

**CALIFORNIA BLUEPRINT FOR BICYCLING AND WALKING**

**Report to the Legislature**

**Gray Davis  
Governor**

**Maria Contreras-Sweet  
Secretary, Business, Transportation  
and Housing Agency**

**Jeff Morales  
Director  
CALIFORNIA  
DEPARTMENT OF TRANSPORTATION**

-----  
**Prepared Pursuant to  
The Supplemental Report of the  
2001 Budget Act**

**May 2002**

## EXECUTIVE SUMMARY

The Supplemental Report of the 2001 Budget Act requires the California Department of Transportation (Department) to submit a report addressing “measurable goals for increasing bicycling and walking within the state, funding of facilities, and a reduction in pedestrian and bicycling injuries and fatalities.”

The California Blueprint for Bicycling and Walking (Blueprint) responds to the Budget Act requirements with ambitious goals:

- A 50 percent increase in bicycling and walking trips by 2010.
- A 50 percent decrease in bicycle and pedestrian fatality rates by 2010.
- Increased funding for bicycle and pedestrian programs.

Achieving the Blueprint’s goals will require the cooperation of government agencies, elected officials, bicycle and pedestrian advocacy organizations, and the public. Bicycling and walking must be considered in land-use and community planning, all phases of transportation planning, and in all project designs.

The Blueprint recommends establishment of a task force to monitor implementation of the report’s recommendations and measure progress toward achieving its goals. The report recognizes the need for additional resources to establish the task force and monitor implementation. For the fiscal year 2003/04, the Department is requesting additional resources to establish full time non-motorized coordinator positions in district offices throughout the State. All district coordinators would participate in the task force.

Increasing bicycling and walking can help relieve traffic congestion, particularly in congested urban areas where many trips may be well suited to bicycling or walking. Blueprint implementation will include research into the levels of bicycling and walking that would achieve noticeable reductions in traffic congestion.

Achieving the Blueprint’s goals for bicycling and walking will require increasing the use of these modes while improving the efficiency of the existing transportation system. The report discusses a number of strategies for accomplishing these objectives. Some areas of emphasis are: professional education in non-motorized transportation; driver, bicyclist, and pedestrian education; law enforcement; traffic management strategies that encourage bicycling and walking; and land use and development policies that encourage bicycle and pedestrian travel.

Traffic management strategies that combine recent technological innovations, such as bicycle signal heads, video detection, and lighted crosswalks with comprehensive networks of bikeways and walkways, can maximize opportunities for bicycling and walking.

The report emphasizes the importance of secure bicycle storage at convenient locations and bikeway designs that enhance personal safety with good visibility, security lighting, and emergency telephones.

Several recommendations address pedestrian safety and walking for transportation. Key considerations include: connectivity of pedestrian facilities; amenities such as trees and adequate lighting; requiring a planted buffer or sufficient sidewalk width as part of new sidewalk construction on major arterials; designing roadways for their optimum and safe speed consistent with the location and functional classification; and developing traffic calming guidelines that facilitate bicycling and walking.

The report emphasizes the importance of communicating the benefits of bicycling and walking to local and statewide audiences. Topics could include the benefits of bicycle helmets, pedestrian safety education, and encouraging public participation when designing the bicycle and pedestrian elements of a freeway interchange.

State and local agencies involved in land use, community planning, transportation, environmental quality, and public health are challenged to implement programs that facilitate non-motorized travel and adopt supportive policies. Key issues include: trip distances; continuity of bicycle and pedestrian facilities; eliminating barriers to bicycling and walking; adding or enhancing bicycling and walking facilities; and bicycling and walking safety.

To facilitate recovery of financial data pertaining to non-motorized transportation improvements, the report recommends modification of the Department's programming and financial databases.

In addition, the report recommends that the Department compile information about existing funding programs and projected needs for bicycle and pedestrian improvements. If warranted by the data, the report recommends that the Department develop a proposal for legislation to provide a guaranteed annual minimum level of funding for State and local bicycle and pedestrian programs.

Contributors to the Blueprint include the California Bicycle Coalition, Walk Sacramento, the Rails to Trails Conservancy, the California Department of Health Services, and the California Department of Transportation. The California Bicycle Advisory Committee, the Pedestrian Safety Task Force, the Departmental Transportation Advisory Committee, and the Department's Alternative Transportation and Livable Communities Working Group reviewed the report and offered comments.

Although this document addresses bicycling and walking, each mode has different facility needs that deserve full and separate consideration.

## TABLE OF CONTENTS

<b>TOPIC</b>	<b>PAGE</b>
I. Goals and Performance Measures	1
II. Context	5
III. Integrating Bicycling and Walking	9
IV. Bicycle Safety	16
V. Pedestrian Safety	18
VI. Changing Attitudes and Behaviors – A Communication Program	23
VII. State and Local Framework	24
VIII. Funding	29
Appendix A. U.S. Department of Transportation Policy	
Appendix B. California Department of Transportation Deputy Directive 64	
Appendix C. Bicycle and Pedestrian Plan Checklists	
Appendix D. Where People Walk in Sacramento	
Appendix E. Statement of Work	
Appendix F. Bicycling and Walking Statistics	

# I. GOALS AND PERFORMANCE MEASURES

## A. Objectives

The Supplemental Report of the 2001 Budget Act requires the Blueprint for Bicycling and Walking (Blueprint) to address three key topics:

- Increasing bicycling and walking.
- Reducing bicycle and pedestrian injuries and fatalities.
- Funding for facilities.

### 1. Statewide Goals

To comply with the Budget language requirements and provide a focus for the many organizations responsible for creating the conditions for bicycling and walking, the Blueprint establishes statewide goals:

- A 50 percent increase in the number of bicycling and walking trips by the year 2010 (compared to base year 2000 levels, according to the 2000 census).
- A 50 percent decrease in the bicycle and pedestrian fatality rates by year 2010 (compared to base year 2000 levels, according to the National Highway Traffic Safety Administration publication, *Safety Facts 2000*).
- Increase funding for bicycle and pedestrian programs to the levels necessary to meet these goals. In addition to funding for facilities, resource needs include amounts necessary to increase State and local agency staffing, and to hire consultants for specific tasks or research efforts recommended in the Blueprint.

The Blueprint's goals focus on increasing bicycling and walking in place of short-distance motor vehicle trips and in combination with other modes as well as improving safety for bicyclists and pedestrians. These goals are based on comparisons with modal choices and fatality rates in states throughout the country (see Appendix F). These goals are challenging but achievable and have already been accomplished by other states. Success will require priority shifts in State and local community planning, public health policy, education, law enforcement, and transportation.

The Blueprint Working Group compared California's 0.8 percent bicycle commuting mode share with Oregon's where 1.2 percent of commuters rode bicycles. Increasing bicycling in California by 50 percent increases the bicycle mode share to a comparable level.

Oregon's bicyclist fatality rate, normalized by the number of bicycle commuters, is less than half of California's. Hawaii, Washington, and several other states have fatality rates similar to Oregon's. The goal of a 50 percent reduction in California bicyclist fatalities is more ambitious than the Pedestrian Safety Task Force's original goal of a 20 percent reduction in collisions by the year 2018. Ideally, the increased national interest in non-motorized modes will accelerate the funding for the four E's (engineering, education, enforcement and encouragement), and thereby increase the resources available for attaining this ambitious goal. Meeting the proposed goal could save the lives of approximately 28 California bicyclists every year, even assuming a 50 percent increase in cycling over the same period.

For walking, the Blueprint Working Group used Massachusetts as a model because they have a reputation in pedestrian orientation similar to Oregon's with respect to bicycles. The 2000 Census found that in Massachusetts, 3.9 percent of commuters walked to work; in California, 2.7 percent walked. A 50 percent increase in pedestrian commuters would place California slightly above Massachusetts' current level (though still far below New York's 5.3 percent pedestrian share).

Massachusetts' pedestrian fatality rate, normalized by the number of pedestrian commuters, is less than half of California's. New York, Pennsylvania, and several other states have fatality rates similar to Massachusetts. Meeting the proposed goal could save the lives of approximately 168 California pedestrians every year, even assuming a 50 percent increase in pedestrian trips over the same period.

Meeting these goals will require comprehensive transportation planning, project programming, and adequate funding to address non-motorized travel needs. It is beyond the scope of this document to identify specific projects, programs, and necessary funding levels. Accordingly, the Blueprint Working Group recommends that a consultant be retained to consider these issues in more detail and recommend funding programs to meet the Blueprint's goals (for a draft Statement of Work, see Appendix E.)

## 2. Local Agency Goals

Achieving the Blueprint's goals will require a coordinated effort involving all jurisdictions and all Federal, State, and local roads and off-road facilities in California.

- a. Cities and counties are invited to establish goals, which may be taken into account in any future funding arrangements.

- b. The ability to achieve a 50 percent increase in bicycling and walking will vary by local agency. Local agency goals that are challenging will contribute significantly to achieving the statewide goal. Setting quantitative targets may be the best approach for some agencies. Establishing a set of specific tasks or qualitative standards may be more practical for others. This may be particularly true for agencies not directly involved in administering the transportation system. In any case, local land-use and community planning policies that facilitate bicycling and walking are essential to increasing use of these modes.

## B. Strategic Actions

The Blueprint Working Group identified four initiatives which are central to the Blueprint and can act as a focus for all contributors. These initiatives are to establish:

- Statewide goals for increasing bicycling and walking in California.
- Associated local, State, and Federal agency goals.
- Appropriate performance measures.
- A Blueprint Task Force to guide the ongoing implementation of the Blueprint.

## C. Performance Measures

The Blueprint Working Group has identified the following performance measures to evaluate progress toward achieving the Blueprint's goals. Additional resources and data from local agencies will be required to measure progress in these areas.

Volumes: Establish a method to measure or estimate bicyclist and pedestrian volumes on a statewide and local basis, both on streets and trails. Compare bicycling and walking trips with other modes, by jurisdiction and zip code, and report the results periodically.

Traffic Safety: Measure and target reductions in crashes involving bicycles and walkers (incidents, fatalities and injuries).

Local Participation: Monitor all local agency efforts to establish their own Blueprints for Bicycling and Walking. Integrate public participation in all phases of strategic planning, land use and community planning, and implementation of public places where people walk or bike.

- Connectivity: Measure the number and proportion of bicycling and walking trips conducted in combination with other modes and the connectivity of facilities for walkers and bicyclists.
- Infrastructure: Accommodate bicycling and walking in all transportation improvements and development projects. Incorporate context-sensitive solutions into planning and implementation. Measure the cost effectiveness of improvements for bicycling and walking.

## D. Monitoring and Review

### 1. Continuous Review

The California Blueprint for Bicycling and Walking proposes strategies for increasing bicycling and walking and improving safety. It offers an action plan designed to achieve the desired goals, but flexible enough to change as new findings are evaluated. Continuous review will provide a sound basis for future guidelines and programs.

### 2. Oversight

The Blueprint Working Group has proposed the establishment of a Blueprint Task Force. The Director of the California Department of Transportation (Department) would assign a chairperson who would form this task force with support from departmental staff. It would include representatives from private organizations, State agencies, and advisory groups related to promoting safe walking and bicycling. The task force would meet regularly, perhaps quarterly, to analyze progress and update blueprint recommendations. Other agencies and organizations which could be included in the task force should be identified. Additional resources would be required to support the task force's efforts to ensure and monitor Blueprint implementation.

#### a. The Blueprint Task Force Mission:

Make recommendations that would help ensure that State and local policies facilitate increases in bicycling and walking, reductions in injuries and fatalities, and adequate funding.



b. Tasks:

- (1) Encourage implementation of the California Blueprint for Bicycling and Walking.
- (2) Involve concerned agencies and organizations; coordinate and integrate their contributions to the Blueprint.
- (3) Identify successful bicycling and walking programs developed by local jurisdictions, states, and other countries and disseminate this information in California.
- (4) Make recommendations to assist State and local agencies with implementation of Blueprint goals.
- (5) Monitor progress on Blueprint performance measures and recommend modifications as appropriate.

3. Annual Report

The Blueprint Task Force will ensure implementation of the California Blueprint for Bicycling and Walking. The annual Non-Motorized Transportation Facilities Report to the Legislature will include a Blueprint element.

## II. CONTEXT

### A. Background

The California Bicycle Coalition and the Surface Transportation Policy Project requested a budget appropriation of \$300,000 to the Department for development of the California Blueprint for Bicycling and Walking. Although the 2001/02 budget does not appropriate the requested funding, it does require the Department to prepare the Blueprint and submit it to the Legislature by May 1, 2002. The following language requiring the blueprint is excerpted from the Supplemental Report of the 2001 Budget Act:

“Bicycle Blueprint. By May 1, 2002, the Department of Transportation’s planning program, in coordination with the California Bicycle Advisory Committee, the Pedestrian Safety Task Force, and staff from other programs that are involved in bicycle and pedestrian issues, shall submit a report to the Chair of the Joint Legislative Budget Committee, the chairs of the fiscal committee in each house, and the chairs of the transportation committee in each house that shall include

measurable goals and objectives for increasing bicycling and walking within the state, funding of facilities, and a reduction in pedestrian and bicycling injuries and fatalities.”

Pursuant to the budget requirement, the Department presented its strategy for preparing the Blueprint to the California Bicycle Advisory Committee and the Pedestrian Safety Task Force. To prepare the report, the Department formed the Blueprint Working Group, which includes representatives from the Department’s Divisions of Local Assistance, Transportation Planning, Traffic Operations, and Design, the Department of Health Services, the interagency Pedestrian Safety Task Force, Walk Sacramento, and the California Bicycle Coalition.

## B. Current Conditions

### 1. Bicycling and Walking in California

In California, as in the rest of the country, data is sparse for determining the percentage of trips that include bicycling and walking. Surveys, such as the U.S. Census, count only the most dominant mode in a trip; substantially understating bicycling and walking, e.g., a bus accessed by bicycle or on foot does not count as a non-motorized trip. Data is sparse also due to distinctions between transportation and leisure trips. Many trips off-arterials and highways are not counted.

Relieving traffic congestion, improving air quality, conserving energy and promoting healthy lifestyles are a few of the benefits to be realized from increased levels of bicycling and walking. Bicyclists and walkers are well aware of these benefits and routinely cite them when promoting non-motorized travel. The State’s mild climate and high percentage of trips less than three miles in length contribute to the potential for significant increases in bicycling and walking for short trips.

Local, regional, State, and Federal agencies are becoming increasingly aware of the need to accommodate bicyclists and pedestrians in policies, plans, and projects. This section addresses some of the existing resources and mechanisms available for pursuing these objectives.

### 2. Legislation, Policies, Guidelines, and Manuals

Legislation establishes the framework and authority to create programs. Federal and State laws contain the major provisions affecting non-motorized programs in California.

a. Federal Legislation

At the Federal level, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) recognized the importance of bicycling and walking in a balanced transportation system. In addition to authorizing use of Federal transportation funding sources for bicycle and pedestrian projects, ISTEA required each state to establish a bicycle and pedestrian coordinator position. The Transportation Equity Act for the Twenty-first Century (TEA-21), enacted in 1998, continued to emphasize the important role of bicyclists and pedestrians and increased Federal funding flexibility for bicycle and pedestrian facilities.

b. State Laws

California Vehicle Code

The California Vehicle Code includes numerous provisions about bicycles and pedestrians, including:

- (1) Definitions for bicycle and pedestrian.
- (2) The rules of the road for bicyclists and pedestrians.
- (3) Prohibitions affecting bicyclists and pedestrians.
- (4) Bicycle helmet requirements.
- (5) Facilities available to bicyclists and pedestrians.
- (6) State and local agency authority to control bicycle and pedestrian access to public roads, bicycling on sidewalks, and bicycle licensing programs.

California Streets and Highways Code

The Streets and Highways Code directs the Department to carry out a non-motorized transportation program. Various code sections address:

- (1) Construction of bicycle and pedestrian facilities.
- (2) Development of standards for bicycle facilities.
- (3) A statewide bicycle map.
- (4) Funding for bicycle and pedestrian facilities.

- (5) The requirement for an annual non-motorized activities report to the Legislature.

c. Policies

Policy development is one step toward achieving goals. Distribution, publicity, educational campaigns, and monitoring are the keys to successful implementation.

- (1) The United States Department of Transportation recently adopted a policy entitled, *Design Guidance: Accommodating Bicycle and Pedestrian Travel: A Recommended Approach* which provides direction for states and local agencies involved in improving bicycle and pedestrian facilities. The *Design Guidance* is included as Appendix A.
- (2) In March 2001, the Department approved Deputy Directive 64 (DD-64) - Accommodating Non-Motorized Travel. This policy states the Department's intent to fully consider "...the needs of non-motorized travelers in all programming, planning, maintenance, construction, operations and project development activities and products." DD-64 is included as Appendix B.
- (3) Policy and Procedure (P78-14), another departmental policy, is in place "To assure that the needs of bicyclists are considered in conjunction with the maintenance and improvement of State highways."
- (4) The Department recently adopted a new policy on Context Sensitive Solutions (Director's Policy No. 22) which will ensure that non-motorized issues are addressed in transportation planning, design, construction, maintenance and operations strategies.
- (5) Other State agencies and many local and regional jurisdictions have policies and ordinances addressing non-motorized travel.

d. Guidelines

Planners and designers rely on guidance from various sources to ensure that they are aware of and are incorporating current best practices into their projects. Funding programs generally incorporate guidelines that assist with application preparation and program/project administration. Ensuring that these resources are available to the appropriate staff and

decision-makers is integral to accommodating bicyclists and pedestrians.

Although all bikeway projects in California, whether State or locally funded, must comply with the Highway Design Manual, as noted below, additional guidance is available from the American Association of State Highway and Transportation Officials' (AASHTO) *Guide for the Development of Bicycle Facilities*. AASHTO is now developing a similar guidance for pedestrian facilities.

AASHTO's *A Policy on Geometric Design of Highways and Streets*, (also known as the "Green Book") is a resource that many local agencies use for road projects. Although it is not specifically about bikes and pedestrians, its guidance about roads in general and non-motorized travel can be a valuable resource for planners and engineers.

e. Manuals

The Transportation Planning Manual, the Highway Design Manual, the Traffic Manual, the Highway Maintenance Manual, and similar publications provide direction for planning, designing, constructing, maintaining, and operating transportation facilities.

The Highway Design Manual requires consideration of non-motorized travel in all State highway projects. In California, State and local transportation agencies are required to comply with Highway Design Manual Chapter 1000 when implementing bikeway projects. Including non-motorized guidance in all applicable manuals and guidelines is critical to improving non-motorized accommodations. Checklists can help ensure adequate consideration of these issues during planning and project implementation.

All manuals should be reviewed periodically and updated as needed to provide the best possible guidance for accommodating non-motorized travel.

### **III. INTEGRATING BICYCLING AND WALKING**

Managing traffic on the existing road network has become increasingly important as transportation agencies strive to relieve traffic congestion in order to move goods and people efficiently. Effective strategies combine capacity increases with steps to increase the efficiency of the existing transportation system. Attaining the Blueprint's goals depends on successful integration of bicycling and walking into all programs and projects that affect existing and proposed transportation systems.

Attaining the Blueprint's goals depends on the availability of a variety of environmentally and economically sustainable transportation choices. Significant increases in bicycling and walking are dependent on the ability and willingness of transportation agencies to routinely plan, design, construct, and maintain safe and convenient facilities for bicycling and walking.

#### A. Objective – A Bicycle and Pedestrian-Friendly Network

Many bicycle and pedestrian trips in this country are for utilitarian purposes: to work, to places of education, for shopping, and other trips. Many people also walk and bicycle for exercise. Regardless of trip purpose, bicyclists and walkers prefer facilities that are convenient, safe, and equipped with appropriate amenities such as drinking fountains, picnic tables, benches, and shade. One of the primary objectives of the Blueprint is to encourage and enable transportation professionals to routinely include these facilities in transportation improvements.

Because designs have evolved over many years, some existing roads do not conform fully with current standards including accommodations for non-motorized travel. On these roads, additions or improvements (such as new or improved shoulders, sidewalks, striping, and other features) may enhance safety and encourage non-motorized travel. Accelerating programs to improve existing roads may require increases in resources.

Separated bicycle and pedestrian facilities also play a vital role in promoting walking and bicycling. Transportation agencies should take advantage of opportunities to reserve rights of way (such as abandoned rail lines) for eventual development of trail and path networks.

#### B. Traffic Management

Traffic management and related engineering practices and technology currently in use or under development offer enormous potential to improve bicycling and walking conditions. Examples include bicycle-sensitive loop detectors, video detection, road closures with gaps for bicyclists, and extensive networks of bikeways. For pedestrians, enhancements could include curb extensions, improved pedestrian crosswalks, pedestrian refuges in medians and islands, sidewalks separated from traffic with tree planting strips, and other design and striping treatments that provide safe and convenient movement for pedestrians and bicyclists. To maximize the potential benefits of these measures, transportation professionals must explicitly plan for non-motorized transportation.

## C. Incorporating Non-Motorized Travel

Creating a bicycle and pedestrian-friendly infrastructure does not necessarily require complex or expensive traffic management and engineering measures. Changes in thinking, increased awareness of non-motorized issues, and modified approaches to managing our transportation systems are keys to increasing bicycling and walking. The following sections provide examples.

### 1. Traffic Tools

Traffic planning and design offer many tools to improve bicycling and walking conditions including:

- Integrating transit with non-motorized modes.
- Using traffic calming devices to increase pedestrian safety.
- Continuing development of a statewide bicycle transportation network.

### 2. Full Consideration

Traditionally, traffic management has emphasized safety and efficiency for motor vehicles with less emphasis on non-motorized travel. Motor vehicle capacity improvements on facilities where bicycles and pedestrians are permitted should accommodate these modes and avoid creating impediments to future enhancements for non-motorized travel. Accommodating bicycling and walking requires consideration throughout the planning, programming, design, and construction stages.

### 3. A Balanced Approach

The Department recently adopted DD-64 stating its intent to fully consider non-motorized modes in all project-related activities. Please refer to Appendix B for the text of DD-64.

### 4. Dual-Purpose Corridors

Excessive motor vehicle speeds can endanger bicyclists, walkers, and other motor vehicle operators. Attention to the functions and values of the surrounding community recognizes roads as part of the environment where people live, work, and interact. Improving traffic safety through engineering, education, encouragement and enforcement is crucial to developing context-sensitive solutions and creating a bicycle- and pedestrian-friendly infrastructure.

## 5. Trails

Publicly-owned rights of way, including active and abandoned railroad corridors, canal corridors, and utility easements provide excellent opportunities for shared use with non-motorized travelers. As a growing population puts pressure on open space, these corridors provide valuable opportunities for developing non-motorized transportation systems. Maximizing opportunities to develop trail corridors will be essential to attaining the Blueprint's goals.

## 6. Short Trips

Many non-commercial trips are short enough to be made by bicycle or by walking/transit combinations. Increasing opportunities to make short trips without using private motor vehicles can help achieve the Blueprint's goals of increasing walking and bicycling trips.

## 7. Connectivity

Traditionally, planning for bicycles, pedestrians, and transit was carried out separately from the rest of the transportation system with resulting gaps that make non-motorized travel difficult. When pedestrians or bicyclists are not confident that they will have continuous facilities for their trips, they will be discouraged from attempting them. An integrated approach maximizes opportunities for sustainable transportation modes. A corridor or area-based approach is preferable.

## 8. Safety

Some agencies have avoided promoting bicycling and walking for fear of failing to meet road safety targets or of assuming additional liability. Yet jurisdictions that have encouraged cycling have seen that increasing bicycling and walking can be compatible with road safety goals. Traffic crashes are strongly correlated with traffic speeds, and the types of measures that encourage non-motorized traffic also tend to lower speeds. In addition, increased presence of pedestrians and bicyclists can cause drivers to be more cautious in traffic.

## 9. Overcoming Barriers

Recognizing bicyclists and pedestrians as legitimate road users is important in overcoming such attitudinal and institutional barriers. Transportation and other departments contributing to the design of our communities need to consistently use best practices for planning and designing non-motorized transportation projects. Suitable training is encouraged.

## D. Strategic Objectives



## 1. Moving People vs. Moving Vehicles

Maximizing opportunities for bicycling and walking shifts the focus from safely moving the maximum number of passenger vehicles to safely moving the maximum number of people. Approaches to traffic planning and engineering, modeling and evaluation techniques, and design guidelines should be reviewed for consistency with this approach.

## 2. Consider All Modes

Planners and engineers need to consider bicyclists and walkers, as well as motor vehicles and transit, when projecting right-of-way needs and allocating road space. Considering the needs of all modes simultaneously increases the overall efficiency of the transportation system. Each agency responsible for transportation and land use in California should undertake a strategic review of its road networks and produce its own blueprint for bicycling and walking.

## 3. Studies to Identify Opportunities

All transportation agencies should adopt a process to ensure that they are maximizing opportunities to enhance conditions for bicyclists and pedestrians. The existing roadway network, including bicycle and pedestrian facilities, should be evaluated using non-motorized audit procedures.

## 4. Priority in Road Safety and Education Programs

The Blueprint's goals include reducing bicyclist and pedestrian injury and fatality rates while bicycling and walking are increasing. Bicyclists and pedestrians should be given increased priority in road safety programs. Data should identify the where, when, and how of bicycling and walking accidents. A methodology for estimating bicycling and walking volumes will be essential to establishing accident exposure. Education programs will help children and adults bicycle and walk safely, while increasing motorist awareness of these vulnerable road users.

The Governor's Office of Traffic Safety funds a number of programs that focus on improving bicycle and pedestrian safety. Examples include the "Share the Road" program, implemented by the Kern County Superintendent of Schools, "Pedestrian Routes to Schools Maps", developed by the Los Angeles Unified School District, and the "Do Stop, Don't Stop" pedestrian safety program implemented by the City of Manhattan Beach.

The Department's recently completed studies of bicycle compatible shoulder rumble strips and bicycles and pedestrians on freeways focus on non-motorized safety on State facilities.

#### 5. Increased Enforcement

Traffic law enforcement, particularly for excessive speed and right-of-way violations, should be given higher priority. Adequate resources should be allocated for effective law enforcement measures. Officials should review existing California traffic laws and enforcement practices and devise appropriate strategies to improve traffic safety.

Currently, California Highway Patrol (CHP) commanders develop safety programs such as bicycle rodeos and classroom safety instruction to address specific needs in the community. The online "Know to Go" program is a fun way for children to test their knowledge of traffic safety. The CHP also produces and distributes bicycle safety brochures for children and adults.

"Aggressive Driver" programs include a safety education component as well as additional enforcement to address specific traffic violations.

#### 6. Increased Professional Education

Bicycle and pedestrian issues should be integrated into mainstream engineering, landscape architecture, and planning programs. Curricula for transportation and land use must present walking and bicycling as normal, expected, efficient, and desirable modes. Continuing education for professionals in related fields should be encouraged. Licensing boards for transportation and trails professionals should review training and education needs and make appropriate recommendations. Professional organizations also need to raise awareness of the relevance of bicycling and walking and encourage practitioners to improve their technical skills.

#### 7. Increased Access

Bicycle and pedestrian access should to be maintained in most areas where vehicle use is restricted or blocked, such as street closures and cul-de-sacs, to reduce distances and travel times. Communities must be designed to enable safe and efficient travel for non-motorists. Local agencies need to coordinate with developers to maximize opportunities to provide bicycle- and walk-friendly development patterns and infrastructure.

#### 8. Increased Funding for Local Agency Projects

Good quality local agency projects are fundamental to local transportation and trails funding as part of a coherent local bicycling and walking strategy. Information on funding possibilities for non-motorized facilities should be widely distributed. Funding criteria should place a high priority on bicycling and pedestrian travel facilities and strategies to integrate those modes with public transportation. Sufficient funding should be allocated to non-motorized and public transportation modes to give travelers a full range of transportation mode choices for trips of various lengths. Such projects are generally far less expensive than major new highway projects and can provide high benefit levels in terms of safety, health, and mobility.

Trails projects deserve special consideration because they often require advance funding to preserve opportunities for future trail development; e.g., purchase an abandoned rail corridor. Planners should become familiar with regional trail opportunities and work with adjoining jurisdictions to maximize trail opportunities.

#### 9. Increased Staff and Resources

Until non-motorized modes are fully incorporated into education, training, planning, and design practices as a normal part of doing business, all local agencies involved with transportation and trails systems should appoint staff with authority and resources to promote and incorporate bicycle and pedestrian travel. State agencies should appoint sufficient staff to ensure the success of the California Blueprint for Bicycling and Walking.

- a. Every local transportation agency should establish clear responsibilities and adequate staff time for bicycling and pedestrian planning.
- b. The Department should pursue increased staff resources sufficient to address non-motorized needs statewide.

#### 10. Increased Research

Further research is needed to evaluate the effects of traffic management on non-motorized transportation. The safety requirements of non-motorized modes should be integrated into all transportation engineering, management, and safety research. Increased involvement of bicycling and walking experts and communities is essential for determining research priorities. A few research projects are noted below as examples.

- Flexible design solutions and innovative measures need to be researched and promoted. This could include drawing on the experience of other states and countries.

- Data collection on volumes and facilities.
- The most cost-effective methods of determining bicycle and pedestrian collision rates.
- Strategies for increasing non-motorized access to destinations and transferring trips from motor vehicles to bicycling and walking should be identified.

#### **IV. BICYCLE SAFETY**

Bicycles are vulnerable to theft. They are lightweight, often parked in the open, high enough in value to be worth stealing, but too low in value to be worth equipping with expensive security devices, frequently hard to identify, and easily disguised. It is hardly surprising that bicycle theft is endemic where there is widespread bicycle use. Considering the value of many modern bicycles, the availability of secure bicycle parking is often the key factor in selecting the bicycle as a commute mode.

The personal security of bicyclists is also a key consideration in facility design and maintenance.

##### **A. Personal Safety and Security for Bicyclists**

Personal security for bicyclists requires attention to design details such as trail, path, and sidewalk lighting. Good sight distance improves the user's perception of safety on sidewalks, pathways, bridges, and in tunnels. Facility designs should be large enough to feel comfortable and to minimize dark corners or spaces that could serve as hiding places.

When landscaping is included, it should be open and airy to promote good visibility. Facility owners may want to install emergency telephones on isolated trails or path segments.

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

###### **1. Secure Parking at Destinations**

Secure bicycle parking is a key factor in deterring opportunistic and organized bicycle theft. This includes providing secure bicycle parking at destinations bicyclists are likely to visit, including but not limited to schools, commercial and employment centers, public buildings, recreational facilities, park and ride lots, and public transportation stops and stations.

## 2. Convenient Locations

If bicycling is to retain its inherent advantages, it is essential that cyclists are able to lock their bicycles at the most convenient location, usually immediately adjacent to their destination. Where bicycle parking is unavailable nearby, or if the bicycle will be parked for several hours, a bike locker or bicycle racks in a fenced enclosure with weather protection is desirable.

Facility owners may want to consider installing street furniture that can accommodate bicycles without obstructing vehicular traffic or pedestrians. Where a bicycle could be an obstruction, the local agency should provide bicycle parking at an appropriate location.

Authorities responsible for providing bicycle parking should consult local cyclists when reviewing existing bicycle parking and when considering changes or improvements.

## 3. Parking Space Conversion

When installing bicycle parking, local agencies may want to consider converting vehicle parking spaces rather than using sidewalk space where bicycle parking could obstruct pedestrians, particularly those with disabilities.

## 4. New Development

State and local jurisdiction agencies should consider adopting an ordinance requiring developers and employers to provide secure bicycle parking at commercial developments and employment sites.

## 5. Bicycle Parking Equipment

Bicycle parking equipment selected for installation should be secure, reliable, and durable. Local agencies, transit agencies, and bicycle advocacy groups are good sources of information regarding secure bicycle parking equipment.

## C. Registration and Recovery

The California Vehicle Code authorizes local agencies to adopt an ordinance or resolution creating a bicycle licensing program utilizing the California Bicycle License system managed by the Department of Motor Vehicles. Although the majority of Californians live in areas where California bicycle licenses are offered or even mandated by local authorities, participation in these programs is not widespread across the State.

State and local agencies may want to consider creation of a statewide bicycle license database or other methods of increasing participation in existing local agency registration programs.

If demonstrated to reduce bicycle theft and improve the chances for recovery when a bicycle is stolen, a licensing program could be a significant factor in increasing bicycle usage.

## D. Blueprint Recommendations

Secure bicycle parking should be included in the earliest phases of project planning to ensure safety and convenience for bicyclists and minimal intrusion into areas frequented by pedestrian and vehicles.

Facility owners who have successfully implemented bicycle parking and bicycle advocates can be valuable resources for designing new or retrofit parking improvements.

# V. PEDESTRIAN SAFETY

The statistics on pedestrian injuries and fatalities provide evidence of pedestrian vulnerability. In California, as in other states, pedestrians are injured and killed in much higher proportion to their trip-making than travelers using other modes. According to the Pedestrian Safety Task Force Report (1999), pedestrians are involved in three percent of collisions, but account for 22 percent of the traffic fatalities statewide. People who have a choice will not walk if there is a lack of safe facilities. Pedestrian-friendly facilities are essential to achieving the Blueprint's goal to increase walking.

## A. Motor Vehicle Speeds

### 1. Existing Conditions

Arterial roadways in California are planned to minimize driving time, particularly during congested commute periods. While increasing peak

hour capacity offers obvious benefits, the expanded roadway can also be a high speed corridor incompatible for pedestrians during non-peak periods.

## 2. Blueprint Recommendations

- Design roadways for their optimum and safe speed consistent with the location and functional classification; e.g., urban, rural, freeway, expressway, arterial, collector, etc.
- Develop roadway design guidelines to minimize excessive speed. Utilize work of the local government commission in this endeavor.
- Develop guidelines for urban/main street arterial traffic calming measures.

## B. Street and Intersection Crossings

### 1. Existing Conditions

Safe and convenient street crossings are essential for pedestrian travel. On multilane roads, long crossing distances increase the potential for pedestrian/vehicle conflict. All intersections, whether controlled or uncontrolled, should be designed so that pedestrians of all ages and abilities can safely cross the road. Pedestrian crossings should also be located at convenient intervals. Planners and designers should not expect pedestrians to travel substantial distances out of their way to use a controlled intersection.

The following measures can improve pedestrian crossing safety: traffic signals; advance signing and other devices that alert drivers to pedestrian crossings; enhanced crosswalk markings; curb extensions that reduce crossing distance; and pedestrian refuge islands and medians.

The Florida Department of Transportation (FDOT) is developing methods for assessing the pedestrian “Level of Service” (LOS) of roadway intersections.

### 2. Blueprint Recommendations

- Develop intersection crossing guidelines using experiences gained in cutting edge communities and consistent with the Americans with Disabilities Act (ADA).
- Review the FDOT’s LOS recommendations for potential applicability in California.

## C. Sidewalks

### 1. Existing Conditions

To maximize pedestrian mobility, there must be a safe place to walk on both sides of the street. Pedestrians walk on the side of the street that is most advantageous to them in terms of time, comfort, and convenience. Gaps in sidewalks can lengthen, or eliminate the possibility of, a walking trip. Meandering sidewalks may not be suitable for walking trips made for utilitarian purposes. Although aesthetically pleasing, they increase the distance the pedestrian must walk to reach his destination.

The FDOT has adopted a method for assessing the roadway's walking environment, excluding its crossings. This method, called the pedestrian LOS, is a mathematical formula which assesses streets according to several factors: sidewalks, sidewalk width, pedestrian facility distance from traffic, traffic volumes, buffer zones with or without trees, etc. A quantitative method totals these factors and ranks the facilities from A to F. Pedestrian surveys have validated the LOS methodology, which the FDOT adopted in response to legislative direction.

To achieve a pedestrian LOS grade "C" or better as measured by the FDOT's method, an arterial would need to have a buffer, such as trees and/or planted areas, between the pedestrian facility and heavy traffic.

### 2. Blueprint Recommendations

- Require appropriate pedestrian and bicycle facilities whenever state funding programs are used for roadway improvements.
- Require a planted buffer, or sufficient sidewalk width, to create a buffer between traffic and pedestrians as part of new sidewalk construction on major arterials.
- Adopt appropriate pedestrian LOS methods for California.
- Review other methodologies for applicability in California.

## D. Lighting

### 1. Existing Conditions

Lighting is important for safe, comfortable pedestrian travel. Inadequate or non-existent lighting may discourage potential walking trips and increase



concerns about the potential for criminal activity. Adequate light illuminates walkways and impediments, such as uneven surfaces or debris, and may improve safety.

## 2. Blueprint Recommendation

Support the inclusion of lighting as a roadway pedestrian amenity that can be funded with transportation funds.

## E. Landscaping

### 1. Existing Conditions

Trees are important to pedestrians. They are an amenity which enhance the pedestrian environment. They are also a necessity during the hot months of the year; people don't want to walk in the heat and, in California, hot weather is common in the inland valley and desert environments.

Trees and landscaping offer additional benefits to drivers and pedestrians. A tree canopy may cause drivers to slow down.

### 2. Blueprint Recommendation

In building new roadways or improving older roads, consider adding trees between the sidewalks and the street. Trees should be selected to provide shade if the climate warrants, not just for beautification.

## C. F. Walkable Distances and Connectivity

### 1. Existing Conditions

As noted earlier, walking is a part of most trips. Walkers prefer short and direct routes to their destinations. People will generally walk one-fourth mile or less to nearby destinations such as transit stops, restaurants, and commercial areas. Many will walk longer distances. Pedestrians don't like circuitous routes or routes that are not clear.

In some communities, pedestrians often walk to work and other destinations. In downtown Sacramento, for example, nearly 24 percent of residents walk to work. Residents in other older neighborhoods in Sacramento walk to work more often than suburban residents. Street connectivity and distance to destinations are some of the reasons for this disparity. (For more on statistics regarding where people walk in Sacramento, see Appendix D.)

In some newly developed areas, walking to shopping centers can be challenging. While the distance may be short, the route may require walking along an arterial and then accessing the shopping center through a parking lot, which may or may not have adequate pedestrian facilities.

## 2. Blueprint Recommendations

- Walking plans for transportation and development projects. These would be similar to traffic engineering studies of the various movements drivers will make at intersections and along roadways. Circulation studies could include the potential access routes and crossings needed to make a project viable for pedestrians.
- Develop incentive programs to retrofit suburban and urban neighborhoods to increase connectivity, such as purchasing property to establish new neighborhood connections to highly used places such as schools and shopping centers.

## G. Education/Enforcement

Education programs for pedestrians and drivers can be effective tools for improving safety.

Programs developed for drivers could address subjects like pedestrian right of way, awareness of children walking to school, and safe driving speeds in neighborhoods.

Pedestrian education programs could emphasize walking on the proper side of the street, the value of crossing at intersections or crosswalks, and wearing bright clothing for increased visibility when walking during hours of darkness. Programs designed for children can increase their awareness of motor vehicles and teach appropriate behavior in the vicinity of traffic.

Law enforcement agencies may want to implement visible enforcement programs to address specific violations such as running red lights or jaywalking if violations are chronic.

Many Office of Traffic Safety (OTS) and CHP outreach programs, such as those discussed in Section III, D., Strategic Objectives, focus on safe walking practices, while advising motorists to drive cautiously in pedestrian corridors. Some programs also include targeted enforcement to address specific problem areas.

## **VI. CHANGING ATTITUDES AND BEHAVIORS – A COMMUNICATION PROGRAM**

The preceding sections of the Blueprint establish statewide goals for increasing bicycling and walking while reducing bicyclist and pedestrian injuries and fatalities. Attainment of these goals depends on many factors, including, but not limited to:

- Infrastructure compatible with bicycling and walking.
- Acceptance of bicycling and walking as viable transportation modes.
- Increased awareness of, and compliance with, applicable traffic laws.
- Education programs designed to instill safe bicycling and walking habits.

A comprehensive public awareness campaign, designed to deliver messages about these and other key areas will be integral to successful implementation of the Blueprint.

Targeted messages delivered to a statewide audience could include:

- Comparisons of the time required to complete the same five-mile trip on a bicycle or in congested traffic.
- A summary of the health benefits of regular exercise, such as bicycling or walking.
- Statistics that document the benefits of bicycle helmets.
- The mode shift from single occupant vehicles to bicycling and walking that would produce a noticeable effect on traffic congestion.
- A campaign to inform drivers, bicyclists, and pedestrians about their rights and responsibilities toward other roadway users, similar to “Share the Road” campaigns currently under way in California.
- A campaign to alert motorists of the need to provide sufficient space for bicyclists and pedestrians.

Local campaigns should address:

- Safe walking and bicycling routes to neighborhood schools.
- Public meetings pursuant to development of a local bikeway plan.
- Successful programs to improve bicycling and walking safety in other local jurisdictions.
- Citizen participation in the design of bicycling and walking features of a new freeway interchange.
- A campaign addressing motorist and potential bicyclist/walker perceptions of illegal bicyclist and pedestrian behavior.

As illustrated by these examples, publicity designed to achieve the Blueprint's goals would present information in a wide variety of forums.

Because a successful communications campaign is integral to successful implementation of the Blueprint, the resources required to develop and deliver the program should be estimated along with other funding, such as the amount needed for infrastructure improvements. The campaign should also take advantage of the experience gained in other states and local jurisdictions that have successfully implemented bicycling and walking programs.

## **VII. STATE AND LOCAL FRAMEWORK**

Interagency cooperation is essential to successful implementation of the Blueprint. State, regional, and local agencies responsible for land use and transportation are especially critical because they influence development patterns as well as availability and continuity of bicycling and walking facilities. Advocacy organizations, multi-agency task forces, community-based organizations, and similar groups are valuable resources for decisionmakers responsible for non-motorized transportation programs.

### **A. Statewide Coordination Framework**

The Blueprint Task Force should monitor coordination efforts of State and local agencies involved in promoting walking and bicycling. Similar efforts currently under way include the California Bicycle Advisory Committee and the Pedestrian Safety Task Force. These existing groups are conduits between public agencies and advocacy groups that focus on improving conditions for bicyclists and pedestrians.

Many State agencies administer programs that interface with transportation, directly or indirectly, and are therefore affected by programs to increase bicycling and walking. Although the Blueprint focuses on the Department and the Department of Health Services, there are many other State agencies whose efforts are integral in promoting safe bicycling and walking. The California Environmental Protection Agency, the California Resources Agency, the CHP, the Department of Education, the Trade and Commerce Agency, and the OTS are some of the public agencies that will play key roles in successful implementation of the Blueprint.

State agencies are well positioned to facilitate communication among local agencies with varying levels of experience in non-motorized transportation. Successful experiences can lead to development of "Best Practices" for broader application.

## I. B. Department of Transportation

The Department's stated mission is to "...improve mobility across California." In March 2001, when it adopted DD 64 – Accommodating Non-Motorized Travel, the Department declared its intent to consider non-motorized travelers in all activities that pertain to the State's transportation system.

As a statewide agency, the Department should be a leader in improving conditions for bicycling and walking. Ongoing collaboration with local and regional planning and transportation agencies provides frequent opportunities to ensure that transportation planning documents and projects address non-motorized travel needs.

To educate planners and designers about non-motorized transportation, the Department offers courses on planning and designing of bicycle and walking facilities to departmental staff and local agencies. As part of the Blueprint implementation, the Department may want to consider accelerating these training programs to reach additional State and local agency staff members.

### 1. Early Inclusion in Planning Documents

The transportation planning process generates documents which can influence general policies, as well as specific transportation plans and projects. To ensure adequate accommodations for bicycling and walking, it is essential that the following include appropriate consideration of these modes:

- California Transportation Plan
- Transportation Concept Reports
- District System Management Plans
- Interregional Transportation Strategic Plans
- Project Initiation Documents

Transportation Concept Reports are especially critical because they communicate the earliest vision for transportation facilities to be provided in specific corridors. The absence of adequate discussion of non-motorized needs in these advance plans can preclude construction of adequate facilities as part of programmed projects, leaving retrofit of bicycling and walking facilities as the only option. The integration of bicycling and pedestrian users should also be considered in the Intergovernmental Review Process where many agencies have opportunities to review and comment on environmental documents.

## 2. Early Integration in Programming Documents

Integration of bicycling and pedestrian users should also be considered in the earliest phases of the programming process. Guidelines for preparing programming documents should emphasize the importance of preserving and improving bicyclist and pedestrian mobility. Programming documents include:

- State Transportation Improvement Program (STIP)
- State Highway Operations and Protection Program (SHOPP)
- Interregional Transportation Improvement Program (ITIP)
- Regional Transportation Improvement Program (RTIP)
- Overall Work Program (OWP)

### C. Department of Health Services (DHS)

#### 1. National Public Health Agenda

Leading health indicators reflect the major health concerns in the United States at the beginning of the 21st century. The leading health indicators were selected on the basis of their ability to motivate action, the availability of data to measure progress, and their importance as public health issues. Four of the top ten leading health indicators can be impacted by the increasing safe walking and bicycling:

- Physical Activity
- Overweight
- Injury and Violence
- Environmental Quality

#### 2. Departmental Mission

The primary mission of DHS is to improve the health of all Californians. Population-based public health and preventive services, environmental health programs, and medical care services provide a foundation for the development of our children, the productivity of our workforce, and the quality of life in our communities. Services are designed and delivered with the understanding that a one size fits all approach does not meet the health care and public health needs of California's ethnically, culturally, and geographically diverse communities.

The Department is allied with 62 local health departments providing services in all counties. Local agencies receive funding from county taxes, grants from DHS programs (e.g., tobacco control, vehicle occupant safety), and other public and private sources.

### 3. Goals and Objectives for Bicycling and Walking

DHS conducts activities that correspond to the national public health framework, currently entitled “Healthy People 2010.” National objectives are carried out by Federal, State and local public health agencies, with each agency selecting objectives for their own jurisdiction. DHS has chosen to work on the following objectives which incorporate activities related to safe bicycling and walking.

- Reduce deaths caused by motor vehicle crashes.
- Reduce pedestrian deaths.
- Reduce nonfatal pedestrian injuries.
- Increase bicycle helmet use.
- Reduce reporting of no leisure-time physical activities.
- Increase prevalence of moderate physical activity.
- Increase prevalence of moderate physical activity in adolescents.
- Increase availability of school physical activity facilities.
- Increase prevalence of worksite physical activity and fitness.
- Increase prevalence of community walking.
- Increase prevalence of community bicycling.

### 4. Lead Programs at DHS

Several DHS programs promote safe walking and bicycling. These programs are housed in the Chronic Disease and Injury Control Division, within Preventive Services.

- a. The Physical Activity and Health Initiative (PAHI), in the Chronic Disease Control Branch, works to get more people active more often. According to research and recommendations from the U.S. Surgeon General (1996), walking and bicycling are primary means to achieving a more active population. PAHI staff is currently involved in projects that promote: walking clubs for older adults; worksite improvements which increase employees’ physical activity, and provide walking paths; Active Community Environments – public places where people can walk and bike for transportation, work, family life, and leisure; and Walk a Child to School Day.
- b. Several programs in the Epidemiology and Prevention for Injury Control (EPIC) Section of DHS focus on different aspects of traffic safety, such as pedestrian surveillance, pedestrian injuries and deaths, bicyclist head injury prevention, and safe routes to school.

## 5. Departmental Programs Engaged in Promotion of Walking and Bicycling

Many other DHS programs encourage and promote walking and bicycling as part of a strategy to promote the public's health and safety. Most activities are conducted in community settings throughout the State, with the guiding expertise of local health departments and non-profit partners. Target areas are diverse, including maternal and child health, diabetes control, 5-A-Day (nutrition and physical activity), cardiovascular disease and stroke prevention, and obesity prevention.

## 6. Addressing Health Disparities

Public health science has identified the populations most at risk from inactivity and from traffic-related hazards. These are people in low-income communities, Hispanics and African Americans. The overarching mission of public health is to eliminate health disparities by focusing services on populations most at risk for disease, disability, injury, and death. California's DHS programs engaged in promoting safe bicycling and walking prioritize the delivery of resources accordingly.

## 7. Given the significance of bicycling and walking to attain success with the designated leading health indicators noted above, the DHS is called upon to:

- Inventory departmental policies to promote walking and bicycling among employees and at departmental work sites.
- Inventory departmental funding and programming to assess and improve promotion of bicycling and walking in program activities.
- Prioritize acquisition of funding for State and local programs that promote safe bicycling and walking.
- Enact policies and procedures consistent with State government's initiative to promote interagency and multi-disciplinary work teams, based on the "Shifting the Focus" task force findings.
- Identify funding and opportunities to orient and train policymakers and planners regarding the health impacts and public health priorities related to transportation and community design.

## D. Local Framework

Historically, successful bicycle and pedestrian programs in California and elsewhere have relied on input from numerous sources. Local agencies should incorporate collaborative planning processes with broad participation from community stakeholders, including bicycling and walking advocacy organizations.



Preserving and improving bicyclist and pedestrian mobility should be emphasized in regional transportation plans, overall work programs, general plans, community area plans, bicycle and pedestrian plans, and local ordinances.

The availability of secure bicycle parking at employment sites is essential to increasing bicycle commuting. Local agencies may want to consider ordinances that require developers and employers to provide appropriate parking and shower/locker facilities at all employment sites. Financial incentives, similar to programs in place for transit users, might also be effective for increasing bicycling and walking for commute trips.

#### E. Policy Issues

Existing and proposed State and local policies should be reviewed, as appropriate, to ensure that they support non-motorized travel. A checklist addressing key issues is an effective evaluation tool, particularly helpful for elected members and community groups interested in verifying discussion of relevant issues, such as: effects on trip distances; continuity of bicycle and pedestrian facilities; barriers to bicycling and walking; addition or removal of bicycling and walking facilities; and effects on bicycling and walking safety.

### VIII. FUNDING

In California, funding for bicycle and pedestrian projects is available from a variety of local, State, and Federal sources. This section summarizes some of the funding currently available. Additional information about these and other funding for non-motorized transportation programs is available from a variety of sources, including bicycle and pedestrian advocacy organizations and government agencies. The California Department of Transportation's Division of Local Assistance produced the *Transportation Funding Opportunities Guidebook*, available at [www.dot.ca.gov/hq/LocalPrograms](http://www.dot.ca.gov/hq/LocalPrograms).

Projects that have received funding from the following sources range from innovative lighted pedestrian crosswalks to more conventional on-street and off-street bikeways, all of which contribute to development of a comprehensive system of non-motorized transportation facilities.

#### A. Local Funding

##### 1. Transportation Development Act

The 1971 Transportation Development Act created a Local Transportation Fund (LTF) in each county. The LTF is funded from one-

quarter cent of the seven-cent sales tax collected statewide. The one-quarter cent is returned to the county in accordance with the amount collected in the county. Local agencies may expend a portion of the LTF to develop pedestrian and bicycle facilities. Public Utilities Code Sections 99233.3, 99234, and 99400 describe types of projects that are eligible and how funds are to be administered.

## 2. Special Taxing Authorities

Voters in many California counties have approved local ballot measures which permit the collection of additional local sales taxes for transportation purposes. Several counties use a portion of these revenues for bicycle and pedestrian projects.

## B. State Funding

### 1. Department of Transportation

- a. State Highway Account – State law authorizes expenditure of highway funds for non-motorized transportation facilities.
- b. Bicycle Transportation Account (BTA) – The BTA funds a maximum of 90 percent of city and county projects to improve safety and convenience for bicycle commuters. In fiscal years (FY) 2001/02 through 2005/06, \$7.2 million will be available to fund local agency projects. The BTA funds bikeway improvements and maintenance, bicycle parking equipment, bicycle racks on transit vehicles, traffic control devices, safety, education, and planning.
- c. Environmental Enhancement and Mitigation Fund (EEM) – In 1989, Assembly Bill (AB) 471 required the Legislature to allocate \$10 million annually for ten years for projects that offset the environmental impacts of public transportation facilities. In 1999, Senate Bill (SB) 117 eliminated the sunset provision to allow the program to continue. The California Resources Agency recommends projects for approval by the California Transportation Commission. Bicycle and pedestrian projects are eligible recipients of EEM funding.
- d. Pedestrian Safety Program – In 2000, AB 2522 created the Pedestrian Safety Account (PSA), a one-year funding source for projects that improve pedestrian safety. The FY 2000/01 State budget appropriated \$8 million to the PSA. Local agencies submitted 184 applications requesting approximately \$41 million. At the time of preparation of this report, the list of proposed projects was being compiled.

2. Department of Health Services – Several sources fund the many DHS programs described in Section 7. Some of those sources are:

- U.S. Department of Health and Human Services Prevention Block Grant
- The California Endowment
- The California Wellness Foundation
- The Robert Wood Johnson Foundation
- The California Office of Traffic Safety
- State of California General Fund

### C. Federal-aid Funds

1. The Transportation Equity Act for the 21st Century (TEA 21)

Several categories of Federal transportation funding may be expended for bicycle and pedestrian projects on roadways and off-road trails.

2. Transportation Enhancement Activities (TEA) Program

Ten percent of each state's annual Surface Transportation Program must be set aside for TEA. Three of the twelve defined TEAs are bicycle and pedestrian related: Provision of Facilities for Bicyclists and Pedestrians, Provision of Safety and Educational Activities for Pedestrians and Bicyclists, and Preservation of Abandoned Railway Corridors. These funds may be used for the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects, such as training, brochures and route maps related to safe bicycle use. The TEA program provides approximately \$30 million to fund approximately 50 bicycle and pedestrian projects annually in California.

3. Congestion Mitigation and Air Quality (CMAQ) Improvement Program/Regional Surface Transportation Program

The CMAQ Improvement Program directs funds to transportation projects in the Clean Air Act non-attainment areas for ozone and carbon monoxide. These projects should contribute to meeting the attainment of national ambient area air quality standards. CMAQ funds may be used to construct bicycle transportation facilities and pedestrian walkways, or for non-construction projects such as brochures and route maps related to safe bicycle use. Bicycle projects must be primarily for transportation rather than recreation, and be included in a plan developed by each Metropolitan Planning Organization and the State. TEA 21 added projects to make sidewalks comply with the ADA eligible for these funds. In FY 1999/2000, \$15.9 million in CMAQ funds were obligated for bicycle and pedestrian projects.

4. Safe Routes to School Program (SR2S)

In 1999, AB 1474 created the SR2S program as a two-year demonstration program to provide approximately \$40 million in Federal funds (\$20 million/year for two years) to local agencies to construct bicycle and pedestrian facilities and traffic-calming projects. Funds for this program are diverted from the Federal Hazard Elimination Safety and Section 130 Railroad/Highway Grade Crossing programs. In 2001, Senate Bill 10 extended the program three years, to January 1, 2005.

5. Recreational Trails Program (RTP)

The RTP provides approximately \$3 million per year for recreational trails and related facilities. Public agencies and non-profit organizations with public lands management responsibilities are eligible to participate in the RTP program.

6. Land and Water Conservation Fund

The Land and Water Conservation Fund is available for statewide recreation planning, land acquisition, and development of recreational parks and related facilities, especially in urban areas. States must adopt a State Comprehensive Outdoor Recreation Plan to be eligible. Applicants include Federal, State, local agencies, and special districts.

The table below summarizes recent funding activity in the BTA, the Safe Routes to School (SR2S) program, and the Pedestrian Safety Program (PSP).

Summary of One Fiscal Year (FY) of Activity in  
Dedicated Bicycle/Pedestrian Funding Sources  
(\$ = million)

Program	Applications Submitted	Amount Requested	Total Project Costs	\$ Programmed	Projects Funded
BTA 2001/02	80	\$ 29.2	\$126	\$ 7.2	34*
SR2S 2001/02	520	\$117.0	\$130	\$24.3	101
SR2S 2000/01	720	\$140.0	\$160	\$19.9	85
PSP 2000/01	184	\$ 41.0	\$ 41	\$ 8.0	33*#
<b>TOTAL</b>	<b>1504</b>	<b>\$327.2</b>	<b>\$457</b>	<b>\$59.4</b>	<b>253</b>

\* Annual programs in project selection process.

# The PSP was funded only in FY 2000/01.

D. Strategies for Bicycle and Pedestrian Project Funding

The following are offered as strategies for improving bicycle and pedestrian funding programs.

## 1. Data for Current Funding Programs

### a. Existing Conditions

The first step in the evaluation of non-motorized funding programs in California is a comprehensive assessment of current needs and funding available.

Data from dedicated sources such as the BTA or the SR2S program is readily available, primarily because these are sources dedicated to improving non-motorized travel.

Tracking expenditures for non-motorized improvements that are elements of major highway improvements can be more challenging if the non-motorized work is not identified in the project title.

### b. Recommendation

The Department should modify its programming and financial databases to facilitate recovery of programming and funding data for bicycle and pedestrian improvements that are elements of larger projects.

## 2. Guaranteed Funding

### a. Existing Conditions

Oregon State law requires cities, counties, and the State Department of Transportation to spend a minimum of one percent of State highway funds received in any fiscal year on bicycle and pedestrian facilities. The one percent minimum requirement ensures approximately \$6 million annually in bicycle and pedestrian program expenditures statewide. According to State bicycle/pedestrian program staff, many jurisdictions in Oregon spend much more than one percent for non-motorized facilities. According to the 2000 census figures, the population of Oregon is approximately 3.4 million.

With a population of nearly 33.9 million, California law requires that each annual State budget include \$360,000 "...for the construction of non-motorized transportation facilities to be used in conjunction with the State Highway System." There is no requirement for cities and counties to spend a minimum amount on non-motorized programs. A one percent allocation of State Highway Account funds in California

would be approximately \$30.6 million in FY 2001/02. This would be in addition to the current annual BTA appropriation of \$7.2 million.

A California requirement similar to Oregon's would ensure minimum expenditures at the local level where most bicycling and walking occur. With guaranteed funding in predictable amounts, State and local agencies would be able to systematically plan bicycle and pedestrian projects with assurance that funding will be available for implementation.

b. Recommendation

The Department should compile comprehensive data for current funding levels and projected needs for bicycle and pedestrian programs. If warranted by the review of this data, the Department should develop a proposal for legislation to provide a guaranteed minimum level of funding for State and local bicycle and pedestrian programs.