of people and goods. Its primary emphasis is placed on maximizing the efficiency of existing and proposed transportation infrastructure through advanced transportation technology, reduction of vehicle trips, and focusing growth in proximity to public transit. To further the goal of vehicle trip reduction while providing additional mobility opportunities in the City, the Transportation Element calls for an integrated system of bikeways that provide "access to employment opportunities, essential services and open space." Originally adopted as part of the Transportation Element in 1996 and readopted in 2002 and 2007, the 1996 Bicycle Plan provides the starting point



for many of the policies, programs and infrastructure projects recommended in this new 2010 Plan.

### **Land Use Element - 35 Community Plans**

The City's 35 Community Plans constitute the Land Use Element of the City's General Plan. They implement, at a community level, the citywide goals and policies established in the overarching General Plan Framework and all other elements of the General Plan. The Community Plans are intended to promote an arrangement of land uses, streets, and services which will encourage and contribute to the economic, social and physical health, safety, welfare and convenience of the people who live and work in each of the City's 35 communities. While the 2010 Plan provides a citywide approach to enhancing bicycle transportation across the City, Community Plans provide the necessary focus for bicyclists at the community level. In this way, localized recommendations that address community-specific conditions can be developed in each of the Community Plans that are consistent with and complementary to this citywide 2010 Plan.



*Photo Credit: Los Angeles Cycle Chic Blog*

## Other Citywide Plans

In addition to the General Plan, the City occasionally adopts long-range vision plans that provide further guidance to the City in establishing priorities for funding, future policy decisions and staff resources. In the past few years the City adopted two documents that have particular relevance to the 2010 Plan: the Los Angeles River Revitalization Master Plan and the Department of Recreation and Parks Community-Wide Needs Assessment.

### Los Angeles River Revitalization Master Plan (2007)

The Los Angeles River Revitalization Master Plan (LARRMP) provides a vision for the 32 miles of the Los Angeles River within the City limits. This vision balances multiple goals including flood protection, water quality, open space, habitat, recreation and non-motorized transportation opportunities. Recommendation 4.12 of the LARRMP calls for the continued “development of non-motorized transportation and recreation elements including bicycle and pedestrian paths and multi-use trails in the River and tributary rights-of-way.” Nearly 80 bridges cross the Los Angeles River in the City of Los Angeles. Of these 80 bridges, 10 have bicycle access and another seven have funds set aside for improving bicycle access. This 2010 Plan recognizes the significant role that the Los Angeles River plays in Los Angeles’ environmental, non-motorized transportation and recreational identity. The 2010 Plan incorporates the recommendation of the River Revitalization Master Plan to provide a continuous bicycle path along the south and west sides of the LA River and identifies connections to the River in order to enhance access to existing and future segments of the River path for non-motorized transportation and recreation.

### Los Angeles Department of Recreation and Parks Community-Wide Needs Assessment (2008)

The Los Angeles Department of Recreation and Parks’ Community-Wide Needs Assessment (Needs Assessment) identifies, quantifies and prioritizes the residents’ needs for recreation and open space throughout the City of Los Angeles. The Needs Assessment is the first step in a citywide park master plan and a five-year capital improvement plan. The Needs Assessment used both a community outreach process as well as GIS analysis to gather data for the assessment. The extensive community outreach process included community leaders, stakeholders and other members of the public in interviews, focus groups, community forums and surveys. When asked which parks and recreation facilities residents experienced



a need for, the majority of the community, 63%, identified the need for walking and bicycling trails. This 2010 Plan addresses the needs identified in the Needs Assessment by enhancing the access to existing and future bicycle paths for transportation and recreation.



## Countywide Plans

### **Southern California Association of Governments (SCAG) Regional Transportation Plan and Non-Motorized Transportation Report (2008)**

The 2008 Regional Transportation Plan (RTP) is a \$531.5 billion plan that provides a regional investment framework to address the region's transportation and related challenges. It relies on strategies that preserve and enhance the existing transportation system and integrate land use into transportation planning. The RTP supports non-motorized transportation (including walking, bicycling and other related forms) through promoting development that is less dependent on automobiles, increased transit service and use, and congestion and air pollution reduction. It also has policies that encourage the development of bicycle and pedestrian incentive policies, and changes in development patterns for both new and redeveloped communities. The Non-Motorized Transportation Report of the RTP is a technical and policy document that guides, supports and encourages the development of county and city bicycle and pedestrian networks, facilities and other non-motorized programs for the SCAG region. Particular emphasis is placed on increasing bicycling and walking as a commute option and improving safety for all forms of non-motorized transportation.

### **Metro Long Range Transportation Plan (2009)**

Los Angeles County Metropolitan Transportation Authority's (Metro)'s 2009 Long Range Transportation Plan (LRTP) takes a



*Photo Credit: Gary Leonard*

30-year look ahead to determine what transportation options the county's residents will need to get around the County. The 2009 LRTP updates changes that have occurred since the 2001 LRTP, including growth patterns, the latest technical assumptions, climate change issues and incorporates planned Measure R projects. It recommends transportation projects to be implemented through 2040, and other projects that may be funded if additional revenue sources become available.

### **Metro Bicycle Transportation Strategic Plan (2006)**

The Bicycle Transportation Strategic Plan (BTSP), developed by the Los Angeles County Metropolitan Transportation Authority (Metro), informed the development of the 2010 Plan in key areas. It provides an inventory of existing and planned facilities in jurisdictions bordering the City; and assists in the identification of routes that may eventually provide continuity for bicyclists. The BTSP also outlines a strategy for prioritizing regional bikeway projects. As the Regional Transportation Planning Agency for Los Angeles County, Metro is the primary local funding source for bicycle transportation.

### **Metro Enhanced Public Outreach Project (2005)**

The primary focus of the Metro Enhanced Public Outreach Project (EPOP) was to prepare the BTSP and "gain a better understanding of the needs, perceptions and travel behavior of all bicyclists, focusing on those in communities with low income and high transit use." The EPOP expanded the concept of the typical bicycle commuter and provided evidence that while the bicycling population is diverse, the needs and preferences of bicyclists, particularly in regards to infrastructure, are generally consistent. As a result, the City's 2010 Plan provides policies, programs and facilities to serve a diverse population of existing and future bicyclists.

### **Metro Eastside Light Rail Bike Interface Plan (2003)**

The primary focus of the Metro Eastside Light Rail Bike Interface Plan (BIP) was to create a community transportation plan that integrates the bicycling needs of residents with the Gold Line Eastside Extension. The plan identifies bikeway facilities and design options for the communities within the project area. This 2010 Plan supports the needs identified in the BIP by enhancing accessibility to future transit stations in the area.

## Los Angeles County River Master Plan (1996)

The Los Angeles River Master Plan (LARMP) provides for the optimization and enhancement of aesthetic, recreational, flood control and environmental values for the 51 miles of the Los Angeles river by creating a community resource, enriching the quality of life for residents, and recognizing the river's primary purpose for flood control. The 2010 Plan supports the goal of the LARMP to provide a continuous regional greenway and trail system along the Los Angeles River and identifies connections to the river in order to enhance the access to existing and future segments of the river path for non-motorized transportation and recreation.

## Los Angeles County Bicycle Plan (1976)

The intent of the Los Angeles County Bicycle Plan (LACBP) is to "guide the development of an interconnected network of countywide bicycle corridors." The LACBP recognizes how a connected network supports both recreational and utilitarian bicycling. The LACBP currently is being updated by the County's Public Works Department.





## Public Participation

Public participation in the development of the 2010 Plan initiated with four public workshops from February to March in 2008. The workshops were held in the San Fernando Valley, Central Los Angeles, West Los Angeles and the Harbor areas. The website [www.labikeplan.org](http://www.labikeplan.org) was launched during the same time period to provide a location for the public to submit bicycle route suggestions and provide written comments. The materials presented at the public workshops were posted on the project website.

Over the next year (March 2008- May 2009) City staff made presentations to, and received feedback from, various groups including Neighborhood Councils, university students, and bicycle advocacy groups. In May 2009, the first draft of the Maps was released which was followed in September 2009 by the release of the first draft of the 2010 Plan.

Following the release of the 2010 Plan in the Fall of 2009 five public workshops were held between October and November 2009. During the public comment period which extended from May 2009 to January 2010 over 1000 public comments were received by letter, comment card, e-mail and via an on-line comment form. A comprehensive list of public comments was compiled and made available via the project website. In particular an extensive number of suggestions were received on potential bicycle routes. These route suggestions too were compiled and made available on the project website. And finally, an electronic survey was conducted to assess community preferences regarding bicycle infrastructure, policies and programs. The survey received over 1000 responses. A summary of the survey is available on the project website.





*Photo Credit: Allison Manushkin*



# Chapter 2

## Bicyclists

This Chapter seeks to quantify the estimated number and variety of existing and potential bicycle users that are in the City of Los Angeles and to describe the personal and environmental benefits that result from an increase of bicycle activity.

Across the City, Angelenos, including college students, construction, retail and restaurant workers, recreational and health enthusiasts, white collar professionals, school aged children, and even senior citizens are jumping on their bicycles and reclaiming the streets and paths of Los Angeles. This 2010 Plan seeks to assist and nurture those individuals and families who are riding their bicycles today, identifies strategies to encourage bicyclists to ride more frequently, and create opportunities for those who have not yet felt comfortable riding a bicycle in the City.

While trip data exists that quantifies the percentage of daily trips that are attributable to bicyclists<sup>1</sup> and census data provides information on the estimated number of bicyclists who commute to work<sup>2</sup> there have been no previous efforts to formally quantify the total number of bicyclists who ride within and through the City. But, increasing bicycle sales<sup>3</sup>, observations of an increase in bicyclists on the City streets<sup>4</sup> and bicycle paths, combined with national statistics<sup>5</sup> indicate that there is an active and growing bicycle population. With the average bicycle trip length for an adult bicycle rider of four miles, and a younger person's average trip length of .5 miles,<sup>6</sup> there are many opportunities to bicycle to local destinations, rather than use a car.

<sup>1</sup>Year 2000 Post-Census Regional Travel Survey, Southern California of Governments, Table 21: Total Number of Trip Type and Travel Mode by County  
2US Census 2000

<sup>3</sup>"In 2005, U.S. Consumers bought 19.8 million bicycles. That's 4.4 million more than all of the cars and trucks purchased in the U.S. that year. (National Bicycle Dealers Association, Bureau of Transportation Statistics.

<sup>4</sup>LA Bike Count, Every Cyclist Counts, Los Angeles Bicycle Coalition, [www.la\\_bike.org](http://www.la_bike.org).

<sup>5</sup>"Nearly 40% of adults in the U.S. ride bicycles." "The number of Americans who ride bicycles is greater than all those who ski, golf, and play tennis combined". (National Sporting Goods Association)

<sup>6</sup>LA County Metropolitan Transportation Authority Long Range Transportation Plan Off-Model Analysis Methodology – Bikeway Category, September 2000.



Increased awareness of the health benefits of bicycling coupled with growing concern about the increasing costs and environmental impacts of owning and operating a motor vehicle have led many people to either rediscover bicycling as a form of recreation or transportation or to embrace it for the first time<sup>7</sup>.

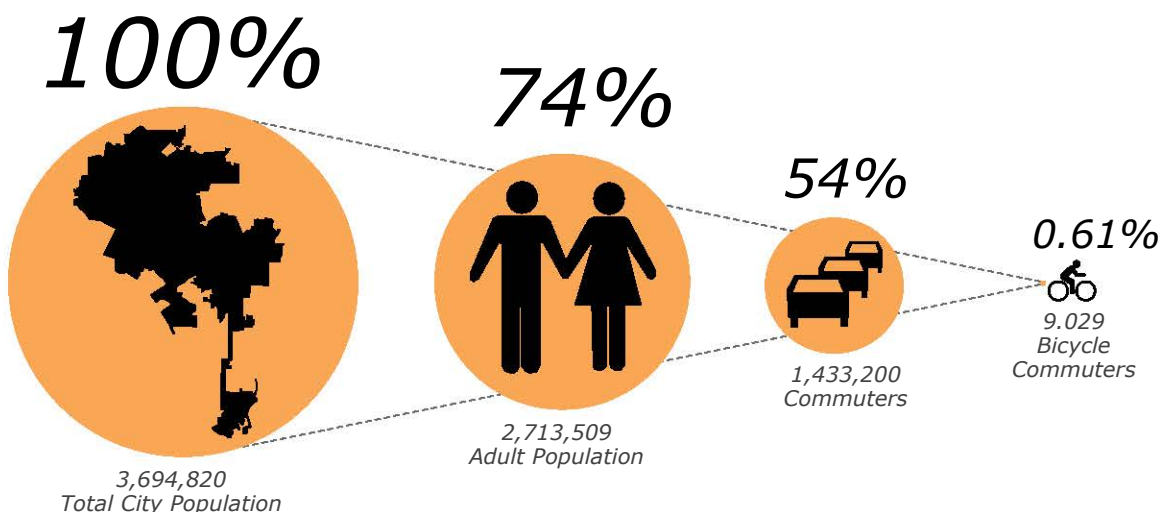
Bicycle riders differ in the frequency with which they ride, the purpose for which they ride, and their level of bicycle experience. Unfortunately, bicycle data does not reflect these distinctions nor reflect the complexity of ridership patterns. For example the Census provides bicycle commute percentage data, but it only represents the percentage of the total number of bicycle commuters who are bicycling on a given day. It does not capture the full spectrum of bicyclists who, while they don't bicycle to work each day may still do so one day a week or two days a month, nor does it capture the daily bicyclists who use the bicycle for only a portion of their commute and utilize some other form of transportation (e.g.. Bus) for the remainder of their commute distance (as these trips are considered transit trips) in the Census data.

## Bicycling Population

The Census data does provide information about the number of bicyclists commuting to work each day. Based upon the 2000 Census the City had 3,694,820 people of which 2,713,509 were

<sup>7</sup>[www.bikesbelong.org](http://www.bikesbelong.org)

## Daily Bicycle Commuting



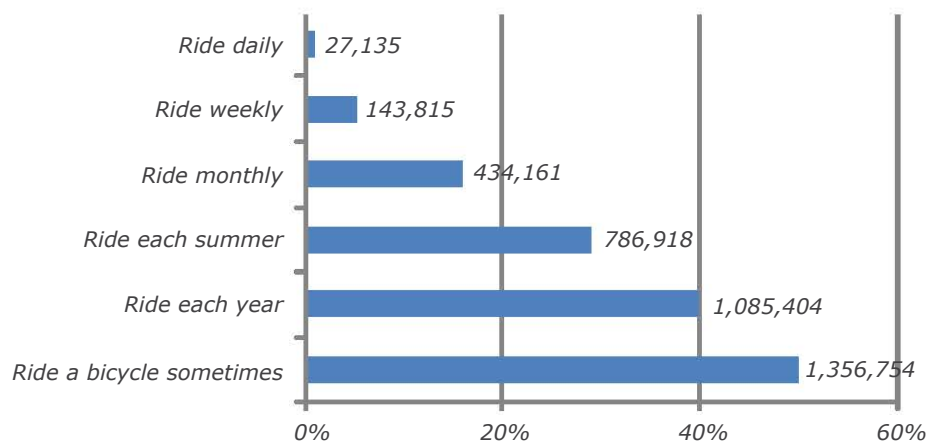
adults (18 years of age or older). Of this adult population 1,433,200 are categorized by the Census as commuters, and of these commuters 9,029 or .61% commuted to work by bicycle each day. Since 2000 interest in bicycling has continued to grow and the 2008 American Community Survey revealed that the City's share of bicycle commuting rose from its 2000 level of .61% to .90%, which is a full 48% increase in eight years.

In 2009, Gary Barnes and Kevin Krizek, developed a tool for estimating bicycle demand<sup>8</sup>. They found that, while the daily bicycle commuter count represented only a snap shot of bicyclists who rode on a daily basis for a specific purpose (commuting) it was nonetheless a reliable measure for estimating the frequency with which adult bicyclists would ride, regardless of the purpose (recreation, commuting, fitness, racing or sport). They concluded that bicycle commute shares ranging from .1% to 1.4% led to an expected overall daily adult bicycle usage of 1%. They further substantiated that this data could be used to conclude the frequency with which bicyclists (of all types and reasons) would choose to ride. Their data, corroborated by on-site observations in multiple cities, including Los Angeles, revealed that (regardless of purpose) 5.3% of adults bicycle at least once on a weekly basis, another 16% bicycle monthly, 29% ride in the summer, 40% bicycle each year, and a full 50% sometimes ride a bicycle, although not necessarily each year.

Based upon these statistics it can be concluded that using the

<sup>8</sup>Journal of the Transportation Research Board, "Estimated Bicycling Demand"

### Frequency of Bicycle Riders in the City



Total City population of 3,694,820 as per 2000 census.

City's 2000 Census, 27,135 adult bicyclists ride each day (3 times the number captured by the Census' tally of daily bicycle commuters), 143,815 ride weekly, 434,161 ride monthly, 786,918 ride each summer, 1,085,404 ride each year, and 1,356,754 are occasional riders.

In addition to the Barnes/Krizek data, the Southern California Association of Governments (SCAG) developed a Regional Travel Survey (Survey) to evaluate the variety of transportation trips taken in Los Angeles County and the modes used for the trips. This Survey also revealed that in Los Angeles County 1% of daily trips were made by bicycle. Assuming again the City's adult population of 2,713,509 and that each person typically makes 3.7<sup>9</sup> trips per day for a total of 10,039,983 trips, than 1% of those trips would equal 100,300 bicycle trips each day.

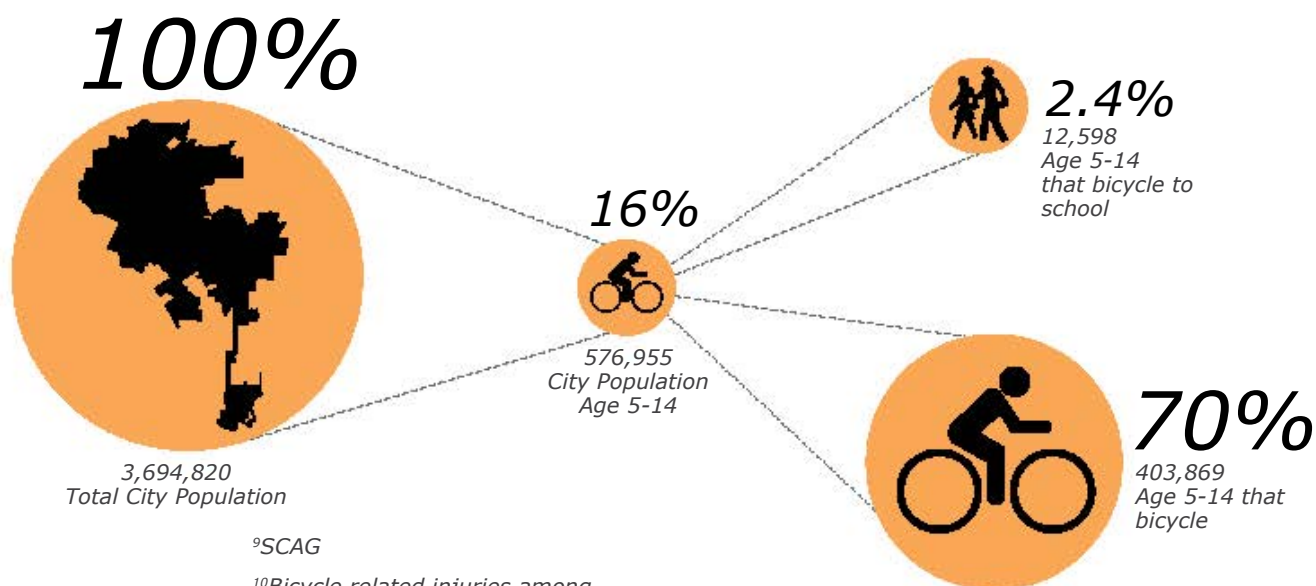
## Youth

Adults (including seniors) are not the only ones who are riding their bicycles today. It has been reported that 70%<sup>10</sup> of all children between the ages of 5 and 14 ride a bicycle. The most recent National Sporting Goods Association Sports Participation report summarizes the participation frequency of children between the ages of 7 and 17 from January to December 2009. According to



Photo Credit: Bike It Blog

## School Age Bicycling Population



<sup>9</sup>SCAG

<sup>10</sup>Bicycle related injuries among children and adolescents in the US. Mehan, T., et al., 20009



this data, 11% of children ride frequently, 53% of children ride occasionally, and 35% of children ride infrequently. As reported in the 2000 Census there were 576,955 children in the City between the ages of 5 and 14. Seventy percent of this population is 403,869. This population figure closely mirrors the City's K-8 population (524,925 students) reported in the 2000 Census of whom 2.4% or 12,598 indicated that they are bicycling to school.

Given that youth are generally inclined to bicycle<sup>11</sup> it is perhaps surprising that so few children ride their bicycle to school. The low rates, however, may be explained by a recent study of the U.S. Centers for Disease Control which found that traffic-related dangers were cited by 30% of parents as a barrier to bicycling to school. Unfortunately, as described by the Safe Routes to School<sup>12</sup> in their article "The Decline of Walking and Bicycling," "as motor vehicle traffic increase parents become more convinced that it is unsafe for their children to walk or bicycle to school. They begin driving them to school, thereby adding even more traffic to the road and sustaining the cycle."<sup>13</sup>

But, as an antidote, a 2007 analysis of California schools showed that Safe Routes to School infrastructure improvements increased bicycling and walking by up to 200%.<sup>14</sup>

Therefore, given the high number of children who ride a bicycle today, there is opportunity to increase the number of students who bicycle to school in Los Angeles once improved facilities and educational programs are in place at local schools that have the support of parent groups and the school administration.

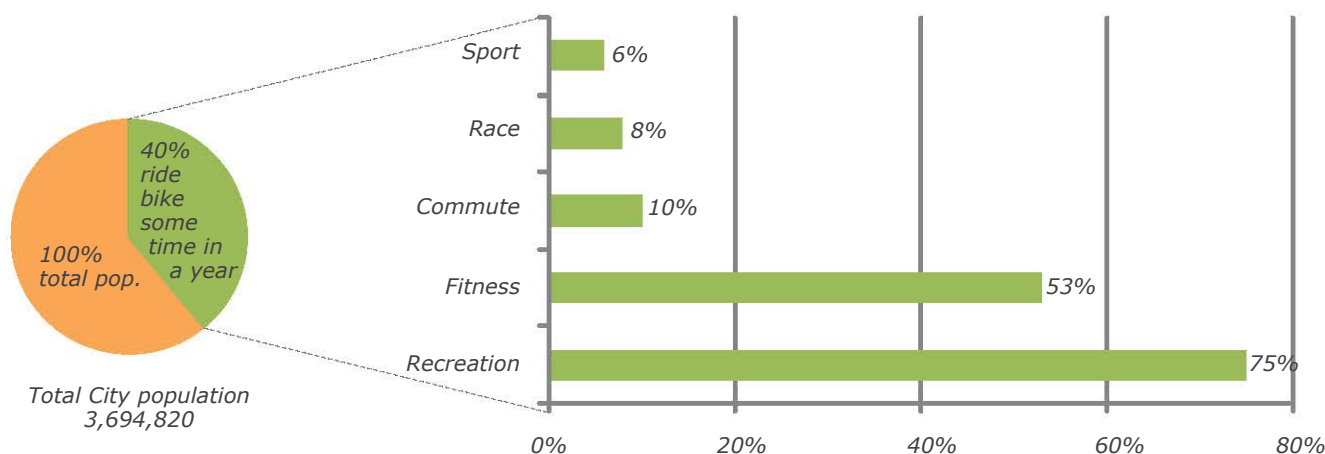
<sup>11</sup>The 2008 Outdoor Recreation Participation Report cited bicycling as the most popular outdoor activity for youth between the ages of 6 and 17. This age group nationwide had 1.15 million outings in 2008 for an average of 74 outings per bicyclist.

<sup>12</sup>U.S. Centers for Disease Control and Prevention, <http://www.saferoutesinfo.org/guide/introduction/references.cfm#why-note4>.

<sup>13</sup>The Decline of Walking and Bicycling, [http://www.saferoutesinfo.org/guide/introduction/the\\_decline\\_of\\_walking\\_and\\_bicycling.cfm](http://www.saferoutesinfo.org/guide/introduction/the_decline_of_walking_and_bicycling.cfm).

<sup>14</sup>Safe Routes to School Safety and Mobility Analysis: A report to the California legislature, California Department of Transportation, Ornstein, M., et al., 2007

## Variety of Bicycle Use



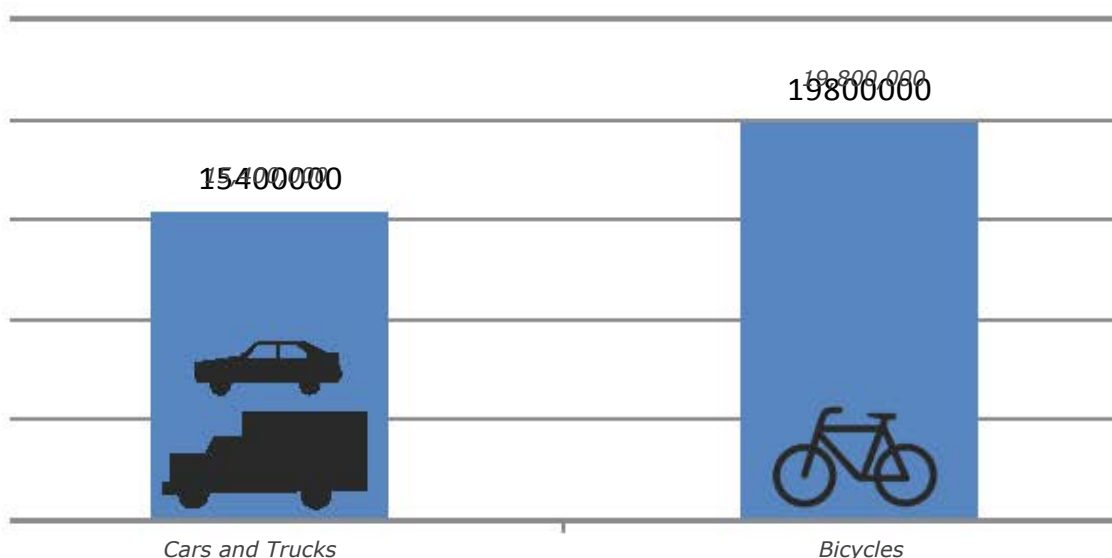
## The Popularity of Bicycling

Bicyclists ride not only at varying degrees of frequency but for many different reasons. It was reported by the Bicycle Market Research Institute in 2006 that 75% of adult bicyclists ride for recreation, 53% ride to stay fit, 10% of bicyclists use it for commuting, and finally, another 8% race, and 6% use the bicycle for some form of sport. (Some bicyclist's ride for multiple reasons and therefore the numbers add up to more than 100%.) Based on this preference data, and assuming that 40% of the City's adult population (or 1,085,404) ride a bicycle at some point within the year, it can be concluded that 792,345 adults ride for recreational purposes, another 575,264 ride for fitness, 108,540 use their bicycle to commute, 86,832 race their bicycle, and finally 65,124 bicycle for sport.

Two other compelling national statistics further bolster the bicycle ridership data suggested by Gary Barnes and Kevin Krizek: "In 2005, U.S. consumers bought 19.8 million bicycles. That's 4.4 million more than all the cars and trucks purchased in the U.S. that year;"<sup>15</sup> according to the National Sporting Goods Association, "the number of Americans who ride bicycles is greater than all those who ski, golf, and play tennis combined."

<sup>15</sup>National Bicycle Dealers Association, Bureau of Transportation Statistics.

## Bicycles and Vehicles Purchased in 2005



Source: National Bicycle Dealer Association, Bureau of Transportation Statistics

## Bicycle Commuting Trends

In 2008, the League of American Cities and the Alliance for Biking and Walking, published American Community Survey: Bicycle Commuting Trends, 2000 to 2008<sup>16</sup> which provided bicycle commuting data for the nation's 70 largest cities. The data included cities which have already attained Bicycle-Friendly Community (BFC) status as well as those, like Los Angeles, that have not. The chart on the following page illustrates the share of bicycle commuters as well as the percent change in bicycle commuting for the United States, the 70-city average, the 43 largest non-BFC Cities, the BFC average, and the five top-rated BFC cities as well as Los Angeles and New York.

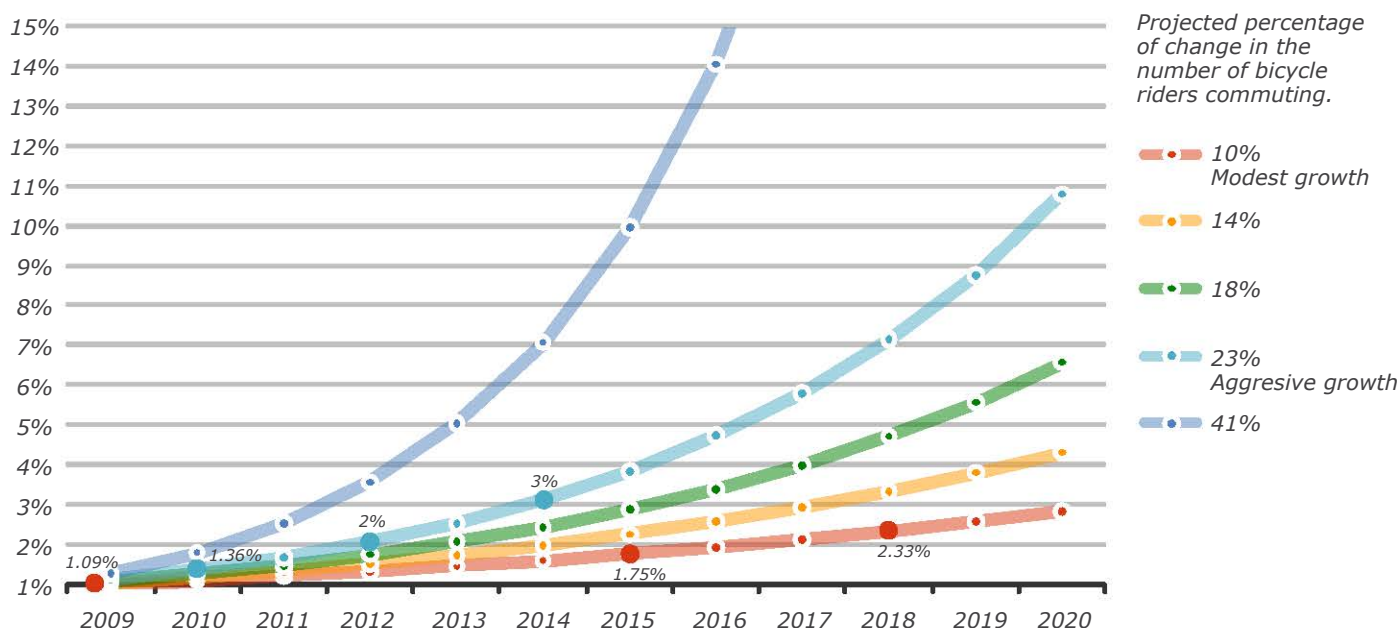
The Survey provides useful data from which to project future bicycle commuting trends in Los Angeles. Given the high numbers of bicyclists who are already riding with some frequency, the 48%

<sup>16</sup>League of American Bicyclists, American Community Survey: Bicycle Commuting Trends, 2000 to 2008.

### Bicycle-Friendly Community (BFC)

In 1996 the League of American Bicyclists developed the Bicycle Friendly Community Program (Program) award designation. The Program provides incentives, hands-on assistance, and award designation for communities that actively support bicycling. A BFC welcomes cyclists by providing safe accommodation for bicycling and encouraging people to bike for transportation and recreation. Since the advent of the Program, 141 cities have qualified for BFC designation: three have received the highest Platinum ranking, 10 have achieved Gold, 25 received Silver and the balance received the Bronze rating. Designation rating is based upon responses to questions in five categories (Engineering, Education, Encouragement, Enforcement, and Evaluation and Planning) regarding a city's facilities, policies and support programs. The City applied in 2007 and received an Honorable Mention.

### Bicycle Commuter Trend in Los Angeles





increase in bicycle commuting in Los Angeles between 2000 and 2008, and the dramatic increase (41%) of bicycle commuting from 2007 to 2008, it is reasonable to expect continued growth in the number of bicyclists who commute especially as additional facilities are developed. If a modest annual growth rate of 10% is assumed, which is comparable to the national average for the nation's largest 43 Non-Bicycle Friendly Communities<sup>17</sup> then bicycle commuting in Los Angeles has already reached 1.09% and could be expected to reach 1.75% by 2015 (Portland's 2000 bicycle commuter rate) and 2.33% by 2018. If a more aggressive rate of growth of 23% is used, which is the annual

<sup>17</sup>Bicycle Friendly Community- See Definition Section

### Bicycle Commuter Trend in Various Cities

				Percent Change Bicycle Commuting			Share of Bicycle Commuters				
BFC Status	Geography	Rank by Population	2008 Rank by Bike	2000 to 2008	2005 to 2008	2007 to 2008	2008	2007	2006	2005	2000
	United States	n/a	n/a	43.36%	35.83%	14.35%	0.55%	0.48%	0.45%	0.40%	0.38%
	70 city average	n/a	n/a	48%	24%	18%	0.93%	0.79%	0.72%	0.75%	0.63%
	43 Largest NON-BFC Cities	n/a	n/a	23%	14%	10%	0.57%	0.51%	0.50%	0.50%	0.46%
	BFC average	n/a	n/a	69.05%	37.77%	23.42%	1.51%	1.22%	1.08%	1.09%	0.89%
Platinum	Portland, OR	30	1	2.38	0.72	0.52	5.96%	3.91%	4.15%	3.47%	1.76%
Silver	Minneapolis, MN	49	2	1.26	0.76	0.12	4.27%	3.80%	2.50%	2.42%	1.89%
Gold	Seattle, WA	26	3	0.56	0.27	0.29	2.94%	2.27%	2.30%	2.31%	1.88%
Bronze	Sacramento, CA	37	4	1.01	0.55	0.47	2.72%	1.85%	1.30%	1.75%	1.35%
Gold	San Francisco, CA	12	5	0.37	0.47	0.08	2.72%	2.52%	2.26%	1.85%	1.98%
	Los Angeles, CA	2	26	0.48	0.52	0.41	0.90%	0.64%	0.62%	0.59%	0.61%
Bronze	New York City, NY	1	36	0.36	0.33	-0.10	0.64%	0.71%	0.55%	0.48%	0.47%

Source: Bicycle Friendly Community

average change amongst all Bicycle-Friendly Communities, than bicycle commuting in Los Angeles could eventually (once some of the plans and programs implemented by this 2010 Plan are in place) surpass the 2% mark and eventually even exceed 3%. It is important to note that the bulk of the growth in commuting is expected to come not from new riders but from the pool of adults who are currently riding. As new facilities are added and the Plan's policies and programs are implemented it is expected that a



Photo Credit: LA Cycle Chic Blog

share of riders who commute once a month, or once a week will gradually shift to a more frequent use of bicycle commuting. Or, a recreational rider may elect, finding a new bicycle facility installed that connects his/her home to work to expand his/her bicycle use to include bicycle commuting.

One of the largest pools of future cyclists is women. Currently, men outnumber women bicyclists 2 to 1.<sup>18</sup> Researchers postulate that women's greater aversion to danger,<sup>19</sup> concern for personal security and fear of motor vehicles keeps them from riding on streets without bicycle facilities, and women's

disproportionate responsibility for child care and household chores makes a disconnected bicycle network an infeasible means of transportation for many women.<sup>20,21,22</sup> In addition to improved infrastructure, bicycle advocates believe that more women will begin bicycling with improved bicycle parking, bicycle equipment for women (including electric-assisted cargo bicycles), and educational and outreach efforts that will change the "traditionally male dominated" bicycle community.<sup>23</sup> Attracting more women to bicycling is an important goal, as women are considered an 'indicator species' for bike-friendly cities.<sup>24</sup> Current research purports that as more female bicyclists ride more frequently, their communities become more bikeable.

<sup>18</sup>Explaining Gender Difference in Bicycling Behavior, *Transportation Research Record*, Volume 2125, Pages 16-25.

<sup>19</sup>"Studies across disciplines as disparate as criminology and child rearing have shown that women are more averse to risk than men," *Scientific American Magazine*, October 2009. Baker, L. 2009, October) <http://www.scientificamerican.com/article.cfm?id=getting-more-bicyclists-on-the-road> and Ronald L. Akers, a criminologist posits that "socialization within the family controls girls more, teaching boys to be risk-takers and girls to be risk-averse."

<sup>20</sup>Linda Baker, *How to Get More Bicyclists on the Road: To boost urban bicycling, figure out what women want*, *Scientific American*, October 2009.

<sup>21</sup>Devin Powell, *Washington Woos Bicycle Commuters*, *Inside Science News Service*, March 22, 2010.

<sup>22</sup>Jennifer Dill, *Understanding and Measuring Bicycling Behavior: A Focus on Travel Time and Route Choice*, Oregon Transportation Research and Education Consortium, December 2008.

<sup>23</sup>Josh Cohen, *Why Don't More Women Ride?*, *publicola*, April 5, 2010.

<sup>24</sup>Linda Baker, *How to Get More Bicyclists on the Road: To boost urban bicycling, figure out what women want*, *Scientific American*, October 2009.

## Categories of Riders

Regardless of the reasons, or frequency, with which a person (adult or child) is prompted to ride a bicycle it is also helpful to classify bicyclists relative to their experience, strength and skill level as this greatly affects their comfort level riding on the varying types of bicycle facilities. These classifications can also be helpful in understanding the characteristics and infrastructure preferences of different bicyclists. However, it should be noted that often times an instructional course can rapidly change a less confident bicyclist to one that can comfortably and safely share the roadway with vehicular traffic.

Since 1994 the Federal Highway Administration has used the following general categories of bicycle user types (A, B and C) to assist highway designers in determining the impact of different facility types and roadway conditions on bicyclists:

***A**dvanced or experienced riders are generally using their bicycles as they would a motor vehicle. They are riding for convenience and speed and want direct access to destinations with a minimum of detour or delay. They are typically comfortable riding with motor vehicle traffic; however, they need sufficient operating space on the traveled way or shoulder to eliminate the need for either themselves or a passing motor vehicle to shift position.*



***B**asic or less confident adult riders may also be using their bicycles for transportation purposes, e.g., to get to the store or to visit friends, but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by faster motor vehicles. Thus, basic riders are comfortable riding on neighborhood streets and shared-use paths and prefer designated facilities such as bicycle lanes or wide shoulder lanes on busier streets.*



Photo Credit: Allison Manushkin



*Children, riding on their own or with their parents, may not travel as fast as their adult counterparts but still require access to key destinations in their community, such as schools, convenience stores and recreational facilities. Residential streets with low motor vehicle speeds, linked with shared-use paths and busier streets with well defined pavement markings between bicycles and motor vehicles can accommodate children without encouraging them to ride in the travel lane of major arterials."*



*Photo Credit: LACBC Blog*



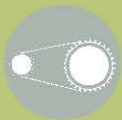
*Photo: Jessica Meaney*

*Photo Credit: Jessica Meaney*



*Photo Credit: Danette Rivera*

These three classifications reinforce the importance that bicycle infrastructure should be planned and designed to accommodate as many user types as possible with separate or parallel facilities considered to provide a comfortable experience for the greatest number of bicyclists.



### **Terrain**

*Almost 87% of all roads in Los Angeles have less than a 5% grade<sup>31</sup>.*



### **Weather**

*With only 35 days per year with precipitation, 25 days per year with extreme heat, and zero days per year below freezing, favorable climatic conditions for bicycling in Southern California prevail over 300 days per year<sup>32</sup>. Average monthly high temperatures range from 67 to 83 degrees Fahrenheit. Average monthly low temperatures range from 49 to 64 degrees Fahrenheit.*

## **Benefits**

Los Angeles has two distinct and inherent advantages for creating an environment that supports bicycling: climate and topography.

While many cities have extreme temperatures and hilly terrain that limit year-round bicycling to only the very dedicated, Los Angeles is fortunate to have relatively flat terrain (although hillside areas do exist and the Santa Monica Mountains in particular provide a physical challenge for bicyclists wishing to travel to and from the Valley) and a temperate climate that make for comfortable bicycling conditions year round for all levels of bicyclists.

Bicycling is a relatively safe activity. When compared to exercises such as running, bicycling is a low-impact activity and often prescribed as physical therapy for knee patients. More recently, doctors have found that Parkinson's patients can bicycle symptom-free even if they have end-stage Parkinson's, giving patients a unique opportunity to simultaneously experience fluid movement and get valuable cardiovascular exercise.<sup>25</sup>

Bicycling can be done at various speeds so beginning, or less physically fit, bicyclists can begin at slower speeds and work up to speeds that are efficient for transportation uses. The use of the bicycle for fitness and transportation can take place in Los Angeles almost anywhere, at any time of the year, and does not require the purchase and use of multiple, more expensive types of exercise equipment, or costly gym memberships.

In addition, bicycling is time efficient as it can be used for trip making and errands, providing cost savings in terms of fuel and motor vehicle maintenance and time savings by eliminating the need to "make time" for exercise.

Besides the personal health, time savings and economic benefits, bicycling is recognized by various agencies including the California Air Resources Board (ARB) as one of the cleanest modes of transportation. According to the ARB over a ton of particulate matter and seven tons of smog-forming gases are kept out of the air by bicycle use each day in California.

Bicycling can replace motor vehicle trips with clean trips by bicycle and assist the City in meeting many of the air quality and sustainability goals outlined by the State's Assembly Bill 32 (AB 32), Senate Bill 375 (SB 375), and the Complete Streets Act of 2008.

The enactment of the Global Warming Solutions Act of 2006 (AB 32) and SB 375 in 2009 authorize the ARB to set regional

<sup>25</sup>Gina Kolata, *Cycling Provides a Break for Some with Parkinson's*, *The New York Times*, March 31, 2010.

<sup>31</sup>Sources: Thomas Brothers Topographical Data

<sup>32</sup>Sources: Average days with precipitation – NOAA; Extreme Heat Days (over 90° F) – NASA; Mean number of days below 32° F – NWS

green house gas emission targets that cities must meet. In computer-based models, rising concentrations of greenhouse gases generally produce an increase in the average temperature of the Earth. Rising temperatures may, in turn, produce changes in weather, sea levels, and land use patterns, commonly referred to as "climate change"<sup>26</sup> The laws encourage changes to land use and transportation planning that help to shift trips from automobile trips to walking, bicycling, and transit. To comply with this slate of legislative actions the City must change its transportation policies from an auto-centric circulation system to a more balanced network that not only includes bicycles, but also elevates the role they play in the City's transportation system. Even a small shift from automobile trips to other modes can play a substantial role in reducing greenhouse gas emissions. The average car emits 5.50 tons of carbon dioxide equivalent emissions annually<sup>27</sup> and the average person takes 3.7 trips per day or 26 trips per week. If 20% of those trips were made by bicycling or walking each week, over a ton of carbon emissions could be eliminated from the Los Angeles air.



#### **Air Quality**

*In 2006 Los Angeles had 59 Unhealthy days.*

*The Environmental Protection Agency (EPA) classifies air quality on a scale ranging from Marginal Non-Attainment on the low end to Severe or Extreme Non-Attainment on the high end.*

*The air quality in the Los Angeles region is consistently categorized in the Severe Non-Attainment category.*

<sup>26</sup><http://www.eia.doe.gov/oiaf/1605/ggccebro/chapter1.html>

<sup>27</sup>U.S. Environmental Protection Agency

## **Legislation**

### **Assembly Bill 32: Global Warming Solutions Act of 2006**

*AB 32 requires the ARB to develop regulations and market mechanisms that will ultimately reduce California's greenhouse gas emissions by 25% by 2020. Mandatory emission caps begin in 2010 for significant resources.*

### **Senate Bill 375**

*SB 375 provides a means for achieving AB 32 goals from cars and light trucks. The bill aligns three critical policy areas of importance to local government: (1) regional long-range transportation plans and investments; (2) regional obligation for cities and counties to zone for housing; and (3) a process to achieve greenhouse gas emission reduction targets for the transportation sector.*

*SB 375 requires ARB to develop regional greenhouse gas emission reduction targets for passenger vehicles for 2020 and 2035.*

### **The California Complete Streets Act (Assembly Bill 1358)**

*AB 1358 requires cities when updating their General Plans to identify how they will provide for the routine accommodation of all users of the roadway including motorists, pedestrians, bicyclists, and individuals with disabilities, seniors, and users of public transportation. The Act defines users as bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors.*





## Obesity

*Estimates from the American Medical Association speculate that as many as sixty-percent (60%) of Americans are not physically active and at least fifty percent (50%) are clinically obese.*

*The California Health Policy Forum notes that thirty-percent (30%) of children are overweight or obese.*



## Health

*The United States Surgeon General stated that the number of people at risk for heart disease, stroke, diabetes and cancer are increasing and that improved nutrition in conjunction with thirty minutes of exercise, five times per week, could reduce cardiovascular illness and death by fifty percent (50%).*

*For the first time in a generation it is anticipated that adult Americans will live shorter life spans than their parents.*

The City's automobile dependency also contributes to a number of health problems, particularly obesity that is now recognized as a national epidemic. Urban planning and transportation design also play key roles in the creation of communities that support and promote bicycling and walking. Key elements in community design include easy and convenient access to public transportation, schools, green space, and shopping on roadways that provide safe and easy access by bicycle. Such access can be improved by the creation of a network of bikeways through the City, and the implementation of supporting policies and practices that facilitate and increase the use of the bicycle as a mode of transportation and recreation.

The chart on the following page provides data to analyze the trade-offs involved in selecting various transportation modes by comparing the calories burned per hour, annual costs of operation, level of annual green house gas emissions, and the physical road dimensions consumed by walking, bicycling, driving, and public transit. The chart demonstrates that walking is the cheapest mode of transportation (not accounting for shoes, and protection from the elements such as hat, sunscreen, or clothes, emits zero emissions and takes up very little area within the public right of way. But bicycling, with its greater mobility range and higher calorie burn rate, is 117% more efficient than walking,<sup>28</sup> And, compared against vehicle use bicycling has an annual operating cost less than 4% of the average car<sup>29</sup> and as many as 7 to 12 bicycles can park in one automobile parking space.<sup>30</sup> Bicycling, is of course but one form of transportation, and while it is not for everyone all the time even incremental shifts towards increased bicycle activity can reduce greenhouse gas emissions, provide personal health gains and reduce the amount of area within the public right of way devoted to the movement and storage of vehicles.




Climate change, air quality, increased levels of traffic congestion and epidemic health problems related to a lack of physical activity have all taken on greater importance in Los Angeles and the nation. An increase in the number of safe and comfortable bikeways will offer incentives for bicyclists to ride with more frequency, which will have a tremendously positive impact on improving air quality, reducing traffic congestion, and improving the personal health of the City's residents.

<sup>28</sup><http://bicycleuniverse.info/transpo/almanac.html>

<sup>29</sup><http://www.bikesbelong.org/stats/Economic+Statistics>

<sup>30</sup><http://bicycleuniverse.info/transpo/almanac.html>

## Transportation Comparison

	Miles Per Hour	Calories burned per hour	National Average (\$)	Annual greenhouse gas emissions in 2008 (metric tons of CO <sub>2</sub> Eq./ mile)	Minimum road space dimensions (ft <sup>2</sup> )
Walking	3	353	0	0	1 
Bicycling	10	484	308 \$	0	10 
Driving (Passenger Cars and Light-Duty Trucks)	30	170	11,263 \$	399.39 CO <sub>2</sub> .50 CH <sub>4</sub> 7.62 N <sub>2</sub> O	96.4 

### Sources:

#### CALORIES

- Centers for Disease Control and Prevention
- Health Status
- Sierra Club
- Transportation Planning and Technology, Routledge
- RideTHISbike.com
- CaloriesPertour.com
- Everyday Health

#### COST

- American Public Transportation Association
- Newgeography
- CommuteSolutions.org
- Bikes Belong Coalition
- U.S. Bureau of Transportation Statistics

#### GREENHOUSE GAS

- U.S. Bureau of Transportation Statistics
- US Environmental Protection Agency
- SPACE
- Department of Transportation
- USA Today
- Westchester County Municipalities







# Chapter 3

## Bicycling

Los Angeles needs more bikeways. This is evident to anyone who regularly rides a bike in Los Angeles, or to anyone who pulls up a map of bicycling facilities in the City. Once one rides more, it also becomes evident that, whether a bike facility is present or not, Los Angeles is often not a supportive environment for bicyclists. To address both issues the City must employ a variety of programs and policies while aggressively building new infrastructure.

To make Los Angeles a better place to bicycle, the 2010 Plan develops programs and policies in ten categories. These categories are the traditional E's of Bicycle Planning, enriched by a couple of innovative E's: Equity: Streets, Equity: Parking, Equity: Transit, Encouragement, Education, Enforcement, Engineering and Maintenance, Economic: Financing, Evaluation and Cooperation, and Environment: Bicycles along Beaches, Rivers, Fixed Transit Corridors and in City and State Parks. The E's are covered in greater detail below.

To improve Los Angeles' bicycling infrastructure, the 2010 Plan introduces three new bikeway networks: the [Backbone Bikeway Network \(Backbone\)](#), the [Neighborhood Bikeway Network \(Neighborhood\)](#), and the [Green Bikeway Network \(Green.\)](#) These three networks together designate a 1,680 mile Citywide Bikeway System. The 2010 Plan's objective is to increase the total mileage of the bikeway system while balancing the multiple roles city streets play in accommodating cars, trucks, transit, parking, pedestrians, and bicycles. The formulation of the three networks allows the 2010 Plan to do that.

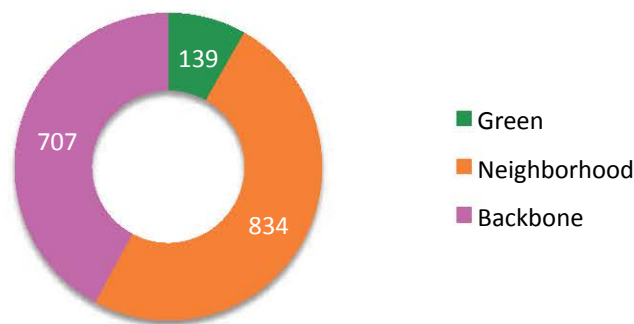
To encourage a broad diversity of bicyclists the City introduces the Bicycle Friendly Street (BFS), a new Class III Route design that introduces street-calming engineering treatments, on local

# 1,680 Miles...

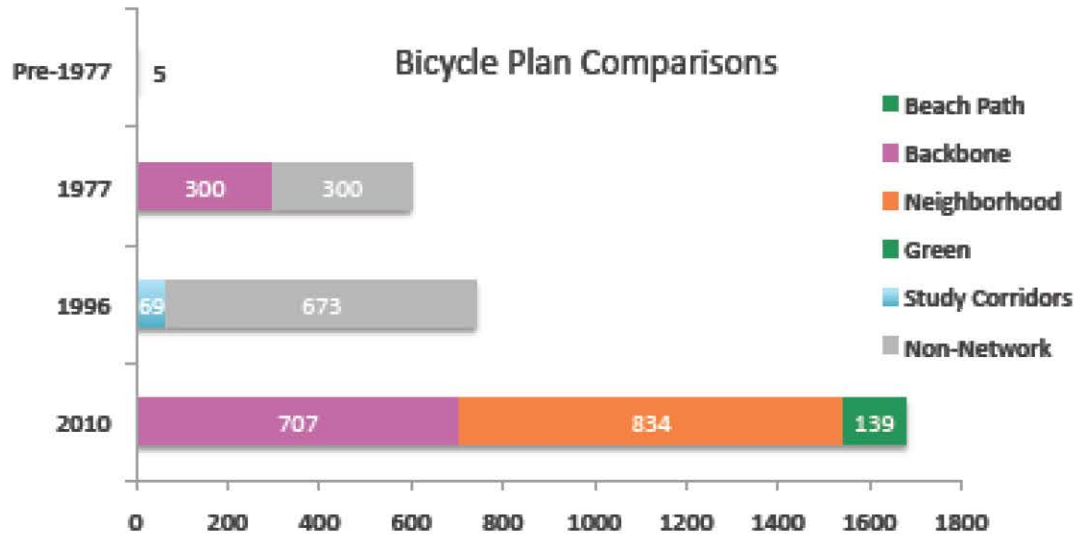
and collector streets, to provide a comfortable bicycling environment. BFS solutions will be utilized primarily on the Neighborhood Network to create a pleasant and safe environment for relaxed riding, especially for bicyclists more sensitive to motor vehicle traffic.

Today the City has approximately 378 miles of bikeways. This includes a total of 64 miles of bicycle paths, 186 miles of bicycle lanes, and 124 miles of bicycle routes (see description of each bikeway type below). However, in a city of 464 square miles and 6,500 miles of roadways it's not nearly enough. Unfortunately, the current bikeway system is a patchwork of corridors and segments- it does not form a comprehensive interconnected network. By closing critical gaps, making connectivity a focus, and adding many miles of facilities, the 2010 Plan seeks to provide a connected network.

Citywide Bikeway System: Three Networks



Prior to the 2010 Plan the City adopted two other bicycle plans. The first Plan was adopted in 1977. The 1977 Bicycle Plan established a 600 mile Citywide System of bikeways. The Citywide System was intended to serve both recreational and transportation needs. Included within the Citywide System was a 300-mile Backbone System. A new Bicycle Plan was completed and adopted in 1996 and then re-adopted in 2002 and 2007. The 1996 Plan designated a total bikeway system of 673 miles plus 69 miles of study corridors. Thus, the 2010 Plan exceeds its predecessors substantially in its commitment to bikeways- it is the most ambitious bicycle plan to date. The Plan establishes three new bikeway networks: the Backbone, the Neighborhood Network, and the Green Network. Each has a distinctive character but together they work in concert to support a variety of bicyclists.



Each of the existing 378 miles of existing bikeways has been allocated to one of the three networks. So, although the concept of the three networks is new to this 2010 Plan each component of the system is launched with some number of bikeways already assigned to it. The Backbone concentrates on providing an interconnected system of streets that facilitates 24/7 bicyclist mobility on key arterials; the Neighborhood Network enhances the pleasant environment of local streets to facilitate relaxed riding; and the Green Network enhances pedestrian and bicyclist access to the City's green corridors, particularly along river channels and segregated transit right of ways.

The **707 mile Backbone Network**, comprised primarily of bicycle lanes will enable access to major employment centers, transit stations and stops, and educational, retail, entertainment, and other open space and recreational resources. It is expected that the Backbone will initially be used primarily by experienced riders who are comfortable riding close to moderate to heavy traffic volumes. However, in time, by resolving the perceived and actual dangers to bicyclists on arterials, the Backbone streets may become more accessible to riders less comfortable with greater traffic volume. Today the Backbone consists of 142 miles of bicycle lanes and 99 miles of routes (81 of which will be converted to lanes overtime). The 2010 Plan will add an additional 433 miles of lanes, 15 miles of routes, and 18 miles of bicycle friendly streets to complete the development of the 707 mile Backbone.

### Backbone

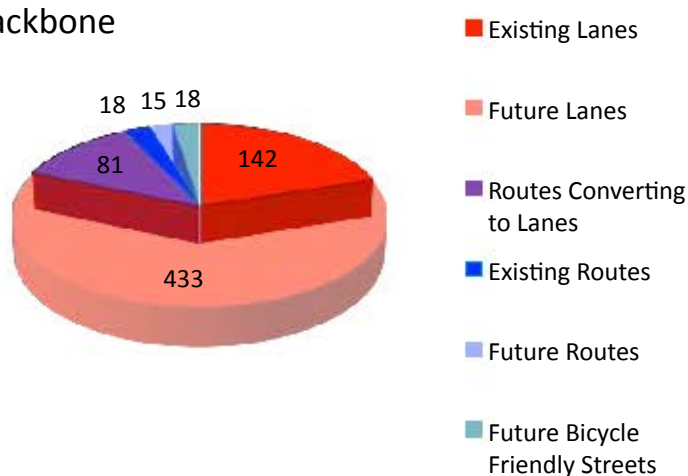


Photo Credit: Will Campbell

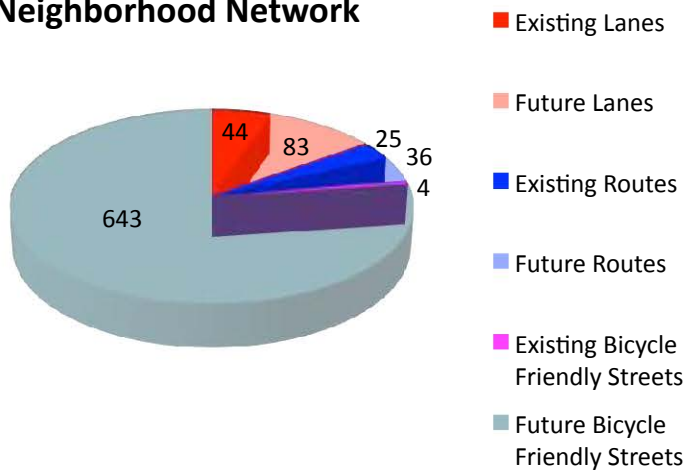


Photo Credit: LACBC Blog

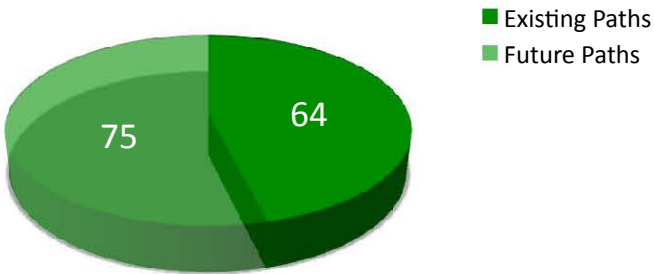


The **834 mile Neighborhood Network** is comprised primarily of Bicycle-Friendly Streets, (on Local and Collector Streets) which are characterized by low traffic volumes and slower speeds. The Neighborhood Network provides a network, generally parallel to the Backbone Network, where bicyclists of all experience levels may feel comfortable riding. The Neighborhood Network will enable all bicycle riders, including children, women, families, young adults, and seniors, to access neighborhood facilities including schools, libraries, shopping districts, and parks and open space. The Neighborhood Network will also provide lower speeds, less traffic, and a less threatening environment than bikeways on arterial roadways. Many of the streets are comfortable for bicycle riding today but may benefit from wayfinding and additional street calming measures such as roundabouts and traffic diverters. Examples of these strategies are included in the Technical Handbook. Today the Neighborhood Network has a total of 73 miles, 44 miles are lanes, 25 miles are routes, and 4 bicycyle friendly miles have been recently been added. An additional 83 miles of lanes, 36 miles of routes, and 643 miles of bicycle friendly streets will be installed as a result of this Plan to bring the total network to 843 miles. The

**Neighborhood Network**



**Green Network**



**139 mile Green Network** enhances access, through bicycle paths and shared use paths, to the City's green open spaces particularly river channels like the Los Angeles River. Enhanced access improves these spaces, bringing the public closer to them. This accelerates the public's appreciation of these spaces, and so, in the long term accelerates their enhancement. In turn, improvements to these spaces that are not specifically for bicyclists still adds to the overall value of the bicycle experience. For example, the on-going greening of Ballona Creek has made it a more relaxing and inspiring place to ride.

The Green Network will appeal to multiple types of riders, including the experienced transportation or recreational bicyclist who appreciates the long unencumbered distances along the paths and the beginning bicyclist who may only want to travel a short distance and is not yet comfortable riding in close proximity to vehicular traffic. Today, the bicycle paths are crowded on different days of the week by a variety of bicyclists from the avid bicyclist who commutes many miles to work along the Los Angeles River Bicycle Path to the family of recreational riders who chooses to ride along the Beach Path on a Saturday afternoon. Although the smallest of the three networks the Green Network is almost 50% complete with 64 miles finished and 75 miles left to construct.

Each network works with the others to enhance their individual functions, so that the whole is greater than the sum of the parts. Segments of each network were chosen with the other networks in mind to achieve maximum coverage. The target types of bicyclists for each network



*Photo Credit: Will Campbell*

## Bicycle Classification System

The Federal and State transportation system recognizes three primary bikeway facilities; Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III).

### Bicycle Paths (Class I)

Bicycle Paths (Class I) are exclusive car free facilities that are typically not located within a roadway area. They are located within or adjacent to river corridors (Arroyo Seco, Ballona Creek, Los Angeles River), transit corridors (Orange Line), City parks (Balboa Park), or the coast (Venice Beach/Marvin Braude).<sup>1</sup> The Green Network is entirely comprised of Bicycle Paths. Bicycle Paths are popular for utilitarian and recreational riding.<sup>2</sup>



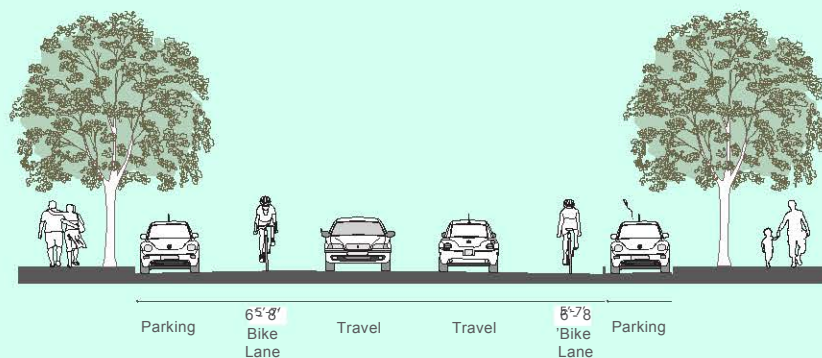
The Orange Line Bus Rapid Transit (BRT) bicycle path and the proposed bicycle path along the Expo Light Rail Transit Line (LRT) provide valuable connections to mass transit and facilitate easier, more comfortable commutes for all types of riders. Class I facilities are typically preferred by less experienced riders and bicycle commuters whose trips are longer than a few miles. In the public outreach survey, 35% of respondents answered that bicycle paths were their preferred facility, although only 16% responded that bike paths were needed to help reach their destinations.

<sup>1</sup>Coastal paths such as the Marvin Braude/Venice Beach Path serve City of Los Angeles residents, and are owned and maintained by the County of Los Angeles and the City of Los Angeles.

<sup>2</sup>A 2002 survey by Los Angeles County Department of Beaches and Harbors found that over 40% of bicyclists using the Marvin Braude Bicycle Path during weekday commute hours were engaged in a utilitarian trip (commuting or errands).

### Bicycle Lanes (Class II)

Bicycle Lanes (Class II) are part of the street design that is dedicated only for bicycles and identified by a striped lane separating vehicle lanes from bicycle lanes. Lanes are most commonly found on major arterials (Sunset and Venice Boulevard) and on wide collector streets (Chandler Boulevard, Griffith Park Boulevard) and comprise the majority of the bikeways included in the Backbone.

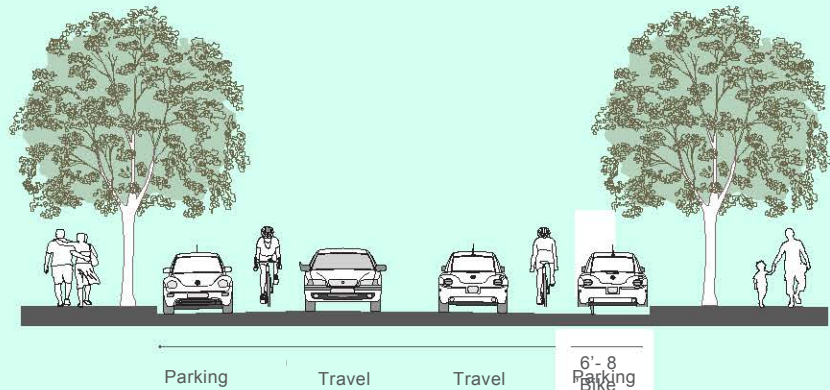


Bicycle lane widths on urban roadways can range from five to seven feet but should not exceed seven feet to keep motor vehicles from driving in them. Bicycle lanes along commercial corridors tend to provide access to destinations, making them useful for utilitarian trips. In the online public outreach survey conducted for this Plan, respondents answered that bicycle lanes were the most preferred (43%) and most needed (63%) facility.



### **Bicycle Routes and Bicycle Friendly Streets (Class III)**

Bicycle-Friendly Streets and Bicycle Routes (Class III) are in-road bikeways where bicycles and motor vehicles share the roadway. They are typically intended for streets with low traffic volumes, signalized intersections at crossings or wide outside lanes. While Bicycle Routes are a common bikeway designation adopted by the State, this Plan introduces the new concept of the Bicycle-Friendly Street (BFS).



**Bicycle Routes (Routes)** are preferably located on collector and lower volume arterial streets (51st Street, Wilbur Avenue) but currently the majority of the existing routes are located on heavily traveled arterials (Westwood, Broadway). To remedy this the 2010 Plan recommends that Routes located on an arterial roadway with high traffic volumes and speeds be designated as Future Lanes and that the use of Routes on arterials in the future be used in limited situations to either close a gap in the Backbone Network or when a physical constraint would prevent the installation of a lane for a particular stretch of roadway. Because it will not be feasible, due to inadequate road width or lack of environmental review, to immediately upgrade most of the existing Routes to Lanes the 2010 Plan establishes a pilot strategy (Program 1.1.5 A Enhanced Bicycle Routes) to add shared lane markings (sharrows) in the public right-of-way on selected Routes which meet the guidelines as established by the State of California MUTCD.

In the public outreach survey, 9% of respondents answered that bicycle routes on major arterials were their most preferred facility, versus 12% of respondents who answered that bicycle routes on local streets were most preferred. For the type of facility most needed to reach destinations, 15% answered bicycle routes on major arterials and 5%

**Bicycle-Friendly Streets (BFS)** are lower volume residential local and collector streets and comprise the majority of the roadways included in the Neighborhood Bikeway Network. A Bicycle-Friendly Street shall be defined as a Local and/or Collector Street that includes at least two traffic-calming engineering treatments in addition to signage and shared lane markings. A toolbox of potential engineering treatments is included in Section Four of the Technical Design Handbook.

BFS's are designated primarily on collector and local roadways. These corridors generally parallel major commercial corridors and, therefore, have the greatest potential to provide continuous bicycle access to neighborhood schools, libraries, parks, and retail areas. Wherever possible, BFS take advantage of existing signalized intersections and grade-separation infrastructure such as bridge or tunnel crossings of flood control channels or freeways. Current obstacles which require modification through capital infrastructure improvements are identified on the Neighborhood Bikeway Network Maps.

At-grade crossing improvements have been proposed wherever a BFS intersects a major arterial roadway with no existing traffic signal. These intersections should be improved by providing refuge islands, bicyclist activated crossings, or traffic signals. Non-motorized (bicycle/pedestrian) bridges or tunnels are recommended to provide continuity where proposed BFS's terminate at flood control channels or freeways. Due to security concerns tunnels are the least favorable option but when tunnels are considered they shall be designed to meet Crime Prevention Through Environment Design (CPTED) standards.

were considered in relation to the others, and the types of potential engineering solutions on each network were drawn up with the other networks in mind. In this sense the networks have co-evolved, and are mutually reinforcing.

The Backbone and the Neighborhood Network work together to provide all types of bicyclists complete access to City streets. Bicyclists can access the Backbone via local elements of the Neighborhood Network, travel along the Backbone for a distance, and then return to the Neighborhood Network for their last mile. Without the Neighborhood Network, bicyclists may find the beginning and ending of trips to be harrowing, whereas without the Backbone, long distance trips may be difficult and stressful. For the bicyclist concerned with personal security, the Backbone may offer a good nighttime alternative to the Neighborhood Network, with its wider spaces, better lighting, and greater foot traffic. For the bicyclist who is averse to heavy traffic, the Neighborhood Network offers a daytime alternative to the more trafficked arterials of the Backbone.

At their core, all three networks enhance neglected open spaces, and in this fashion, all three networks work together. Indeed, the Backbone and Neighborhood Networks, where they integrate seamlessly with the Green Network, put the City's lively street activities in touch with its natural beauty. For those close, but not immediately adjacent to a segment of the Green Network, the Neighborhood Network offers a low traffic option to access the Green Network, providing bicyclists (and pedestrians) with recreational options nearly totally free of motor vehicle traffic.

Similarly, there are clear opportunities for these networks to work with other non-bicycle networks and to facilitate seamless bicycle linkages to and from our neighboring jurisdictions, wherever feasible. The Backbone especially, can link up with Metro's multi-pronged transit system, particularly the light-rail lines (LRT), the subway, and the Rapid Bus Network. A number of neighboring cities such as Burbank, Calabasas, Culver City, Glendale, Long Beach, Monterey Park, Pasadena, San



Fernando, Santa Monica, and West Hollywood have each adopted a bicycle plan and the City's 2010 Plan includes a complementary system of roadways to link to the roadways in those other plans. It is hoped that neighboring jurisdictions that have not yet developed a bicycle plan will look to the City's 2010 Plan for guidance to ensure that a bicyclist traveling between the jurisdictions has a smooth and seamless experience.

The Networks are, at their core, not only a physical network of inter-connected streets and paths but also an organizing structure, around which to focus the Plan's many policies and programs that are defined in Chapter 4. A holistic approach to creating supportive bicycling environments on network elements will necessarily make use of many policies and programs.

With capital funding limited, and hundreds of miles of street facilities to maintain and improve, merely providing bicycle facilities would not provide the beneficial results that this 2010 Plan envisions. In some cases, infrastructure solutions alone cannot solve all of the problems that bicyclists encounter, as we have seen with collisions that occur within bicycle facilities. Conversely, infrastructure modifications may not always be necessary to create a supportive environment for bicyclists. Integrating engineering approaches with education, enforcement, and encouragement programs multiplies the benefits to bicyclists. Just as the Networks weave together to form a complete Citywide Bikeway System, the Plan offers an opportunity to focus a variety of its individual programs on a portion of a network in order to improve dramatically the safety and convenience of those select corridors.

Both the Neighborhood Network and the Backbone represent a rethinking of the City's streets as more than conduits for moving motor vehicle traffic. Streets are our most abundant open spaces, and the Backbone and Neighborhood Networks provide the opportunity to enhance the function of these streets for bicyclists, pedestrians, and indirectly, by making them more civilized as open space,



*Photo Credit: Devan Wells*



## Traditional Six E's of Bicycle Planning:

**Equity: Streets** focuses on the establishment of new street standards and measurement tools which will facilitate the opportunity to incorporate bicycle lanes and other engineering enhancements in City streets;

**Equity: Parking** identifies the importance of providing bicycle parking at both the beginning and end of each bicycle trip;

**Equity: Transit** encourages the coordination of bicycling with all transit facilities;

**Engineering** consists of all of the physical aspects of the built environment which can affect the actual bicycling experience; bicycle lanes, paths, curb bulb-outs, curb radii, and even the condition of the street surface;

**Enforcement** ensures that motorists and bicyclists alike are supported by adhering to the traffic laws;

**Education** provides a venue to inform bicyclists and non-bicyclists how to use the roads, provides information to bicyclists to plan a route to work, and encourages bicyclists, young and old, how to handle a bicycle skillfully;

**Encouragement** programs lead non-bicyclists to try bicycling and current bicyclists to ride more often;

**Evaluation** programs determine what is working and what is not, and identifies new directions which may be worth pursuing.

## Additional Two E's developed for this Plan:

**Economic: Financing** identifies opportunities to lobby and expand the availability of local, state and federal funding for bicycle infrastructure along with enforcement, education, encouragement, and evaluation programs.

**Environment: Bicycles along Beaches, Rivers, Fixed Transit Corridors and in City and State Parks** establishes and supports the implementation of the Green Network, and identifies a series of steps to evaluate the feasibility of incorporating bicycle paths and trails in City parks.



Chapter Four includes the full details of all of the policies, and programs established by this 2010 Plan but the paragraphs on the following pages provide a snapshot of the various program categories. The policies and program are bundled around ten categories: Equity: Streets, Equity: Parking, Equity: Transit, Encouragement, Education, Enforcement, Engineering and Maintenance, Economic: Financing, and Environment: Bicycles along Beaches, Rivers, Fixed Transit Corridors and in City and State Parks.

## Equity: Streets

This first program category focuses on strategies that assert the role of the bicycle in City streets. In particular this category describes the Backbone and Neighborhood Networks, identifies the Five Year Implementation Strategy and a Comprehensive Safe Routes to School Strategic Plan, establishes the Bicycle Friendly Street as a new Class III bikeway facility, and outlines opportunities to expand the City's street standards to include bicycle lanes.



Photo Credit: Danette Rivera

## Equity: Parking

Safe, visible and accessible bicycle parking is essential to encourage greater levels of bicycling activity. The City of Los Angeles provides bicycle parking in the public right-of-way and requires some new developments to include end-of-trip facilities, such as bicycle parking (racks, lockers), showers, changing rooms, and areas to securely store bicycles and commuting equipment. This 2010 Plan adds a number of new programs to increase the availability and quantity of bicycle parking especially along the Backbone and Neighborhood Networks., expand opportunities to include bicycle parking at schools, and facilitate the storage of bicycles inside buildings.

### Bicycle Parking in the Public Right-of-Way

The Los Angeles Department of Transportation (LADOT) Bicycle Program installs bicycle racks in the public right-of-way (City property) to encourage bicycling to shopping and commercial areas, city buildings and libraries. Bicycle racks provide secure, convenient, short-term (under two hours) bike parking at office buildings, businesses, or stores near public sidewalks. The program installs racks based on requests by business owners and citizens. Standard “Inverted-U” bicycle racks are generally used. Currently, there are over 3,600 inverted-U racks provided by LADOT through the sidewalk bicycle-parking program. The City has also provided artist-designed bicycle racks for installations in downtown LA and the Vermont Corridor. These bicycle racks are intended to contribute to the identity of the local neighborhood or district through public art. In addition, LADOT is testing a pilot program to retrofit used meter posts with bicycle racks in locations where “smart meters” are being installed to maintain bicycle parking in these areas.



Photo: Agustin Barajas

*Photo Credit: Agustin Barajas*



*Photo Credit: Allison Manushking*

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Racks are placed in areas that are visible to the public and that avoid conflicts with pedestrians and parked vehicles, usually near the curb and away from but visible to bus stops or crosswalks. LADOT provides resources to register for sidewalk bike rack installation and offers tips on locking bicycles to minimize theft on its website; [bicyclela.org](http://bicyclela.org).

The City Council recently approved a Bicycle Corral pilot program along York Boulevard between Avenue 50 and Avenue 56. A Bicycle Corral replaces one on-street vehicle parking space with multiple bicycle parking spaces, gives bikes a designated place, acknowledges their importance, and keeps sidewalks clear for safe walking. With a successful pilot project, this form of bicycle parking may be replicated to other parts of the City.

### **Bicycle Parking in Private Development**

The City of Los Angeles currently mandates the provision of off-street bicycle parking spaces and facilities for employee showers and lockers. Bicycle parking must be provided at a ratio of two percent of the number of auto parking spaces in commercial and industrial zones with non-residential uses which exceed 10,000 square feet and at all City-owned and operated properties over 10,000 square feet. Specific standards for the facilities can be found in LAMC Sections 12.21 A.16 and 12.21 A.4(c). This 2010 Plan includes programs to expand bicycle parking requirements in non-residential public and private developments and proposes to expand bicycle parking requirements to include residential multi-family developments.





## Equity: Transit

Bicycle ridership can be increased by providing connections to transit, providing bicycle facilities at transit stations, and assuring that bicycles can be carried on buses and trains. The majority of Los Angeles residents and employees live and/or work within a five mile radius of a transit station. For many, two and a half to five miles is a reasonable distance to bicycle especially if there are safe and comfortable bikeway facilities along their route. But, even the most ideal bicycling conditions may not encourage someone to ride their bicycle to or from transit if there are not facilities at the stop/station and/or their home and/or workplace to store a bicycle, or if it is not feasible to transport a bicycle on the bus or train. Currently, only Metrolink and Metro's Red Line trains permit bicycles on-board during peak commute hours. Fortunately in the past years, the City of Los Angeles and the many transit providers in the region have greatly expanded the storage capacity of many of the transit stations, have added carrying capacity to all buses and trains and are beginning to incorporate additional amenities at stations that support a number of transportation modes.

Bicycle racks and/or lockers are available at many of Metro's 60 light rail and subway stations and at the City's five Metrolink Stations in the Valley. The location of bicycle parking facilities at Metro Rail and Busway Stations is noted on the "Bike Lockers and Racks on Metro Map" in Appendix C. The City's Commuter Express fleet vehicles, which connect commuters from all regions of the City to employment centers, include front-mounted bicycle racks with capacity for two bicycles each with plans to upgrade capacity to racks that hold three bicycles when equipment upgrades are made. Most other regional and municipal bus operators serving the City of Los Angeles also provide front-mounted bicycle racks. Wherever possible, bicycle parking facilities are included with major transit projects such as the Metro Orange Line and the future Exposition Light Rail and Metro Gold Line Eastside Extension. This 2010 Plan also promotes a newer type of shared facility; a Bicycle-Transit Only bus lane to increase bicycle access on existing Metro Rapid bus corridors.

These very welcome facilities have of course increased demand for bicycling which in turn has expanded demand for additional storage and carrying capacity. As a result this 2010 Plan puts in place additional programs to encourage Metro and Metrolink to expand carrying capacity from two to three bicycles on buses, to lift time of day and carrying capacity restrictions on trains, to allow bicycles on buses in special circumstances, and to include additional amenities at transit stations.





*Photo Credit: GreenLA Girl*



## Mobility Hubs Example



Looking North from Pico Blvd



Looking West from Figueroa Street

Source: Deborah Murphy, Urban Design + Planning CRA/LA.

Figueroa Corridor Bike Station Cycling Enhancements

Exhibit III-A4a : Conceptual design - Perspective views of Bike Station from Pico Blvd and Figueroa Street.

## Clean Mobility and Multi-Mobility Hubs

There are now more than 60 fixed transit stations located within the City of Los Angeles. The stations serve as destination or departure points for travelers who typically still need to go some distance from the station to reach their final destination. This additional travel can be accommodated by bus, bicycle, taxi, shuttle, skateboard, car or scooter. It goes without saying that each of these transit riders will end or begin their transit trip as pedestrians, regardless of whichever additional travel mode they might utilize. To support this confluence of travel modes there is increasing interest in developing transit hubs at select stations to provide transit riders with a full complement of travel options and services.

The 2010 Plan designates several locations as either a Clean Mobility or Multi-Mobility Hub, as seen on Appendix D, Map 2a. A mobility hub provides car share and vehicle charging stations, and a variety of services oriented to bicyclists including attendant operated showers, restrooms, bicycle repair, and bicycle lockers. A Multi-Mobility Hub (M-M Hub) is similar to a Clean-Mobility Hub (C-M Hub) except that it would not provide attendants to oversee the bicycle locker and storage areas nor would it typically have restrooms and showers.

The first C-M Hub in Los Angeles was identified in the Environmental Impact Report for the Exposition Light Rail Line. This C-M Hub will be constructed at the Venice/Robertson station which is the terminus of the first phase of the Exposition Line. Several additional M-M Hubs are currently planned for Staples Center, the Civic Center area and Union Station.

Implementation mechanisms of the C-M and M-M Hubs are described in Chapter 5: Implementation.



## Encouragement

The 2010 Plan includes a number of programs to bolster increased support for bicycling and encourage both the avid and novice bicyclist. Over the years thousands have participated in free summer public bicycle rides led by, on various occasions, the Mayor, City Attorney, and Councilmember Tom LaBonge. In 1994 the City initiated Bike to Work Day which grew into Bike to Work Week and now includes a variety of activities including the Annual Bike to Work Day on the third Thursday in May. The City also provides maps that illustrate the location of various bicycle facilities and maintains a website at: [bicyclela.org](http://bicyclela.org) which includes current information on road safety, future improvements, events, network maps, and maintenance activities. The 2010 Plan continues these activities but also promotes a Monthly Car Free Day to encourage bicycling, transit, and walking as alternatives to the car, and supports Ciclovias whereby the City partners with local organizations to close select local and/or arterial roads on designated weekends and/or holidays to provide bicyclists, walkers, skaters and others a car-free recreational opportunity.



Photo Credit: Yasuko Fujisawa





*Photo Credit: Allison Manushkin*

## Education

Bicycle education remains critical to the goal of expanding bicycle use. The 2010 Plan includes a number of programs targeting youth, motorists, bus drivers, truck drivers, and taxi operators. All groups need to learn how to safely navigate where cars, trucks and bicycles coexist. All groups need to be knowledgeable about the rights and responsibilities of bicyclists on the road.

With increasing bicycle ridership, the potential for conflicts between bicyclists and motorists has grown. These conflicts may be ameliorated through education on the part of both the motorist and the bicyclist, so that each respects the other as a user of the road. The City of Los Angeles provides motorist and bicyclist education programs, described below, conducted primarily through the Department of Transportation (DOT), the Police Department (LAPD), and the Los Angeles Unified School District (LAUSD).

### School Bicycle Safety and Transit Education Program

Since 1983, the City of Los Angeles has provided bicycle safety education services to children through its School Bicycle Safety and Transit Education program. The program is managed by DOT and focuses on bicycle and pedestrian safety while also providing information about transit to its young participants. Since its inception, the project has served millions of children between the ages of four and thirteen and continues to reach children in the Los Angeles Unified School District and some private schools. The 2010 annual project budget is approximately \$450,000 and is projected to provide bicycle safety education to 200,000 children this school year.

### Bicycle Los Angeles Safety Training/Youth Education Sports

Originally funded through a transportation grant, the City of Los Angeles developed and provided funding for the Bicycle Los Angeles Safety Training program. Now completely sanctioned and supervised by the Los Angeles Unified School District through its police on-campus program, the project provides bicycle safety training and a citation diversion program for youth violators, as well as teaching riding skills to junior high and high school students.



Photo Credit: Allison Manushkin



Photo Credit: Allison Manushkin

## Enforcement

Effective enforcement helps to ensure a safe bicycling environment for riders of all experience levels. One objective of this Plan is reduce the number of bicycle collisions. This section puts particular emphasis on the documentation of collisions so that areas with a greater number of collisions can receive focused attention through improvements targeted to these locations. Many such programs are already in place such as the LAPD Officer Bicycle Education Program and the Watch the Road Campaign, described below. The 2010 Plan adds additional programs to increase the deployment of LAPD officers on the City's bicycle paths, to train officers on bicyclists rights and responsibilities, to train officers and the Bureau of Sanitation's truck drivers to identify bicycle lane parking violations and issue citations, and to develop a Bicycle Incident Reporting mechanism to allow bicyclists to report aggressive behavior by motorists.

### LAPD Officer Bicycle Education Program

In an effort to educate adult bicyclists and encourage the enforcement of bicycling laws, a cooperative program between the Los Angeles Police Department (LAPD) and the Los Angeles Department of Transportation (LADOT) has been developed to provide additional bicycling education to LAPD officers as well as to produce materials regarding bicycling laws for distribution to the public. Materials include a roll call training module for LAPD officers, as well as materials for distribution to the public such as a safety brochure and pocket guide to bicyclists' legal rights and responsibilities.

### Watch the Road Campaign

The Watch the Road Program is a general traffic safety campaign intended to enhance safety for all users of the transportation system, including bicyclists. The program focuses on the top ten roadway user bad behaviors including: speeding; aggressive driving; inattentive driving; driving or cycling through red lights; DUI; not yielding to pedestrians; walking without looking; walking outside crosswalks; bicycling against traffic; and not wearing seat belts.







*Photo Credit: Devan Wells*



## Engineering and Maintenance

Encouraging a range of bicyclists to navigate the City's streets depends on quality and well-maintained streets with smooth pavement that are free of potholes, include clear signage about route turns, intersections, mileage, detours, obstacles or road constrictions and nearby destinations, and have adequate nighttime street lighting. Without these necessary improvements the bicyclist's journey can be hazardous and frustrating and can result in unnecessary collisions, conflicts, or delays. This Plan includes a number of programs aimed at remedying these issues.

## Economic

Adequate funding and a clearly established methodology to prioritize spending are keys to ensuring the successful implementation of bicycle facilities and programs. All facets of the 2010 Plan have costs, whether it is education programs, construction of a bicycle path, public outreach, adding bicycle parking or making a map. Limited funding requires that choices be made. In order to maximize funding and invest money most effectively the economic objective has a two-pronged focus. Firstly, it is focused on programs that increase the level of monies which the City can attract to further the 2010 Plan's multiple goals. And secondly, it establishes criteria for the prioritization of bicycle funding for capital projects through the Bicycle Funding Priority Grading System and Selection Process described in Chapter 4.

## Evaluation and Cooperation

At the heart of any successful program is a method to monitor and evaluate success. The Plan provides the necessary measurement tools to review the Plan's progress as well as improve the quantity and quality of bikeway facilities across local boundaries.

The Bicycle Advisory Committee which was established in 1973 has been an ongoing participant in past efforts to evaluate the progress of the 1977 and 1996 Plans' implementation. This 2010 Plan bolsters the BAC's efforts by establishing a Bicycle Plan Implementation Team (BPIT) that will provide support and oversight of on-going programs and provide a platform to discuss issues and projects that cross jurisdictional boundaries. The BPIT will include City staff as well as representatives from the bicycling community. In order to fully measure the impacts of the 2010 Plan identifies a number of programs which will enable the City to measure its progress and assess needed modifications.

## **Environment: Bicycles along Beaches, Rivers, At-Grade-Fixed-Transit Corridors and in City and State Parks**

This section of Chapter 4 includes programs that support the Green Network described at length in the early paragraphs of this Chapter as well as programs that support future research and analysis to identify potential off-road bicycling options.

While there has long been interest among bicyclists to access paths and trails/utility roads within the City's parks, bicycle use is a particular challenge in Los Angeles Parks as there is both limited park acreage and limited funds to adequately provide the variety of uses requested by the City's population. For the purposes of this discussion off-road paths and trails have been separated into two categories. The first includes paths, typically paved, within City parks and built to recognized standards such as the paths in Sepulveda Basin and the Harbor area. The second, and arguably the more contentious, include dirt trails in City parks that are typically located within hillside and/or mountain areas.

### **Paved Paths**

The 2010 Plan recognizes the multiple demands and inherent conflicts that arise when mingling various users on a single path. The 2010 Plan, however further recognizes the benefits of utilizing path segments to facilitate neighborhood connectivity to nearby community services. In many instances the local street grid terminates at a local park and a bicyclist needing to access a school or library on the far side of the park, without the ability to bicycle through the park, is forced to circumnavigate the park to reach his/her destination. Unfortunately, many times this detour requires the bicyclist (often a child) to leave the comfort of the local street grid and navigate a more heavily traveled corridor. The 2010 Plan promotes continued use of the Recreation and Parks Commission's authority to grant, in special circumstances, permission for a particular pathway to be designated for local bicycle activity.

### **Trails**

The Los Angeles Municipal Code currently prohibits the use of bicycles on unpaved roads and trails unless the Recreation and Parks Commission has designated a particular facility for bicycle use. To date only the trails in Mandeville Canyon have been designated for off-road bicycle use. When the City acquired Mandeville Canyon it was required to continue allowing off-road bicycling on the trail. Fortunately, off-road bicycle enthusiasts do have access to numerous off-road recreational and transportation oriented facilities in the nearby Santa Monica Mountains. Locally, the Mountains Recreation Conservation Authority (MRCA), in partnership with the National Park Service, the California Department of Parks and Recreation and the Mountains Restoration Trust has designated a Backbone Trail as well as several Multi-Use Trails; which serve multiple user types. In the eastern portion of the Santa Monica Mountains the Multi-Use Trails accommodate only bicyclists and hikers but in the western portion the designation permits horses along with bicyclists and hikers. The majority of the trails are limited exclusively for hikers but the designation of selected trails has directed mountain bicyclists to those trails and reduced the migration of mountain bicyclists onto trails where they are not permitted.

In acknowledgement of the growing demand for mountain bike trails the 1996 Bicycle Plan (1996 Plan) adopted a policy to study the feasibility of designating and developing bicycle trails in Griffith Park, Ernest Debs Park, the Recreation and Parks Department's Valley and Pacific Regions, DWP access and public utility rights of ways, and mountain fireroads. The 1996 Plan also contained implementation programs related to off-road bicycle use. Those programs directed staff to review the feasibility of establishing mountain bicycle trails and to prepare guidelines and standards for such trails. To support this endorsement eight public meetings were held between 1999 and 2000 to discuss mountain bicycles and the off-road policy. During that time the participating groups, which included the City of Los Angeles Bicycle Advisory Committee, Concerned Off-Road Bicyclists Association, the Los Angeles Recreation and Parks Commission, and the Mountain Bicycle Access Working Group could not reach a consensus and the use of mountain bicycles on city trails was not found feasible. As a part of the public participation process for the 2010 Plan additional meetings that included representatives from mountain bicyclist, hiker, and equestrian groups were held to determine, yet again, if common ground could be identified. While it is beyond the scope of this Plan and the current financial means of the City to propose a network of unpaved mountain bicycling paths, policies and programs have been identified in Chapter 4, Section 3.3 to address the continued pressures of multiple user types on the City's limited public park hillside and mountain areas.



*Photo Credit: Will Campbell*







# Chapter 4

## Policies and Programs

This Chapter presents the goals, objectives, policies, and programs that together comprise the strategies to increase, improve and enhance bicycling in the City as a safe, healthy, and enjoyable means of transportation and recreation. Toward this end, the 2010 Plan is guided by these following three major citywide goals.



Increase the number and types of bicyclists who bicycle in the City.



Make every street a safe place to ride a bicycle.



Make the City of Los Angeles a bicycle-friendly community.

The Chapter is organized into three sections, one for each goal. Each goal has three to four objectives and each objective is accompanied by several policies and corresponding programs, which reinforce the values described in Chapter 3 (equity, encouragement, education, enforcement, engineering/maintenance, economics, evaluation and the environment)

**Goal:** *A goal is a statement that describes a desired future condition or "end" state. Goals are change- and outcome-oriented, achievable over time, though not driven by funding.*

**Objective:** *An objective is a specified end, condition or state that is an intermediate step towards attaining a goal. Each objective is followed by a series of policies and programs whose results provide the basis for measuring the success of the objective.*

**Policy:** *A policy is a clear statement that guides a specific course of action for decision-makers to achieve a desired goal. Policies may refer to existing programs or call for establishment of new ones. Each policy in the Plan is labeled according to the goal and objective it refers to, and a unique number (1.1.1). Each policy is followed by its corresponding implementation program(s) (i.e., A, B).*

**Program:** *A Program is an action, procedure, program, or technique that carries out the 2010 Bicycle Plan goals, objectives and policies. The Plan will be implemented through a comprehensive program of activities which will include capital investment, amendments to existing ordinances and guidelines, modifications to City procedures and the development approval process, bicycle safety and promotion and interagency coordination. Each program includes a description of the program, identifies the department or departments who will be responsible for its implementation, objectives for the program and a timetable in which the program should be implemented. Each program is individually labeled (i.e. .A) and grouped under its associated policy. Several of the Programs of this Plan are established and implemented by adoption of this Plan. In most instances however, implementation will be dependent upon adequate funding and close coordination of City and other interagency efforts.*

# Purpose

To increase, improve and enhance bicycling in the City as a safe, healthy and enjoyable means of transportation and recreation.

## Goals



Increase the number and type of bicyclists in the City.



Make every street a safe place to ride a bicycle.



Make the City of Los Angeles a bicycle friendly community.

## Objectives

### **Equity: Street Access 1.1**

Develop a comprehensive transportation and recreation bikeway system for the City of Los Angeles.

### **Equity: Parking 1.2**

Provide convenient and secure bicycle parking and support facilities Citywide.

### **Equity: Transit 1.3**

Expand bicyclists' mobility through the integration of bicycling into the City's transit system.

### **Encouragement 1.4**

Encourage and facilitate bicycle riding as an important mode of personal transportation as well as a pleasant source of outdoor exercise.

### **Education 2.1**

Disseminate information and provide comprehensive education programs for bicyclists, motorists and the general public to improve bicycle safety and encourage increased bicycle use.

### **Enforcement 2.2**

Assure a safe bicycling environment for riders of all experience levels.

### **Engineering 2.3**

Design and maintain all streets so that they incorporate Complete Street standards.

### **Economic: Funding 3.1**

Assure that the City has adequate staff to qualify for, receive, and administer its fair share of regional, state and federal funding for bikeway construction, support amenities, bikeway maintenance and bicycle education with high quality projects.

### **Evaluation and Cooperation 3.2**

Monitor and evaluate the performance and completion of Bicycle Plan policies and programs.

### **Environment: Bicycles along Beaches, Rivers, Fixed Transit Corridors and in City and State Parks 3.3**

Provide a safe and comfortable Class I Bikeway and park experience for all users.





## GOAL 1

Increase the number and types of bicyclists who bicycle in the City.

*Support the goal of increasing bicycle activity by increasing access to public rights-of-way, by providing additional bicycle parking, by facilitating access to and amenities around transit, and by increasing programs and educational activities that encourage bicycling and diminish obstacles.*

### Equity: Street Access Objective 1.1

Develop a comprehensive transportation and recreation bikeway system for the City of Los Angeles.

#### Policy 1.1.1

Establish bicycling as an officially designated mode of transportation in the State of California.

#### Program

##### A. Traffic Definition

Lobby the State of California to update the legal definition of “traffic” in the California Vehicle Code to include bicycles.

Lead Department: Council, CLA, Mayor

Objective: Create parity for the bicycle as a transportation vehicle.

Schedule: 2011-2012

#### Policy 1.1.2

Reduce automobile trips and greenhouse gas emissions by making 5% of all daily trips and

3% of commute trips bicycle trips by 2020.

#### Programs

##### A. Backbone Network

Establish a Backbone Network at an approximately two mile grid to provide access to Downtown Los Angeles, Regional and Community Centers, and community and citywide amenities on Secondary and Major Class II roadway facilities as well as off-road public rights-of-way.

Lead Department: DOT, DPW, LAPD.

Objective: Complete build out of network within 35 years.

Schedule: 2010-2045

##### B. Neighborhood Network

Establish a Neighborhood Network at an approximately one mile grid to provide local and regional access to community and citywide amenities on “bicycle friendly” local and collector streets as well as off-road public rights-of-way.

Lead Department: DCP, DOT, DWP

Objective: Complete build-out of network within 35 years.

Schedule: 2011-2045

##### C. Five Year Implementation Strategy

In collaboration with the community and Council Districts develop a comprehensive implementation strategy to identify funds and construct at least 200 miles of bicycle facilities on the Backbone and Neighborhood Networks every five years until complete. Bikeways that fill geographic gaps in either of the Networks and/or are in neighborhoods with low-income populations will be prioritized. See 3.1.4.A and B. Develop and post on-line a matrix of the selected bikeways that includes the current roadway width, number of lanes, number of on-street parking spaces, traffic volumes and other opportunities and challenges.

Lead Department: DCP, DOT, DWP, in collaboration with the Bicycle Plan

Implementation Team (BPIT). (See 3.2.1.B)

Objective: Complete the Backbone and Neighborhood Networks as quickly as funding and staffing permits.

Schedule: 2011-2045

#### **D. Comprehensive Safe Routes to School Strategic Plan**

In partnership with the community and local schools, identify, develop and adopt a Comprehensive Safe Routes to School Strategic Plan (Strategic Plan). Utilize safety and accident data (SWITRS, See Program 2.2.4A), as the underlying basis for the Citywide Safe Routes to School Strategic Plan. Further prioritization of the selection of routes should also consider: project location in/near the Backbone and Neighborhood Networks, percentage of students receiving free and reduced lunch (California Department of Education) and having a high number of students that live within a two-mile radius of the school. Coordinate program with LAUSD.

Lead Department: DCP, DOT, with support from LAPD, and LAUSD

Objective: Develop a Strategic Plan to guide the City in its Safe Routes to School Applications and other related funding efforts.

Schedule: 2011-2035

#### **Policy 1.1.3**

Add neighborhood linkages to the Neighborhood Networks.

#### **Programs**

##### **A. School Parent Organizations**

Collaborate with parents and community organizations to identify and develop bikeway infrastructure improvements around all Los Angeles elementary, middle, and high schools with support and coordination from LAUSD.

Lead Department : DCP, DOT

Objective: Increase bicycle facilities to and from

local schools and adjoining neighborhoods.

Schedule: 2012-2020

#### **B. Downtown Bikeways**

Plan and implement series of interconnected bikeways within the downtown area to link bicyclists to employment, retail, residential, civic, cultural and recreational destination. Downtown bikeways should be integrated with the existing Downtown Street Standards.

Lead Department: DCP, DOT

Objective: Increase bicycling within the downtown core by adding bikeway infrastructure and improving safety.

Schedule: 2011-2014

#### **C. Gated Communities**

Encourage community members to work with their Council office, Neighborhood Councils, other community organizations and gated communities to identify opportunities to permit bicycles through gated entryways.

Lead Department: Council offices

Objective: Provide bicyclists with access through gated entryways.

Schedule: 2011-2015.

#### **Policy 1.1.4**

Establish Bicycle Friendly Streets to encourage bicycling on streets with low traffic volumes and slow speeds.

#### **Programs**

##### **A. Bicycle Friendly Streets**

Use a combination of at least two traffic calming, and intersection treatments, in addition to shared pavement markings and signage to discourage non-local motor vehicle traffic and to make it easier and safer for bicyclists and pedestrians to travel on local and collector streets and to cross intersections.

Lead Department: DOT, DPW's Bureau of

Engineering

Objective: Bicycle Friendly Streets.

Schedule: 2011-2035

### Policy 1.1.5

Upgrade Bicycle Routes

#### Program

##### A. Enhanced Bicycle Routes

Upgrade existing routes with shared lane markings and signage to increase motorist awareness of bicycle presence.

Lead Department: DOT

Objective: Improve safety and quality of bicycling experience on Bicycle Routes by increasing motorist awareness of the presence of bicyclists.

Schedule: 2011-2015

### Policy 1.1.6

Increase the number of bicycle lanes and/or improve the quality of the street right of way for bicyclists.

#### Programs

##### A. Major Highway Class II Street Designation Review

In collaboration with bicyclists, community stakeholders, and City departments update the Major Highway Class II roadways, included in the Backbone Network, to include modified street standards that include the addition of bicycle lanes, bicycle-bus-only lanes and/or other engineering treatments.

Lead Department: DCP, DOT, DPW

Objective: Improve safety and quality of bicycling experience on Major Highway Class II roadways.

Schedule: 2010-2020

##### B. Secondary Road Mobility

In collaboration with bicyclists, community stakeholders, and City departments, update Secondary streets included in either the Backbone and/or Neighborhood Bikeway Network, to incorporate modified street standards that include the addition of bicycle lanes and/or other engineering treatments.

Lead Department: DCP, DOT, DPW

Objective: Improve safety and quality of bicycling experience on Secondary Streets.

Schedule: 2011-2035

##### C. Local and Collector Street Mobility

In collaboration with bicyclists, community stakeholders, and City departments update Local and Collector streets included in either the Backbone and/or Neighborhood Networks, to incorporate modified street standards that could include reduced street lane width, the addition of bicycle lanes, Bicycle Friendly Street Features or wide curb lanes.

Lead Department: DCP, DOT, DPW

Objective: Improve safety and quality of bicycling experience on Local and Collector Streets.

Schedule: 2011-2035

##### D. Modified Cross-Sections

Using the Modified Cross-Sections included in the Technical Design Handbook and Street Classification Study, develop and adopt new street cross-sections that accommodate a range of bikeway facilities as Standard Cross-Sections in the City's Standard Plans.

Lead Department: DCP, DOT, DPW

Objective: Adopt Standard Cross-Sections that incorporate bikeway facilities.

Schedule: 2011-2012.

##### E. Appropriate Speed Limits for Complete Streets

Develop and advocate for state legislation to support reducing posted traffic speeds. Revised methodology should account for all roadway



users (including pedestrians and bicyclists), adjacent land uses, and street user demand.

Lead Department: Mayor's Office, CLA

Objective: Ensure safer streets for all users, provide enforcement for consistent travel speeds, and increase survival rates of pedestrians and bicyclists in case of collision.

Schedule: 2011-2015 (or until achieved)

### **Policy 1.1.7**

Increase the number of bicycle lanes.

#### **Programs**

##### **A. Transit/Bikeway Priority Streets**

Establish Major Class II Streets within the Backbone Network that have Rapid Bus Service as Transit/Bicycle Priority Streets. Review the need for a peak hour travel lane on Transit/Bicycle Priority Streets. Install transit/bicycle only lanes where feasible.

Lead Department: DOT

Objective: Increase opportunity for bicycle lanes on Major Class II roadways.

Schedule: 2011-2020

##### **B. Protected Bicycle Lanes**

Develop a pilot project to test the use of a protected bicycle lane on Major Class II or secondary roadways. (See Technical Design Handbook)

Lead Department: DOT, DCP

Objective: Improve bicycle safety on heavily traveled roadways.

Schedule: 2011-2013

##### **C. Street Parking Removal**

Identify favorable opportunities to remove parking to accommodate bicycle lanes.

Lead Department: DOT, DCP, City Council

Objective: Increase miles of bicycle lanes.

Schedule: 2011-2015

##### **D. Street Resurfacing Bicycle Lane Opportunities**

Identify opportunities to install bicycle lanes and/or other bicycle- supportive engineering enhancements on street segments longer than one-quarter mile that have been included in the annual street paving schedule (See 2.3.5.C). City staff shall work with the Bicycle Plan Implementation Team (BPIT- see 3.2.2 A) to identify potential design solutions. If staff, determines that a bicycle lane is not feasible, than the BPIT shall be notified in a timely manner prior to the street resurfacing.

Lead Department: DOT

Objective: Increase cost effective means of installing bicycle lanes on City streets.

Schedule: 2011-ongoing

### **Policy 1.1.8**

Require a public hearing for the proposed removal of an existing bicycle lane or path.

#### **Program**

##### **A. Public Hearing Process for Bicycle Facility Removal.**

Require a public hearing with the City Council's Transportation Committee for any proposed bicycle lane, path removal or street improvement that would preclude an existing or designated bicycle lane or path.

Lead Department: DOT, DCP, City Attorney, CLA

Objective: Provide opportunity for public input prior to the removal of an existing bicycle lane or path.

Schedule: 2011-2035

## Equity: Parking Objective 1.2

Encourage the use of bicycles for everyday transportation by ensuring the provision of convenient and secure bicycle parking and support facilities citywide.

### Policy 1.2.1

Develop and implement citywide bicycle rack and location standards.

#### Program

##### A. Bicycle Parking Equipment Standards

Develop and adopt bicycle parking equipment standards for bicycle parking equipment installed within the public right-of-way or private developments. Post an educational information guide on the City website.

Lead Department: DOT, DPW-BOE

Improve the quality of bicycle parking equipment and increase awareness of the new equipment standards to developers and property owners.

Schedule: 2011

### Policy 1.2.2

Increase the supply of quality bicycle parking in public rights of way.

#### Programs

##### A. Sidewalk Bicycle Parking Program

Continue to install and maintain City-standard bicycle racks on sidewalks. Identify areas with demand for bicycle racks and implement an installation schedule. Prioritize the installation of racks on streets where businesses request the racks as well as within either the Backbone and/or Neighborhood Networks.

Lead Department: DOT

Objective: Add 400 additional racks per year.

Schedule: 2011-2020

##### B. On-Street Bicycle Parking Corrals

Develop bicycle parking corrals in on-street parking spaces as a public-private partnership. Implement a pilot installation and evaluate the feasibility and criteria for widespread use. Prioritize Network streets as potential locations for corrals as well as locations where businesses request a corral.

Lead Department: DOT, DPW-BSS

Objective: Increase availability of bicycle parking by providing bicycle parking opportunities in existing on-street automobile parking spaces.

Schedule: 2011-2015

### Policy 1.2.3

Increase the supply of quality bicycle parking in City facilities.

#### Programs

##### A. Bicycle Parking Standards in City Facilities.

Amend LAMC 12.21-A 16(a) to modify the bicycle parking requirement at all City owned and operated facilities to provide bicycle parking space for 5% of employees and estimated daily visitors with a minimum of five (5) bicycle parking spaces.

Lead Department: DOT, DCP

Objective: Increase bicycle parking

Schedule: 2011-2012

##### B. City Owned, Operated and Leased Facility Bicycle Parking Review.

Review all City-owned, operated, and leased facilities for compliance with the city's bicycle parking standards. Increase bicycle parking to meet LAMC requirements where deficiencies are identified.

Lead Department: DOT, GSD

Objective: Provide adequate bicycle parking at all city owned, operated and leased facilities.

Schedule: 2012-2015

### **C. Recreation and Parks Bicycle Parking Standards**

Provide approved bicycle parking at recreation centers and parks. Review all recreation centers and parks for compliance with the City's design standards and ordinances related to bicycle parking. Create solutions and seek funding to bring the facilities into compliance.

Lead Department: RAP

Objective: Increase the availability of bicycle parking at all City owned recreation and parks facilities by 2015.

Schedule: 2011-2015

#### **Policy 1.2.4**

Ensure the maintenance of safe, secure bicycle parking facilities.

#### **Programs**

##### **A. Bicycle Parking Handbook**

Provide information to developers, property managers and building inspectors about bicycle parking and support facilities to comply with LAMC bicycle parking requirements.

Lead Department: DOT

Objective: Provide and disseminate handbooks on the web.

Schedule: 2012-2015

##### **B. Bicycle Parking Training**

Develop a Bicycle Parking Requirement Training Presentation and post on the Bicycle website. Provide training sessions to the Department of Building and Safety and other City staff on the LAMC bicycle parking requirements.

Lead Department: DOT, DBS

Objective: Improve knowledge of bicycle parking standards and requirements among building inspectors in order to appropriately enforce bicycle parking requirements.

Schedule: 2012-2015

#### **Policy 1.2.5**

Encourage the installation of bicycle parking at public schools, colleges, and universities.

#### **Programs**

##### **A. Public School Bicycle Parking**

Encourage the Los Angeles Unified School District (LAUSD) to install quality bicycle parking at public schools within the City of Los Angeles. Work with LAUSD to identify bicycle parking needs and solutions.

Lead Department: DOT

Objective: Install bicycle parking spaces on school property, in front of the school entrance or other visible high traffic location, for at least 5% of the student body and faculty.

Schedule: 2011-2020

##### **B. Community College Bicycle Parking**

Encourage the Los Angeles Community College District (LACCD) to install quality bicycle parking on school property, in front of the school entrance or other visible high traffic location, at all community colleges within the City of Los Angeles. Work with LACCD to identify bicycle parking needs and solutions.

Lead Department: DOT

Objective: Install bicycle parking spaces for at least 5% of the student body and faculty.

Schedule: 2011-2020

##### **C. University Bicycle Parking**

Encourage local four year universities to install quality bicycle parking on school property, in front of the school entrance or other visible high traffic location, on all campus locations within the City of Los Angeles. Conduct outreach to identify bicycle parking needs and solutions.

Lead Department: DOT

Objective: Install bicycle parking spaces for at least 5% of the student body and faculty.

Schedule: 2015-2020

### Policy 1.2.6

Encourage the installation of bicycle parking at a visible, high traffic location, at all Federal, State and County facilities located within the City of Los Angeles.

#### Programs

##### A. Federal Facility Parking

Coordinate with Federal officials to encourage the installation of quality bicycle parking at all Federal facilities within the City of Los Angeles, to meet or exceed City bicycle parking standards. Conduct outreach to identify bicycle parking needs and solutions.

Lead Department: DOT

Objective: Install bicycle parking spaces for at least 5% of the vehicle parking.

Schedule: 2012-2017

##### B. State Facility Parking

Coordinate with State officials to encourage the installation of quality bicycle parking at all State facilities within the City of Los Angeles to meet or exceed City bicycle parking standards. Conduct outreach to identify bicycle parking needs and solutions.

Lead Department: DOT

Objective: Install bicycle parking spaces for at least 5% of the vehicle parking.

Schedule: 2012-2017

##### C. County Parking

Coordinate with County officials to encourage the installation of good quality parking at all County facilities within the City of Los Angeles to meet or exceed City bicycle parking standards. Conduct outreach to identify bicycle parking needs and solutions.

Lead Department: DOT

Objective: Install bicycle parking spaces for at

least 5% of the vehicle parking.

Schedule: 2012-2017

### Policy 1.2.7

Develop and implement citywide bicycling parking standards.

#### Programs

##### A. Private Property Bicycle Parking Standard for Commercial and Industrial projects.

Amend LAMC Section 12.21 A.16 to increase the City's requirements for bicycle racks, lockers, and shower amenities in commercial and industrial projects. Require design and placement to comply with City standards.

Lead Department: DCP, DOT

Objective: Increase the supply of secure bicycle parking.

Schedule: 2011-2015

##### B. Private Property Bicycle Parking Standard for Residential projects.

Amend LAMC Section 12.21 A1b to augment the City's bicycle parking requirements to include bicycle racks and lockers in multi-family residential projects.

Lead Department: DCP, DOT

Objective: Increase the supply of secure bicycle parking in appropriate key, safe locations.

Schedule: 2011-2015

##### C. Parking at Existing Major Destinations

Work with special event facilities' managers to provide convenient, secure, good quality and well-lit bicycle parking facilities at special event venues such as Dodger Stadium, the Staples Center/LA Convention Center, and the LA Memorial Coliseum/Sports Arena.

Lead Department: DOT

Objective: Provide and/or increase the supply of good quality bicycle parking at major event



destinations.

Schedule: 2011-2015

#### **D. Transit Oriented District Plans**

Review and update all existing Transit Oriented District Plans (TODs) to include bicycle access and amenities.

Lead Department: DCP

Objective: Increase the supply of safe and visible bicycle parking in TOD areas.

Schedule: 2012-2015

#### **E. TDM Ordinance Revision**

Include bicycle parking and other bicycle use incentives as a Transportation Demand Management (TDM) measure to mitigate traffic/vehicle trips for purposes of CEQA compliance for commercial, residential and mixed-use development projects.

Lead Department: DCP, DOT

Objective: Update TDM measures to include bicycle parking and other incentives to increase bicycle use for commuting.

Schedule: 2011-2015

#### **F. Expanded Bicycle Parking Standard**

Explore the feasibility of permitting reduced vehicle parking in exchange for bicycle parking especially in locations along the Networks, adjacent to a transit station and/or at commercial and manufacturing locations.

Lead Department: DCP

Objective: Increase the availability of bicycle parking and reduce the quantity of vehicle parking.

Schedule: 2011-2013

#### **G. Storage of Bicycles Inside Buildings**

Establish an ordinance to require building owners and managers to permit bicycles to enter and be stored inside a building when safe and secure bicycle parking is not available elsewhere on the premises.

Lead Department: DCP, DBS

Objective: Expand the bicycle parking options for bicyclists.

Schedule: 2011-2013

#### **Policy 1.2.8**

Encourage creative solutions to increase the availability of bicycle parking.

#### **Programs**

##### **A. Artist Designed Bicycle Parking Solutions**

Support and develop creative bicycle parking solutions in the public rights-of-way.

Lead Department: DOT, DPW-BOE/BSS

Objective: Create guidelines within bike parking standards.

Schedule: 2015-2020

##### **B. Parking Meter Posts**

As existing parking meters are eliminated citywide maintain a minimum of 25% of existing parking meter posts and retrofit for bicycle parking.

Lead Department: DOT

Objective: Increase on-street bicycle parking locations.

Schedule: 2011-2015

##### **C. Street Furniture Definition**

Include bicycle racks in the definition of street furniture to utilize streetscape funding opportunities.

Lead Department: DPW, City Attorney

Objective: Increase funding options for bicycle racks.

Schedule: 2011-2015

### Equity: Transit Objective 1.3

Expand bicyclists' range and mobility options through the integration of bicycling into the region's transit system.

#### Policy 1.3.1

Incorporate bikeways into transit projects that include an exclusive right-of-way.

##### Programs

#### A. Bikeways along Exclusive Transit Rights-of-Way

Continue to include Class I bicycle paths adjacent to new exclusive surface transit rights-of-way. Identify all major transit projects under development and work with Metro and other appropriate agencies to incorporate bikeways in new transit projects.

Lead Department: DOT, DCP

Objective: Construct Class I bicycle paths along transit rights-of-way in coordination with transit projects.

Schedule: 2011-2025

#### B. Bicycle-Transit-Only Lanes

Allow bicycle use on surface street bus-only lanes as permitted by California Vehicle Code (CVC) 21202. Work with Metro to develop bus/bike-only lane standards to accommodate bicycles and install appropriate signage and on-street markings. Identify corridors on the Backbone Network that are potential candidates for the inclusion of bus-only lanes.

Lead Department: DOT, DCP

Objective: Install Bicycle-Transit-Only Lanes.

Schedule: 2011-2025

#### Policy 1.3.2

Maximize Bicycle Amenities at Transit Stops and Stations.

##### Programs

#### A. Clean Mobility Hubs (Bicycle Commuter Center )

Work with transit agencies and adjacent property owners to include attendant operated bicycle storage, lockers, restrooms and showers, and bicycle rental and repair facilities, and WiFi at all transit stations identified as Clean Mobility Hubs on the Bicycle Plan Maps. Coordinate and support Metro efforts as necessary. Leverage the role of the Mayor and the Mayor's appointees as members of the Metro board and/or the Metro Technical Advisory Committee to increase support for the development of bicycle amenities at transit locations. Prioritize the development of Hubs that are located on the Backbone Network.

Lead Department: City Council, DCP, DOT, Office of the Mayor

Objective: Install attendant operated bicycle services at all Clean Mobility Centers.

Schedule: 2011-2020

#### B. Multi-Mobility Hubs

Work with transit agencies and adjacent property owners to include short term and long term secure bicycle storage, bicycle rental facilities, lockers, bicycle maps and WiFi at transit stations identified as Multi-Mobility Hubs on the Bicycle Plan Maps. (See Backbone and Neighborhood Networks Maps) Coordinate and support Metro efforts as necessary.

Lead Department: City Council, DOT, DCP, Office of the Mayor

Objective: Install bicycle facilities at all Multi-Mobility Hubs.

Schedule: 2012-2017

#### C. Transit Station Bicycle Parking

Work with Metro, other transit agencies and adjacent property owners to include bicycle parking racks and lockers at all existing and new transit stations identified as Bicycle Transit Hubs in the Metro Bicycle Transportation Strategic Plan (BTSP).

Lead Department: DOT, DCP

Objective: Increase bicycle parking at transit hubs.

Schedule: 2011-2020

#### **D. Bus Stop Bicycle Parking**

Work with Metro, local transit agencies and adjacent property owners to include bicycle parking racks within 50' of all existing and new transit stops. Prioritize bus stops that are located on either the Backbone or Neighborhood Networks.

Lead Department: DOT, DCP

Objective: Increase bicycle parking at bus stops.

Schedule: 2012-2030

### **Policy 1.3.3**

Establish a bicycle sharing network around each of the Multi-Mobility Hubs and Clean Mobility Hubs.

#### **Program**

##### **A. Bicycle Sharing Network**

Work with private enterprise and local and county agencies to develop a bicycle sharing network at each of the Multi-Mobility Hubs and Clean Mobility Hubs identified on the Bicycle Plan Maps.

Lead Department: DOT, City Council, Office of the Mayor

Objective: Increase short term bicycle use within a five mile distance of Multi-Mobility Hubs and Clean Mobility Hubs.

Schedule: 2011-2015

### **Policy 1.3.4**

Accommodate bicycles on transit vehicles and taxis

#### **Programs**

##### **A. Bus-Bicycle Racks**

Work with Metro and local transit agencies to include bicycle racks on Metro and municipal bus lines that operate within the City of Los Angeles.

Lead Department: DOT, City Council, Office of the Mayor

Objective: Increase bicycle carrying capacity on all local buses.

Schedule: 2011-2015

##### **B. Three-Bicycle Racks**

Work with Metro and local transit agencies to increase the bicycle carrying capacity of all Metro and Municipal bus lines operating within the City of Los Angeles from two to three. Prioritize the upgrade on bus lines that are along the Backbone Network.

Lead Department: DOT, City Council, Office of the Mayor

Objective: Increase the bicycle carrying capacity of all buses with racks.

Schedule: 2011-2015

##### **C. Advocacy for Bicycles on Trains**

Work with Metro to create opportunities for increasing the capacity for bicycles on all Metro trains and lift time of day and capacity restrictions

Lead Department: DOT, City Council, Office of the Mayor, BAC

Objective: Increase bicycle access to trains.

Schedule: 2011-2015

##### **D. Operator Judgement (Bicycles on Buses)**

Work with Metro and local transit operators in the City of Los Angeles to allow operators to make decisions regarding allowing bicycles on buses when space on bus allows, racks are full, service is last of the day or in inclement weather.

Lead Department: DOT, City Council, Office of the Mayor, BAC

Objective: Increase bicycle access to buses.

Schedule: 2011-2015

### **E. Turnstile Design**

Work with Metro and local transit agencies to ensure that all turnstiles can accommodate a bicycle.

Lead Department: DOT, City Council, Office of the Mayor, BAC

Objective: Facilitate bicycle access to transit.

Schedule: 2011-2015

### **F. Bicycle Racks on Taxis**

Investigate the integration of bicycles with taxi service by adding bicycle racks on to all of the taxi cabs that are permitted through the Department of Transportation.

Lead Department: DOT

Objective: Seamlessly incorporate bicycle travel with the use of taxis. Expand the range of bicycle mobility.

Schedule: 2011-2015.

## **Encouragement Objective 1.4**

Encourage and facilitate bicycle riding as an important mode of personal transportation as well as a pleasant source of outdoor exercise.

### **Policy 1.4.1**

Promote bicycling through City-sponsored events and through non-profit entities.

### **Programs**

#### **A. Monthly Car-Free Days**

Coordinate a Car-Free Day on a regular basis each month. Provide information and incentives for drivers to leave the car behind for a day. Post materials at BicycleLA.org Website and work with Metro and City Council offices to provide incentives and disseminate materials to event participants.

Lead Department: Mayor's Office, City Council, DOT, DPW

Objective: Reduce car use by 5%.

Schedule: 2011-2015

### **B. Los Angeles Bicycle Tours**

Organize, lead and provide support to -local and citywide bicycle tours as either stand alone events or in conjunction with events such as the Los Angeles Marathon and the Los Angeles Triathlon. Identify and work with potential community partners including bicycle advocacy groups, neighborhood councils, neighborhood preservation groups, historical societies, merchant groups and Business Improvement Districts (BIDs). Encourage the selection of streets on the Backbone and Neighborhood Networks for the tours.

Lead Department: Mayor's Office, City Council, DOT, RAP, LAPD, Fire

Objective: Support at least one event annually.

Schedule: 2012-2017

### **C. Recreational Rides**

Organize and lead local and citywide recreational rides ranging from 5-30 miles. Prioritize routes that include the Green, Backbone or Neighborhood Networks.

Lead Department: RAP, Mayor's Office, City Council, DOT, DPW.

Objective: Increase participants by 10% each year.

Schedule: 2012-2017

### **D. Summer Ride Series**

Organize, lead and provide support to local and citywide bicycle rides. Prioritize routes that include the Backbone and Neighborhood Networks.

Lead Department: RAP, Mayor's Office, City Council, DOT, LAPD.

Objective: Increase participants by 10% each year.

Schedule: 2012-2017



### **E. Ciclovias (Car free Weekend/Holiday Roadways)**

Provide support to local organizations to organize Ciclovias (a series of local and citywide road closure events) on weekends and holidays to provide bicyclists, walkers, skaters and others a recreational opportunity by creating public space for non-vehicular activities within the roadway area. Encourage the selection of streets on the Backbone and Neighborhood Networks.

Lead Department: Mayor's Office, City Council, RAP, DOT, DPW, LAPD, LAFD

Objective: Increase participants by 5% each event.

Schedule: 2010-2035

### **F. Non-Profit Coordination**

Support and expand local non-profit efforts to coordinate and plan bicycle events. Encourage the use of streets on the Backbone and Neighborhood Network for the events.

Lead Department: Mayor's office, DOT

Objective: Support multiple events.

Schedule: 2011-2035

### **G. Streets as Public Space**

Encourage the use of Backbone and Neighborhood Streets for a variety of events such as Farmers' Markets, Art Cycles and other bicycling events, parades, races, and art fairs to promote public awareness of streets as public space.

Lead Department: Mayor's Office, City Council, RAP, DOT, DPW, LAPD, LAFD Fire.

Objective: Expand the use of public streets for multiple users.

Schedule: 2011-2035

### **Policy 1.4.2**

Provide widespread and user-friendly information on the location and quality of bicycle facilities.

## **Programs**

### **A. Citywide Bikeways Map**

Provide and distribute physical and electronic copies of the Citywide Bikeway Map that includes information about the Green, Backbone and Neighborhood Networks and locations of the Clean Mobility Hubs, Multi-Mobility Hubs and bus stops with bicycle amenities.

Lead Department: DOT

Objective: To provide information that will assist cyclists to find secure bicycle parking and other bicycle amenities.

Schedule: 2011-2035

### **B. Neighborhood Network Maps**

Work with local Business Improvement Districts, Neighborhood Councils, and Chambers of Commerce to develop, fund, and distribute physical and electronic maps of localized portions of the Citywide Bikeways Map.

Lead Department: DOT

Objective: To provide information that will assist bicyclists to find secure bicycle parking and other bicycle amenities.

Schedule: 2011-2015

### **C. Public Bicycle Parking Facility Map and Database**

Develop and provide a map that includes the public bicycle parking facilities. Maintain a database of the facilities that includes the number of bicycle parking spaces, ownership of the facility, and other amenities.

Lead Department: DOT

Objective: Distribute maps on website to download or view and distribute physical copies at local venues.

Schedule: 2011-2015

### **D. City's Bikeway Plan Website**

Continue to maintain the BicycleLA.org website to provide bicyclists with current information about safety, future improvements,

events, network maps, route information and suggestions, maintenance and other relevant information. Provide enhanced tools for hazard reporting, mapping of reported hazards and tracking of repairs.

Lead Department: DOT

Objective: Increase visitors to download or view on-line information.

Schedule: 2011-2035

### **E. Existing Bikeways Map**

Update and make public the Existing Bikeways Map each year. The map should identify the type, location, and number of new miles that were added within the past year as well as other bikeway modifications that may have occurred.

Lead Department: DOT

Objective: Provide communities with up- to-date information on additions and other changes that have occurred within the past year.

Schedule: 2011-2035

### **F. Poster Campaigns**

Promote awareness of the Green, Backbone, and Neighborhood Networks through the installation of posters and/or banners. Installation could be either temporary or permanent and could be used to inform the community about the Networks as well as focus on a variety of topics including safe driving practices, and or bicycling encouragement.

Lead Department: DOT

Objective: Expand community awareness of the Networks.

Schedule: 2011-2035

### **G. Wayfinding (see also Program 2.3.3. E)**

Develop and install wayfinding signage along the Green, Backbone, and Neighborhood Networks to inform bicyclists of key destinations along, or adjacent to, their route.

Lead Department: DOT

Objective: Facilitate and promote bicycle access

to key destinations.

Schedule: 2011-2035

### **Policy 1.4.3**

Promote bicycle commuting and encourage safe bicycling practices in Los Angeles.

### **Program**

#### **A. Bicycle Ambassador Program**

Develop a Bicycle Ambassador Program to attend public events including health fairs and community bike rodeos to broaden awareness of bicycling and provide safety information. Work with the City and Metro to disseminate information about the Program

Lead Department: DOT

Objective: Disseminate two Ambassadors to 10 promotional events each year.

Schedule 2011-2020

#### **B. Bicycle Buddy Program**

Develop and operate a Bicycle Buddy Program to encourage the use of the bicycle for commuting purposes on the Backbone Network. Work with the City and Metro to disseminate information about the Program.

Lead Department: DOT

Objective: Schedule 2011-2020

#### **C. Bike to Work/School Week**

Expand the City of Los Angeles Bike-to-Work Week efforts by providing City sponsored events and pit stops in every council district and supporting bicycling to school for students. Provide information, support services and incentives for bicyclists to bicycle to work and school. Distribute materials and post information on Bicycle Website.

Lead Department: Mayor's Office, City Council, DOT, DPW

Objective: Increase Bike to Work/School week registration by 5% each year.

Schedule: 2012-2035



## GOAL 2

Make every street a safe place to ride a bicycle.

*Create safe streets by increasing education efforts for motorists, bicyclists, and pedestrians; by increasing awareness of bicyclists' rights and responsibilities; by increasing enforcement of moving violations; by focusing improvements at locations with high rates of collisions, and by ensuring that all streets, particularly those with bicycle facilities, are regularly maintained to provide a safe and comfortable environment for bicyclists.*

### Education Objective 2.1

Disseminate information and provide comprehensive education programs for motorists, bicyclists, and the general public to improve bicycle safety and encourage increased bicycle use.

#### Policy 2.1.1

Support and encourage third-party bicycle education classes.

#### Program

##### A. Safe Cycling Classes

Work with local bicycle advocacy organizations to develop, promote and support a series of bicycle education classes. Include information on safe bicycling, bicycle maintenance and security. Reach out to LAUSD to ensure that schools are promoting these classes to interested students.

Lead Department: DOT

Objective: Hold regular clinics that provide training and outreach to stakeholders, including LAUSD, to ensure they are aware of the training sessions.

Schedule: 2012-2017

#### Policy 2.1.2

Educate motorists, bicyclists, and the general public on bicycle safety and maintenance.

#### Programs

##### A. Bicycle Safety Literature and Distribution Program

Develop Bicycle Safety literature and implement a strategy to distribute the literature to motorists, city employees, bus, truck and heavy vehicle operators. Work with Metro and local transit agencies to disseminate information about the Program.

Lead Department: DOT, Personnel, POLA

Objective: Distribute literature to City employees, motorists, and bus, truck and heavy vehicle operators each year.

Schedule: 2012-2035

##### B. Bicycle Safety and Maintenance Program

Develop curriculum and conduct classes for bicyclists at City recreation centers and libraries and work with LAUSD to help with outreach on availability of classes.

Lead Department: DOT, RAP

Objective: Provide classes each year that funding is available.

Schedule: 2012-2017

##### C. DMV Bicycle Education Program

Encourage the Department of Motor Vehicles to develop a bicycle safety/awareness component to be incorporated into motorist education program, distribute informational pamphlets to motorists about bicyclists' rights and responsibilities, and include information as to how to safely share the road with bicyclists.

Lead Department: Mayor, CLA, Council, DOT

Objective: Distribute pamphlets each year to motorists when registering or renewing their vehicle registration and when receiving or renewing their drivers license.

Schedule: 2012-2035

#### **D. Poster Campaigns (see Program 1.4.2.F.)**

Develop and install posters and banners along the Networks to expand motorist awareness of bicyclists.

Objective: Educate motorists on the role of the Networks, the presence of bicyclists and their legitimate right to the road.

Lead Department: DOT

Schedule: 2012-2035

#### **E. Bicycle Facility Education**

Develop educational campaigns for the public about the benefits and use of bikeways engineering treatments or innovative bikeway pilot projects. Education can be done through door hangers, "coming soon" signs, and other on-street, online and innovative media tools. Prior outreach should be conducted, as well, when implementing new bicycle infrastructure.

Lead Department: DOT.

Objective: Educate and work with communities and neighborhoods to support bicycling and bicycle infrastructure improvements. Promote safe cycling and driving practices.

Schedule: 2011-2030

#### **Policy 2.1.3**

Educate school children on safe bicycling behavior.

#### **Programs**

##### **A. Bicycle Safety and Transit Education Program**

In coordination with LAUSD, continue the City's

School Bicycle Safety and Transit Education program that provides education and bicycle and pedestrian safety information about transit to children between the ages of four and thirteen at LAUSD schools.

Lead Department: DOT

Objective: Educate 200,000 children each year on bicycle and pedestrian safety and provide information about transit. Provide a yearly report to the City Council Transportation Committee on the number of children educated.

Schedule: 2011-2015

#### **Policy 2.1.4**

Increase bicycle education at Los Angeles schools.

#### **Programs**

##### **A. Bicycle School Pilot Program.**

Work with local parent organizations, LAUSD, school police and traffic officers in middle schools to develop education and encouragement programs, provide better bicycle parking, and identify preferred bikeway routes to school. Identify locations and implement pilot programs.

Lead Department: DOT, LAPD

Objective: Increase bicycle facilities and programs at middle schools and within two miles of school.

Schedule: 2013-2017

##### **B. Safety Pilot Program**

Work with local parent organizations at elementary and middle schools to educate parents on safe motoring behavior around bicyclists. Identify various locations for pilot programs.

Lead Department: DOT, LAPD

Objective: Disseminate motorist education materials via school children.

Schedule: 2011-2015



### Policy 2.1.5

Educate law enforcement, heavy duty bus and truck operators, taxis, motorists, all city employees and bicyclists on bicyclist rights and safe monitoring behavior around bicyclists.

#### Programs

##### **A. Bicycle Safety Public Service Announcements**

Continue to produce a series of Bicycle Safety Public Service Announcements (PSA's) for distribution on television, radio, and outdoor signage. Launch a new PSA annually during Bicycle to Work (and School) Week and disseminate through media outlets. and local blogs.

Lead Department: DOT, LAPD, ITA

Objective: Produce PSA's each year. Air PSA's on television, on radio, and install ads at outdoor signage locations.

Schedule: 2010-2015

##### **B. Bicyclists and the Law**

Develop and distribute Bicyclists and the Law education material.

Lead Department: DOT, LAPD

Objective: Distribute pamphlets each year to LAPD Patrol Officers, motorists, bicyclists, and heavy duty vehicle and bus operators and post information on the website.

Schedule: 2011-2015

##### **C. Bus Operator and Ambulance, Taxi, and Truck Driver Training Program**

Develop and conduct a City-approved training program to ensure that bus (DASH), ambulance, taxi, and truck drivers are educated on bicyclists' rights and responsibilities and safe motoring around bicyclists. Provide a yearly report to the City Council Transportation Committee on the number of drivers educated.

Lead Department: DOT, POLA

Objective: Provide training each year.

Schedule: 2011-2015

##### **D. Transit Operators**

Encourage Metro and other transit agencies to incorporate a bicycle safety/awareness component into their driver training programs. Provide a yearly report to the City Council Transportation Committee on the number of drivers educated.

Lead Department: DOT, Metro, Council, Mayor

Objective: Provide operational training to all drivers annually.

Schedule: 2011-2015

##### **E. Violator Training Program for Bicyclists**

Work with the Los Angeles County Superior Court system to develop a program that offers bicycle safety training to bicyclists receiving bicycle- related citations in lieu of paying a fine or other pecuniary penalties.

Lead Department: DOT, City Attorney

Objective: Educate motorists and bicyclists and reduce citations and collisions.

Schedule: 2012-2017

##### **F. Violator Training Program for Motorists**

Work with the Los Angeles County Superior Court system to develop a program that offers bicycle safety training to motorists receiving bicycle related citations or involved in automobile and bicycle related collisions.

Lead Department: City Attorney

Objective: Educate motorists and reduce citations and collisions.

Schedule: 2012-2017

## Enforcement Objective 2.2.

Reduce the number of annual bicycle collisions (bicycle to pedestrian, bicycle to bicycle, bicycle to automobile) to zero.

### Policy 2.2.1

Enforce traffic laws to enhance bicyclists' safety by consistently citing both motor vehicle operators and bicyclists and ensuring speed enforcement in school zones. and motor vehicle operators.

#### Programs

##### A. LAPD Bicycle Peace Officer Standards and Training Program

Train officers on bicyclists' rights and responsibilities and bicycle/vehicle collision evaluation.

Lead Department: LAPD, DOT

Objective: Train officers annually.

Schedule: 2011-2015

##### B. Sting Operations

Target unsafe bicycle riding, and motorist driving behavior especially on the Backbone and Neighborhood Networks and in school zones, as resources permit. Publicize the stings to improve bicycle and motorist interaction.

Lead Department: LAPD

Objective: Improve safety for bicyclists.

Schedule: 2011-2020

### Policy 2.2.2

Reduce impediments to bicycle lane mobility and safety.

#### Program

##### A. Bicycle Lane Enforcement Program

Train LAPD Traffic Officers and Bureau of Sanitation drivers to identify bicycle lane parking violations and obstructions and issue citations.

Lead Department: LAPD, DOT, DPW-Bureau of Sanitation.

Objective: Reduce obstructions in bicycle lanes

Schedule: 2011-2015

### Policy 2.2.3

Increase motorist awareness of the potential presence of bicyclists.

#### Programs

##### A. Watch the Road Campaign.

Continue to participate in and enhance the Watch the Road Campaign dedicated to increasing traffic safety and mobility in the Los Angeles region by working with the community.

Lead Department: LAPD and DOT

Objective: Enhance safety for all users of the transportation system, including bicyclists.

Schedule: 2010-2015

##### B. Share the Road Campaign

Expand the Share the Road campaign to include advertisements in multiple languages, particularly Spanish. Install campaign materials primarily on streets within the Backbone Network and around schools.

Lead Department: DOT

Objective: Expand driver awareness of how to safely share the road safely with bicyclists including information on appropriate passing distance and behavior.

Schedule: 2011-2015

### Policy 2.2.4

Expand awareness of locations with auto, pedestrian, and bicycle collisions.

#### Program

##### A. Hot Zones Map

Develop and update annually a GIS- based map of crash data from the Statewide Integrated

traffic Records System (SWITRS) and other applicable sources (as available) that reflects the number and types of all collisions (auto, bicyclist, pedestrian) that are occurring throughout the City. Coordinate this effort with support and data from LAPD, LAFD, and LAUSD.

Lead Department: DCP

Objective: Direct funding dollars and improvements to locations with moderate to high SWITRS collisions particularly those along the Backbone Network and in school zones.

Schedule: 2011-2035

### Policy 2.2.5

Establish and promote a hotline for reporting behavior or conditions that endanger bicyclists, and incidents and conflicts involving motorists and bicyclists.

#### Program

##### **A. Bicycle Infrastructure and Incident Reporting Program**

Develop and maintain a program to allow bicyclists and other concerned citizens to report infrastructure obstacles or failures or to report aggressive behavior by motorists or motorist harassment.

Lead Department: LAPD

Objective: Reduce bicyclist/motorist collisions.

Schedule: 2011-2015

### Engineering and Maintenance Objective 2.3.

Design and maintain all streets so that they incorporate Complete Street standards

#### Policy 2.3.1

Upgrade bridges, intersections, freeway ramps, tunnels, and grade separations that impede safe and convenient bicycle passage.

#### Programs

##### **A. Signalization Program**

Upgrade, repair, or adjust intersection signalization to accommodate bicyclists in accordance with CA MUTCD. Focus initial efforts on the Backbone and Neighborhood Networks.

Lead Department: DOT

Objective: Upgrade, repair, or adjust signals per year per Caltrans Guidelines.

Schedule: 2010-2015

##### **B. Bridge Design Program**

Consider bicycle facilities when designing new or retrofitting bridges. Any modifications to an existing bridge that has been designated, or determined to be eligible, as a Historic Resource should avoid adversely impacting character-defining features. Particular attention should be made to bridge underpasses that cross existing or future bicycle paths to ensure that the paths are integrated into the design and construction of the facility.

Lead Department: DOT, DPW's Bureau of Engineering

Objective: Increase bicycle access on grade separated projects.

Schedule: 2010-2015

##### **C. Street Grate Installation**

Retrofit street grates to Bicycle Safe Standard

Design. Focus initial efforts on the Backbone and Neighborhood Networks.

Lead Department: DPW-BOE and BSS

Objective: Seek funding and replace all grates that do not comply with the current standards.

Schedule: 2010-2015

#### **D. Signal Timing**

Identify opportunities to re-time street signals to reduce speeds and create smoother traffic throughput. Prioritize re-timing efforts on streets within the Backbone Network. In addition, identify opportunities to re-time street signals to allow longer crossing times for cyclists and pedestrians where the Neighborhood Network streets cross large intersections or major thoroughfares.

Lead Department: DOT

Objective; Provide a safer bicycle cycling environment and improve interaction between cyclists, buses, and cars as well as reduce risks to pedestrians.

#### **Policy 2.3.2**

Mitigate obstacles or obstructions that impede safe and convenient bicycle passage.

#### **Programs**

##### **A. Detour Strategies for Bicyclists**

Develop and implement standard detour strategies for construction projects to ensure safe passage of bicyclists per the California MUTCD.

Lead Department: DOT, DPW-CA

Objective: Train contract administration project managers to include bicycle detours.

Schedule: 2010-2015

##### **B. Construction Zone Standards for Bicyclists**

Implement standard procedures as defined in the MUTCD to ensure safe bicycle travel

through construction zones. Disseminate standard procedures to appropriate city street maintenance personnel and contractors.

Lead Department: DOT, DPW-Contract Administration.

Objective: Reduce bicycle collisions.

Schedule: 2010-2015

##### **C. Hazards and Closures Alert Program**

Prepare strategies and procedures to alert bicyclists about construction zones, closures, detours or obstacles through the use of temporary road signage, media, and web banners.

Lead Department: DOT, DPW-BOE, ITA

Objective: Develop media list. Distribute announcement to all media outlets and websites.

Schedule: 2010-2015

##### **D. Warning System**

Identify bicycle travel impediments such as tunnels or bridges and install any needed warning signage and flashing beacons to warn motorists of the presence of bicyclists. Prioritize the installation of warning signals at impediments along the Backbone Network.

Lead Department: DOT

Objective: Improve and ensure neighborhood connectivity and reduce bicycle collisions near freeway entrances, exit ramps, tunnels bridges or other roadway infrastructure impediments.

Schedule: 2011-2015

##### **E. Caltrans Design**

Work with Caltrans to design improvements to freeway entrances and exit ramps to warn motorists of the presence of bicyclists.

Lead Department: DOT

Objective: Reduce bicycle collisions near freeway entrances and exit ramps.

Schedule: 2011-2016



### Policy 2.3.3

Provide and maintain bicycle sensitive signal detectors, informational signage, and lighting, along City bikeways.

#### Programs

##### A. Bicycle-Sensitive Detectors

Continue to install bicycle sensitive signal detectors at all actuated signal controlled intersections. Include pavement markings for bicyclists.

Lead Department: DOT

Objective: Provide bicyclists a mechanism to insure that signal recognizes their presence.

Schedule 2011-2015

##### B. Bicycle Network Wayfinding Program

Develop and install a bicycle wayfinding signage program to indicate route turns, the presence of intersecting bikeways, streets and distances to nearby local and major destinations along the Backbone and Neighborhood Networks.

Lead Department: DOT

Objective: Assist bicyclists to safely and efficiently navigate the bicycle network. Alert motorists to alternative travel option.

Schedule: 2011-2015

##### C. Bicycle Street Lighting

Prioritize the installation of bicycle-scale lighting on the Backbone and Neighborhood Network streets.

Lead Department: DPW-BSL

Objective: Ensure a safe and comfortable street experience for all pedestrians, bicyclists, and transit users alike.

Schedule: 2012-2020

### Policy 2.3.4

Maintain and facilitate best bikeway design practices.

#### Programs

##### A. Facility Design Standards

Develop and maintain City of Los Angeles Bikeway Design Standards for inclusion in DOT Manual of Policies and Programs (MPP).

Lead Department: DOT

Objective: Ensure the consistent design and installation of standard facilities.

Schedule: 2011-2015

##### B. Bicycle Facility Design Review Program

Review and approve all bikeway plans. Work with designers citywide to ensure that bicycle facilities are incorporated into projects per the DOT MPP.

Lead Department: DOT

Objective: Ensure the consistent design and installation of bicycle facilities. Schedule: 2010-2015

##### C. Bikeway Project Status Meetings.

Continue to host monthly meetings with various design staff on ongoing progress of bikeway projects.

Lead Department: DOT

Objective: Hold monthly meetings with City staff throughout year.

Schedule: 2011-2020

##### D. Innovative Bicycle Priorities and Procedures Review Program

Develop new and innovative bikeway designs and treatments through the California Traffic Control Devices Committee (CTCDC) and the Federal Highway Administration (FHWA) approved experiment process.

Lead Department: DOT

Objective: Increase the variety of designs and treatments to address unique design challenges and include pilot projects in the first 5-Year Implementation Strategy.

Schedule: 2011-2015

## **E. Design Workshops**

Host/participate in workshops on bicycle facility design.

Lead Department: DOT

Objective: Train all DOT and DPW design staff in current and future bikeway design standards.

Schedule: 2012-2035

## **Policy 2.3.5**

Maintain safe bikeways through regular inspection and maintenance.

### **Programs**

#### **A. Bikeways Visual Inspection Program**

Incorporate into the City's Pavement Management System (PMS) provisions for visual inspections of all on-street bikeways and develop a database to track observations. Provide mechanisms for public input on conditions.

Lead Department: DOT, DPW-BSS

Objective: Increase maintenance of bikeway surface quality.

Schedule: 2012-2020

#### **B. Bikeways Maintenance Program**

Establish and implement a routine maintenance program which responds to the visual inspection reports for repair/removal of potential hazards, including but not limited to potholes, railroad crossings, inappropriate/unsafe storm drain grates, and gutter cracks. Prioritize the maintenance of streets on the Backbone and Neighborhood Networks.

Lead Department: DOT, DPW, RAP, POLA, LAWA

Objective: Reduce bicycle collisions resulting from poor roadway surface quality.

Schedule: 2011-2015

#### **C. Street Paving Schedule**

Make the annual street paving schedule public and easily accessible on the Bureau of

Street Services' website homepage. The list is subject to change throughout the year and a disclosure statement will be included on the website to alert the public regarding potential changes. Prioritize paving on the Backbone and Neighborhood Network streets.

Lead Department: DPW-BSS

Objective: Provide information to the public on the timetable for street paving.

Schedule: 2011-2030

## **D. Routine Bikeways Maintenance Program**

Establish a routine maintenance (sweeping, litter removal, repainting of striping and signage) schedule for all roads with bikeways. Prioritize streets on the Backbone and Neighborhood Networks. Publish a schedule on-line and make it easily accessible from the DPW and RAP (and other agency) websites.

Lead Department: DOT, DPW, RAP, POLA, LAWA

Objective: Reduce bicycle collisions resulting from poor bikeway maintenance.

Schedule: 2011-2015

## **E. Service Request Form**

Continue the Service Request Form for the public to inform the Department of Public Works about obstacles, hazards, and needed improvements and repairs.

Lead Department: DPW

Objective: Increase reporting by the public and response by Bureau of Sanitation to maintenance issues. Monitor number of Service Request Forms submitted.

Schedule: 2011-2015

## **F. Street Lighting of Bikeways**

Regularly monitor and maintain adequate street lighting along bikeways. Review lighting conditions and repair lighting as necessary. Prioritize maintenance of lighting on streets along the Backbone and Neighborhood Networks. Provide a way for the public to inform DPW-BSL through an existing on-line service request form

and 311 when lighting is out.

Lead Department: DPW-BSL

Objective: Reduce bicycle collisions due to poor street lighting performance.

Schedule: 2011-2015

### **G. Maintenance Workshops**

Host/participate in workshops for bicycle-specific maintenance on streets and bikeways.

Lead Department: DPW-BSS, BOE

Objective: Train maintenance staff in bikeway maintenance standards.

Schedule: 2012-2035



## **GOAL 3**

*Make the City of Los Angeles a bicycle-friendly community.*

*Support the goal of making the City a bicycle-friendly community , for all users regardless of age or abilities by increasing funding opportunities to increase the quality and quantity of bicycle facilities and amenities, by developing monitoring and evaluation programs to ensure that the goals, objectives, policies, and programs of the 2010 Bicycle Plan are fully implemented; and by providing a safe, encouraging, and comfortable experience for all users.*

### **Economic Objective: 3.1**

Assure that the City has adequate staff to qualify for, receive, and administer its fair share of regional, state and federal funding for bikeway construction, support amenities, bikeway maintenance and bicycle education with high quality projects.

#### **Policy 3.1.1**

Actively pursue diverse sources of funding for the implementation of the 2010 Plan programs and infrastructure improvements. Prioritize projects that are identified in the current Five- Year Implementation Strategy, the Green Network, especially where there is overlap with

the Comprehensive Strategic Safe Routes to School Plan (once completed), or the Hot Zones Map (Program 2.2.4.A. once completed).

## **Programs**

### **A. Citywide Funding Coordination Program**

Coordinate bicycle funding applications and project proposals among adjacent cities and appropriate State and County agencies, City departments, elected officials, and the BAC to ensure maximum leveraging of funds from outside sources. Actively pursue input from BAC and the public on ideas for needed bikeway projects and programs.

Lead Department: DOT

Objective: Streamline and maximize funding opportunities.

Schedule: 2011-2035

### **B. Auxiliary Fund Review**

Evaluate opportunities to utilize existing City auxiliary funds (street furniture funds, etc) for bicycle plan improvements.

Lead Department: DOT, BSS, CLA

Objective: Increase the pool of public funds for bicycle plan implementation.

Schedule: 2011-2035

### **C. Application for Metro Call for Projects Funding**

Aggressively pursue funding for the 2010 Plan implementation by obtaining Metro Call for Projects funding.

Lead Department: DOT, DWP

Objective: Obtain funding for bikeway infrastructure projects through all eligible modal categories. Report yearly to City Council Transportation Committee on how many projects were submitted and how many were funded.

Schedule: 2011-2015

### **D. Measure R Local Bicycle Return Funding**

Set aside a minimum of 10 percent of Measure

R local return funds for bikeway infrastructure projects. Maximize investments by funding bicycle and pedestrian improvements along the same corridor.

Lead Department: DOT

Objective: Spend annual allotment of Measure R funds on bicycle support activities. Provide dedicated revenue stream for bicycle and pedestrian infrastructure improvements.

Schedule: 2011-2040

### **E. Application for State Safe Routes to School Funding**

Aggressively pursue funding for bikeway infrastructure and education projects near schools with competitive and through grant proposals. Applications should be selected from the list of projects prioritized by the Comprehensive Safe Routes to School Strategic Plan (See Program 1.1.2.D). Coordinate with LAUSD.

Lead Department: DOT, DPW

Objective: Apply for funding each year. Report yearly to City Council Transportation Committee on how many projects were submitted and how many were funded.

Schedule: 2011-2035

### **F. Application for Office of Traffic Safety Grants**

Aggressively pursue funding for bicycle safety programs.

Lead Department: DPW, DOT

Objective: Apply for funding each year. Report yearly to City Council Transportation Committee on how many projects were submitted and how many were funded.

Schedule: 2011-2015

### **G. Application for Caltrans Highway Safety Improvement Program**

Aggressively pursue funding for projects that will improve safety for all road users, especially bicyclists.



Lead Department: DOT, DWP

Objective: Apply for funding each year. Report yearly to City Council Transportation Committee on how many projects were submitted and how many were funded.

Schedule: 2011-2035

#### **H. Application for Federal Safe Routes to School Funding**

Aggressively pursue funding for bikeway infrastructure and education projects near schools with competitive and thorough grant proposals. Applications should be selected from the list of projects prioritized by the Comprehensive Safe Routes to School Strategic Plan (See Program 1.1.2.D). Coordinate with LAUSD.

Lead Department: DOT, DWP

Objective: Apply for funding each year. Report yearly to City Council Transportation Committee on how many projects were submitted and how many were funded.

Schedule: 2011-2035

#### **I. Application for Prop A Funds**

Aggressively pursue funding for the development of bicycle lanes on the Mulholland Scenic Parkway and other eligible roadways.

Lead Department: RAP

Objective: Apply for funding each year. Report yearly to City Council Transportation Committee on how many projects were submitted and how many were funded.

Schedule: 2011-2015

#### **J. Application for Coastal Conservancy Funds**

Aggressively pursue funding for qualifying bicycle facility projects.

Lead Department: RAP

Objective: Apply for funding each year. Report yearly to City Council Transportation Committee on how many projects were submitted and how

many were funded.

Schedule: 2011-2015

#### **K. Federal Lands Highway Funds**

Aggressively pursue funding for qualifying bicycle facility projects to provide access to and within the Santa Monica Mountains.

Lead Department: RAP

Objective: Apply for funding each year. Report yearly to City Council Transportation Committee on how many projects were submitted and how many were funded.

Schedule: 2011-2015

#### **L. Unique Funding Opportunities**

Identify and pursue local, state, and or federal funding opportunities that encourage and reward multi-purpose and multi-benefit applications. In particular, explore funding for any of the Networks which would permit the City to apply for a bundled application that might include capital improvement monies as well as funds for education, encouragement, and or enforcement programs.

Lead Department: DOT, DPW-BOE, DCP, CRA

Objective: Maximize opportunities to fund multi-purpose programs and therefore leverage benefits for a wider variety of the bicycling public and other non-motoring transportation uses.

Schedule: 2011-2015

#### **M. Measure R Local Return Funding**

Identify and pursue opportunities to incorporate bicycle improvements and/or programs into any and all Measure R Local Return projects.

Lead Department: DOT, DPW, DCP, Mayor's Office

Objective: Maximize opportunities to develop complete street solutions to any and all transportation related projects.

Schedule: 2011-2040.

### Policy 3.1.2

Advocate for maintenance of and increases to federal, state and local funding allocations for bicycle programs and infrastructure projects.

#### Programs

##### **A. Advocacy for Federal Funding for Bicycle Programs and Infrastructure Projects**

Aggressively advocate for continued and expanded federal funding for bicycle programs and infrastructure projects in Federal transportation legislation. Ensure representation on bicycling issues with the City's Sacramento and DC lobbyist. Regularly brief the City's Sacramento and Washington lobbyists on the status of the Bicycle Plan, Five-Year Implementation Plan, and bicycle-related funding opportunities to ensure that bicyclists' needs are included within the City's legislative program.

Lead Department: Office of the Mayor and City Council, CLA

Objective: Increase federal funding for bicycle programs and infrastructure projects in federal transportation bills and allocations.

Schedule: 2011-2015

##### **B. Advocacy for State Funding for Bicycle Programs and Infrastructure Projects**

Aggressively advocate for continued and expanded state funding for bicycle programs and infrastructure projects in California transportation legislation.

Lead Department: Office of the Mayor and City Council, CLA

Objective: Increase state funding for bicycle programs and infrastructure projects.

Schedule: 2011-2015

##### **C. Advocacy for Regional Funding for Bicycle Programs and Infrastructure Projects**

Aggressively advocate for the creation of regional planning support and funding for bicycle programs, staffing and infrastructure projects.

Lead Department: Office of the Mayor and City Council, CLA

Objective: Increase regional funding, staff, and provide better regional coordination for bicycle programs and infrastructure projects.

Schedule: 2011-2015

##### **D. Advocacy for Local Funding for Bicycle Programs and Infrastructure Projects**

Aggressively advocate for continued and expanded local funding for bicycle programs, staffing and infrastructure projects.

Lead Department: Office of the Mayor and City Council, CLA

Objective: Increase local funding and staff for bicycle programs and infrastructure projects.

Schedule: 2011-2015

### Policy 3.1.3

Adopt a strategy for project vehicle trips to be mitigated through bicycle plan projects and/or programs.

#### Programs

##### **A. Bicycle Plan Mitigation Fee and Trip Reduction Credit**

Establish a trip-mitigation fee to be used for Bicycle Plan project and program implementation. Establish a process for fair share contributions towards bicycle facilities to be allocated as trip reductions.

Lead Department: DCP, DOT

Objective: Increase implementation of bicycle plan projects and programs.

Schedule: 2011-2035

##### **B. Bicycle Plan Trust Fund**

Establish a trust fund to collect project related trip-mitigation fees to be used for 2010 Plan project and program implementation.

Lead Department: DCP, DOT

Objective: Increase implementation of bicycle

plan projects and programs.

Schedule: 2011-2035

### C. Standard Mitigation Measure Revision

Revise the standard mitigation measures to include contributions to the Bicycle Plan Trust Fund and/or the installation of bicycle facility improvements and/or bicycle amenities such as parking, internal bikeway paths, etc.

Lead Department: DCP, DOT

Objective: Increase opportunity for bicycle facility improvement.

Schedule: 2011-2015

### D. Traffic Study Guidelines Revision

Revise the City's Traffic Study Guidelines to prioritize the installation of bicycle facility improvements as a trip reduction measure.

Lead Department: DOT, DCP

Objective: Increase implementation in new developments.

Schedule: 2011-2015

## Policy 3.1.4

Establish the Bicycle Funding Priority Grading System to prioritize funding applications and City budget allocations to existing and new bikeway facilities including but not limited to bicycle lanes, bicycle parking and showers, signage, intersection improvements, grade separations, street repaving and staffing requirements to support these activities.

### Programs

#### A. Bicycle Funding Priority Grading System

Potential projects for the Five Year Implementation Strategy shall be based upon the 20\* point Grading System described below. Projects that are located within either the Backbone or Neighborhood Networks or School Strategic Plan shall automatically receive 5 points. The strategy emphasizes the importance of providing bikeways within communities with

Low-Income households and one to five points are awarded based upon the percentage of Low-Income Households (<80% AMI) that are located along the bikeway. Additional points may be obtained if the bikeway fills either a corridor or geographic gap. For example, a new project that completes a street segment (which is currently only partially completed) would receive two points but a project that fills a larger system gap would receive five points.

\*The Grading System shall be modified to include SWITRS data as a prioritizing criteria once it is readily available.

Category	Points
<b>Network:</b>	
Backbone	5
Neighborhood	5
School Strategic Plan	5
<b>Low Income Households:</b>	
0-21 %	2
21-40%	4
41-60%	6
61-80%	8
81-100%	10
<b>Gaps:</b>	
Connection, Linear or Corridor	2
Geographic Gap	5

Lead Department: DCP, DOT, DPW-BOE, City Council, Office of the Mayor.

Objective: Develop a prioritization list of bikeways for funding and capital improvements for each Five-Year Implementation Strategy.

Schedule: 2011-2045

#### B. Selection Process

Utilize the Bicycle Funding Priority Grading System in collaboration with a community outreach process to select the next 200 miles of bikeways to be included in the current Five-Year Implementation Strategy.

Lead Department: DCP, DOT, City Council

Objective: Ensure that bikeways are selected for the next Five-Year Implementation Strategy based upon the criteria established by the Bicycle Funding Priority Grading System.

Schedule: 2011-2045

### **C. Street Resurfacing Prioritization**

Utilize the Bicycle Funding Priority Grading System to prioritize streets for resurfacing.

Lead Department: DPW-BSS, City Council

Objective: Ensure that streets on either the Backbone or Neighborhood Networks receive priority for maintenance. Maintain bicycle facilities free of pot holes, cracks and uneven pavement created by transit vehicles.

Schedule: 2011-2045

### **D. Street Tree Prioritization**

Utilize the Bicycle Funding Priority Grading System to prioritize streets for the planting and maintenance of shade trees.

Lead Department: DPW-BSS

Objective: Ensure that streets on either of Backbone or Neighborhood Networks receive priority for shade trees.

Schedule: 2011-2045

### **E. Street Lighting Prioritization**

Utilize the Bicycle Funding Priority Grading System to prioritize streets for the installation and maintenance of street lights.

Lead Department: DPW-BSL

Objective: Ensure that streets on either the Backbone or Neighborhood Networks receive priority for street lighting.

Schedule: 2011-2045

## **Evaluation and Cooperation Objective 3.2.**

Monitor and evaluate the performance and completion of Bicycle Plan policies and programs.

### **Policy 3.2.1**

Maintain a citizen advisory panel to evaluate implementation of the Bicycle Plan.

### **Program**

#### **A. Bicycle Advisory Committee (BAC)**

The BAC is comprised of 19 community members that are appointed by each of the 15 Council members and the Mayor. The BAC holds public meetings every month to work with local bicycle groups, advocates, and activists. Monitor progress of Bicycle Plan Implementation.

Lead Department: City Council, Mayor's office, DOT

Objective: Provides a quarterly update on the progress of the implementation of the Bicycle Plan to the City Council.

Schedule: 2010-2035

### **Policy 3.2.2**

Support and oversee the implementation of the City's Bicycle Plan and coordinate implementation efforts with other cities and agencies as well as interested bicyclists.

### **Program**

#### **A. Bicycle Plan Implementation Team**

Establish a Bicycle Plan Implementation Team (BPIT) comprised of City staff as well as representation from the bicycling community to provide implementation support and oversight of on-going programs. The BPIT shall also meet with the County of Los Angeles, Metro, LAUSD, and other municipalities on an as-needed basis to monitor project activities and provide technical support for issues and projects that cross boundary lines.



Lead Department: DCP, DOT, DPW, (LAPD, RAP, CLA, CAO, and the Mayor's Office as needed)

Objective: Meet quarterly each year, provide regular reports to the Bicycle Advisory Committee and provide quarterly reports to the City Council Transportation Committee.

Schedule: 2011-2035

### Policy 3.2.3

Monitor and participate in regional, state, and federal bicycle facility policy, design planning and development.

#### Programs

##### A. Regional Cooperation

Work cooperatively with adjoining jurisdictions and agencies including the County of Los Angeles, Metro, and the Southern California Agency of Governments (SCAG) to coordinate bicycle planning and implementation activities to ensure connectivity for regionally significant routes. Work to help achieve regional goals, such as SB 375 and identify regionally significant multi-jurisdictional projects for which to pursue funding.

Lead Department: DOT, DCP

Objective: Facilitate regional connectivity.

Schedule: 2011-2035

##### B. Legislation Monitoring

Continually monitor and develop state and federal legislation to support or oppose legislation that could impact 2010 Plan implementation.

Lead Department: DOT, DCP, Mayor's Office, CLA

Objective: Impact legislation to improve bicycle activities.

Schedule: 2011-2035

##### C. Design Standard Monitoring

Continually monitor Federal and State efforts to update bikeway design standards.

Lead Department: DOT

Objective: Influence new Federal and State Standards

Schedule: 2011-2035

### Policy 3.2.4

Evaluate the performance of 2010 Plan policies and programs.

#### Programs

##### A. Collision Data Analysis

Analyze bicycle crash data from the Statewide Integrated Traffic Records System (SWITRS) and other sources to evaluate the impacts of prior improvements. (See Hot Zones Map 2.2.4.A)

Provide a yearly report on the number of bicycle related collisions in the City to the City Council Transportation Committee.

Lead Department: DCP, DOT, with support from LAPD

Objective: Use crash data to identify and determine locations of collision activity each year, recommend and prioritize safety solutions, and evaluate the effectiveness of bicycle plan implementation.

Schedule: 2010-2015

##### B. Database of Bicycle Plan Infrastructure Projects

Develop and maintain a database of all 2010 Plan infrastructure projects and track their progress from design to construction. Utilize counts to assist the Greenhouse Gas Emission Tracking Program. Provide a yearly report on the number of completed bikeway miles and other Plan accomplishments to the City Council Transportation Committee.

Lead Department: DOT, DCP, DPW

Objective: Post project information on website to inform public and allow for the tracking of bicycle plan implementation.

Schedule: 2012-2035

### **C. Bicycle Counts.**

Measure and track bicycle use as a component of all manual and automatic traffic counts.

Lead Department: DOT

Objective: Create and develop a meaningful baseline count of bicycle ridership in the City of Los Angeles in which to then continue to monitor bicycle use and quantify decreases or increases of bicycle activity on particular corridors and use for funding applications and other strategic transportation planning purposes.

Schedule: 2011-2035

### **D. Annual Bicycle Count**

With the assistance of local bicycle groups, Count the number and type (sex, age) of bicyclists traveling on the Networks and other City streets each year. Identify a specific date and locations for the annual count. The number of locations that are included each year should increase as funding increases. Utilize the locations, date, and time of the count conducted by the Los Angeles Bicycle Coalition (LACBC) in 2010 as the baseline.

Lead Department: DOT with assistance from local bicycle groups.

Objective: Quantify the change in the number, sex and age of bicyclists riding in the City over time and provide a tool to measure the effectiveness of bicycle plan implementation.

Schedule: 2011-2035

### **E. Annual Survey**

Conduct in-person and on-line interviews with bicyclists annually about the Bicycle Plan. In particular, identify on-going concerns and listen to suggested improvements. Collect data on problem areas (not just where collisions have occurred but where "near-misses" frequently occur) identify solutions.

Lead Department: DOT with assistance from local bicycle groups.

Objective: Learn what programs are working and

what is not so that improvements can be made.

Schedule: 2011-2035

### **F. Case Studies**

Utilize the collision data from Program 3.2.5.A to identify potential Case Study Locations. Conduct case studies of selected locations to identify potential improvements to reduce collisions.

Lead Department: DOT

Objective: Mitigate problem areas and improve the safety of bicyclists, pedestrians, and motorists at problem locations.

Schedule: 2011-2015

### **G. Annual Bicycle Plan Implementation Report**

Prepare an annual report that summarizes the status of the Bicycle Plan's programs, highlights the accomplishments, identifies where improvement is needed, and outlines future projects. The report should include a detailed summary that quantifies the results of each of the Bicycle Plan's programs. Present the report to the City Planning Commission and the City Council Transportation Committee. Utilize the database established in Program 3.2.4.B to assist with the preparation of the report.

Lead Department: DCP, DOT, DPW

Objective: Track the progress of the plan, identify successes and illustrate needed improvements.

Schedule: 2011-2035

## **Policy 3.2.5**

Measure reductions in greenhouse gas emissions (GHG) that result from a decrease in vehicular use as bicycle use correspondingly increases.

### **Programs**

#### **A. Greenhouse Gas Emission Tracking Program**

Quantify total reductions in GHG from bicycle use and vehicle miles traveled (VMT). Include

data in the Citywide Climate Action Plan and the Climate Action Registry.

Lead Department: Mayor's Office on the Energy and Environment.

Objective: Measure effectiveness of the bicycle as a transportation option in the reduction of greenhouse gases.

Schedule: 2011-2035

### **B. Carbon Offset Credits**

Track and apply offset credits (resulting from GHG and VMT reductions) towards the city's compliance with SB 375, AB 32 and the region's Sustainable Community Strategy.

Lead Department: DCP (Environmental Division), Office of the Mayor, City Council

Objective: Measure effectiveness of the bicycle as a transportation option in the reduction of greenhouse gases.

Schedule: 2011-2035

## **Environment: Bicycles along Beaches, Rivers, Fixed Transit Corridors and in City and State Parks Objective 3.3.**

Provide a safe and comfortable Class I Bikeway and park experience for all users.

### **Policy 3.3.1.**

Provide a connected network of Class I Bikeways facilities linking bicyclists to recreational, transportation, and community facilities.

### **Programs**

#### **A. Green Network**

Establish a Green Network of Class I Bicycle Paths along Beaches, Riverways, Fixed Transit Corridors, and City and State Parks to provide a transportation bikeway system with recreational benefits that links users to recreation,

transportation, and community facilities.

Identify opportunities to link the Green Network to bikeways on either the Backbone and/or Neighborhood Network. Work with the State Department of Recreation and Parks.

Lead Department: DCP, DOT, DPW, RAP,

Objective: Expanded network of Class I bikeways

Schedule: 2011-2035

### **B. Los Angeles River Path**

Prioritize the design and construction of the bicycle path along the Los Angeles River.

Lead Department: DPW, RAP, DOT

Objective: Complete the build-out of the bicycle path along the full 32 miles of the River by 2035.

Schedule: 2011-2035.

### **C. Ballona Creek Bikepath**

Extend the bicycle path along Ballona Creek north to Venice Boulevard.

Lead Department: D DPW, RAP, DOT

Objective: Complete the build-out of the bicycle path north to Venice Boulevard. Schedule: 2010-2020.

### **D. Beach Path**

Extend the bicycle path along the beach north from Bay Club Drive to the City Limit.

Lead Department: D DPW, RAP, DOT

Objective: Complete the build-out of the beach bicycle path.

Schedule: 2011-2020.

### **E. Arroyo Seco Bikepath**

Prioritize the design and construction of the bicycle path south from Debs Park to the Confluence of the Los Angeles River.

Lead Department: DPW, RAP, DOT

Objective: Complete the build-out of the Arroyo Seco Bikepath

Schedule: 2011-2020

## **F. Green Network Expansion**

Identify future opportunities to expand the Green Network within the Central, South, and Harbor portions of Los Angeles.

Lead Department: DCP, RAP, DPW, DOT

Objective: Provide a connected network of bicycle paths throughout the City.

Schedule: 2012-2035

## **G. Tujunga Wash**

Design and construct the bicycle path along Tujunga Wash.

Lead Department: DOT, DPW, RAP

Objective: Complete a bicycle path along Tujunga Wash.

Schedule: 2020-2040

## **Policy 3.3.2**

Increase the presence of LAPD Officers on bicycle paths and provide and maintain informational signage, lighting, and shade and landscaping amenities along Class I Bicycle Paths.

## **Programs**

### **A. Bicycle Path Officer Deployment Program**

LAPD will train and certify officers to conduct patrols of bicycle paths on bicycles.

Lead Department: LAPD, DOT

Objective: Reduce crime on the City's bicycle paths.

Schedule: 2011-2015

### **B. Bicycle Path Landscaping**

Develop a list of acceptable plant materials for bicycle paths that will not damage, create security problems or create hazards for bicyclists. Incorporate trees and native, drought tolerant landscaping as a standard Class I facility (bicycle path) feature.

Lead Department: DOT, DPW/BOE and BSS

Objective: Reduce heat island induced temperatures along bicycle paths and provide shade for cyclists.

Schedule: 2012-2017

## **C. Bicycle Path Lighting**

Adopt standard lighting designs for bicycle paths and grade separated bikeways. Implement lighting standards and update manuals as necessary.

Lead Department: DOT, DPW's Bureau of Street Lighting

Objective: Provide lighting for secure night riding.

Schedule: 2011-2015

## **D. Bicycle Path Mile Markers**

Continue to install mile markers along all Class I bicycle paths to provide distance information to bicyclists and to allow them to find their way to major destinations. Work with LAPD and LAFD to facilitate emergency response personnel in locating bicyclists in need of assistance.

Lead Department: DOT, LAPD, LAFD

Objective: Continue to install and retrofit Mile Markers.

Schedule: 2011-2015

## **Policy 3.3.3.**

Maintain safe Class I Bicycle Paths through regular inspection and maintenance.

## **Program**

### **A. Path Inspection and Cleaning Program**

Develop a regular inspection and cleaning program to maintain Class I Bicycle Paths.

Lead Department: DOT, DPW, RAP

Objective: Provide a safe and well-maintained Class I bicycling environment.

Schedule: 2012-2017



#### **Policy 3.3.4.**

Promote bicycle connectivity to community-serving uses such as schools, libraries, retail, and parks.

#### **Program**

##### **A. Analysis of Existing Paths**

Identify a subset of paved paths within City parks that may potentially be suitable for bicycling based on path width, grade and existing user counts, or that could provide a link to neighborhood community uses. Identify paths that could be incorporated into either the Green, Backbone or Neighborhood Networks.

Objective: Provide connectivity along identified bikeways.

Lead Department: RAP, DCP

Schedule: 2011-2015

#### **Policy 3.3.5.**

Continue existing off-road bicycle trails and analyze and explore opportunities for additional off-road bicycle facilities.

#### **Programs**

##### **A. Mandeville Canyon Park**

Maintain off-road bicycle trails in Mandeville Canyon.

Objective: Continue to permit off-road mountain bicycling at Mandeville Canyon Park.

Lead Department: RAP

Schedule: 2011-ongoing

##### **B. Mountain Bicycle Access Program**

Pursue opportunities for mountain bicycle access that may exist on land within and adjacent to the City of Los Angeles, under the jurisdiction of other agencies such as the Santa Monica Mountains Conservancy, Los Angeles County, State of California, etc. (3.3.1.(2) Fall)

Objective: Increase mountain bicycle access to surrounding areas.

Schedule: 2012-2015

##### **C. Park Trail Inventory**

Identify a subset of trails with no existing equestrian use that may potentially be suitable for mountain biking based on trail width, grade and existing user counts.

Objective: Evaluate trails.

Lead Department: RAP, DCP

Schedule: 2011-2015

##### **D. Unimproved Road Database**

Develop a comprehensive database of all unimproved roads including City-owned trails and their allowed uses.

Objective: Identify and map existing unimproved roads.

Lead Department: RAP, DCP, DOT, LAFD

Schedule: 2011-2015

##### **E. Off-Road Bicycle Database and Maps**

Develop a database and create maps of all City and non-City owned trails within or directly adjacent to the City of Los Angeles where mountain bicycling is allowed.

Objective: Expand awareness of existing off-road facilities. Work with the State Department of Recreation and Parks and LA County Department of Parks and Recreation.

Lead Department: RAP, DCP, DOT

Schedule: 2011-2015

#### **Policy 3.3.6.**

Evaluate and address multiple user groups' needs in the City's limited public park land.

#### **Programs**

##### **A. Mountain Trail Conflict Resolution Analysis**

Examine other jurisdictions to understand how they accommodate mountain bicycling and the extent to which conflicts in use, particularly

with regards to concerns about safety, have been realized and addressed.

Lead Department: RAP, DPW

Objective: Identify strategies for reducing conflicts between multiple users.

Schedule: 2011-2015

Objective: Reduce spillover of off-road bicycle use to trails and off-road facilities where bicycles are not permitted.

Lead Department: RAP, DPW

Schedule: 2011-2015

## **B. Analysis of Shared Trail Use in Other Urban Areas**

Conduct comparison counts on shared use trails in other urban areas. Research levels of user conflict on shared use trails in urban areas.

Objective: Identify conditions and demand for shared use trails in other urban areas.

Lead Department: RAP

Schedule: 2011-2015

## **C. Data Collection**

Conduct user counts and employ other methods to evaluate demand for off-road facilities by user groups.

Objective: Indicate level of use for different groups. Compare user counts to shared use trails in other urban areas.

Lead Department: RAP, DOT, DPW

Schedule: 2011-2015

## **D. Analysis of Impacts of Off-Road Bicycle Access**

Obtain information on levels of use by hikers and equestrians before and after the introduction of off-road bicycle access.

Objective: Evaluate safety impacts and overall effectiveness of permitting off-road bicycle access.

Lead Department: RAP

Schedule: 2011-2015

## **E. Spillover Analysis**

Conduct a spillover analysis to determine the extent to which mountain bicycle use spills over onto mountain trails where bicycling is prohibited.







# Chapter 5

## Implementation

This Chapter describes past Bicycle Plans and implementation efforts, the new Five Year Implementation Strategy, funding costs, and the collaboration opportunities offered by the two key groups. A list of potential Federal, State and Local funding sources that may assist with the 2010 Plan's implementation is provided in Appendix B.

### Background

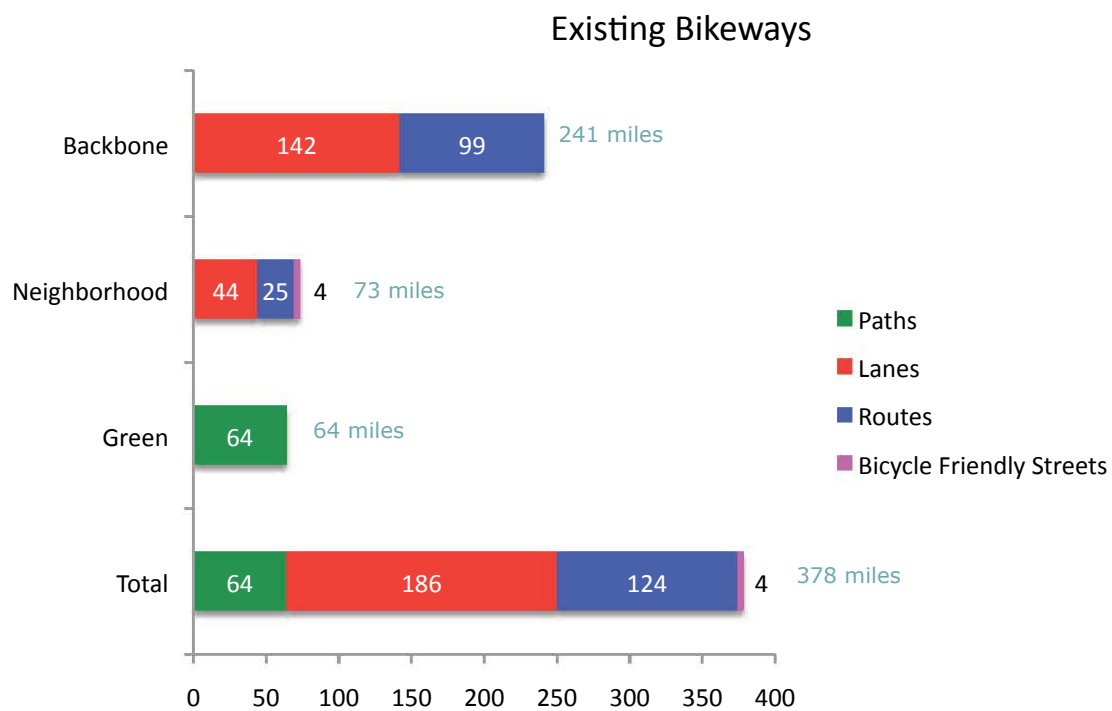
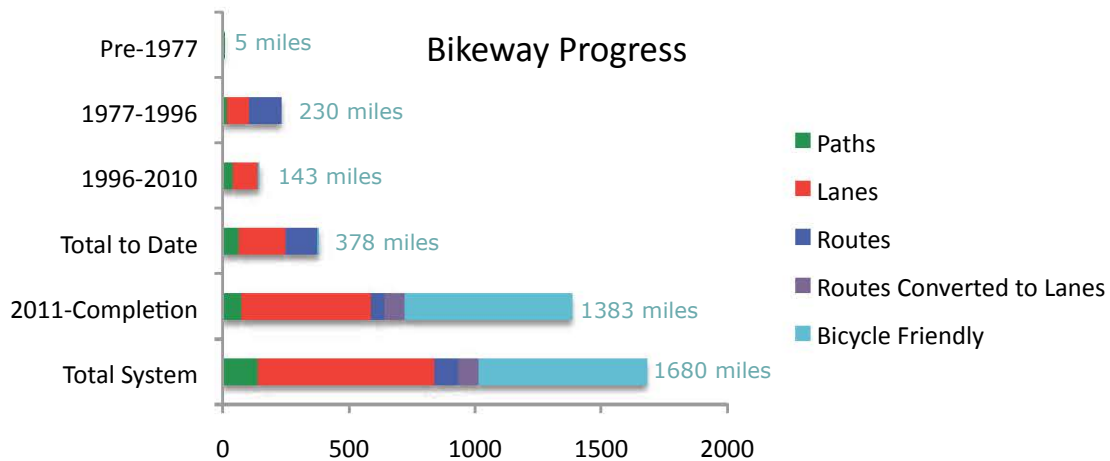
Prior to the adoption of the 1977 Plan the County constructed the Bicycle Beach Path (Beach Path)-stretching from Torrance to Santa Monica. The Beach Path continues to be utilized by thousands of bicyclists, young and old, every day and includes a five mile stretch along the western edge of the City. In the years between the 1977 and 1996 Plans a total of 230 miles of bikeways were installed (12.1 miles per year). The bikeways included 18 miles of paths, 88 miles of lanes and 124 miles of bicycle routes. Between 1996 and 2010 the City completed an additional 143 miles of bikeways (10.2 miles per year) for a total system of 378 miles. The bikeways, from 1996-2010, included 41 miles of paths, 98 miles of lanes, and 4 miles of bicycle friendly streets.

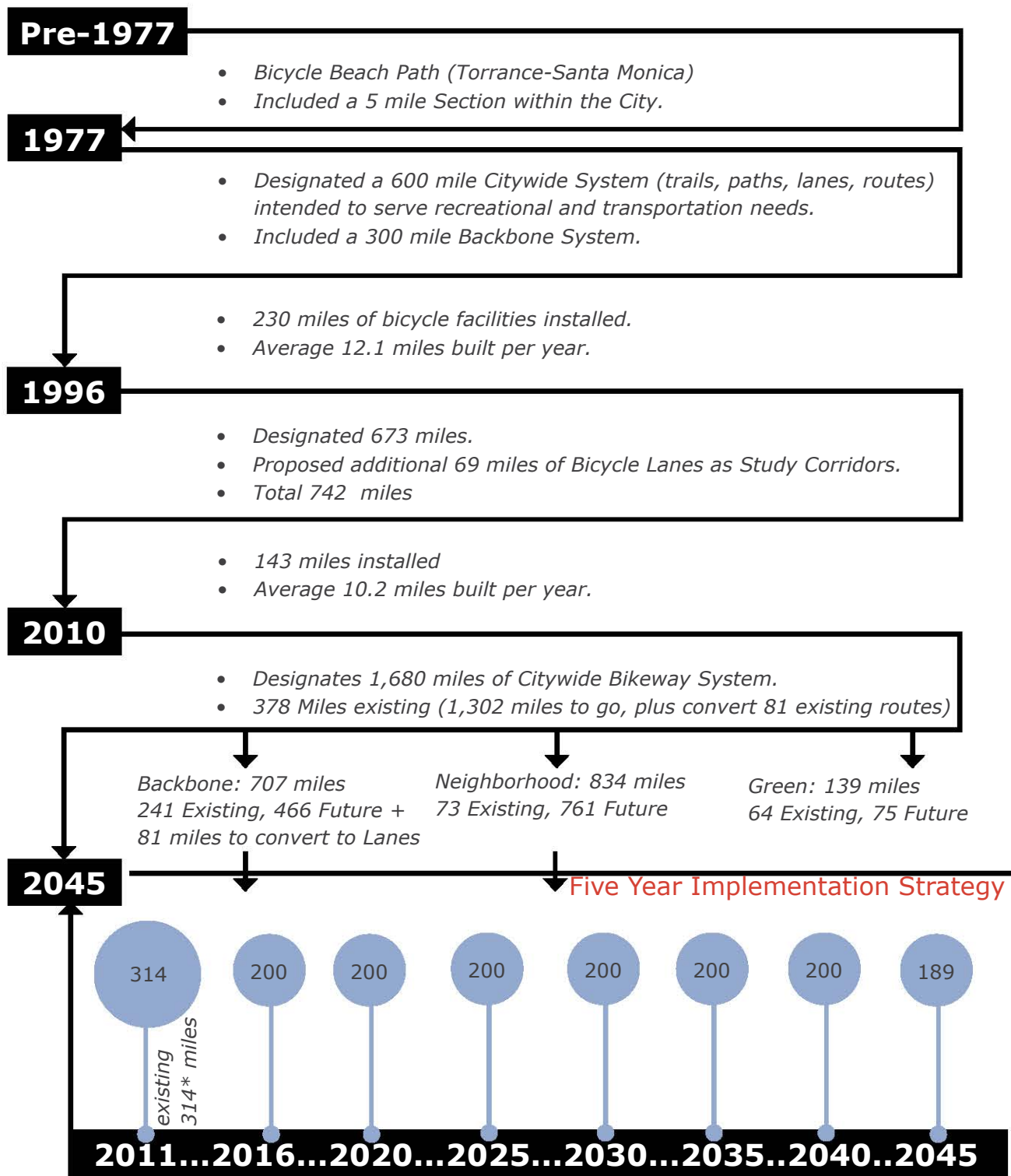
### Citywide Bikeway System

Over the next thirty-five years the City intends to expand from 378 miles to a total of 1,680 miles. All 1,680 miles, including all of the existing bikeways, is distributed between one of the three Networks. With the exception of the Green Network, which is comprised solely of paths, the networks are a compilation of several bikeway types. The charts on the following pages illustrates the distribution of the miles among the three networks, the number of miles that are paths, lanes, routes, and bicycle friendly streets, as well as which bikeways are currently existing, what type of bikeway they are and which network they have been assigned to.

### The Five-Year Implementation Strategy

The Five-Year Implementation strategy focuses on initiating at





\* Excludes the 64 existing Green Network miles.



least 200 miles on the Backbone and Neighborhood Networks every five years. Today these two networks include 314 of the overall existing system of 378 miles. While the 314 miles of bikeways on streets is not insignificant, the lack of support for a bikeway implementation strategy has provided bicyclists not with an integrated and connected network of bicycle facilities but with piecemeal segments of disconnected paths, lanes, and routes throughout the City. Nevertheless, these 314 miles, while fragmented, do provide the City with a baseline on which to build the connected, integrated network. It is important to point out that of these 314 miles 81 miles of existing routes are proposed to be upgraded to bicycle lanes.

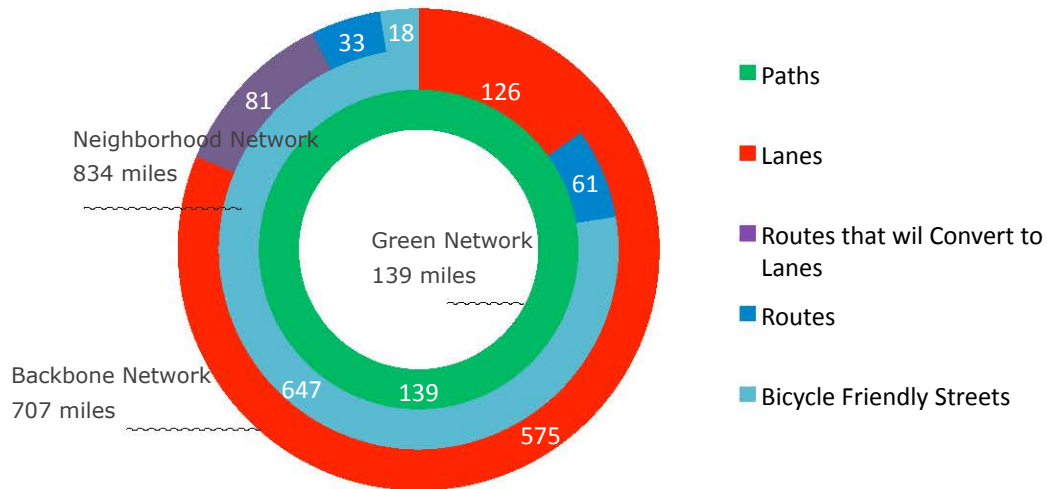
Therefore, in order to complete the Backbone and Neighborhood Networks the City has committed to build a total of 1389 miles. This total includes the 81 miles of routes that will be converted to lanes as well as the 466 miles of new bikeways that are left to build on the Backbone and the 761 miles of bikeways remaining on the Neighborhood Network.

Over the 32 years between 1977 and 2009 the City built an average of 9.8 miles of street facilities per year. At this current average it would take 141 years to complete the Backbone and Neighborhood Networks. With growing public, political, and institutional support the 2010 Plan proposes a more aggressive implementation strategy that would build (funding and staffing dependent) 200 Backbone or Neighborhood network-miles every five years. At this new invigorated pace the City would be able to complete the Backbone and Neighborhood Networks within 35 years.

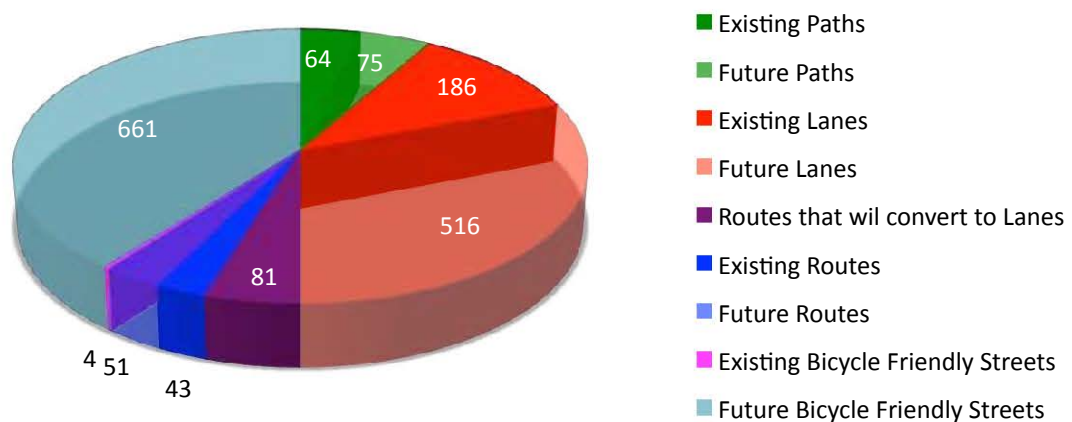
The first 200 miles would add to the baseline of 314 miles and would be selected based upon the Bicycle Funding Priority Grading System established in Chapter 4. The selected 200 miles would close gaps within the current 314 miles, provide equitable geographic distribution, and put every Angeleno within approximately four miles of a facility on either the Backbone or Neighborhood Network. In subsequent five-year segments each set of 200 miles will be selected using the same weighted criteria. Each five-year round would put residents within closer and closer proximity to a bicycle facility so that ultimately, after 35 years and the completion of both networks, every Angeleno would be within approximately one mile of a bikeway.



**Distribution of Bikeways by Network**  
Citywide Bikeway System 1680 miles



**Citywide Bikeway System**



## Funding Cost Assumptions



*Photo Credit: Gabriel E. Prieto*

### Backbone and Neighborhood Networks

Completion of 200 miles every five years will continue to be dependent upon the ability for the City to identify and obtain funding and provide staffing to manage and implement each of the bikeways included in the Five Year-Implementation Strategy. In addition to the funding needed for these new facilities, the City will need to continue to identify staffing and funding for the maintenance and upkeep of its existing bikeway facilities. Typically the City receives \$7-10 million each year for bikeway projects, a portion of which is provided for the maintenance of existing facilities. Collectively, this would provide on average a total of \$35-50 million within five years to be split between the design and construction of new facilities and the maintenance of existing bikeways. The funds generally come from a variety of sources including the Transportation Development Act, and such competitive grant sources as Metro's Call for Projects, the State's Bicycle Transportation Account, and Federal and State Safe Routes to Schools. The funds are typically tied to specific projects and/or pay for on-going maintenance, bicycle lane striping, and safety and education programs. In addition the City expects to receive \$1-1.5 million each year from the Local Measure R funds for implementation of the 2010 Plan.

While the cost for each bikeway will vary, the table below provides basic planning level cost estimates for both capital and maintenance costs of the various bikeway classifications. These costs do not take into consideration any necessary environmental review or public outreach nor does it consider the removal of existing roadway striping, or extensive infrastructure improvements such as a bridge, signal, or underpass that may be required for a particular segment. Using these base costs, a minimum total cost using 2010 dollars for the build-out and maintenance of the entire system can be calculated. The price of building out the entire system without considering staffing needs is currently estimated at \$235-427 million. The cost for all of the future bicycle lanes is estimated at \$17-30 million. The estimated total cost for the future bicycle-friendly streets is \$19.9-198 million and the estimated cost of the future bicycle routes totals \$1.02 million.

A preliminary estimate for the first Five Year Strategy, assuming that 130 miles are lanes and another 70 miles are bicycle friendly

Facility Type	Cost
<b>Capital Cost</b>	<b>2010 \$</b>
Bicycle Path (along flood control channel or rail corridor)	\$2,640,000/mile
Bicycle Path (in park, short connector no crossings)	\$500,000/mile
Bicycle Lanes (may include signage, striping, and pavement markings)	\$28,000-50,000/mile
Bicycle Route (may include signage and pavement markings)	\$20,000/mile
Bicycle Friendly Streets	\$30-300,000/mile
At-Grade Crossing Improvements	\$100,000/each
Grade Separated Crossing (Flood Control Channel)	\$2-5,000,000/each
Grade Separated Crossing (Freeway)	\$10,000,000/each
<b>Maintenance Costs (Annual)</b>	
Bicycle Path	\$15,000 / mile
Bicycle Lanes / Bicycle Route	\$5,000 / mile
Bicycle Friendly Streets	\$10,000 / mile

streets, is \$24 million, exclusive of staffing costs. An additional \$6 million is estimated for potential environmental review. As the streets are not yet selected, and therefore the extent of improvements (e.g. signage, street calming, pavement markings, sandblasting, environmental clearance) are not yet known, a detailed budget cannot be fully determined. As projects are selected and pre-engineering is conducted the City will develop a refined budget, conduct any required environmental review and identify potential funding sources.

### Green Network

While large portions of the Green Network are in place today critical components are still lacking, particularly along the Los Angeles River and the northern section of the Beach Path. While in some ways not as complex as installing a bikeway within the City streets paths nonetheless require substantial amounts of funding to design and construct and often take a number of years to complete. Paths are usually the most expensive bikeway to design and install costing an average of \$2.4 million per mile. Typically, funds for Class I bikeways are available from such sources as the Transportation Development Act Article III, Measure R, Proposition C Local Return, the Bicycle Transportation Account, and Recreational Trails. The Departments of Transportation, Recreation and Parks along with the Department of Public Works Bureau of Engineering will continue to work together to identify and pursue funding opportunities from all of these sources. A rough estimate of the total cost for all future bicycle paths on the Green Network is \$198 million.



## Environmental Review

While some of the future bicycle lanes are evaluated in the Mitigated Negative Declaration, that is being conducted simultaneously with preparation of the 2010 Bicycle Plan, many future Bicycle lanes will require additional analysis (particularly impacts on traffic) pursuant to the California Environmental Quality Act (CEQA). Lanes that can be accommodated within the existing roadway width under existing traffic conditions, with no impacts to traffic capacity will require no additional environmental analysis. Lanes that cannot be accommodated in the current street width without potentially significantly impacting traffic and/or parking in the area will require further study. These lanes may require physical alternation to the roadway configuration in order to be implemented. At this point there is not enough information to analyze these lanes in detail to verify their feasibility and a route alignment study may be needed to determine the best alignment within the general corridor. However, it is important to emphasize that not all bikeway projects that require additional analysis will require a lengthy and costly full Environmental Impact Report (EIR). In many cases, the potential impacts may be less than significant, and may be analyzed through a Negative Declaration or Mitigated Negative Declaration, which are significantly less burdensome and expensive to prepare.

As each bikeway that is identified as a future bicycle lane is prioritized in the Five -Year Implementation Strategy a preliminary analysis will be conducted to evaluate whether further environmental review will be necessary. When more detailed review is determined

### *The California Environmental Quality Act (CEQA)*

*The purpose of the California Environmental Quality Act (CEQA) is to develop and maintain a high-quality environment now and in the future, while the specific goals of CEQA are for California's public agencies to identify the significant environmental effects of their actions, to avoid those significant environmental effects, and to mitigate those significant environmental effects.*

*CEQA applies to projects proposed to be undertaken or requiring approval by State and local government agencies, which have the potential to have a physical impact on the environment. The public agency must complete the environmental review process and prepare a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report (EIR) based on the significance of impacts in the environmental review process.*

*The purpose of an EIR is to provide policymakers, State and local agencies, and the general public with detailed information on the potentially significant environmental effects which a proposed project is likely to have and to list ways which the significant environmental effects may be minimized and indicate alternatives to the project.*

*California Environmental Resources Evaluation System. Retrieved from <http://ceres.ca.gov/ceqa/summary.html>*



to be needed the Departments of Planning and Transportation will seek funding to conduct the necessary analysis. In addition, the 2010 Plan identifies three other opportunities for undertaking environmental analyses of future bicycle lanes:

1. The City is currently in the process of updating all 35 Community Plans that together comprise the Land Use Element of the General Plan. As each Community Plan update is updated future bicycle lanes in that planning area will be analyzed with regard to potential environmental impacts. Currently future bicycle lanes are being analyzed for the Sylmar, Granada Hills, Southeast, South, San Pedro, and West Adams/Leimert Park Community Plans.
2. Environmental Impact Reports (EIRs) are being prepared for a number of specific plans including the Cornfield Arroyo Seco, Jordan Downs, University of Southern California, and Warner Center. Environmental analysis of these specific plans will also include evaluation of future lanes that are located within the plan areas.
3. The preparation of EIRs for large development projects provides additional opportunities to analyze roadway reconfigurations to allow for future bicycle lanes.

In some cases the analysis may determine that the originally selected roadway is not well suited for a bicycle lane. In these cases an alternative roadway within the same general corridor may be considered or alternative solutions may be considered that would facilitate bicycle activity on the designated corridor without the inclusion of a bicycle lane. In other cases, a community may prefer to remove a parking lane in lieu of removing a travel lane in order to accommodate a bicycle lane.



*Photo Credit: LA Cycle Chic Blog*

## Collaboration

Collaboration is key to the implementation of the 2010 Plan. Many challenges remain, and each neighborhood will have differing perspectives on the role that bicycling should play in their community. The convenience and safety of bicycling in Los Angeles is a street level question, answered day-by-day and block-by-block by the experience of individual bicyclists. It is difficult to foresee which programs best address cyclists' needs on each street segment. Therefore, apart from broad trends, the Plan does not try to discern future circumstances. In turn, the Plan leaves great latitude for the prescription of specific solutions to unknown circumstances. The Plan's policies, programs, and extensive networks provide an alphabet of solutions that can be selected and applied at the right location at the right time.

Coordinating the selection of these solutions will be two key groups, the City's Bicycle Advisory Committee (3.2.1.A) and the Bicycle Plan Implementation Team (3.2.2.A ). These two groups will assist in identifying, coordinating, scheduling, and implementing appropriate solutions to the Plan's many programs. The groups, comprised of City staff and citizen bicyclists with broad expertise and a finger on the City's cycling pulse, will be well placed to negotiate the political and bureaucratic circumstances to maximize improvements for bicyclists. They will also provide a conduit for City staff



*Photo Credit: LACBC Blog*

to access the skills of peers and the experience of bicyclists, as well as provide a means for bicyclists to communicate their needs to staff.

The implementation of a Clean-Mobility or Multi-Mobility Hub at any one of the transit stations will require intensive collaboration among a variety of groups and is just one example of the multiple programs that will benefit from the collaborative effort. A mobility hub may provide a variety of transportation support services including: car share and vehicle charging stations; and a variety of services oriented to bicyclists including attendant operated showers, restrooms, bicycle repair, and bicycle lockers. Each hub will require a unique set of solutions depending upon the underlying ownership of the land on which the hub is located and its configuration relative to the roadway and transit facilities.

A hub may be situated on property owned by Metro, the City, another governmental agency, or a private entity. The ownership relationship will have direct bearing on the implementation strategies that are employed to design, construct, and maintain the hub. As identified in Chapter 3 the City will continue to identify opportunities to collaborate with Metro, other agencies, and private entities to seek capital and maintenance funding to develop and maintain the hubs. The two key groups identified above can play a critical role in bringing together these multiple partners and implementing the hubs.



*Photo Credit: Allison Manushkin*









# Appendix A:

## Definitions and Glossary

### Definitions

**At-grade crossing** - A junction where bicycle path or sidewalk users cross a roadway at the same level as motor vehicle traffic, as opposed to a grade-separated crossing where users cross over or under the roadway using a bridge or tunnel.

**Bicycle Boulevard** - See Bicycle Friendly Street

**Bicycle facilities** - A general term used to describe all types of bicycle-related infrastructure including linear bikeways and other provisions to accommodate or encourage bicycling, including bicycle racks and lockers, bikeways, and showers at employment destinations.

**Bicycle Lane** - A striped lane for one-way bicycle travel on a street or highway. Caltrans refers to this facility as a Class II bikeway.

**Bicycle Path** - A paved pathway separated from motorized vehicular traffic by an open space or barrier and either within the highway rights-of-way or within an independent alignment. Bicycle paths may be used by bicyclists, skaters, wheelchair users, joggers, and other non-motorized users. Caltrans refers to this facility as a Class I Bikeway which "Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross flow of motorists minimized."

**Bicycle Friendly Street (BFS)** - A new Class III facility introduced by this Plan a BFS will include at least two engineering street calming treatments in addition to signage and shared lane markings.

**Bicycle Route** - A shared roadway specifically identified for use by bicyclists, providing a superior route based on traffic volumes and speeds, street width, directness, and/or cross-street priority, denoted by signs only. Caltrans refers to this facility as a Class III Bikeway - "Provides for shared use with pedestrian or motor vehicle traffic."

**Bikeway** - A generic term for any road, street, path or way that in some manner is specifically designed for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

**Caltrans** - California Department of Transportation

**CA MUTCD** - The CALTRANS Manual on Uniform Traffic Control Devices, which designates standards for signage and pavement markings.

**Class I Bikeway** - CALTRANS HDM designation. See "bicycle path".

**Class II Bikeway** - CALTRANS HDM designation. See "bicycle lane".

**Class III Bikeway** - CALTRANS HDM designation. See "bicycle route".

**Clearance, lateral** - Width required for safe passage of bicycle path users as measured on a horizontal plane.

**Clearance, vertical** - Height required for safe passage of bicycle path users as measured on a vertical plane.

**CROW Manual** - Bicycle facility and design manual from the Netherlands.

**CTCDC** - The California Traffic Control Devices Committee establishes standards and designs for the signs, stripping, pavement markings and signalization included in CA MUTCD.

**Directional or wayfinding signs** - Signs typically placed at road and bicycle path junctions (decision points) to guide bikeway users toward a destination or experience.

#### **Gaps:**

**Connection Gaps** - Connection gaps are missing segments (1/4 mile long or less) on a clearly defined and otherwise well-connected bikeway. Major barriers standing between bicycle destinations and clearly defined routes also represent connection gaps. Examples include bicycle lanes on a major street



“dropping” for several blocks to make way for on-street parking; a discontinuous off-street path; or a freeway standing between a major bicycle route and a school.

**Linear Gaps** - Similar to connection gaps, linear gaps are 1/2-to one-mile long missing link segments on a clearly defined and otherwise well-connected bikeway.

**Corridor Gaps** - On clearly defined and otherwise well-connected bikeway, corridor gaps are missing links longer than one mile. These gaps will sometimes encompass an entire street corridor where bicycle facilities are desired but do not currently exist.

**System Gaps** - Larger geographic areas (e.g., a neighborhood or business district) where few or no bikeways exist would be identified as system gaps. A geographic gap is identified where the density of bikeways in one part of the City is less than the density of bikeways in another part of the City.

**Geometry** - The vertical and horizontal characteristics of a transportation facility, typically defined in terms of gradient, degrees, and super elevation.

**Grade-separated crossing** - A bridge or tunnel allowing bicycle path users to cross a major roadway without conflict.

**HDM** - Caltrans Highway Design Manual for the design of transportation facilities including streets and bikeways.

**Level of service (LOS)** - Term for the measurement of how well automobile traffic “flows” on a roadway system or how well an intersection functions.

**Loop detector** - A device placed in the pavement at intersections to detect a vehicle or bicycle and trigger a signal or provide green time.

**Medians** - Area in the center of the roadway that separates directional traffic. Medians may be painted and levelled with the surrounding roadway or “raised” using curb and gutter. Medians may include landscaping, concrete, striping or any combination thereof.

**MPP LADOT** - Manual of Policies and Procedures

**Multi-use path** - See “shared pathway”

**MUTCD** - Federal Manual on Uniform Traffic Control Devices,



which designates standards for signage and pavement markings. CA MUTCD has jurisdiction in California.

**Paved shoulder** - The outer edge of the roadway beyond the outer stripe edge that provides a place for bicyclists when it is wide enough (3 ft. minimum), free of debris, and does not contain rumble strips or other obstructions.

**Pavement marking** - Any marking on the surface of the pavement that gives directions to motorists and other road users in the proper use of the road. The MUTCD determines the standard marking in California for state and local use.

**Refuge islands** - Raised medians which may be used by bicyclists at intersections or mid-block for assistance with crossing wide streets or signalized intersections.

**Rights-of-way (ROW)** - The strip of property over which a transportation facility or other facility is built. The right of one vehicle, bicycle, to proceed in a lawful manner in preference to another vehicle, bicycle, or pedestrian.

**Shared pathway** - A path that permits more than one type of user, such as a path designated for use by both pedestrians and bicyclists.

**Shared roadway** - A roadway where bicyclists and motor vehicles share the same space with no striped bicycle lane. Any roadway where bicycles are not prohibited by law (i.e. interstate highways or freeways) is a shared roadway.

**Sight distance** - The distance a person can see along an unobstructed line of sight.

**Traffic calming** - Changes in street alignment, installation of barriers, and other physical measures employed to reduce traffic speeds and/or cut-through traffic volumes in the interest of street safety, livability, and other public purposes.

**Traffic control devices** - Signs, signals, or pavement markings whether permanent or temporary, placed on or adjacent to a travel way by authority of a public body having jurisdiction to regulate, warn, or guide traffic. CA MUTCD/MUTCD designates standards.

**Traffic volume** - The number of vehicles that pass a specific





point for a specific amount of time (hour, day, year).

**Utilitarian trips** - Trips that are not for recreational purposes, such as running errands.

**Wide curb lane** - A 14 foot (or greater) wide outside lane adjacent to the curb of a roadway, that provides space for bicyclists to ride next to (to the right of) motor vehicles. Also referred to as a "wide outside lane". If adjacent to parking, 22 feet in width may also be considered a wide curb lane.

## Glossary of Acronyms

AASHTO - American Association of State Highway and Transportation Officials

AB - Assembly Bill

APC - Area Planning Commission

BAC - Bicycle Advisory Committee (City of Los Angeles)

BFS - Bicycle Friendly Street

BLOS - Bicycle Level of Service

BoE - Bureau of Engineering (Department of Public Works)

BoS - Bureau of Sanitation (Department of Public Works)

BP - Bicycle Plan

BPIT - Bicycle Plan Implementation Team

BRT - Bus Rapid Transit

BSL - Bureau of Street Lighting (Department of Public Works)

BSS - Bureau of Street Services (Department of Public Works)

BTSP - Bicycle Transportation Strategic Plan (Metro)

CA DMV - California Department of Motor Vehicles

CA MUTCD - California Manual on Uniform Traffic Control Devices

Caltrans - California Department of Transportation

CDL - Commercial Driver License

CEQA - California Environmental Quality Act

CFP - Call for Projects ( Metro)

CMAQ - Congestion Mitigation and Air Quality

CRA - Community Redevelopment Agency

CSHTS - California Statewide Household Travel Survey

CTCDC - California Traffic Control Device Committee



DBS - Department of Building and Safety  
DCP - Department of City Planning  
DEIR - Draft Environmental Impact Report  
DOT - Department of Transportation  
DPW - Department of Public Works  
DUI - Driving Under the Influence (of alcohol or drugs)  
EAD - Environmental Affairs Department  
EIR - Environmental Impact Report  
GHG - Greenhouse Gas  
GIS - Geographic Information System  
GSD - General Services Department  
HDM - Highway Design Manual (Caltrans)  
HSIP - Highway Safety Improvement Program  
ITA - Information Technology Agency  
LACMTA - Los Angeles County Metropolitan Transportation Authority (also Metro)  
LAMC - Los Angeles Municipal Code  
LAPD - Los Angeles Police Department  
LAUSD - Los Angeles Unified School District  
LAWA - Los Angeles World Airports  
LOS - Level of Service  
Metro - Los Angeles County Metropolitan Transportation Authority (also LACMTA or MTA)  
MUTCD - Manual on Uniform Traffic Control Devices (Federal)  
NHTS - National Household Travel Survey  
OTS - Office of Traffic Safety (State of California)  
PBCAT - Pedestrian and Bicycle Crash Analysis Tool  
PMS - Pavement Management System  
POLA - Port of Los Angeles  
PSA - Public Service Announcement  
RAP - Recreation and Parks  
ROW - Right-of-Way  
RTP - Recreational Trails Program  
RTPA - Regional Transportation Planning Agency  
RUS - Recreational Use Statute  
SAFTEA-LU - Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users



SB - Senate Bill

SCAG - Southern California Association of Governments

SCS - Sustainable Community Strategy

SLM - Shared Lane Marking (also "sharrow")

SLPP - State Local Partnership Program

SR2S - Safe Routes to School (CA State Program)

SRTS - Safe Routes to School (Federal Program)

SWITRS - Statewide Integrated Traffic Records System

TDA - Transportation Development Act

TEA-21 - Transportation Equity Act of the 21st Century

TIMP - Traffic Impact and Mitigation Studies

VMT - Vehicle Miles Traveled









# Appendix B: Funding Resources

## Funding Strategies

Funding opportunities for the recommended projects and programs identified in this Bicycle Plan are available through a variety of sources.

### Federal Funding Sources

#### A. Land & Water Conservation Fund (LWCF)

The LWCF program provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities. The program is intended to create and maintain a nationwide legacy of high quality recreation areas and facilities and to stimulate non-federal investments in the protection and maintenance of recreation resources. The LWCF could fund the development of river-adjacent bicycle facilities.

#### B. Petroleum Violation Escrow Account (PVEA)

PVEA funds come from fines paid by oil companies in the 1970's for violating oil price caps set by the federal government. The Department of Energy's State Energy and Weatherization Assistance Program distribute the money at the state level through grants. PVEA funds projects with an emphasis on energy saving including public transportation and bridge construction or maintenance.

#### C. Safe Routes to School (SRTS) Program

Authorized under Section 1404 of SAFETEA-LU (the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users), the Safe Routes to School (SRTS) Program came into effect in August, 2005. Consistent with other federal-aid programs, each State Department of Transportation (DOT) is held responsible for the development and implementation of grant funds made available to the states through this new program throughout the life of SAFETEA-LU. Some expected outcomes of the program include:

- Increased bicycle, pedestrian, and traffic safety around schools;
- More children walking and bicycling to and from schools;

- Decreased traffic congestion around schools;
- Reduced childhood obesity;
- Improved air quality, community safety and security, and community involvement;
- Improved partnerships among schools, local agencies, parents, community groups, and nonprofit organizations.

A minimum of 70 percent of each year's apportionment will be made available for infrastructure projects with up to 30 percent for non-infrastructure projects.

### **Infrastructure Projects**

Infrastructure projects are engineering projects or capital improvements that will substantially improve safety and the ability of students to walk and bicycle to school. They typically involve the planning, design, and construction of facilities within a two mile radius from a grade school or middle school. The maximum funding cap for an infrastructure project is \$1 million. Caltrans does not set minimum caps. The project cost estimate may include eligible direct and indirect costs.

#### **Eligible projects may include but are not limited to:**

- New bicycle trails and paths, bicycle racks, bicycle lane striping and widening, new sidewalks, widening of sidewalks, sidewalk gap closures, curbs, gutters, and curb ramps. Also includes new pedestrian trails, paths, and pedestrian over and under crossings, roundabouts, bulb-outs, speed bumps, raised intersections, median refuges, narrowed traffic lanes, lane reductions, full or half-street closures, and other speed reduction techniques.
- Included in the category of traffic control devices are: new or upgraded traffic signals, crosswalks, pavement markings, traffic signs, traffic stripes, in-roadway crosswalk lights, flashing beacons, bicycle-sensitive signal actuation devices, pedestrian countdown signals, vehicle speed feedback signs, pedestrian activated upgrades, and all other pedestrian and bicycle-related traffic control devices.

Infrastructure projects should directly support increased safety and convenience for children in K-8 (including children with disabilities) to walk and bicycle to school.

### **Non-Infrastructure Projects**

Non-infrastructure projects are education/encouragement/enforcement activities that are intended to change community behavior, attitudes, and social norms to make it safer for children



in Grades K-8 to walk and bicycle to school. Non-infrastructure projects should increase the likelihood of programs becoming institutionalized once in place. Deliverables from a non-infrastructure project must be clearly stated in the application and tangible samples must be attached to the final invoice or Progress Report; i.e., sample training materials or promotional brochures. The funding cap for a non-infrastructure project is \$500,000. Multi-year funding allows the applicant to staff up and deliver their project over the course of four (4) years, thereby reducing overhead and increasing project sustainability.

Non infrastructure projects must fall into one or more of the following categories. Note: While typical non-infrastructure projects would fall under one or more of the top four E's listed below, it is conceivable that certain non-infrastructure activities may involve engineers in some capacity. For that reason, it is included as one of the five E's below.

- Education – Teaching children about the broad range of transportation choices, instructing them in important lifelong bicycling and walking safety skills, and launching driver safety campaigns in the vicinity of schools.
- Enforcement – Partnering with local law enforcement to ensure traffic laws are obeyed in the vicinity of schools (this includes enforcement of speeds, yielding to pedestrians in crossings, and proper walking and bicycling behaviors), and initiating community enforcement such as crossing guard programs or pedestrian right of way sting programs.
- Encouragement – Using events and activities to promote walking and bicycling.
- Evaluation – Monitoring and documenting outcomes and trends through the collection of data, including the collection of data before and after the intervention(s).
- Engineering – Creating operational and physical improvements to the infrastructure surrounding schools that reduce speeds and potential conflicts with motor vehicle traffic, and establish safer and fully accessible crossings, walkways, trails and bikeways.

Eligible projects may target a single local school or school district, or the State as a whole. The most effective non-infrastructure activities are conducted within the framework of a community coalition. Thus, it is strongly suggested that an SRTS community coalition be established. A Walkable/Bikeable Community Workshop convenes community stakeholders to identify, and then pursue concrete steps to make the community more walkable and bikeable. The workshop serves as the impetus to bring together key partners, including schools, elected officials, local



government, parks and recreation, law enforcement, emergency services, public health, business owners, residents, advocacy groups and other organizations that can serve as core members of a community coalition to design and implement a plan which incorporates the five E's. Examples of local, regional, and district level non infrastructure projects might include but are not limited to:

- Hire a Program Manager to coordinate SRTS efforts and volunteers at several schools.
- Conduct a Walkable Community Workshop which includes a walk and bicycle audit.
- Provide a community with a walkability checklist.
- Provide modest incentives for SRTS contests, and incentives that encourage more walking and bicycling over time.
- Pay for a substitute teacher if needed to cover for faculty attending SRTS functions during school hours.
- Procure equipment and training needed for establishing crossing guard programs.
- Conduct outreach to local press and community leaders.
- Pay for the cost of additional traffic enforcement or equipment needed for enforcement activities.
- Pay for traffic education and enforcement in the vicinity of schools.
- Form student sessions on bicycle and pedestrian safety, health, and environmental impacts.
- Develops "Suggested SRTS Maps."

### **Transportation, Community, and System Preservation Program (TCSP)**

Implementation grants under the TCSP Program are intended to provide financial resources to States, metropolitan planning organizations, local governments and tribal governments to enable them to carry out activities that address transportation efficiency while meeting community preservation and environmental goals. Examples of such policies or programs include: spending policies that direct funds to high-growth regions of the country; urban growth boundaries to guide metropolitan expansion; green corridors" programs that provide access to major highway corridors for areas targeted for efficient and compact development.





## State of California Funding Sources

### A. Bicycle Transportation Account

The State of California Bicycle Transportation Account (BTA) is an annual statewide discretionary program that is available through the Caltrans Bicycle Facilities Unit for funding bicycle projects. Available as grants to local jurisdictions, the emphasis is on projects that benefit bicycling for commuting purposes. As of 2010, the BTA makes \$7.2 million available each year. The local match is a minimum of 10% of the total project cost.

BTA projects are intended to improve safety and convenience for bicycle commuters, and can include, but are not limited to, any of the following:

- New bikeways serving major transportation corridors
- New bikeways removing travel barriers to potential bicycle commuters
- Secure bicycle parking at employment centers, park-and-ride lots, rail and transit terminals, and ferry docks and landings
- Bicycle-carrying facilities on public transit vehicles
- Installation of traffic control devices to improve the safety and efficiency of bicycle travel
- Elimination of hazardous conditions on existing bikeways
- Planning
- Improvement and maintenance of bikeways

Eligible project activities include:

- Project planning
- Preliminary engineering
- Final design
- Right of way acquisition
- Construction and/or rehabilitation

### B. Environmental Enhancement and Mitigation Program (EEMP)

Environmental Enhancement and Mitigation Program Funds are allocated to projects that offset environmental impacts of modified or new public transportation facilities including streets, mass transit guideways, park-n-ride facilities, transit stations, tree planting to equalize the effects of vehicular emissions, and the acquisition or development of roadside recreational facilities, such as trails. State gasoline tax monies fund the EEMP, which annually allocates \$10 million for mitigation projects.



### **C. Hazard Elimination Safety Program (HES)**

The Hazard Elimination Safety Program (HES) is a state safety program that provides funds for safety improvements on all public roads and highways. These funds serve to eliminate or reduce the number and/or severity of traffic accidents at locations selected for improvement.

Each year, local agencies compete for HES funds by submitting candidate safety projects to Caltrans for review and analysis. Caltrans prioritizes these projects, statewide, and releases an annual HES Program Plan that identifies the projects that are approved for funding. Funding is offered annually following the federal fiscal year. Approximately \$27 million dollars were available in the 2007 funding cycle.

Projects may be submitted for consideration of funding through the HSIP under two types of projects: Work Type and Safety Index Projects. Projects submitted under the Safety Index category may qualify for funding on the basis of a calculated safety index. These projects are prioritized statewide by the safety index. Projects submitted under the Work Type category cannot be quantified by a safety index generally due to a lack of data. If a project fails to get funded under the Safety Index category, it will automatically be moved into the Work Type category and re-compete for funding with other projects within this category. Work Type projects receive approximately 75 percent, while Safety Index projects receive about 25 percent of the available HSIP funds.

Examples of projects in the Safety Index category include installation of raised median islands, protected left-turn phasing, and widened and improved roadways. Examples of projects in the Work Type category include curb ramps, crosswalks, installation of right turn lanes and construction of new bus stop aprons.

### **D. Office of Traffic Safety (OTS) Grant**

Office of Traffic Safety Grants (OTS) fund safety programs and equipment. Bicycle and Pedestrian Safety is a specifically identified priority. This category of grants includes enforcement and education programs, which can encompass a wide range of activities, including bicycle helmet distribution, design and printing of billboards and bus posters, other public information materials, development of safety components as part of physical education curriculum, or police safety demonstrations through school visitations.

The grant cycle typically begins with a request for proposals in October, which are due the following January. In 2009, OTS awarded \$82 million to 203 agencies.



### **E. Recreational Trails Program (RTP)**

The Recreational Trails Program provides funds to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized as well as motorized uses.

Recreational Trails Program funds may be used for:

- Maintenance and restoration of existing trails;
- Development and rehabilitation of trailside and trailhead facilities and trail linkages;
- Purchase and lease of trail construction and maintenance equipment;
- Construction of new trails (with restrictions for new trails on federal lands);
- Acquisition of easements or property for trails;
- State administrative costs related to this program (limited to seven percent of a State's funds); and
- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds).

### **F. Safe Routes to School (SR2S) Program**

Established in 1999, the State-legislated Safe Routes to School (SR2S) program came into effect with the passage of AB 1475. In 2001, SB 10 was enacted which extended the program for three additional years. In 2004, SB 1087 was enacted to extend the program three more years. And in 2007, AB 57 was enacted to extend the program indefinitely. Seven (7) cycles of the SR2S program have been completed. The list of awarded projects is typically announced in the fall.

The goals of the program are to reduce injuries and fatalities to school children and to encourage increased walking and bicycling among students. The program achieves these goals by constructing facilities that enhance safety for pedestrians and bicyclists, primarily students in grades K-12 who walk or bicycle to school. By enhancing the safety of the pathways, trails, sidewalks, and crossings, the likelihood of attracting and encouraging other students to walk and bicycle increases.

The SR2S program is primarily a construction program. Projects funded by the program are intended to improve the safety of students who walk or bicycle to school. Construction improvements must be made on public property. Improvements can be made on public school grounds providing the cost is



incidental to the overall cost of the project. The program typically provides approximately \$25 million annually statewide. The maximum reimbursement percentage for any SR2S project is ninety percent. The maximum amount of SR2S funds that will be allocated to any single project is \$900,000.

Eligible project elements include bicycle facilities, traffic control devices and traffic calming measures. Up to 10% of funding provided for an individual project can be used for Outreach, Education, Encouragement, and/or Enforcement activities.

Regarding funding projections, the 2008 cycle is anticipated to provide \$48.5 million in funding. A letter from the Safe Routes to School National Partnership to the California Air Resources Board recognized that awards were part of "the volatile state budget process."

This California SR2S program should not be confused with the Federal Highway Administration's (FHWA) Safe Routes to School (SRTS) program authorized under SAFETEA-LU. Although both programs have similar goals and objectives, their funding source, local funding match requirements and other program requirements are different (see following section).

#### **G. TDA Article III (SB 821)**

Transportation Development Act Article 3 funds are distributed by the State of California and administered at the county level, which can be used by cities for planning and construction of bicycle and pedestrian facilities. For the City of Los Angeles, the Los Angeles County Metropolitan Transportation Authority (Metro) administers this program and establishes its policies.

These funds are allocated annually on a per capita basis to both cities and the County of Los Angeles. Local agencies may either draw down these funds or place them on reserve. Agencies must submit a claim form to Metro by the end of the fiscal year in which they are allocated. Failure to do so may result in the lapsing of these allocations.

TDA Article 3 funds may be used for the following activities related to the planning and construction of bicycle and pedestrian facilities:

- Engineering expenses leading to construction.
- Rights-of-way acquisition.
- Construction and reconstruction.
- Retrofitting existing bicycle and pedestrian facilities, including installation of signage, to comply with the Americans with Disabilities Act (ADA).
- Route improvements such as signal controls for bicyclists,





bicycle loop detectors, rubberized rail crossings and bicycle-friendly drainage grates.

- Purchase and installation of bicycle facilities such as secure bicycle parking, benches, drinking fountains, changing rooms, rest rooms and showers which are adjacent to bicycle trails, employment centers, park-and-ride lots, and/or transit terminals and are accessible to the general public.

## County of Los Angeles Funding Sources

### A. Metro Call for Projects (CFP)

Metro is responsible for allocating discretionary federal, state and local transportation funds to improve all modes of surface transportation. Metro also prepares the Los Angeles County Transportation Improvement Program (TIP). A key component of TIP is the Call for Projects program, a competitive process that distributes discretionary capital transportation funds to regionally significant projects.

Every other year (pending funding availability), Metro accepts Call for Projects applications in several modal categories. Funding levels for each of the modes is established by mode share as determined by the Metro Long Range Transportation Plan (LRTP). As of the writing of this plan, the CFP is currently on an odd-year funding cycle with applications typically due early in the odd years. Local jurisdictions, transit operators, and other eligible public agencies are encouraged to submit applications proposing projects for funding.

Metro staff ranks eligible projects and presents preliminary scores to Metro's Technical Advisory Committee (TAC) and the Metro Board of Directors for approval. Upon approval, the TIP is developed and formally transmitted to the regional (SCAG) and state transportation (CTC) planning agencies. The TIP then becomes part of the five-year program of projects scheduled for implementation in Los Angeles County.

The modal categories relevant to the implementation of Bicycle Plan projects and programs are Bikeway Improvements, Regional Surface Transportation Improvements (RSTI), Transportation Enhancements (TE) and Transportation Demand Management (TDM). Typically funding provided for bicycle improvements include (EA) Enhancement Activities and (CMAQ) Congestion Mitigation and Air Quality categories. Some intersection improvements or grade-separated crossing projects in this Bicycle Plan may provide an equal or greater benefit to pedestrians. In these cases the City should consider applying for funding within the Pedestrian Improvements modal category. Wherever possible, Bicycle Plan projects should be included as part of larger arterial

improvement projects and submitted under the RSTI, Regional Surface Transportation Improvements category.

The following table provides information on each of the relevant modal categories within the Metro Call for Projects as of 2010.

**Metro Call for Projects – Modal Categories Relevant to Bicycle Plan Projects and Programs**

<b>Modal Category</b>	<b>Share of Funding*</b>	<b>Eligible Projects**</b>
Bikeway Improvements	8%	Regionally significant projects that provide access and mobility through bike-to-transit improvements, gap closures in the inter-jurisdictional bikeway network, bicycle parking, and first-time implementation of bicycle racks on buses.
Regional Surface Transportation Improvements	40%	On-street bicycle lanes may be eligible if included as part of a larger capacity-enhancing arterial improvement project. Bikeway grade-separation projects may be eligible as part of larger arterial grade-separation projects.
Transportation Enhancement Activities	2%	Bicycle-related safety and education programs. Bikeway projects implemented as part of a scenic or historic highway, and landscaping or scenic beautification along existing bikeways may also be eligible.
Transportation Demand Management	7%	Technology and/or innovation-based bicycle transportation projects such as Bicycle Commuter Centers and modern bicycle sharing infrastructure. Larger TDM strategies with bicycle transportation components would also be eligible.
Pedestrian Improvements	8%	Pedestrian improvements that promote walking as a viable form of utilitarian travel, pedestrian safety, and an integral link within the overall transportation system.
<p>*Funding estimate is bi-annual (every other year) based on the approved funding from the 2007 CFP.</p> <p>**The discussion of eligible projects is based on 2009 CFP requirements and assumes all eligibility requirements are met and the questions in the CFP application are adequately addressed. These requirements are subject to change in future cycles. City staff should refer to the latest CFP Application Package for detailed eligibility requirements.</p>		



## Local Funding Sources

### A. Developer Impact Fees

Another potential local source of funding is developer impact fees, typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may reduce the number of trips (and hence impacts and cost) by paying for on and off-site bikeway improvements that will encourage residents to bicycle rather than drive. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical in avoiding legal action for ineligible use.

### B. Mello-Roos Community Facilities Act

Bicycle paths and bicycle lanes can be funded as part of a local assessment or benefit district. Defining the boundaries of the benefit district may be difficult unless the facility is part of a larger parks and recreation or public infrastructure program with broad community benefits and support.





## Funding Sources

Granting Agency	Due Date	Fund Source(s)	Annual Funding (approx) 2009	Matching Requirement	Eligible Bikeway Projects Commute Recreation Safety /Ed	Comments
Metro CFP: Bikeway Improvements	Odd- numbered years: January	SLPP TEA CMAQ RSTP	\$17.5 m	20% local match	X	Refer to latest Call for Projects Application Package for eligibility requirements.
Metro CFP: Regional Surface Transportation Improvements (RSTI)	Odd- numbered years: January	Local Prop C SLPP CMAQ	\$110 m	35% local match	X	Refer to latest Call for Projects Application Package for eligibility requirements.
Metro CFP: Transportation Enhancement Activities (TE)	Odd- numbered years: January	TEA CMAQ RSTP	\$6.5 m	20% local match	X	Refer to latest Call for Projects Application Package for eligibility requirements.
Metro CFP: Transportation Demand Management (TDM)	Odd- numbered years: January	CMAQ	\$3.5 m	20% local match	X	Refer to latest Call for Projects Application Package for eligibility requirements.
Metro CFP: Pedestrian Improvements	Odd- numbered years: January	SLPP TEA CMAQ RSTP	\$20 m	20% local match	X	Refer to latest Call for Projects Application Package for eligibility requirements.
Bicycle Transportation Account (BTA)	December	Caltrans	\$7.2 m	min. 10% local match on construction	X	State-funded. Projects that improve safety and convenience of bicycle commuters.
Safe Routes to School - State (SRTS)	May	Caltrans	\$18 m	11.5% min.	X	Primarily construction program to enhance safety of pedestrian and bicycle facilities.
Safe Routes to School - Federal (SRTS)	April	Caltrans	\$48.5 m	--	X	Infrastructure improvements must be within 2 miles of elementary or middle school.



Granting Agency	Due Date	Fund Source(s)	Annual Funding (approx) 2009	Matching Requirement	Eligible Bikeway Projects Commuter Recreation Safety /Ed	Comments
Office of Traffic Safety Grants	January	Office of Traffic Safety	\$56 m	--	X	Bicycle and pedestrian projects have been funded through this program.
Recreational Trails Program (RTP)	October	TEA	\$3 m	20% match	X	For recreational trails to benefit bicyclists, pedestrians, and other users.
Environmental Enhancement and Mitigation Program (EEMP)	November	State Resources Agency, Caltrans	\$10 m statewide	not required but favored	X	Projects that enhance or mitigate future transportation projects; can include acquisition or development of roadside recreational facilities.
Transportation Development Act (TDA) Article 3 (2% of total TDA)	--	RTPA	--	--	X	Purchase and installation of bicycle facilities including bikeway support facilities and secure bicycle parking. Retrofit of existing facilities to comply with ADA.
Mello-Roos Community Facilities Act	--	Tax Revenue approved by 2/3 vote	--	--	X	Funds have been used for bicycle lanes/paths
Transportation and Community and System Preservation Program (TCSP)	Pending	FHWA	\$61.25 m	--	X	Projects that improve system efficiency, reduce environmental impacts of transportation, etc.
Land & Water Conservation Fund (LWCF)	May	State DPR		\$7.7 m statewide	50%, including in-kind	Federally-funded. Projects that acquire and develop outdoor recreation areas and facilities.
Petroleum Violation Escrow Account (PVEA)	On-going	State Legislature		\$5 m	--	Bicycle and trail facilities have been funded with this program.
Developer Fees or Exactions (Developer fee for street improvements - DFSI)	--	Cities or County		--	--	Mitigation required during land use approval process
Hazard Elimination Safety Program (HES)	April	Caltrans		\$10-16 m	10%	Refer to latest Call for Projects Application Package for eligibility requirements.

2010 Bicycle Plan  
Funding Sources

\* Metro Call for Projects funding levels may vary greatly from cycle to cycle. The annual estimates in this table are based on the approved funding from the 2007 CFP.



# Appendix C:

## Bicycle Transportation Account Matrix





## City of Los Angeles 2010 Bicycle Plan - BTA Checklist

The following text describes the location in the 2010 Plan of each of the BTA Requirements a-k:

(a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan. [Location: Chapter 2, Pages 27-35](#)

(b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers. [Location: Chapter 3, Pages 43-53 and Maps: Appendix E](#)

(c) A map and description of existing and proposed bikeways.

[Location: Chapter 3 and Maps: Appendix E- Designated Bikeways and Existing and Funded Bikeways Maps.](#)

(d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers. [Location: Chapter 3, Pages 54-59, Chapter 4, Pages 76-79, and Map: Appendix E- Designated Bikeways Map.](#)

(e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels. [Location: Chapter 3, Page 59, Chapter 4, Pages 76-82, and Map: Appendix E- Designated Bikeways Map.](#)

(f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities. [Location: Chapter 3, Page 59, Map: Appendix E - Designated Bikeways Map.](#)

(g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists. [Location: Chapter 3, Pages 60-63.](#)

(h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support. [Location: Chapter 1, Page 25.](#)



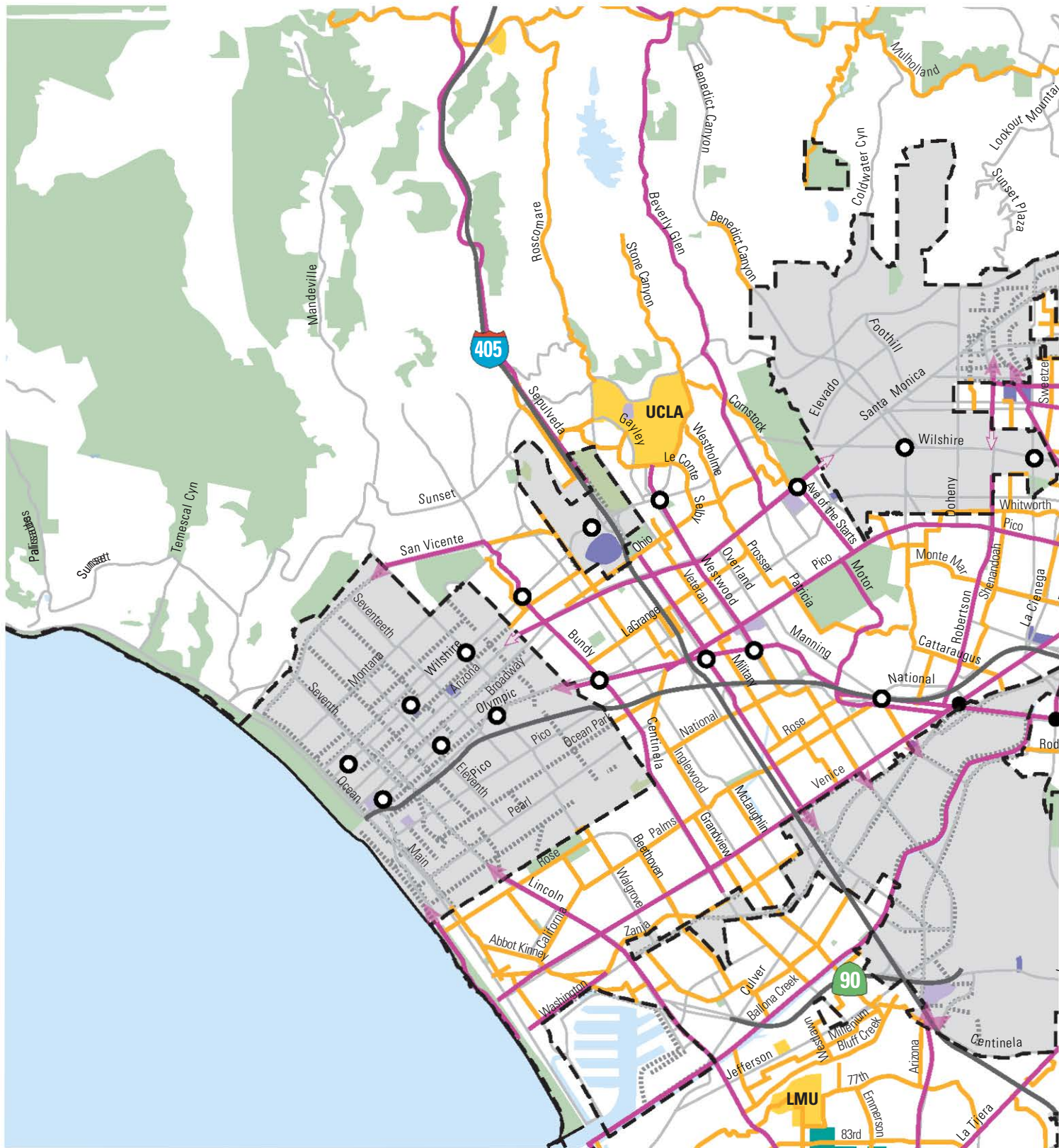


(i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting. Location: Chapter 1, Pages 21-24.

(j) A description of the projects proposed in the plan and a listing of their priorities for implementation. Location: Chapter 4, Pages 72 and 97, and Chapter 5 Page 110.

(k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area. Location: Chapter 5 Pages 112-113.





# Appendix D: Matrix and Maps

*(See attachment- bound separately)*







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