

ENCOURAGING BICYCLING AND WALKING

THE STATE LEGISLATIVE ROLE

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and
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of STATE LEGISLATURES
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The National Conference of State Legislatures is the bipartisan organization that serves the legislators and staffs of the states, commonwealths and territories.

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- To promote policy innovation and communication among state legislatures.
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The League of American Bicyclists promotes bicycling for fun, fitness and transportation and works through advocacy and education for a bicycle-friendly America. The League represents the interests of the nation's 57 million cyclists.

With a current membership of 300,000 affiliated cyclists, including 25,000 individuals and 700 affiliated organizations, the League works to bring better bicycling to your community. Learn more

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Bikes Belong is the U.S. bicycling organization dedicated to putting more people on bicycles more often. Bikes Belong Coalition works to maximize federal bike funding for bicycling, awards grants to support innovative bike facility and advocacy projects, promotes bicycling and its benefits, and sponsors key national initiatives such as the National Bike Summit, the Safe Routes to School National Partnership, and the Bicycle Friendly Community program. The affiliated Bikes Belong Foundation focuses on improving bicycle safety and enhancing children's bike programs.



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PREFACE AND ACKNOWLEDGMENTS

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EXECUTIVE SUMMARY

Bicycling and walking historically have been important means of transportation and recreation in the United States. Since World War II, however, the development of automobile-oriented communities has led to a steady decline of bicycling and walking. These activities became lost in the dustbin of history and limited to childhood play. During the past few years, however, a renaissance has occurred with impressive increases in the number of people who bicycle and walk for transportation and recreation. Record gas prices, a gridlocked transportation system, increasing health maladies related to physical inactivity, and environmental concerns have led to a reexamination of the transportation choices available in this country and to a subsequent shift from driving to more walking and bicycling.

Today, people of all ages, income groups and fitness levels use walking and bicycling for everyday travel, recreation, and getting to and from work. It is important to remember that approximately one-third of the population is unable to drive—because of age, disability, choice or license restrictions—so bicycling and walking are important transportation options. Public transit, which is primarily reached on foot or by bicycle, also has experienced significantly increased use during the past few years. Pedestrians and bicyclists suffer the effects—sometimes fatal—of a transportation system that does not account for their needs. All road users—including motorists, bicyclists and pedestrians—must act responsibly and follow the rules of the road for their own and others' safety. It lies with state governments, however, to play the primary role in ensuring that roads are safe and accommodate all users.

Many people are bicycling and walking more because of the many benefits these transportation choices provide. Walking and bicycling offer cheap, effective ways to reach a destination, especially with the likelihood of higher gas prices. Furthermore, they provide a variety of benefits to individuals and society. Both are clean forms of transport that emit no pollutants. With disturbing increases in diseases and ailments related to lack of exercise, active commuting also is an effective way to combat diseases related to inactivity, especially for those who have time constraints. Communities where destinations are easy to reach by bike and foot create a more balanced transportation system and more welcoming neighborhoods.

Research on government involvement in bicycling and walking has centered mainly on congressional activity. With increased flexibility and innovation, however, states have played a crucial role in developing and modeling successful strategies to encourage bicycling and walking. This report provides information about and examples of how state legislatures can and have proactively supported bicycling and walking, especially as transportation choices.

WHAT'S INSIDE

The report first provides an overview of recent trends in bicycling and walking and the related transportation, economic, public and environmental health benefits. A snapshot of the current state of bicycling and walking in the United States follows. Subsequent chapters examine state legislative activity in three key areas: funding, planning and safety.

The funding section reviews state efforts to provide money for bicycling and walking infrastructure and programs, including some funding stream mechanisms. The planning section examines how states have integrated bicycling and walking into transportation plans and projects and discusses the importance of these options within state decision making. A visual tour of a bicycling- and walking-friendly community follows, with samples of infrastructure design elements that can increase bicycle and pedestrian safety and use. The final chapter discusses how states are increasing safety for pedestrians and bicyclists, including creating new laws; increasing penalties; targeting enforcement; and increasing responsibility for motorists, pedestrians and bicyclists.

1. INTRODUCTION

During the last few years, cities nationwide have seen increased use of alternative transportation such as mass transit, bicycling and walking. In a steady trickle and then a torrent, bike path, sidewalk and bus use have risen, often in record numbers. High gas prices, thinning wallets and rising obesity rates are among the factors causing people to consider alternative transportation. This report provides policy options and discussion about how to increase walking and bicycling as alternative transportation choices.



When the general public thinks of riding a bike or walking, it often is an afterthought or a childhood endeavor that has no relevance in a busy, 21st century world. Several factors during the last few years have encouraged more bicycling and walking, and today they are considered increasingly viable methods of transportation. People are walking and bicycling to and from work, shopping and other appointments. In the face of

congestion, these alternative transportation choices can help address a host of challenges the nation faces.

Public transit also is becoming increasingly important. Ridership skyrocketed in the last year, and many walk or bike to and from transit stops. The important connection between public transit, bicycling and walking is addressed throughout this report.

The introductory chapter discusses how bicycling and walking benefit state transportation, economics, public health, energy and environmental health. It also offers a look at the current state of U.S. bicycling and walking, including federal policies.

Chapter 2 addresses various funding mechanisms available to states as they attempt to improve conditions for cyclists and pedestrians. Chapter 3 provides examples of how states can plan more effectively for bikes and pedestrians and includes a visual tour of what a bicycling- and walking-friendly community might look like. Chapter 4 discusses pedestrian and bicycle safety issues, including various state laws and programs.

TRANSPORTATION BENEFITS

In 2003, the 85 largest U.S. metropolitan areas dealt with congestion that caused 3.7 billion hours of travel delay, wasted 2.3 billion gallons of fuel, and resulted in total congestion costs of \$63 billion.¹ Relieving congestion and moving people and goods efficiently in the coming years will require a multi-faceted transportation system. Bicycling and walking can increase the capacity of public transit systems and extend the reach of bus and rail lines. Some cities—including Portland, Ore., Minneapolis, Minn., and Tucson, Ariz.—have proven that properly accommodating bicyclists can increase the number of bicycle commuters and transit users, thus reducing stress on the road system. Of note is the fact that approximately one-third of Americans do not have consistent access to an automobile and must rely upon other means of transit.²

Between 1990 and 2000, Oregon and Washington—both of which have programs designed to encourage alternative forms of transportation, especially bicycling—were the only states to see a decrease in the percent of people who drove alone to work, according to a U.S. Census Bureau survey.³ Both also were ranked in the top five by the League of American Bicyclists for their bicycle-friendly policies and practices. In all other states, the average rate for drive-alone commuting increased during the decade by 3.4 percent.⁴

The length of most trips in the United States is conducive to bicycling and walking. Twenty-five percent of all trips are shorter than one mile, and statistics show that 75 percent of these trips are made by personal car. Of the 40 percent of trips that are less than two miles, nine out of 10 are made by car.⁵ Bicycling and walking are viable and efficient options for these short trips.



Safety is an issue for some potential bicyclists and pedestrians. America's traffic gridlock could be significantly decreased by providing a safe environment for bicycling and walking. The benefits of investing in bicycle facilities are estimated to be at least four to five times the cost, making these investments more cost-effective than other transportation alternatives.⁶

ECONOMIC BENEFITS

The personal and overall economic benefits of bicycling and walking can be significant. From an individual perspective, walking and bicycling, either in combination with public transit or exclusively, are less costly than driving an automobile. Annual bicycle operation and maintenance cost approximately \$120, compared to \$13,950 per year for a car that is driven 15,000 miles, according to calculations at commutesolutions.org. Traffic congestion is also a significant drain on the economy. The Texas Transportation Institute found that congestion cost the average urban peak-time driver \$710 per year in 2005. The institute also found the

national cost of traffic congestion to be at least \$78 billion in 2007.

Bicycling is also a significant revenue generator, contributing \$133 billion annually to the nation's economy and supporting approximately 1.1 million jobs.⁷ An August 2008 survey of bicycle retailers nationwide showed increased interest in bicycling, especially for commuting to work or running errands. Ninety-five percent of bike shops reported that customers



who made bicycle-related purchases cited higher gas prices; the same percentage reported customers are turning to bikes for transportation.⁸ The survey also found that bike sales increased for 73 percent of retailers, and bike repairs were up for 88 percent. The bike industry is capitalizing on the renewed interest in bicycling, especially as a form of transport, by customizing bikes to fit the needs of commuters and errand-runners.



Homes for sale near trail in Vienna, Va.

walking and bicycling trails were cited as the second most important community amenity.⁹ Some realtors note that more prospective buyers inquire about homes near bike trails. In Marion County, Ind., for example, homes near greenway corridors sold for an average of 10 percent more.¹⁰

A few states have quantified the economic effects of bicycling. Colorado found that bicycling generates more than \$1 billion per year for the state. Colorado is a hot spot for bicycle manufacturing, which generated \$763 million in revenue. Other sources such as bicycle sales and tourism generated close to \$400 million. Wisconsin also found bicycling to be an important industry in the state. Wisconsin estimated that 3,400 jobs were created and more than \$556 million flowed into the economy due to bicycle manufacturing, distribution and retail industries.





BIKE TOURISM

Many states gear marketing campaigns specifically to bicycle tourists. States and communities especially appreciate bicycle tourism because it is a low-impact, clean industry. Not much is required, other than ensuring safe and interesting places to ride. Bicycle tourists appeal to chambers of commerce because they often have more

disposable income and spend more time on vacation. According to the Outdoor Industry Association, a cyclist's median income is \$62,500, compared to \$46,000 for the average American. Large group bicycle tours or multi-day rides often involve hundreds or thousands of riders who need accommodations and food.

Several states have identified bicycle tourism as an important economic resource. The Maine Department of Transportation commissioned a 2000 study on the economic effect of bicycle tourism. Study results estimated the direct economic impact at \$36.3 million. A regional-specific economic multiplier model, however, indicated additional related spending of \$30.5 million, for a total of \$66.8 million. Findings from the study indicated that improving on-road conditions and building more shared-use trails would enhance bicycle tourism.¹¹

States can help bolster bicycle tourism by designating, marketing and improving routes that include noteworthy historical, scenic and cultural attractions. As a result of 2005 legislation, the Texas Department of Transportation was to develop bicycle tourism trails in the state. The Bicycle Advisory Committee recommended that the department designate a route from Austin to Houston as the first state bicycle tourism trail. Next steps include developing signage and possible modest infrastructure improvements.

Mountain biking also can generate significant revenue. In tourist-reliant Colorado, the ski industry uses existing infrastructure to transform slopes into mountain biking hotspots in the summer off-season. Drawing nearly 700,000 summertime bicycle tourists, this new industry has helped strengthen and diversify the ski resorts' overall business portfolio. A 1999 Colorado study concluded that, "Tourists who engaged in bicycling during their vacation at a Colorado resort spent between \$141 million and \$193 million."¹² Bike trails in the Moab, Utah, area, a popular mountain biking destination, produce an estimated \$8.4 million to \$8.7 million annually.¹³



PUBLIC HEALTH BENEFITS

Two-thirds of U.S. adults are overweight or obese, which increases the likelihood of serious health issues such as hypertension, diabetes, stroke and some forms of cancer.¹⁴ Because health care spending averages approximately 30 percent of a state budget, the rising costs associated with physical inactivity can be particularly important to state legislators.¹⁵ Studies show that physical activity performed as a part of daily activities—such as bike commuting or walking to the market—can help improve fitness and reduce blood pressure as much as a trip to the gym.¹⁶ Bicycling and walking also can improve mental health; a 2007 study found that a 30-minute bike commute positively influenced men’s mental health.¹⁷



minute bike commute positively influenced men’s mental health.¹⁷

The connection between the walking- and bicycling-friendliness of a neighborhood and individual health has been well researched in recent years. A study documented in the *American Journal of Preventive Medicine* found that, “A man of average height and weight who lived

in the most walkable neighborhood in Salt Lake County would be expected to weigh an average of 10 pounds less than a man living in the least walkable neighborhood. For women, the difference would be six pounds.”¹⁸

Although some self-selection occurs among physically active citizens who would prefer to live in more activity-accessible neighborhoods, studies show that those who move from low-density areas to neighborhoods that have more accommodations and destinations for pedestrians are likely to walk more.¹⁹ Not surprisingly, people who walk or bike to work are much less likely to be overweight or obese.²⁰



Obesity rates among American children are particularly startling. This may well be the first generation of Americans to have a lower life expectancy than their parents. Two-thirds of adolescents do not meet the U.S. Surgeon General’s recommendation for 60 minutes of moderate physical activity daily.²¹ As a result, the obesity rate for children has tripled and more adolescents are being diagnosed for typically adult maladies such as type two diabetes and high blood pressure.

As with adults, research indicates a strong correlation between availability of sidewalks, parks and mixed-use development and higher physical activity levels for children.²² One Atlanta, Ga., study showed that children were twice as likely to have taken a walking trip in the past two days if they lived in a neighborhood that had sidewalks and destinations within one mile of home.²³ It is especially important for American children to participate in physical activity in their formative years that will carry into adulthood. A 2008 study found that normal-weight and overweight children who engaged in activities such as bicycling were much less likely to become overweight adults.²⁴ Having an infrastructure that provides opportunities for physical play is clearly an important factor in raising healthy children.



THE LEAGUE OF AMERICAN BICYCLISTS' BICYCLE FRIENDLY STATE PROGRAM

The League of American Bicyclists recently launched the Bicycle Friendly State Program to work with states that want to improve their bicycling environment. Bicycling is an activity that can help solve issues such as traffic congestion, air pollution and the obesity epidemic. It also offers a unique opportunity for state agencies—transportation, public health, recreation, tourism and planning—to work together on issues of mutual concern. Through legislation, policies and programs states can promote bicycling as a healthy and affordable means of recreation and transportation for everyone. A bicycle-friendly state may wish to incorporate aspects of the “Five Es” to encourage better bicycling: Engineering, Education, Encouragement, Enforcement and Evaluation.

The two-part Bicycle Friendly State Program ranks and awards states that actively support bicycling.

1. All 50 states are ranked annually based on their levels of bike-friendliness.
2. Each state then has an opportunity to apply for the Bicycle Friendly State award recognition. A state’s efforts are further recognized and promoted within this program. In addition the state receives feedback, technical assistance, and encouragement to improve its bicycling legislation, projects and programs.

For more information about the League’s Bicycle Friendly State Program, visit www.bikeleague.org or call (202) 822-1333.



ENERGY AND ENVIRONMENTAL HEALTH BENEFITS

Many people rely on bicycling and walking for economic and health reasons; these benefits are further highlighted by unstable gasoline prices and air pollution from vehicle emissions. Traveling by bike or on foot can play a significant role in reducing U.S. energy consumption and improving air quality.

Currently, “U.S. cars and light trucks consume about 44 percent of all the petroleum used nationwide and 10 percent of that used worldwide, in the process generating about 22 percent of total U.S. carbon dioxide emissions.”²⁵ Shifting just a small percentage of trips to bicycling or walking could significantly reduce fuel use, possibly curbing gasoline demand and prices. A bicyclist who commutes eight miles round-trip four days per week, for example, could save 54 gallons of gas annually. If American bicycle and foot trips increased modestly to 13 percent of trips less than three miles, annual U.S. gasoline consumption could decrease by 3.8 billion gallons annually.²⁶ This decrease could help to reduce imports of foreign fuel.

Bicycling and walking also can replace car trips that tax the environment. Both these non-polluting transit options are especially useful for short trips. In fact, 60 percent of automobile pollution occurs within the first few minutes of operation, before the catalytic converter begins to work efficiently.²⁷ Once again, a small increase to 13 percent of trips under three miles taken by foot or bike could remove 9 million tons of carbon dioxide from America’s air each year.²⁸



According to the U.S. Environmental Protection Agency, motor vehicle emissions represent 31 percent of total carbon dioxide, 81 percent of carbon monoxide, and 49 percent of nitrogen oxides released in the United States.²⁹ Air-conditioned vehicles account for about 25 percent of U.S. chlorofluorocarbon (CFC) use, and CFCs are responsible for approximately 14 percent of the greenhouse effect.³⁰ Bicycling and walking are environmentally friendly alternatives to driving.

Policymakers can consider the benefits of bicycling and walking when crafting policies related to transportation, economic development, health, energy consumption, recreational opportunities and overall budgets.

2. SETTING THE SCENE: THE CURRENT STATE OF BICYCLING AND WALKING IN THE UNITED STATES

In America, 8.7 percent of trips are made by walking, and only 0.8 percent are completed on bicycles, according to the most recent National Household Travel Survey. This is a small amount of mode share as compared to other countries and historic patterns in the United States. A mode share is defined as “the percentage share that a particular type of transportation mode (i.e., car, bus, rail, plane, etc.) has in relation to other modes.” Between 1977 and 1995, walking trips declined by 40 percent for both children and adults.³¹

Safe, connected facilities such as bike paths and sidewalks in communities encourage more people to walk and bike. Funding for bicycling and walking projects in many instances has been insufficient, however. Between 1998 and 2001, the average annual amount spent on pedestrian and bicycle projects was 87 cents per person, while the average annual amount spent for roads and bridges was more than \$50 per person.³²



The Nationwide Personal Transportation Survey and National Household Travel Survey detected an increase in the number and percentage of trips taken by bicycle and foot during the last 10 years, especially for non-work-related trips. Work-related trips reportedly declined somewhat, but the counts for bicyclists and pedestrians are not always rigorous enough to capture all users. Some cities have made serious attempts to accommodate bicycles and pedestrians. New York City, for example, has dedicated space in its crowded streets to encourage bicyclists. It also sought to establish a more accurate count of how many people bicycle to work. Using a trends analysis, the city found that commuter cycling increased by an impressive 77 percent between 2000 and 2007.³³ Other cities such as Portland, Ore., also report a dramatic increase in the number of cyclists. Anecdotal evidence from 2008, when gas prices rose to record levels, also is of interest. A record 35,000 riders—including at least 10,000 first-time bike commuters—participated in Denver’s 2008 bike to work day. Many communities reported similar increases.

CURRENT STATE OF BICYCLING

Who bicycles in America today, where and for what reasons? According to the Outdoor Industry Association, 86 million people in the United States ride bikes. Most—58 percent of

the general ridership—are male,³⁴ and 78 percent of bicycle commuters are male.³⁵ Female riders are a good indicator that bicycle facilities are accommodating a wide variety of users. Female riders tend to be more safety-conscious and their increased presence points to a system considering users of all skill and comfort levels.³⁶

- Nationwide, minorities and whites are about equally likely to travel to work by bike.³⁷
- Younger people tend to ride more until they reach driving age.
- Most bicyclists ride for pleasure or exercise, but at least 43 percent make more utilitarian trips, such as to visit a friend or run errands.³⁸



Although recreational bicyclists tend to have higher incomes, it is important to note that bicycling crosses economic and racial divides. People who have higher incomes may ride for pleasure and transportation, but those who earn less may ride or walk due to a lack of other transit options.³⁹ It is important for policymakers to consider who is bicycling when they devise strategies to encourage cycling. To encourage bicycling among a broad cross-section that includes age, gender, geography and income, various accommodations may be necessary.

There is a big difference in the comfort level—and thus the kind of accommodation to be considered—of frequent, infrequent and potential riders when choosing where to ride and whether to ride in traffic.

Existing daily bicycle commuters and long-time recreational and competitive riders often are used to riding on the road with motor vehicle traffic and will ride on almost any street or highway. For them, surface quality and maintenance issues are as important as whether there is a bike lane on the street. In rural areas, a paved shoulder (preferably four feet or more without rumble strips) will serve them well.

Less frequent or casual riders express a clear preference for riding on trails or city streets that have some additional provision for cyclists, such as a striped bike lane. A range of bikeway types exist, from shared roadways with lower traffic volume and speed limits to busy arterial roadways that have bike lanes or physically separated facilities.

New and returning cyclists often will ride only on low-volume neighborhood streets or on paths or trails where there is no motor vehicle traffic. At least initially, they are not comfortable riding in traffic.



Experience nationwide shows that the “best” communities for bicyclists have a mix of on- and off-street bikeways that are connected and serve the same key origins and destinations as the roadway network. No one facility type is better or safer than another; they have different applications and results. The visual tour of a bicycle-friendly community in Chapter 5 illustrates many of these facility types.

Policymakers who want to encourage bicycle use by promoting various policies and programs will rightly be concerned with their effect on bicyclists’ safety and with collisions between bicyclists and motor vehicles. The good news is that, in the experience of communities worldwide, increased bicycle use does not necessarily increase bicycle crashes. In Portland, Ore., for example, bicycle ridership has increased by 210 percent since 1991 with no increase in the number of bicycle-motor vehicle collisions during that period.⁴⁰

Bicycling is not without risk, however. In 2007, 698 bicyclists were killed while riding, and 43,000 were injured, according to the National Highway Traffic Safety Administration. Although bicycle crashes often are underreported, bicyclists are still overrepresented in the number of injuries and deaths compared to the number who ride.

Crash studies have shown that a relatively small number of common mistakes contribute to a large percentage of bicycle-motor vehicle collisions. Riding the wrong way—against the flow of traffic—and riding on the sidewalk are two of the main causes of collisions.

- Motorists who are turning onto a street or driveway are not looking for bicyclists on sidewalks, especially those coming against the flow of traffic.
- Because bicyclists usually travel much faster than pedestrians, they catch the turning motorist by surprise.
- The closing speed of a motorist and a bicyclist coming head-on toward each other does not leave enough reaction time and increases the impact of a collision.

Many are surprised to discover that being hit from behind by a passing motorist is not a common crash type, although it frequently is cited as the greatest fear. Fewer than one in 10 fatal crashes occur this way. They tend to be in rural locations and involve higher motor vehicle speed.

A 2008 National Highway Traffic Safety Administration survey contained numerous insights into bicyclist behavior and habits. The survey found that one in 10 bicyclists felt their personal safety was threatened on the most recent day they rode.⁴¹ Riders in suburban areas were most likely to feel threatened and also to want improved bicycle facilities in their community. Eighty-eight percent noted that motorists threatened them by driving too close and fast. “Half of bicyclists reported that bicycle paths (paths away from the road on which bikes can travel) are available in the areas they rode, while 32 percent reported that bicycle lanes (marked lanes on a public road reserved for bikes to



travel) are available.” Approximately 75 percent of bicyclists typically ride on the road and use bicycle lanes when available. The use of off-street bicycle paths or trails is approximately 13 percent, however, suggesting that most people do not have access to them.

The NHTSA survey also found that some cyclists (14 percent) ride on sidewalks and against traffic, which often is against the law. They either may not be aware of the law, or there may be no safe on-street bicycle lanes. Urban and suburban riders use bicycle lanes more frequently, likely due to their availability in more developed communities. Only 48 percent of bicyclists are satisfied with how their communities are designed for bicycling safely, according to the survey. The good news is that a concerted effort to reduce bicycle crashes seems to have had some effect; between 2002 and 2003, bicyclist injuries declined by 8.3 percent.

CURRENT STATE OF WALKING

Who walks in America today, where, and for what purposes? Walking obviously differs from bicycling in that almost everyone walks at some point during the day and it requires no equipment. Some demographic data are not available for pedestrians because walking typically is regarded as a universal activity. People do not self-identify as a “pedestrian” as many do as a “bicyclist.” For this discussion, walking is classified as “[a]ny outdoor walking, jogging, or running that lasts at least five minutes or more.”⁴²

A National Highway Traffic Safety Administration survey showed that 72 percent of people age 16 and older walked at least weekly during the summer months. Both males and females said they made about 15 walking trips per month. Of note is that 20 percent of respondents did not walk at all in the last month. Numbers were fairly consistent across age groups, with slightly higher percentages for 16- to 20-year-olds and those over age 65. Most walking trips started at a residence, and only 8 percent began at work or a transportation site. About half the walking trips were for recreation or exercise, and running errands accounted for almost 40 percent. Just 5 percent stated they walked to work or school. The average walking trip was 1.3 miles, but half were less than one mile. Younger, older, high-frequency and low-income walkers were least likely to have alternate forms of transportation.⁴³

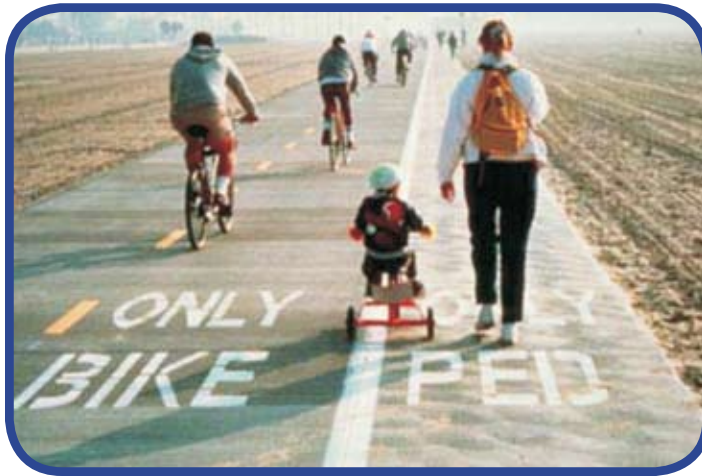
As with bicycling, safety is paramount to pedestrians who are exposed to the dangers of auto traffic and often are disregarded in the transportation system. On the most recent day walking,

OLDER AMERICANS: BICYCLING AND WALKING

The United States faces the challenge of an aging population, many of whom are at risk of losing options for mobility. These senior citizens need a new transportation framework to help ensure they can make trips to the store or doctor when they no longer can drive. Seniors are more likely to rely upon alternative transportation such as walking or public transit. A recent survey conducted by AARP found that 40 percent of respondents were walking, bicycling or taking transit more often due to higher gas prices, but 39 percent did not feel their neighborhood had adequate sidewalks; dissatisfaction with crosswalk, transit and bicycle accommodations was even higher. Mobility is a particular challenge for seniors in rural areas. Fewer transportation options and greater dissatisfaction with a lack of sidewalks and other factors seriously inhibit their mobility. The survey also found significant support for complete streets policies among older Americans.⁴⁴



6 percent of pedestrians surveyed felt their safety was threatened while walking. Once again, the crash statistics confirm their fear—4,654 pedestrians died in traffic crashes in 2007, and about 70,000 were injured.⁴⁵ Seventy percent of pedestrian deaths occurred in urban areas. Pedestrians were most concerned about motorists—62 percent reported feeling threatened by cars driving too close and too fast. Animals and crime also were significant concerns for walkers. Of those surveyed, 28 percent felt unsafe due to uneven sidewalks or roadways, a reminder of the importance of quality accommodations. Pedestrians make some personal effort to be more visible to motorists—40 percent reported wearing light or reflective clothes.



Only 68 percent of pedestrians reported that sidewalks or paths are available where they walk. Seventy-three percent are satisfied with walking facilities in their neighborhood, but one-third would like to see improvements to make them more walking friendly. Sidewalks were the most commonly requested infrastructure improvement. As an example of the need for proper accommodations, pedestrians who walked less frequently were less likely to have access to sidewalks and walking paths and desired more of these amenities. As with bicyclists, pedestrian injuries declined by 4.2 percent between 2002 and 2003.⁴⁶ Since 1975, pedestrian deaths have declined 51 percent, although this can be partially attributed to the decreasing number of people walking.⁴⁷

FEDERAL INVOLVEMENT IN BICYCLING AND WALKING POLICY

During the past 20 years, the federal government has taken significant strides to put bicycling and walking on more even terms with other transportation modes. In 1991, Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA), which required all states to have bicycle and pedestrian coordinators. Before 1991, federal funding was restrictive and weak. States were not allowed to spend more than \$4.5 million on a bicycle or pedestrian project that was not part of a larger highway project. This rule was changed, however, and federal spending for independent bicycle and pedestrian projects increased significantly, from about \$6 million in 1990 to \$422 million in 2003.⁴⁸ This does not account for transportation projects such as highway construction, which may include bicycling and walking facilities.

In 2007, for example, all 50 states and the District of Columbia received \$580 million total from transportation enhancement funds, which provide half the federal funding for bicycle and pedestrian projects. The funds include 12 eligible activities; bike and pedestrian projects represent a significant component of three of these activities, which account for 55 percent of transportation enhancement spending. Although 10 percent of federal transportation funds are set aside for each state for transportation enhancement, they often are the first target of spending cuts. State planning certainty and consistency suffer because specified amounts may have to be returned.

3. FUNDING

Funding for most state bicycle and pedestrian projects comes from the federal government. Federal funding for all transportation projects is established through transportation reauthorization packages. With finite resources, many projects compete for funding both at the federal and state levels, and long-term planning can be difficult due to uncertain funding levels and shifting priorities. This uncertainty affects not only planning for bicycle and pedestrian infrastructure projects, but also for education and safety activities. As with federal funding, state pedestrian and bicycling projects compete for funding with major highway construction projects.

Several states have created funding mechanisms or grant programs that specifically set aside money for bicycle and pedestrian projects and programs. This chapter takes a closer look at the origins of funding streams, where the money comes from, and the types of projects they support.

MOTOR FUEL TAX REVENUE FOR BICYCLE AND PEDESTRIAN PROJECTS

Many states do not allow motor fuel and vehicle registration taxes to be used for non-automobile purposes, even when wording seems clear on allowable uses for gas tax revenues.



Colorado

The Colorado Constitution states, “Proceeds from the imposition of any excise tax on gasoline ... shall, except for costs of administration, be used exclusively for the construction, maintenance, and supervision of the public highways of this state.” In practice, however, it is not quite that simple. Colorado does allow motor fuel tax revenue to be used for bicycle and pedestrian projects within the right-of-way of an existing highway project.

Washington

Washington can spend gas tax revenues on bicycle and pedestrian projects when it can be construed as increasing safety and is part of a comprehensive trail plan. The 2005 Washington Legislature increased the state’s role in pedestrian and bicycle safety by adopting SB 6091,

which created new grant programs to support pedestrian and bicycle safety projects such as Safe Routes to School, transit, and bicycle and pedestrian paths. For the 2007-2009 biennium, \$11 million in state funds is available for this program, and \$74 million was appropriated over 16 years starting in 2005.

This Washington initiative seeks to reduce the number of pedestrian and bicycle injuries and fatalities in the state. The program focuses on engineering corrections, education programs and enforcement strategies. Applicants are chosen based on a few criteria, including the current conditions of the site and data on traffic levels and bicycle and pedestrian accidents. Officials then determine if an engineering solution is sufficient, if it meets state design standards from one of the approved bicycle/pedestrian manuals, and whether the locality has a long-term plan and is ready to implement and maintain the improvements. Washington law also establishes a minimum funding amount for bicycle and pedestrian projects from the fuel tax fund. A municipality or county must expend at least 0.42 percent of the received funds from the motor vehicle fund, and the state Department of Transportation must spend at least 0.30 percent (see Appendix A).

Other states—California and Michigan, for example—dedicate a certain amount of gas tax revenues for bike and pedestrian projects.

California

California statutory language specifically targets the functional needs of bicycle commuters and establishes a bicycle transportation system. Funding for many California bike projects is provided by the California Bicycle Transportation Account, which comes from the Motor Vehicle Fuel License Tax and Highway Users Tax Account. Funding recently was increased to \$7.2 million per year; a 10 percent local match is required. Only cities and counties can apply, but matching funds can come from any entity, including a nonprofit; these funds can exceed the 10 percent matching requirement. To apply for Bicycle Transportation Account funds, a city or county must adopt a Bicycle Transportation Plan (discussed in Chapter 4).

Michigan

Michigan law requires that a minimum amount of motor fuel and vehicle registration funds be spent on non-motorized infrastructure. Michigan law states, "...of the funds allocated from the Michigan transportation fund to the state trunk line fund and to the counties, cities, and villages, a reasonable amount, but not less than one percent of those funds shall be expended for construction or improvement of non-motorized transportation services and facilities." This 1 percent minimum can be spread over 10 years so that small communities can amass the amount necessary to fund a project that it could not afford in a one-year period. In 2006, due to deterioration of many sidewalks in the state, the law was amended to allow expenditures to build sidewalks.

DEDICATED MINIMUM

In addition to Michigan and Washington, a few states established a minimum amount for bicycle funding as part of the transportation funding budget.



Oregon

Since 1971, Oregon’s “Bike Bill” has required that the state, a county or a city must spend at least 1 percent of money received from the state highway fund on bike facilities and sidewalks that are within a road’s right-of-way. Exceptions to the 1 percent requirement exist for very small communities or if there are excessive cost or safety reasons. The law is especially strong because it requires all state government entities

to spend the 1 percent minimum on bike infrastructure. Oregon’s legislation is the first to establish a “complete streets” approach to planning and building roads to accommodate all users, such as bicyclists, pedestrians, the handicapped and senior citizens (see Chapter 4).

Hawaii

Hawaii recently designated expenditure of a 2 percent minimum of eligible federal funds for multi-use paths and bikeways. For fiscal year 2007, the state exceeded the minimum; 4.7 percent of eligible federal funds were spent on bicycle projects. Such minimums vary from state to state. Hawaii requires only that the state meet the minimum, while Michigan and Oregon require all localities involved in road-building to abide by the minimum.

USER FEES

User fees—funds collected from the groups that most benefit from a public service—often are a popular funding option. Few state-level examples of user fees are available that involve bicyclists and pedestrians.

Wisconsin

Wisconsin’s State Trails Pass is required for bicyclists and other users of 584 miles of designated state trails and paths. Pedestrians are exempt from the fee, which is set at \$20 for an annual pass and \$4 for a day pass. Although some funds go to local entities that operate the trails, remaining funds—usually about \$1 million—are deposited in the general fund and not earmarked for trails. Localities have the discretion to require a trail fee, based on factors such as availability of other recreational activities and whether it is economically feasible for community members to purchase the pass. A voluntary on-line survey of trail pass users in 2008 indicated that 68 percent of the 2,824 respondents said they bicycle some of the time on the state trail system; 10 percent of respondents used state trails to commute to work.

Texas

The Texas sporting goods tax—the only one in the nation—funds recreation-related programs. It could serve as a model for bicycle-specific projects. The sporting goods sales tax, implemented in 1994, is a dedicated source of revenue primarily for the Texas state parks system. The .05 percent tax is attached to “...any item of personal property designed and sold for use in a sport or sporting activity, excluding apparel and footwear except that which is suitable only for use in



BIKE REGISTRATION

The main intent of a bicycle registration system is to track and recover lost or stolen bikes and better tally the number of bicyclists in the state. However, some states have funded bike projects with bicycle registration revenue, with limited success. Bicycle registration

program drawbacks could be a disincentive to ride or create an undue burden on local law enforcement agencies. In some cases, they have been used unfairly as a pretext to stop cyclists. Some logistical barriers exist to creating a cost-effective statewide bike registration system: How would you require registration? Where would you require registration? Must all bikes be registered, or only those used by adults?

Minnesota's statewide bicycle registration program was repealed in 2005 due to under-performance. The \$9 fee per bike was not collected at point-of-sale. Instead, bicyclists were to voluntarily contact the Department of Transportation, which contributed to a lack of participation. Money collected was to be used to support bicycle facilities and safety. The state Department of Transportation recommended the law be repealed because the amount of revenue generated was less than the administrative expenses to run the program.

Hawaii's statutory statewide registration requires counties to set up and administer a registration system and deposit the money in a fund for building and improving bikeways. The one-time, point-of-sale registration fee is \$15. Bike dealers give bicycle purchasers the form, which must be filled out on-site. The dealer then submits the form to the county, which sends the license decal and registration to the bicycle owner. Registrations have steadily increased; in the City and County of Honolulu, they rose from 209,980 in 2006 to 234,483 in 2007. It must be noted, however, that the registration program is used mainly as a mechanism to recover lost and stolen bicycles rather than to provide new funding for bicycle projects. The bikeway fund currently generates approximately \$400,000 annually for the City and County of Honolulu. Funds are used to support programs such as BikeEd Hawaii, which teaches basic safety and riding skills to fourth-grade students. The fund also can be used for new initiatives, such as a pilot program to put bike racks on buses; all Honolulu buses now have bike racks.

California, Massachusetts and Wisconsin leave the question of bicycle registration to municipalities. In California, municipalities vote on whether to require bicycle registration, and the state distributes registration forms and bike license stickers to participating municipalities. The state receives money for administrative costs and limits the registration fee to no more than \$4 for a new registration and no more than \$2 for a renewal or replacement.

a sport or sporting activity, and excluding board games, electronic games and similar devices, aircraft and powered vehicles, and replacement parts and accessories for any item.” The state uses industry figures to estimate the amount of money derived from sporting goods sold, then allocates that amount.

Other User Taxes

The Pittman-Robertson law, passed by Congress in 1937, established an excise or manufacturing tax on hunting and fishing goods; the money supports wildlife habitat that can be used by sportsmen. Some bicycle advocates have called for a similar manufacturing



tax on all bicycles and bicycle-related goods at the source. Manufacturers then would pass the cost to retailers and consumers. Because the tax already is embedded in the cost of products, retailers would not have to collect it. A revenue fund—supported directly by bicycle-related purchases—would be available for bicycle projects.

The Colorado Springs, Colo., City Council approved a bicycle excise tax in 1988 with strong support from bicycle retailers and user groups. The \$4 excise tax is charged on every bicycle or bicycle frame with a wheel size larger than 16 inches sold within the city. The ordinance requires all bicycle excise tax revenues be allocated to fund recommendations in the city’s current bicycle plan.

STATE GRANT PROGRAMS

Many states have grant programs that leverage state money with municipality matching funds and local knowledge to help bolster bicycle and pedestrian infrastructure. These programs increase state and local partnerships and provide state-controlled funding for bicycle and pedestrian infrastructure. Some emphasize recreational and environmental value, while others stress interconnection and transportation.

Dedicated Funds

Illinois

In Illinois, a long-standing, annual dedication of \$2 from the car title transfer tax raises between \$6 million and \$7 million annually for the Illinois Bicycle Path program for trail and bicycle-pedestrian improvements in local communities. A 50 percent local match is required, with a maximum annual award of \$200,000 for construction of a project. No limit exists for costs related to acquisition of land for a project, however. About half the money is granted to local entities, and the other half is used to build and maintain state Department of Natural Resources trails and paths.

The program builds only trail systems that are not on the roadway. Emphasis is on building trails that link into a larger system of trails, serve large populations, and have unique physical characteristics. This program has helped build 500 to 1,000 miles of paths in the state.



NEW JERSEY PEDESTRIAN SAFETY FUNDING

When they walk on the nation's streets and sidewalks, pedestrians are disproportionately at risk. Nationwide, 8.7 percent of all trips are walking trips,⁴⁹ but 11 percent of traffic fatalities are pedestrians. This overrepresentation of pedestrians in traffic fatalities is even higher in urban areas, where pedestrians can account for 25 percent to 40 percent of all traffic fatalities.⁵⁴

In 2004, the Federal Highway Administration identified 14 states with high incidences of pedestrian fatalities that would benefit from improvements to pedestrian safety. New Jersey was one of the “focus” states because its percentage of pedestrian fatalities is third highest in the nation. This fact, combined with some well-publicized pedestrian fatalities, led New Jersey to focus on ensuring pedestrian safety. New Jersey also has an above-average percentage of people who travel to work and make other trips on foot.

In 2006, New Jersey unveiled an ambitious five-year, \$74 million, multi-pronged pedestrian safety initiative. Using money from the state's Transportation Trust Fund, largely supported by state gas taxes and highway toll revenue, the initiative funds infrastructure projects and appropriates money for education and enforcement.

The largest chunk of new spending—\$50 million—will fund infrastructure and design improvements on prioritized state highways where many pedestrian deaths have occurred. Two components within the larger plan demonstrate awareness of New Jersey's particular challenges.

- The Pedestrian Safety Corridor program recognized that often an entire corridor, rather than a certain spot, can present pedestrian safety issues. The program, funded at \$2.5 million over five years, will designate “Pedestrian Safe Corridors” and provide money for infrastructure improvements. General pedestrian safety funds are available to fill financial gaps.
- Ensuring accessibility and safety when walking to transit is important in New Jersey, where transit use is third-highest in the nation—10.3 percent of New Jersey residents travel to work via transit, compared to 4.7 percent of total U.S. residents.⁵¹ Because of this identified need, the Safe Streets to Transit Program—with \$5 million in funding—was established to facilitate connections between communities and transit facilities. Interagency and local cooperation was critical to ensure the initiative's success. The New Jersey Department of Transportation and NJ Transit identified and prioritized necessary improvements. The initiative also addresses traffic law enforcement that targets motorist infractions that involve pedestrians.

Iowa

The Iowa legislature created a State Recreation Trails grant program in 1987. Funding for the current fiscal year is \$3 million, but has varied from a low of \$0 to the current amount. Since fiscal year 1989, the program has invested \$42.8 million to develop Iowa recreational trails. The



program uses a competitive grant process and requires a 25 percent minimum local match. Trails typically are off-road, but they also can be on-road facilities. Proposed projects must be part of a local, area-wide, regional or statewide trail plan and tie into one of the networks. Trails built by successful applicants must be maintained as a public facility for a minimum of 20 years.

State recreation trail funds also can be used to complement federal recreational trails programs and transportation enhancement funds. A bicycle and pedestrian advisory committee chooses the finalists and makes recommendations to the Iowa Transportation Commission, which approves the projects. With 800 to 1,000 miles of developed trails, the state may need to consider long-term funding for ongoing maintenance and upkeep of existing trails. No policy currently directs specific funding for ongoing maintenance.

LOTTERY FUNDS

Colorado uses revenue from the state lottery for trails and other outdoor projects. The Colorado State Trails grants program has built or restored more than 659 miles of state trails. Trails can be built using the 25 percent of Great Outdoors Colorado lottery revenue (not to exceed \$35 million per year) or the 10 percent of lottery revenue funds given to the state parks. Approximately \$2 million is granted each year for non-motorized trails, and a portion goes to off-highway vehicle and snowmobile trails. The program requires a 50/50 match for any project that costs more than \$25,000. The program is considering other dedicated funds, since it can support only 34 percent of grant applications. The only group that has no dedicated user fee is non-motorized trail users. (Snowmobile and off-highway vehicle users pay licensing fees that support building trails for their use.) Non-motorized trails usually link existing trails and recreational sites.

Sales Tax Revenue

Sales tax revenue is another option for funding bicycle projects.

California

The California Legislature passed the Transportation Development Act, which dedicates 1/4 of 1 cent from the statewide 7.75 percent sales tax to support public transit. The funds are returned to the county of origin, where the regional transportation planning agency can set aside 2 percent for bicycle and pedestrian projects. In San Diego County, where this set-aside has been established, funding amounts to approximately \$1.7 million annually.

After administrative costs are subtracted, up to 2 percent of returned funds go to bike projects. In San Diego County, money also comes from Transnet, a local county sales tax that is 2 percent of a half-cent sales tax. Combined, the two taxes typically generate \$8 million to \$9 million annually for the fund. A bicycle/pedestrian working group—including one member from each participating city, a few other entities and four pedestrian/bike advocates—selects projects based on priorities. Money can be spent on project planning (a bike path), bicycle or pedestrian master plans (municipality-level plan to address bike and pedestrian needs), bicycle/pedestrian safety (local education programs to teach safe bike riding), and project construction (municipalities must have a bicycle master plan—but not a pedestrian plan—to receive funding for a project). Approximately 80 percent of the money goes to projects, and the program focuses on supporting transportation.

Maryland

Since 1969, Maryland has used a real estate transfer tax on the sale of residential and commercial property to raise money to acquire open space and build trails. Of the state real estate transfer tax received from a home or land purchase, .05 percent goes to a special fund for program open space. The fund helps improve neighborhoods and has been used to acquire more than 254,429 acres of open space for state parks and natural resource areas and more than 37,512 acres of local park land.



In 2007, approximately \$200 million was designated for program open space. The money is discretionary, however, so funds sometimes are diverted to other areas. The program first received full funding in 2007. Approximately \$30 million for local entities and \$20 million for the state typically are allocated. Half of the money goes to the state, and half to counties (that then can designate it to municipalities). Every six years, the county updates a master plan that must include recreational and preservation needs. Counties must submit a yearly plan and application for program open space funds. The plan and application then are approved by the Maryland Department of Natural Resources and other state programs. Funding allocations are calculated based on population and the amount of money collected. The legislature must approve overall funding

for county grants. The department is making a concerted effort to work with the Department of Transportation to identify critical missing links and develop a formal, collaborative plan.

SIDEWALK FUNDING

Studies show that sidewalks are essential to encourage walking. If as many people in neighborhoods without sidewalks were able to walk as those in locations with sidewalks, an additional 2.8 million U.S. residents would walk regularly.⁵² A few states fund sidewalk-specific programs.

Washington

In Washington, for example, two sidewalk programs have funded more than \$18 million in sidewalk construction since 2004.

- The goal of the Small City Sidewalk program is to connect the central business district to the main areas used by pedestrians. A local match of 5 percent is required unless the town population is less than 500; then no match is required.
- The Urban Sidewalk program aims to connect discontinuous networks of sidewalks. A 20 percent match is required for localities with more than 5,000 people.



Utah

In Utah, an annual appropriation of \$500,000 from the state general fund goes to the Safe Sidewalks Program. The program accepts applications from localities, then awards the money based on a 50/50 state and local match. To best use available funds, the program targets routes that are not scheduled for construction or reconstruction within the next 10 years.

INCENTIVES FOR COMMUTERS, EMPLOYERS AND LANDLORDS

According to the U.S. Census Bureau, parking spots are available to 88 percent of people who drive to work, despite the often prohibitive cost. In some instances, governments and employers offer financial incentives and reimbursements for parking. In most cases, however, the scenario is quite different for bicyclists and pedestrians who commute to work. Showers and lockers often are not available for people who bike or walk to work, and safe bicycle storage often is not available. Although incentives are provided for commuters who use public transit, few are available for bicyclists and pedestrians, who use modes of travel that expand the reach of transit. At the other end of the commute, housing complexes that often struggle with auto parking issues often neglect to include secure, weather-friendly bicycle parking.

Federal Incentives

The U.S. tax code currently offers subsidies for car parking and transit use. Commuter tax benefits include tax-free parking (up to \$210 per month) and transit passes (up to \$115 per month) for eligible employees and participating companies and government agencies, including the U.S. House of Representatives. The tax benefit—at \$20 per month—recently was extended to bicycle commuters.

State Incentives

As gas prices and gridlock increase, state legislators are considering not only policy options that would provide incentives to employers, residents and property owners for bicycling and walking,



but also laws that would create communities and land-use patterns to encourage bicycling and walking. To date, such legislation has met with limited success. Illinois passed a few measures, and more states have introduced them in the last five years.

Some legislation would give financial incentives to individuals who commute by bike or on foot. In Maryland, New Jersey and Virginia, financial incentives were proposed to increase commuting by bicycling or walking (see Appendix B).

Maryland

The Maryland legislature considered bills giving an individual tax deduction of up to \$100 for traveling to and from work by foot or bicycle.

New Jersey

New Jersey proposed giving a gross income tax deduction of 10 cents per mile to bicycle commuters. The legislation states that, "...the taxpayer shall maintain suitable records of the dates of commuting and the miles traveled and furnish those records to the taxpayer's employer."

New York

The New York Legislature considered a tax credit of up to \$250 per household to purchase a bike. This measure is especially helpful for low-income households that depend upon alternative transportation but might be less able to buy bicycles.⁵³ New York also unsuccessfully proposed legislation requiring building owners in the state's five largest cities—New York City, Yonkers, Syracuse, Rochester and Buffalo—to make reasonable provisions for secure bicycle storage facilities for tenants, employers and their employees.

Virginia

Legislation introduced but not passed in Virginia offered incentives to residents and employers. Up to \$5,000 in reimbursements would be available to employers that provide bicycle racks and showers, and a \$15 per month tax credit would be available for those who ride their bikes to and from work for at least 10 days per month. Virginia also considered legislation to provide a \$500 deduction to those who bike or walk to work at least 100 days annually.

Location Incentives

Another strategy focuses on land-use patterns by providing incentives for citizens to live closer to work. Legislation introduced in Michigan and New Jersey offers financial incentives (\$3,000 and \$5,000, respectively) to citizens who purchase housing within two miles of their primary place of employment. New Jersey also suggested a \$500 credit for renters who live within two miles of work. Similar legislation was introduced in Pennsylvania.

Location-efficient mortgages are gaining popularity as residents in far-flung commuter areas are faced with increasing costs of driving. Location-efficient mortgages acknowledge and factor in the decreased transportation costs when a homebuyer purchases housing closer to work. Applicants who use a location-efficient mortgage may be eligible for larger loans or lower interest rates.

Illinois

Illinois passed two measures that adopted some of the principles of location-efficient mortgages. The first, passed in 2006, created the Business Location Efficiency Incentive Act, which allows companies that locate near mass transit to apply for certain tax credits. In 2007, the legislature required the Department of Commerce and Economic Opportunity to consider whether the area meets location-efficiency standards when it awards any economic development grant.



TRANSIT-ORIENTED DEVELOPMENT

Transit-oriented development integrates compact clusters of mixed housing, employment, civic and retail services within a short distance from a transit center. This technique can facilitate increased transit use, bicycling and walking. Some communities use this as a planning tool. Massachusetts formalized such a policy in 2004 with its Transit-Oriented Development Bond

Program, which provides \$30 million for preliminary design of bicyclist and pedestrian facilities and for building housing, bike parking and pedestrian facilities that serve a mixed-use development within one-fourth mile of a transit station. The program also requires that 25 percent of the housing be affordable (defined as for those who earn no more than 80 percent of area median income). Of note: “The lowest income households have dramatically higher transit mode shares than middle or upper income households.”⁵⁴ Low-income populations are the most reliant on transit options, however many new transit-oriented development communities are out of reach financially for low-income families.⁵⁵ The affordability aspect of this program is key to actually increasing mobility options for those who need it most.

Through the transit-oriented development program, communities can receive up to \$1 million for bicycle and pedestrian construction and up to \$50,000 for preliminary design of bicycle and pedestrian facilities. The program provides funds to localities to help build transit-oriented development communities through an application process. No local match is required for construction funds, but a 10 percent local match is needed for preliminary design of bicycle and pedestrian facilities. To date, the program has awarded more than \$13 million.



4. PLANNING

Proper planning is necessary to create an environment that is friendly to bicycling and walking. States can take simple steps to improve bicycling and walking, such as providing wide shoulders, sidewalks, bike lanes and adequate bicycle parking. To fully and systematically integrate these modes into state transportation planning, however, further steps are necessary. States will need to

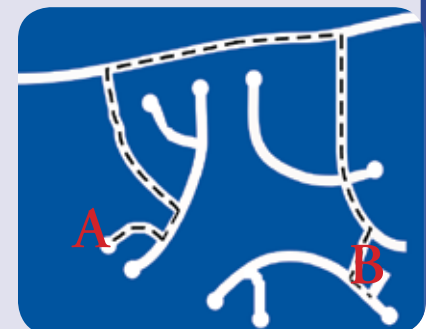
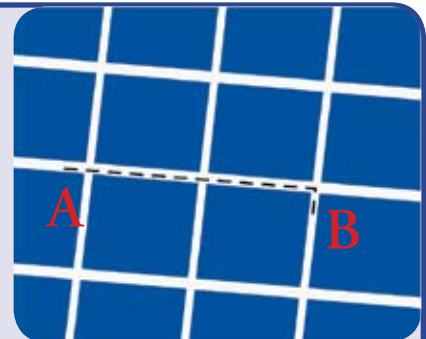


ensure that bicycling and walking are given equal consideration and emphasis in transportation project and long-term planning decisions. Many state departments of transportation have taken steps to incorporate bicycling and walking solutions to help communities and regions cope with 21st century transportation challenges.

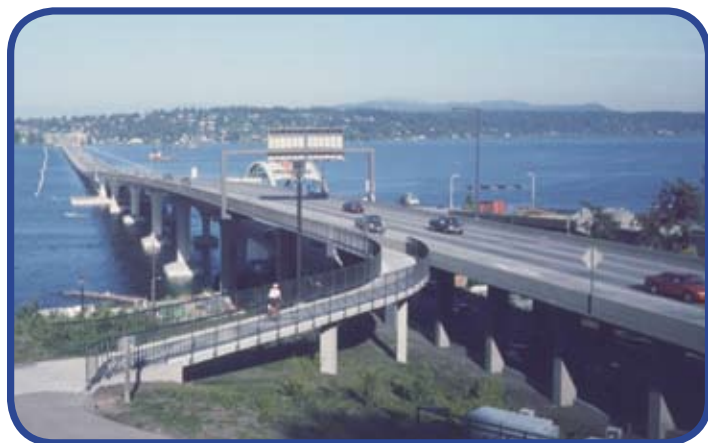
PROXIMITY AND CONNECTIVITY

Proximity and connectivity are essential to encouraging walking and bicycling. During the past 40 to 50 years, most communities were built to separate home from work and work from play. However, people are more likely to walk when necessities and interesting destinations are nearby.

Connectivity also is key. A grid network of streets makes it easier to go two blocks to a friend's house. Typical post-World War II subdivisions, however, often require a nine-block walk to reach a destination that is only two blocks away. Cul-de-sacs and long, meandering streets with no access to other parts of the street network exacerbate this problem. Here, the two-block trip may require walking five streets up and five streets back.



State departments of transportation develop statewide transportation plans to guide transportation projects. The plans identify and prioritize highway projects, including new construction and maintenance. Some states integrate bicycling and walking into statewide transportation plans by designing walkways and bike paths adjacent to new highways or by including such facilities along existing highways. Other states develop bicycling- and walking-specific plans that address these users' needs (see Appendix C).



North Carolina

In 1974, the North Carolina legislature passed the Bicycle and Bikeways Act that created a bicycle program within the Department of Transportation. The act clearly includes biking as an integral part of state transportation efforts: "...bikeways are a bona fide highway purpose, subject to the same rights and responsibilities, and eligible for the same consider-

ations as other highway purposes and functions." In 1992, the bicycle program was expanded to include pedestrian transportation. It was elevated within the department to the same status as aviation, automobiles and trains. The Board of Transportation, appointed by the governor to help determine transportation project priorities, has supported resolutions to strengthen the department's mission to serve bicyclists and pedestrians. This included language to encourage consideration of all users in transportation projects.

North Carolina's long-standing commitment to integrating bicycling and walking is evident in the North Carolina Bicycle and Pedestrian Planning Grant Initiative, which has awarded almost \$2 million to 80 communities throughout the state. Legislation passed in 2003 expanded comprehensive planning requirements for localities to consider: "...all transportation modes including, but not limited to, the street system, transit alternatives, bicycle, pedestrian, and operating strategies. The Department of Transportation may provide financial and technical assistance in the preparation of such plans." This language inspired the planning grant program, which is funded with \$250,000 annually from the state and \$150,000 from the federal government. The grants are to help communities of any size develop comprehensive bicycle and pedestrian plans. The plans increase the likelihood that bicycle and pedestrian projects will be included in the transportation improvement program that guides most state construction or reconstruction projects.

The North Carolina legislature was the first to establish a statewide bicycle committee in 1977. The committee, made up of seven citizens appointed by the secretary of transportation, makes official recommendations to the Board of Transportation for bicycle improvement projects. North Carolina also has responded to user needs by including bicycle-safe drainage gates in all highway construction and providing adequate bicycle parking at state parks and buildings.

STATEWIDE BICYCLE PLANS

The federal government codified as part of the 1991 transportation reauthorization that:

“Bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each metropolitan planning organization and State in accordance with sections 134 and 135, respectively. Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted.”



This law led to development of statewide master plans for bicyclists and pedestrians, either as a single plan or with each as a stand-alone plan. The best statewide bicycle and pedestrian plans represent a collaboration between the public and the state. The plans incorporate the public’s unique knowledge of their communities, such as the safest and most preferable routes for walking and bicycling. State department of transportation officials then can reconcile the public’s wishes and demands with the larger realities and goals of the overall transportation system.

Hawaii

In 1974, Hawaii legislation first required a statewide bicycle master plan; the most recent plan was adopted in 2003. The main goal of Bike Plan Hawaii is “...to

establish bicycling as a safe and convenient mode of transportation for residents and visitors throughout the state.” The plan:

- Is the blueprint for current and long-term bicycle facility improvements.
- Increases integration with other transportation and land-use decisions.
- Opens funding options that often require or prefer a formal plan.
- Allows citizen input and clear communication of future bicycle policy, projects and goals to concerned parties.

Public participation was an important part of the bike plan. Eleven workshops were held throughout the islands to explain the planning process and obtain input on all aspects, including overarching goals and specific routes. Another round of public workshops helped solidify routes and public acceptance. Participants, including bicyclists and advocates with strong local knowledge, helped identify and prioritize routes. The Hawaii Department of Transportation developed a Bike Plan Hawaii Implementation Plan to review prioritized projects, determine whether the routes remain feasible and desired, and complete preliminary work on selected projects across the state. It is standard procedure for Department of Transportation engineers to consult the bike plan to determine the extent to which bicycle facilities should be included in the project.

Wisconsin

The Wisconsin Department of Transportation completed a bike plan in 1998. The plan prioritizes routes to be constructed, most of which focus on connecting communities.

Bicycling mapping completed in the early 1980s helped facilitate the process. The plan has two main goals: double the number of bicycle trips and reduce bicyclist and motorist crashes by 10 percent by 2010. It proposes to “...expand and improve a statewide network of safe and convenient routes for bicycle transportation and touring.” Wisconsin faces challenges, however. Although many rural roads have broad shoulders and low traffic volume appropriate for bicycling, many urban areas, where the bulk of biking for transportation likely would occur, lack space and facilities for cyclists.

Wisconsin’s effort to create a statewide bicycle network used a two-part approach. First, the state assessed routes for all county trunk and state trunk highways, examining factors such as pavement width and traffic volume. The state then considered how to create a statewide system of trails to link all towns with populations of more than 5,000 people (about 60 percent



of the state’s population) and major bicyclist destinations such as parks and scenic areas. The corridors most appropriate for bicycle travel and best served by creating the network of statewide trails are designated as “Priority corridors and key linkages.” They are given highest priority by the Wisconsin Department of Transportation during roadway reconstruction. Particular attention is given to seven inter-city links—such as Madison to

Belleville—that would serve many people and were identified as key missing links. The department acknowledges that on-street bicycle facilities are not appropriate in many cases. The plan promotes continued coordination with the Department of Natural Resources to improve and expand the 900 miles of rail-to-trails that department oversees, as well as numerous other locally maintained rail trails.

California

California codified a bicycle transportation system that clearly emphasizes bicycle commuting. Under California statute, the bicycle transportation system “...shall be designed and developed to achieve the functional commuting needs of the employee, student, business person, and shopper as the foremost consideration in route selection.”

Although California has no statewide bicycle plan, municipalities are required by state law to have a bicycle transportation plan before they can receive California Bicycle Transportation Account funds (see page 14 for more information). A community bicycle transportation plan must consider numerous factors for improving bicycle facilities, such as:

- A map and description of existing and proposed bikeways.
- Existing and proposed bicycle transport and parking facilities for connections with other transportation modes.
- Locker, rest room and shower facilities near bicycle parking facilities.

This requirement for cities and counties improves project consistency and quality and helps develop a bicycling system that is interconnected, serves more users and considers all needs.

Bicycle transportation plans are reconsidered and approved every five years by the supervising authority, such as a city council.

STATEWIDE PEDESTRIAN PLANS

Wisconsin

The Wisconsin Department of Transportation created separate statewide plans for pedestrians and bicycles. The Wisconsin Pedestrian Policy Plan 2020's goal is "...to establish pedestrian travel as a viable, convenient, and safe transportation choice throughout Wisconsin." The plan focuses on a statewide policy and regulatory framework under which the Wisconsin Department of Transportation must, where it has jurisdiction, accommodate pedestrians, such as filling sidewalk gaps. The department also:

- Promotes and disseminates proper sidewalk design practices to local governments;
- Conducts research to identify strategies to protect pedestrians;
- Provides guidance and training to help localities develop community-level plans for pedestrians, answer design questions and identify funding sources;
- Takes into consideration groups—including the elderly, children and people with disabilities—that rely upon safe sidewalks and walking facilities.



LINKING BICYCLING AND WALKING THROUGH LAND USE

Several states have adopted growth management legislation. Washington's Growth Management Act, for example, requires local communities, with state guidelines and assistance, to create comprehensive plans to manage and direct development. In 2005, the Legislature amended the act to expand citizen access to physical activity and require that the transportation element of a local plan include a "...pedestrian and bicycle component to include collaborative efforts to identify and designate planned improvements for pedestrian and bicycle facilities and corridors that address and encourage enhanced community access and promote healthy lifestyles."

COMPLETE STREETS

As state departments of transportation attempt to integrate the needs of all road and highway users, many states and municipalities have adopted a “complete streets” policy that considers and accommodates the various needs and abilities of all users—bicyclists, pedestrians, older people, transit-users and the disabled—when planning, building or rebuilding transportation-related projects (see Appendix D). Studies show people are more likely to bike or walk in neighborhoods where it is safe to do so and the proper infrastructure is present.⁵⁶ The complete streets concept fundamentally reorients planning for and building a community’s transportation system.

Planning for All Users

By mandating or encouraging state departments of transportation or local planners to consider all users when planning and building new transportation infrastructure, complete streets



policies can reduce the need for costly infrastructure retrofits that sometimes are spurred by deadly crashes. In Illinois for example, a bridge built in the 1990s had no safe path for pedestrians or bicyclists. After several deaths occurred and a successful wrongful-death lawsuit was filed by the parents of a teenager killed on the bridge, the state transportation department was forced to retrofit the exist-

ing bridge at great expense; a side path added to the span cost the federal and state governments more than \$800,000.

Some communities refer to the complete streets concept as “healthy streets,” since one goal is to improve public health by creating safer and more welcoming environments for people-powered transportation. Streets that typically are designed only for vehicles may not meet the needs of residents who want to use alternative transportation or just get some exercise. A recent survey of older Americans found that many wanted alternatives to driving due to high gas prices and fewer mobility options. Nearly 40 percent, however, reported lack of sidewalks and safe crossings, bicycle lanes or safe places to catch the bus near their homes.⁵⁷ Complete streets policies tackle these issues by considering all users in transportation project design and planning.

Development

State complete streets programs can take several forms. The state department of transportation might choose to insert language in its official policies requiring all future transportation projects consider the needs of pedestrians, bus riders, bicyclists and others. State legislatures can mandate or ask that local planning authorities include these users in transportation plans.

Eleven states—California, Florida, Illinois, Massachusetts, New York, North Carolina, Oregon, South Carolina, Tennessee, Vermont and Virginia—have some form of complete streets policy or law. Department of transportation policies in Pennsylvania, South Carolina and Tennessee encourage development of complete streets. Interest in complete streets policy has increased during the past few years. Connecticut, Hawaii, Kentucky, Minnesota, Missouri and West Virginia considered legislation either to strengthen existing complete streets laws or to create new policies in 2008. California, Louisiana and Vermont passed new complete streets laws in 2008.

Oregon

The first “complete streets” legislation in the country was Oregon’s 1971 “Bike Bill.” The law states: “Footpaths and bicycle trails, including curb cuts or ramps as part of the project, shall be provided wherever a highway, road or street is being constructed, reconstructed or relocated.” The law requires that all state roads include bikeways and sidewalks whenever a road is built or rebuilt, including those built by local governments. The law also requires at least 1 percent of state highway funds used by a city, county or the Oregon Department of Transportation be spent on bikeways.

Oregon’s law requires funding to be set aside and to include all roads in the state, creating perhaps the nation’s strongest complete streets policy. Exceptions exist for small communities and cost-prohibitive improvements. Advocates believe the Oregon law sets the standard for bicycling and pedestrian policy and has helped the state achieve the second-highest rate of bicycle commuters in the country (behind Montana) at 1.5 percent. Oregon’s largest city, Portland, registers the largest percentage of city bike commuters; 6 percent use a bicycle as their primary mode of transportation, and 10 percent use it as their secondary mode of transportation.⁵⁸



SUCCESS STORY: PORTLAND, OREGON

Portland, Ore., often is cited as a strong example of a city that has consciously created safe, convenient facilities for bikes, demonstrating the correlation between more facilities and increased bicycling. Between 1992 and 2005, Portland increased its developed bikeway network by 215 percent, from 83 miles to 260 miles.⁵⁹ As a result, the number of bicycle commuters doubled between 1990 to 2000. Portland is one of the few cities that conducts an annual bicycle count; it uses central Portland bridges as a convenient tool to gauge bicycling

growth. From 1991 to 2004, the bridges, which link the city’s main employment districts with residential neighborhoods, saw a 210 percent increase in bicycle trips. These numbers seem to indicate that more safe, well-planned bicycle infrastructure will lead to increased bicycle trips. Portland received the Platinum Bicycle Friendly Community award, the highest designation awarded by the League of American Bicyclists.



Exceptions

Most complete street policies make exceptions and offer flexibility for situations where excessive cost, safety concerns or lack of demonstrated need make a project unrealistic. Hawaii's mode-specific bicycle law, strictly speaking, is not considered a complete streets policy. A potential model is included in the law, however, for exceptions to complete streets requirements. The law places the burden of proof on the Department of Transportation by requiring it to provide documented reasons for not including bicycle facilities in a project. The law also requires local

bicycle organizations be involved in the decision-making process.



Safety

Complete street projects also encourage safety. Crashes involving pedestrians are twice as likely to occur when no sidewalk exists, and strategies such as raised medians, pedestrian islands, and walk signals with time counters can dramatically increase pedestrian safety.⁶⁰

State Examples

Illinois

Illinois overwhelmingly passed complete streets legislation in 2007 and is in the process of implementing the policy statewide. The language emphasizes urban areas, "... in or within one mile of an urban area, bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, or other change of any state transportation facility." Ensuring that a roadway is appropriate for all users and meets complete streets



standards generally adds between 1 percent and 4 percent to project cost. Many states, however, commonly attempt to integrate all users, and the cost is already assumed in these cases.

Massachusetts

The road to complete streets in Massachusetts began with a 1996 law stating that the Executive Office of Transportation "...shall make all reasonable provisions for the accommodation of bicycle and pedestrian traffic in the planning, design, and construction, reconstruction or maintenance of any project undertaken by the department." The law ultimately led to replacement of the old highway design manual. The new award-winning *Project Development and Design Guidebook* integrates all transportation modes into a comprehensive approach. Any construction project is examined by the bicycle and pedestrian accommodation engineer to ensure all users are considered.

The National Complete Streets Coalition tracks and reports on new complete streets laws and policies and provides many resources on its website: www.completestreets.org.

Federal Support

The federal government also supports complete streets. A 2000 U.S. Department of Transportation policy states, "... bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist," in hopes that state and local entities will adopt it. No federal funds have been directly allocated for this effort, however. Complete streets legislation was introduced in both

chambers of Congress in 2008.

CONNECTING BICYCLISTS, PEDESTRIANS AND PUBLIC TRANSIT

Ninety percent of public transit riders must walk a short distance to board, and many bicyclists use transit to begin or finish their trips.⁶¹ If public transit is to continue reducing congestion and increasing transportation options, it is important to ensure the facilities are pedestrian- and disabled-friendly, can accommodate bicyclists, and are accessible from adjacent neighborhoods for bicyclists and pedestrians.

Recent high gas prices nationwide have led to increased transit use and bicycle commuting, often in concert. In Houston, for example, the number of bus riders who loaded their bicycles rose from 1,510 in April 2008 to 3,624 in June 2008.⁶²



Despite the growing number of riders and services, few agencies have collected detailed information about bicycle-transit rider characteristics or bicycle parking use. It is relatively inexpensive for transit agencies to provide bicycle services. Bicycle racks for buses or van pool vehicles typically cost between \$500 and \$1,000, which is a small fraction of the cost of the entire vehicle. Bicycle storage equipment on rail cars also is a small portion of total cost. Allowing bicycles to be brought on board



buses and trains requires little or no capital investment. Bicycle racks typically cost between \$150 and \$200 each. Several transit agencies reported higher use of bike-on-bus and bike-on-rail services when bicycles were accommodated at all times on all routes. Consistency and reliability are key to encouraging these multi-modal trips.⁶³ Technology used by the Central Ohio Transit Authority in Columbus tracks use patterns by recording every passenger who boards with a bike and transmitting information on where and when the boarding occurs.



Most bus systems in large cities now provide bike racks that can hold two bikes. In Denver, Colo., for example, Regional Transportation District one-day counts conducted in 2000 and 2007 showed a 108 percent increase in passengers with bicycles, from 1,898 in 2000 to 3,957 in 2007. Three-bike bus racks are becoming more common as demand increases. Florida's Pinellas Suncoast Transit Au-

thority replaced its existing two-bike racks with three-bike racks in 2003. Taking bicycles onto buses increased by approximately 8 percent over one year, from 39,862 in 2003 to 43,096 in 2004.

Dedicated space for bicycles on trains and light-rail also can be useful. Some transit agencies, such as the Altamont Commuter Express that serves San Joaquin Valley suburbs and the employment centers of California's Silicon Valley, has dedicated one rail car per train to carry bicycles. The train can accommodate 17 each of bicycles and passengers. The agency estimates that 8,000 bicyclists are served by this program annually. The website contains information about bicycle capacity for



each train; some trains have two bike cars. Many rail services do not allow bikes on trains during peak travel times due to lack of space. Some cities have relaxed the rules, however, or are creating more capacity for bicycles on trains. In Connecticut and Illinois, where there was increased demand to allow bicycles on passenger rail lines, legislation to allow this was introduced but did not pass.



Some bicyclists may ride to the transit station but do not take their bikes on board the bus or train. They then need a safe, dry place to store their bikes for the day. Facilities can run the gamut from bike parking at racks to bicycle transit centers that are "...a comprehensive approach to providing everything the

bicyclist needs in one location,”⁶⁴ such as weather-friendly bike storage, bicycle repair services, and shower and changing facilities.

California

In 2002, California awarded a \$171,000 Community-Based Transportation Planning grant to nonprofit Bikestation to plan a network of bicycle transit centers along rail routes in Los Angeles. The plan was completed in 2004. Pasadena—one of the four cities in the network—plans to build a bicycle transit center and already has secured some state funding through California’s Bicycle Transportation Account (see page 14 for more information about the Bicycle Transportation Account). Money from the grant will help fund construction. Existing and planned bicycle transit centers in Burbank, Long Beach, Oakland, Palo Alto and San Francisco also have received funding from the Bicycle Transit Account. The Palo Alto bicycle transit center, for example, has access to five transit systems, including Caltrain, which has the nation’s highest rate of bicycle boardings. The center offers various services, including repairs, transit information, changing rooms, bike accessories, free air and parking.



Hawaii

Hawaii legislation ensures the connection between transit and bicycles, stating that, “...planning for any mass transit system shall include appropriate accommodation for bicycle lanes, bikeways, and bicycle routes, including bicycle racks on mass transit vehicles, to enable mass transit users to connect conveniently by bicycle to transit stations and bus stops.”

Virginia

Virginia recently established the Office of Intermodal Planning and Investment within its Department of Transportation. The office is to “...link existing systems; reduce congestion; improve safety, mobility, and accessibility; and provide for greater travel options.” With \$4 million in federal and state grants, the office’s primary objective is to complete an inter-modal plan by 2009 that will link five distinct modes and create a unified plan for all modes and the state.

States can act as a model for other employers by ensuring state agencies provide the proper facilities for bicycle users. Wisconsin requires the state to “...establish bicycle storage racks adjacent to the capitol and all state office buildings.” The state bike coordinator informally advises state agencies about the best types, emphasizing covered parking. Minnesota unsuccessfully attempted legislation in 2005 to require all state agencies to provide bicycle facilities such as secure bike parking, and showering and changing rooms, and to “...establish and operate an employee transportation program promoting bicycle commuting by state employees.”



BIKE-SHARING PROGRAMS

Bike sharing programs seek to increase mobility and transportation choice by loaning or renting bicycles. Modeled after successful European programs, bike sharing programs are gaining widespread interest in the United States. Humana, a Fortune 500 health care insurance company, was among the first to implement the practice in the United States. Its Freewheelin program provides bikes for Humana's 8,000 employees in Louisville, Ky., to shuttle between campuses. The program also encourages and models healthy behavior for employees; it has been a success—27 percent of Humana's Louisville employees now bike around town as part of the program. Humana, in partnership with the Bikes Belong Coalition, took the program to the 2008 Democratic and Republican national conventions, where it attracted considerable press and accolades, served more than 7,000 riders, and logged 41,000 total miles.

The District of Columbia is the largest U.S. government entity to adopt such a program to date. Unveiled in August 2008, SmartBike has 120 bicycles at 10 locations throughout the city. As is often the case with European bike-share programs, SmartBike is operated by an advertising firm that finances and administers it as part of an advertising contract for the city transit system. The District of Columbia Department of Transportation provides administrative and technical support. In the District, bicycles can be used for up to three hours and returned to any bike station in the city. By registering and paying a \$40 fee, users have unlimited bike use for one year. Bike stations are located throughout the city in areas near transit stations and large employers.

Bike sharing programs can increase mobility and reduce vehicular traffic, especially when the bikes are used for short trips and errands. Some municipalities offer free bikes when a credit card is provided to guard against theft. Denver, Colo.; Ft. Collins, Colo.; and Tulsa, Okla. have similar programs.

RAIL-TRAILS

Rail-trails are multi-purpose public paths created from former railroad corridors. Flat or following a gentle grade, the trails traverse urban, suburban and rural America. Ideal for many uses—such as bicycling, walking, inline skating, cross-country skiing, equestrian and wheelchair use—rail-trails are popular recreation and transportation corridors.



Since the 1960s, more than 15,000 miles of rail-trails have been created nationwide. By linking isolated parks and creating greenways through developed areas, rail-trails also serve as wildlife conservation corridors and help preserve historic landmarks. Rail-trails can stimulate local economies in suburban and rural communities by increasing tourism and promoting local business. In urban areas, rail-trails form the basis of trail networks and act as an impetus for regional trail system development. Many rail-trails are established using a federal “railbanking” law that allows a railroad to “bank” a corridor for future rail use, if necessary, but allows it to be used as a trail in the interim. Located in a bustling city or quiet countryside, rail-trails provide safe places for people to engage in physical activity and explore non-motorized transportation alternatives.

State legislatures have actively encouraged rail-trails, especially since railroad corridors often offer an intriguing opportunity to amass land that is appropriate for bicycle and pedestrian use. Rail-trails also often provide a natural, safe link between towns and landmarks away from busy roads.

Missouri

Missouri’s Katy Trail state park is funded and managed by the state. The nation’s longest rail-trail, it runs for 225 miles across the state and it is operated by the Missouri Department of Natural Resources as part of the state park system. All money to maintain the trail and expand it is provided in the state budget. The park is broken into four units, and maintenance falls to four state parks within the units. All maintenance originally was directed from a central unit, but this was found to be unwieldy and cost-inefficient. The 2007 state budget dedicated approximately \$603,000 for trail staffing, maintenance and equipment.

Pennsylvania

Pennsylvania funds rail-trails with a portion of the real estate transfer tax; since 1993, approximately \$1 million annually has been dedicated to the state’s Rails-to-Trails grant program. Rails-to-Trails grants provide 50 percent funding for planning, acquisition or development of rail-trail corridors. Eligible applicants include municipalities and nonprofit organizations established to preserve and protect available abandoned railroad corridors for use as trails or future rail service. The Pennsylvania Rails-to-Trails Act gives the state the right of first refusal to abandoned rail corridors and facilitates state rail-trail development. Other programs within Pennsylvania’s Department of Conservation and Natural Resources also fund rail-trail development. With 1,298 miles of rail-trails currently, Pennsylvania boasts the third most miles



of any state. In cooperation with the Rails-to-Trails Conservancy, Pennsylvania also funded a guide that details methods to best maintain and operate rail-trails.

Maine

Maine amended its Recreational Use Statute in 2005 to address concerns that railroad rights-of-way were not covered for liability. The law provides liability protection specifically for owners of “railroad property, railroad rights-of-way and utility corridors.” All

states have what are commonly called “recreational use statutes” that limit liability for private landowners who allow their land to be used for public recreation. For more information about these statutes, visit the National Agricultural Law Center’s website at www.nationalaglawcenter.org/assets/recreationaluse/index.html.

RAILS-TO-TRAILS CONSERVANCY

Rails-to-Trails Conservancy is a nonprofit organization that works with communities to preserve unused rail corridors by transforming them into trails, enhancing the health of America’s environment, economy, neighborhoods and people. For more information, visit www.railstotrails.org.

5. A Visual Tour of a Bicycling- and Walking-Friendly Community

This section provides examples of design elements that can encourage bicycling and walking and increase user safety. Some strategies and infrastructure may be familiar from your community or personal experience. Others may be new to you. This list is not exhaustive. There is no one perfect approach to building a pedal- and pedestrian-friendly environment. These dynamic strategies can be adapted to the unique conditions and needs of specific communities.

Several policies and programs will benefit all cyclists and pedestrians, regardless of their abilities or preferences.

- Smooth, well-maintained riding surfaces, especially for designated bike lanes, paved shoulders and signed bicycle routes.
- Education programs, such as those available from the League of American Bicyclists, to give people confidence and skills to ride in all traffic situations.
- Motorist behavior that respects the presence of bicyclists and pedestrians.
- Crossing signals that allow sufficient time for pedestrians to cross.
- Streets that prioritize pedestrians and bicyclists by using mechanisms to slow speeds and increase awareness.

MULTI-USE TRAIL

This trail is wide enough to accommodate a variety of users. It is especially important to allow bicyclists and walkers to pass one another comfortably. The multi-use trail pictured here accommodates bike traffic and designates a separate lane for walkers and joggers. This element requires sufficient room, and problems can arise if the path frequently intersects with auto traffic.



SHARED LANE MARKING

A design approach to encourage road-sharing by bicycles and cars, shared lane markings often are used on roadways that are too narrow for bike lanes. They alert drivers to respect the rights of bicyclists who travel in the road. They also position bicyclists on the street outside the “door zone” of parked cars.



BIKE BOX

This feature gives bicyclists increased visibility and a head-start at a red light by placing them in front of motorists. Most important, it reduces the risk of a right-turning vehicle hitting a bike, which is one of the most common threats to bicyclists. An educational campaign is important for all road users to grasp how to use this feature. Bike boxes have been shown to reduce vehicle-bicycle crashes.

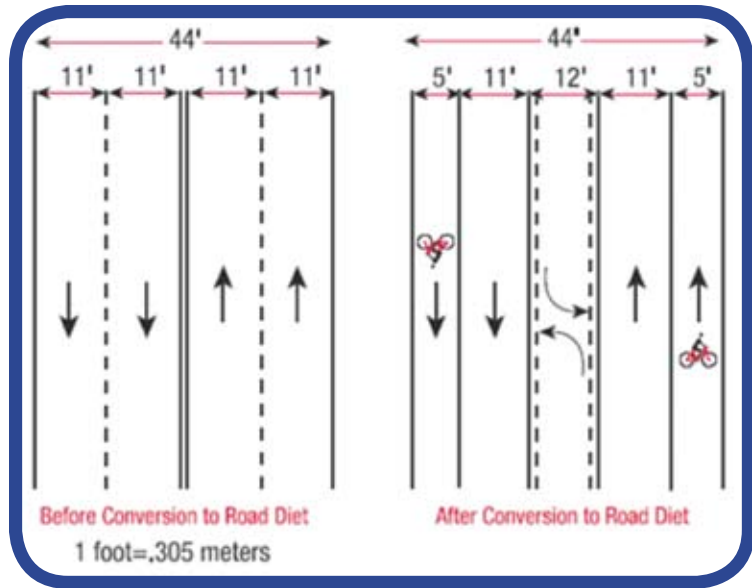
PHYSICALLY SEPARATED BICYCLE LANE

These lanes separate bikes from auto traffic and the ever-present threat of parked drivers opening their car doors. This tool creates a separate lane for bike traffic next to the sidewalk, rather than between traffic and parking. This insulates bikes from cars, that otherwise would need to cross a bike lane to park. The bike lane usually is buffered from parking and traffic lanes by a barrier, such as trees or cones. This strategy is especially appropriate for urban settings where traffic and sidewalk riding bans are likely to discourage less-skilled bicyclists.



ROAD DIET

This can consist of reducing a four-lane road to two or three lanes, with a mutual turn lane in both directions. It then frees space for bicycling and walking facilities, parking and streetscapes. Although they may seem counter intuitive, road diets often reduce congestion and encourage a safer, more efficient traffic flow. Left lane turns that slow traffic move to the middle, creating more room for bicycles and pedestrians. This approach can be popular for streets where merchants want a slower, more pedestrian-active stretch for their businesses.



BEFORE
ROAD DIET



AFTER
ROAD DIET



CAMERA OR PAVEMENT SENSOR

These tools detect the presence of a bike and activate the traffic signal.



BIKE PARKING

Ensuring safe and weather-friendly bike parking is key to promoting cycling, especially at transit stops, workplaces and neighborhood destinations. Such facilities also can include maps and other bike information.



CONTRAFLOW LANE

These lanes allow bicyclists to travel in the opposite direction on a one-way street in a marked bike lane. One-way streets often cause problems for bikes, because they lengthen bicycle commute time and may induce detours onto unsafe streets. Contraflow lanes enhance connectivity for bicycles. They are more appropriate for slower, low-traffic one-way streets.



BIKE BOULEVARDS

These low-traffic streets prioritize bike use by utilizing various traffic-calming measures to slow vehicle traffic or direct it to larger thoroughfares. Examples of this include speed humps, right-turn-only diverters at intersections for vehicles, and streets that end for cars but continue for bikes. Proximity to a larger road is helpful for diverting vehicle traffic. Bike boulevards are a low-cost way for any community to build a safe, comfortable riding environment for all users.



IN-STREET PEDESTRIAN CROSSWALK SIGN

These offer a clear visual cue to drivers to slow down and expect pedestrian traffic. They can be designed to display the state crosswalk law and effectively increase motorist compliance with state laws.





PEDESTRIAN FLAGS

To cross the street, pedestrians grab a flag from a bucket on one side of a crossing and hold it out to ensure that drivers see them. Safely across, they deposit the flag for someone crossing in the opposite direction.



MEDIANS

This element provides refuge for pedestrians by breaking a crossing into two segments. Crossing a street with two-way or multiple lanes of traffic becomes less dangerous because the median provides a safe haven where pedestrians can wait until traffic clears.

CURB EXTENSIONS

In addition to reducing street crossing distance, curb extensions induce slower traffic speed and increase pedestrian safety. Studies show that curb extensions, paired with marked crosswalks, lead to more motorists yielding to pedestrians.



RAISED CROSSWALKS

Acting as a visual clue, raised crosswalks are a speed calming device for motorists. They may be especially appropriate where a trail crosses a road.

6. SAFETY

Throughout history, walking has been an efficient and inexpensive mode of human transportation. Walkers today face many hazards and obstacles that can cost them their lives. In 2006, 4,784 pedestrians were killed and 61,000 pedestrians were injured in traffic crashes in the United States. On average, a pedestrian is killed in a traffic crash every 110 minutes and injured in a traffic crash every nine minutes. In addition to funding and planning, ensuring pedestrian and bicycling safety obviously can encourage these activities. Pedestrian safety laws—covering the youngest walkers on their way to school to senior citizens who need extra time at crosswalks—vary by state.



SAFE ROUTES TO SCHOOL

In 1969, approximately 50 percent of children made their way to school on foot or bike.⁶⁵ Now, due to various factors, only about 15 percent of children walk or bicycle to school.⁶⁶ The drop is even more pronounced for students who live within one mile of school. In 1969, 86 percent of students who lived within one mile of school walked or biked to school; now, only 31 percent of students do so.⁶⁷

Several factors led to this dramatic drop. Land-use patterns have changed considerably, so fewer neighborhood schools are within easy walking distance of home. Although 66 percent of students lived within three miles of school in 1969, this figure dropped to 50 percent in 2001. In most cases, students must walk or bicycle further to reach school, cross at busier and larger intersections, and deal with infrastructure that may compromise a safe journey. Safety issues are a major concern for parents, who cite traffic danger, distance, and lack of convenience as reasons their children cannot bicycle or walk to school.

Because burgeoning rates of obesity and obesity-related diseases such as diabetes are occurring among even young children, this trend has clear implications for policymakers. The well-documented decrease in physical activity by the nation's children is exacerbated by the lack of muscle power involved in transportation. Furthermore, parents who drop their children at school can account for 20 percent to 30 percent of morning traffic. If more children bicycle

and walk to school, ancillary results include reduced morning traffic and air pollution and improved physical activity and health.

In response to these trends, the first U.S. Safe Routes to School (SRTS) program was developed in 1997 in response to a high number of fatal pedestrian crashes involving children in the Bronx, N.Y. Students, parents, teachers and principals identified dangerous locations and designated safe walking routes for elementary and middle schools throughout the borough.⁶⁸

In 1999, California became the first state to author legislation that provided funding for Safe Routes to School projects. In 2000, the National Highway Traffic Safety Administration funded federal pilot projects in Marin County, Calif., and Arlington, Mass. By 2002, Delaware, Florida and Texas also enacted state legislation for Safe Routes to School. Other pilot projects were being developed in Oregon and Maryland.

Federal Funding

In 2005, Congress passed transportation reauthorization legislation—Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—that authorizes federal surface transportation programs for highways, highway safety and transit for a five-year period (2005–2009). Included in SAFETEA-LU was the new federal Safe Routes to School



Program, which provided \$612 million in federal funding for state departments of transportation to create and administer Safe Routes to School programs for elementary and middle schools.

Under SAFETEA-LU, each state receives a minimum of \$1 million annually for five years for the programs.

Although state Safe

Routes to School programs differ, all have the same goal—to improve walking and bicycling conditions for students on their way to school. The state departments of transportation act as the gateway to dispense federal funding to local programs. Thus, each state can develop and maintain funding and program models.

South Carolina Safe Routes to School language to establish the program and spend federal funds states:

“Municipal and county governing bodies shall work with school districts located in their jurisdictions to identify barriers and hazards to children walking or bicycling to and from school. The municipalities, counties, and districts may develop a plan for the funding of improvements designed to reduce the barriers and hazards identified. The sources of these funds may include federal funding or grants, state funding, or funding from private sources.”

States have adopted various approaches to implement the Safe Routes to School goals. In 2008, the Ohio Department of Transportation awarded more than \$4 million to 107 Ohio communities that wanted to create and encourage Safe Routes to School. In New Mexico, one school that implemented a mix of infrastructure and educational improvements saw a fourfold increase in bicycle trips and a decrease in car trips. Local programs can range from giving safety guides and route maps to parents when their children start school to building new sidewalks and bikeways. Installing clearly marked signs and improving crosswalks are common projects for local programs.



In all 50 states and the District of Columbia, Safe Routes to School programs are in various stages of implementation; each has a designated coordinator within the state department of transportation. According to the National Safe Routes to School Task Force report, as of March 2008, states have committed to spending approximately \$222 million on the programs. Forty-two states have announced funding for local and/or statewide programs that involve nearly 2,600 schools. Legislation currently in Congress intends to add high schools to the list of Safe Routes grantees.



Safe Routes to School programs originated in state and local governments. The states developed an innovative safety idea; the federal government capitalized on its popularity and made it a federal program. Safe Routes to School is a model for how states can create a program that can expand nationwide but retain the flexibility to meet community-specific needs. Safe Routes to School programs can improve pedestrian and bicycling safety

conditions through infrastructure, planning and education, and by creating community partnerships. The programs also get children into the habit of bicycling and walking at a young age, educate them about safe walking and bicycling skills, and impress upon them that bicycling and walking are legitimate forms of transportation.

School Siting

Closely related to Safe Routes to School is ensuring that local governments, planning authorities and schools work together to site schools in locations that foster walking and bicycling. Studies show that longer distances to school can account for a decline of approximately 50 percent in walking or biking to school.⁶⁹ Students who attend campuses that are located at the edge of town are much less likely to walk or bicycle.

A 1998 Maine law allows the state board of education to deny state funds to schools that are built outside preferred growth areas. The law encourages school districts to exhaust all options before building a school outside existing infrastructure and neighborhoods. The results have been encouraging. The 11 schools built since 2004 are within locally designated growth areas. Another approach, enacted in Nevada and Washington, is to require local planning authorities to study safe walking routes for students and make recommendations for improvements. Ensuring that students can safely get to school on their own will continue to occupy policymakers in the future.

The Federal Highway Administration recommends that each local SRTS program integrate the five “Es”—engineering, education, enforcement, encouragement and evaluation—for a successful program (Table 1).

For more information about Safe Routes to School and to learn about specific state programs, see the Safe Routes to School National Partnership website at www.saferoutespartnership.org and the National Center for Safe Routes to School at www.saferoutesinfo.org.

Table 1. The Five Es for Safe Routes to School Programs

Engineering	Create 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.
Education	Teach children about the broad range of transportation choices, instruct them in important lifelong bicycling and walking safety skills, and launch driver safety campaigns in the vicinity of schools.
Enforcement	Partner 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 initiate community enforcement such as crossing guard programs.
Encouragement	Use events and activities to promote walking and bicycling.
Evaluation	Monitor and document outcomes and trends by collecting data, both before and after the intervention(s).

Source: Federal Highway Administration, 2007.



OLDER PEDESTRIANS

Older pedestrians tend to rely on walking for recreation and transportation. They also are more at risk—pedestrians age 70 and older accounted for 15 percent (702) of all pedestrian fatalities and an estimated 7 percent (4,000) of all pedestrians injured in 2006. According to NHTSA, the fatality rate for pedestrians age 70 and older in 2006 was higher than for any other age group. Fast-paced traffic, wider streets, and relatively short crossing times at intersections contribute to the safety hazards elderly pedestrians face. The gradual loss of agility and reflexes

associated with aging affects the safety of an increasing number of baby boomers.

Hawaii

Legislators in Hawaii considered many pedestrian safety bills in the 2007–2008 session. In 2007, AARP reported that Hawaii’s elderly pedestrian death rate was the highest nationwide.⁷⁰ In January 2007, a bill was introduced to appropriate \$1 million to the Department of Transportation to conduct a study to identify intersections where the time to cross is insufficient for elderly pedestrians and to develop plans to make crosswalks and roadways safer. The bill also enabled the department to work with nonprofit organizations and counties to immediately make changes to ensure safety at intersections. The bill became law without the governor’s signature on July 8, 2008.

New York

New York introduced a similar bill in 2007. The legislation would have commissioned a Department of Transportation survey of older pedestrians and hazardous intersections. The department then would use survey results to study the feasibility of installing safety median islands to permit pedestrians to cross on two timing cycles, retiming traffic signals, installing crossing signs and pedestrian warning signs, and lowering vehicle speed limits. The bill passed both houses, but was vetoed by the governor in August 2008 because the mandate was cost-prohibitive.⁷¹

QUIET VEHICLES

With rising gas prices and growing concerns about foreign oil, hybrid vehicles—those that use more than one power source—have become more popular. Hybrid vehicles usually get better mileage and create less pollution than traditional cars because they switch between gasoline and electric motors. At low speeds and idling at intersections, hybrid engines are almost silent, which can be a hazard for pedestrians and bicyclists. The National Federation of the Blind recognized this as a serious safety concern for all pedestrians, not only for the visually impaired, because people crossing streets are accustomed to hearing vehicle noise and reacting accordingly.⁷² Crossing the street can be dangerous for any road user if cars quickly approach in virtual silence.



In May 2008, the Maryland legislature established a Quiet Vehicles and Pedestrian Safety Task Force. Task force members will be appointed by the governor to study the effects of vehicle sound on pedestrian safety and “...explore all available technology that may enhance the safety of blind pedestrians.” The task force’s work is timely because the Maryland Clean Cars Act of 2007 requires a certain percentage of vehicles sold to have lower emissions by 2011. A bill was introduced in California to convene a “Quiet Motorized Road Vehicle and Safe Mobility Committee” to conduct similar research. The bill passed both houses but was vetoed by the governor.

PEDESTRIAN SAFETY ENFORCEMENT

As walking and bicycling become more popular forms of transportation and exercise, state legislatures have attempted to create laws that emphasize the rights and safety of pedestrians. In the past few years, a few states have introduced and passed legislation to increase penalties for motorists who do not yield to pedestrians. They also have clarified the statutes that establish motorist and pedestrian responsibilities. Public education and enforcement are crucial to increase awareness of the increased penalties for violating pedestrian laws.



The Washington Traffic Safety Commission conducted a 2003 study to increase driver compliance with crosswalk laws. The study was designed to evaluate the rate of driver compliance with pedestrian laws and the effectiveness of “targeted pedestrian enforcement.” This involves having a pedestrian decoy attempt to cross a roadway crosswalk with traffic officers concealed a few blocks ahead. Drivers who fail to stop for the pedestrian decoy are pulled over by traffic officers and either cited or given a warning. The enforcement was accompanied by public service announcements and media messages. Results indicated that public education, combined with enforcement, can boost driver compliance and awareness of pedestrian crosswalk laws.

- Bellingham served as the test city and Olympia was the control city for the three-week study. Driver compliance with the crosswalk law at Bellingham sites averaged 49.3 percent during the baseline week and increased to 63.1 percent when enforcement activities were conducted. During the follow-up week, compliance remained high at 74.4 percent. In Olympia, where only observations were made at intersections, compliance was 26.1 percent during the three-week study.

As a result of the study, similar undercover stings have occurred nationwide. In Illinois, Chicago police officers stopped 78 vehicles in two hours in a summer 2008 sting.⁷³ In June 2008, New Jersey law enforcement officers went undercover as pedestrians in various locations as part of the comprehensive state pedestrian safety initiative. The pilot program, dubbed “Cops in the Crosswalks,” was designed to catch and ticket motorists who failed to yield to pedestrians in crosswalks. Violators who failed to yield faced a \$100 fine and two points on their driving records. Ticketed motorists who chose to plea could pay higher fines and not lose points on their license.

Pedestrian safety enforcement has been a priority in New Jersey during the last few years. The New Jersey Legislature passed a 2005 law to increase by \$50 penalties for failing to yield at crosswalks. The funds, dedicated to the Department of Law and Public Safety, are used in the Division of Highway and Traffic Safety for pedestrian enforcement and safety projects. Legislation introduced but not passed in 2008 would have increased penalties for motorists who fail to yield to a pedestrian and the pedestrian is seriously injured.

A DAY IN THE LIFE OF A PEDESTRIAN COMMUTER

by David Levinger

Walking seems like the simplest thing in the world, but for someone who simply chooses to walk, the world can become surprisingly complex. The choice of clothing is a critical first step. Clothes are always an expression of one's unique identity, and walking to work provides another reason to go shopping for items that are both fashionable and practical.

A pedestrian is responsible for arriving on time, having forsaken the long list of credible excuses that accompany travel by the "speedier" modes (such as bad traffic or the array of more serious misfortunes). Walking has been shown to be the most consistent and reliable transportation mode. Determining one's time on a walk home is the easiest way to plan, but most people can count on a three-mile per hour pace.

Walking is both carefree and a constant challenge. Sidewalks—if present—are rarely well maintained, often too narrow, and routinely overgrown or blocked. Pleasant stretches of tree- and garden-lined sidewalks are broken up by blind driveways, swaths of parking lots, street crossings and construction zones that demand attention. Everyone on foot or in a wheelchair is a pedestrian, but people behind the wheel often lack either awareness or empathy. Because tinted windows often exceed legal limits, it is frequently impossible to gauge whether the driver even sees you. Those considerate enough to stop regularly obscure the sight-line for overtaking vehicles in the second lane.



Walkers can be the protective eyes for neighborhoods, and on school days one becomes a guardian for children on their way to school. Mostly, though, walkers must look out for themselves. Most state laws offer pedestrians the right to cross at any intersection without a signal. Multi-lane streets with heavy 40 mph or faster traffic are prevalent and so hazardous that it is unwise to cross unless there is a signal or a wide gap in traffic—this often may entail a long wait. Even where signals are installed, pedestrians must constantly assess a variety of factors. Unlike the motorist who drives a continuous road, the pedestrian walks block-by-block, in and out of hostile territory.

Arriving on foot is a great joy. Glowing yet fresh, walkers celebrate humanity and vitality. Every hour of walking adds two hours to a person's longevity. There is so much to see, in the best and even in the worst of places. The walker who develops this habit begins to ask "Do I have time *not* to walk?"

BICYCLE SAFETY

Teaching Awareness: Driver Education

Educating motorists, bicyclists and pedestrians about their rights and responsibilities on the road can effectively encourage biking and walking and promote safe coexistence among all roadway users.

The Federal Highway Administration suggests teaching new drivers about pedestrian and bicycle safety by including information in driver's education classes. These classes typically



discuss interaction with other motorists, but more attention has been given recently to other road users. Teaching novice drivers about other road users and establishing a foundation of knowledge about bicycle and pedestrian laws can follow throughout their lives.⁷⁴ Nearly 35 states have information in the state driver's manual on the rights and responsibilities of motorists towards bicyclists. At least 20 states include questions in the state driver's license test regarding the rights and responsibilities of motorists toward bicyclists (see appendices E, F and G).

At least 20 states require that the driver's education curriculum in the state include information about laws concerning bicycles and pedestrians and how motorists can safely drive and interact with other road users. California law states:

SPEED

Speeding can have serious consequences when pedestrians and bicyclists are involved. Many speeding-related fatalities occur on streets where bicyclists and pedestrians share the road with motorists. According to NHTSA, 87 percent of speeding-related fatalities occurred on roads that were not interstate highways.⁷⁶ Excessive speed extends the distance necessary to stop and reduces a driver's ability to steer around pedestrians or bicyclists in the roadway. At high speeds, motorists are less likely to see other road users and less likely to be able to stop in time to avoid hitting a pedestrian or bicyclist.

"...a course in automobile driver education shall include, but is not limited to, education regarding the rights and duties of a motorist as those rights and duties pertain to pedestrians and the rights and duties of pedestrians as those rights and duties pertain to traffic laws and traffic safety."⁷⁵

In 2008, Minnesota, New Hampshire and Washington passed laws requiring that the driver's education curriculum include information about pedestrian and bicycle safety.

Three-Foot Passing Laws

When a 4,000-pound motor vehicle and a 20-pound bicycle must share the same road, motorist awareness of bicyclists becomes crucial to bicycling safety. In many states, laws require motorists to pass bicyclists going the same direction at a "safe distance." Many such "safe distance" laws have recently been amended to require that motorists give at least three feet of space when passing a bicyclist.



A DAY IN THE LIFE OF A BICYCLE COMMUTER

The bike commuter's day begins with an acute awareness of the weather and other factors that may affect the day's ride. The cyclist has carefully considered and scouted various routes in an attempt to best balance the need for safety with speed of travel to reach the destination. Once

the rubber meets the road, the commuter must be constantly vigilant: "Does the motorist on her cell phone at the stop sign see me? Is that guy going to open his car door into my path?"

A bicycle commuter often must contend with multiple impediments, including stoplights that do not register the bicycle's presence, bike lanes that begin and end with no discernible logic, motorists who use bike lanes as parking and turn lanes, and a host of other problems, small and large. Motorists often will express frustration with sharing the road with bicyclists. This is an indicator of the lack of awareness that bicycles are, indeed, usually classified as vehicles and have as much right to be on the road as an automobile.

Passing through a sea of car parking spots, you arrive at your workplace with an entirely new set of challenges. Does your workplace have indoor bicycle parking, or will you have to chance that the gathering rain clouds will not rain on and corrode the delicate chain of your bike? Worse yet, will your bike still be there in the afternoon? No shower or changing room? Well, just clean up using a washcloth and change in the bathroom. If the weather turns bad after work, does the local transit system allow or accommodate bikes?

Riding your bicycle to work is not always fraught with doom and gloom. It allows time to see the community at a slower pace, talk to neighbors or passersby, get some exercise and save money in the process. Your arrival home often leaves you yearning for more consideration for bicycles when communities are planned and roads are built, and an appreciation of a city street or rural road that accommodates you with a wide shoulder, or well-marked bike lanes with plenty of room to avoid car doors and passing cars. Mostly, you look forward to riding again tomorrow.

As of August 2008, Arizona, Arkansas, Florida, Illinois, Maine, Minnesota, Oklahoma, Tennessee, Utah, West Virginia, and Wisconsin have "three-foot passing" laws. Maine's law, enacted in 2007, states:

"An operator of a motor vehicle that is passing a bicycle proceeding in the same direction shall exercise due care by leaving a distance between the motor vehicle and the bicycle of not less than three feet while the motor vehicle is passing the bicycle. A motor vehicle operator may pass a bicycle traveling in the same direction in a no-passing zone only when it is safe to do so."

The penalties for violating three-foot passing laws vary by state. In Florida, a violation is a noncriminal traffic infraction that carries a \$60 fine and three points on the driver's license. The Tennessee law—The Jeff Roth and Brian Brown Bicycle Protection Act of 2007—carries a Class C misdemeanor charge for motorists who are found in violation of the three-foot passing law. A Class C misdemeanor in Tennessee carries possible jail time of 30 days and a maximum fine of \$50.⁷⁷

North Carolina and Virginia laws require motorists to leave two feet of space when passing bicyclists. A South Carolina bill introduced in the 2007/2008 session would have required motorists to leave five feet of room while passing. Although the bill passed without the five-foot provision, it requires motorists to pass at a “safe distance.” A few states, such as Kansas and Texas, do not have three-foot passing laws designated in statute, but their official driving manuals inform motorists to give three feet when passing.



During the 2007/2008 legislative sessions, three-foot passing legislation was introduced in Hawaii, Indiana, Maryland, Mississippi, New Hampshire, Ohio, South Carolina, Vermont and Washington. Supporters of three-foot passing laws argue that older laws—which require only that motorists to pass at a “safe distance”—are too vague and difficult to enforce. Laws that require at least three feet to pass are more precise for enforcement because they give officers specific guidelines. The more space between the

vehicle and the bicycle, the less air turbulence that bicyclists feel when vehicles pass at high speeds. Some opponents of the three-foot passing law argue it is difficult or nearly impossible to enforce. They also argue motorists may unintentionally violate the law on narrow roads or if bicyclists gradually drift closer to vehicles.

State legislatures have introduced and passed more three-foot passing laws during the past few years. If motorists follow the law, it can help create a safe buffer between bicyclists and motorists on the road.

Bicyclists and Pedestrians: Vulnerable Users of the Road

The unique vulnerability of pedestrians and bicyclists on the road and their need for enhanced protection has inspired some state legislatures to pass laws designating them “vulnerable users.”

The Oregon legislature passed House Bill 3314 in 2007, creating enhanced penalties for drivers who are involved in an accident with vulnerable roadway users. The law defines “vulnerable users of a public way” as pedestrians, highway workers and people riding on animals, skateboards, roller skates, scooters or bicycles.

Effective January 2008, the law specifically states that, if a vehicle operator contributed to the injury or death of a “vulnerable user,” the court shall require the offender to complete a traffic safety course and to perform 100 to 200 hours of community service related to traffic safety. If the course or the community service hours is not completed, the offender could pay a fine of up to \$12,500 and lose his or her license for one year.

The law is designed to both educate and punish careless drivers about the dangerous risks they pose to other users of the road. The Oregon law does not create a new criminal offense for careless drivers who injure vulnerable users; instead, it enhances the civil fines and penalties.

Following Oregon's lead, legislation related to vulnerable roadway users was introduced in Illinois, Iowa, Michigan, Pennsylvania and Vermont. In Illinois, 2008 House Bill 4861 would have made the "infliction of serious physical injury or death to a vulnerable user of a public way" a Class A misdemeanor, which is a criminal offense. The offense would carry a possible \$12,500 fine and loss of driving privileges. The bill passed the Illinois House but not the Senate.



Other legislation has targeted more deadly dangers for bicyclists and pedestrians. South Carolina law states it is unlawful to "harass, taunt, or maliciously throw an object at or in the direction of any person riding a bicycle."⁷⁸



Offenders are guilty of a misdemeanor and could be fined \$250 and serve 30 days in jail. Pennsylvania introduced a bill similar to South Carolina's law in 2008, but it did not pass. The bill would have amended the definition of "recklessly endangering another person" by including a section that makes the offense a misdemeanor if a motorist "knowingly maneuvers the vehicle to intimidate or harass a pedestrian or pedalcyclist; or...knowingly directs threatening gestures or language at a pedestrian or pedalcyclist on a highway."

Another approach to protect vulnerable users' safety is the "fair share for safety" concept, which advocates that funding for traffic safety projects be proportionate to the amount of injuries or deaths suffered by bicyclists and pedestrians. Approximately 13 percent of traffic fatalities currently are bicyclists and pedestrians, yet funding to ameliorate these accidents is only about 2 percent of federal traffic safety funds.⁷⁹

SHARE THE ROAD LICENSE PLATES

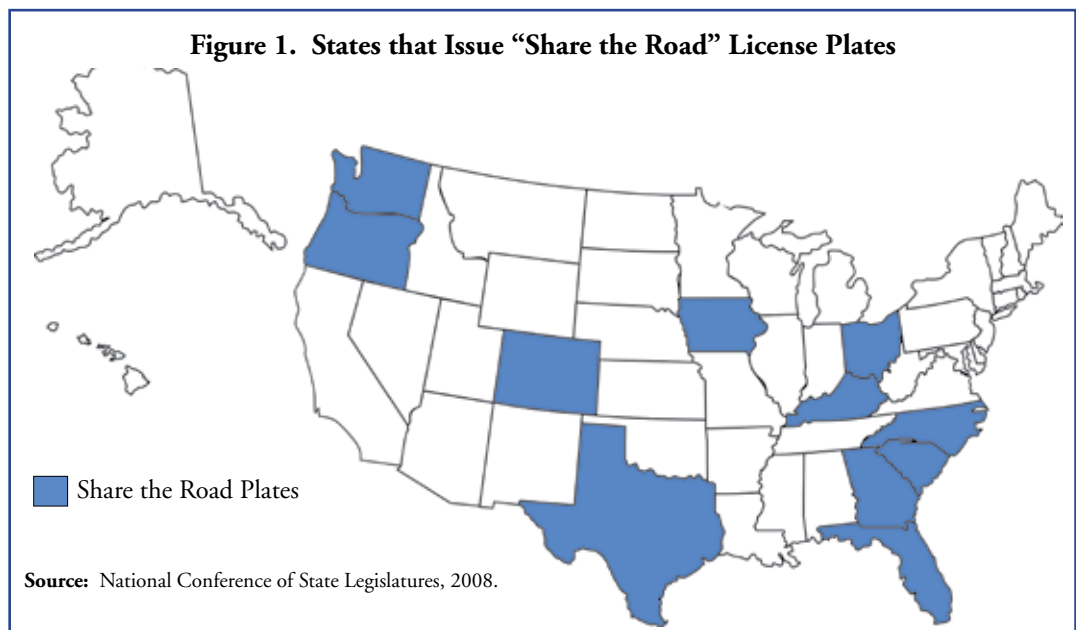
At least 11 states offer specialty “Share the Road” license plates through the state department of motor vehicles (Figure 1). Although plate designs vary, all depict a bicyclist riding on a road and the phrase “Share the Road” somewhere on the plate. This specialty plate is designed to be a small public service announcement to alert motorists about the importance of sharing the road with bicyclists.

Florida was the first state to issue “Share the Road” license plates in 1999. North Carolina legislation passed in 2005 created a “Share the Road” specialty plate. The North Carolina Division of Bicycle and Pedestrian Transportation receives \$20 of the \$30 fee collected for each plate. The funds are used for bicycle and pedestrian safety initiatives, including distributing bicycle helmets to disadvantaged youth. In some states, fees collected from the “Share the Road” plates go to bicycle groups or coalitions that promote bicycle safety and motorist education. California, Missouri, Utah and West Virginia currently are developing “Share the Road” license plates.



As of July 2008, more than 3,000 of these Share the Road plates have been sold in Washington.

Figure 1. States that Issue “Share the Road” License Plates





Helmets

In light of recent high-profile accidents, including one that involved the West Virginia governor and his wife, bicycle safety has become a key issue for lawmakers. Bicycle safety laws can be categorized into bicyclist responsibility (such as wearing a bicycle helmet) and motorist responsibility (such as passing a bike safely) (Table 2). As bicycling has become increasingly popular, state legislatures have begun to consider strategies to keep motorists and bicyclists moving safely on the same road.

Table 2. Bicycle Helmets

State/Jurisdiction	Bicycle Helmets/Bicyclists Covered by State Law	State/Jurisdiction	Bicycle Helmets/Bicyclists Covered by State Law
Alabama	Age 15 and younger	Montana	No Law
Alaska	No Law	Nebraska	No Law
Arizona	No Law	Nevada	No Law
Arkansas	No Law	New Hampshire	Age 15 and younger
California	Age 17 and younger	New Jersey	Age 16 and younger
Colorado	No law	New Mexico	Age 17 and younger
Connecticut	Age 15 and younger	New York	Ages 1 through 13 (riding with children younger than age 1 prohibited)
Delaware	Age 17 and younger	North Carolina	Age 15 and younger
Florida	Age 15 and younger	North Dakota	No Law
Georgia	Age 15 and younger	Ohio	No Law
Hawaii	Age 15 and younger	Oklahoma	No Law
Idaho	No Law	Oregon	Age 15 and younger
Illinois	No Law	Pennsylvania	Age 11 and younger
Indiana	No Law	Rhode Island	Age 15 and younger
Iowa	No Law	South Carolina	No Law
Kansas	No Law	South Dakota	No Law
Kentucky	No Law	Tennessee	Age 15 and younger
Louisiana	Age 11 and younger	Texas	No Law
Maine	Age 15 and younger	Utah	No Law
Maryland	Age 15 and younger	Vermont	No Law
Massachusetts	Ages 1 through 16 (riding with children younger than age 1 prohibited)	Virginia	No Law
Michigan	No Law	Washington	No Law
Minnesota	No Law	West Virginia	Age 14 and younger
Mississippi	No Law	Wisconsin	No Law
Missouri	No Law	Wyoming	No Law

Source: Insurance Institute for Highway Safety, 2008; National Conference of State Legislatures, 2008.

Of all bicyclist fatalities in 2006, 95 percent of riders were not wearing helmets.⁸⁰ According to the Brain Injury Association of America, bike helmets, when worn properly, are 85 percent effective in preventing brain injuries. Still, a NHTSA survey of bicyclists revealed only about 35 percent of bicyclists admit to wearing helmets most of the time, and 50 percent admit they never wear a helmet or even own one.



As of August 2008, 21 states require bicyclists under certain ages to wear helmets. Most require children under age 15 to wear helmets or protective headgear while riding. Nearly 10 states in the 2007–2008 legislative session considered legislation to require certain riders to wear helmets. Delaware enacted a law that increases mandatory helmet use from age 15 and younger to age 17 and younger.

New York considered increasing the age of mandatory helmet use from age 13 to age 18. In Ohio, which has no helmet law, a 2008 bill was introduced, but did not pass, to require riders age 18 and younger to wear bicycle helmets.

No state requires all riders to wear helmets; to date, such laws have been directed toward adolescents. In New Jersey and New York, bills were introduced in 2008 that would require all commercial bicyclists or bicycle delivery people to wear helmets; the bills did not pass. A 2008 NHTSA survey indicated that most Americans support helmet laws. Of those age 16 and older, 62 percent supported laws that require adults to wear helmets when riding bicycles; 90 percent supported helmet laws for children. Of note: Although helmets do not reduce the incidence of crashes, they are proven to reduce the chance for serious brain injury and associated fatalities. Some bicycle advocates point to studies that show mandatory helmet laws may discourage people from riding bikes. States may want to consider incentives to encourage helmet purchase and use.

Reflective Equipment

Both bicyclists and motorists must be vigilant at night. According to a study conducted in North Carolina, approximately 21 percent of bicycle crashes there occurred after dark.⁸¹ NHTSA suggests that bicyclists increase their visibility to drivers by wearing bright clothing or using retro-reflective tape on their equipment or clothing.

In addition to the helmet bills, bills were introduced but did not pass in New Jersey and New York in 2008 to require that commercial bicyclists equip their bikes with reflective material or lights for night use. A bill introduced in Iowa would have imposed a \$15 fine on bicyclists who did not wear reflective clothing when riding on certain highways; it did not pass.

The California Legislature passed a bill in 2008 that requires bicycles operated during darkness be equipped with:

“(1) A lamp emitting a white light that, while the bicycle is in motion, illuminates the highway, sidewalk, or bikeway in front of the bicyclist and is visible from a distance of 300 feet in front and from the sides of the bicycle.

(2) A red reflector on the rear that shall be visible from a distance of 500 feet to the rear when directly in front of lawful upper beams of head lamps on a motor vehicle.

(3) A white or yellow reflector on each pedal, shoe, or ankle visible from the front and rear of the bicycle from a distance of 200 feet.

(4) A white or yellow reflector on each side forward of the center of the bicycle, and a white or red reflector on each side to the rear of the center of the bicycle, except that bicycles that are equipped with reflectorized tires on the front and the rear need not be equipped with these side reflectors.”⁸²

A 2008 New Hampshire law requires bicyclists to wear reflective apparel after sunset and before sunrise.

Appendix A. Notable State Funding Statutes for Bicycle and Pedestrian Facilities

State	Statute Citation	Provision
California	Cal. Streets and Highway Code §2106 (2007)	2106. A sum equal to the net revenue derived from one and four one-hundredths cent (\$0.0104) per gallon tax under the Motor Vehicle Fuel License Tax Law (Part 2 (commencing with Section 7301) of Division 2 of the Revenue and Taxation Code) shall be apportioned monthly from the Highway Users Tax Account in the Transportation Tax Fund among the counties and cities as follows: (b) Commencing on July 31, 2007, and on the last day of each month after that date, the sum of six hundred thousand dollars (\$600,000) per month shall be transferred to the Bicycle Transportation Account in the State Transportation Fund.
California	Cal. Public Utilities Code §99233.3 (2008)	99233.3. Two percent of the remaining money in the fund shall be made available to counties and cities for facilities provided for the exclusive use of pedestrians and bicycles
Colorado	Colo. Rev. Stat. §24-35-210 (2007)	The lottery money available for appropriation to the division of parks and outdoor recreation pursuant to paragraph (b) of this subsection (4.1) shall be appropriated and expended for the acquisition and development of new state parks, new state recreation areas, or new recreational trails, for the expansion of existing state parks, state recreation areas, or recreational trails, or for capital improvements of both new and existing state parks, state recreation areas, or recreational trails. Except as provided in section 33-60-105, C.R.S., in addition to appropriation for the division's capital construction budget, said lottery money may be appropriated for the division's operating budget for expenditures attributable to the maintenance and operation of state parks, state recreation areas, or recreational trails, or any portions thereof, that have been acquired or developed with lottery money.
Hawaii	Hawaii Rev. Stat. §264-18 (2007)	§264-18 Use of highway fund for bikeways. (a) Out of the state highway fund amounts, whether state funds or federal funds, shall be expended as necessary by the State for the establishment of bikeways; provided that bikeways shall be established, whenever practicable, wherever a new or existing highway, road, or street is being designed, planned, constructed, reconstructed, relocated, or rehabilitated. At least two per cent of eligible federal funds, and in addition, other state highway fund moneys as available, shall be expended to: (1) Establish multi-use paths, bicycle paths, and bicycle lanes; and (2) Install signage and safety devices along bikeways;
Illinois	Ill. Rev. Stat. ch. 805, §420 (2004)	Sec. 805-420. Appropriations from Park and Conservation Fund. The Department has the power to expend monies appropriated to the Department from the Park and Conservation Fund in the State treasury for conservation and park purposes. All revenue derived from fees paid for certificates of title, duplicate certificates of title and corrected certificates of title and deposited in the Park and Conservation Fund, as provided for in Section 2-119 of the Illinois Vehicle Code, shall be expended solely by the Department pursuant to an appropriation for acquisition, development, and maintenance of bike paths, including grants for the acquisition and development of bike paths.

Appendix A. Notable State Funding Statutes for Bicycle and Pedestrian Facilities (continued)

State	Statute Citation	Provision
Iowa	Iowa Code §465B.1 (2004)	The General Assembly finds that a program shall be established to acquire, develop, promote, and manage existing and new recreation trails. The objective of a statewide trails program shall be for the state to acquire and develop two thousand miles of new recreation trails and completion of existing trail projects before the year 2000.
Massachusetts	2004 Mass. Acts, Chap. 291 (2004)	For a program to provide financial assistance to promote transit-oriented development; provided, that the assistance may be in the form of grants or loans and maybe e used to design, construct, reconstruct or enhance parking facilities and related pedestrian and bicycle access serving mixed use developments adjacent to existing or planned transit stations, to build or rehabilitate housing, at least 25 per cent of which shall be affordable to households earning no more than 80 per cent of the area median income; provided, however that all projects funded under this item shall be located within .25 miles of a commuter rail station, subway station, ferry terminal or bus station; provided further, that the executive office of transportation is authorized to enter into agreements, request proposals and applications, and issue regulations and guidelines as necessary to carry out the purposes of this item
Michigan	Mich. Comp. Laws §247.660k (5) (2008)	(5) The state transportation department or a county, city, or village receiving money from the Michigan transportation fund annually shall prepare and submit a 5-year program for the improvement of qualified nonmotorized facilities which when implemented would result in the expenditure of an amount equal to at least 1% of the amount distributed to the state transportation department or the county, city, or village, whichever is appropriate, from the Michigan transportation fund in the previous calendar year multiplied by 10, less the accumulated total expenditures by the state transportation department or the county, city, or village for qualified nonmotorized facilities in the immediately preceding 5 calendar years. A county, city, or village receiving money from the Michigan transportation fund shall consult with the state transportation development region where the county, city, or village is located in its preparation and submittal of the 5-year program under this subsection.
New Jersey	N.J. Rev. Stat. §39:4-36 (2008)	<p>Whenever any vehicle is stopped to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle.</p> <p>Every pedestrian upon a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right-of-way to all vehicles upon the roadway.</p> <p>Nothing contained herein shall relieve a driver from the duty to exercise due care for the safety of any pedestrian upon a roadway.</p> <p>b. A person violating this section shall, upon conviction thereof, pay a fine to be imposed by the court in the amount of \$100. The court may also impose a term of imprisonment not to exceed 15 days.</p> <p>c. Of each fine imposed and collected pursuant to subsection b. of this section, \$50 shall be forwarded to the State Treasurer who shall annually deposit the moneys into the “Pedestrian Safety Enforcement and Education Fund”</p>

Appendix A. Notable State Funding Statutes for Bicycle and Pedestrian Facilities (continued)

State	Statute Citation	Provision
Oregon	Or. Rev. Stat. §366.514 (2006)	<p>Out of the funds received by the department or by any county or city from the State Highway Fund reasonable amounts shall be expended as necessary to provide footpaths and bicycle trails, including curb cuts or ramps as part of the project.</p> <p>(3) The amount expended by the department or by a city or county as required or permitted by this section shall never in any one fiscal year be less than one percent of the total amount of the funds received from the highway fund.</p>
Washington	Wash. Rev. Code §47.30.050 (2008)	<p>(2) In each fiscal year the department of transportation shall expend, as a minimum, for the purposes mentioned in RCW 47.30.030 a sum equal to three-tenths of one percent of all funds, both state and federal, expended for the construction of state highways in such year, or in order to more efficiently program trail improvements the department may defer any part of such minimum trail or path expenditures for a fiscal year for a period not to exceed four years after the end of such fiscal year.</p>

Appendix B. Notable Bicycling and Walking Incentives State Legislation

State	Citation	Provision
Illinois	Ill. Rev. Stat. ch. 35 §11 (2008)	“Location efficient” means a project that maximizes the use of existing investments in infrastructure, avoids or minimizes additional government expenditures for new infrastructure, and has nearby housing affordable to the permanent workforce of the project or has accessible and affordable mass transit or its equivalent or some combination of both.
Maryland	House Bill 805 (2005)	Shall include an amount equal to 10 cents per mile traveled by an individual during the taxable year by bicycle or on foot between the individual’s place of residence and the individual’s place of employment.
Michigan	House Bill 6612 (2006)	A taxpayer may claim a credit equal to \$3,000 for the tax year in which the taxpayer purchases an eligible residence if the taxpayer or both the taxpayer and his or her spouse live in that residence and one of them walks to his or her primary place of employment or uses public transportation to get to and from his or her primary place of employment.
Minnesota	House File 1011 (2005)	No state agency may propose or implement a capital investment plan for a state office building unless: (1) the agency has developed a plan for increasing bicycle commuting by employees who would normally work in the building, or the agency has prepared a statement describing why such a plan is not practicable; State agencies providing a subsidy, direct or indirect, for singly occupied motor vehicle commuting by a state employee, including provision of parking at below local market rates, shall make available an equal or greater subsidy for bicycle commuting by a state employee.
New Jersey	Senate Bill 1925 (2008)	A taxpayer shall be allowed a deduction against gross income for the miles traveled by the taxpayer during the taxable year commuting by means of bicycling between the taxpayer’s place of residence and place of employment or termini near those places, the amount of which deduction shall be equal to \$0.10 per mile traveled.
New Jersey	Assembly Bill 3195 (2006)	4. The commissioner shall establish the “Walk to Work Pilot Program.” This pilot program shall be utilized to make available grants to qualified home purchasers and qualified tenants who purchase or rent housing as their principal residence, as provided hereunder. A qualified home purchaser shall be eligible for a one-time grant of \$5,000 so long as that person purchases a dwelling unit within two miles of the purchaser’s place of employment. A qualified tenant shall be eligible for a one-time grant of \$500 so long as that person rents living space within two miles of the tenant’s place of employment.
New York	Senate Bill 8204 (2008)	A taxpayer shall be allowed a credit, to be computed as provided in this subsection, against the tax imposed pursuant to Section six hundred one of this part. The amount of the credit shall equal, up to two hundred fifty dollars per household, the amount paid by the taxpayer during the taxable year for qualified expenses relating to the purchase of a new bicycle.

Appendix B. Notable Bicycling and Walking Incentives State Legislation (continued)

State	Citation	Provision
Pennsylvania	House Bill 2701 (2008)	Providing for the establishment of cooperative community development programs throughout this Commonwealth utilizing the resources of the Commonwealth, local municipalities and employers to encourage employees to locate near and reside in communities located close to employer worksites; establishing a tax credit program to encourage employer participation;
Virginia	House Bill 1826 (2007)	<p>A. For taxable years beginning on or after January 1, 2008, any employer who purchases bicycle racks for use by employees and has showers for bathing installed in his business facilities shall be entitled to a credit against the tax levied pursuant to §§58.1-320 and 58.1-400. The amount of the credit shall be equal to the lesser of (i) the amount paid during the taxable year by the employer for the bicycle racks or shower installation or both, or (ii) \$5,000.</p> <p>A. For taxable years beginning on or after January 1, 2008, any individual who rides his bicycle to and from work at least 10 days of each month shall be entitled to a credit against the tax levied pursuant to §58.1-320. The amount of the credit shall be \$15 per month.</p>
Virginia	Senate Bill 6014 (2008)	<p>14. a. For taxable years beginning on or after January 1, 2009, an amount equal to 50% of the annual costs incurred by an individual for utilizing public transportation in commuting to and from his place of employment.</p> <p>b. For taxable years beginning on or after January 1, 2009, \$500 for an individual utilizing carpools or other modes of ride sharing, bicycling, or walking as his primary mode of transportation in commuting to and from his place of employment. For purposes of this subdivision, an individual shall be eligible for the \$500 deduction if he uses any such modes of transportation a minimum of 100 days annually, and submits satisfactory documentation in a form specified by the Department of Taxation.</p>

Appendix C. Notable Bicycle Planning State Statutes

State	Citation	Provision
California	Cal. Streets and Highways Code §891.2 (2008)	<p>891.2. A city or county may prepare a bicycle transportation plan, which shall include, but not be limited to, the following elements:</p> <p>(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.</p> <p>(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.</p> <p>(c) A map and description of existing and proposed bikeways.</p> <p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.</p> <p>(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.</p> <p>(j) A description of the projects proposed in the plan and a listing of their priorities for implementation.</p> <p>(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.</p>
Florida	Fla. Stat. §260.0141 (2008)	<p>260.0141 Greenways and Trails Program.--There is established within the department the "Florida Greenways and Trails Program," the purpose of which is to facilitate the establishment of a statewide system of greenways and trails. Planning materials, maps, data, and other information developed or used in the program shall not be construed as designation of lands as part of the statewide system of greenways and trails.</p>
Hawaii	Hawaii Rev. Stat. §264-18 (2007)	<p>Planning for any mass transit system shall include appropriate accommodation for bicycle lanes, bikeways, and bicycle routes, including bicycle racks on mass transit vehicles, to enable mass transit users to connect conveniently by bicycle to transit stations and bus stops.</p>

Appendix C. Notable Bicycle Planning State Statutes (continued)

State	Citation	Provision
North Carolina	N.C. Gen. Stat. §136-71.10 (2006)	<p>The Department will:</p> <ol style="list-style-type: none"> (1) Assist and cooperate with local governments and other agencies in the development and construction of local and regional bikeway projects; (2) Develop and publish policies, procedures, and standards for planning, designing, constructing, maintaining, marking, and operating bikeways in the State; for the registration and security of bicycles; and for the safety of bicyclists, motorists and the public; (3) Develop bikeway demonstration projects and safety training programs; (4) Develop and construct a State bikeway system.
Virginia	Va. Code §2.2-229 (2007)	<p>There is hereby established the Office of Intermodal Planning and Investment of the Secretary of Transportation, consisting of a director, appointed by the Secretary of Transportation, and such additional transportation professionals as the Secretary of Transportation shall determine. The goals of the Office are to provide solutions that link existing systems; reduce congestion; improve safety, mobility, and accessibility; and provide for greater travel options. It shall be the duty of the director of the office to advise the Secretary and the Commonwealth Transportation Board on intermodal issues, generally.</p>
Wisconsin	Wis. Stat. §85.023 (2007)	<p>85.023 “The Department shall assist any regional or municipal agency or commission in the planning, promotion, and development of bikeways.”</p>

Appendix D. Notable Complete Streets State Statutes

State	Citation	Provision
California	Cal. Government Code §65302 (2008)	(h) Commencing January 1, 2009, but no later than January 1, 2014, upon the next revision of the guidelines pursuant to subdivision (i), the office shall prepare or amend guidelines for a legislative body to accommodate the safe and convenient travel of users of streets, roads, and highways in a manner that is suitable to the rural, suburban, or urban context of the general plan, pursuant to subdivision (b) of Section 65302.
Florida	Fla. Stat. §335.065 (2008)	(1)(a) Bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities, including the incorporation of such ways into state, regional, and local transportation plans and programs. Bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, or other change of any state transportation facility, and special emphasis shall be given to projects in or within one mile of an urban area.
Illinois	Ill. Rev. Stat. ch. 605 §220 (2008)	Bicycle and pedestrian ways shall be given consideration in the planning and development of transportation facilities, including the incorporation of such ways into State plans and programs. (b) In or within one mile of an urban area, bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, or other change of any State transportation facility
Oregon	Or. Rev. Stat. §366.514 (2006)	Footpaths and bicycle trails, including curb cuts or ramps as part of the project, shall be provided wherever a highway, road or street is being constructed, reconstructed or relocated.
Vermont	Vt. Stat. Ann. Highways 19 §2310 (2007)	(b) Any construction, or reconstruction, including upgrading and resurfacing projects on these highways, shall maintain or improve existing access and road surface conditions for bicycles and pedestrians along the shoulders of these highways, unless the area is adequately served by bicycle and pedestrian paths that are not located along the shoulders of these highways, or unless the agency deems it to be cost-prohibitive.

Appendix E. States Where Bicycles Are Considered Vehicles

State	Vehicle	State	Vehicle
Alabama	✓	Montana	✓
Alaska	✓	Nebraska	✓
Arizona	No	Nevada	No
Arkansas	✓	New Hampshire	✓
California	No	New Jersey	No
Colorado	✓	New Mexico	✓
Connecticut	✓	New York	✓
Delaware	✓	North Carolina	✓
Florida	✓	North Dakota	✓
Georgia	✓	Ohio	✓
Hawaii	✓	Oklahoma	✓
Idaho	✓	Oregon	✓
Illinois	✓	Pennsylvania	✓
Indiana	✓	Rhode Island	✓
Iowa	No	South Carolina	✓
Kansas	✓	South Dakota	✓
Kentucky	✓	Tennessee	✓
Louisiana	✓	Texas	✓
Maine	✓	Utah	✓
Maryland	✓	Vermont	No
Massachusetts	✓	Virginia	✓
Michigan	No	Washington	✓
Minnesota	✓	West Virginia	✓
Mississippi	✓	Wisconsin	✓
Missouri	✓	Wyoming	✓

Source: League of American Bicyclists Bicycle Friendly State Program Survey, 2008.

Appendix F. Driver's Manual Contains Questions on Motorists' Rights and Responsibilities to Cyclists

State	Driver's Manual— Responsibility to Cyclists	State	Driver's Manual— Responsibility to Cyclists
Arizona	✓	Montana	✓
Alabama	No	Nebraska	✓
Alaska	No	Nevada	✓
Arkansas	✓	New Hampshire	✓
California	No	New Jersey	✓
Colorado	✓	New Mexico	No
Connecticut	No	New York	✓
Delaware	✓	North Carolina	✓
Florida	✓	North Dakota	No
Georgia	No	Ohio	✓
Hawaii	✓	Oklahoma	✓
Idaho	No	Oregon	✓
Illinois	✓	Pennsylvania	✓
Indiana	✓	Rhode Island	No
Iowa	✓	South Carolina	✓
Kansas	✓	South Dakota	No
Kentucky	✓	Tennessee	No
Louisiana	✓	Texas	✓
Maine	✓	Utah	✓
Maryland	No	Vermont	✓
Massachusetts	✓	Virginia	✓
Michigan	✓	Washington	✓
Minnesota	✓	West Virginia	No
Mississippi	No	Wisconsin	✓
Missouri	✓	Wyoming	✓

Source: League of American Bicyclists Bicycle Friendly State Program Survey, 2008.

Appendix G. Driver's License Test Contains Questions on Motorists' Rights and Responsibilities to Cyclists

State	Motorist Responsibility to Cyclists on Test	State	Motorist Responsibility to Cyclists on Test
Arizona	✓	Montana	No
Alabama	No	Nebraska	✓
Alaska	No	Nevada	✓
Arkansas	No	New Hampshire	✓
California	No	New Jersey	✓
Colorado	No	New Mexico	No
Connecticut	No	New York	✓
Delaware	No	North Carolina	✓
Florida	✓	North Dakota	No
Georgia	No	Ohio	No
Hawaii	✓	Oklahoma	No
Idaho	No	Oregon	✓
Illinois	✓	Pennsylvania	No
Indiana	No	Rhode Island	No
Iowa	✓	South Carolina	✓
Kansas	✓	South Dakota	No
Kentucky	✓	Tennessee	No
Louisiana	No	Texas	No
Maine	✓	Utah	✓
Maryland	No	Vermont	✓
Massachusetts	No	Virginia	No
Michigan	✓	Washington	✓
Minnesota	✓	West Virginia	No
Mississippi	No	Wisconsin	✓
Missouri	✓	Wyoming	✓

Source: League of American Bicyclists Bicycle Friendly State Program Survey, 2008.

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