



STATEWIDE
BICYCLE PEDESTRIAN
BICYCLE PEDESTRIAN
PLAN

PHASE II



Prepared for
Arizona Department of Transportation
December 2004



Kimley-Horn
and Associates, Inc.



Statewide Bicycle and Pedestrian Phase II Plan

Prepared for:

Arizona Department of Transportation
Transportation Planning Division
Project Manager: Carol Slaker

Prepared by:

Consultant:
Kimley-Horn and Associates, Inc.
Project Manager: Michael Colety, P.E.

Subconsultant:
Project Manager: Matt Zoll



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Reed Kempton, City of Scottsdale
Dan Lance, ADOT Intermodal Transportation Division
Bill Lazenby, Coalition of Arizona Bicyclists
Briiana Leon, City of Phoenix
John Lynch, Maricopa County DOT
Richard Moeur, ADOT Traffic Engineering
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Don Reeves, City of Prescott Bicycle Advisory Committee
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1. Executive Summary

The Statewide Bicycle and Pedestrian Phase II Plan (Phase II Plan) focuses on implementing some of the main recommendations of the Statewide Bicycle and Pedestrian Phase I Plan (Phase I Plan). This includes the development of documents for statewide distribution, the development of plans for a number of future programs, and significant improvements to the Bicycle and Pedestrian Program website.

The following documents for statewide distribution are included within the Phase II Plan:

- Bicycle User Map;
- Share the Road;
- Share the Road with Pedestrians; and
- Arizona Bicycling Street Smarts.

The following program plans are also included:

- Grant and Funding Plan;
- Bicycle and Pedestrian Education Program Plan;
- Maintenance and Facility Request System; and
- Pedestrian Action Plan.

1.1. Stakeholder Coordination

The Statewide Bicycle and Pedestrian Plan Phase II focused on input from the Steering Committee with field condition information requested of the ADOT Traffic Engineers. Similar to the Phase I Plan, the participation by representatives from both engineering and planning divisions from ADOT, MPOs, and local jurisdictions plus interested organizations provides valuable input that is critical to the creation of an implementable plan that meets the needs of the citizens and visitors to Arizona.

1.2. Bicycle User Maps

The Bicycle User Map is a color, double sided 27" x 24" map that folds into 8" x 4.5" in size. The user map is provided in **Appendix A**. The map provides the shoulder width, grade, and traffic volume designation for state highways so that users can make a decision regarding the suitability of the route for their use. The map also provides the local bicycle routes with regional significance, points of public interests, monthly statewide average temperature, annual bicycle events, safety tips, Arizona bicycle safety laws, and other bicycle resources. Inset maps with a larger scale are provided for Flagstaff, Phoenix, Prescott, Tucson, and Yuma.

1.3. Website Enhancements

A review of nine other State DOT websites was completed in order to aid in the enhancement of the ADOT Bicycle and Pedestrian Program website. In general, all of the state websites reviewed offered similar information. Several states offered expanded information on walking including safety tips, recreational facilities, multi-modal links, walk to school and planned projects. The most common information presented included;

- 1) Information on trails and bike touring (9 of 9)
- 2) Information of available safety materials (9 of 9)
- 3) Information on bicycling and pedestrian laws (9 of 9)
- 4) Copy of State Bicycling and Pedestrian Plan (5 of 9)



- 5) Copies of statewide bicycling maps (9 of 9)
- 6) Information on commuting to work by bike (4 of 9)
- 7) Contact information for State Bicycle Coordinator and other State DOT staff (7 of 9)
- 8) State Bicycle/Pedestrian Advisory Committee information (5 of 9)
- 9) Bike and or pedestrian design guides (6 of 9)
- 10) School related information/materials, Crossing Guard Program (4 of 9)
- 11) Bicycling Events (5 of 9)
- 12) Programmed or planned bicycle/pedestrian projects, funding (4 of 9)

Based on available information, all of the above data is incorporated into the enhanced website. The website is available at <http://www.azbikeped.org>.

1.4. Grant and Funding Plans

Bicycle and pedestrian programs in Arizona need additional funding in order to continue the improvement of conditions for walking and cycling in Arizona. The Statewide Bicycle and Pedestrian Phase I Plan identified a number of potential federal, state, and local funding sources in Table 8 of Chapter 12, for which bicycle and pedestrian improvements were eligible. In this Phase II Plan, the potential funding is categorized with two strategies: ADOT funding strategies and Non-ADOT funding strategies in Chapter 5. The ADOT funding strategies are recommended for ADOT personnel to require funding for bicycle and pedestrian improvements. On the other hand, the non-ADOT funding strategies are recommended for non-ADOT personnel. As a funding source for both strategies, a new concept of “Project Combination” is introduced to utilize opportunities of major construction and reconstruction projects to construct the bicycle and walking facilities. Project combination is based on the ADOT Bicycle Policy which states that appropriate bicycle and pedestrian facilities shall be included in major construction and reconstruction projects and similar federal guidelines which state that bicycling and walking facilities should be provided.

The project prioritization process is summarized, and more detailed information is included for each of the potential funding sources. The actions in the following sections are recommended as an aid to statewide bicycle and pedestrian program coordinators, individuals, organizations, and agencies interested in the implementation and/or improvement of programs and facilities.

The following are potential funding sources for the ADOT Bicycle and Pedestrian Program:

- State Planning Research (SPR) funds;
- ADOT Construction Program (Project Combination) – Undefined;
- Transportation Enhancements or Highway User Resource Fund – up to \$1.5 million annually; and
- Highway Safety Program Funds – up to \$400,000 annually, April 21 application deadline.

1.5. Bicycle/Pedestrian Education Program

The education of bicyclists, pedestrians, and motorists is a key component to reduce vehicle and bicycle/pedestrian conflicts. In order for bicyclists to safely travel with motorists, bicyclists need to develop good cycling skills that include knowledge of the “rules of the road.” Like drivers, bicyclists must understand and obey the rules and laws that apply. Likewise, pedestrians must also understand and obey rules and laws if they are to coexist safely with vehicles. Drivers also can be made more aware and careful around bicyclists and pedestrians through safety and education campaigns and through spot enforcement programs.



The overall goal is to implement a statewide program that targets pedestrians and bicycle riders of all ages, community leaders, and facility designers. For Arizona, the recommended statewide approach to safety and education should be “One-Message”. The “One-Message” intent is to reduce costs through shared development and implementation. As a process of identifying implementation plans, the publication and existing programs focusing on different bicycle and pedestrian safety education programs in Arizona and nationwide were reviewed, and then implementation plans were developed with the review process. Five programming areas for statewide implementation are identified as follows:

- Safety Education Training;
- Safe Routes to School;
- Bicycle and Pedestrian Facility Design Training;
- Safety Awareness Campaign; and
- Archived Data.

1.6. Safety and Education Booklets

Safety and education booklets were developed in support of the recommendations of the Education Program Plan described in **Section 6**. The Share the Road Guide for bicycling by Pima County Department of Transportation was modified to be specific statewide (see **Appendix C**) and a similar Share the Road with Pedestrians document was created (see **Appendix D**). In addition, the existing Bicycling Street Smarts guide by Rubel Bike Maps was modified by them to be specific to Arizona (see **Appendix E**). The intent of the development of the Share the Road Guides, is for these documents to be targeted at the general public, both motorists and users. On the other hand, the Arizona Bicycling Street Smarts is intended to be used by intermediate to advanced bicyclists interested in learning the detail behind becoming a better and safer rider.

1.7. Maintenance and Facility Request System

The State of Arizona should implement a bicycle facility maintenance program that responds to citizen’s request. As with other citizen request and/or complaints, response to the maintenance problem should be timely. The program goal would be to correct and/or inspect the problem within 72 hours and schedule repairs within a reasonable timeframe.

In order to track the maintenance request and ensure the proper response Arizona should develop a statewide notification and follow-up system. To be successful the statewide system should establish an existing ADOT position as the central point of contact for citizen notification and the same point for facility maintenance coordination.

Implementation steps:

- receive approval from the ADOT Bicycle and Pedestrian Coordinator and ADOT Risk Management for the draft program outline and sample form (See **Appendix F**);
- coordinate adoption of the program with all federal, state and local agencies having bicycle facility maintenance responsibilities;
- establish a single statewide central point of contact within an existing position;
 - recommended that the center be located within the ADOT Statewide Bicycle/Pedestrian Coordinators Office.
- each agency having bicycle facility maintenance responsibility provides phone number and email address to the statewide center for the responsible maintenance supervisor and/or point of contact.



1.8. Pedestrian Action Plan

Several states and regions across the U.S. have developed and are implementing effective pedestrian plans. Some examples include the states of Oregon, Vermont, California, Maryland, and Georgia, and communities and regions including Santa Barbara, Portland, Madison, and San Diego, just to name a few.

These states and regions are actively promoting pedestrian travel and access for all pedestrians, with a particular emphasis on meeting Americans with Disabilities Act (ADA) requirements. A primary component of the plans is the inclusion of policies supporting the development of improved pedestrian facilities and access as well as improved education of pedestrians and motorists. Currently, the State of Arizona has limited policies regarding pedestrian travel, generally providing pedestrian facilities only if the local jurisdictions through which the State facilities travel take on the liability and maintenance of the sidewalks.

The purpose of this pedestrian action plan is to support the adoption of a proposed pedestrian policy by the State and to list potential action items that can be taken to achieve the policy. The draft pedestrian policy is intended to address pedestrian access, safety issues, and facility needs. This draft policy is a first step in improving the pedestrian environment and addressing ADA requirements. The draft pedestrian policy reads as follows:

It is the policy of the State of Arizona to provide accessible and convenient walking facilities and to support and encourage increased levels of walking.

Strategies to achieve the policy are listed in the “ADOT Pedestrian Policy for Consideration”. The ADOT Pedestrian Policy for Consideration is on pages 127-129 of the Statewide Bicycle and Pedestrian Plan (Section 10.1 Phase I) and is not included in this plan. Additional specific actions to achieve the draft pedestrian policy are recommended for consideration by ADOT and by incorporated jurisdictions and counties in Arizona. These actions are intended to improve the overall pedestrian environment for all pedestrians and in particular to address needs for persons with disabilities.



2. Stakeholder Coordination

The Statewide Bicycle and Pedestrian Plan Phase II focused on input from the Steering Committee with field condition information requested of the ADOT Traffic Engineers. Similar to the Phase I Plan, the participation by representatives from both engineering and planning divisions from ADOT, MPOs, and local jurisdictions plus interested organizations provides valuable input that is critical to the creation of an implementable plan that meets the needs of the citizens and visitors to Arizona.

2.1. Steering Committee Input

Members of the Steering Committee were actively involved in the review and development of the plan. Comments provided by the Steering Committee were discussed at the meetings and the documents were revised based on the consensus of the group. Steering Committee members also were able to stay involved with the project through e-mail communication. Representatives of the following organizations made up the Steering Committee:

- ADOT Intermodal Transportation Division;
- ADOT Northern Regional Traffic Engineer;
- ADOT Regional Traffic;
- ADOT Roadway Design;
- ADOT Roadway Standards
- ADOT Traffic Engineering;
- ADOT Transportation Enhancements;
- ADOT Transportation Planning Division;
- ADOT Western Regional Traffic Engineer;
- Arizona Office of Tourism;
- Arizona State Parks;
- Bicycle Advisory Committee – Flagstaff;
- Bicycle Advisory Committee – Glendale;
- Bicycle Advisory Committee – Prescott;
- Bicycle Advisory Committee – Tempe;
- Catholic Healthcare West, St. Josephs;
- Central Arizona Association of Governments;
- City of Flagstaff;
- City of Flagstaff City Council;
- City of Glendale;
- City of Goodyear;
- City of Mesa;
- City of Phoenix Trails;
- City of Phoenix Bicycle Coordinator;
- City of Scottsdale;
- City of Tempe Transportation;
- City of Tucson;
- City of Yuma Community Development;
- Coalition of Arizona Bicyclists;
- Flagstaff Metropolitan Planning Organization;
- Greater Arizona Bicycling Association – Tucson;
- Lake Havasu City Transportation
- Maricopa Association of Governments;
- Maricopa County DOT;
- Northern Arizona University;
- Northern Arizona Council of Governments;
- Phoenix Children’s Hospital;
- Pima Association of Governments;
- Pedestrian Advisory Committee – Tucson;
- Prescott Alternative Transportation;
- Sedona Bicycle Advocate
- Southeastern Arizona Governments;
- Southwest Gas;
- Tucson Department of Transportation;
- Town of Oro Valley;
- Valley Metro;
- Western Arizona Council of Governments;
- Yuma Unofficial Foothills Bicycle Club;
- Yuma Metropolitan Planning Organization;
- and
- Yuma Safety Representative.



2.2. ADOT District and Regional Traffic Engineer Input

The ADOT District and Regional traffic engineers have a vast knowledge of the conditions of roadways under their jurisdiction and issues related to bicycle and pedestrian transportation. The following list of district and regional traffic engineers that were involved in the data request for the Phase I Plan were involved directly or indirectly in the Phase II Plan:

- Baja Regional Traffic Engineer;
- Flagstaff District Engineer;
- Globe District Engineer ADOT
- Holbrook District Engineer;
- Kingman Maintenance District Engineer;
- Kingman District Engineer;
- Northern Regional Traffic Engineer;
- Prescott Maintenance District Engineer;
- Phoenix Construction Assistant DE;
- Phoenix Construction District Engineer;
- Phoenix Regional Traffic Engineer;
- Phoenix Prescott District Engineer;
- Safford Development and Maintenance Engineer;
- Safford District Engineer;
- Tucson District Engineer;
- Western Regional Traffic Engineer; and
- Yuma District Engineer.

The district and regional traffic engineers were coordinated with through a request of the shoulder width data on the draft user map to the Regional Traffic Engineers listed above. It was requested that the Regional Traffic Engineers coordinate with the District Engineers within their region. Information was received for areas within the Western and Northern Regions. That information provided is included in the Bicycle User Map described in **Section 3.0**.



3. Bicycle User Map

The information and format of the Cycle Arizona Map of Suitable Bicycle Routes on the State Highway System, printed in 1998 by ADOT was evaluated and modified for the Bicycle User Map. The Bicycle User Map is a color, double sided 27" x 24" map that folds into 8" by 4.5" in size. The user map is provided in **Appendix A**. The map provides the shoulder width, grade, and traffic volume designation for state highways so that users can make a decision regarding the suitability of the route for their use. The map also provides the local bicycle routes with regional significance, points of public interests, monthly statewide average temperature, annual bicycle events, safety tips, Arizona bicycle safety laws, and other bicycle resources. Blow up inset maps are provided for Flagstaff, Phoenix, Prescott, Tucson, and Yuma.

The main revision to the format of the data on the map was that the Average Annual Daily Traffic (AADT) data that was used in the legend on the Phase I Plan Network Map was revised to label low, medium, or high traffic volume. The Steering Committee felt that the low, medium, or high traffic volume designation was more usable to the common rider. The AADT associated with each traffic volume was labeled within the legend. The consensus of the committee was to utilize the following:

- Low Traffic Volume Less than 2,500 Vehicles per Day
- Medium Traffic Volume Between 2,500 and 7,500 Vehicles per Day
- High Traffic Volume Greater than 7,500 Vehicles per Day



4. ADOT Bicycle and Pedestrian Program Website

A review of other State DOT websites was completed in order to aid in the enhancement of the ADOT Bicycle and Pedestrian Program website. The review team primarily looked at content available on the bicycle and pedestrian website, but also reviewed a number of additional features including: ease of access, navigation within the website, number of web page layers (clicks) required to reach the requested information, and readability.

Approximately 15 state department of transportation websites were reviewed in order to determine which were the most effective. It was decided to further review the websites hosted by Washington, Connecticut, Georgia, Florida, New Jersey, North Carolina, Oregon, Pennsylvania, and Virginia. These eight states presented the best information for comparison and/or features for incorporation into the ADOT Bicycle and Pedestrian Program website. The website content is available at <http://www.azbikeped.org>.

The following is a summary of the review of other state department of transportation websites:

Website Content

In general, all of the state websites reviewed offered similar information. Several states offered expanded information on walking including safety tips, recreational facilities, multi-modal links, walk to school and planned projects. The most common information presented included:

- 1) Information on trails and bike touring (9 of 9)
- 2) Information of available safety materials (9 of 9)
- 3) Information on bicycling and pedestrian laws (9 of 9)
- 4) Copy of State Bicycling and Pedestrian Plan (5 of 9)
- 5) Copies of statewide bicycling maps (9 of 9)
- 6) Information on commuting to work by bike (4 of 9)
- 7) Contact information for State Bicycle Coordinator and other State DOT staff (7 of 9)
- 8) State Bicycle/Pedestrian Advisory Committee information (5 of 9)
- 9) Bike and or pedestrian design guides (6 of 9)
- 10) School related information/materials, Crossing Guard Program (4 of 9)
- 11) Bicycling Events (5 of 9)
- 12) Programmed or planned bicycle/pedestrian projects, funding (4 of 9)

Based on available information, all of the above data is incorporated into the revised website.

Web Page Access/Navigation

The keys to accessing any bicycling and pedestrian information are: an easily identifiable link on the DOT Home Page, navigation to the information with a minimal number of pages to review, and navigation within the site. A number of dot web sites included a link directly from the DOT Home Page to the Bicycle and Pedestrian Program page. This removes location guess work and places the information within a single click. On the other hand, many states (including Arizona), currently have the Bicycle and Pedestrian Program website under general information, available maps or different divisions within the department. Since the original review of the ADOT website, the ADOT website has been updated to include the Transportation Planning Division on the Home Page and a link to the ADOT Bicycle and Pedestrian Program is on the main page of the Transportation Planning Division page.



The States of Florida, North Carolina, and Washington each offer a Bicycle/Pedestrian Home Page briefly describing the program and providing a menu of additional information. Each style is different. North Carolina uses drop down menus. Florida lists each major topic web page along the left margin, while Washington lists each major heading across the page with sub-topics (Exhibits 1-3, respectively). Each method is successful while the North Carolina style allows for the addition of sub-topics within the drop down menu without reformatting the web page. Each of the three examples allows the reader to access a sub-topic with a minimum of two clicks from the DOT Home Page. A general “rule of thumb” is that a reader should be able to access the desired information with a maximum of three clicks.

The third consideration is site navigation, moving within the web pages without use of the Back Arrow. Florida, North Carolina, and Washington each accomplish this in a similar fashion listing the major area sub-topics on the left margin. The one noted difference is that North Carolina’s drop down menus allow for the movement between any major area sub-topic with a single click (Exhibit 4). Virginia maintains links to other VDOT web pages and provides navigation between the bicycling and pedestrian site through the use of the footer links. Florida helps the reader by providing a “you are here” line below the top header and the page content. In addition Florida provides a page indicator for multi-page reports (Exhibit 5). Several states also provided a search capability, (Exhibits 1 and 2).

We received feedback from the Steering Committee regarding a desired heading layout and navigation throughout.

Readability

The team considered several readability factors. The first factor was the ease and time it took for the reader to determine whether the web page contained the information requested, the second factor looked at material presentation and whether it could be understood by all ages and educational levels and the third factor was whether or not the information could easily be downloaded within the normal print margins. In general it was found that most websites are written for an adult audience, most sites contained a lot of narrative which requires the reader to review considerable text to gain the information requested and the text width exceeds the normal print page format for downloading.

Florida and Washington commonly used small text descriptions to introduce a subject (Exhibits 6 and 6a). North Carolina as one example uses more text requiring additional time to scan the information (Exhibit 7). Web pages, especially those summarizing traffic laws and safety tips should be written in layman terms and at a level easily understood by children. A couple of examples where the website provided information for all ages were PennDOT’s interactive graphics and games and the Bike Safety laws offered by Connecticut DOT (Exhibits 8 and 8a, respectively). Virginia and North Carolina’s website (Exhibits 9 and 9a) both display a text format that exceeds the print area width. Several states websites provided the file size of the material to be downloaded.

Each state that was reviewed is unique in how it presented information to the public. Each provides a list of safety tips. One is very brief but complete, the other consisting of more text (Exhibits 8a, 10 and 10a). Exhibit 6a displays an interactive map allowing one click to access the requested trail information and Exhibit 11 presents an informative and useable trail description table format. Pictures and graphics are informative and tell a lot at a quick glance but were generally limited to one picture per page for the states reviewed. All exhibits are included in **Appendix B**.



ADOT BICYCLE & PEDESTRIAN PROGRAM

Search	Home	Bicycling	Walking	Maps	Statewide Bicycle & Pedestrian Plan	Laws & Policies	Education	Contacts
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Courtesy of Phoenix CVB

Welcome

to the Arizona Department of Transportation's Bicycle and Pedestrian Program website. This site is designed to provide you with a wide variety of resources and information about biking and walking in Arizona, including places to bike and walk, how to integrate biking and walking into your commute, important laws and policies, safety issues, maps, and organizations. Bicycling and walking are not only great alternative modes of transportation, but also are great ways to get exercise and improve Arizona's air quality. Arizona is the perfect place for biking and walking year-round. So explore the site and enjoy the benefits of safe bicycling and walking.

Our VISION

to improve the accommodation of non-motorized modes of transportation within Arizona's multi-modal transportation system.

Check it Out

Calendar of Events

ADOT BICYCLE AND PEDESTRIAN PROGRAM

Mailing: 206 S. 17th Avenue, Mail Drop 310 B
Phoenix, Arizona 85007

Phone: (602) 712-8141
Fax: (602) 712-3046
Email: azbikeped@azdot.gov



5. Grant and Funding Plan

Bicycle and pedestrian programs in Arizona need additional funding in order to continue to improve conditions for walking and cycling in Arizona. The *ADOT Statewide Bicycle and Pedestrian Plan – Phase I* report identified a number of potential federal, state, and local funding sources in Table 8 of Chapter 12, for which bicycle and pedestrian improvements were eligible. The following funding plan builds upon this information.

The project prioritization process is summarized, and more detailed information is included for each of the potential funding sources. The actions in the following sections are recommended as an aid to statewide bicycle and pedestrian program coordinators, individuals, organizations, and agencies interested in the implementation and/or improvement of programs and facilities. **Section 5.1** provides a list of recommended strategies for ADOT staff to consider. **Section 5.2** provides a list of recommended actions for local jurisdictions and organizations. Additional detail on the funding sources is provided in **Sections 5.3 and 5.4**. **Section 5.5** provides a summary of funding strategies of bicycle and pedestrian programs within Arizona and nationwide.

The MoveAZ Long Range Transportation Plan will provide the means to allocate funding to transportation projects, including bicycle and pedestrian facilities, throughout the state as required by both federal and state law. Projects will be evaluated based on their contribution to the performance of the transportation system. One of the performance factors is “accessibility” with an objective to “integrate transit, bicycle, and pedestrian facilities into highway improvements (where feasible).” Measure 6.3 is “bike suitability” and is based on the definition of Bicycling Conditions Score in the Bicycle and Pedestrian Phase I Plan. Projects that increase the systemwide bike suitability by the greatest percentage receive the most points for this measure.”

5.1. ADOT Funding Plan

The following are potential funding sources for the Bicycle and Pedestrian Program:

- State Planning Research (SPR) funds;
- ADOT Construction Program (Project Combination) – Undefined;
- Transportation Enhancements or Highway User Resource Fund – up to \$1.5 million annually; and
- Highway Safety Program Funds – up to \$400,000 annually, April 21 application deadline.

The following paragraphs summarize the rationale for selecting these four recommended funding sources. Additional detail on the funding sources is provided in **Sections 5.3 and 5.4**.

Federal State Planning Research (SPR) funds have been used to fund the first two phases of the Statewide Bicycle and Pedestrian Plan. The continued support of the Bicycle and Pedestrian Program with SPR funds will enable the implementation of the plan to continue and the effectiveness of the program to significantly improve. Both the recommended facility improvements and the proposed programs, such as the Education Program, are significantly more likely to be implemented if the program is a continuous program as compared to spot funding. Funds should be used annually to assist with the monitoring of the plan and to update the *Statewide Bicycle and Pedestrian Plan* at a minimum of every five years. Included within the plan update should be a summary of improvements that have been made since the previous plan, and a comprehensive list of proposed bicycle/pedestrian capital facilities improvements and program implementations grouped by the desired time frame (short, medium and long-range) with an estimate of probable cost included. The update should review and



modify, as necessary, statewide facility design criteria, operational and maintenance policies and bicycle/pedestrian policies.

Although the term “Project Combination” is not a recognized process typically identified as a funding source, project combination is based on the ADOT Bicycle Policy which states that appropriate bicycle and pedestrian facilities shall be included in major construction and reconstruction projects; therefore, the standard application of this policy could be the most significant contributor to the improvement of bicycle and pedestrian facilities on state highways.

Thus it is recommended that an annual review of all large roadway capacity, corridor, bridge reconstruction, and/or spot location projects be completed as part of the ADOT Bicycle and Pedestrian Program. The purpose of the review is to ensure that appropriate bicycle and pedestrian facility improvements are being incorporated into ADOT projects and so that these improvements are incorporated into future Bicycle User Map updates, although the user map will not be changed every time a new project comes on line. The proposed improvements should be consistent with adopted bicycle/pedestrian plans and implementation policies. The review should occur early in the project identification process in order to develop project staff and management support. The goal for this effort is to incorporate bicycle shoulder improvements and/or pedestrian improvements into all appropriate construction projects. Implementation can be accomplished with a “check-off” requiring the design project manager to coordinate with ADOT’s Bicycle/Pedestrian Coordinator. Design, construction, and coordination costs are eligible expenses through the larger project whether federally and/or state funded.

An annual allocation request could be made to Management and the State Transportation Board, in consultation with the Resource Allocation Advisory Committee (RAAC), the Priority Planning Advisory Committee (PPAC) and with coordination with the MoveAZ process. The funding programs and dollar amounts for ADOT construction will be determined through the MoveAZ process. This report recommends the request for an annual allocation be from the Transportation Enhancement (TE) funds retained by ADOT and/or the Highway Users Revenue Fund (HURF) revenues. The annual allocation can be included within the ADOT’s System Improvements – Roadside Facilities Improvements sub-category. The second alternative would be to request Management and Board policy support to fund state bicycle/pedestrian projects up to \$1.5 million each year.

Federal National Highway Traffic and Safety Administration (NHTSA) Highway Safety Program funds, Section 402, administered by the Governor’s Office of Traffic Safety, could be applied for in order to support the Education Program. Funds would be applied in support of statewide bicycle/pedestrian educational programs, development of educational materials, procurement of the required program support equipment, and for initial development and deployment of new programs. The State Coordinator could request up to \$400,000 annually to support statewide implementation of programs appropriate for all age and user groups including a public education campaign, facilities design, and law enforcement training.

5.2. Non-ADOT Funding Strategies

The following actions are recommended for non-ADOT personnel to acquire funding for bicycle and pedestrians programs and facilities. Additional detail on the funding sources is provided in **Sections 5.3** and **5.4**.

- Develop and adopt a comprehensive local and regional bicycle and pedestrian strategic plan establishing a short, medium, and long-range list of improvements including an estimate of probable



cost. In addition to facility improvements, the Plan should address operational and maintenance issues and other programs supporting education, safe communities, bike and walk-to-school, and bike-to-work programs, etc. Plans should be updated at least every five years.

- Funding support is available through federal MPO Planning Funds (PL) or through support offered by ADOT Transportation Planning Division. State and local revenues programmed for planning activities are an eligible funding source.
- Develop a project implementation strategy within each bicycle and pedestrian organization. The construction project priority process is developed through the MoveAZ Plan. Include a review of projects and fit the high priority projects to available funding programs including the competitive grant programs. This process should start during the summer in preparation of the grant application deadlines February to April and the development of the 5-Year Construction Program and TIP programs.
- Participate in the 5-Year Construction Program and TIP development and review process.
- Work with the appropriate ADOT District and/or project design staff, MPO/COG to include bicycle/pedestrian improvements into larger roadway capacity, corridor, bridge reconstruction, and/or spot location projects. Stand-alone bicycle/pedestrian projects are eligible for other federal funds including National Highway System (NHS), Surface Transportation Program (STP), Transportation Enhancement (TE) and Recreational Trails Program (RTP) and other state revenue funding programs. Within Maricopa County bicycle/pedestrian projects are eligible for Congestion Mitigation and Air Quality (CMAQ) federal funds.
- Establish annual project allocation for bicycle and pedestrian programs in coordination with the MoveAZ process. Local transportation policy makers and/or elected officials should establish an allocation from an existing funding category. The annual allocation should consider federal, state and/or locally generated funds. The best opportunity for dedicated federal funding would involve a statewide allocation from the Transportation Enhancement (TE) program, from Section 402 Safety Funds, and potentially from new federal Safe Routes to Schools funding that is currently included in pending federal legislation. The best opportunity for dedicated state funds would involve annual funding from the local area HURF allocation. Establishment of an annual HURF allocation within each jurisdiction may not be practical. The recommended action would be to develop a regional strategy and present the proposal to the nine MPO/COG's Boards. The second approach would be to solicit a statement of MPO/COG Board policy supporting annual funding of bicycle/pedestrian projects.
- Propose a dedicated new funding source. This action would require a new tax initiative (existing tax measures generally have very specific enabling legislation identifying both the tax source and permissible/eligible distribution requirements). An example of a local tax is the 0.5 percent sales tax initiative implemented in the City of Yuma (ROAD) for the purpose of funding street and roadway improvements. Bicycle and pedestrian improvements such as a wider curb lane and curb ramps may occur as part of the road project. However, any new tax initiative option presents administrative and political hurdles. A second approach would be to modify the HURF distribution formula establishing a statewide set-aside. This would require a change in legislation.
- Work with the Maricopa Association of Government (MAG) and member agencies regarding allocation and project selection for bicycle and pedestrian projects. The recently adopted MAG Regional Transportation Plan (RTP) allocates approximately \$7 million annually for bicycle and pedestrian projects.



- Submittal of federal NHTSA Section 402 Highway Safety funds through the Governor's Office of Traffic Safety is required. This would typically be submitted by regional/local bicycle/pedestrian coordinators and/or organizations. Funds can be applied in support of safety and educational programs, development of safety/educational materials, procurement of the required program support equipment and support initial deployment of separate programs. Regional/local program applications should be coordinated with the ADOT Bicycle and Pedestrian Program Coordinator.
- Submit Community Development Block Grant (CDBG) applications for pedestrian improvements.

5.3. Project Combination and the Prioritization Process

Although the term "Project Combination" is not a recognized process typically identified as a funding source, project combination is based on the ADOT Bicycle Policy which states that appropriate bicycle and pedestrian facilities shall be included in major construction and reconstruction projects and similar federal guidelines which state that bicycling and walking facilities should be provided. As mentioned in the previous sections, the standard application of this policy could be the most significant contributor to the improvement of bicycle and pedestrian facilities on roadways in the state. The following summary is intended to provide bicycle and pedestrian planners with an understanding of how most public agencies in the state, fund and prioritize their roadway improvements.

Each year the Arizona State Transportation Board adopts a 5-Year Construction Program allocating projected revenues from all federal, state, and other sources including a list of prioritized programs/projects. The Board, appointed by the Governor, must follow a process referred to as the "Priority Programming Law" outlined in Arizona Revised Statutes (A.R.S. 28-6951). The 5-Year Construction Program must be adopted by June 30th of each year.

The Board is assisted by the Resource Allocation Advisory Committee (RAAC) composed of the ADOT Assistant Director and State Engineer, one representative for Maricopa Association of Governments (MAG) and Pima Association of Governments (PAG), two representatives from rural COG's, a representative for Phoenix Transit and a representative from an urban MPO. The RAAC is responsible for allocating the necessary revenues to fund the ADOT program subdivided into three major categories: System Preservation, System Management and System Improvements. Projects included within the System Improvements category were identified through adopted plans, studies, and ADOT staff through consultation with local jurisdictions, transportation agencies, individuals, and organizations. The number and type of projects prioritized is dependent upon the specific funding category eligibility requirements and projected revenues.

During the program/project identification process, ADOT staff consults with each MPO/COG in development of the final list of recommended area projects. The consultation and cooperatively determined list aids in achieving program/project consistency and coordination between statewide and local area needs. The RAAC submits the recommended list of prioritized projects to the Board. Due to the competitive nature of project selection and prioritization attributed to limited funding, public review and adoption process, a sponsor should submit the proposed project at the earliest possible time for incorporation into a future 5-Year Construction Program.

In addition to the 5-Year Construction Program, the State complies with the federal Transportation Equity Act for the 21st Century (TEA-21). TEA-21 requires each state to submit a three year Statewide Transportation improvement Program (STIP) incorporating all statewide highway, federal lands, and



transit projects funded under Title 23 and the Federal Transit Act. The STIP must be federally approved, consistent with the adopted statewide long-range transportation plan and it shall incorporate and be consistent with each MPO/COG TIP. Both the STIP and TIP identify programs/projects by federal funding category following distinct programming rules and requirements.

MPO's follow federal guidelines requiring the TIP to be developed following an open public participation and project identification process to include all projects funded by federal, state, local or other revenue sources and to be adopted by the MPO governing board. Following MPO adoption, the TIP is submitted to the Governor or his designee for approval; within Arizona the six COG's follow the MPO requirements. Approved TIP's are incorporated into the STIP and submitted to FHWA/FTA for approval by October 1st of each year.

The Arizona STIP incorporates the programs/projects identified within the first three years of the 5-Year Construction Program. The PPAC, appointed by the ADOT Director and consisting of the Deputy Director as Chairperson and representatives from the Intermodal, Operations, Aeronautics, Motor Carrier and Administrative Services Division aids in development and coordination of the STIP. The PPAC administers the work program and makes recommendations to the Board on any changes to project scope and funding level.

5.4. Funding Sources Summary

Bicycle/pedestrian projects are an eligible program expense for roadway facility and transit system funds. Two of the larger eligible federal category funds include the National Highway System (NHS) and the Surface Transportation Program (STP). ADOT receives approximately \$126 million in STP apportionment, besides the bicycle/pedestrian eligibility of the STP primary program; TEA-21 established 10 percent TE set aside or approximately \$13 million per year. NHS funds are eligible and normally include bicycle/pedestrian facilities through project combination. The Bridge Replacement and Rehabilitation category receives approximate \$13.7 million annually and bicycle and pedestrian facility improvements are an eligible expense when part of a bridge reconstruction project. The other large federal apportionments category, Interstate Maintenance, generally is not used for bicycle/pedestrian improvements.

The two smaller federal apportionments include the Congestion Mitigation Air Quality Program (CMAQ) and the Recreational Trails Program (RTP). Maricopa Association of Governments (MAG) is the only recipient of CMAQ funds. ADOT also receives approximately \$1.1 million annually in RTP apportionment; funds received are transferred to the Arizona State Parks for programming. RTP funds can be used for both motorized and non-motorized trail projects.

Review of the 5-Year Construction Program and STIP showed virtually all statewide bicycle and pedestrian projects funded with STP – TE funds; within Maricopa County several projects utilized CMAQ funds. In addition, few projects were programmed using 100 percent state or local revenues and very few showed a larger state/local funding share than the required non-federal dollar match. This finding was confirmed through discussions with ADOT and other regional staff; however, it was stressed that an increasing number of bicycle/pedestrian improvements are being incorporated into larger roadway project and there is increased use of other regional and local revenues. Several projects were funded using Community Development Block Grants (CDBG), Highway User Revenue Funds (HURF) and other local revenues.



The following sections include a summary of each funding source. **Table 5-4** at the end of this section includes a summary of each funding source.

Transportation Enhancement Program

The TE program represents the best opportunity and historically has been the primary funding category for stand-alone bicycle and pedestrian projects. Annually ADOT retains \$1 million from the federal appropriation for design, project administration, and contingency or “projects of opportunity.” The remaining \$12 million is sub-divided with ADOT retaining \$6 million for “State” sponsored projects and the remaining \$6 million available for local jurisdiction “Local” TE projects.

ADOT administers the statewide TE program and is assisted by the 12 voting and 1 non-voting (FHWA) members of the Transportation Enhancement Review Committee (TERC). The 12 voting members represent the State Transportation Board, ADOT, MAG, PAG, 3 members appointed on a rotating basis from the 6 remaining MPO and COGs, Historical Advisory Commission, Commission of the Arts, Office of Tourism, State Parks Board, and the ADOT Bicycle/Pedestrian Coordinator. Refer to the ADOT web site at http://www.azdot.gov/ABOUT/envplan/enhancement_scenic_roads/enhancement/index.html for downloadable versions of the Program Handbook, Grant Application, and Evaluation Criteria. It is important for project applicants to consult these updated documents annually for a complete understanding of the requirements and process.

An individual, organization, or agency can apply for TE funds. Candidate projects must be submitted on a completed *Arizona TEA-21 Transportation Enhancement Grant Application* to the appropriate reviewing agency. In order for a project to be considered under the State program 75 percent of the overall project must be located within ADOT right-of-way and must receive support/endorsement by the appropriate District Engineer. All other projects are considered Local projects; this includes projects submitted by federal lands agencies. All TE projects require a 5.7 percent hard cash match; ADOT provides the hard match for State projects and the Local project sponsor provides the local hard match. The State TE project funding limit is \$1.5 million and Local is \$500,000.

An application should be complete before being submitted to the appropriate reviewing agency. The reviewing agency may be ADOT, a local jurisdiction or a MPO/COG. The submittal should include any preliminary/conceptual architectural and/or engineering design information and an estimate of cost. All local jurisdiction supported projects are submitted to the appropriate MPO/COG for endorsement. Endorsed projects and those that have a committed sponsor, such as a local jurisdiction, ADOT or the federal lands agency, and that are submitted to the ADOT TE staff for further evaluation. Projects meeting all evaluation criteria are submitted to the TERC.

The TERC reviews each enhancement candidate project and ranks each against the “General Merit” and “Activity-Specific” evaluation criteria. Project applicants should review the evaluation criteria during the scoping and application development process to ensure the proposal meets the overall intent of the enhancement program. Projects receiving the highest number of points increase their ranking and chance for funding. The ranked list of projects is submitted to the State Transportation Board for approval. Approved TE projects are incorporated into the appropriate MPO TIP and subsequently the STIP.

All project sponsors are required to sign an Intergovernmental Agreement (IGA) prior to construction that defines how the project will be maintained, the organization(s) responsible, type of on-going program and source of funding. In addition each project applicant/sponsor is required to attend a TE



Workshop and Kick-off Project Scoping Meeting. A fee of \$5,000 covering ADOT expenses is submitted by the sponsor with the project scoping document. Project applicants/sponsors should consult the TE Program Handbook for an explanation of a “typical project development process.”

Congestion Mitigation Air Quality Program

The Maricopa Association of Governments (MAG) has the responsibility for administering the CMAQ program including development of projects designed to achieve reductions in transportation related emissions. Projects for consideration for CMAQ funding are submitted by Maricopa County jurisdictions, ADOT, and MAG staff. MAG staff evaluates all projects submitted against vehicle emission reduction criteria ranking those projects producing the most benefit. Ranked projects are programmed to the extent of available funds. MAG is considering a formal CMAQ project application process. The CMAQ program offers a source of funding for bicycle and pedestrian projects.

Highway Safety Program

Annually the Governor’s Office of Highway Safety (GOHS) receives approximately \$2.5 million from NHTSA. Each year NHTSA identifies specific funding priorities. In general, funds are intended to enhance existing programs and may be used for conducting inventories, needed studies, engineering studies, systems development, and program implementation or for purchasing equipment. Bicycle and pedestrian safety is one of the eight GOHS priority program areas.

Each January GOHS mails invitations soliciting submittal of funding request. Agencies responding to the request should carefully prepare the application to include a cover letter signed by the submitting agency, project description containing identification of the problem or reason for the request, how the problem will be solved and include a budget. Applications received are reviewed by a Grant Coordinator and a recommended list is submitted to the Director. Applications are reviewed for completeness, evaluated against achieving identified priority areas and satisfying an overall need. Applications can not repeat work already funded. In addition, there are requirements and restrictions applicants should be aware of involving request for equipment and production of print media including printed materials, brochures and bumper stickers, etc. The applicant should contact a GOHS Grant Coordinator for clarification of rules. Agencies applying for safety funds should refer to the GOHS grant application Proposal Guide web site at <http://www.azgohs.state.az.us/downloadpdf/ProposalGuide.pdf>. Application deadline is typically April 1st of each year.

Transit Enhancements Program

The Federal Transit Administration (FTA) Section 5307 Basic Tier Funds urbanized area formula program provides funds that can be used for transit capital improvements, planning, and, in some cases, operating assistance. The Urbanized Area Formula Governors Apportionment for areas between 50,000 and 200,000 populations provides grant funds to Flagstaff and Yuma. The Urbanized Area Formula Apportionment, areas greater than 200,000, provides funds to Phoenix and Tucson transit systems. Based of need ADOT provides \$4 million annually from the STP apportionment to urbanized area formula recipients. Eligible expenses may include bicycle and pedestrian improvements at Park and Ride facilities, bus shelters, and bicycle racks on buses. FTA Section 5309 funds awarded on a discretionary basis are eligible for capital projects. TEA-21 requires the four transit operators to include programming of all federally funded projects into the local MPO TIP. Bicycle and pedestrian advocates should coordinate proposed projects and programs with the transit operator. Section 5307 funding is annual and offers a good source of funds for operational improvements versus facility improvements.



Highway Users Revenue Fund (HURF)

HURF represents the largest single source of transportation funding considering all federal, state, and local generated revenues. HURF includes taxes collected from motor fuels and a variety of user fees including motor carrier taxes, vehicle license taxes, motor vehicle registration fees, and other charges relating to the registration and operation of motor vehicles on the public highways of the state. These revenues are distributed through formula to the State Highway Fund, cities and towns and counties.

The State Constitution, Article IX, Section 14, restricts the use of HURF funds to highway and street purposes, cost of administering the state highway system, HURF administration, payment of principal and interest on highway and street bonds, expenses for enforcement of state traffic laws, administration of traffic safety programs and publication/distribution of the Arizona Highways magazine. Eligible expenditure of funds for highway and street purposes includes the acquisition of right-of-way and all facility improvements contained within the right-of-way.

Between FY 2004-2012 HURF revenues are projected to grow at an annual rate of 4.3 percent per year, increasing revenues from \$1.151 billion in 2004 to \$1.616 billion in 2012. The HURF distribution formula includes two takedowns, \$10 million per year is transferred to the Department of Public Safety (DPS) and \$1 million per year set aside for the Economic Strength Project (ESP). The remaining funds are allocated to the State Highway Fund – ADOT receives 50.5 percent and 49.5 percent is allocated to cities/towns and counties.

HURF Local Jurisdiction Allocation

The 49.5 percent local jurisdiction share is further sub-divided with 27.5 percent sub-allocated to cities and towns, 3 percent to cities over 300,000, and 19 percent to counties. The 27.5 percent sub-allocated city and town share considers the incorporated area population and county origin of the gasoline sales in the distribution formula. From 2004 to 2012 the 27.5 percent share is projected to increase from approximately \$313.5 million to \$441.3 million. The 3 percent sub-allocated share is based solely on population. From 2004 to 2012 the 3 percent share is expected to increase from approximately \$34.2 million to \$48.1 million. Jurisdictions within the “cities over 300,000” category (Phoenix, Tucson, and Mesa) also receive their eligible share of the funds from the cities and towns 27.5 percent sub-allocation. The 19 percent sub-allocation share distributed to the counties considers several factors including the distribution of gasoline sales, diesel fuel consumption, and unincorporated area population. From 2004 to 2012 the 19 percent share is projected to increase from approximately \$216.6 million to \$304.9 million. In FY 2002 – 2003, **Table 5-1**, the combined 27.5 percent and 3 percent sub-allocation to cities and towns was approximately \$321.8 million, the counties 19 percent share equaled approximately \$200.5 million.



**Table 5-1 – FY 2002-2003 Highway User Revenue Fund (HURF)
City/Town and County Distribution**

COUNTY		CITY	
Apache	\$6,359,875	Eagar	\$910,667
		Springerville	\$445,726
		St. Johns	\$738,368
Cochise	\$7,098,403	Benson	\$369,205
		Bisbee	\$478,479
		Douglas	\$1,123,371
		Huachuca City	\$136,959
		Sierra Vista	\$2,964,848
		Tombstone	\$117,786
		Wilcox	\$292,597
Coconino	\$9,830,761	Flagstaff	\$7,408,116
		Fredonia	\$145,509
		Page	\$952,244
		Williams	\$397,703
		Sedona	\$414,775
Gila	\$3,202,973	Globe	\$702,573
		Hayden	\$83,626
		Miami	\$181,828
		Payson	\$1,279,669
		Winkelman	\$41,304
Graham	\$2,154,959	Pima	\$156,078
		Safford	\$725,194
		Thatcher	\$315,424
Greenlee	\$708,992	Clifton	\$186,913
		Duncan	\$58,520
La Paz	\$3,137,770	Parker	\$898,194
		Quartzite	\$961,454

STATEWIDE
BICYCLE PEDESTRIAN
PLAN



Maricopa	\$81,523,647	Apache Junction	\$18,429
		Avondale	\$2,323,982
		Buckeye	\$603,053
		Carefree	\$188,985
		Cave Creek	\$241,229
		Chandler	\$11,443,761
		El Mirage	\$493,141
		Fountain Hills	\$1,310,997
		Gila Bend	\$128,302
		Gilbert	\$7,103,864
		Glendale	\$14,183,180
		Goodyear	\$1,226,423
		Guadalupe	\$339,023
		Litchfield Park	\$246,715
		Mesa	\$31,384,493
		Paradise Valley	\$885,598
		Peoria	\$7,020,874
		Phoenix	\$104,596,507
		Queen Creek	\$272,664
		Scottsdale	\$13,136,860
Surprise	\$1,996,908		
Tempe	\$10,285,029		
Tolleson	\$322,726		
Wickenburg	\$330,432		
Youngtown	\$194,428		
Mohave	\$9,765,472	Bullhead City	\$3,222,246
		Colorado City	\$317,270
		Kingman	\$1,914,305
		Lake Havasu City	\$4,000,566
Navajo	\$7,229,030	Pinetop/Lakeside	\$484,552
		Holbrook	\$664,533
		Show Low	\$1,039,230
		Snowflake	\$602,108
		Taylor	\$429,920
Winslow	\$1,284,217		
Pima	\$37,716,916	Marana	\$1,043,282
		Oro Valley	\$2,283,594
		South Tucson	\$422,000
		Tucson	\$44,383,949
		Sahuarita	\$249,135



Pinal	\$10,252,245	Apache Junction	\$2,487,277
		Casa Grande	\$1,987,709
		Coolidge	\$612,433
		Eloy	\$818,531
		Florence	\$1,057,139
		Kearny	\$177,565
		Mammoth	\$139,299
		Superior	\$255,406
		Queen Creek	\$9,490
		Winkelman	\$165
Santa Cruz	\$2,657,384	Nogales	\$2,180,037
		Patagonia	\$92,291
Yavapai	\$9,504,729	Camp Verde	\$798,947
		Chino Valley	\$662,298
		Clarkdale	\$289,706
		Cottonwood	\$775,805
		Jerome	\$27,546
		Prescott	\$2,865,724
		Prescott Valley	\$1,989,445
		Sedona	\$610,933
		Peoria	\$46
Yuma	\$9,321,929	Somerton	\$631,597
		San Luis	\$1,332,864
		Welton	\$158,665
		Yuma	\$6,732,658

Source – ADOT Financial Management Services Division HURF distribution report

HURF represents the single largest revenue source available to fund local jurisdiction transportation services. **Table 5-1** identifies 92 cities/towns and 15 counties sharing the total HURF FY 2003 local jurisdiction distribution of \$522 million. It is recommended that bicycle/pedestrian projects sponsors approach each of the larger entities to establish a dedicated funding allocation; however, for the smaller jurisdictions, developing a regional approach may be more acceptable. Any request should be supported by an adopted bicycle/pedestrian strategic plan.

HURF State Allocation

The 50.5 percent HURF sub-allocation is further sub-divided, 42.83 percent (approximately \$531.6 million in 2004) is allocated to support the statewide program and 7.67 percent is identified for controlled access facility projects in Maricopa and Pima Counties (approximately \$44.2 million in 2004). HURF represents the principal share of non-federal revenues contributed to the State Highway Fund. The HURF allocation, federal apportionment and other state, local and private sources constitute the total State Highway Fund revenues. The Arizona share of the federal aid highway apportionment is projected at \$500 million per year; ADOT retains the major portion of the apportionment, other apportioned funds are pass-through funds programmed by local jurisdictions and minor sums are allocated to other state agencies.



The projected FY 2004-2008 5-Year Construction Program budget is \$3.94 billion, approximately \$788 million per year. Over the five year period \$972 million has been identified for Maricopa County freeway improvements leaving ADOT an average of approximately \$594 million per year for all remaining statewide programs/projects. Working through an iterative process RAAC evaluates projected funding levels and recommended funding levels necessary to meet operational and maintenance needs of the transportation system. Projected revenues are allocated between three major program areas, System Preservation, System Management, and System Improvements.

The 5-Year Construction Program *Resource Allocation*, **Table 5-2**, represents the five-year budget and approximate average annual funding levels for System Preservation at \$744 million/\$149M, System Management \$365 million/\$73 million and System Improvements \$2,835 million/\$567 million (\$1,877 million/\$375 million with the \$972 million identified for Maricopa Co. removed). The 5-Year Construction Program *Summary of Dollars by County*, **Table 5-3** indicates that the largest portion of all State Highway Fund revenues is programmed for capital improvements within the 15 counties. The list of capital projects represents the larger high-priority projects including spot and corridor improvement, roadside facility improvements and minor and major capacity/operational improvements. The identified list of projects was developed through a public participation process, identified through studies or responses to a need identified through public policy. The list was developed through consultation between ADOT and each of the local jurisdictions and MPO/COG's. Even though bicycle/pedestrian projects are included within this list of prioritized projects they were selected through an evaluation and ranking process matching projects against competing needs. The process described develops a mix of project types which changes annually offering no guarantee of annual bicycle/pedestrian project selection; therefore, the approach of competing against other high priority projects does not present a reliable annual funding program for bicycle/pedestrian projects.



**Table 5-2 – Highway User Revenue Fund (HURF)
Resource Allocation
(000) Thousand**

		<i>FY 2004</i>	<i>FY 2005</i>	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>Total</i>
<i>SYSTEM PRESERVATION</i>	SAFETY PROGRAM	\$21,588	\$14,580	\$14,140	\$14,140	\$14,140	\$78,588
	ROADSIDE FACILITIES	\$850	\$3,000	\$1,000	\$1,800	\$1,800	\$8,050
	PUBLIC TRANSIT	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500	\$32,500
	PAVEMENT PRESERVATION	\$80,945	\$107,783	\$88,200	\$99,000	\$100,000	\$473,928
	OPERATIONAL FACILITIES	\$10,354	\$8,855	\$8,800	\$8,800	\$11,800	\$44,809
	BRIDGE PRESERVATION	\$30,560	\$13,198	\$21,850	\$23,750	\$18,750	\$108,108
	<i>Summary Totals:</i>	<i>\$150,797</i>	<i>\$153,924</i>	<i>\$136,490</i>	<i>\$151,790</i>	<i>\$150,790</i>	<i>\$743,791</i>
<i>SYSTEM MANAGEMENT</i>	PROGRAM OPERATING CONTINGENCIES	\$21,544	\$17,175	\$17,175	\$18,800	\$18,800	\$89,494
	OPERATING SUPPORT	\$8,678	\$4,928	\$4,928	\$4,928	\$4,928	\$28,380
	DEVELOPMENT SUPPORT	\$58,482	\$50,292	\$48,292	\$47,082	\$47,082	\$249,280
	<i>Summary Totals:</i>	<i>\$84,712</i>	<i>\$72,393</i>	<i>\$70,393</i>	<i>\$68,818</i>	<i>\$68,818</i>	<i>\$365,134</i>
<i>SYSTEM IMPROVEMENTS</i>	TEA 21 HIGH PRIORITY PROJECTS					\$5,000	\$5,000
	ROADSIDE FACILITIES IMPROVEMENTS	\$38,248	\$25,003	\$18,710	\$30,812	\$9,388	\$117,959
	MINOR CAPACITY/OPERATIONAL SPOT IMPROVEMENTS	\$19,838	\$23,325	\$22,375	\$21,950	\$21,950	\$109,438
	MAJOR CAPACITY/OPERATIONAL SPOT IMPROVEMENTS	\$31,997	\$98,803	\$33,182	\$54,042	\$81,180	\$277,184
	CORRIDOR IMPROVEMENTS	\$878,818	\$518,128	\$583,775	\$252,150	\$294,445	\$2,325,314
	<i>Summary Totals:</i>	<i>\$766,899</i>	<i>\$661,259</i>	<i>\$656,022</i>	<i>\$358,754</i>	<i>\$391,961</i>	<i>\$2,834,895</i>
	<i>Total Resource Allocations:</i>	<i>\$1,002,408</i>	<i>\$887,576</i>	<i>\$862,905</i>	<i>\$579,362</i>	<i>\$611,569</i>	<i>\$3,943,820</i>

The SubProgram category listed in **Table 5-3** represents the Departments five-year internal budget. The total is approximately \$1 billion or \$200 million per year. The annual budget is sub-allocated between System Preservation, Management and Improvements. The Department has identified System Preservation and Management as high priority funding areas, suggesting any proposed reallocation of “limited” funds would be difficult to support. The third category, System Improvements, has a five-year annual average budget of \$38 million. State funds account for 76 percent of the category budget currently sub-divided into a number of separate program areas. The SubProgram System Improvements category contains the smaller capital improvement projects including discretionary or projects of opportunity. Program areas range in funding from as high as \$95 million to \$400,000. The average is approximately \$1 million per year. System Improvements includes the Roadside Facilities



Improvements sub-category which contains funding for facility improvements and program support for statewide transportation enhancement and the recreational trails programs.

Implementation of a bicycle and pedestrian sub-allocation would require approval of the State Transportation Board, concurrence from ADOT Management and coordination with the RAAC and ADOT staff on the appropriate funding level. To support the request, the adopted local area plans within the MoveAZ Plan should document the identified need.

**Table 5-3 – Highway User Revenue Fund (HURF)
Summary of Dollars by County
(000) Thousand**

	<i>FY 2004</i>	<i>FY 2005</i>	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>Total</i>
Apache Count	\$3,743	\$23,814	\$600	\$12,000	\$6,000	\$46,157
Cochise Count	\$18,176	\$18,630	\$3,800	\$14,542		\$55,148
Coconino Count	\$32,607	\$29,332	\$12,465	\$7,335	\$4,400	\$86,139
Gila County	\$50,800	\$19,326	\$5,775		\$21,700	\$97,601
Graham Count	\$7,576	\$475	\$1,000		\$6,900	\$15,951
Greenlee Count	\$6,889	\$13,809	\$1,700			\$22,398
La Paz Count	\$4,019	\$9,261		\$200		\$13,480
Maricopa Count	\$568,457	\$474,913	\$360,690	\$244,462	\$173,643	\$1,822,165
Mohave Count	\$40,122	\$44,604	\$2,750	\$5,250	\$12,500	\$105,226
Navajo County	\$19,520	\$26,304	\$13,262	\$200	\$1,800	\$61,086
Pima Count	\$46,161	\$25,533	\$153,400	\$17,095	\$75,302	\$317,491
Pinal Count	\$18,916		\$30,000	\$300	\$26,800	\$76,016
Santa Cruz Count	\$6,659	\$1,194	\$700			\$8,553
Yavapai Count	\$12,832	\$42,062	\$9,635	\$28,575	\$23,080	\$116,184
Yuma Count	\$30,515	\$2,250	\$34,850		\$4,000	\$71,615
SubProgram	\$135,416	\$156,069	\$232,278	\$249,403	\$255,444	\$1,028,610
	\$1,002,408	\$887,576	\$862,905	\$579,362	\$611,569	\$3,943,820

Local Transportation Assistance Fund I and II (LTAF)

The Local Transportation Assistance Fund I (LTAF I) program may receive up to \$23 million per year. The LTAF I funds are distributed on the basis of population; the proportion received by a city/town is based on the share of total population compared to all cities and towns in the state. Funds can be used for public transportation and transportation purposes depending on the jurisdiction's population.



Generally, a city or town with a population less than 300,000, use the funds for general transportation services and public transit including operating and related capital expenses. A city or town with a population over 300,000, use the funds for public transit operating and related capital purposes. Through resolution, a city or town may authorize 10 percent of the LTAF I for cultural, educational, historical, recreational, scientific facilities, programs for nonresidential outpatient programs and/or services for persons with a developmental disability. Similar to the federal Section 5307, funds can be programmed for operational type improvements, bus bike racks, bus shelters and Park and Ride facility improvements. Reliance on funding for recreational uses through the resolution process is highly competitive, and depending upon the jurisdiction, potentially offers a small funding source. This avenue is not recommended.

LTAF II program may receive up to \$18 million per year, funding provides additional statewide transit and transportation funds to counties, cities, and towns. The LTAF II program is administered by ADOT, funds are distributed to the Regional Public Transportation Authority (RPTA), MPO, and cities and counties not represented by a RPTA or MPO. A jurisdiction's share of the fund is proportional to its share of the total state population. Counties with a population greater than 500,000 can use the funds for public transit, or under certain circumstances, other programs up to a maximum 50 percent grant match. In counties with a population less than 500,000, the grant funds are distributed to the cities/towns and county board of supervisors and require a 25 percent match. The distribution to the county board of supervisors shall be based on the unincorporated population of the county. Cities with greater than 50,000 in population are awarded grants requiring a 50 percent match, less than 50,000 the match is 25 percent.

Annually ADOT, RPTA or MPO notifies each city/town and county board of supervisors the amount of grant monies available. The jurisdiction may submit proposals to the appropriate agency, RPTA, MPO or ADOT requesting some or all of the matching grant monies available to the jurisdiction. The proposal shall certify the appropriate match is available and detail a plan for spending the grant and local match. Funds can only be used for public transit purposes, including operating and capital purposes that conform to the long-range transportation plan or regional transportation plan. Eligible expenses may include bicycle and pedestrian improvements at Park and Ride facilities, bus shelters and bicycle racks on buses.

Arizona State Parks Grant Programs

The ASP Board administers nine competitive grant programs funded through both federal and state funds covering a variety of recreational and preservation programs throughout the state. Three programs offer an opportunity for bicycle and pedestrian access and facility improvements. The programs include the Trails portion of the Arizona State Parks Heritage Fund, federally funded Recreational Trails Program (RTP) and the Growing Smarter Grant program for land conservation and acquisition. Program information can be found on the ASP web site <http://www.pr.state.az.us/partnerships/grants/grants.html>. Annually ASP updates each grant program application; the documents are down-loadable and it is recommended project applicants consult the documents to ensure an understanding of the grant process and that the most recent program requirements are being followed. Each grant application submitted is reviewed by ASP staff; the review determines project eligibility following the basic requirements outlined in the appropriate grant manual. Eligible applications are submitted to the appropriate ASP committee; the committee evaluates each applicant against established criteria and submits a prioritized list to the ASP Board.



Growing Smarter Program

The Growing Smarter program provides assistance for the acquisition and preservation of open spaces in or near urban centers. Competitive grants are awarded for either land acquisition or purchase/lease of the development rights. The Program can receive up to \$18 million per year transferred to the Land Conservation Fund from the State General Fund. Prior to the site acquisition recommendation, the location must be classified as suitable for conservation and added to State Trust Lands property by the Arizona State Land Department. Funding requests can not exceed 50 percent of the appraised value based on highest and best offer. Grant applications for suitable sites are recommended to the ASP Board by the Governor appointed Conservation Acquisition Board (CAB). Grant applications are due the last working day of March each year. The lands can be used for recreational purposes including bicycle and pedestrian facilities.

Recreational Trails Program

ADOT receives an approximate \$1.1 million annual federal apportionment to fund the RTP. Approximately \$967,000 is transferred to ASP for program implementation. ASP currently programs 7 percent of the funds to support Program administration, 5 percent for educationally based projects and the remaining is divided equally between two programs, RTP – Motorized Portion and maintenance of statewide trails. Motorized and non-motorized trails can be for recreational and/or transportation purposes, trails used for transportation purposes are eligible for other federal highway funds.

RTP – Motorized Portion is a competitive grant application process. ASP Board is assisted in project grant application review and prioritization by the Off-Highway Vehicle Advisory Group (OHVAG). Approximately \$430,000 is available annually. Governmental entities, cities, towns, counties, tribal governments, state and federal agencies, and non-profit organizations designated as 501(c) by the Internal Revenue Service and meeting all eligibility criteria can apply for RTP grants. The federal RTP funds can be used to pay a maximum 80 percent of the total project cost; the applicant must provide the remaining 20 percent as match. A federal agency may provide 15 percent of the match from other federal sources but the remaining 5 percent must be non-federal. The applicant’s matching share must be certified at the time of application. Grant applications are due the last working day of March each year.

Trails Heritage Program

The Trails Heritage Fund Grant Program is a competitive grant program providing funding assistance for non-motorized trail projects. Annually \$475,000 is contributed by the Arizona Lottery for project funding. The ASP Board administers the program assistance with policy and grant application evaluation criteria development provided by the Arizona State Committee on Trails (ASCOT) and the Arizona Outdoor Recreation Coordinating Committee (AORCC). AORCC reviews each eligible application and recommends a prioritized list including the level of funding to the ASP Board. Trails proposed for funding assistance must be listed in the State Trails System or a nomination application must be submitted. Deadline for the trail nomination is July 1 of the year preceding the planned grant application submittal. Acceptance into the State Trails System must occur prior to the project grant application deadline. State Trails System nomination forms are available on this website under “Trails Program.” Trail nominations can include projects for both recreational and for transportation purposes.

Grant applicants may include governmental entities, cities, towns, counties, tribal governments, and state and federal agencies. Private or non-profit organizations may apply through a governmental entity acting as a third party. An entity may submit more than one application per year for completely different projects; however, no one entity can be awarded more than 20 percent of the funds available regardless



of the number of applications submitted. Federal land agencies including the National Forest Service, National Park Service and Bureau of Land Management are considered a single entity.

Grants require a 50 percent match based on the total eligible project cost. The project applicant can provide matching funds in the form of cash or in-kind contributions including donated land, materials or services, cost of in-house labor and equipment, local appropriations or bond monies, or monetary contributions from outside sources. The applicant's matching share must be certified at the time of application. The minimum dollar amount that can be requested is \$4000. Applications must be received by the last working day of February each year.

Arizona Game and Fish Department Heritage Grant Funds

The Arizona Game and Fish Commission administer the state supported Heritage Fund Grant Program including the Public Access sub-program. The Public Access program is a competitive grant program intended for relatively small projects. Funds are intended to increase entry to public lands for recreational purposes when entry is consistent with the provisions establishing those lands. The annual public access grant fund budget is \$160,000. Eligible applicants include any federal agency, Indian tribe, state agency, state board or commission and any local agency including county, city, town, municipal corporation, school district or other political subdivision.

A description of the project prioritization process is provided at the Department's web site: http://www.gf.state.az.us/w_c/heritage_apply.html. The web site offers downloadable versions of the Heritage Grant Application manual, forms and instructions. Applicants should check the web site annually because instructions, forms, and information on prioritization scoring periodically change. A prospective applicant requiring assistance may attend an agency sponsored Heritage Grant Application workshop; schedule/locations are posted on the web site. Applications must be received prior to 5 p.m. on the last working day of November each year.

Arizona Office of Tourism

Arizona Office of Tourism (AOT) Tourism Development Division administers two competitive matching grant programs, one eligible for statewide applicants and the Proposition 302 Maricopa County grant program.

The statewide program was specifically designed to assist rural communities in marketing their tourism-related products and services with dedicated funding and resources. The matching grant program is offered to destination marketing organizations including tourism-oriented non-profit organizations, city, county and chambers of commerce. The statewide program, referred to as Teamwork for Effective Arizona Marketing (TEAM), awards matching grant funds totaling approximately \$1 million per year. Grants are awarded both as individual and regional, a single applicant is eligible for an individual matching grant of \$20,000 and a regional grant of an additional \$10,000, total \$30,000. Grants require a 50 percent match. The TEAM application guidelines can be found at <http://azot.com/tourism/grants/data/TEAM%20FY05%20Booklet.pdf>. The AOT web site requires users to register.

TEAM funds are available annually based on AOT's fiscal year. New Guidelines are available in early January, applicants are required to attend a mandatory workshop starting in late January and held in various locations. Applications are due in late March, and awards are announced in May.

TEAM funding can be used for advertising, internet website development, printed material and



brochures, media communications and public relations, strategic planning and research, and other tourism-related promotional activities.

Small Project Grants

The Bikes Belong Coalition and the American Greenways Kodak Awards both provide grant funds for bicycle pedestrian facilities and programs. The maximum project amount for the Bikes Belong Coalition is \$10,000, with the maximum project amount for the American Greenways Coalition being \$2,500. Based on the maximum project funding amount, these grants are appropriate for projects or programs with small budgets that are typically not eligible for the major funding sources.

5.5. Funding Strategies – Other Agencies

This section includes information on how other State Departments of Transportation currently fund their bicycle/pedestrian programs. The information collected included funding sources utilized to fund staff positions, safety and educational programs and new or the rehabilitation of existing bicycle/pedestrian facilities. The information demonstrates funding source similarities for the three core operational areas. Included is additional information for those states who have implemented unique and/or innovative funding sources to construct new or rehabilitate existing facilities.

North Carolina Department of Transportation (NCDOT)

The NCDOT Division of Bicycle and Pedestrian Transportation funds staff positions with state and federal STP funds. Positions prior to the passage of ISTEA are state funded all new positions primarily engineering are federally funded. The Department of Environment and Natural Resources supports a state funded Trails Coordinator position responsible for non-transportation related recreational/hiking trails. The program administers the federal RTP funds and occasionally request TE funds for projects that are transportation related.

The Bicycle and Pedestrian Division uses state operating funds to support development, reproduction, and distribution of safety and education brochures, and state bicycle maps. State funds also support the safety education and enforcement programs. To a lesser extent, a specific project request for funds from the Governor’s Highway Safety Program (GHSP) provides funding to a variety of pedestrian and bicycle safety initiatives. The Division includes in the STIP, \$200,000 in TE funds for support of training workshops, pedestrian safety and research projects, and other pedestrian needs. Eligible expenses include hiring of instructors, payment for the host venue and related expenses.

The State characterizes bicycle facility projects into two categories, which determines the types of funds that may be available. The first, “Independent Projects” are not part of a scheduled highway project. “Incidental Projects” are part of a scheduled highway project.

Annually, NCDOT programs \$6 million in federal TE funds for statewide bicycle improvements and \$1.4 million for pedestrian hazard elimination independent of scheduled highway projects. In 2004 the State Legislature as part of an Economic Stimulus package programmed an additional \$5 million in state funds for bike lanes, pedestrian facilities and shoulder widening to accommodate bicycle use. State funds are an eligible funding source for either independent or incidental projects

Bike lanes, bicycle-safe drainage grates, widened paved shoulders, pedestrian safety improvements, and bicycle-safe bridge projects are included as incidental features on highway projects. These scheduled improvements receive funding from a combination of federal and state construction funds including NHS, STP, and CMAQ within the non-attainment areas.



Ohio Department of Transportation (ODOT)

ODOT uses state revenues to fund the Bicycling/Pedestrian Coordinator position. State funds cover operating expenses including the production/reproduction and distribution of safety materials. For larger safety campaigns, *Safe Streets* brochure, the Program Coordinator has used Transportation Enhancement (TE) funds for the development and reproduction of brochures, etc.

Bicycle/pedestrian facilities proposed at the state level will request TE funds for construction. Normally the Districts will utilize NHS and STP funds constructing bicycle and pedestrian where required as part of a construction/reconstruction project. Districts are encouraged and occasionally request TE funds. State policy encourages the inclusion of bicycle/pedestrian facilities as part of a roadway construction project. The Ohio Department of Natural Resources administers the Recreational Trails Program (RTP) and the “*Clean Ohio*” recreational trails grant program. Statewide MPO’s will utilize CMAQ funds for bicycle/pedestrian facilities.

Oregon Department of Transportation (ODOT)

Legislation passed by the State of Oregon, ORS 366.514, referred to as the "Bike Bill" requires the construction of bikeways and walkways as part of the initial road project or as part of a "modernization" project. The “Bill” requires ODOT and the cities and counties to expend reasonable amounts of highway fund to provide facilities with three exemptions:

- where there is no need or probable use;
- where safety would be jeopardized; or
- where the cost is excessively disproportionate to the need or probable use.

The State of Oregon supports the following funding programs for bicycle and pedestrian facilities:

- The state funded **Pedestrian and Bicycle Facility Improvement Grant Program** provides \$2.5 million annually for projects including completion of short missing sections of sidewalks, ADA upgrades, crossing improvements, intersection improvements, and minor widening for bike lanes or shoulders. The maximum grant amount is \$200,000;
- **CMAQ** funds projects and programs that reduce transportation related emissions including bicycle and pedestrian facilities; and
- **Transportation Enhancement**, funds are used to fund transportation related bicycle and pedestrian projects that may also serve recreational.

Washington State Department of Transportation (WsDOT)

The State of Washington and/or WSDOT support several state funded grant programs for bicycle and pedestrian facilities, programs include:

- **Washington Wildlife and Recreation Program**, acquisition and development of local and state parks including trails;
- **Non-Highway and Off-Road Vehicle Program**, supports facility development including non-motorized trail activities for bicyclists, and hikers;
- **Traffic Safety Near Schools Grants**, WSDOT, traffic and pedestrian safety improvements near schools, includes sidewalks, signing and signals, pedestrian crossings, pavement warning lights, flashing beacons, turning lanes, and bus pullouts; and
- **Traffic Safety Grants**, safety and education programs, and projects.



Federal funded programs for bicycle and pedestrian facilities include:

- **Transportation Enhancement Grants**, transportation-related activities including bike and pedestrian facilities;
- **Recreational Trails Program**, construction, rehabilitation, and maintenance of recreational trails and facilities including environmental education and trail safety programs;
- **Hazard Elimination Safety Grants**, WSDOT, safety improvement projects to correct hazardous locations, and/or elements;
- **National Scenic Byways Grants**, WSDOT, consistent with the corridor management plan bicycle and pedestrian facilities and signing are eligible;
- **Public Lands Highways Program**, WSDOT, transportation related project providing and/or improving access to and within federal lands are eligible including bicycle and pedestrian projects;
- **Surface Transportation Program**, MPO regional and state rural funds are used for modifications to existing public sidewalks to comply with the requirements of the Americans with Disabilities Act; and
- **Congestion Mitigation Air Quality**, MPO, fund projects and programs that reduce transportation related emissions including bicycle and pedestrian facilities.

Wisconsin Department of Transportation (Wisconsin DOT)

Wisconsin DOT Bicycling and Pedestrian Coordinator staff position is 100 percent funded through the federal State Planning and Research (SP&R) program. The Coordinator position is primarily responsible for facilities and statewide planning. A Safety Coordinator position is located with the Office of Traffic Safety. The safety position is state funded; however, the statewide safety, education, and enforcement program utilizes federal 402 Safety Funds. Funding for the Safety Program has historically averaged \$200,000 per year.

The State utilizes bridge replacement, NHS, and STP funds for facility construction and reconstruction. Facilities not directly connected to the roadway, referred to as “freestanding” use TE funds. Freestanding projects include multi-use paths, support facilities, and trails. The Department of Natural Resources administers the state trails program utilizing TE and RTP program funds. CMAQ funds are available to the eleven southeast counties included within the non-attainment. Historically, the MPO’s have programmed approximately 50 percent of the funds available for bicycle and pedestrian projects.



Table 5-4 – Funding Source Summary

Funding Programs	Modes	Trip Types	Project Types (Const., Non-Construction)	Required Matching Funds	Deadlines	Total Available Annual Funding (All Modes)	Contact and Website
Transportation Enhancements Program (TE)	All	Transportation	Both	5.7% (hard cash min.)	Variable	Approx. \$13M annually /2 (\$500,000 max. for local projects, \$1.5M for State projects)	Cheryl Banta, Transportation Enhancements Manager (602) 712-7906 http://www.azdot.gov/Highways/EEG/enhancement_scenic_roads/enhancement/index.html
Congestion Mitigation and Air Quality Improvement Program	All	Transportation	Both	20%	September	Approx. \$40.9M (2002) /1 (\$31.4M to MAG)	MPOs, http://tpd.az.gov/air/index.htm Federal Apportionment at http://www.fhwa.dot.gov/environment/cmaqps/index.htm
Highway Safety Program	All	Transportation	Non-construction	20%	April 1, annually	Approx. \$12M /2	Governor's Office of Highway Safety http://www.azgohs.state.az.us/downloadpdf/ProposalGuide.pdf
Transit Enhancements Program (Section 5307) pop. >200,000	All	Transportation	Both	20%		Phoenix = \$26.9M Tucson = \$8.9M (2003 est.) /3	http://www.fta.dot.gov/office/program/2003/5307g.html
Transit Enhancements Program (Section 5307) pop. 50,000 – 200,000	All	Transportation	Both	20%		\$1.5M (2003 est.) for Flagstaff and Yuma /4	http://www.fta.dot.gov/office/program/2003/5307l.html
Highway User Revenue Fund (HURF)	Bike/Ped	Transportation	Construction	N/A	N/A	\$536.4 M ADOT (2003)	www.dot.state.az.us/ABOUT/fms/hurflink.htm
Local Transportation Assistance Fund (LTAF)	All	Transportation (bike/ped improvements directly related to transit)	Construction	N/A	N/A	\$23M (funding currently on hold)	http://www.dot.state.az.us/ABOUT/fms/fndsource.htm

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Funding Programs	Modes	Trip Types	Project Types (Const., Non-Construction)	Required Matching Funds	Deadlines	Total Available Annual Funding (All Modes)	Contact and Website
Growing Smarter Planning Grant Program	All	Transportation	Non-construction	50%	October	\$60,000 annually	Marty Lynch, (602) 280-8144, www.commerce.state.az.us/CommunityPlanning/GSGrants.htm
Recreational Trails Program (RTP)	Paths	Recreational	Construction	20%	Currently N/A	Approx. \$1.1M annually /5	Annie McVay, Recreational Trails Coordinator, (602) 542-7116, http://www.pr.state.az.us/partnerships/grants/grants.html
Arizona State Parks Heritage Funds	Paths	Recreation	Construction	50%	Last working day of February	\$500,000 annually	Robert Baldwin (602) 542-7130 www.pr.state.az.us/partnerships/grants/grants.html
Arizona Game and Fish Department Heritage Funds	Paths	Recreation	Construction	None	Last working day of November	\$160,000 (Public Access) (\$1,000 min.)	Robyn Beck (602) 789-3530 www.gf.state.az.us/frames/other/h_grant.htm
Arizona Office of Tourism	Bike/Ped	Both	Non-Construction	50%	March	\$1 M, each project not to exceed \$20K individual or \$30K regional	Local Jurisdiction
Bikes Belong Coalition	Bicycle	Both	Both	N/A	On-going	Each project not to exceed \$10,000	www.bikesbelong.org
American Greenways Kodak Awards	Bike/Ped	Both	Both	N/A	Early June	Each project not to exceed \$2,500	www.conservationfund.org

/1 Source: <http://www.fhaw.dot.gov/legsregs/directives/notices/n4510479/n4510479a15.htm>

/2 Source: <http://http://www.azdot.gov/ABOUT/fms/fndsorce.htm> (FY 2001)

/3 Source: <http://www.fta.dot.gov/office/program/2003/5307g.html>

/4 Source: <http://www.fta.dot.gov/office/program/2003/5307l.html>

/5 Source: <http://www.fhwa.dot.gov/environment/refunds.htm>



6. Bicycle/Pedestrian Education Program Plan

The education of bicyclists, pedestrians, and motorists is a key component to reduce vehicle and bicycle/pedestrian conflicts. In order for bicyclists to safely travel with motorists, bicyclists need to develop good cycling skills that include knowledge of the “rules of the road.” Like drivers, bicyclists must understand and obey the rules and laws that apply. Likewise, pedestrians must also understand and obey rules and laws if they are to coexist safely with vehicles. Drivers also can be made to be more aware and careful around bicyclists and pedestrians through safety and education campaigns and through spot enforcement programs.

Educating the public through training, published materials, workshops, and “how to” guides can provide the bicyclist, pedestrian and motorist the knowledge and skills necessary for each to more safely coexist. An educational plan must be broad based, comprehensive, and understandable in its approach. Participants should include public facility administrators, facility designers, and users from each age group. Training sessions and materials include all age groups, present statutory laws in an understandable manner and offer training that teaches good bicycling skills and other practical exercises aimed at the pedestrian and motorists.

Section 6.1 contains a review of publications and existing programs offered by state and local agencies. The review focused on areas recommended for implementation identified in the Phase I Plan. **Section 6.2** contains descriptions for five recommended ADOT Bicycle/Pedestrian Education Program areas.

- Safety Education Program;
- Safe Routes to School Program;
- Bicycle/Pedestrian Facility Design Training Program;
- Safety Awareness Campaign; and
- Data Archive.

6.1. Literature Review

The literature search included review of publicly offered educational and safety related programs sponsored by federal agencies, state departments of transportation and other state agencies, national bicycling organizations and agencies within Arizona. Chapter 11 of the Phase I Plan listed several Arizona agency guides developed to teach safe bicycling and walking, present “rules of the road” and laws and tips for bicycle commuters. In addition, Chapter 11 offered a number of recommendations that ADOT and agencies around the state could implement to improve bicycling and walking conditions. The principal needs identified included improvements in the following program areas.

- Safety Education Program;
- Safe Routes to School Program;
- Bicycle/Pedestrian Facility Design Training Program;
- Safety Awareness Campaign; and
- Data Archive.

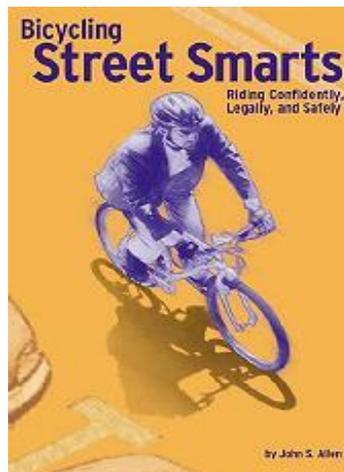
Safety Education Program

The Safety Education Program review looked at the following list of publications and existing programs offered by organizations, federal, state, and local agencies:



- ***Bike Sense, British Columbia Bicycle Operator’s Manual*** – sponsored by Greater Victoria Cycling Coalition. The manual developed for distribution contains numerous photos and situational graphics. The manual focuses on five basic principles:
 - maintain your bicycle in good working order;
 - be as visible as possible to others;
 - learn the skills needed to control your bike;
 - cycle in traffic safely and predictably; and
 - know and obey the rules of the road.
- ***Bicycling Street Smarts: Riding Confidently, Legally, and Safely*** – produced by the Florida Bicycle Association through permission granted by author John S. Allen was funded by the Florida “Share the Road” license plate program and State Safety Office of FDOT. The manual includes State Statutes classifying a bicycle as a vehicle and a bicyclist as a driver. A driver must follow all traffic rules common to all drivers and as a bicyclist you must also obey all rules developed specifically for bicycles. The manual intended for a non-classroom environment teaches safe bicycling techniques on public roads and streets.

Michigan DOT provides the latest edition of ***Bicycling Street Smarts: Riding Confidently, Legally and Safely*** through the DOT web site.



- ***Safe Bicycling in Chicago*** – sponsored by City of Chicago and Chicagoland Bicycle Federation is an eleven-page quick reference guide with photos and graphics. The guide includes descriptions on equipment and fit, traffic basics, lane positions and turning, and off-street bicycling.
- ***Share the Road: A guide for bicyclists and motorists*** – produced by the Pima County Department of Transportation. The 39-page “pocket guide” includes illustrations, tips for motorists and bicyclists, and relevant statutes to promote safer roadway travel. The pocket guide is distributed through bike shops, libraries, motor vehicle division offices, health clubs, at special events, and through numerous other outlets to encourage greater understanding of traffic laws and sharing of the road. The guide, also available in Spanish, is presented in a Power Point program to drivers’ education classes, traffic safety educators for traffic diversion classes, public bus providers, school bus drivers, middle school classes, bike clubs, and other venues to promote greater roadway safety.
- ***Good Practices Guide*** – [Publication number: FHWA-SA-02-001 HSA-4/30-02 (5M)QE] is available at the **Bicycle Safety Education Resource Center** sponsored by the Federal Highway



Administration. The *Guide* provides a good reference tool for developing a bicycle education program or selecting the most effective program for your needs. The *Guide* summarizes 16 existing safety education programs including both successful and unsuccessful features, provides strategies, and discusses issues in developing a program. Features discussed are program funding, presenting safety education in schools, developing partnerships, and gaining publicity for the project.

- **National Bicycle Education Program Course Descriptions** – developed by the League of American Bicyclists offers a number of different courses designed to meet the needs of any group from information to on-bike skills:
 - **Road I** – is an introductory course covering safe operation of a bicycle in a variety of situations. Road I is recommended for adults and children above 14 years of age. A similar course, Kids II, designed for 5th and 6th graders, covers on-bike skills, as well as choosing safe routes for riding;
 - **Kids I** – instructs parents on how to teach a young child to ride a bike. Parents learn how to perform a bicycle safety check, helmet fitting, and bike sizing;
 - **Road II** – offers advanced cycling principles including fitness, training for longer rides, advanced mechanics, pace line skills, advanced traffic negotiation, foul weather riding, and night riding; and
 - **Commuting** – covers topics including route selection, bicycle choice, dealing with cargo and clothing, bike parking, lighting, reflection, and foul weather riding.
- **Traffic and Bicycle Safety Education Program** – sponsored by Florida DOT, it offers training workshops and certificate programs through the University of Florida. Trainers are selected from elementary and middle schoolteachers, community volunteers, law enforcement officers, and recreation leaders. The FDOT Safety Office provides program development and continued training. Courses at the elementary school level focus on pedestrian safety, safety on school buses, bicycle safety, and bike-handling skills. At the middle school level, the focus is on bicycle knowledge and skills including on-bike practice and classroom instruction. The third training session focuses on law enforcement officials, youth group leaders, community safety specialists, and school officials covering bicycle safety, rules of the road, how to implement successful bicycle safety programs, and how to present bicycle safety information to the public. The fourth session trains driver education instructors on information for teaching bicycle and pedestrian laws, common crash types and responsible sharing of the road.
- **Basics of Bicycling Curriculum** – North Carolina DOT and the Center for Bicycling and Walking developed an elementary school-level program for fourth and fifth graders. The Guide offers systematic instructions so that instructors of differing cycling abilities can teach the course. The curriculum includes classroom instruction, and students learning on their bikes in an outside setting. The step-by-step guide provides all handouts including a parent letter and permission slip.
- **Interactive Games and Activities** – geared for kids focusing on bike safety sponsored by the Pennsylvania DOT web site. The interactive graphics cover such topics as how to check the parts of your bike for safety, proper fitting of your bike to make it safer to ride, using hand signals for road riding, fitting your helmet properly, and understanding the meaning of traffic signs. Interactive games and activities cover topics including: *Have a Safe Ride*, equipping your bike and yourself for a safe ride; *Safe Road Riding*, a game to test your knowledge; *Trail Riding*, which checks your knowledge of safe and responsible riding on trails, and *Take a Bike Driver's Test*.
- **Bicycle Safety Education Program** – organized by the Bicycle Coalition of Maine (BCM). Initial funding support was through the State Office of Traffic Safety. The BCM Education Committee developed training program guidelines and materials. Maine DOT sends out applications to all schools and contracts with BCM to provide the Bicycle Safety Education Program statewide.



Instructors come equipped with a bicycle, helmet, and handouts spending approximately one-hour in each classroom. The approach is to make the student think as a “driver” with all the rules and responsibilities instead of as a “rider”. The training covers proper helmet fit, dressing for safety, doing the ABC Bike Check, and rules of the road.

- **BIPED** – bicycle/pedestrian safety education program is offered statewide by the White Clay Bicycle Club, Wilmington, Delaware in partnership and with funding support from the University of Delaware, and the 4-H Cooperative Extension Service. **BIPED** is a one-hour classroom introduction on the basics of bicycle safety. Volunteer instructors, generally certified by the League of American Bicyclists, come equipped with a teaching kit (course outline, videotape, handouts). Instruction focuses on the concept of “driving” a bicycle as opposed to “riding” and that driving a bicycle carries the same responsibility as driving a car.
- **T.E.A.M. (Traffic Education and Management)** – sponsored by the City of Mesa provides traffic safety education. Part of the program includes interactive presentations on pedestrian and bike safety.
- **Bicycle Awareness and Safety Program** – presented by the Bicycle Transportation Alliance, Portland, Oregon is a comprehensive classroom and on-bike ten-hour curriculum that teaches middle school students the fundamentals of bike safety. Instruction includes obeying traffic laws and signs, ride with traffic, use hand turn signals, road positioning, right-of-way rules, hazard identification, defensive cycling, proper helmet fitting, and bicycle maintenance. The goal is to maintain an on-bike focus spending six of the ten hours riding and culminating with an on-street community ride. Certified instructors complete a twelve-hour teacher-training class. The program is supported through funds provided by a Section 402 grant.
- **Effective Cycling Training and Effective Cycling Instructors** – developed by John Forester, founder of the Effective Cycling League. *Effective Cycling* is a handbook for cyclists. It contains what a road cyclist needs to know to use a bicycle every day, for any purpose, under different conditions of road, traffic and topography, and under different conditions of weather. *Effective Cycling Instructors* covers the full adult course and the full intermediate and elementary children’s courses. While this manual is not an instructor’s workbook for the new multi-step courses (Road 1, Road 2, etc.), it discusses understanding the difficulties of cycling instruction in modern America, the teaching techniques for different levels of students, and the preparation that is required.

Safe Routes to School Program

The Safe Routes to School Program review looked at the following list of publications and existing programs offered by organizations, federal, state, and local agencies.

- **School Administrators Guide to School Walk Routes and Student Pedestrian Safety** -sponsored by the State of Washington. This program discusses key steps in walk route development and provides guidelines for decision-making. Washington requires all school districts to have suggested route plans for every elementary school (WAC 392-151-025). The **Guide** provides information on laws and liabilities, background on student safety education, direction on how to develop and maintain school walk routes, how to identify pedestrian safety deficiencies, and when to consider enhancements, and makes recommendations on how school administrators can work with local public works agencies. Consulting Traffic Engineers recommended as appropriate throughout the process. School districts provide recommended walking route maps to parents, students, and host workshops on safe walking and biking.
- **School Safety Program** – sponsored by the City of Phoenix. This program created a School Safety Task Force with responsibility to educate the public on transportation safety topics, evaluate safety conditions at all schools including school-related crosswalks, and to improve pedestrian/student safety. The Task Force studied school safety at all crosswalks recommending a list of 26



engineering, enforcement, and educational countermeasures, as well as experimenting with new traffic control technology. One of the recommendations was to establish a two-person school safety team to work exclusively with schools on traffic safety concerns and provide improved service to school principals and transportation directors. Other recommendations included: development of a new school crossing guard training video, development of a ‘**Safest Route to School**’ walking plan, introduction of automated enforcement of speed limits at schools, installation of fluorescent yellow-green school warning signs, introduction of staggered crosswalks, revised student drop-off/pick-up procedures and school safety summit meetings.

- ***Pima County-Tucson Safe Routes to School and Pedestrian/Bicycle Education Program*** – sponsored by the Pima County and Tucson Departments of Transportation and funded by a federal Transportation Enhancement grant. This program will work with seven elementary schools in a two-year pilot program to assess bicycle and pedestrian safety needs around the schools, provide a comprehensive pedestrian education program for second graders and bicycle education program for fourth graders, and work with area motorists and parents to improve safety around the schools. The program, beginning with the fall school year of 2004, will provide near-term and lower cost improvement projects at the schools and will plan for longer-term projects for which additional funding will be pursued.
- ***Getting to School Safely*** – sponsored by the USDOT, National Highway Traffic Safety Administration. This guide offers help in developing a school transportation safety program. The program considers students whether traveling by passenger car, on foot, bicycle, public transportation, or school bus. The guide offers design assistance whether it is a one-time event or for the school year.
- ***California’s Safe Routes to School Program*** – is principally a public relations and awareness program, but also provides grants for physical improvement projects. The program encourages safe routes through better enforcement of traffic laws, engineering projects to help slow down residential traffic, and educational programs. Funding sources for enforcement and education are offered through the California Office of Traffic Safety and engineering projects are eligible for federal, state and local funds. Program implementation is at the local jurisdiction level.
- ***Marin County Safe Routes to School Program*** – is funded by the Bay Area Air Quality Management District and administered by the County of Marin on behalf of the Marin County Congestion Management Agency and the county, Cities and towns of Marin . Thirty-five schools have participated in Safe Routes to Schools activities since the spring of 2000. Marin Safe Routes to Schools offers the following assistance to local schools in starting up and maintaining a Safe Routes to Schools program:
 - Training and materials in organizing events for International Walk to School Day;
 - Instructors offering In-class lessons on safety, health, and the environment;
 - Bicycle Rodeos;
 - Guidance on developing Safe Kid Zones with the assistance of engineering consulting provided by David Parisi and Associates;
 - Cooperation with local law enforcement in providing added protection;
 - Guidance on forming carpools, Walking School Buses Kids Walk to School, Centers for Disease Control, and Bike Trains;
 - Materials and prizes for the annual Frequent Rider Mile Contest; and
 - Promotional and educational materials to encourage Walking and Biking to school.
- ***WalkBoston Safe Routes to School Program*** – started as an initiative to get elementary students to walk to school. The program includes walking and/or riding a bike in groups with parent escorts, provides safety training, and working with local governments to ensure that there are sidewalks, crosswalks, and safer streets. A key feature of the WalkBoston program is the use of a parent escort



coordinator. The coordinators are part-time paid parents, one per school, who implement the program including coordination of the volunteer parent escorts.

- **Safe Routes to School in Texas Program** – resulted from the enactment of State legislation directing the Texas Department of Transportation (TxDOT) to establish the Safe Routes to School Program. The local jurisdiction submits an application for safety improvements around school areas. Projects must be within the public right-of-way, within a two-mile radius of a school and may include multiple sites if similar work is performed at each site. The projects are limited to \$500,000 in federal funds and require a 20 percent local match unless the project is located on the state highway system in which case TxDOT will provide the match. Six categories of work are eligible for funding:
 - Sidewalk improvements;
 - Pedestrian/Bicycle crossing improvements;
 - On-street bicycle facilities;
 - Traffic diversion improvements;
 - Off-street bicycle and pedestrian facilities; and
 - Traffic calming measures for off-system roads.

Bicycle/Pedestrian Facility Design Training Program

The Bicycle/Pedestrian Facility Design Training Program review looked at the following list of publications and existing programs offered by organizations, federal, state, and local agencies.

- **A Walkable Community, Common Characteristics of Pedestrian Friendly Communities** – is a program sponsored by the USDOT-FHWA. The program focuses on the design of safe and successful pedestrian facilities through effective planning, education, and law enforcement. The program provides solutions to vehicle/pedestrian problem areas through engineering countermeasures.
- **Getting People Walking: Municipal Strategies to Increase Pedestrian Travel** – the report sponsored by the State of Washington focused on developing a more walkable environment. Included in the report were the benefits on making walking easier, design recommendations for more pedestrian-friendly streets and a discussion on land-use policies benefiting walkable communities.
- **Pedestrian and Streetscape Guide** – sponsored by the Georgia DOT provides direction to design professionals, developers, municipalities and others regarding the design, construction, and maintenance of pedestrian facilities. GDOT updates the *Guide* as required offering the revisions in an electronic downloadable format. The *Guide* is not intended as standards, regulations, requirements, or specifications, but rather as “desirable” or “minimum” recommendations. Chapters include general design guidelines, accessibility issues, children and school zones, trails and paths, sidewalks and walkways, intersections, street crossings, traffic calming measures, pedestrian access to transit, site design for pedestrians, and safety in work zones.
- **National Center for Bicycling and Walking (NCBW)** – sponsors Walkable Communities. Workshops designed to foster community-based initiatives related to walking and bicycling. The four-hour workshop brings together elected officials, public agency staff, public health practitioners, planners, engineers, and advocates to focus attention on making communities more walkable, including how land use and transportation decisions affect walking. One aspect of the training involves taking participants on an interpretive walking tour, a “ped audit” of a pre-determined study area emphasizing seeing the community from the perspective of a pedestrian. Workshop arrangements are through applications submitted by the Metropolitan Planning Organization (MPO).



NCBW provides bicycle facility design guidelines covering street crossings, overcoming bicycle barriers, trail networks, transit connections, roadway bridge modifications, traffic signals, drainage grates and utility covers, rural road shoulders, facility maintenance, liability aspects of bikeway designation, and the economic benefits of a bicycle- and pedestrian-based tourism.

- **Training through the National Highway Institute (NHI) and FHWA** – routinely provides a wide array of training seminars and workshops upon request. Training includes facility planning, engineering techniques, increasing bicycling and walking through land use practices, and a variety of other urban and rural design procedures. The NHI charges a fee for each participant while the FHWA provides most course offerings at no cost. The following bicycle and pedestrian offering is currently available:
 - Pedestrian Safety Roadshow workshop is designed to educate and inspire a community to develop an advocacy group supporting facilities and programs to improve walkability and safety for pedestrians.

Safety Awareness Campaign

The Safety Awareness Campaign review looked at the following list of publications and existing programs offered by organizations, federal, state, and local agencies.

- **Bicycle and Pedestrian Safety and Education Program** – sponsored by Pima County and Tucson Departments of Transportation. The project will provide for education and promotion of safety programs for bicyclist and pedestrians. Project includes cycling safety instruction, development of enforcement training and educational videos, public service announcements for both broadcast and print media, posters and purchase of safety equipment, helmets, and safety lights for distribution. The project also includes a major awareness and enforcement element with motorists, bicyclists and pedestrians in order to improve overall traffic safety.
 - **School Crossing Guard Training Program** – sponsored by the State of Florida. The statewide program certifies all trainers who train the school crossing guards in their jurisdiction based on guidelines developed by FDOT.
 - **School Crossing Guard Training Program** – within North Carolina, school crossing guards are considered traffic control officers requiring the same training as other traffic control officers. The NCDOT Division of Bicycle and Pedestrian Transportation developed a train-the-trainer program to train local law enforcement officers responsible for training school crossing guards. A practical application session uses students at a simulated intersection.
- Education, Encouragement and Enforcement (3-E Program)** – sponsored by the Virginia DOT. The program focuses on teaching effective riding principles and use of safety equipment. The guidebook *Bike Smart Virginia* equips educators and others with the resources necessary to encourage helmet use. Other educational activities include BikeWalk Conferences, sponsorship of Bicycle Safety Rodeos, and public service announcements. Encouragement focuses on providing assistance in the form of maps, brochures and/or travel guides making bicycling more enjoyable for novice and advance bicyclists alike. Additional programs include supporting bikes with transit, website information, bike to work weeks, bike tours, and program funding. The third E, Enforcement, focuses on educating the bicyclist and motorist, ticketing of bicyclists and motorists, police on bikes, adoption of local helmet ordinances, and bicycle crash reporting.
- **Don't Get Stuck: FIX IT** – *bike* repair video produced by NCDOT in collaboration with 4-H addresses the large percentage of bike crashes caused by mechanical problems and poor maintenance. The 38-minute video for children ages 11 to 15, teaches ten basic bicycle repairs. NCDOT loans the video to schools and organizations by request.



- **Bike Safety Program** – sponsored by New Jersey DOT. The program offers downloaded posters from the web site. In addition, the site offers games, books on safety, and quizzes geared toward children.
- **Bicyclist and Pedestrian Safety Program** – sponsored by Oregon DOT. The program is performance based with annual goals. Annual goals set the number of educational sessions, enforcement activities, and outreach activities accomplished each year. This updated approach is a change from previous years when performance goals were set on reduction of accidents, which proved difficult to quantify due to the many variables that influence accidents. The program encourages bicyclist/pedestrian safety through:
 - Public information program including placing messages on billboards, production of posters and brochures, posters on transit buses and public service announcements on radio and TV;
 - Law enforcement has focused on the motorists' failing to yield to pedestrians in a crosswalk. Bicycle enforcement will focus on bicyclists riding the wrong way, failure to yield, and not using bike lights at night. Both activities are done through payment of overtime salaries to law enforcement agencies;
 - Information and education programs for targeted audiences are focusing on motorists who are at fault in 65 percent of all bicycle/motor vehicle accidents and adult cyclists who research shows are the primary offenders of riding the wrong way, failing to yield, and not using bike lights;
 - Law enforcement training is included as part of the crosswalk and bicycle enforcement programs; and
 - School presentations are part of the student education program.
- **Building Safe Communities** – sponsored by NHTSA. The program is a comprehensive guide that lists ideas, activities, and programs in each major area of traffic safety. A Safe Community program promotes injury prevention activities at the local level to solve local highway and traffic safety problems. The program uses traffic safety activities called "best practices" that have frequently been used and identified as practices that most experts in highway and traffic safety would agree work well at the community level. Program topics cover how to evaluate your program, policy, legislation, enforcement, and community education.
- **SAFE KIDS Coalition** – sponsored by Yuma County Health Department, Injury Prevention Program. The program offers helmets to the public at a substantial discount in sizes from infant to adult. The funding for the helmets and other safety products comes from donations to **SAFE KIDS**. County Health works with Parks and Recreation and law enforcement to conduct bicycle safety rodeos and education classes.

Archived Data

The archived data review looked at the following list of publications and existing programs offered by organizations, federal, state, and local agencies.

- **USDOT Bicycle and Pedestrian Related Publications and Reports** – The USDOT provides national bicycling and walking study reports and copies of bicycle and pedestrian-related research. Other sources of information include the USDOT National Transportation Library, and TRIS hosted by the Transportation Research Board.
- **California Pedestrian Safety Network** – sponsored by the California Pedestrian Task Force. The network provides a website where you can add to and view a shared-documents library. Viewers can also add links to outside sites for additional information on specific topic areas. The site reserves the right to post only those sites appropriate to the subject matter. The Task Force has developed the public information campaign and the documents library to educate the public about pedestrian and bicycle safety in order to help reduce pedestrian-involved collisions and make walking and bicycling safer for everyone.



- **Interactive Crash Data Tool** – incorporated into the NCDOT bike/pedestrian web site, the tool offers access to a central location for information. The interactive database is designed for researching and analyzing bicycle and pedestrian crash data. The data bank allows queries of the cross-tabulated information by city, county, state, and includes other variables such as age, gender, race, injury severity, type of roadway, and type of crash for both bicyclist and pedestrian crashes.

6.2. *Recommended Statewide Bicycle and Pedestrian Education Program*

Section 6.1 included a literature review of publications and existing programs focusing at different bicycle and pedestrian safety education programs within Arizona and nationwide. The review and information collected from interviews helped formulate the program described in **Section 6.2**. This section outlines a recommended plan that ADOT and interested parties may consider in developing the Statewide Bicycle and Pedestrian Educational Campaign.

To achieve improved statewide bicycling and walking safety, five program areas are discussed. The overall goal is to implement a statewide program that targets pedestrians and bicycle riders of all ages, community leaders, and facility designers. For Arizona, the recommended statewide approach to safety and education should be “One-Message”. The “One-Message” intent is to reduce costs through shared development and implementation. Discussed are the following five programming areas for statewide implementation:

- Safety Education Training;
- Safe Routes to School;
- Bicycle and Pedestrian Facility Design Training;
- Safety Awareness Campaign; and
- Archived Data.

Safety Education Training

Bicycle safety education should focus on a combination of classroom and non-classroom training. This will include both training courses and the distribution of safety training booklets. ***Bike I*** and ***Bike II*** programs from the League of American Bicyclists are recommended for elementary school age children and ***Road I*** for the more experienced teenage and adult riders. ADOT and the Statewide Bicycle/Pedestrian Steering Committee should consider developing ***Bike I*** for 3rd and/or 4th grade levels and ***Bike II*** for the 5th and/or 6th grade levels. Both courses should be offered annually statewide. Limiting each course to one grade level reduces cost and provides more assurance that each student will have the opportunity to receive training on basic bicycling skills. When possible, the course should be presented during national and local bike events.

Bike I implementation steps:

- ADOT should be the lead agency.
- Develop a program description and present to the Statewide Bicycle/Pedestrian Steering Committee.
- Submit a multi-year grant application to the Governor’s Office of Highway Safety for Highway Safety Grant (Section 402) funds for program development and start-up costs including travel, course materials, instructor training, training aids, video production, and presentation equipment as appropriate. The Committee should consider long-term funding support, initial development and start-up implementation may be obtained through Section 402 funds, but overall program success depends upon securing an annual funding source.



- Select a jurisdiction, school district, school(s) for a pilot test. Evaluate the results of the pilot project and modify the course as appropriate.
- Information on the results of the pre- and post-test, jurisdiction, school district, school, grade and number of students receiving instruction will be provided to the ADOT Bicycle/Pedestrian Coordinator. Information will be used in the preparation of an annual report used to justify requested funding support.
- Reminders to annually schedule the course should be sent to each school administrator. It is recommended that each elementary school contact the area MPO/COG bicycle/pedestrian program coordinator or State Bicycle/Pedestrian Coordinator to schedule the class.

Required budget, including cost to develop the course materials/handouts and to “train-the-trainers”: up to \$90,000. Annual budget to produce materials, provide trainer support: up to \$100,000.

Similar programs at the national and local level (refer to **Section 6.1**) include:

- **Bicycle Safety Education Program** – organized by the Bicycle Coalition of Maine.
- **BIPED** – sponsored by the White Clay Bicycle Club, Wilmington, Delaware.
- **T.E.A.M. (Traffic Education and Management)** – sponsored by the City of Mesa.
- **National Bicycle Education Program Course** – developed by the League of American Bicyclists.

A **Bike II** safety course typically contains approximately four hours of outside and classroom instruction. When possible, the class should be presented during national and local bike events.

Implementation steps and funding would be similar to **Bike I**. Required budget would be similar to **Bike I**; develop materials and to “train-the-trainers”: up to \$90,000. Annual budget to produce materials, provide trainer support: up to \$100,000.

Similar programs at the national level (refer to **Section 6.1**) include:

- **Traffic and Bicycle Education Program** – sponsored by Florida DOT.
- **National Bicycle Education Program Course** – developed by the League of American Bicyclists.
- **Basics of Bicycling Curriculum** – sponsored by the North Carolina DOT.
- **Bicycle Awareness and Safety Program** – presented by the Bicycle Transportation Alliance, Portland, Oregon.

Road I is designed for teenagers, adults and advanced riders consisting of approximately four to eight hours of outside and classroom instruction. The Bicycling Street Smarts document that is described in **Section 6.1** and has been modified to be specific to Arizona should be utilized in conjunction with the Road 1 course (See **Section 7** for a description of the Arizona Bicycling Street Smarts document).

Implementation steps and funding would be similar to **Bike I and II**. However, the implementation can build upon the fact that the Road I course is currently being offered in the Phoenix metropolitan area through the Coalition of Arizona Bicyclists, see <http://www.cazbike.com/flyer.pdf>. The required budget for **Road I** would include materials and funds to “train-the-trainers” would be up to \$60,000 for the first year and up to \$50,000 annually thereafter.



Similar programs at the national level (refer to **Section 6.1**) include:

- **National Bicycle Education Program Course** – developed by the League of American Bicyclists.
- **Basics of Bicycling Curriculum** – sponsored by the North Carolina DOT.
- **Bicycle Awareness and Safety Program** – presented by the Bicycle Transportation Alliance, Portland, Oregon.

Safe Routes to School

Safe Routes to School (SRS) is a program intended to provide a safer environment and encourage students to walk or bicycle to school and other community sites. Similar to safety education, *SRS* programs require the dedication of a few individuals starting at the grass-roots level building community and political support for the program. The Arizona Statewide Bicycle and Pedestrian Steering Committee and other interested parties can help fulfill that role.

Through the effort described, ADOT should develop a set of guidelines to help communities and/or schools to assess and improve hazardous conditions that exist around school sites and in surrounding neighborhoods.

Recommended implementation steps:

- Under ADOT direction, draft a **SRS** statement of need and define the program goals.
- ADOT should submit a multi-year grant application to the Governor's Office of Highway Safety for Highway Safety Grant (Section 402) funds for program development, preparation of draft State guideline and resource materials, cover start-up costs of a pilot project and cost to review and finalize the **SRS** program guidelines. ADOT should conduct the review after the second year of the pilot program.
- The organizing group should carefully select the right jurisdiction, school district and schools for a pilot project. The pilot project should consist of about 15 to 20 elementary schools distributed in three to four local jurisdictions in the state (i.e., an average of five elementary schools per jurisdiction). The group should meet with school administrators, PTAs, or appear at other functions to present the program and solicit support from the parents and students.
- The group should identify local champions for the pilot project. The champions will oversee activities at each school and chair a School SRS Committee. The Committees for each school should consist of parents, students, teachers, school administrators and members of the community at large (political leaders, public works, public health and law enforcement are critical members, getting community-wide participation and support can spread the program, plus gain the necessary support for street improvements, enforcement, and community safety education). The school-based safety team should organize and carry out various assessments and surveys, and oversee an on-going educational component.
- The Committee should seek official status as either a committee of the PTA or other existing School District committee. Recognition will help attain cooperation and participation of the local municipality, school board and principal, etc.
- SRS Committee activities should include:
 - Assisting with development of a bicycle/pedestrian safety component for inclusion into a "School Safety Improvement Plan" addressing safe routes, a safer community, and a pedestrian and bicycle safety education curriculum for the students.
 - Conducting a school-wide travel survey at the beginning of the project to assess the various transportation modes students use to go to and from school.



- Conducting a school site design review and a neighborhood site assessment to determine characteristics of vehicular traffic, neighborhood traffic counts, parent and bus drop-off locations, speed limits, vehicle speeds, commercial driveways, intersections, the need for crossing guards, and missing or ineffective crosswalks, sidewalks, and bike lanes.
- Mapping routes children currently take to school, walking the routes in groups, identifying sidewalks, crossings, and the overall safety issues along the routes, suggesting safer routes when necessary and recommending improvements. Developing a safe routes checklist; soliciting the aid of parents, public works and enforcement officials, and students.
- Collecting information from parents and students identifying their concerns
- Developing a list of on-site and off-site safety improvements. Presenting the list to the appropriate government entity for consideration and pursuing additional funding to construct the improvements. Organizing events and contests to encourage students to walk and bike, encouraging parents to participate in "walking school bus" programs and other "safe" neighborhood initiatives.
- Assisting with the presentation of the *Bike I* safety course described previously at the pilot elementary schools, as well as with a pedestrian safety education component. The *Bike I* safety instructors will be responsible for organizing and implementing both the pedestrian and bicycle education programs for the pilot schools.
- The Committee should work to keep the program alive by reintroducing the program every year at the beginning of the school year. With the aid of school administration the champion/Committee should:
 - Notify parents and include information about the program in the parent packages that are sent home at the start of the school year;
 - Hold a kick-off event or assembly with parents and students to explain the program, solicit new and replacement parent helpers;
 - Meet with the principal and teachers at the beginning of the year to plan in-classroom activities for the year; and
 - Conduct a follow-up travel survey to assess traffic hazards.

The NHTSA developed document, *Safe Routes to School*, should be utilized for setting up the pilot program.

Requested funding level for the statewide pilot Safe Routes to School program should be up to \$800,000.

Similar programs at the national and local level (refer to **Section 6.1**) include:

- ***School Administrators Guide to School Walk Routes and Student Pedestrian Safety*** – sponsored by the State of Washington.
- **WalkBoston Safe Routes to School Program** – started as an initiative to get elementary students to walk to school.
- **School Safety Program** – sponsored by the City of Phoenix and designed to educate the public and schoolchildren on transportation safety topics.

Bicycle and Pedestrian Facility Design Training

The intent of the **Bicycle/Pedestrian Facility Design Training** is to educate community officials, developers, professionals, and advocates regarding the planning, design, construction, and maintenance of bicycle and pedestrian facilities. Training should focus on making communities more bicycle



friendly and walkable including discussions on how land use and other transportation decisions and roadway design standards affect bicycling and walking.

ADOT should conduct workshops statewide on the bicycle and pedestrian facility design guidelines listed in Section 8 of the Statewide Bicycle and Pedestrian Phase I Plan. The training can be presented frequently, sponsored by ADOT and/or MPOs or COGs. ADOT should also pursue hosting any NHI/FHWA offered courses on bicycle and pedestrian facility design. The Statewide Bicycle and Pedestrian Steering Committee can assist ADOT with course review and selection. The training content should focus on “desirable” conditions for walking and bicycling. As a separate task, the bicycle and pedestrian facility design guidelines in **Section 8** of the Statewide Bicycle and Pedestrian Phase I Plan should expeditiously be updated to include any applicable new design guidelines, such as the accommodation of bicyclists and pedestrians at roundabouts and at mid-block and intersection crossings of shared use paths.

Recommended implementation steps:

- Utilize Statewide Planning and Research (SPR) federal funds to revise the bicycle/pedestrian facility design guidelines in **Section 8** of the Statewide Bicycle and Pedestrian Phase I Plan to include new items and to be consistent with the training courses.
- Present the design guideline statewide through a series of workshops.

Request up to \$30,000 to hold training seminars.

Similar programs at the national level (refer to **Section 6.1**) include:

- **Pedestrian and Streetscape Guide** – sponsored by the Georgia DOT.
- **National Center for Bicycling and Walking (NCBW)** – sponsors Walkable Communities Workshops designed to foster community-based initiatives related to walking and bicycling.
- **Training through the National Highway Institute (NHI) and FHWA** – both organizations routinely provide a wide array of training seminars, workshops, and technical assistance to stakeholders upon request.

Safety Awareness Campaign

The **Safety Awareness Campaign** will focus on non-classroom bicycle and pedestrian community education and an enforcement program. Education would focus on reaching a larger audience.

Strategies include:

- placing posters in public places;
- placing messages on transit buses;
- using billboards;
- distributing educational booklets/pamphlets; and
- developing articles for print media, and radio and TV public service announcements (PSA).

The educational booklets that were developed within this project that are similar to the Pima County Share the Road booklet should be distributed statewide. See **Section 7** for more information on the pedestrian and bicyclist share the road guides developed for Arizona.

An attractive poster displaying, for example; “rules of the road”, “give a bicyclist five (5) feet”, facts on bike helmet use and dangers of riding a bike against traffic can be widely distributed in schools, libraries, community centers and other public places, such as malls.



A Public Service Announcement (PSA) can be designed to communicate a message to one age group or many at the same time including motorists, pedestrians and bicyclists. For example, a PSA can inform motorists how to “share the road” with bicyclists. Sharing the road is something many motorists are uncomfortable with because motorists were never really taught how to safely deal with bicyclist when learning to drive. Nor do many motorists understand that the cyclist has a legitimate right to be on the road and that riding in the gutter or on the sidewalk is in most instances less safe. These and other messages should reach a larger audience than can be reached through a classroom setting.

Lack of understanding and knowledge makes enforcement of laws governing riding of bicycles, and laws affecting the interaction of motorist and bicyclist difficult to enforce and frequently met with resistance; therefore, education can aid and encourage both the bicyclist and motorist to follow the rules of the road. A method to communicate this information is through the distribution of educational pamphlets, such as *Bicycling Street Smarts* and the *Share the Road Guides* currently being developed by ADOT.

A second approach is to make enforcement of the laws and rules of the road a community priority, observing someone break the law and “get away with it” (especially with children) can lead to other occurrences. Enforcement can be community-wide or focused in an area where the majority of problems occur. An effective strategy, similar to announcing a DUI checkpoint, can use PSA’s to inform the public that there is a problem and that an increased enforcement program will be undertaken. The announcement itself is effective in identifying the problem and often more effective than the actual enforcement activity. Recommended areas in which to focus enforcement for bicyclists include:

- driving at night without lights or required reflectors;
- riding the wrong way in a traffic lane or on the wrong side of the road;
- running a stop sign or red light;
- failing to yield the right-of-way;
 - while changing lanes;
 - while turning right or left;
 - for pedestrians in or entering crosswalks;
 - when entering a crosswalk at a speed too fast for approaching traffic; and
 - failing to signal before a left or right turn.

Areas to focus enforcement at the motorist include:

- driving while impaired by drugs or alcohol;
- failing to yield the right-of-way;
 - when turning left at intersections or at driveways;
 - when turning right at intersections or at driveways;
 - when entering the roadway;
 - while changing lanes; and
 - for pedestrians in or entering crosswalks.
- running red lights or turning right on red lights without stopping;
- speeding, particularly in neighborhoods and near schools; and
- overtaking bicycles in areas where it cannot be done safely (not giving bicyclists the required 3-foot separation).



Recommended implementation steps:

- ADOT should be the lead agency.
- Distribute the Arizona Pedestrian and Bicyclist Share the Road Documents (See **Section 7** for a description of these documents).
- Identify bicyclist and bicycle/motor vehicle safety issues and statewide problem locations. Collect bicycle and bicycle/motor vehicle crash data, citation data, and survey law enforcement agencies and medical facilities on the types of crashes occurring.
- Develop a safety awareness campaign and present it to the Statewide Bicycle/Pedestrian Steering Committee.
- Submit a multi-year grant application to the Governor's Office of Highway Safety for Highway Safety Grant (Section 402) funds. The application should include a funding request for three areas; creation and printing of safety related posters, brochures and display of messages on transit buses and billboards, development and broadcast of PSA's, and funding to support enforcement activities statewide.
- Obtain the required services to design required poster program and PSA's.
- Develop intergovernmental agreements with law enforcement agencies implementing focused enforcement activities.
- The Arizona Statewide Bicycle and Pedestrian Steering Committee should assist ADOT with statewide review of program effectiveness.

Required funding for the focused non-classroom educational program would be up to \$150,000. Annual budget for increased enforcement program is up to \$100,000.

Similar programs at the national level and local level (refer to **Section 6.1**) include:

- ***Bike Safety Program*** – sponsored by the New Jersey DOT, offers downloaded posters on their web site.
- ***Bicyclist and Pedestrian Safety Program*** – sponsored by the Oregon DOT.
- ***Building Safe Communities*** – sponsored by the National Highway Traffic Safety Administration provides a guide that lists ideas, activities, and programs in each major area of traffic safety.
- ***SAFE KIDS Coalition*** – sponsored by Yuma County Health Department, Injury Prevention Program.
- ***Bicycling Street Smarts*** – a bicyclist educational guide based on classifying a bicycle as a vehicle and a bicyclist as a driver and it was written by John S. Allen.
- ***Share the Road Guide*** – created by the Pima County Bicycle and Pedestrian Program and it includes safety materials for bicyclists and motorists.

Archived Data

Develop a website that centrally locates data resources providing information on bicycle and pedestrian crashes and usage. Based on the information collected and stored, research and analysis of bicycle and pedestrian crash data in Arizona could allow queries by city, county, state, and other variables. For example, tables of crash facts related to age, gender, race, injury severity, type of roadway, and type of crash for both bicyclist and pedestrian crashes can be created. The site should provide a shared documents library containing study reports and related research in addition to other information resources including other state and local web sites, USDOT, and other sources such as the National Transportation Library and TRIS hosted by the Transportation Research Board. Site design and information content should present the information in a manner accessible by all ages and computer



knowledge. This feature will aid with the public information campaign and the documents library should assist with educating the public about pedestrian and bicycle safety.

Recommended implementation steps:

- Issue an RFP for services to develop the website.
- The Arizona Statewide Bicycle and Pedestrian Steering Committee should assist ADOT with the website review.
- Place the website on the ADOT site and a link to the website from the ADOT bicycle/pedestrian program website.
- Present the website statewide through a series of workshops.

Required funding for the website design would be up to \$60,000. Annual budget for site maintenance would be up to \$15,000.

Similar programs at the national level and local level (refer to **Section 6.1**) include:

- **USDOT Bicycle and Pedestrian Related Publications and Reports** – sponsored by USDOT, provides a source for national bicycling and walking study reports and related research.
- **California Pedestrian Safety Network** – sponsored by California Pedestrian Task Force, provides website where persons can add to and view a shared documents library.
- **Interactive Crash Data Tool** – incorporated into the NCDOT bike/pedestrian website, offers access to a central location for information.



7. Safety and Education Booklets

Safety and education booklets were developed in support of the recommendations of the Education Program Plan described in **Section 6**. The Share the Road Guide by Pima County Department of Transportation was modified to be specific statewide and a similar walking document was created. In addition, the Bicycling Street Smarts guide was modified to be specific to Arizona. The intent of the development of the Share the Road Guides, is for these documents to be targeted at the general public, both motorists and users. On the other hand, the Arizona Bicycling Street Smarts is intended to be used by intermediate to advanced bicyclists interested in learning the detail behind becoming a better and safer rider.

7.1. *Share the Road Guide*

A statewide Bicycling “Share the Road” Guide was developed based on the existing Pima County Bicycle and Pedestrian Program’s Share the Road, A guide for bicyclists and motorists. The Pima County’s document is 37 pages and 5 ½” by 3 ½” in size. This guide provides educational information that is directed at both bicyclists and motorists and cites Arizona bicycle laws and those specific to Pima County.

The “Share the Road” Guide for Arizona consists of 40 color pages and is also 5 ½” x 3 ½” in size. (A copy of the document is provided in **Appendix C**). This guide provides information how to share a roadway between bicyclists and motorists and discusses what both bicyclist and motorists can do to avoid accidents/conflicts. This guide is recommended for beginner bicyclists and motorists.

7.2. *Share the Road with Pedestrians Guide*

A statewide Walking “Share the Road” Guide was developed based on the Share the Road Guide format and content within the existing Pedestrian Facilities User Guide-Providing Safety and Mobility by US DOT Federal Highway Administration (FHWA). The “Share the Road with Pedestrians” Guide is also 5 ½” x 3 ½” in size. The FHWA guide provides information on pedestrian friendly street designs, pedestrian friendly walking facilities, and analysis and solutions to pedestrian and motorists accidents.

The Walking “Share the Road” Guide addresses motorist considerations to pedestrians and pedestrian considerations to awareness in surrounding area. This guide analyzes conflict situations between pedestrians and vehicles in motion or stationary and presents what pedestrians and motorists should be aware of to avoid accidents. A copy of the document is provided in **Appendix D**.

7.3. *Arizona Bicycling Street Smarts*

Learning how to ride a two-wheel bicycle is probably one of the most exciting experiences, due to the difficulty of maneuvering it. At the beginning, most bicyclists look for safe places where they feel confident in riding a bicycle such as parks, parking lots, and open spaces. When bicyclists have more experiences and feel comfortable to ride a bicycle for transportation, exercise, or fun, they start riding on roadways and need to follow certain traffic laws.

The Bicycling Street Smarts booklet by Rubel Bike Maps that was discussed in **Section 6** was modified to be specific to Arizona in an effort to target these experienced bicyclists. This booklet teaches experienced bicyclists how to ride confidently, legally, and more safely on roadways. The 5.3” X 8.4” booklet contains 48 pages of roadway regulations to bicyclists. The document is included in **Appendix E**.



8. Maintenance and Facility Request System

8.1. Initial Program Implementation

The State of Arizona should implement a bicycle facility maintenance program that responds to citizen's request. As with other citizen request and/or complaints, response to the maintenance problem should be timely. The program goal would be to correct and/or inspect the problem within 72 hours and schedule repairs within a reasonable timeframe.

In order to track the maintenance request and ensure the proper response Arizona should develop a statewide notification and follow-up system. To be successful the statewide system should establish a central point of contact for citizen notification and the same point for facility maintenance coordination.

Implementation steps:

- receive approval from the ADOT Bicycle and Pedestrian Coordinator and ADOT Risk Management for the draft program outline and sample form (See **Appendix F**);
- coordinate adoption of the program with all federal, state and local agencies having bicycle facility maintenance responsibilities;
- establish a single statewide central point of contact within an existing ADOT position:
 - recommended the center be located within the ADOT Statewide Bicycle/Pedestrian Coordinators Office.
- each agency having bicycle facility maintenance responsibility provides phone number and email address to the statewide center for the responsible maintenance supervisor and/or point of contact.

Program description:

- distribute an Arizona Bicycle Program Facility Improvement Request Form, the form should be designed in such a manner that all required information is obtained (See **Appendix F**):
 - include the statewide central contact phone number, fax number and mailing address;
 - include space for a description of the hazard/maintenance problem;
 - include space for detailed location description;
 - include space for information on person submitting the request; and
 - include space for requesting facility improvements.
- incorporate the Arizona Bicycle Program Facility Improvement Request Form into the ADOT Bicycle/Pedestrian web site, the form should:
 - be downloadable and interactive (preferable).
- establish the statewide center with a system computer, fax and phone for message, each accessible to Bicycle/Pedestrian Coordinator office staff;
- once a maintenance request notification is received, staff will, based on the location description and type of maintenance requested, contact the proper District and/or agency:
 - establish a completion date; and
 - do follow-up.
- implement a public relations (PR) program announcing the program implementation using broadcast and print media public service announcements (PSA)'s and notification letters to all public agencies, bicycle organizations and interested public; and
- provide copies of the Request Form to ADOT District offices, regional and local agencies, federal and Indian Lands agencies and bicycle stores statewide.



8.2. Long-Range Implementation

ADOT should consider the following long-range strategies:

- incorporate the process and contact phone number(s), email address for reporting a bicycle hazard and/or maintenance problem on ADOT and other state agency bicycle facility maps. Requested information should include the type of hazard/maintenance request and location.
- establish a budget line-item for spot improvements/hazard elimination/repairs that are less than \$25,000 per project (dollar amount to be determined) within the 5 Year Construction Program/STIP. Funds controlled by the State B/P Coordinator and made available to the Districts for the requested work.

8.3. Review of Other Jurisdiction Maintenance and Request Systems

City of Madison, WI – Arthur Ross at (608-266-6225)

Several notification methods are utilized:

- The city maintenance department phone number is placed on the back of bike/ped facility maps/ The phone call direct to maintenance works best and shortens the response time;
- A web site is used to contact traffic engineering/bike program staff. The site also has a request form for maintenance and/or improvements. The form can be downloaded and faxed or mailed; and
- Pre-paid postcards that are placed in bike shops. The system does not work well and staff does not check to see if shops need additional cards or if they are routinely offered to patrons.

Biggest issue is the need for a centralized maintenance coordinator/contact person to notify the correct agency, cities/county/state, that a maintenance request has been received.

City of Seattle, WA – Paul Wong (206-684-7583)

Several notification methods are utilized:

- pre-paid postcards are distributed to community centers, bike shops and libraries;
- citizens can post the requested maintenance through the cities bike/ped web site;
- citizens can call the city bike/ped staff; and
- citizens can send direct e-mail to staff.

The direct phone call and e-mail are most commonly used method; staff will coordinate the request with the proper agency and department.

Small improvement requests are received on postcards, by a direct e-mail and through phone calls. Larger requests are identified in plans, by staff and bike advisory board.

North Carolina DOT – Tom Norman (919-715-2342)

The public contacts the District Office by phone or can access the NCDOT.org web site and send an email message to the District Maintenance Engineer. Minor improvements, sign replacement, striping and painting are included within the District budget. Larger improvements, less than \$25,000 per project, are funded by the State Bike/Ped Coordinator Office. The Department has a line-item budget category included within the STIP for spot improvements; e.g. replace drainage grates, trim vegetation, eliminate hazards, repair RR crossings, etc.



Summary of Study “Road Hazard Identification and Reporting”, Wisconsin DOT – Peter Fluckie (920-497-3196)

This project was funded by the WisDOT pilot program in the Green Bay metro area. The reporting system utilized:

- a central point of contact; and
- a public relations and education program to inform the public of the central reporting point of contact that explained the purpose and how to contact the central reporting point.

Steps in the reporting system included:

- initial hazard notification was received through phone calls;
- receipt of pre-paid postcard and email;
- central contact would confirm hazard and location through field verification;
- report hazard to the proper agency; and
- follow-up in field.

Several issues were identified/confirmed during the study: First, the public was confused or unaware of how to report the hazard. This issue was addressed through the public relations program and resolved by implementation of the central reporting location. The second issue identified the maintenance staff/agency as either not caring or not understanding the hazard. The study addressed this issue through training of public works staff and by pre-checking the location and hazard prior to notifying the maintenance staff. Confirming the location and hazard to be fixed reduced the perception of a “wild goose chase”. Second, the training focused on having the maintenance staff look at the hazard from the perspective of a bicyclist, e.g. an inch longitudinal pavement crack does not impact a vehicle but can cause a bike to fall. Other topics covered were that a bike is a legal vehicle and has a right to use the roadway and covered agency liability there was the perception that if the agency was unaware of the hazard there was no liability.

Oregon Department of Transportation – Michael Ronkin (503) 986-3555

The Statewide B/P Plan established maintenance standards and established a schedule for regular inspections and maintenance activities.

Department provides postage-paid, pre-addressed postcards that include staff telephone numbers. ODOT has experienced mixed success from the postcards.

Caltrans – web site information

Caltrans policy allows bicycle/pedestrian facilities within State highway right of way that are partially funded by local agencies to be maintained by the local agencies through a Cooperative Agreement. If the facility connects to a local facility and is outside the limits needed for operating and maintaining the roadway, Caltrans will seek an agreement for the local agency to maintain the facility. This strategy can provide continuity in the maintenance.



9. Pedestrian Action Plan

Several states and regions across the U.S. have developed and are implementing effective pedestrian plans. Some examples include the states of Oregon, Vermont, California, Maryland, and Georgia, and communities and regions including Santa Barbara, Portland, Madison, and San Diego, just to name a few.

These states and regions are actively promoting pedestrian travel and access for all pedestrians, with a particular emphasis on meeting Americans with Disabilities Act (ADA) requirements. A primary component of the plans is the inclusion of policies supporting the development of improved pedestrian facilities and access as well as improved education of pedestrians and motorists. The Arizona State Transportation Board policy on Bicycle and Pedestrian Facilities can be found at http://www.azdot.gov/Board/PDF/Board_Policies_081503.pdf. The policy generally supports design guidelines and policies that give the designer the flexibility to balance the needs of motorists, bicyclists and pedestrians and to accommodate bicyclists and pedestrians in construction. However, sidewalks are generally only provided if the local jurisdictions through which the State facilities travel take on the liability and maintenance of the sidewalks.

The purpose of this pedestrian action plan is to support the adoption of a proposed pedestrian policy by the State and to list potential action items that can be taken to achieve the policy. The draft pedestrian policy is intended to address pedestrian access, safety issues and facility needs. This draft policy is a first step in improving the pedestrian environment and addressing ADA requirements. The draft pedestrian policy reads as follows:

It is the policy of the State of Arizona to provide accessible and convenient walking facilities and to support and encourage increased levels of walking.

Strategies to achieve the policy are listed in the “ADOT Pedestrian Policy for Consideration” section of the Statewide Bicycle and Pedestrian Phase I Plan (Section 10.1, on pages 127-129). Additional specific actions to achieve the draft pedestrian policy are recommended for consideration by ADOT and by incorporated jurisdictions and counties in Arizona. These actions are intended to improve the overall pedestrian environment for all pedestrians and in particular to address needs for persons with disabilities.

Recent significant federal lawsuits¹ regarding the Americans with Disabilities Act indicate jurisdictions should prioritize resources in order to address ADA requirements over the next several decades. Further guidance to address ADA needs within public rights-of-way were published in an Advance Notice of Proposed Rulemaking in September 2004, which is available at <http://www.ada.gov/anprm04.htm>. The proposed rulemaking revises Parts I and III of the ADA and ABA Accessibility Guidelines, comments on the proposed revisions are due to the Department of Justice by January 28, 2005.

The overall pedestrian environment can be improved in large part by meeting ADA requirements, and good pedestrian facility design will consider pedestrian needs above and beyond the ADA. Basic action items that may be considered to address overall pedestrian issues and ADA needs include but are not limited to the following:

¹ See *Barden v. Sacramento* and *Tennessee v. Lane*



- 1) Compile and review ADA Transition Plans from different state plans, Metropolitan Planning Organizations, and incorporated and unincorporated local jurisdictions and research ADA action items and timetables. Review action items and ADA implementation progress requirements with reference to U.S. Supreme Court decision regarding the Barden v. Sacramento ADA case.

Transition Plans primarily address pedestrian facility improvement needs relating to disabled access and the presence and condition of pedestrian facilities. Transition Plans address how jurisdictions will make their streets and roads accessible to all persons and include specific project information and commitment to a detailed time schedule for completion. Additional information on Transition Plan requirements may be found at <http://www.access-board.gov/>

- 2) Based upon U.S. Justice Department Access Board guidance and exemplary ADA Transition Plans from communities across the U.S., develop ADA Transition Plan updates within all local jurisdictions in Arizona and for State maintained public rights-of-way
- 3) Incorporate ADA standards into all new and reconstructed roadway projects, as applicable (pedestrian walkways provided as part of roadway projects are required to incorporate ADA requirements)
- 4) Incorporate pedestrian standards of the Federal Highway Administration Manual on Uniform Traffic Control Devices, including safety for pedestrian travel in construction zones (Chapter 6)
- 5) Measure, utilizing Geographic Information Systems mapping (as applicable), demand factors including:
 - a) Proximity to schools, parks, employment centers, transit stops, shopping, and community centers
 - b) Land use (zoning categories)
 - c) Population Density
- 6) Measure, utilizing GIS mapping as applicable, needs factors including:
 - a) Traffic Crashes (number of crashes in past 3 years)
 - b) Missing sidewalks and curb ramps, existing non-ADA compliant sidewalks
 - c) Inaccessible intersection crossings
 - d) Public comments
- 7) Adopt American Association of State Highway Officials (AASHTO) Guide for the Planning, Design, and Operation of Pedestrian Facilities, July 2004
- 8) Incorporate Guidelines for Accessible Public Rights-of-Way (forthcoming)
- 9) Provide annual funding set aside to address ADA needs at required level (based on Sacramento case)
- 10) Address pedestrian “support facility” needs such as shade landscaping and rest areas to facilitate pedestrian walking comfort
- 11) Pursue safety programs – Safe Routes to Schools, bicycle, pedestrian and motorist safety and Education campaigns, crosswalk “stings”, pedestrian and bicycle traffic diversion programs. Pursue Governors Office of Highway Safety, Transportation Enhancement, Section 402 grants
- 12) Pursue Transportation Enhancement, Congestion Mitigation and Air Quality, and Safe Routes to School (if approved in pending Surface Transportation Program legislation) federal funding and demonstration grant funds for pedestrian projects and safety programs

Adoption of the ADOT Pedestrian Policy for Consideration and implementation of policy strategies and action items can result in significant improvements to the pedestrian environment. The proposed adoption of the policy is also timely regarding the pending Notice of Proposed Rulemaking for the Guidelines for Accessible Public Rights-of-Way. The State of Arizona can show strong progress to



providing effective, prioritized facilities and education programs in support of pedestrian travel and safety.

Selected Pedestrian Plan References:

Arizona Statewide Bicycle and Pedestrian Phase I Plan ADOT Pedestrian Policy for Consideration (Section 10.1, pp 127-129) <http://www.azbikeped.org/phase1documents.html>

State of Oregon Bicycle and Pedestrian Plan <http://www.odot.state.or.us/techserv/bikewalk/obppplan.htm>

State of Washington Bicycle and Pedestrian Plan http://www.wsdot.wa.gov/Bike/Bike_Plan.htm

Vermont Pedestrian and Bicycle Facility Planning and Design Manual
<http://www.aot.state.vt.us/progdev/Documents/LTF/FinalPedestrianAndBicycleFacility/PedBikeTOC.html>

Georgia Department of Transportation Pedestrian and Streetscape Guide
<http://www.dot.state.ga.us/dot/plan-prog/planning/projects/>

Maryland Statewide Bicycle and Pedestrian Plan
http://www.fhiplan.com/md_bike_ped_plan/index.htm

City of Santa Barbara Pedestrian Plan (under development) http://www.ci.santa-barbara.ca.us/departments/public_works/transportation/alternative/ also
<http://www.altaplanning.com/news/03summer/>

Madison, Wisconsin Pedestrian Transportation Plan <http://www.ci.madison.wi.us/reports/execsum2.pdf>

City of Portland, OR Pedestrian Master Plan
<http://www.trans.ci.portland.or.us/Plans/PedestrianMasterPlan/default.htm>

City of Sacramento Public Works Dept Pedestrian Safety Guidelines
(<http://www.pwsacramento.com/traffic/Media/PedSafety.pdf>)

Planning and Designing for Pedestrians: Model Guidelines for the San Diego Region
<http://www.sandag.org/index.asp?projectid=2&fuseaction=projects.detail>

City of San Diego Pedestrian Design Manual <http://www.sandiego.gov/planning/pdf/peddesign.pdf>

Maricopa Association of Governments Pedestrian Plan 2000:
http://www.mag.maricopa.gov/pdf/cms.resource/ped-plan2000sum-web_427.pdf

Federal Highway Administration Designing Sidewalks and Trails for Access, Parts I and II

Part 1 at <http://www.fhwa.dot.gov/environment/sidewalks>.

Part 2 at <http://www.fhwa.dot.gov/environment/sidewalk2/>



The HTML version incorporates all the changes listed on the errata sheet:

<http://www.fhwa.dot.gov/environment/bikeped/errata.htm>

NOTE: The HTML version does not incorporate corrections needed in Section 6.5 (accessible signals).

Detectable Warnings memorandum:

<http://www.fhwa.dot.gov/environment/bikeped/dwm.htm>

* Transmittal Memo:

<http://www.fhwa.dot.gov/environment/bikeped/tranmemo.htm>



Appendix A

Bicycle User Map

The document can be viewed electronically at the ADOT Bicycle and Pedestrian Program website: <http://www.azbikeped.org/>



Appendix B

Website Review

The ADOT Bicycle and Pedestrian Program website can be viewed at:
<http://www.azbikeped.org/>



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You are here: > [Safety Programs](#) ▶ **Pedestrian/Bicycle Safety Program**

Overview



- Florida Pedestrian and Bicycle Program Staff
- Staff Directory Listing
- Available Safety Brochures
- Florida School Crossing Guard Training Program
- Pedestrian Laws
- Bicycle Laws
- Bicycle Touring Information
- Florida Policies and Standards
- Contact Pedestrian/Bicycle Safety

The Florida Pedestrian and Bicycle Program works in many areas to promote safe walking and bicycling in Florida. The office develops initiatives and programs to improve the environment for safe, comfortable, and convenient walking and bicycling trips and to improve the performance and interaction among motorists, bicyclists, and pedestrians. A broad network of professional staff in the District Offices and in metropolitan areas has been established to assist in this effort.



The Pedestrian and Bicycle Program serves as a clearinghouse for information concerning safety, design, and touring. The office is also responsible for the [Florida School Crossing Guard Program](#) and the [Florida Traffic Safety Education Program](#) (Clicking this link will start another instance of your web browser).

[Safety Programs Home](#) | [Pedestrian/Bicycle Safety](#) | [Florida Pedestrian and Bicycle Program Staff](#) |

Exhibit 1

[Pedestrian/Bicycle Staff Directory Listing](#) | [Available Safety Brochures](#) | [Florida School Crossing Guard Program](#) | [Pedestrian Laws](#) | [Bicycle Laws](#) | [Bicycle Touring Information](#) | [Florida Policies and Standards](#) | [Contact Pedestrian/Bicycle Staff](#)

Exhibit 2

 North Carolina Department of Transportation								
Search	Projects	Maps	Safety	What's New	Events	Laws & Policies	Funding	About Us
<p>BICYCLING >></p> <p>Bicycling is a fun way to get around for people of all ages, whether for transportation or fitness. This site is designed to put you in touch with all types of resources and information about bicycling. Whether you like touring, commuting, off-road riding, just tooling around your neighborhood, or working to make your community more bicycle friendly, you've come to the right place!</p>				 <p>division of <i>bicycle & pedestrian</i> TRANSPORTATION</p> <p><i>Our Vision: All citizens of North Carolina and visitors to the state will be able to walk and bicycle safely and conveniently to their chosen destinations with reasonable access to roadways.</i></p>				
<p>WALKING >></p> <p>Since more people are walking to work, to shop, and for fitness, new programs and resources are underway to help people of all ages walk safely. Come see what's here for you!</p> 				<p>CHECK THIS OUT</p> <p>Our Website Has a New Look More info, more photos — all in a new, up-to-date design — make it easier for you to find out what's happening for bicyclists and pedestrians in North Carolina. Click here to learn more about what's here for you.</p> <p>Crash Data at Your Fingertips A unique resource is now available for researching bicycle and pedestrian crash data in North Carolina. The Interactive Crash Data Tool allows queries of cross-tabulated information by city, county, and other variables.</p> <p>10/16/03</p>				
<p>CRASH DATA</p>		<p>DIVISION OF BICYCLE AND PEDESTRIAN TRANSPORTATION</p>		<p>Street: 1 S. Wilmington St. Raleigh, NC 27602 Mailing: 1552 Mail Service Center Raleigh, NC 27699-1552</p>		<p>919.733.2804 919.715.4422 fax bikaped_transportation@dot.state.nc.us</p>		


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[TRAFFIC & ROADS](#) [PROJECTS](#) [BUSINESS](#) [ENVIRONMENTAL](#) [MAPS & DATA](#)

BICYCLING IN WASHINGTON

BICYCLING

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- [Recreation/Touring](#)
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- [Bike to School](#)
- [Organizations](#)
- [Technical Resources](#)
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Bicycling plays a big role in Washington's transportation. Whether you are a casual or serious rider, a bike commuter, a bicycle tourist from inside or outside our borders, or a bike-curious to bike-expert transportation professional, we hope this page will help you locate topics of interest and useful information on bicycling in our state.



WALKING

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- [Equestrian \(4 hooved walking\)](#)

Be Safe; Be Legal

- [Safety Tips](#)
- [State Bicycling Laws](#)
- [State Highway Sections Closed to Bicycles](#)
- [Sharing Trails with Horses](#)

Rec. and Touring

- [Tour Planning and Bicycling Maps](#)
- [Bicycle Tour Operators](#)
- [Washington State Ferries and Amtrak Cascades](#)
- [Bicycle Paths and Trails](#)

CONTACT US

- [Paula Reeves](#)
(360)705-7258
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- [Weather](#)
- [Highways & Local](#)

Bicycle Commuting

- [Bike Commuting Tips](#)
- [Bikes on Transit](#)

The Sag Wagon

[More >>](#)

- [Designing for Bicycles: Information and Other Resources](#)
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Advisory Cttee.

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Exhibit 3

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Exhibit 4

		<i>Division of Bicycle & Pedestrian Transportation</i>						
Search	Projects	Maps	Safety	What's New	Events	Laws & Policies	Funding	About Us
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Introduction — Laws & Policies

[Introduction](#)

[Bicycle & Bikeway Act](#)

[Bicycle Laws](#)

[Bicycle Helmet Law](#)

[Bicycle Racing Guidelines](#)

[Pedestrian Laws](#)

[School Zone Laws](#)

[School Crossing Guard Laws](#)

[Board of Transportation Resolution](#)

[Bicycle Policy](#)

[Pedestrian Policy Guidelines](#)

[Greenways—Administrative Process](#)

Bicycles are legally defined as vehicles in North Carolina. This section explains the 1974 legislation to create the forerunner of the Division of Bicycle and Pedestrian Transportation and lists all the North Carolina laws that pertain to bicycles, pedestrians, school zones, and school crossing guards. Also included are NCDOT policies and guidelines related to bicycles, pedestrians, and greenways. A library of approved minutes from the North Carolina Bicycle Committee meetings is included at the end of the North Carolina Bicycle Committee section.

9/19/02

Exhibit 4

[NCDOT Bicycle & Pedestrian Task Force](#)

[NC Bicycle Committee](#)

 North Carolina Department of Transportation		
DIVISION OF BICYCLE AND PEDESTRIAN TRANSPORTATION	<i>Street: 1 S. Wilmington St. Raleigh, NC 27602</i> <i>Mailing: 1552 Mail Service Center Raleigh, NC 27699-1552</i>	<i>919.733.2804 919.715.4422 fax</i> <i>bikaped_transportation@dot.state.nc.us</i>



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You are here: > [Safety Programs](#) > [Pedestrian/Bicycle Safety Program](#) ▶ [Bicycle Laws \(1\)](#)

Traffic laws for bicyclists and motorists to know (1)



1 | [2](#) | [3](#) | [4](#) | [Next](#)



This section provides a summary of Florida's bicycle regulations. [Click here](#) (clicking on this link will open another instance of the web browser) for the exact wording of the Florida Uniform Traffic Control Law.

With few exceptions, there is only one road and it is up to bicyclists and motorists to treat each other with care and respect. Adherence to the law is the foundation for this respect.

Legal status of bicycles

In Florida the bicycle is legally defined as a vehicle (but not a motor vehicle). A bicyclist has all the rights of drivers of other vehicles, except in those cases in which special provisions have been adopted for bicycles. A bicyclist must obey the traffic laws and traffic control devices that apply to the driver of any vehicle.

Traffic law highlights - for bicycles

Obedience to traffic control devices
(Section 316.074, F.S.)

- ▶ A cyclist must obey all applicable traffic control devices (signs, markings, and traffic signals).

Exhibit 5**Driving on right side of roadway**

(Section 316.081, F.S.)

- ▶ Upon all roadways of sufficient width, a vehicle must be driven on the right half of the roadway.

Comment: A cyclist on a roadway must ride in the direction of traffic. Cycling in the opposite direction, so as to face oncoming traffic, is a contributing cause in many bicycle crashes. Other drivers do not expect traffic to approach on the right.

Bicycle regulations

(Section 316.2065, F.S.)

- ▶ Bicyclists must use a fixed, regular seat for riding.
- ▶ A bicycle may not be used to carry more persons at one time than the number for which it is designed or equipped.
- ▶ An adult bicyclist may carry a child in a backpack or sling, child seat or trailer designed to carry children.
- ▶ A bicyclist may not allow a passenger to remain in a child seat or carrier when not in immediate control of the bicycle.
- ▶ A bicycle rider or passenger under age 16 must wear a bicycle helmet that meets a nationally recognized standard. (Citrus and St. Lucie counties have opted out of this law.) The two helmet standards mentioned as examples in this law are obsolete. Under federal law, bicycle helmets manufactured since March 1999 are required to meet the CPSC (Consumer Product Safety Commission) standard.
- ▶ At least one hand must be kept on the handlebars while riding.
- ▶ Parents or guardians must not knowingly allow a child or minor warc to violate any provision of this section.
- ▶ Every bicycle must be equipped with a brake or brakes which allow the rider to stop within 25 feet from a speed of 10 miles per hour on dry, level, clean pavement.

Sidewalk riding

(Section 316.2065, F.S.)

- ▶ When riding on a sidewalk or crosswalk, a bicyclist has the rights and duties of a pedestrian.

Comment: Since a cyclist riding on a sidewalk does not have the duties (or rights) of a driver, he may ride in either direction. (However, it is safer to ride in the direction of traffic, since drivers do not expect cyclists to come from the other direction at driveways and crosswalks.) At a signalized intersection, he must obey the instructions of any applicable pedestrian control signal. That is, he may start to cross a roadway in a crosswalk only during a steady Walk phase, if one is displayed. If no pedestrian signal is provided, the cyclist may proceed in accordance with the signal indications for the parallel roadway traffic flow (Section 316.084, F.S.). Local ordinances generally prohibit riding on sidewalks in central business districts.

- ▶ A bicyclist riding on sidewalks or in crosswalks must yield the right-of-way to pedestrians and must give an audible signal before passing.

Lighting

(Section 316.2065, F.S.)

- ▶ A bicycle operated between sunset and sunrise must be equipped with a lamp on the front exhibiting a white light visible from 500 feet to the front and both a red reflector and a lamp on the rear exhibiting a red light visible from 600 feet to the rear.

Comment: Additional lighting is permitted and recommended.

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Exhibit 5

[Standards](#) | [Contact Pedestrian/Bicycle Staff](#)



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You are here: > [Safety Programs](#) > [Pedestrian/Bicycle Safety Program](#) > [Bicycle Touring Information](#) ▶ [Trials](#)

Bicycle Touring Information Trails



[Bicycle Touring Information](#) | [Trails](#) | [Maps](#) | [Roads](#) | [Books](#) | [Tour Operators](#) | [Accommodations](#) | [Bicycle Shops, Rentals, and Bicycle Clubs](#) | [Other Touring Information](#)

- Florida Pedestrian and Bicycle Program Staff
- Staff Directory Listing
- Available Safety Brochures
- Florida School Crossing Guard Training Program
- Pedestrian Laws
- Bicycle Laws
- Bicycle Touring Information
 - ◀ **Trails**
 - ◀ Maps
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 - ◀ Bicycle Shops, Rentals, and Bicycle Clubs
 - ◀ Other Touring Information
- Florida Policies and Standards
- Contact Pedestrian/Bicycle Safety

Note: Clicking on the links below will open another instance of the web browser.

Numerous shared-use paths and off-road bike routes cross the Florida landscape. Many paths follow greenways or former railroad corridors. Among the most popular or scenic paths, paved unless otherwise noted, are those listed in the table below. More information about many of them can be found in Florida's [Online Greenways and Trails Guide](#).

The regional Water Management Districts have unpaved trails open to cyclists, described in their recreational guidebooks (some available from this office). The [Suwannee River Water Management District](#), [St. Johns River Water Management District](#), [Southwest Florida Water Management District](#), and [South Florida Water Management District](#) have made their recreational guides available on-line.

Shared-use Paths (partial list)

Trail Name	Location	Distance
North Florida		

Exhibit 6

Black Creek Trail	Black Creek trailhead off SR 17-southern approach, Doctors Lake Bridge, Clay County	5 mi 8 km
Blackwater Heritage State Trail	Milton-Whiting Field	10 mi 16 km
Fort Pickens Trail	western end, Santa Rosa Island	3 mi 5 km
Gainesville-Depot Avenue Trail	Gainesville-Hawthorne	2.1 mi 3.4 km
Gainesville-Hawthorne State Trail	Gainesville-Hawthorne	16 mi 26 km
Gainesville-Waldo Road Greenway	Gainesville-Hawthorne	2.6 mi 4.2 km
Jacksonville-Baldwin Rail Trail	Imeson Rd-Brandy Branch Rd, Duval County	15 mi 23 km
Nature Coast Greenway	Chiefland - Cross City	23 mi 38 km
Suwannee River Greenway at Branford	Branford -Little River Springs	4 mi 6 km
Tallahassee-St. Marks Railroad State Trail	Tallahassee-St. Marks	21 mi 33 km
Walton 30A Parallel Path (merges with CR 30A at several points)	Walton County, along CR 30A, segments west and east of Seaside	10 mi 16 km
Central Florida		
Cady Way Trail Note: Clicking this link will open another instance of the web browser.	Cady Way-Fashion Square Mall, Orlando	4 mi 6 km
Cross Seminole Trail	Winter Springs-Oviedo	3 mi 5 km

Exhibit 6

Seminole Wekiva Trail	Altamonte Springs- Wekiva River Protection Area, west of Sanford	14 mi 23km
General James Van Fleet State Trail	Mabel-Polk City	29 mi 47 km
Little Econ Greenway	along Little Econlockhatchee River, Orange County, e. of Orlando	4 mi 7 km
Lake Minneola Scenic Trail/Clermont Trail	Minneola, Lake County	4 mi 6 km
West Orange Trail	County Line Station- Apopka, Orange County	19 mi 31 km
Withlacoochee State Trail	Citrus Springs-Trilby	46 mi 74 km
West Coast		
Boca Grande Trail	Gasparilla Island	7 mi 11 km
Cape Haze Pioneer Trail	McCall	3.5 mi 6 km
Flatwoods Loop Trail	Wilderness Park, Hillsborough County	7 mi 11 km
Friendship Trail	Tampa - St. Petersburg	2.6 mi 4 km
Pinellas Trail (on line guide) Note: Clicking this link will open another instance of the web browser.	Tarpon Springs-St. Petersburg	34 mi 54 km
Suncoast Trail	along Suncoast Parkway, from Lutz-Lake Fern Road north of Tampa to US 98 in northern Hernando County	42 mi 67 km

Exhibit 6

Upper Tampa Bay Trail	from Old Memorial Highway to Peterson Road, western Hillsborough County	8 mi 13 km
South Florida		
El Rio Trail	Glades Rd-River Rd., Boca Raton (along El Rio Canal)	2.5 mi 4 km
Everglades Trail (unpaved)	SW 136 St.-SR 9336, Dade County	24 mi 39 km
Southern Glades Trail (unpaved)	SR 9336-US 1, Dade County	12 mi 26 km
Florida Keys Overseas Heritage Trail (segments)	Florida Keys, Monroe County	50 mi 80km
Key Biscayne/Old Cutler Road (Gap along Old Cutler Road near Snapper Creek Canal)	Biscayne National Park - Key Biscayne	28 mi 48 km
Lake Okeechobee Scenic Trail (unpaved)	Lake Okeechobee dike (must exit to road at some canals)	115 mi 185 km
Lake Trail	Intracoastal Waterway, Palm Beach	5 mi 7 km
Dyer Park Path	West Palm Beach	4 mi 7 km
John Prince Park Path	Lake Worth	5 mi 8 km
Okeeheelee Park Path	West Palm Beach	7 mi 10 km
Shark Valley Loop Road	Everglades National Park	15 mi 24 km
South Dade Trail	Dadeland South-Cutler Ridge Mall, Dade County	8 mi 13 km

Exhibit 6

[Safety Programs Home](#) | [Pedestrian/Bicycle Safety](#) | [Florida Pedestrian and Bicycle Program Staff](#) | [Pedestrian/Bicycle Staff Directory Listing](#) | [Available Safety Brochures](#) | [Florida School Crossing Guard Program](#) | [Pedestrian Laws](#) | [Bicycle Laws](#) | [Bicycle Touring Information](#) | [Florida Policies and Standards](#) | [Contact Pedestrian/Bicycle Staff](#)

BICYCLING IN WASHINGTON

BICYCLING

- [Bicycling](#)
- [Safety](#)
- [Recreation/Touring](#)
- [Commuting](#)
- [Bike to School](#)
- [Organizations](#)
- [Technical Resources](#)
- [Projects](#)
- [Calendar](#)

Bicycle Paths and Trails

There are bike paths and trails everywhere in Washington, including in cities. You can also ride on trails in the suburbs, the country and the backcountry. Some paths and trails follow former railroad corridors. Information about some of the most popular trails including the Burke-Gilman Trail, the Foothills Trail, and Devils Gulch Trail are listed below.



WALKING

- [Walking](#)
- [Recreation](#)
- [Multi-Modal](#)
- [Walk to School](#)
- [Technical Resources](#)
- [Projects](#)
- [Calendar](#)
- [Equestrian \(4 hooved walking\)](#)

If you have questions about paths and trails elsewhere in Washington, the [City, County and Regional Contacts](#) in the area of your interest may be able to help you. You can also contact WSDOT's Bicycle and Pedestrian Program at (360) -705-7258 for additional information.

Click on the stars to see bicycle paths and trails in the area

CONTACT US

- [Paula Reeves](#)
(360)705-7258
- [Contact WSDOT](#)

OTHER LINKS

- [Weather](#)
- [Highways & Local Programs](#)
- [Commute Options](#)

Exhibit 6a**Other Bicycle Trail Links**

[Outdoor Recreation in Washington \(IAC\)](#)
[Self guided routes throughout the State of Washington](#)
[Trails in Washington](#)
[Mountains to Sound Greenway](#)
[Rails to Trails Concervancy](#)

Links for Mountain Biking

- [Washington's Backcountry Bicycle Trails Club](#)
- [State Department of Natural Resources - Trail Page](#)
- [International Mountain Bike Association](#) – Rules of the Trail

		<i>Division of Bicycle & Pedestrian Transportation</i>							
Search	Projects	Maps	Safety	What's New	Events	Laws & Policies	Funding	About Us	
<input type="text"/>		WALKING		home // maps // bicycle touring					

[Introduction](#)

[Bicycle Touring](#)

[NC Bicycling Highways Maps](#)

[Regional & Local Maps](#)

[Urban Maps](#)

[Mountain Biking](#)

[Blue Ridge Parkway](#)

[NC Bike Clubs](#)

[NC Bike Shops](#)

[Map Order Form](#)

North Carolina Is For Bicycle Touring

Whatever your cycling ability, there are many wonderful places to travel by bicycle in North Carolina. For recommendations on routes, you can order maps for North Carolina's Bicycling Highways, regional and local maps, and urban area maps. These maps include information about points of interest, recreation areas, and, in some cases, camping information. To further assist your travel plans, you can order or download North Carolina state highway map or a state ferry schedule from the main NC Department of Transportation website.



Check out the [NCDOT Traveler Information Management System](#) to get real-time information on events that cause severe and unusual congestion on major roadways in North Carolina.

Tourist Information

For more information on camping, motel accommodations, bed and breakfast facilities, and other state and local tourist information, you can contact http://www.ncdot.org/transit/bicycle/maps/maps_touring.html# North Carolina Division of Tourism, Film and Sports Development
430 N. Salisbury Street
Raleigh, NC 27611
(919) 733-4171 or 1-800-VISIT NC (800-847-4862)

Cycle North Carolina (CNC) A Cross-State Bicycle Tour

Cycle North Carolina is a week-long bicycle tour that takes place in mid-October when the air is cool and the colors make every scene picturesque. Each year nearly a thousand participants pedal their way from the foothills of the Smoky and Blue Ridge Mountains to the coast taking in the best of North Carolina's historic sites, state and national parks, museums, and points of interest. In addition to all there is to see, several communities selected for overnight stays, host evening entertainment and showcase their unique and diverse cultures. The promotion of good health and fitness, while providing economic benefit to rural communities and a natural presentation of this state's scenic beauty, has been the objective of this successful bicycling event, since 1999. To find out more about this tour named "One of the Best Bicycling Events in America" by the League of American Bicyclists, go to http://www.ncdot.org/transit/bicycle/maps/maps_touring.html#

Exhibit 7

Other Organized Tours & Events

Each year local bike clubs, charitable organizations, commercial tour operators, and others sponsor organized tours and bicycling events across the state. For a complete listing of these events, please check our [Bicycle Calendar of Events](#).

6/26/03

 North Carolina Department of Transportation	<i>Street: 1 S. Wilmington St. Raleigh, NC 27602</i> <i>Mailing: 1552 Mail Service Center Raleigh, NC 27609-1552</i>	<i>919.733.2804 919.715.4422 fax</i> <i>bikaped_transportation@dot.state.nc.us</i>
DIVISION OF BICYCLE AND PEDESTRIAN TRANSPORTATION		



Home Bike Safety PA Bike Laws Games Road Riding Trail Riding Touring Links

Interactive Graphics



Check the parts of your bike for safety.



Fitting your bike will make it safer to ride.



Using hand signals for road riding.



Fit your helmet properly.



Do you know the meaning of some traffic signs?

Bicycle safety

Look here for guidelines on how to ride your bike so that you and others are safe. This section contains information on fitting your bike and helmet properly and riding in traffic safely.

- TAKE THE BIKE DRIVER'S TEST.
- VIEW a copy of the PA Bike Driver's Manual.

PA bicycle laws

Pennsylvania's bicycle laws help insure the safety of everyone on the road. All riders should become familiar with our Commonwealth's regulations. This information is viewable in your browser or you can **DOWNLOAD** a PDF document.

It is recommended that all bicyclists wear helmets at all times.

Games & Activities



HAVE A SAFE RIDE! Equip your bike and yourself with items for a safe ride.



This game tests your knowledge of SAFE ROAD RIDING.



Check out your knowledge of safe and responsible TRAIL RIDING.

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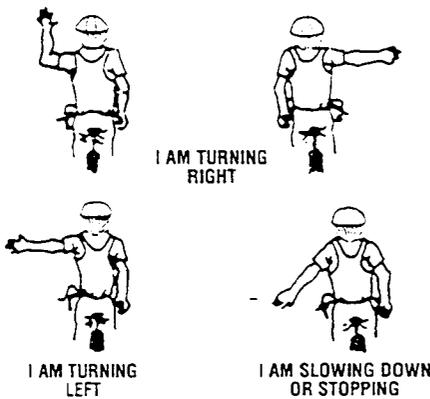
Disclaimers associated with this site • Download Adobe Acrobat Reader • Contact the Webmaster
[For the visually challenged users, Adobe provides versions of Acrobat Reader that include support for screen readers (Accessibility) via the Microsoft Active Access API (MSAA).]

Interactive graphics and games on this site require Shockwave Player for viewing. A free copy of Shockwave Player can be downloaded from Macromedia.com

BIKE SAFELY! Here are the laws to live by.

Exhibit 8a

1. Always bike on the right side of the road in the same direction as traffic. Motorists don't expect wrong-way traffic. Also, because wrong-way bicyclists and motorists come together head-on at the sum of their speeds, neither has much time to avoid the other.
2. When on roadways, consider yourself a driver. Obey all traffic laws.
3. When on crosswalks or sidewalks, consider yourself a pedestrian. However, yield to pedestrians. Follow all town ordinances about biking on sidewalks.
4. Always signal your intention to turn or stop by hand.



5. Always make an audible signal when overtaking a pedestrian or another bicyclist.
6. Never ride more than two abreast, but riding single file is safer. Keep in one lane and be careful not to block traffic.
7. Do not carry passengers on your bicycle unless it is built for two. Adults (18 and over) may carry children (under 4) in backpacks or slings.
8. Do not carry any package which prevents you from using both hands when needed.
9. Keep at least one hand on the handlebars at all times.
10. Never hold onto a moving vehicle.
11. Never allow your child to violate a traffic or bicycle law.

Keep your bike right. The law requires:

White front lamp after dark, visible for 500 ft.

Rear reflector and reflective material on all sides, all visible for at least 600 ft.

Brake able to stop your bike within 25 ft. on dry, clean and level pavement from a speed of 10 mph.

How to turn left at intersections

THE WALK-A-THON.

Get off your bike. Go up onto sidewalk. Heed pedestrian control signals. Walk bicycle in crosswalk. Stop. Wait for next signal. Continue walking. Get back on your bike.

THE BIKE-A-THON.

Before you reach the intersection, look behind for traffic. Signal your turn. Start to gradually merge left. Try to get a positive signal that approaching drivers will yield to let you merge. Once in the left-turn lane, turn like a vehicle driver.

How to make an emergency stop.

If a vehicle turns into your path, the only way to avoid an accident may be to stop as quickly as possible.

Here's how:

Apply front and rear brakes together.

Keep your weight as far back and low as possible. Maximum braking is achieved by resisting the natural back-to-front weight transfer.

Practice emergency stops in an off-road area.

Remember: Wet weather increases stopping distances.

WATCH OUT!

The most common biking accidents.

THE MERGER MISTAKE.

Watch for, and try to establish eye contact with merging motorists. Always bike on the right. If you bike on the left, there is less chance merging motorists will look in your direction.

THE SIDE STREET SWIPE.

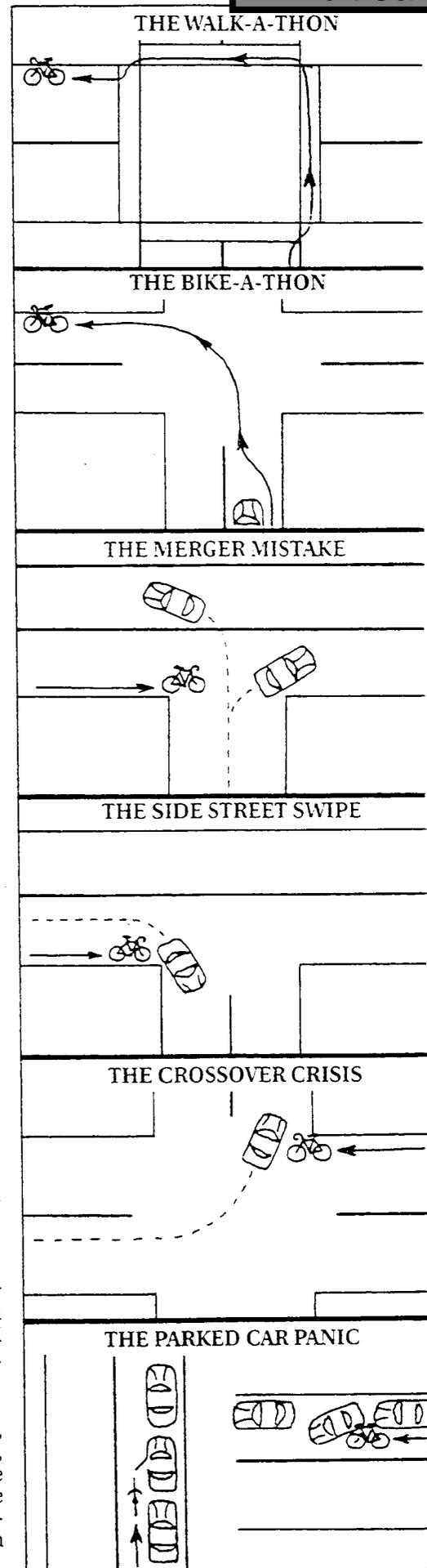
Be extra aware of cars turning into side streets and driveways. If a car passes you, then slows down, the driver may be preparing to turn. Look for signal lights. Be ready to brake or, if possible, make an evasive right turn.

THE CROSSOVER CRISIS.

When a car is turning left at an intersection, the driver can often misjudge your speed. Or not see you at all because you are hidden by another car. Look ahead toward intersections. Be extra careful. Make yourself visible and/or audible.

THE PARKED CAR PANIC.

Be wary of pull-out signs like brake lights, movement of the driver inside the car, tail-pipe exhaust. Keep your hands on the brakes and be ready to stop when you are riding near a row of parked cars. If possible, ride beyond the reach of an open vehicle door.



Traffic & Travel | Business Networks | **Programs & Info** | Projects & Plans | Careers

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SEARCH:



Programs & Info

Bicycling and Walking in Virginia

What's new . . .

Update on the [Virginia Capital Trail](#)
Integrating Bicycle and Pedestrian Transportation
[A Policy and Procedural Review](#)

Bicycling in Virginia Learn about various opportunities for bicycling in Virginia.

Events Look for exciting rides, races, and special biking events throughout Virginia on our bike events calendar or share an event with us.

Laws and Safety Tips Familiarize yourself with the bicycle laws in Virginia, as well as tips for making your biking experience safe and enjoyable.

Trails Check out the many off-road opportunities in Virginia, from paved trails to Rails-to-Trails paths.

Orders Place an order for the 2001/2002 **Virginia Bicycling Guide**, materials for safety programs, and the **Virginia Bicycle Facility Resource Guide**.



Fast Links

- [News Center](#)
- [Photo Gallery](#)
- [Bulletin \(Employee Newsletter\)](#)
- [Bulletin Archives](#)

Research

- [Resources](#)
- [Technology](#)
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Did You Know?



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- [Leadership](#)
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Environment

- [Adopt-a-Highway](#)
- [Bicycling in Virginia](#)
- [Wildflowers](#)
- [Enhancement Program](#)
- [Environmental Programs](#)

Roadway

- [Get a pothole filled](#)
- [Rural Rustic Roads](#)
- [Get a hauling permit](#)
- [Get a road paved](#)
- [Signs](#)
- [Services](#)
- [Get a road accepted for VDOT maintenance](#)

HIGHWAY HELPLINE

Exhibit 9

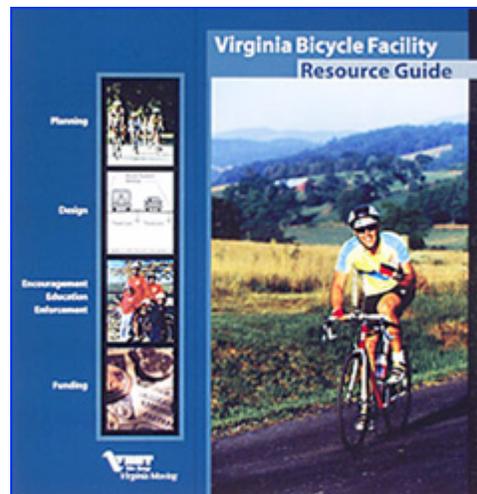
1-800-367-ROAD
(TTY users, call 1-800-432-1843)

Maps Highway and county maps are available to help with planning your bicycle travels in Virginia.

The **State Bicycle and Pedestrian Program** promotes bicycling and walking throughout Virginia. Learn more about the program and support teams and bicycle and pedestrian projects conducted by VDOT. Current projects include the [Northern Virginia Regional Bikeway and Trail Network Study](#) and the [Richmond Regional Bicycle and Pedestrian Transportation Study](#).

The **Virginia Bicycle Facility Resource Guide** is available in PDF format. This guide offers planning, design, education, encouragement and funding ideas for bicycle facilities.

The bicycle facility **Design Guidelines** from VDOT's Road Design Manual are now available in PDF format.



[Biking and Walking Home Page](#) | [Biking in Virginia](#) | [Laws & Safety Trails](#) | [Events](#) | [Maps](#) | [Order Info](#) | [Program](#) | [Directory](#) | [Contact Us](#)

VDOT has created numerous biking and walking trails throughout the Commonwealth.

Pop Quiz

True or False? You can bike and walk...

In Shenandoah National Park on the 105-mile long Skyline Drive.

T F

In Virginia's Blue Ridge Mountains on the 214 mile long trail.

T F

The Colonial Parkway that joins Jamestown, Williamsburg, and Yorktown.

T F

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[Contact Us](#) | [Privacy Statement](#) | [Accessibility](#)

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Exhibit 9a

		<i>Division of Bicycle & Pedestrian Transportation</i>						
Search	Projects	Maps	Safety	What's New	Events	Laws & Policies	Funding	About Us
BICYCLING		WALKING		home // safety // resources & links // safety education materials				

[Introduction](#)

Bicycle Safety Education Materials

[Bicyclist & Pedestrian Safety in North Carolina](#)

This section lists safety materials and education programs that are available through the Division of Bicycle and Pedestrian Transportation.

[Programs & Initiatives](#)

- [Pamphlets and Handouts](#)
- [Tests](#)
- [Curriculum for Teachers](#)
- [Manuals/Guidebooks/Information Sheets](#)
- [Posters](#)
- [Miscellaneous Items](#)
- [Video Library](#)
- [Order Form for North Carolina Residents](#)
- [Order Form for Out-of-State Residents](#)

[Basics of Bicycling Curriculum](#)

[Bicycle Helmet Initiatives](#)

[Bike Repair Video](#)

The Division of Bicycle and Pedestrian Transportation can provide a variety of tools for your use in developing and conducting bicycle safety programs. Below are a list and brief description of the items that are available. North Carolina agencies and residents may obtain any of the materials free of charge. You may [order online](#) or by calling 919/733-2804 during regular business hours. You may also fax the order to 919/715-4422. Sorry, but we can only offer single copies of selected items to out-of-state agencies and residents.

[North Carolina School Crossing Guard Training Program](#)

[Share the Road Initiative](#)

If you are unsure of which items might be appropriate for your program, we can send you a sample packet for your review. For larger orders, please allow a minimum of three weeks for delivery.

[Walk a Child to School Initiative](#)

[Click here](#) to link to NC other agencies that can help with safety education.

[Research & Reports Interactive Crash Data Tool](#)

[Resources & Links](#)[Bicycle Safety
Materials](#)[Order Form](#)

Pamphlets and Handouts

Available in multiple copies, up to 500 of each item, except as otherwise noted.

Bicycle Safety and Your Child

Points out erroneous concepts many parents have about how to bike safely.

Outlines crash types common to younger riders and offers instructions for avoiding these safety hazards.

Do Your Kids Need a Bicycle Helmet?

Informative pamphlet encouraging parents to buy helmets for their children.

Namron Says Be Safe on Your Bike

For Grades K-3. Gives children 12 important rules for keeping safe while biking. Coordinating poster also available.

Worksheets: Namron Says Be Safe on Your Bike

For grades K-3. Connect-the-dots and fill-in-the-blank worksheets covering helmet use, stop signs, watching for cars, signaling turns, and keeping both hands on the handlebars when riding.

Bicyclists' Rights and Responsibilities

For grade 4 to adult. Outlines North Carolina vehicle laws that apply to the operation of a bicycle.

Why Knock Yourself Out on Your Bike

For grades 4-9. Eye-catching pamphlet encouraging children to wear helmets.

Bicycle Quick Check

For grade 4 to adult. Outlines procedure for checking your bike for problems before each ride.

Bicycle Inspection Form

Checklist of parts with place to note problems. Bicycle inspection is suggested as an element of all bicycle rodeos.

Certificate of Achievement (Rodeo)

To be awarded upon the successful completion of a Bicycle Rodeo Course.

Be Seen at Night

For grade 9 to adult. Highlights risks of biking at night and encourages use of lights and reflective clothing to enhance visibility.

History of Bicycle Transportation

For grades 5 and up. Traces the development of the bicycle from its earliest appearance around 1770. Industrial and social impact of the bicycle are also outlined.

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Tests

Available in multiple copies, up to a maximum of 500 each.

What Do You Know About Bicycling?

For grades 4 and up. Tests student's knowledge of basic bicycle rules and safe riding techniques. Accompanying answer sheet thoroughly explains correct answers.

Find the 12 Hazards

For grades 4 and up. Cartoon illustration shows 12 crashes waiting to happen. Correct answers on the back.

Parts of the Bicycle

For grades 4 and up. Tests student's knowledge of basic bicycle parts. Correct answers on back.

[return to top](#)

Curriculum for Teachers

The Basics of Bicycling (Loan Only — To Teachers)

Curriculum package complete with video component (instructor's module and

student modules) for teaching bicycle safety to 4th and 5th grade students. Seven-lesson format includes two in-class lessons and five on-bike lessons conducted in a simulated traffic environment. Complete teacher's manual with lesson plans and background information.

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Manuals/Guidebooks/Information Sheets

Comprehensive information on a variety of topics, for use by instructors and event organizers. Maximum of 3 copies each, except as noted.

Bicycle Events: A Community Guide

32-page booklet outlining suggested bicycle events and promotions. Includes information on how to mobilize community resources and how to work with the media.

North Carolina Bicycle Helmet Campaign Guide

Comprehensive manual on how to conduct awareness campaign to increase bicycle helmet use. Includes case studies, sample budgets, and references and contacts.

You're the Driver of a Vehicle

Overview of laws that pertain to the operation of a bicycle in North Carolina. Quotes General Statute that applies, with explanatory text. Also includes information on common bicyclist errors and what to do following a crash.

Conducting a Bicycle Repair Clinic

Instructions on how to set up, staff, and implement a local bicycle repair clinic.

Organizing a Bicycle Field Trip for Children

Instructions for taking children on a long bicycle outing.

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Posters

Available in limited quantities for display in classrooms or at bicycle events.
Maximum of 25 each.

Namron Says Be Safe on Your Bike!

For grade K-3. 11" x 17" two-color poster listing 12 important rules for keeping safe on your bike. Goes with pamphlet and worksheets.

Wrong Way is the Wrong Way

11" x 17" two-color poster showing why riding the wrong way is dangerous.

Frankenstein Helmet Poster

For grades 4 and up. 11" x 17" two-color poster featuring cartoon of Frankenstein monster, the "Noted Brain Expert," advising kids to "keep your brains where they belong — in your head. Get a bicycle helmet today."

Bicycle Rodeo

Colorful 11" x 17" poster for announcing local bicycle rodeos. Provides space for date, time, place, and other information for the event.

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Miscellaneous Items

North Carolina Bicycle Clubs and Organizations

[Click here](#) to see a complete list of bike clubs and organizations in North Carolina that you can download and print.

North Carolina Bicycle Shops

[Click here](#) to see a complete list of bike shops in North Carolina that you can download and print.

Sources of Low-Cost Bicycle Helmets

Lists bicycle manufacturers who offer special discounts on helmets. Describes type of promotion, cost of helmet, and provides the name and phone number of contact person. Lists both bicycle shop-based promotions and direct bulk

purchase programs. Maximum of 10.

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Video Library

The DBPT has an extensive library of videocassettes dealing with a variety of bicycle safety topics for bicyclists of all ages. These visual aids are available on loan, free of charge, to individuals and organizations in North Carolina.

Videocassettes should be reserved in advance and must be returned within one week after use. Borrowers are responsible for replacing lost or stolen videocassettes.

To obtain a videocassette, you may [click here](#) to go to the Safety Materials Order Form, which you may email to us. You may also contact us by mail, phone, or FAX:

The Division of Bicycle and Pedestrian Transportation
1552 Mail Service Center
Raleigh, NC 27699-1552
(919) 733-2804
Fax (919) 715-4422

Visual aids will be mailed or you may pick them up during regular business hours.

The Division of Bicycle and Pedestrian Transportation offices are located in downtown Raleigh, in the Transportation Building, at the corner of Wilmington and Morgan Streets (across from the State Capitol), Room 304.

Along for the Ride (Adult) 1994 18 min

Produced by the Federal Highway Administration and the National Highway Traffic Safety Administration, this video stresses the benefits of bicycling and how to ride safely. Through interviews with US Cycling Team members and other avid cyclists, concepts such as being visible, the importance of helmet use, proper riding techniques and how to safely share the road with cars are explored. The benefits of commuting by bicycle are highlighted.

Exhibit 9a

Bicycle Safety Camp (Grades 4 & 5) 1989 25 min.

Sam Sprocket teaches kids all the important bicycle safety rules in a lively rap music format. Helmet use, signaling turns, looking both ways before entering the road, obeying traffic signs and signals, concentrating on what is ahead and much more is covered.

Bicycle Tripping (Jr. High to Adult) 1985 80 min

Covers everything you need to know to plan for all types of bicycle travel — errands, commuting, day-trips, and touring. Includes information on types of bicycles, transporting bikes, preparing for a ride, safety tips and on-road repairs. Features well-known author Tom Cuthbertson. Can be shown as a series.

The Bicycle Zone (Upper Elementary) 1995 12 min

This humorous video uses colorful graphics and animation with live scenes to teach fundamental bicycle skills. The story follows a family into the Bicycle Zone where it becomes apparent that the children know more than the parents about safe bicycling. Shot in California, the video highlights two California laws not applicable in North Carolina: mandatory helmet use and the choice of executing right turn signals with the right or left arm. In North Carolina there is no statewide bicycle helmet law; however, a number of North Carolina localities have passed ordinances which require helmet use for certain age groups. Also, right turn signals must be made with the left hand and arm pointed upward. Be sure to highlight these differences when showing the video.

Bike Safety with Bill Nye The Science Guy (Grades 6-12) 1996 16 min

Take a ride with Bill Nye, The Science Guy, and learn about the fascinating world of bicycle safety. But before you start your wheels in motion, remember to put on your helmet and do the "pre-ride check." From hand signals and rules of the road, to valuable tips from professional cyclists, this is a fun way to learn about a serious subject.

Don't Get Stuck: FIX IT! Bike Repair Clinic (Ages 11-15) 2000 38 min

Common problems such as a flat tire, brakes that don't work, or a missing or broken part make a bike unrideable and unsafe. This 38-minute video is designed to stand alone or be used by an adult to help a child learn to make 10 basic bicycle repairs. All the tools, parts, and equipment needed to make the repairs are listed in each section. Information on properly fitting a helmet and

Exhibit 9a

sizing a bike are also included. Most importantly, the repairs that are best left to an experienced mechanic are discussed.

Elephants Never Forget (K-3) 1989 7 min

Elephant siblings and their mom teach the basic bicycle riding tips and rules of the road that children should "never forget." Using animation and live action sequences, the elephants stress the importance of helmet use and address safe practices for riding in the street and on the sidewalk.

Get the Big Picture (Middle School) 1994 8 min

A young teen dreams of driving a car like his older sister. Video emphasizes that bicycle riders must obey the same rules of the road as drivers and must learn to always be aware of what is going on around them. Three potentially hazardous situations are highlighted: parked cars, intersections and left turns.

"Heads You Win" (Adults) 1990 10 min

Produced by the Pitt County Bicycle Helmet Promotion Project for use with adult groups such as PTA's, service clubs, community groups, etc. Provides information on bicycle crash trends, how helmets reduce injury severity, why parents should buy helmets for their children, helmet types, helmet standards, helmet fit, etc.

I'm No Fool with a Bike (Grades K-4) 1988 15 min

Features Disney characters Jiminy Cricket, Pinocchio and Gepetto. Live action sequences cover topics which include bicycle fit, use of helmets, riding on the sidewalk, riding in traffic, rules of the road and scanning for hazards.

Otto the Auto Bicycle Safety Series (Grades K-2) 1981 4 min each

Three animated videos each covering one key topic, instruct children in those bicycle safety concepts most important for reducing crashes in this age group:

Bicycle Border Patrol: Otto teaches children on bicycles to avoid darting out into traffic by observing "borders" along sidewalks, driveways, alleys and streets to help them remember to ride only where it is safe.

Dream Bike: Otto instructs a young girl on how to properly choose

Exhibit 9a

a bicycle. Otto shows her how to see if the bike fits and what equipment she must check to make sure that she can safely ride the bike.

Bikes Go With the Flow: Riding on the wrong side of the road is a serious mistake made by young children on bikes. Otto, by use of a catchy song, "Go with the Flow," shows youngsters how to ride with traffic and tells them why they should ride on the right-hand side of the street.

Pedal Smarts (High School) 1995 18 min

Upbeat, fast-paced and humorous, this video demonstrates safe cycling and motoring skills to a typically hard-to-reach audience. It uses teen actors in a news-style format with eye-catching graphics, animation and off-beat segments to teach laws, the importance of wearing a helmet, and how to choose the safest spot to ride in a variety of traffic situations. Shot in California, the video highlights one California law not applicable in North Carolina: the choice of executing right turn signals with the right or left arm. In North Carolina right turn signals must be made with the left hand and arm pointed upward. The video also highlights California's mandatory helmet law. In North Carolina the Child Bicycle Safety Act of 2001 requires all bicycle operators under 16 years of age to wear a bicycle helmet on public roads, public paths and public rights-of-way. In addition, a number of North Carolina localities have passed ordinances requiring helmet use for certain age groups that may be more stringent than the state law. Be sure to highlight these differences when showing the video.

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7/18/03

 <p>North Carolina Department of Transportation</p>	<p>DIVISION OF BICYCLE AND PEDESTRIAN TRANSPORTATION</p> <p>Street: 1 S. Wilmington St. Raleigh, NC 27602 Mailing: 1552 Mail Service Center Raleigh, NC 27609-1552</p> <p>919.733.2804 919.715.4422 fax bikaped_transportation@dot.state.nc.us</p>	
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Safety Tips

Bicycles are legally considered "vehicles" on Washington's roadways. That means bicyclists must obey the rules of the road like drivers of any other vehicle and must be treated as equal users by all other vehicles.



The best way to avoid accidents is to be prepared and be aware of other vehicles around you. Avoid common bicyclist errors and common motorist errors committed around bicyclists.

Here are some safety tips for biking in Washington:

1. Obey traffic signs and signals - Bicycles must follow the rules of the road like other vehicles.
2. Never ride against traffic - Motorists aren't looking for bicyclists riding on the wrong side of the road. State law and common sense require that bicyclists drive like other vehicles.
3. Follow lane markings - Don't turn left from the right lane. Don't go straight in a lane marked "right-turn only."
4. Don't pass on the right - Motorists may not look for or see a bicycle passing on the right.
5. Scan the road behind you - Learn to look back over your shoulder without losing your balance or swerving. Some riders use rear-view mirrors.
6. Keep both hands ready to brake - You may not stop in time if you brake one-handed. Allow extra distance for stopping in the rain, since breaks

[Programs](#)[• Commute Options](#)

- are less efficient when wet.
7. Wear a helmet and never ride with headphones - Always wear a helmet. Never wear a headphone while riding a bike.
 8. Dress appropriately - In rain wear a pancho or waterproof suit. Dress in layers so, you can adjust to temperature changes. Wear bright colored clothing.
 9. **Use hand signals** - Hand signals tell motorists and pedestrians what you intend to do. Signal as a matter of law, of courtesy, and of self-protection.
 10. **Ride in the middle of the lane in slower traffic** - Get in the middle of the lane at busy intersections and whenever you are moving at the same speed as traffic.
 11. **Choose the best way to turn left** – There are two choices: (1) Like an auto: signal to move into the left turn lane and then turn left. (2) Like a pedestrian: ride straight to the far side crosswalk. Walk your bike across.
 12. **Make eye contact with drivers** - Assume that other drivers don't see you until you are sure that they do. Eye contact is important with any driver which might pose a threat to your safety.
 13. **Look out for road hazards** - Watch out for parallel-slat sewer grates, gravel, ice, sand or debris. Cross railroad tracks at right angles.
 14. **Use lights at night** - The law requires a white headlight (visible from at least 500 feet ahead) and a rear reflector or taillight (visible up to 300 feet from behind).
 15. **Keep your bike in good repair** - Adjust your bike to fit you and keep it working properly. Check brakes and tires regularly. Routine maintenance is simple and you can learn to do it yourself.

[Order Washington State Bicycle and Pedestrian Safety Brochures](#) - from Washington Traffic Safety Commission

[Cooper Jones License Plate Emblem Kit Now Available!](#)

National Bicycle Safety Links

- [10 Safety Tips](#) - from National Highway Traffic Safety Administration
- [Bike Safety Tips](#) - from American Association of Family Physicians

Exhibit 10

- [Bicycle Safety Training](#) - from the League of American Bicyclists
- [Bicycle Safety News](#) - from the US Consumer Product Safety Commission

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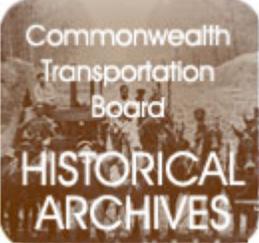


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Programs & Info



Bicycling in Virginia - Laws & Safety Tips

The laws regulating bicycling on Virginia's public highways define the rights and duties of bicyclists as well as the motorists with whom they share the roadway. Bicyclists and motorists basically have the same rights and duties, and the laws governing traffic regulation apply equally to both. The following summary is intended to help bicyclists understand the laws which apply to the operation of bicycles in Virginia.

[Rights and Duties](#)

[Definitions](#)

[Traffic Controls](#)

[Where to Ride](#)

[Changing Directions](#)

[Passing](#)

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[Electric Power-assisted Bicycles](#)

[Electric Personal Assistive Mobility Devices](#)

[Tips for Safe Bicycling](#)

This summary condenses or paraphrases the actual language of the Virginia vehicle laws. In a court, which is guided by the full and exact language of the laws, it is not a proper authority to cite. The *Code of Virginia* section references are provided with the summary. The text of the sections may be found by entering the reference in the searchable [database](#) for the *Code of Virginia*.

Rights and Duties

Every person riding a bicycle on a highway shall be subject to the provisions of the Code of Virginia section on motor vehicles and shall have the rights and duties applicable to the driver of a vehicle unless a provision clearly indicates otherwise.

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HIGHWAY HELPLINE

1-800-367-ROAD

Exhibit 10a

(TTY users, call 1-800-432-1843)

Reference: §46.2-800

Definitions

- A **bicycle** is defined as a device propelled solely by human power, upon which a person may ride either on or astride a regular seat attached thereto, having two or more wheels in tandem, including children's bicycles except a toy vehicle intended for use by young children. A bicycle is a vehicle when operated on the highway.
- A **bike lane** is defined as that portion of a roadway designated by signs and/or pavement markings for the preferential use of bicycles, electric power-assisted bicycles, and mopeds.
- A **shared use path** is defined as a bikeway that is physically separated from motorized vehicular traffic by an open space or barrier and is located either within the highway right-of-way or within a separate right-of way. Shared use paths may also be used by pedestrians, skaters, users of wheel chair conveyances, joggers, and other nonmotorized users.
- A **sidewalk** is defined as the portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for use by pedestrians.
- A **highway** is defined as the entire width between the boundary lines of every place open to public use for purposes of vehicular travel.
- A **roadway** is defined as the portion of the highway improved, designed, or ordinarily used for vehicular travel, exclusive of the shoulder.
- A **vehicle** is defined as every device used for the transportation of people or property on a highway.

Reference: §46.2-100

Traffic Controls

Bicyclists must obey all traffic signs, signals, lights, and markings.

Reference: §46.2-830

Where to Ride

VDOT has created numerous biking and walking trails throughout the Commonwealth.

Pop Quiz

True or False? You can bike and walk...

In Shenandoah National Park on the 105-mile long Skyline Drive.

T F

In Virginia's Blue Ridge Mountains on the 214 mile long trail.

T F

The Colonial Parkway that joins Jamestown, Williamsburg, and Yorktown.

T F

Exhibit 10a

- Bicyclists must ride with the flow of traffic on the right side of the highway.
- Bicyclists operating a bicycle on a roadway at less than the normal speed of traffic at the time and place under conditions then existing shall ride as close as safely practicable to the right curb or edge of roadway. Exceptions to this are when bicyclists are overtaking and passing another vehicle proceeding in the same direction, preparing for a left turn, avoiding unsafe conditions, avoiding riding in a lane that turns or diverges to the right, riding on a one way street where bicyclists may ride as near the left-hand curb or edge of roadway, or when the lane width is too narrow to share with a motor vehicle. Additionally, bicycles are not excluded from riding on the highway shoulder.
- Bicyclists must not ride between two lanes of traffic moving in the same direction unless one lane is a separate or mandatory turn lane.
- Bicyclists must ride single file on highways. Bicyclists may ride two or more abreast on paths or parts of highways designated exclusively for bicycle use.
- Bicyclists are not permitted to ride on Interstate and certain other controlled access highways. The restricted sections of the highways are marked with conspicuous signs.
- If a usable bicycle path is located next to a roadway and local ordinance requires its use, bicyclists must ride on the path, not the roadway.
- Bicycles may be ridden on sidewalks unless prohibited by local ordinance or traffic control devices. While on sidewalks and shared use paths, bicyclists must always yield the right of way to pedestrians and give an audible signal before passing a pedestrian.
- Bicyclists pulling onto a sidewalk or highway from a driveway must yield the right of way to pedestrians or vehicles already on the sidewalk or highway.

Reference: §§ 46.2-802, 46.2-808, 46.2-826, 46.2-903, 46.2-904, 46.2-905, 46.2-907

Changing Directions

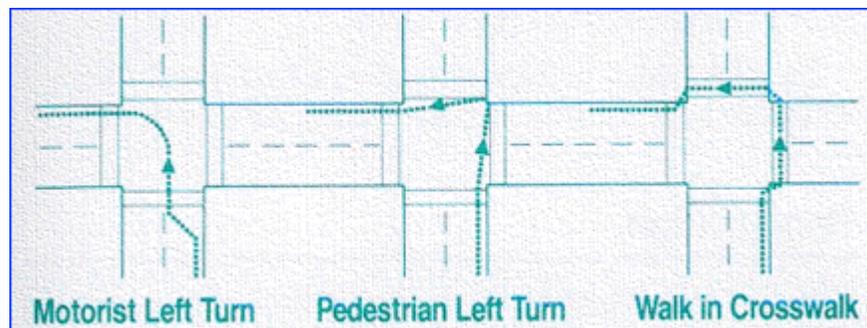
Bicyclists must signal their intentions to stop or turn. The proper signals are made with the left arm as follows:

Exhibit 10a



The signals do not have to be given continuously if both hands are needed to control the bicycle.

Bicyclists may make left turns as either motorists or pedestrians do. To make a pedestrian left turn, the bicyclist should continue straight across the intersecting road, obey the traffic signals, turn left at the corner, and proceed as usual. Bicyclists may also dismount and walk in the crosswalks of the two intersecting roads. If traffic control devices specify the method of crossings, these directions must be followed. Please refer to the examples shown here:



Reference: §§ 46.2-846, 46.2-847, 46.2-848, 46.2-849

Passing

Bicyclists may overtake and pass another vehicle only when safe to do so. Bicyclists may pass another vehicle on the right or left, and they may stay in the same lane, change lanes, or ride off the road if necessary for safe

Exhibit 10a

passing. Please note that passing motor vehicles on the right side may be extremely dangerous if the motorist does not see the bicyclist and attempts a right turn.

Motorists must approach and pass a bicyclist at a safe distance and reasonable speed.

Reference: §§ 46.2-839, 46.2-907

Safety Considerations

- Bicyclists must not carry articles which prevent them from keeping at least one hand on the handlebars.
- Bicyclists must not carry more people than the bicycle is designed to accommodate, except for adult bicyclists carrying a child, under six years of age, securely attached to the bicycle in a seat or trailer designed to carry children.
- Bicyclists must not attach themselves or their bicycles to any other vehicle on the roadway.
- Bicyclists are not permitted to wear earphones in both ears while riding a bicycle.

Reference: §§ 46.2-906, 46.2-932, 46.2-1078

Helmet Use

Several jurisdictions in Virginia require that every person fourteen years of age or younger shall wear a protective helmet whenever riding or being carried on a bicycle on any highway, sidewalk, or public bicycle path. The jurisdictions such ordinances reporting to VDOT are:

Albemarle County	City of Manassas
City of Alexandria	City of Manassas Park
Amherst County	City of Norfolk
Arlington County	Orange County
Clarke County	City of Petersburg
City of Falls Church	Prince William County
Floyd County	Stafford County
City of Hampton	Town of Vienna
James City County	Town of Wise

Town of Luray

Reference: §46.2-906.1

Equipment

Every bicycle ridden between sunset and sunrise must have a white light on its front with the light being visible at least 500 feet to the front. The bicycle must have a red reflector on the rear visible 300 feet to the rear. A red light visible for 500 feet to the rear may be used in place of or in addition to the red reflector.

Bicycles ridden on highways must have brakes which will skid the wheels on dry, level, clean pavement.

Reference: §§ 46.2-1015, 46.2-1066

Registration

Bicyclists may register the serial numbers of their bicycles with local police or sheriff's department.

Localities have the authority to license bicycles.

Reference: §§ 46.2-908, 15.2-1720

Accidents

Bicyclists must stop when they are in an accident involving death, injury, or property damage. The bicyclist's name and address must be given to the police and to any person involved in the accident or the owner of the property. If unattended property is damaged, the bicyclist must make a reasonable effort to find the owner. The bicyclist's name and address must be given to the owner. If the owner can not be located, the bicyclist must leave a note in a conspicuous place at the accident site and report the accident to the police within 24 hours.

Reference: §§ 46.2-894, 46.2-895, 46.2-896

Mopeds, Electric Power-assisted Bicycles, and Electric Personal Assistive Mobility Devices

Generally the laws for the operation of mopeds, electric power-assisted bicycles, and electric assistive mobility devices are similar to the operation of bicycles.

A moped is a bicycle-like device with pedals and a helper motor that has no more than two brake horsepower and produces speeds not exceeding 30 miles per hour. Moped operators must be at least 16 years old. A moped is considered a vehicle while operated on a highway. Mopeds can not be ridden on sidewalks or bike paths. Some localities in Northern Virginia may impose restrictions on the operation of mopeds. Localities can require additional safety equipment for moped operation.

An electric power-assisted bicycle is a bicycle equipped with an electric motor that reduces the pedaling effort required of the rider, but does not eliminate the rider's need to pedal. They may not be driven faster than 25 miles per hour. Operators must be at least 14 years old or be under the supervision of someone at least 18 years old. An electric power-assisted bicycle shall be considered a vehicle when operated on a highway.

An electric personal assistive mobility device is a self-balancing two-nontandem-wheeled device that is designed to transport only one person and is powered by an electric propulsion system that limits the device's maximum speed to fifteen miles per hour or less. Such devices must be equipped with a system that will enable the user to bring the device to a controlled stop. These devices may be operated on highways with a maximum speed limit of 25 miles per hour or less if no sidewalk is provided or if use of the sidewalk is prohibited. Operators must be at least 14 years old or under the supervision of a person who is at least 18 years old. An electric personal assistive mobility device is considered a vehicle when operated on a highway.

Reference: §§ 46.2-100, 46.2-908.1, 46.2-914, 46.2-915.2, 46.2-1051

Important Note on Infractions

Violation of state traffic laws is considered a traffic infraction and is punishable by a fine of not more than \$100 unless other specific penalty provisions apply.

Tips for Safe Bicycling

- Be a responsible bicyclist - obey all traffic control devices and use proper hand signals.
- Always ride with the flow of traffic.
- Dress safely - wear a helmet, wear bright colored clothing, and secure loose pant legs.
- Ride defensively - anticipate the actions of other road users and watch for road hazards.
- Pass vehicles with extreme care - turning vehicles may not see you.
- Be aware of motor vehicle blind spots whether while riding or when stopped at an intersection.
- Maximize your visibility at night - wear reflective clothing and apply reflective tape to your bicycle.
- Walk your bicycle when you get into traffic situations beyond your cycling abilities.
- Exercise great caution when riding in bus traffic - watch out for buses pulling to and from curbs and passengers getting on and off buses.
- Park your bicycle so you do not block sidewalks, handicap and building accesses, or emergency drives.
- Lock your bicycle - secure both wheels and the frame to a stationary object using a sturdy lock.
- Register or license your bicycle if required or provided by your community.

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Andover Hop River State Park Trail

Trail Highlights

This trail is a part of the Hop River State Park Trail that begins in Bolton and ends in Columbia/Windham; it is also a part of the planned East Coast Greenway. This 6-mile section of the trail begins at the Bolton town line, where it connects with Bolton's portion of the trail. The trail runs southeast through the town, first crossing Bailey Road and then Burnap Brook Road and Burnap Brook. The trail then continues south crossing Wales Road and then Hebron Road (Route 316). Continuing to the southeast the trail crosses the Merritt Valley Road then travels under Route 6 ending at Parker Bridge Road at the Columbia town line. At this point it connects with Columbia's portion of the trail.

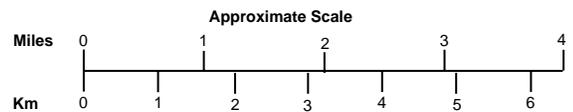
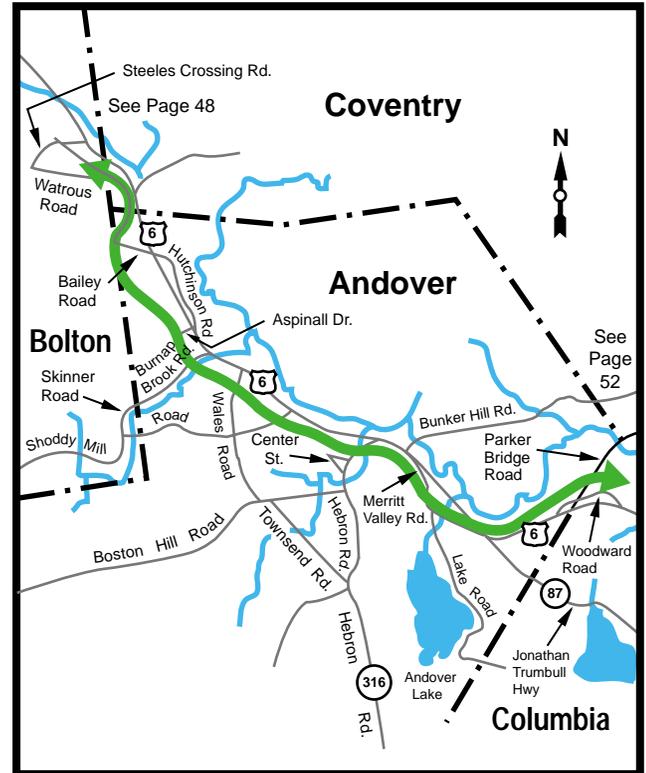
There are remains of railroad bridges along this trail. Extreme caution must be taken in these areas.

Parking and Accessibility

No designated parking area is available for trail users.

From Route 6 East: After Route 6 enters the town of Andover, turn right onto Bailey Road. The road will intersect with the trail after a short distance.

From Route 6 West: After entering the town of Andover, turn left onto Merritt Valley Road. The road will intersect with the trail after about 0.5 miles.



Recommended Activities



Prohibited Activities



LOCATION: Andover
ENDPOINTS: Bolton town line
 and Columbia
 town line

HOURS: Dawn to dusk
LENGTH: 6 miles
SURFACE: Gravel, broken
 stone and
 compacted earth

CONTACT: Department of
 Environmental
 Protection
 Eastern District
 Headquarters
 209 Hebron Road
 Marlborough, CT 06447
 (860) 295-9523



Appendix C

Share the Road

The document can be viewed electronically at the ADOT Bicycle and Pedestrian Program website: <http://www.azbikeped.org/>



Appendix D

Share the Road with Pedestrians

The document can be viewed electronically at the ADOT Bicycle and Pedestrian Program website: <http://www.azbikeped.org/>



Appendix E

Arizona Bicycling Street Smarts

The document can be viewed electronically at the ADOT Bicycle and Pedestrian Program website: <http://www.azbikeped.org/>



Appendix F

Maintenance and Improvement Request Form



Arizona Bicycle Maintenance and Improvement Request Form

Arizona Bicycle Program Facility Improvement Request Form is a program of the Arizona Department of Transportation. The program goals are designed to collect maintenance and improvement needs on Roadways and trails and for an inspection/response to the problem on ADOT roadways within 3 business days after receiving the request. After the inspection, the repair date(s) will be scheduled as necessary.

You may send a request via mail, fax, e-mail, or by filling out the on-line request form below. Mailing your request may take longer.

Arizona Department of Transportation

mailing address 206 S. 17th, Ave Mail Drop 310B
Phoenix, AZ 85007
Phone Number: (602) 712-8141
Fax Number: (602) 712-3046
e-mail Address: azbikeped@azdot.gov

Please fill out the form below to submit your request to the Arizona department of Transportation. Your information must be included after the *s.

*Last Name: _____ *First Name: _____
Your Address: _____ City: _____
State: _____ Zip: _____
*Day-Time Phone Number: _____
Fax Number: _____
*e-mail Address: _____
*If we have questions, we will contact you. Please check a best method to contact you:
Phone: _____ Fax: _____ e-mail: _____



Location of Improvement/Maintenance Need

*City Name: _____

*Street Name/Trail Name: _____

Which side of the street (north, south, west, east?): _____

Nearest Cross Street Name: _____

*Landmarks (nearby building names, address, etc...) please be specific _____

Description of Hazard/Maintenance Improvement Need:

*What type of improvement are you requesting

Surface Repair: _____ Striping: _____ Sweeping: _____ Graffiti: _____

Light Bulb

Changes: _____ Other (Please be specific): _____

Comments:

