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LETTER FROM MATTOX OR WHOMEVER

November 3, 2009

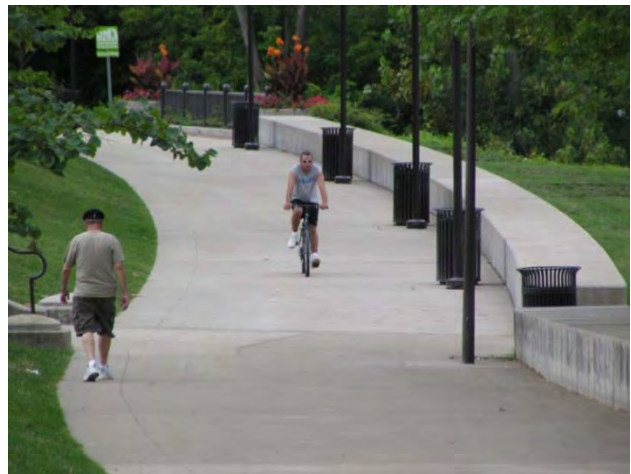
***MISSION: One mission of the West Virginia Division of Highways is to safely accommodate bicycles, pedestrians and other non-motorized users on the state roadway system.***

## **SECTION ONE: INTRODUCTION**

Everyone is a pedestrian sometime, including persons using wheelchairs and other forms of mobility assistance. Every trip begins and ends with a walk, no matter how long or how short the trip and regardless of the mode of transit used during the larger portion of the trip, In many areas, walking is the most expedient way to complete short trips.

In the United States today, many people use bicycles or walk for recreational or exercise. It is one of the peculiar twists of modern life that many people will get in their car and drive ten, or twenty miles to visit a gym, hike a trail or ride a bicycle with their friends for simple exercise.

Recreational bicycle use in West Virginia is constantly increasing. However, bicycling for transportation is limited, primarily due to the rugged terrain, and the rural nature of the state. Both walking and biking are older forms of transportation than motor vehicles and bicycling is more efficient in many circumstances. Yet whenever there is an alternative to walking and bicycling, whether it is automobiles, buses, horses, ferries, or trains; these two modes fall out of favor as a transportation option. The long distances some of us travel every day to get to work or reach a store diminishes bicycling and walking as viable choices for



A network of rail trails provides safe routes for walkers and bicyclists traveling in downtown Wheeling.

transportation for a portion of the population. The real and perceived dangers of walking and cycling discourage others from using these alternatives.

Bicyclists and pedestrians are the most vulnerable users of our highways and byways. They are less protected from the changing weather and more likely to be injured in a collision; the first motor vehicle collision reported involved a bicycle rider in New York City.

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#### FIRST MOTOR VEHICLE ACCIDENT

Ms. Evelyln Thomas, a bicyclist was struck by a Duryea Motor Wagon driven by Mr. Henry Wells in New York City in 1896. Ms. Thomas was taken to a hospital; Mr. Wells was taken to jail where he spent the night waiting on a report of the extent of her injuries.

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Early efforts to improve road conditions in the United States were sponsored by organizations such as the League of American Bicyclists. The invention of the automobile quickly changed the reason for smooth pavement from the bicyclist to the motorist. This sudden change prevented bicyclists and motorists from developing a system for coexistence. American drivers largely consider bicycles to be more of a toy than a legitimate means of transportation. This attitude is slowly beginning to change due to the cost of gasoline, urban congestion, the recent upswing in the number of adult bicycle riders, and the environmental degradation caused by automobiles. As governmental transportation officials, we cannot ignore the segment of society that, due to various circumstances, is dependent upon bicycles or walking for their routine daily transportation needs.

Increasing the amounts of bicycling and walking we do, like any other increase in exercise, would result in an increase in our health and physical fitness. It would also benefit the environment, relieve transportation congestion, and reduce the amount we spend each month to simply get around.

Today motorists must share the road with bicyclists, pedestrians, equestrians, horse drawn buggies, and other groups with special needs. This plan is the West Virginia Division of Highways' (WVDOH) effort to accommodate all of these users on the State's roadways. In fact, the WVDOH wants to do more than just accommodate these users; we want to invite them to use the roads in a safe and effective manner.

#### **MISSION STATEMENT**

The mission of the WVDOH's Bicycle/Pedestrian Coordinator is to improve accommodations on the State's roadway system for bicycles, pedestrians

November 3, 2009

and other non-motorized users and function as a point of contact for inquiry and comment on bicycle and pedestrian issues.

## **PURPOSE OF PLAN**

Through this plan the WVDOH will improve conditions on the State's roadway system for bicycles and pedestrians. Safely and effectively accommodating bicycles and pedestrians will improve the roadway system by increasing the transportation choices available, reducing congestion, reducing the demand for automobile parking spaces and reducing the individuals cost for transportation. It will also improve the quality of life of citizens and visitors in West Virginia by providing a healthier transportation choice and by improving the environment by reducing greenhouse gas emissions and noise pollution.

This plan is intended to:

- advance bicycle and pedestrian accommodations on the State's roadway system and integrate it with other transportation modes,
- developing new and upgrading existing bicycle and pedestrian facilities on the WVDOH roadway system,
- identifying maintenance issues which will improve facilities for bicyclists and pedestrians,
- providing information to citizens on bicycle pedestrian facilities,
- providing standards for planning and designing bicycle pedestrian facilities,
- explaining the laws relating to bicycle and pedestrian facilities, and
- providing public access to Federal and West Virginia laws, rules, regulations and policies on bicycle and pedestrian issues, and
- developing proposals to improve bicycle and pedestrian transportation.

This plan provides a snapshot of the bicycle and pedestrian transportation system in West Virginia and the state laws, policies and procedures relating to it. In addition it includes numerous proposals for future actions to improve bicycle and pedestrian transportation over the next several years.

While this plan is the responsibility of WVDOH and its Bicycle/Pedestrian



This broad shoulder provides a safe area for pedestrians and bicyclists in Putnam County.

Coordinator, no one person or one agency can unilaterally accommodate bicycles and pedestrians on all segments of the roadway system across the state with its fifty-five counties and over four hundred municipalities. It will require a cooperative effort of many Federal and State agencies, local governments, and private organizations

## **ORGANIZATION OF PLAN**

This plan is organized in sections with a specific goal for each section. These goals:

- Adopt bicycle and pedestrian friendly laws practices and policies.*
- Improve access to an improved network of bicycle transportation facilities.*
- Promote safe bicycling through education and enforcement.*
- Improve pedestrian access to the roadway system.*
- Suggest funding for bicycle and pedestrian facilities.*

Each chapter within the section addresses one or more objectives and provides recommendations to aid in achieving the goals. Since this plan proposes actions, objectives and goals over a extended time period, it is obvious that they will not all be achieved by the time the initial plan is promulgated. Instead, they will be completed as time and resources, both personnel and financial, allow. In fact, the realities of funding, personnel and organizational limitations may prevent some of the objectives from ever being achieved.

## SECTION TWO: LAWS POLICIES AND PROCEDURES INTRODUCTION

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***Goal: Adopt bicycle and pedestrian friendly laws, policies and procedures.***

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There are numerous laws, policies and procedures which may apply to bicycles and pedestrians. This section will review those with the most relevance to bicyclists and pedestrians and provides recommendations concerning them.

Any discussion of laws, policies and procedures relating to pedestrians and bicycles must include a survey of federal laws. Many of the changes to state and local policies and procedures are based on changes in federal laws. There are two broad categories of federal laws that affect pedestrians and bicycles: the transportation law and the accessibility law.

### **FEDERAL TRANSPORTATION LAWS**

In 1991 the US Congress passed the Intermodal Surface Transportation Efficiency Act, better known as ISTEA. It recognized the transportation value of walking and bicycling and offered opportunities to consider these users needs in the roadway system.

*The National Bicycling and Walking Study*, published in 1994, interpreted this recognition as two goals; to double the percentage of trips made by bicyclists and pedestrians and to reduce the number of crashes involving bicyclists and pedestrians by ten percent.

ISTEA was followed by the Transportation Equity Act for the 21st Century (TEA-21) which authorized the Federal surface transportation programs for highways, highway safety, and transit from 1998 to 2003. Among other things, the bicycle and pedestrian sections of TEA-21 provide for:

- Including bicycle and pedestrian interests long range transportation plans.
- Considering bicycle and pedestrian projects along with new construction and reconstruction of transportation facilities funded with federal aid.

- Taking safety and contiguous routes for bicyclists and pedestrians into consideration in transportation plans and projects.
- Addressing bicycle safety issues in carrying out railway-highway crossing hazard elimination projects.
- Federal Highways Administration (FHWA) developing guidance on bicycle and pedestrian accommodation, including recommendations on and updating AASHTO design standards for streets and highways.
- Not approving projects or taking regulatory actions that sever an existing major non-motorized route or adversely affects the safety of non-motorized traffic, unless a reasonable alternate exists.
- Authorizing the FHWA to develop a bicycle safety education curriculum.

On August 10, 2005, President Bush signed the Safe Accountable, Flexible, and Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU). The more important provisions of SAFETY-LU that related to bicycling and walking included:

- Establishing the FHWA policy of mainstreaming non-motorized transportation by increasing it to 15% of all trips and reducing the number of pedestrians and bicycle riders killed or injured in traffic crashes by 10 percent.
- Establishing the FHWA policy to improve conditions and safety for bicycling and walking and providing provides travelers with a real choice of transportation modes.
- Requiring planning for the development and integrated management and operation of accessible pedestrian walkways and bicycle transportation facilities as part of an intermodal transportation system.
- Adding users of pedestrian walkways and bicycle transportation facilities to the people included in the development of long range metropolitan and state wide transportation plans.

SAFETEA-LU includes the presumption that bicyclists and pedestrians will be accommodated in new and improved transportation facilities. In the planning, design, and operation of transportation facilities, bicyclists and pedestrians should be included as a matter of routine. The decision to not accommodate them should be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling.

**Maintaining access to the transportation system for non-motorized users is not an optional activity.** While these actions don't require bicycle and pedestrian accommodation in every project, Congress clearly intended bicyclists and pedestrians to have safe, convenient access to the roadway



system. Every transportation improvement is an opportunity to enhance the safety and convenience for pedestrians and bicyclists.

Bicyclists and pedestrians have the same rights and privileges as other users of the transportation system. It is important that they have safe and convenient access to airports, ferry services, transit terminals, and other intermodal facilities as well as to jobs, services, recreation facilities, and neighborhoods. Federal surface transportation law places a strong emphasis on creating a seamless transportation system that all users can use efficiently and safely.

In short, bicycling and walking are important elements of an integrated, intermodal transportation system. Constructing sidewalks, installing bicycle parking at intermodal transit stops, teaching children to ride and walk safely, installing curb cuts and ramps for wheelchairs, striping bicycle lanes, and building trails all contribute to the transportation goals of safety, mobility, economic growth and trade, national security and the enhancement of communities and the natural environment.

West Virginia, like every other state, is required to have a Bicycle/Pedestrian Coordinator in the Division of Highways to promote and facilitate the increased use of non-motorized transportation; including the development of facilities for the use of pedestrians and bicyclists, and public educational, promotional, and safety programs.

The full text of Federal laws relating to highways, including those amendments made by SAFETEA-LU, can be found at 23 USC FEDERAL-AID HIGHWAYS.

## **THE AMERICANS WITH DISABILITIES ACT**

Over 54 million Americans have some physical or mental impairment that limit daily activities. These activities include working, walking, talking, seeing, hearing, or caring for one self. Determining all the requirements under the Americans with Disabilities Act (ADA) would require referring to the voluminous regulations, guidelines, and/or technical assistance materials that have been developed by the Department of Justice (DOJ), the Equal Employment Opportunity Commission (EEOC), the US Department of Transportation (US DOT), the Federal Communications Commission (FCC), and the Architectural and Transportation Barriers Compliance Board (Access Board).

The following is a very brief summary of some of the areas covered by the ADA statute. Title II is most relevant to transportation, but the other titles may impact transportation in some manner.

## **Title I -Employment**

Title I of the ADA prohibits discrimination in employment against people with disabilities. It requires employers to make reasonable accommodations to the known physical or mental limitations of a qualified applicant or employee. Reasonable accommodations include making worksites accessible.

## **Title II -State and Local Governments**

Title II of the ADA requires that the services and programs of local and State governments be operated so they are, when viewed in their entirety, readily accessible to and usable by individuals with disabilities. Title II seeks to ensure that people with disabilities have access to existing public transportation services. All new buses must be accessible. Transit authorities must provide supplementary transit services or other special transportation services for individuals with disabilities who cannot use fixed-route bus services, unless this would present an undue burden.

## **Title III -Public Accommodations**

Physical barriers in existing facilities must be removed when it is "readily achievable" to do so (i.e., when it can be accomplished easily and without much expense). Modifications that would be readily achievable in most cases include the ramping of a few steps. However, all construction of new building facilities and alterations of existing facilities in public accommodations, as well as in commercial facilities such as office buildings, must comply with the ADA Accessibility Guidelines (ADAAG) so they are accessible to people with disabilities. Title III also addresses transportation provided by private entities.

## **Title IV - Telecommunications**

Title IV requires that telephone companies provide telecommunications relay services that allow people with hearing impairments to communicate using a TTY or other non-voice device. Relay services may be accessed by dialing 7-1-



The accessible entrance to the California Street side of the State Capitol building in Charleston.

1. Title IV also requires that all television public service announcements produced by or funded in whole or in part by the federal government include closed captioning.

## **Title V - Miscellaneous Provisions**

Title V includes information regarding the ADA's relationship with other federal and state laws, including the Rehabilitation Act of 1973, requirements relating to the provision of insurance, construction and design regulations by the U.S. Access Board, prohibition of state immunity, inclusion of Congress as a covered entity under the law, promotion of alternative means of dispute resolution, and establishment of technical assistance resources.

### **The Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines (July 23, 2004)**

This document is known as ADAAG based on the earlier Americans with Disabilities Act Accessibility Guidelines issued in 1991. This 304 page long book provides guidance on the design and construction of almost everything in the country from curb ramps to bathroom stalls. However, it is important to know that the ADAAG does not provide enforceable standards for design and construction. It simply provides a baseline for the enforceable standards established by the US Department of Justice and the US Department of Transportation.

### **Draft Public Rights-Of-Way Accessibility Guidelines (PROWAG)**

While the ADAAG and the standards based on it address some features found on public sidewalks and other public rights of way it did not address many of the conditions that are unique to these common transportation routes. The PROWAG has been developed to fill this need. The PROWAG is a stand-alone document that supplements the ADAAG. The PROWAG has not gone through the rule making process and standards based on it have not been adopted.

Until enforceable standards on public rights of way have been adopted, it is recommended that all facilities built on the state highway system comply with the Draft Public Rights-of-Way Accessibility Guidelines.

## CHAPTER ONE: WV STATE CODE

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***Objective: Make the West Virginia State Code friendlier to bicycles, pedestrians and those with special needs.***

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Limited research indicates that the West Virginia Legislature last modified the sections of the West Virginia State Code pertaining to pedestrians and bicyclists in 1996 when they adopted the Child Bicycle Safety Act. Most sections of the State Code which apply to bicycles and pedestrians were adopted in 1951. In view of the changing attitudes towards pedestrians and bicycles among planners, transportation professionals, and society in general; it is time for the WVDOH to encourage the legislature to address this area again by providing suggestions and guidance.

To identify the portions of the State Code related to bicyclists and pedestrians a search of the State Code located on the West Virginia Legislature's web site (<http://www.legis.state.wv.us/>) was conducted. This identified places with the terms "bicycle" or "pedestrian". In addition, a hard copy was reviewed to identify additional sections that might be relevant to these groups that were missed during the internet search.



This sign in Beech Fork State Park informs visitors of the requirement in the State Code.

Sections that authorized some local government or quasi-governmental agency to provide or plan for pedestrian access, and sections which only marginally impact bicycle and pedestrian transportation were subsequently omitted from consideration in this plan.

The following table lists the Chapters and Articles of the State Code addressed here. The text of the relevant sections, with suggested revisions identified by striking through and underlining, is included in Appendix A. Since the State Code is a dynamic document, please visit the West Virginia

State Legislatures web site identified above for the complete and up to date State Code.

<b>SELECTED CHAPTERS AND ARTICLES OF THE WEST VIRGINIA STATE CODE THAT APPLY TO BICYCLES AND PEDESTRIANS AS OF AUGUST 1, 2009</b>	
<b>Chapter 17C. Traffic Regulations And Laws Of The Road.</b>	
	<b>Article 1. Words And Phrases Defined.</b>
	<b>Article 3. Traffic Signs, Signals And Markings.</b>
	<b>Article 5B. Postmortem Tests For Alcohol In Persons Killed In Motor Vehicle Accidents.</b>
	<b>Article 10. Pedestrians' Rights And Duties.</b>
	<b>Article 10A. Operation Of Electric Personal Assistive Mobility Devices.</b>
	<b>Article 11. Operation Of Bicycles And Play Vehicles.</b>
	<b>Article 11A. Child Bicycle Safety Act.</b>
<b>Chapter 18. Education.</b>	
	<b>Article 6. Driver Education.</b>

Under Chapter **17C: Traffic Regulations and Laws of the Road**, the first section we recommend changing is §17C-1-30 which provides the definition of pedestrian. The change recommended is indicated by underlining.

**§17C-1-30. "Pedestrian"** means any person afoot or any person using a wheelchair or other mobility assistance or person walking a bicycle.

The next section we recommend changing is §17C-3-6. This section does not provide for the modern traffic signals which use the figures of a pedestrian and an upraised palm to indicate walking and waiting. We recommend this language be changed to conform to the Uniform Vehicle Code with the following language as underlined below:

**§17C-3-6. Pedestrian-control signals.** Whenever special pedestrian-control signals exhibiting the "Walk" or "Don't Walk" or symbols of a "walking person" or "upraised palm" are in place, such signals shall indicate as follows:  
(a) Flashing or Steady Walk or Walking Person-Any pedestrian facing the signal may proceed across the roadway in the direction of the signal and every driver of a vehicle shall yield the right of way to such pedestrian.  
(b) Flashing or Steady Don't Walk or Upraised Palm-No pedestrian shall start to cross the roadway in the direction of the signal, but any pedestrian who has partially completed crossing on the walk signal shall

proceed to a sidewalk or safety island while the don't walk or upraised palm signal is showing.

(c) Any person violating the provisions of this section is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one hundred dollars; upon a second conviction within one year thereafter, shall be fined not more than two hundred dollars; and upon a third or subsequent conviction, shall be fined not more than five hundred dollars.

The next section we recommend changing is §17C-5B-1. Currently this section requires a blood test for alcohol of just a driver or adult pedestrian killed in a motor vehicle accident. We suggest this language be changed to require a blood test for alcohol of any adult whether he is a passenger, bicyclist, or pedestrian, killed in a motor vehicle accident. According to the NHTSA's National Center for Statistics and Analysis, in one third of the crashes either the driver of the motor vehicle **or the bicyclist** was reported to have a blood alcohol content of .08 grams per deciliter or higher. In another ten percent of the crashes, lower blood alcohol contents were reported. Thirty-one percent of the bicyclists killed had measurable blood alcohol content. One fourth had blood alcohol content above .08 grams per deciliter. The relevant change is fairly simple and is indicated in the following by a strikethrough:

**§17C-5B-1. Blood test for alcohol in drivers and adult pedestrians killed in motor vehicle accidents; time limit for conducting test; who may conduct test; express consent to withdraw blood from dead body granted; granting civil and criminal immunity to person conducting test; fee for test.**

When any motor vehicle driver or adult ~~pedestrian~~ dies in a motor vehicle accident in this state or dies within four hours after having been involved in a motor vehicle accident in this state, the physician in attendance, or law-enforcement officer having knowledge of such death, or the funeral director, or any other person present when such death occurred, shall immediately report such death to the medical examiner of the county in which such death occurred.

The next section we recommend changing is §17C-10-3 Crossing at other than crosswalks. We recommend adding a section, §17C-10-3(d) to allow crossing an intersection diagonally when authorized. This should read as follows:

(d) No pedestrian shall cross a roadway intersection diagonally unless authorized by official traffic-control devices; and when authorized to cross diagonally, pedestrians shall cross only in accordance with the official traffic-control devices pertaining to such crossing movements.

The next section we recommend changing is §17C-11-3(b) to allow carrying a child in a baby carrier by adding the language underlined in the following:

(b) No bicycle shall be used to carry more persons at one time than the number for which it is designed and equipped., except that an adult rider may carry a child securely attached to the adult rider in a back pack or sling manufactured for that purpose.

The next section we recommend changing is §17C-11-5. The change would provide exceptions to riding on the right side of the roadway in specific instances, clarify where bicyclists may ride two abreast, and eliminate the ambiguity reported concerning riding on the highway shoulders. These recommendations are indicated by the strikethroughs and underlining in the following:

(a) Every person operating a bicycle upon a roadway shall ride as near to the right side of the roadway as practicable, ~~exercising due care when passing a standing vehicle or one proceeding in the same direction.~~ except; when overtaking and passing another bicycle or vehicle proceeding in the same direction, when preparing for a left turn at an intersection or into a private road or driveway, when riding in the right turn only lane, or when reasonably necessary to avoid conditions including, but not limited to, fixed or moving objects, parked or moving vehicles, bicycles, pedestrians, animals, surface hazards, or substandard width lanes that make it unsafe to continue along the right-hand curb or edge. For purposes of this section, a "substandard width lane" is a lane that is too narrow for a bicycle and a vehicle to travel safely side by side within the lane.

(b) Persons riding bicycles upon a roadway shall not ride more than two abreast except on paths or parts of roadways set aside for the exclusive use of bicycles. Persons riding two abreast, where allowed, shall not impede the normal and reasonable movement of traffic and shall ride within a single lane.

(c) Whenever a usable path ~~for bicycles has been provided~~ paved path has been constructed and designated for bicycles adjacent to a roadway, bicycle riders shall use such path and shall not use the roadway.

(d) Nothing in this chapter shall be construed as prohibiting persons from riding bicycles on or along shoulders of a street or highway.

The next section we recommend changing is §17C-11-6 by adding the language underlined in the following:

Nothing in this chapter shall prohibit attaching a bicycle trailer or bicycle semitrailer to a bicycle if that trailer or semitrailer has been designed for such attachment.

The next section we recommend changing is §17C-11-7. These changes make bicycles more visible at night and improve the language regarding brakes. The changes are indicated by the strikethroughs and underling in the following:

**§17C-11-7. Lamps and other equipment on bicycles.**

- (a) Every bicycle when in use at nighttime shall be equipped with a lamp on the front which shall emit a white light visible from a distance of at least five hundred feet to the front and with a red reflector on the rear of a type approved by the department which shall be visible ~~from all distances from fifty feet to three~~ for six hundred feet to the rear when directly in front of lawful upper beams of head lamps on a motor vehicle. ~~A lamp emitting a red light visible from a distance of five hundred feet to the rear may be used in addition to the red reflector.~~ In addition, every bicycle used at night shall be equipped with reflective material of sufficient size and reflectivity to be visible from both sides for six hundred feet when directly in front of lawful upper beams of head lamps on a motor vehicle. A lamp visible from both sides from a distance of at least five hundred feet may be used in lieu of



Bicycles should alert pedestrians before overtaking them on sidewalks and in cross walks.



the reflective material. A bicycle or its rider may be equipped with lights or reflectors in addition to those required by this section.

- (b) No person shall operate a bicycle unless it is equipped with a bell or other device capable of giving a signal audible for a distance of at least one hundred feet, except that a bicycle shall not be equipped with nor shall any person use upon a bicycle any siren or whistle.

(c) Every bicycle shall be equipped with a brake ~~which will enable the operator to make the braked wheels skid on dry, level, clean pavement.~~ or brakes which will enable its driver to stop the bicycle within twenty-five feet from a speed of ten miles per hour on dry, level, clean pavement.

We recommend adding the following three sections. Section 17C-11-8 provides some controls over riding a bicycle on a sidewalk, unless otherwise prohibited. Section 17C-11-9 requires bicycle dealers to only sell bicycles with serial numbers permanently stamped on them. Section 17C-11-10 provides law enforcement officers with the authority to stop and inspect a bicycle to ensure it is properly equipped.

**§17C-11-8. Bicycles and human powered vehicles on sidewalks**

(a) A person propelling a bicycle upon and along a sidewalk, or across a roadway upon and along a crosswalk, shall yield the right of way to any pedestrian and shall give audible signal before overtaking and passing such pedestrian.

(b) A person shall not ride a bicycle upon and along a sidewalk, or across a roadway upon and along a crosswalk, where such use of bicycles is prohibited by official traffic-control devices or city ordinances.

(c) A person propelling a vehicle by human power upon and along a sidewalk, or across a roadway upon and along a crosswalk, shall have all the rights and duties applicable to a pedestrian under the same circumstances.

**§17C-11-9. Bicycle identifying number**

A person engaged in the business of selling bicycles at retail shall not sell any bicycle unless the bicycle has an identifying number permanently stamped or cast on its frame.

**§17C-11-10. Inspecting bicycles**

A uniformed law enforcement officer may at any time upon reasonable cause to believe that a bicycle is unsafe or not equipped as required by law, or that its equipment is not in proper adjustment or repair, require the person riding the bicycle to stop and submit the bicycle to an inspection and such test with reference thereto as may be appropriate.

The final section we recommend changing is §18-6-3. We believe it is vital to add bicycle safety to driver education programs to improve their safety. This is provided by adding the language underlined in the following:

(G) Pedestrian safety and bicycle safety in a program which shall include, but not be limited to, ensuring that the driver has knowledge and awareness of these groups sharing the roads of this state for the safety of pedestrians and bicyclists; and

There are many minor and major differences between the West Virginia State Code and the Uniform Vehicle Code which were not addressed in this document. There are other changes to the West Virginia State Code desired by bicycle and pedestrian activists which have not been addressed in this plan.

One such change is the desire for a statute which would require a motorist to keep three feet away from a bicyclist when passing in traffic. Many law enforcement officers believe, and even some bicycle activists admit, that such a law is unenforceable. It is our position that an active campaign to educate motorists, bicyclists and pedestrians of their rights and responsibilities on our public thoroughfares will aid in achieving our goals more effectively than arbitrary, unenforceable laws.

## CHAPTER TWO: DIVISION OF HIGHWAYS POLICIES AND PROCEDURES

### ***Objective: Make WVDOH policies and procedures friendlier to bicycles, pedestrians and those with special needs.***

Currently there are three policies specifically related to bicycle and pedestrian facilities within WVDOH. Design Directive 811: Curb Ramps and Sidewalks, Design Directive 813: Bicycle and Pedestrian Accommodation, and the Policy on Paving Shoulders.

#### **Design Directive-811 Curb Ramps and Sidewalks**

In 2001 this design directive was modified to provide for curb cuts for all cross walks for which the DOH has responsibility. The presence or absence of a sidewalk does not affect the decision of whether to add a curb ramp or not. DD-811 also requires sidewalks to smoothly meet the existing ground or sidewalks and curb cuts for all sidewalks which extend through a crosswalk.

DD-811 established the minimum width for sidewalks as three feet and provides for five foot by five foot passing spaces at least every two hundred feet. Driveways, building entrances and public sidewalk intersections are allowed to substitute for these passing spaces. A problem has arisen where the design plans provide for driveways and public sidewalk intersections without construction of the actual driveway or intersecting public sidewalk. Persons reviewing designs and/or conducting final inspections of WVDOH projects and projects funded by WVDOH should be made aware of this problem to prevent it reoccurring.



“Driveway” curb cut improperly replacing a wheelchair passing area in Oak Hill.

New Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines (AADAG)

were issued in July of 2004. Draft Public Rights-of-Way Accessibility Guidelines (PROWAG) are available now. A proposed draft of DD-811, based on these documents and using strike-through and underlining, can be found in Appendix B.

### **Design Directive-813 Bicycle/Pedestrian Accommodation**

In 2001 DD-813 was adopted by the WVDOH to establish the guidelines for future bicycle and pedestrian facilities in the State. In general this directive established the following:

- In urban areas bicycle facilities will be established on all new construction or reconstruction unless bicycles are prohibited from using the roadway, the cost of establishing a bikeway is greater than ten percent of the total project cost, or if other factors indicate there is no need for such a facility.
- In rural areas bicycle facilities may be considered during the design phase of the project and the continuity of bicycle facilities where the highway changes from urban to rural must be considered.

DD 813 established design standards for bicycle facilities along highways. For any issues not addressed by DD 813, the design criteria contained in the AASHTO *Guide for the Development of Bicycle Facilities* should be used.

To address the needs of bicycle users of various skill levels, DD813 uses a classification system of bicyclists. This system is a modification of the existing classification used by the American Association of State Highway and Transportation Officials (AASHTO). This system is described as follows:

- Group A--Advanced Bicyclists: This group consists of experienced riders who can operate under most traffic conditions, and compose the majority of current users of collector and arterial systems. Group A travel is best facilitated by:
  - direct access to destinations, usually via the highway system;
  - the opportunity to operate at maximum speed, with minimum delay; and
  - sufficient operating space on the roadway or shoulder to reduce the need for bicyclist or motor vehicle operator to change position when passing.
- Group B--Basic Bicyclists: This group consists of new or casual adult or teenage riders who are less



Parkersburg has posted this sign to encourage bicyclists to use the sidewalk over a congested bridge.

confident and/or less competent (than Group A riders) to operate in traffic without special provisions for bicyclists. Group B riders prefer comfortable access to destinations, by a direct route or bicycle facility which they perceive as safe.

- Group C--Child Bicyclists: This group consists of pre-teen riders whose roadway use is initially monitored by their parents. Group C riders prefer the following:
  - access to key destinations surrounding residential areas, including schools, recreation and shopping facilities, or other residential areas;
  - highways with low motor vehicle speeds and volumes; and
  - well defined separation of bicycles and motor vehicles, such as a separate bicycle path.

These classifications are utilized in the “design bicyclist” concept, in which WVDOH’s accommodation procedures are focused on the expected user of a facility. Generally, Group A bicyclists are best accommodated by the construction of Bicycle Lanes or Bikeways. In most situations, due to the similarity in the level of experience, Groups B and C may be combined to produce a Group B/C design cyclist, which generally will be best accommodated by a network of independent bicycle paths.

A proposed draft of DD-813, using strike-through and underlining, can be found in Appendix B.

## **PAVING SHOULDERS**

Governor Joe Manchin directed WVDOH to begin paving the shoulders of its roads during projects for new construction, widening and resurfacing roadways. As Governor Manchin described it, he wants the roads paved “...from the hillsides to the guardrails”.

On March 21, 2007, Marvin G. Murphy, P.E., P.L.S., State Highway Engineer, responded to this directive by establishing the policy of paving shoulders with hot mix asphalt on all projects involving new construction, widening and resurfacing on all two-lane arterial, collector and local road projects. The maximum width of shoulder to be paved is eight feet.

This memorandum has been frequently misinterpreted. This memorandum was not intended to provide for a general widening of the road surface. It specifically states that the edge line stripping, sometimes called the fog line, be placed at the previous pavement edge. Nor does this policy authorize the purchase of additional right-of-way or the relocation of existing guardrails or the construction of additional shoulder area. It simply provides for paving

the existing shoulders to improve conditions for all users of the state roadway system, but in the context of this plan, particularly bicyclists and pedestrians.

It is obvious that a stretch of road may have shoulders eight feet wide while the section immediately adjacent to it has shoulders that are only two feet wide. This condition may exist because of protruding rock faces, adjacent streams, guard rails or the lack of right-of-way.

## **SUGGESTED POLICIES**

This plan suggests the Commissioner of the WVDOH direct that Design Directives 811 and 813 be rewritten as indicated in Appendix B. In addition the plan recommends the Commissioner initiate policies and procedures to achieve the purposes of this plan. These policies and procedures are:

- Designate three levels of bicycle routes in West Virginia, 1-across state “transportation routes”, 2-recreational loop routes, 3-recreational connector routes between major off road hiking and biking trails.
- Require each WVDOH District to mark 10% of all shoulders paved five feet or greater in width as bicycle routes with appropriate signage and pavement markings. The Appalachian Corridor Highways are recommended as the initial routes to be marked. These routes should be documented and identified them on online interactive maps.
- Improve the shoulders of paved and unpaved roads used as long distance hiking trail connections during routine maintenance.
- Improve the roads designated as bicycle routes during routine maintenance and resurfacing by installing approved bicycle route signs, widening shoulders by relocating guardrails, paving where possible and sweeping the paved shoulders during routine maintenance.
- Institute periodic training on AASHTO and FHWA design guidelines for bicycle and pedestrian facilities for WVDOH employees. This training should be mandatory for all design engineers and is recommended for all engineers within WVDOH and other persons working with bicycle and pedestrian issues.



Some Category I Roads already have Bike Route Signs and pavement markings encouraging bicyclists to use the shoulders.

## **SECTION THREE: BICYCLE TRANSPORTATION FACILITIES: INTRODUCTION**

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### ***Goal: Improve bicycle transportation facilities in West Virginia.***

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Due to the nature of bicycling, bicycle facilities have historically been a local responsibility. With ISTEA, TEA-21 and SAFETEA-LU this has begun to change. Now, more than ever, the planning, design, construction and maintenance of bicycle facilities have become a State and Federal concern.

The WVDOH recognizes the importance of bicycling for commuting, touring, recreation and health. No one expects bicycling to replace the automobile or mass transit for all trips, however, walking or biking can be practical for:

- Trips to work or school;
- Visits to friends or relatives;
- Small shopping errands;
- Children's sports events;
- Recreational trips; and
- Combination trips such as recreational riding and small shopping.

The WVDOH supports non-motorized transportation modes physically and institutionally.

Most information available for bicycle facilities pertains primarily to urban systems. These areas tend to benefit most from bicycling facilities because more people live in urban areas, they live closer together, there are more places to go within a short distance, and small reductions in the numbers of automobiles results in larger reductions in the degree of congestion.

While bicycles may be found on almost any road in West Virginia, some roads are more appropriate for bicycles than others. Highly congested, high speed roads are not suitable for inexperienced riders. Only interstates and a few other roads prohibit bicycles entirely.

Design guidelines for bicycle and pedestrian facilities are addressed in Section Two, Chapter Three of this plan. The remainder of this Section will identify the existing bicycle routes, bicycle lanes, shared use paths and bicycle parking facilities, and mass transit connections for bicycles across the state.

## CHAPTER ONE: ESTABLISHING WEST VIRGINIA BICYCLE TRANSPORTATION ROUTES

***Objective: Develop a procedure and begin designating West Virginia State Bicycle Transportation and Recreation Routes and seek designation as US Bicycle Routes where appropriate.***

West Virginia is blessed with an abundance of roads with low speeds, low traffic volumes and high scenic value. Such routes are ideal for bicycle traffic. With the current price of gasoline and the increasing interest in outdoor activities and healthy exercise, the Mountain State should be proactive in taking advantage of our situation and actively promote bicycle tourism.

In addition to the tourist value of such designated routes, American Association of State Highway and Transportation Officials (AASHTO) and Adventure Cycling Association have combined to establish the U. S. Bicycle Route System. This system is a national network of bicycle routes that span several states. Each route is selected and maintained by state Departments of Transportation and designated and catalogued by AASHTO. To date only two US Bicycle Routes have been designated; neither is in West Virginia.

The Bicycle/Pedestrian Coordinator, with assistance from Federal and State agency staff, local bicycle riders, and local government officials has prepared a selection of routes that cross West Virginia. Most of these routes connect to bicycle routes in adjoining states. Some of these routes use rail trails, city streets and Forest Service roads which are not on the State Highway System. It will be necessary to coordinate designation with the agencies managing these trails, streets and roads.

It is proposed that these routes be reviewed in the field to determine their suitability. It is expected that the routes designated will vary from those described here. After the field review,





documents will be prepared to request their formal designation as West Virginia Bicycle Routes through an order issued by the West Virginia Commissioner of Highways. Once these bicycle routes are designated they should receive priority attention for repairs and maintenance to improve their suitability for bicyclists.



Wheeling Heritage Trail in downtown Wheeling.

Since many of these proposed routes connect to bicycle routes in adjoining states, we recommend the WVDOH cooperate with adjoining states and seek designation as US Bike Routes by AASHTO where appropriate. Any routes designated as US Bike Routes should only use the number designated by AASHTO and would not use the West Virginia Bicycle Route number. Way-finding signs along these newly designated routes will be necessary. Each sign should cost approximately \$300 to fabricate and install. An FY 2010 Congestion Mitigation Air Quality Program Grant is being sought to provide funding for installation of these signs.

These proposed routes have been numbered with the odd numbers running north-south beginning in the eastern panhandle and the even numbers running east-west beginning in the northern panhandle. A summary of the ten proposed routes is provided in the following table. A complete list of the proposed routes is included in Appendix C.

<b>BICYCLE ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>	<b>COMMENTS</b>
<b>1</b>	Virginia state line	Virginia state line at Harpers Ferry	This route crosses Jefferson County and connects to the C & O Canal tow path and Maryland Bicycle Route 67.
<b>2</b>	Ohio River Bridge in Weirton	Pennsylvania state line	This route crosses the northern panhandle and connects Ohio to Pennsylvania.
<b>3</b>	Virginia state line	Maryland state line in Shepherdstown	This route crosses Jefferson County and connects to the C & O Canal tow path and Maryland Bicycle Route 65.
<b>4</b>	Ohio River US 40 Bridge on Zane Street in Wheeling	Pennsylvania state line on County Route 88	This route uses the extensive rail trail network in Wheeling as well as city streets. This is a major link in U. S. Bicycle Route 50 proposed to follow a corridor around US Route 40.
<b>5</b>	Virginia state line on US Route 219 in Monroe County	Maryland state line on State Route 28 in Mineral County	This route follows US Bike Route Corridor 15 through West Virginia and nearly connects to US Bike Route 50 (around US 40) in Cumberland Maryland.
<b>6</b>	Point Park in Parkersburg	Alt 1 - Maryland state line at Greenspring. Alt 2 - Virginia state line near Glengary, VA. Alt 3 - Virginia State Line near Winchester, VA	This route roughly parallels US 50. It uses city streets in Parkersburg and Clarksburg. Three alternative routes exist from Romney to the state line. A field review needs to be conducted to determine the preferred route prior to it being designated and signed.
<b>7</b>	North Bend Rail Trail at Wolf Summit in Harrison County	Pennsylvania State line on County Route 857 and PA Bicycle Route "A"	This route would connect the American Discovery Trail which runs along the North Bend Rail Trail to Pennsylvania Bicycle Route "A" which appears to follow the Monongalia-Fayette Expressway.
<b>8</b>	Ohio state line on US Route 35 in Mason County	Virginia state line on SR 39 in Pocahontas County	This route would provide a scenic route across the middle of the state through many of the more rural counties. This route uses one paved Forest Service Road.
<b>9</b>	Kentucky state line on Corridor G in Mingo County	Point Park in Parkersburg	This route could connect to US BR 76, one of the two currently designated routes, if Kentucky cooperated.
<b>10</b>	Kentucky state line on US Route 60	Virginia State Line on US Route 60	This route follows the Midland Trail and would provide a southern cross state route. It is ridden by many bicyclists already.

In addition to the proposed transportation routes, recreational or loop routes have been identified that could become important tourist attractions in portions of the Mountain State. No particular system was devised for numbering these recreational loop routes. A summary of the three proposed routes is provided in the following table. A complete list of the proposed routes is included in Appendix C.

<b>BICYCLE ROUTE NUMBER</b>	<b>COMMENTS</b>
<b>L1</b>	This loop recreational route is one frequently ridden by bicyclists from Harrison County. It circles through Lewis County between Weston and Jane Lew
<b>L2</b>	This loop recreational route is listed in several guides to on road riding in West Virginia and is one of the rides identified by the Mountain State Wheelers. It is located in the Milton/Ona area of Cabell County
<b>L3</b>	This recreational route follows one route of the Cheat Mountain Challenge, a series of on-road bicycle races sponsored by Snowshoe Resort in Pocahontas County. Parts of it are also recreational rides promoted by the Mountain State Wheelers and published in several guides to road riding in West Virginia.

We recommend notifying Metropolitan Planning Organizations, Regional Planning and Development Councils, County Commissions, municipalities and other interested parties of the designation of bicycle transportation and recreation routes and request they submit recommendations for future routes to the Bicycle/Pedestrian Coordinator.

The field review of these routes and future proposed routes could be done with the assistance of summer employees.

We also recommend that these routes be depicted on a map of the state's roadway system and a web-based interactive map be developed to allow viewers to zoom in to areas of interest.

## CHAPTER TWO: IDENTIFYING CONNECTOR BICYCLE LINKS

***Objective: Connect the existing long distance off road bicycle routes in West Virginia.***

A number of long-distance off-road bicycle trails, usually rail trails, exist in West Virginia. These trails could serve as part of the bicycle transportation network if they were connected together by designated bicycle routes.

Some of these trails connect to trails in adjoining states which connect to long



Cheat Lake Rail Trail in Monongalia County may someday be connected to the Mon River Trail system.

The major long distance off road bicycle trails in West Virginia are:

- Greenbrier River Trail
- West Fork Trail
- Cranberry Tri-Rivers Rail Trail
- Allegheny Highlands Trail
- North Bend Rail Trail
- Harrison Co. Hike/Bike Trail
- Shinnston Rail Trail
- Harrison Co. Southern Rail
- West Fork River Trail
- McTrail
- Caperton Trail
- Mon River Trail
- Deckers Creek Trail
- Glen Dale to Moundsville Trail
- Wheeling Heritage Rail Trail
- Panhandle Rail Trail
- Brooke Pioneer Rail Trail
- Wellsburg Yankee Rail Trail

distance trails such as the Great Allegheny Passage Trail and the C & O Canal Towpath. These multi-state connections would allow a bicyclist to travel from Parkersburg to Pittsburgh and on to Washington, DC through Maryland. A majority of this distance could be traveled on rail trails with short connecting stretches along public roads.

All of the possible connections will not be addressed here. One such connecting route, linking the North Bend Rail Trail, Shinnston Rail Trail, West Fork Trail, McTrail, and the Mon River Rail Trail/Caperton Rail Trail/ Deckers Creek Rail Trail

system, is detailed as West Virginia Bicycle Route 7 in Chapter One of this Section. Due to the lack of time and resources only three connections will be addressed here. These routes are summarized in the table below. Complete descriptions of these routes are included in APPENDIX C.

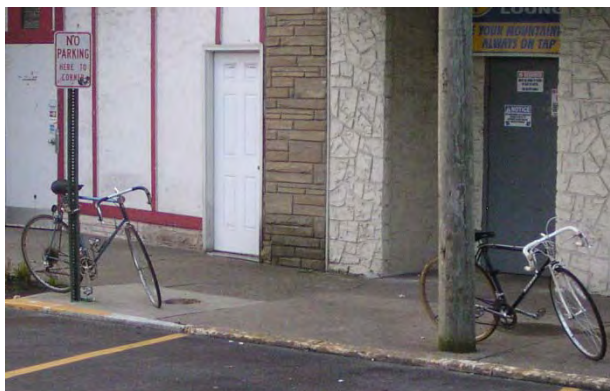
<b>TABLE 3.1.2 WEST VIRGINIA CONNECTOR BICYCLE ROUTES</b>	
<b>BICYCLE ROUTE NUMBER</b>	<b>COMMENTS</b>
<b>C1</b>	Connecting Pan-handle Trail to Wellsburg Yankee Trail. This connection will allow bicyclist to ride from Pittsburgh, Pennsylvania to Weirton along a series of rail trails and then connect to the Wellsburg-Yankee and Brooke Pioneer Rail Trails. Eventually these two rail trails will connect to the system of rail trails being developed in Wheeling.
<b>C2</b>	Connecting Allegheny Highlands Trail to the West Fork Trail. This rather long connection will link a developing trail along Corridor H in Elkins to the rail trails in the Greenbrier River Valley. There are two alternative routes proposed. One uses a US Forest Service road. Both routes use city streets for the initial stages. A field review of both routes is necessary to determine the best route.
<b>C3</b>	Connecting the West Fork Trail to the Greenbrier River Rail Trail. This will link two long particularly scenic rail trails. Combined with the previous connection it will provide a corridor of designated off road bicycle routes from Parsons to the Lewisburg/ White Sulphur Springs area.

It is recommended that these routes, and other connecting routes developed in the future, be designated as West Virginia Connector Bicycle Routes. The field review of these connector routes and future proposed connector routes could be done with the assistance of summer employees. We recommend that these routes be depicted on a map of the state's roadway system and a web-based interactive map be developed to allow viewers to zoom in to areas of interest.

## CHAPTER THREE: BICYCLE PARKING

### ***Objective: Expand and improve existing bicycle parking.***

Just as eggs are a key ingredient in omelets, secure bicycle parking is a key ingredient in any effort to promote bicycling for transportation. No reasonable person would leave their bicycle unsecured outside the corner store, shop for a half an hour, and expect to find the bicycle still there when they return; not even in West Virginia with its low crime rates. One report indicates between one half million and one million bicycles are stolen each year in the United States.



Bicyclists have improvised parking in South Charleston where bicycle parking is not available.

If secure parking is not available, people either won't ride their bicycles or will improvise parking by locking their bicycles to sign posts, light poles, trees, or other street furniture, often in places that obstruct pedestrian traffic.



A bicyclist has improvised parking at this bike rack to better protect his bike.

There are three basic approaches to bicycle parking: racks, lockers, and lock-ups. Bicycle racks are the most familiar in West Virginia. Usually these are the old style "wheel bender" or "fence" style rack that supports the bicycle by only one wheel. Many of these are light weight and are not securely fastened to the ground. Many bicyclists refuse to lock just their wheels into these minimal security racks and instead lock their frames to the ends of the racks. This style

bicycle rack should be replaced with a modern design such as the “wave” rack, inverted “U” rack, “post and ring” rack or even a custom designed rack. All of these racks use the frame to support the bicycle and allow the frame and at least one wheel to be locked to a firmly fixed and secure rack.

Bicycle lockers are uncommon in West Virginia. These mini-garages are low boxes with a door that can be locked. A bicyclist can roll his bicycle into the locker, and secure it. Some designs have see-through sides or doors to reduce their use as storage or



A wave style bicycle rack at the Lee Street Triangle in Charleston.



An inverted “U” style bicycle rack blends in well with street furniture.

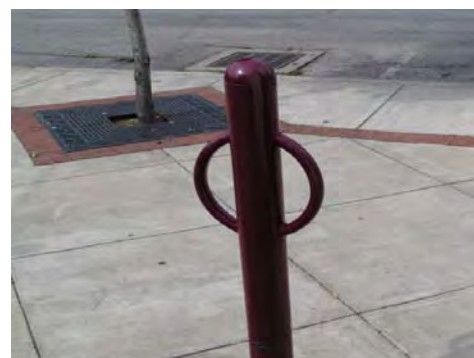
prevent homeless people from using them as shelters.

Most bicycle lockers are triangular inside and measure approximately four feet high, six feet deep and three feet wide at the door. The back is approximately six inches wide. Their triangular shape allows adjoining lockers to be accessed from opposite sides. Bicycle lockers provide secure protection from the weather for long term storage of bicycles, these units would be ideal for use at offices,

apartment complexes, college campuses, transit malls, or other locations where bicyclists need long term storage.

Bicycle lock-ups are dedicated rooms for bicycle storage with restricted access. They typically are adjacent to shower rooms and changing facilities. These are found most often in cities or businesses with a major bicycling culture. When provided with bicycle racks, they provide the ultimate in bicycle protection from vandals, thieves and the weather.

We recommend adopting a policy that requires every state office provide one bicycle



This Post and Ring Style bicycle rack is part of a Transportation Enhancement Project in St. Albans.

parking “space” for every fifty employees. One space for every twenty employees would be the preferred ratio. Institutions of higher education should be required to provide one space for every fifty students and employees. Recreational facilities, such as swimming pools in state parks, should be required to provide one bicycle space for every twenty prospective users.

We also recommend notifying Metropolitan Planning Organizations, Regional Planning and Development Councils, County Commissions, municipalities and other interested parties of the need for additional bicycle parking in promoting bicycling in West Virginia and the possibility of funding through the FHWA grant programs.

Finally we recommend the Public Transit Division identify the major intermodal transportation connections and require transit agencies to include long and short term parking for bicycles in their design. A promotional campaign describing these bicycle parking facilities should be conducted by a cooperative effort of the WVDOT Bicycle/Pedestrian Coordinator, the Public Transit Division and the local transportation agency.

Funding for installation of bicycle racks should qualify for Transportation Enhancement grants under the alternative transportation category and may qualify for funding under other grant programs.



This appears to be a custom designed bicycle rack in Wheeling.  
However, it may be just art.  
Sometimes it is hard to tell.



## SECTION FOUR: PROMOTING SAFE BICYCLING INTRODUCTION

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### ***GOAL: Improve bicycle safety.***

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The bicycle is a light weight, highly maneuverable, human-powered vehicle. The bicyclist rides under varying degrees of stress, both mental and physical, and is vulnerable to injury from other vehicles and the environment itself.

Bicycles are legal vehicles on West Virginia's roads and have the same rights and responsibilities as motorists. This means they share equally in the duties related to bicycle safety and reducing the number and severity of motor vehicle/bicycle crashes. The biggest factor contributing to these crashes appears to be the failure of both bicyclists and motorists to yield the right of way.

Motorists should be aware of bicycles on the road. West Virginia statutes require motorists to pass on the left at a safe distance and only return to the right side of the roadway when they are safely clear of the vehicle being passed; regardless of whether the vehicle being passes is an automobile, truck or bicycle.

Just as motorists should be wary around tractor trailers, bicyclists, as the smaller vehicle and more vulnerable to injury, should be wary of motor vehicles and obey all traffic control signs and signals. Being highly visible, riding predictably, signaling turns and obeying traffic laws are important things bicyclists can do to improve their chances of survival on the highways.

## CHAPTER ONE: REDUCING ACCIDENTS BETWEEN MOTOR VEHICLES AND BICYCLES OR PEDESTRIANS

***Objective: Review data on motor vehicle accidents involving bicycles and pedestrians to propose measures to reduce the number and severity of bicycle/pedestrian injuries and fatalities in West Virginia.***

According to the National Highway Traffic Safety Administration's (NHTSA) National Center for Statistics and Analysis; 698 cyclists were killed and approximately 43,000 injured in traffic accidents across the country in 2007. Nationally, bicyclist fatalities occurred more often in urban areas (72%), at non-intersection locations (64%), between the hours of 5 pm and 9 pm (26%), and during the months of June and September (11% each). The average age of bicyclist fatalities in 2007 was 40. The average age of those injured was 30. Delaware, North Dakota, South Dakota, Vermont, and Wyoming had no bicycle fatalities in 2007. Alaska, District of Columbia, Maine, Nebraska, and Rhode Island all joined West Virginia with only one bicycle fatality. Four states, California, Florida, New York, and Texas, account for 327 or 46% of all bicycle fatalities in 2007

That same year, 4,654 pedestrians were killed and 70,000 were injured in motor vehicle crashes. Pedestrian fatalities also occurred more often in urban areas (72%), and almost half the pedestrian fatalities occurred on Friday, Saturday, or Sunday. Five states, Nebraska, North Dakota, South Dakota, Vermont, and Wyoming, combined had a total of 28 pedestrian fatalities. All of these states had a very low number of bicycle fatalities. The same four states with the highest numbers of bicycle fatalities, California, Florida, New York, and Texas, account for 1,836 or 39% of all pedestrian fatalities in 2007.



Just after dawn is a particularly dangerous time of day for bicyclists to be on the road.

Table 4-1-1 provides the national statistics on bicycle pedestrian fatalities in motor vehicle accidents over the last five years for which we have statistics. Research into emergency room records indicates that only a fraction of the pedestrian and bicycle crashes that cause injury are included in these reports.

<b>TABLE 4.1.1 NATIONAL BICYCLE PEDESTRIAN FATALITIES 2003 to 2007</b>			
<b>YEAR</b>	<b>BICYCLIST</b>	<b>PEDESTRIAN</b>	<b>TOTAL</b>
2003	629	4,774	5,403
2004	727	4,675	5,402
2005	786	4,892	5,678
2006	772	4,795	5,567
2007	698	4,654	5,352
2003 -2007	3,612	23,790	27,402

In West Virginia the statistics are maintained by fiscal year (July 1 to June 30) rather than the calendar year. The bicycle pedestrian statistics for the last five years for which we have data is provided in Table 4-1-2.

<b>TABLE 4.1.2 WEST VIRGINIA BICYCLE PEDESTRIAN FATALITIES 2002 to 2007</b>			
<b>YEAR</b>	<b>BICYCLIST</b>	<b>PEDESTRIAN</b>	<b>TOTAL</b>
2002-2003	0	37	37
2003-2004	2	20	22
2004-2005	4	27	31
2005-2006	2	35	37
2006-2007	1	23	24
2002-2007	9	142	151

The relatively low number of bicycle and pedestrian fatalities in West Virginia and the manner in which the data is maintained make it difficult to determine the causes of the accidents. Without identifying a cause for the accident it is difficult to develop general counter-measures that could be taken to reduce the number of fatalities.

However, there are significantly more vehicle crashes involving injury (including fatalities) to bicyclists and pedestrians. While the manner in which the data is maintained is still an issue, there are enough events to allow some statistically valid conclusions to be reached. This data is shown in Table 4-1-3.

<b>YEAR</b>	<b>BICYCLIST</b>	<b>PEDESTRIAN</b>	<b>TOTAL</b>
2002-2003	114	362	476
2003-2004	137	365	502
2004-2005	114	309	423
2005-2006	122	358	480
2006-2007	107	473	580
2002-2007	594	1,867	2,461

Stop signs, traffic signals or yield signs were present in 20.52% of all the pedestrian and motor vehicle accidents and in 39.63% of all the bicycle and motor vehicle accidents. These three are certain indicators of an intersection, and an intersection is the one place every motorist should be alert for other traffic including pedestrians and bicycles. However, in only 1.62% of the motor vehicle crashes involving pedestrians did the investigating officer note the motorist disregarded the traffic signal. This percentage dropped to 0.25% for motor vehicle crashes involving bicyclists. These percentages lead to the following three recommendations to reduce the numbers of motor vehicle accidents at intersections involving pedestrians and bicycles:

- Request stricter enforcement of laws and ordinances related to intersections for pedestrians, bicyclists and motorists.
- Make motorists aware of the potential presence of pedestrians and bicyclists in intersections.
- Educate pedestrians and bicyclist of proper safety precautions to take at intersections.

The Crash Summary identified four periods of reduced visibility: Dusk, Dark, Artificial Light, and Dawn. During these four periods 38.96% of the accidents involving pedestrians and 21.78% of the accidents involving bicycles occurred. The difference in these percentages may stem from bicycles being more visible because of the standard reflectors installed on them. Regardless, both percentages are too high. The recommendations to reduce the number of motor vehicle accidents during periods of reduced visibility are:

- Educate pedestrians of the proper safety precautions to take during the hours of reduced visibility and encourage them to wear or carry light colored or reflective items during periods of reduced visibility.
- Educate bicyclists about the laws requiring headlights, reflectors and the safety precaution of using a flashing rear light.

- Request stricter enforcement of laws and ordinances related to lights and reflectors on bicycles ridden during periods of reduced visibility.
- Make motorists aware of the potential presence of pedestrians and bicyclists during periods of reduced visibility.

Motor vehicle accidents involving pedestrians seem to occur in all months with very little variability. In fact the difference between February (6.53%), the shortest month with the coldest weather, and October (9.74%), one of the longer months with warmer weather, is only 3.21%. Motor vehicle accidents involving bicycles, on the other hand, have a summertime surge during the months of May through August. These four months account for 55.91% of all motor vehicle accidents involving bicycles. Therefore we recommend the following actions:

- Conduct a bicycle safety campaign in schools in the final months of the school year.
- Conduct a public awareness campaign on bicycle safety during the months of April through August.
- Emphasize the Share the Road safety awareness campaign during the months of April through August.

A final recommendation involves the data itself. We recommend that the Bicycle Pedestrian Crash Analysis Tool (BPCAT) be used to analyze the data included in the original investigation reports of motor vehicle accidents involving bicycles or pedestrians. The BPCAT is a free software program that provides a method of recording information on accidents involving bicycles and pedestrians and allows the data base to be mined for more relevant summary reports of the accidents and countermeasures to aid in reducing the number and severity of future accidents.

## CHAPTER TWO: PROMOTE SAFE BICYCLING

### ***Objective: Promote safe bicycling.***

#### **SHARE THE ROAD**

Many motorists seem surprised to find a bicycle on the road in front of them. They believe the only roads where bicycles are legal are where signs expressly permit them. They believe “Share the Road” signs are only used to identify roads where bicycling is encouraged. These beliefs are wrong; except for Interstate Highways, and a few other specific locations, bicycles are legal vehicles on all roads in West Virginia.

The purpose all highway signs is to promote highway safety and efficiency by providing for the orderly movement of road users. Signs and other traffic control devices provide warning and guidance for the reasonably safe, uniform, and efficient operation of all elements of the traffic stream. “Share the Road” signs are intended to remind motorists that bicycles may be traveling along the highway. Similar signs with horses replacing the bicycle are frequently seen where equestrians are common. Both are intended as polite reminders that the single occupant motor vehicle is not the only user of our streets, roads and highways.

The design, placement, maintenance, and uniformity of signs are aspects that must be considered prior to placing a new sign. The design of highway signs in West Virginia is determined by the *Manual on Uniform Traffic Control Devices for Streets and Highways: 2003 Edition* (MUTCD). By using this manual, the WVDOH is able to provide signs that command attention, convey a clear message, and allow adequate time for the proper response. Some local jurisdictions have installed non-conforming signs along WVDOH maintained roads; such signs are not derived from the MUTCD and are not acceptable along WVDOH highways.



A “Share the Road” sign along Route 60 in Putnam County.

The WVDOH Bicycle/Pedestrian Coordinator receives many requests for “Share the Road” signs. On occasion bicycle clubs have submitted lists of most roads in a county and asked for “Share the Road” signs to be located every half mile along them. Even if there were sufficient funds to install all the signs requested; their proliferation could contribute to roadside clutter and blunt the effectiveness of their message. A set of the forms used to request “Share the Road” signs can be found in APPENDIX D. All requests for “Share the Road” signs should be submitted to the WVDOH Bicycle/Pedestrian Coordinator at the address on the form. The Bicycle/Pedestrian Coordinator will review the forms, and submit them along with any recommendations and comments to the appropriate WVDOH District. In West Virginia, the various WVDOH District Maintenance Engineers are responsible for making the final decision about sign installation.



A non-conforming “Share the Road” sign along WVDOH right of way in Barbour County apparently used to mark a local bicycle route.

Currently there is no comprehensive inventory of “Share the Road” signs on WVDOH right of way. We propose compiling a database of all “Share the Road” signs using GPS receivers and summer employees along with other personnel. A guide to data collection and the form to be used can be found in APPENDIX D.

### **MULTIMEDIA EDUCATIONAL CAMPAIGN**

The “Share the Road” concept should be more than just a few signs placed along West Virginia’s highways. It should be a complete public awareness campaign designed to inform motorists, bicyclists and pedestrians of their rights and responsibilities as users of the roadway system.

Simply providing a facility to walk or ride bicycles will not result in more people walking or bicycling safely. It is necessary to market the facilities and promote safe walking and riding by reminding pedestrians, bicyclists and motorists of the need to share the road. Placing occasional “Share the Road” signs is insufficient. It is necessary to develop and conduct a multi-media campaign directed at all segments of the traveling public to improve the safety of all.

We recommend developing, funding and conducting a full campaign with “SHARE THE ROAD” as the central theme. Other issues can be addressed when reviews of the data indicate the need.

This campaign should consist of safety brochures, public service announcements, posters, poster contests for schools, and any other method that can be devised to get the message of motoring, walking and bicycling safely and predictably across to public. Once developed these materials must be distributed for display in libraries, schools, buses, bill boards, bicycle shops, fitness establishments, and at any other available location.

Any such multi-media campaign will have to be periodically revised using information from improved data collection. By using PBCAT to review the data on motor vehicle accidents involving pedestrians and bicyclists, we can target the campaign to those events and those audiences that contribute to the majority of the injuries. While riding a bicycle while under the influence of alcohol is dangerous, the knowledge that only two bicyclists involved in accidents were reported as being under the influence during a five year period indicates there are more urgent issues to be addressed.

As indicated in Chapter One of this Section, motor vehicle accidents involving bicycles have a surge during the summer months from May through August. With over 55% of all the motor vehicle accidents involving bicycles during these months it was obvious that we should recommend a public awareness campaign on bicycle safety during April through August each year.

### **WV BIKE/PED SAFETY**

Any public awareness campaign should include a method for the public to respond. The WV BIKE/PED SAFETY program is the recommended process. The Maine Department of Transportation in cooperation with the Bicycle Coalition of Maine developed the Spot ME program to address low cost improvements that enhance bicycle safety and access such as maintenance work, signs and striping, and small construction projects.

The WVDOH should adopt this program and call it “WV BIKE/PED SAFETY”. All reports of unsafe conditions or suggestions for improvements to roads, programs or other infrastructure that would affect bicyclists, pedestrians or those with special needs should be reported to the WVDOH Bicycle/Pedestrian Coordinator. Either a special email address such as BIKEPED@WV.GOV could be established for this use or the Bicycle/Pedestrian Coordinator’s regular email address could be used. (See Appendix E for the Bicycle/Pedestrian Coordinator’s contact information).

This program is not intended to be a method of requesting “Share the Road” signs or construction of new bicycle or pedestrian facilities. It is intended to be used for small projects that will improve existing facilities and make them safer



We request all individuals reporting these conditions use “WV BIKE/PED SAFETY” in the subject line of their email or on the envelope of their communication so it can receive prompt attention. The following information should be included in every report.

- The name and contact information of the reporter, including phone number and email address,
- The name of the road,
- The route number of the road,
- Other landmarks to aid in locating the problem,
- A complete description of the problem, what it is and why it is a problem.

The Bicycle/Pedestrian Coordinator should review the information submitted, contact the appropriate person to address the problem, and report the action taken to the person making the report. This will prevent multiple reports of the same problem distracting the personnel from performing their regular duties and correcting the problems.

Funding for this program and the necessary repairs may be available from the Hazard Elimination Program (See Section 6 of this plan.)

### **BICYCLE SAFETY IN DMV BOOKLET**

The West Virginia Division of Motor Vehicles (WVDMV) publishes and distributes a study booklet to prepare beginning drivers for the test to obtain their learners permit. This booklet contains information on Sharing the Road with pedestrians, animal riders, bicycles, and joggers. It can be found online at:  
[http://www.wvdot.com/6\\_motorists/dmv/downloads/drivershandbook.pdf](http://www.wvdot.com/6_motorists/dmv/downloads/drivershandbook.pdf). We commend the WVDMV for disseminating this information to new drivers. Our only request is for WVDMV to include some questions on sharing the road on future written tests for operator’s licenses.

### **LAW ENFORCEMENT**

Few bicycle advocates are willing to stand up and ask for the traffic laws that apply to bicyclists be more aggressively enforced. They prefer to talk about the softer side of education, safety promotional campaigns and encouragement to follow the rules. While education, encouragement and safety promotions are important, they are not the complete solution.

The initial step in asking for stricter and more aggressive enforcement of the law should involve reviewing existing laws and suggesting necessary modifications to them. Section Two of this plan addresses this issue.

Many bicyclists refuse to obey the rules of the road, or don't know that the rules of the road apply to them, or don't know that they can get a ticket when riding a bicycle just as easily as when driving a car. Some bicyclists behaviors are not only against the law, they are dangerous. Some such actions include:

- Riding at night without lights or reflectors
- Not wearing visible clothing.
- Riding in the wrong direction, or the wrong way on a one way street.
- Riding through stop signs and red lights.
- Making sudden or unpredictable turns or failing to signal.
- Not yielding the right-of-way when required.

An obvious second step is the review of accident data to determine the causes of accidents resulting in injuries and fatalities. This review should result in specific recommendations for education and enforcement. This was addressed in Chapter One of this section. This review indicated intersections were a high risk area for pedestrians and bicyclists and that the hours of reduced visibility (from dusk till dawn) are particularly dangerous for pedestrians and bicyclists. This resulted in two recommendations for stricter enforcement.

One recommendation requests stricter enforcement of laws and ordinances related to intersections for pedestrians, bicyclists and motorists. A stricter enforcement of pedestrians crossing against the light is just as important as enforcement of automobiles or bicycles entering the intersection without stopping at the stop sign or waiting on the light to turn green. At the same time law enforcement officials should routinely give motorists who encroach on the cross walks or partially enter an intersection before stopping a citation.

The other recommendation involved stricter enforcement of laws and ordinances related to lights and reflectors on bicycles ridden at night. Law enforcement officials routinely give motorists "Fix-it Tickets" for such equipment offences as burnt out lights. The same process should be extended to bicyclists who ride without required equipment especially those who ride during hours of reduced visibility without proper reflectors and lights.

Stopping a bicyclist and taking enforcement actions against the rider



Commuting to work is good.  
Doing it without a helmet is bad.  
Doing it on the wrong side of the road is  
bad, very bad.

can be a challenge for an officer who has not thought through the process. As stated earlier in this plan, bicycles are highly maneuverable and are difficult to overtake and actually stop if their rider doesn't want to stop or realize the officer is "after him". The best way to stop a bicycle is with another bicycle. Ideally, a bicycle officer rides alongside the offender and asks them to stop.

Since bicycle riders often do not carry identification, much less an operator's license, they may give a fictitious or altered name when stopped. As in any situation where the officer questions a person's identification, the officers should keep notes of the identity information given and verify it with companions or later in the discussion.

Some bicyclists will object to the officer's challenge to their behavior. Some may be bicycle advocates and have strong opinions about their way of doing things, legal or not. Some will be opposed to automobiles or authority, or both. Officers should not debate such issues but should focus on the specifics of the violation observed. Any officer knowledgeable about the bicycle and traffic laws should have minimal difficulty with these people.

Enhanced enforcement for bicycle safety must begin with training for officers. Few officers have training related to bicycles. A number of training resources are available to begin educating officers. Two excellent resources to use in development of a training program are provided by the U.S. Department of Transportation National Highway Traffic Safety Administration.

*Law Enforcing Law for Bicyclist's* is a video that provides a review of the importance of law enforcement for bicycle safety and highlights steps officers can take to enhance the safety of all road users, especially cyclists. It describes common violations, discusses the importance of reporting bicycle crashes, and provides additional resources.

*Enhancing Bicycle Safety: Law Enforcements Role* is a self-paced interactive training designed for law enforcement officers. It recognizes that most law enforcement officers do not receive any training on bicycle safety. It usually takes two hours to complete this training.



Part of enforcement should involve law enforcement officers seeking to reconcile confusing signage such as this one in St. Albans.

*NHTSA Community Oriented Bicycle Safety for Law Enforcement (2002)* is a two-day course for law enforcement officers working with groups, organizations, and individuals to improve bicycle safety. The course is instructor-led and is open to all law enforcement officers. For more information contact the National Highway Safety Administration, at 202-366-2692.

Bicycle helmets reduce the death and injuries inflicted by bicyclist's head coming into contact with the environment around them. West Virginia's State Code mandates bicycle helmets for all riders under fifteen. Law enforcement officers should actively support helmet use. Any law enforcement agency with bicycle mounted officers should require their officers wear helmets. Failure to use safety equipment could result in denial of workmen's compensation claims made by an injured officer. It is important that officers be role models for other bicyclists both young and old.

In no way is this encouragement for stricter enforcement meant to replace the officer's discretion. As the person in the field, face to face with the violator, only the officer can judge whether a discussion with the violator, a warning ticket, a citation, or taking the violator forth-with to the magistrate's office is the proper course of action.

### **ANNUAL BICYCLE MEETING**

This plan also recommends that WVDOH initiate funding, through the WVDOH Bicycle/Pedestrian Coordinator, an annual meeting of the bicycle community in West Virginia. Discussions at these meetings should include: issues pertinent to bicycle safety, upgrading existing bicycle facilities, developing new bicycle facilities, and improving communication among all those interested in bicycling.

## **SECTION FIVE: PEDESTRIAN TRANSPORTATION FACILITIES INTRODUCTION**

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### ***GOAL: Improve pedestrian transportation facilities in West Virginia.***

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Pedestrian facilities are not common along rural roads. Usually the WVDOH accommodates pedestrians (and bicyclists) by paving the shoulders up to eight feet in width or “from the hillside to the guard rail” as the policy was described by Governor Manchin.

In urban areas, pedestrian facilities have historically been the concern of the municipalities or counties. Those on WVDOH right of way must comply with Design Directive 811 *Curb Ramps and Sidewalks*. However, DD-811 is based on an early version of the Accessibility Guidelines and needs to be revised to comply with the 2004 *Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines (ADAAG)* and the recent *Draft Public Rights of Way Accessibility Guidelines (PROWAG)*. All other facilities should be designed and constructed in compliance with ADAAG.

A shared use path should be designed as a pedestrian facility that allows bicycles. Proper attention to the width, cross slope, tactile warning of traffic crossings, grade, and resting intervals should be addressed. Details for design standards for trails may be found in *Designing Sidewalks and Trails for Access Parts I and II*.

The West Virginia Recreational Trail Advisory Board has agreed to follow the US Department of Agriculture’s *Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG)* for all outdoor recreation access routes, camping and picnicking areas and other facilities funded under the Recreational Trails Program. Hiking trails funded by the Recreational Trails Program are covered by the Forest Service Trails Accessibility Guidelines (FSTAG).

Recreational trails funded by the Transportation Enhancement Program or the Recreational Trails Program which are intended solely for motorized, equestrian or bicycle use are not required to be constructed according to DD 811, DD813 or any other accessibility guidelines even though pedestrians may sometimes use them.

## CHAPTER ONE: PEDESTRIAN TRANSPORTATION FACILITIES OWNED BY WVDOH

### ***Objective: Review pedestrian transportation facilities constructed and maintained by WVDOH for accessibility.***

In addition to the Transportation Enhancement, Recreational Trails, and Safe Routes to Schools projects, a number of pedestrian facilities have been built by WVDOH around the state. Usually these are in coordination with construction of a highway project. A few examples are the pedestrian bridge over Corridor L (US 19) in Fayette County, the pedestrian bridge over US 219 in Fairlea, the shared use path along State Route 9 in Jefferson County, and the spiral pedestrian ramp to the 35<sup>th</sup> Street Bridge in Charleston.

This plan recommends contacting the Metropolitan Planning Organizations and the WVDOH Districts by the end of 2011 to ascertain what pedestrian facilities have been built by the WVDOH within their jurisdiction. A field review of each of these facilities should be conducted to determine if they are still fulfilling their needs, if they can be made more accessible for people with special needs, if they need to be improved, and what upgrades are needed if any. For instance, a recent review of the ramp to the 35<sup>th</sup> Street Bridge in Charleston revealed it does not have truncated domes or other tactile warning of the roadway where it enters US 60. Based on these field reviews a ten year transition plan should be developed to bring WVDOH into full compliance with accessibility laws.

These same organizations should be asked if there are additional pedestrian facilities they desire on WVDOH right of way.



The ramp to the 35<sup>th</sup> Street Bridge once complied with the Accessibility guidelines. Today's guidelines require tactile warning of the roadway where it approaches US 60.

## CHAPTER TWO: TRAILS ALONG ROADS

***Objective: Identify long-distance pedestrian trails that are routed in part along WVDOH right-of-way and recommend improvements.***

A number of long-distance hiking trails are partially routed over WVDOH right-of-way and city streets. Among these are the Allegheny Trail, the American Discovery Trail, the Appalachian Trail, Kanawha Trace, Tuscarora Trail (formerly known as the Big Blue Trail) and the Warrior Trail. In addition to the existing trails, the Great Eastern Trail is being developed and some segments of it will be routed over WVDOH rights-of-way. Many of these are along narrow roads with low speed and low Average Daily Traffic.

While the pedestrian traffic along these roads may be low, they serve as vital connections in preserving the continuous corridors of the long distance trails that cross West Virginia. Thus, we recommend they receive special consideration when road maintenance activities are conducted. Another important consideration for these routes is the impact abandoning right-of-way will have on trails that use right-of-way proposed for abandonment.

The portions of long distance trails we have identified along WVDOH right of way are listed below. Extremely short sections are not included here. We recommend that WVDOH Districts identify the segments within their jurisdiction and make efforts to improve their suitability as part of the long distance hiking trails during routine maintenance and repairs. At the very least we request that the WVDOH Districts take care to not destroy blazing or other trail markings placed to aid the hikers in finding their way.

### **ALLEGHENY TRAIL**

The Allegheny Trail is blazed in yellow from its beginning along the Pennsylvania state border in Preston County to its other extremity some three hundred miles away at the Appalachian Trail along the Virginia state border in Monroe County. Along the way it is routed across private property, state parks, state forests, national forests, as well as along WVDOH right-of-ways.

Some sections of the WVDOH right-of-way used by the Allegheny Trail are paved, others are unpaved. Some sections seem like they have not been maintained in years; others are US Routes receiving routine maintenance. The list of WVDOH roadways used by the Allegheny Trail was compiled from the *Hiking Guide to the Allegheny Trail* published by the West Virginia Scenic Trails Association, Inc. (WVSTA), the group who conceived this trail and brought it into existence. This list is arranged by county from north to south along the trail.

WVSTA would prefer the trail to follow woodland tracks over its entire length. They continually seek to relocate sections which follow roadways onto public or private property away from motor vehicles. Until this can be done, they will continue to need the connections along WVDOH right-of-way. Since this is a dynamic trail, some segments listed may no longer be part of the trail.

<b>TABLE 5.2.1 ALLEGHENY TRAIL SEGMENTS ALONG WVDOH RIGHT OF WAY</b>		
<b>PRESTON COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
CR 4	Near Bruceton Mills Compressor Station	At junction with CR 4/1
CR 4/1	At junction with CR 4	At junction with CR 6/2
CR 6/2	At junction with CR 4/1	At junction with CR 73/9
CR 73/9	At junction with CR 6/2	At junction with CR 2/2
CR 2/2	At junction with CR 73/9	At junction with CR 2/5
CR 2/5	At junction with CR 2/2	At junction with CR 2
CR 2	At junction with CR 2/5	At junction with CR 73/73 and CR 73/5
CR 73/5	At junction with CR 73/73 and CR 2	At junction with CR 14/1
CR 14/1	At junction with CR 73/5	At junction with CR 14
CR 14	At junction with CR 14/1	At junction with CR 14/4
CR 14/4	At junction with CR 14	At Cheat River
<b>PRESTON COUNTY SEGMENT 2</b>		
Route	Beginning	Ending
CR 26/23	At Muddy Creek 0.3 miles west of intersection with CR 26	At junction with CR 26
CR 26	At junction with CR 26/23	At junction with CR 7/12 in Albright
CR 7/12	At junction with CR 26	At junction with CR 45/1 at Albright city limits
CR 45/1	At junction with 7/12 at Albright city limits	At junction with CR 3/12
CR 3/12	At junction with CR 45/1	At junction with CR 7/33
CR 7/33	At junction with CR 3/12	At junction with CR 7/22
CR 7/22	At junction with CR 7/33	At junction with CR 3/13



<b>TABLE 5.2.1 ALLEGHENY TRAIL SEGMENTS ALONG WVDOH RIGHT OF WAY (continued)</b>		
<b>PRESTON COUNTY SEGMENT 3</b>		
Route	Beginning	Ending
CR 45/3	At junction with CR 3/13	At junction with SR 7
SR 7	At junction with CR 45/3	At Junction with CR 86
CR 86	At junction with SR 7	At junction with CR 86/4
CR 86/4	At junction with CR 86	At junction with CR 80/1
CR 80/1	At junction with CR 86/4	At junction with CR 80/2
CR 80/2	At junction with CR 80/1	At junction with CR 51
CR 51	At junction with CR 80/2	At junction with CR 80
CR 80	At junction with CR 51	At junction with CR 84
CR 84	At junction with CR 80	At junction with US 50
US 50	At junction with CR 84	At junction with CR 110
CR 110	At junction with CR 50	At junction with CR 112 and CR 112/1
CR 112/1	At junction with CR 112 and CR 110	County line and CR 7 in Tucker County
<b>TUCKER COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
CR 7	County line and CR 112/1 in Preston County	At junction with CR 16
CR 16	At junction with CR 7	At junction with CR 25
CR 25	At junction with CR 16	At junction with US 219
US 219	At junction with CR 25	At junction with FS Road 18
<b>TUCKER COUNTY SEGMENT 2</b>		
Route	Beginning	Ending
CR 27	At junction with FS Road 18	At junction with SR 32
SR 32	At junction with CR 27	At junction with CR 29
CR 29	At junction with SR 32	At junction with CR 29/1
CR 29/1	At junction with CR 29	At end in Blackwater Falls State Park
<b>TUCKER COUNTY SEGMENT 3</b>		
Route	Beginning	Ending
CR 45/3	Approximately one mile west of SR 32	At junction with SR 72
SR 72	At junction with CR 45/3	At junction with CR 45/2
CR 45/2	At junction with SR 7	At junction with CR 35/15
CR 35/15	At junction with CR 45/2	At junction with CR 26
CR 26	At junction with CR 35/15	To low water bridge on Glady Fork
<b>RANDOLPH COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
CR 27	Approximately two miles north of Glady and junction with CR 22	At junction with CR 22
CR 22	At junction with CR 27	Approximately one tenth of a mile west of junction with CR 27

<b>TABLE 5.2.1 ALLEGHENY TRAIL SEGMENTS ALONG WVDOH RIGHT OF WAY (continued)</b>		
<b>POCAHONTAS COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
US 250	Just east of junction with CR 250/1	At junction with CR 250/2
CR 250/2	At junction with US 250	At junction with CR 3
CR 3	At junction with CR 250/2	Approximately 100 yards east of junction with CR 250/2
<b>POCAHONTAS COUNTY SEGMENT 2</b>		
Route	Beginning	Ending
CR 12	Greenbrier River Trail	At junction with CR 12/2
CR 12/2	At junction with CR 12	At junction with CR 1/4
CR 1/4	At junction with CR 12/2	Approximately three tenths of a mile east of junction with CR 12/2
<b>POCAHONTAS COUNTY SEGMENT 3</b>		
Route	Beginning	Ending
CR 11/2	Approximately one quarter mile west of SR 28	At junction with SR 28
SR 28	At junction with CR 11/2	Approximately one half mile east of junction with CR 11/2
<b>POCHONTAS COUNTY SEGMENT 3</b>		
Route	Beginning	Ending
SR 28	About half way between junction with SR 39 and junction with CR 39/3	At junction with SR 39
SR 39	At junction with SR 28	At junction with CR 21
CR 21	At junction with CR 39	Approximately one mile south of the intersection with CR 39 near Gilden Hollow

## **KANAWHA TRACE**

The Kanawha Trace is a thirty two mile long trail from Cabell County to the Kanawha River at Frazier's Bottom in Putnam County. This trail is primarily located on private property and is cared for by the Tri-State Boy Scout Council, Inc. The Kanawha Trace begins just north of US Route 60 along the Merritt Creek Connector and follows narrow country roads for the first mile or two until it dives into the woods.



The Kanawha Trace begins at the Merritt Creek Connector and runs along WVDOH Right of way for several miles.

During the recent construction of US Route 35 in Putnam County a pedestrian tunnel under the new four-lane was constructed to maintain a safe continuity for this trail which is nearly fifty years old. Only the solar panels that provide power for the tunnel's lights are visible from Route 35.

<b>TABLE 5.2.2 KANAWHA TRACE SEGMENTS ALONG WVDOH RIGHT OF WAY</b>		
<b>CABELL COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
CR 26 (Mud River Road)	At SR 193 between US 60 and I 64 in Barboursville	At junction with CR 26/3
CR 26/3 (Wildcat Hollow Road)	At junction with CR 26	After .06 miles trail enters woods.
<b>CABELL COUNTY SEGMENT 2</b>		
Route	Beginning	Ending
CR 17 (Blue Sulphur Road)	North of junction with CR 17/4	South of junction with CR 17/1
<b>CABELL COUNTY SEGMENT 3</b>		
Route	Beginning	Ending
CR 1/11 (Big Cabell Creek Road)	South of junction with CR 20	South of junction with CR 20
<b>CABELL COUNTY SEGMENT 4</b>		
Route	Beginning	Ending
CR 1 (Howell's Mill Road)	South of junction with CR 1/11	South of junction with CR 1/11
<b>CABELL COUNTY SEGMENT 5</b>		
Route	Beginning	Ending
CR 11 (Barkers Ridge Road)	East of junction with CR 11/9	East to junction with CR 1/4
CR 1/4	At junction with CR 11	1.5 miles north of junction with CR 11
<b>CABELL COUNTY SEGMENT 6</b>		
Route	Beginning	Ending
CR 6	.27 miles west of junction with CR 9	East to junction with CR 9
CR 9	At junction with CR 6	Approximately one mile north of junction with CR 6
<b>MASON COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
CR 45/3 (Dry Ridge Road)	Near Mason/Putnam County line	North to location near junction with CR 45

**TABLE 5.2.2  
KANAWHA TRACE SEGMENTS  
ALONG WVDOH RIGHT OF WAY (continued)**

<b>MASON COUNTY SEGMENT 2</b>		
Route	Beginning	Ending
CR 86 (Glenwood Road)	Approximately .9 miles east of junction with CR 45	Junction with CR 45 (Hannan Trace Road)
CR 45 (Hannan Trace Road)	Junction with CR 86	East 3.22 miles to CR 41 (Mason Road)
CR 41 (Mason Road)	Junction with CR 45	Junction with CR 43/2
CR 43/2	Junction with CR 41	Mason/Putnam County Line where CR 43/2 becomes CR 13/3
<b>PUTNAM COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
CR 13/3	At Mason/Putnam County Line	Junction with CR 13/4
CR 13/4	Junction with CR 13/3	Approximately .2 miles east of junction with CR 13/3
<b>PUTNAM COUNTY SEGMENT 2</b>		
Route	Beginning	Ending
CR 24	Barrett Branch of Five and Twenty Mile Creek	At SR 817

### **TUSCARORA TRAIL**

The Tuscarora Trail was developed as a side branch of the Appalachian Trail and extends from Harrisburg, Pennsylvania to Luray, Virginia. Along the 250 mile route it passes through Hampshire, Morgan and Berkeley counties. Until 1995 the southern portion of the trail was called the Big Blue Trail after the blue rectangles painted on trees to blaze the route. Recently the Tuscarora Trail has been incorporated into the Great Eastern Trail, a new north to south hiking trail separate from the Appalachian Trail. The Great Eastern Trail extends from Maine to Alabama.

WVDOH right-of-way includes three sections of the Tuscarora Trail. One section near Capon Springs in Hampshire County is extremely short and is not included here. The other two sections are relatively short but are vital to maintain the continuous nature of the trail. These sections are arranged by county from Maryland to Virginia in a north to south direction.

<b>TABLE 5.2.3 TUSCARORA TRAIL SEGMENTS ALONG WVDOH RIGHT OF WAY</b>		
<b>MORGAN COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
US 522	Maryland State Line	At junction with CR 1
CR 1	At junction with US 522	Approximately one and one half miles east of junction with US 522
<b>MORGAN COUNTY SEGMENT 2</b>		
Route	Beginning	Ending
CR 8	At junction with CR 6	At junction with CR 1/3
CR 1/3	At junction with CR 8	At junction with CR 1/6
CR 1/6	At junction with CR 1/3	At junction with SR 9
<b>BERKELEY COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
SR 45	At dirt road approximately one and one half miles north of the Virginia State Line	Virginia State Line

## **WARRIOR TRAIL**

The Warrior Trail Association, headquartered in Waynesburg, Pennsylvania, developed the Warrior Trail between the Ohio River and Greensboro, Pennsylvania. The 68 mile long trail has almost twenty-three miles in West Virginia; nineteen of these miles follow WVDOH right-of-way. The West Virginia contact for this trail, like so many other hiking trails in the mountain state, is The West Virginia Scenic Trails Association.

<b>TABLE 5.2.4 WARRIOR TRAIL SEGMENTS ALONG WVDOH RIGHT OF WAY</b>		
<b>MARSHALL COUNTY SEGMENT 1</b>		
Route	Beginning	Ending
CR 27	At junction with SR 2	At junction with CR 74
CR 74	At junction with CR 27	At junction with CR 72
CR 72	At junction with CR 74	At junction with CR 2/1
CR 2/1	County Route 72	At junction with CR 21
CR 21	At junction with CR 2/1	At junction with CR 62
CR 62	At junction with CR 21	At junction with CR 25/1
CR 25/1	At junction with CR 62	About one mile south of junction with CR 25

## SECTION SIX: FUNDING INTRODUCTION

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### ***GOAL: Improve funding for bicycle and pedestrian facilities and programs.***

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Almost all the major Federal-aid highway, transit, safety, and other programs can be interpreted to provide funding for bicycle and pedestrian projects. Bicycle projects must be for transportation, rather than recreation and must be designed and located according to the State's and Metropolitan Planning Organizations' transportation plans.

#### **Federal-aid Highway Program**

**National Highway System** funds may be used to construct bicycle transportation facilities and pedestrian walkways on land adjacent to any highway on the National Highway System, **including Interstate highways.**

**Surface Transportation Program (STP)** funds may be used for bicycle transportation facilities and pedestrian walkways, or projects such as maps, brochures, and public service announcements, related to safe bicycle use and walking. TEA-21 added "the modification of public sidewalks to comply with the Americans with Disabilities Act" as an activity that is specifically eligible for the use of these funds.

Ten percent of each State's annual STP funds are set-aside for **Transportation Enhancement Activities (TEAs)**. The law provides a specific list of activities that are eligible. This includes "provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists," and the "preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails)."

Another 10 percent of each State's STP funds is set-aside for the **Hazard Elimination and Railway-Highway Crossing programs**, which address bicycle and pedestrian safety issues. Each State is required to implement a Hazard Elimination Program to identify and correct locations which may constitute a danger to motorists, bicyclists, and pedestrians. Funds may be used for activities including a survey of hazardous locations and for projects

on any publicly owned bicycle or pedestrian pathway or trail, or any safety-related traffic calming measure.

**Congestion Mitigation and Air Quality Improvement Program** funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or projects such as maps, brochures, and public service announcements, related to safe bicycle use.

**Recreational Trails Program** funds may be used for all kinds of trail projects. Of the funds apportioned to a State, 30 percent must be used for motorized trail uses, 30 percent for non-motorized trail uses, and 40 percent for diverse trail uses.

Provisions for pedestrians and bicyclists are eligible under various categories of the **Federal Lands Highway Program** in conjunction with roads, highways, and parkways. Priority for funding projects is determined by the appropriate Federal Land Agency or Tribal government.

**National Scenic Byways Program** funds may be used for "construction along a scenic byway of a facility for pedestrians and bicyclists."

**Job Access and Reverse Commute Grants** are available to support projects, including bicycle-related services, designed to transport welfare recipients and eligible low-income individuals to and from employment.

**High Priority Projects and Designated Transportation Enhancement Activities** identified by Section 1602 of TEA-21 include numerous bicycle, pedestrian, trail, and traffic calming projects in communities throughout the country.

### **Federal Transit Program**

Title 49 U.S.C. (as amended by TEA-21) allows the **Urbanized Area Formula Grants, Capital Investment Grants and Loans, and Formula Program for Other than Urbanized Area** transit funds to be used for improving bicycle and pedestrian access to transit facilities and vehicles. Eligible activities include investments in "pedestrian and bicycle access to a mass transportation facility" that establishes or enhances coordination between mass transportation and other transportation.

TEA-21 also created a **Transit Enhancement Activity** program with a one percent set-aside of Urbanized Area Formula Grant funds designated for, among other things, pedestrian access and walkways, and "bicycle access, including bicycle storage facilities and installing equipment for transporting bicycles on mass transportation vehicles".

## Highway Safety Programs

Pedestrian and bicyclist safety remain priority areas for **State and Community Highway Safety Grants** funded by the Section 402 formula grant program. A State is eligible for these grants by submitting a Performance plan (establishing goals and performance measures for improving highway safety) and a Highway Safety Plan (describing activities to achieve those goals).

Research, development, demonstrations and training to improve highway safety (including bicycle and pedestrian safety) is carried out under the Highway Safety Research and Development (Section 403) program.

## Federal/State Matching Requirements

In general, the Federal share of the costs of transportation projects is 80 percent with a 20 percent State or local match. However, there are a number of exceptions to this rule.

- Federal Lands Highway projects and Section 402 Highway Safety funds are 100 percent Federally funded.
- Bicycle-related Transit Enhancement Activities are 95 percent Federally funded.
- Hazard elimination projects are 90 percent Federally funded. Bicycle-related transit projects (other than Transit Enhancement Activities) may be up to 90 percent Federally funded.
- Individual Transportation Enhancement Activity projects under the STP can have a match higher or lower than 80 percent. However, the overall Federal share of each State's Transportation Enhancement Program must be 80 percent.
- States with higher percentages of Federal Lands have higher Federal shares calculated in proportion to their percentage of Federal lands.
- The State and/or local funds used to match Federal-aid highway projects may include in-kind contributions (such as donations). Funds from other Federal programs may also be used to match Transportation Enhancement, Scenic Byways, and Recreational Trails program funds. A Federal agency project sponsor may provide matching funds to Recreational Trails funds provided the Federal share does not exceed 95 percent.



## CHAPTER ONE: FUNDING OF BICYCLE PEDESTRIAN PROJECTS IN WEST VIRGINIA

***Objective: Compile data on current grant programs available for bicycle and pedestrian facilities and programs.***

### TRANSPORTATION ENHANCEMENT PROGRAM

Prior to 1991, Congress authorized a “Highway Bill” every six years to allocate federal funds to the states for highway and bridge construction. In 1991, the Congress instituted a number of new programs, to be funded from the Highway Trust Fund, to provide for “more-livable communities,” in addition to highway and bridge construction. Among the new funding programs initiated by the Intermodal and Surface Transportation Efficiency Act (ISTEA) of 1991, was the Transportation Enhancement (TE) program.

Every six years since, the program has continued to evolve under a number of different bills. The most recent reauthorization is part of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy For Users (SAFETEA-LU) which was signed into law on August 10, 2005. SAFETEA-LU represents the largest surface transportation investment in our Nation’s history and continues to expand the TE program.

Two (2) basic requirements determine eligibility: First, the proposed TE activity must be one of the 12 qualifying activities or categories listed in the legislation; Second, the activity must relate to surface transportation.

A number of those categories would be of interest to pedestrians, bicyclists and those planning facilities for pedestrians and/or bicyclists. Specifically items

- 1: Provision of facilities for pedestrians and bicycles,
- 2: Provision of safety and educational activities for pedestrians and Bicyclists, and
- 8: Preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian or bicycle trails).

Following is an in depth description of these categories.

## 1. PROVISION OF FACILITIES FOR PEDESTRIANS AND BICYCLES

This activity includes providing for safe bicycle/pedestrian accommodations, either through construction of new facilities or improvements to existing facilities. Such construction/ improvement activities must be independent from any new construction or reconstruction of highways. Activities to improve facilities for bicycles or pedestrians on an existing roadway may include widening curb lanes, striping bicycle lanes, adding road shoulders, installing sidewalks where none currently exist (note: repair to existing sidewalks is not eligible unless a minor element of construction of new sidewalks; however, reconstruction of deteriorated sidewalks is an eligible activity). There must be a documented transportation need for bicycle or pedestrian transportation; a project that is more “recreational” in use or benefit, rather than serving a transportation need, would NOT be eligible. Examples of eligible projects might include installation of bicycle racks, construction of a separate bicycle path along a roadway from an area school to a residential area, or construction of crosswalks where an obvious need exists to allow the safe passage of pedestrians.

Examples:

Elkins Pedestrian Bridge—Construction of a pedestrian/bicycle bridge linking River Bend area and Glendale area.

Ritter Park Bicycle-North Boulevard Extension Trail—Pave, illuminate, landscape and provide parking for the bicycle and pedestrian pathways through the park connecting multiple entrances.

## 2. PROVISION OF SAFETY AND EDUCATIONAL ACTIVITIES FOR PEDESTRIANS AND BICYCLISTS

The “provision of safety and educational activities for pedestrians and bicyclists” includes non-construction safety-related activities and the reasonable costs to provide safety and educational activities such as bicycle/pedestrian safety training and the cost of facilitators and classes. It may also include related training materials such as brochures, videotapes, other training aids, as well as rent for leased space and limited staff salaries. Long-term salary participation should be avoided. TE proposals should be written to reflect a definitive period for participation. Where salaries become an issue, they should be negotiated as part of the local buy-in to the project.

The funded activities must be accessible to the general public or targeted to a broad segment of the general public. The activities must show a relationship to the surface transportation system, and as with all bicycle and pedestrian activities under the STP, bicycle and pedestrian projects

using TE funds need not be located on Federal-aid highway routes, and may be non-construction activities.

Project sponsors using TE funds are encouraged to integrate safety messages and educational opportunities for bicyclists and pedestrians into enhancement projects through the development of campaigns, programs, educational materials including maps and brochures, and pedestrian and bicycle enforcement activities. Project sponsors are encouraged to coordinate these activities with the National Highway Traffic Safety Administration and other modal administrations. This TE activity is not intended to replace or duplicate existing funding opportunities for bicycle and pedestrian activities currently available through the State and Community Traffic Safety Program.

Example:

Bicycle Safety Brochure—The West Virginia Division of Tourism, in cooperation with The Hospital Association and Robert Wood Johnson Foundation, developed a bicycle safety brochure aimed, primarily, for younger bicyclists.

#### 8. PRESERVATION OF ABANDONED RAILWAY CORRIDORS (INCLUDING THE CONVERSION AND USE THEREOF FOR PEDESTRIAN OR BICYCLE TRAILS)

This category has funded many so-called “rail trail” projects throughout the state. Eligible activities could include the purchase of an abandoned rail corridor (including the acquisition costs, title search, appraisals, etc.), architect and engineering costs, as well as development and construction activities (surface preparation, paving, signage, lighting, barricades, trailhead facilities, parking, restrooms, picnic areas, etc.).

Acquisition must be from a willing seller and the purchase price must be established from an appraisal prepared by a certified general appraiser. The appraisal must be reviewed and approved by the WVDOH prior to an offer to purchase being presented to the seller. In most cases, acquisition of the railway property is through less-than fee ownership (quit claim deed). In such cases, it is highly advisable that the title be delivered to the State Rail Authority and “rail banked” by this agency. The State Rail Authority will then lease the corridor to the project sponsor for development of the rail trail with the understanding that it could be returned to railroad purposes sometime in the future. Acquisition where full title ownership (fee simple) is acquired does not require rail banking.

Examples:

North Bend Rail Trail—Multiple awards for various stages of development along its 57-mile length including surface improvements, lighting, rest areas, construction, and signage.

Marion County Rail Trail—Multiple awards for acquisition and various stages of development along this countywide rail trail system including paving and trailhead construction.

Glen Dale to Moundsville Rail Trail—Acquisition and construction of a 3.8 mile rail trail from Glen Dale to Moundsville.

### **RECREATIONAL TRAILS PROGRAM**

The Recreational Trails Program (RTP) funds can be used for the acquisition, design, construction and maintenance of motorized and non-motorized recreational trail projects. These projects can range from funding minor walking trails at public schools to the development and construction of the massive Hatfield McCoy motorized trail system in several southern West Virginia Counties.

The West Virginia Recreational Trail Advisory Board reviews and assigns a numerical score to all applications for RTP funding. These scores determine which projects are recommended to the West Virginia Department of Transportation Secretary and the Governor for funding. These projects may include designing, building and maintaining trails, purchasing equipment and tools for maintaining trails, purchasing and installing trailhead and trailside amenities such as bathrooms, parking, benches, drinking fountains, trailside signs, and the development and printing of educational and safety literature.

One major limitation on the program funding is that it cannot be spent to improve the highway system. Therefore, its use to accommodate bicycle and pedestrian transportation is limited to off-road situations.

Examples of RTP funding include:

- the design and construction of Laurel Fork Trail, an accessible trail in Holly River State park,
- the design and construction of various phases of the Mon River Rail trail system,
- the publishing of a Rail Trail guide including safety and conservation information, and
- the development and construction of the Black Diamond ATV park in Raleigh County.

## **SCENIC BYWAYS AND BACKWAYS PROGRAM**

NO INFORMATION RECEIVED

## **SAFE ROUTES TO SCHOOL**

Safe Routes to School provides funds to West Virginia to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The purposes of the program are:

- To enable and encourage children, including those with disabilities, to walk and bicycle to school;
- To make walking and bicycling to school a safer and more appealing transportation choice, which will encourage a healthy, active lifestyle starting at an early age; and
- To facilitate the planning, development and implementation of projects and activities that will improve safety, and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately two miles) of primary and middle schools.

## **CONGESTION MITIGATION AIR QUALITY PROGRAM**

In 1991, ISTEA established the Congestion Mitigation and Air Quality Program (CMAQ). This program has been reauthorized by each successive highway funding act, including the most recent, SAFETEA-LU. CMAQ is considered one of the five core programs of federal funding.

The primary purpose of CMAQ is to fund transportation projects that will result in measurable reductions in carbon monoxide (CO), ozone precursors which are volatile organic compounds (VOC) and nitrous oxide (NO<sub>x</sub>), and particulate matter (PM). These projects help designated air quality non-attainment and maintenance areas meet and maintain their National Ambient Air Quality Standards (NAAQS) established by the federal Environmental Protection Agency (EPA).

As with all federal-aid transportation funding, CMAQ is a reimbursable program; CMAQ funds are not granted to pay project expenses directly. Also, a second funding source, such as the State or local government, must generally match the eligible CMAQ funds, usually at a rate of 80% federal (CMAQ) and 20% non-federal funds. Interstate projects and some types of traffic control signalization projects may require only 10% or no matching funds.

CMAQ funds are divided into two categories, a flexible portion and a mandatory portion. The mandatory portion must be spent on eligible projects in designated air quality non-attainment or maintenance areas. The flexible portion, as its name suggests, may be spent in any area and for

a broader range of project types. For this reason, the pool of eligible projects is much larger for the flexible portion and, typically, flexible funds are well utilized from year to year. However, the pool of eligible projects is much smaller for the mandatory portion which makes utilization of the mandatory funds more challenging.

## PROJECT ELIGIBILITY

Counties that are eligible for mandatory CMAQ funds and the WVDOH district in which they are located are as follows:

- » District One: Kanawha and Putnam Counties
- » District Two: Cabell and Wayne Counties
- » District Three: Wood County
- » District Five: Berkeley and Jefferson Counties
- » District Six: Brooke, Hancock, Marshall, and Ohio Counties

Projects must demonstrate a reduction in motor vehicle emissions in order to be eligible for mandatory CMAQ funds. Also, projects must be of at least one of the eligible types of projects and activities as set forth by the program. Bicycle and pedestrian facilities and programs are explicitly eligible under the CMAQ program. However, such projects must compete with other eligible projects which include traffic congestion reduction and traffic flow improvement projects. Competition between projects is encouraged as part of the WVDOT CMAQ application process administered by the Program Planning and Administration Division of the Division of Highways.

To date, only two bicycle/pedestrian projects have received CMAQ funding in West Virginia. One project involves developing and constructing part of the connecting link between Point Park in Parkersburg and the west end of North Bend Rail Trail. The other project involves developing and constructing part of a network of trails and bike lanes in and around Huntington.

More information on the CMAQ Program can be found at the following internet website: <http://www.fhwa.dot.gov/environment/cmaq08gm.htm>.

## **APPENDIX A: WEST VIRGINIA STATE CODE RELEVANT TO PEDESTRIANS AND BICYCLES**

### **CHAPTER 17C. TRAFFIC REGULATIONS AND LAWS OF THE ROAD. ARTICLE 1. WORDS AND PHRASES DEFINED.**

#### **§17C-1-1. Definitions generally.**

The following words and phrases when used in this chapter shall, for the purpose of this chapter, have the meanings respectively ascribed to them in this article.

#### **§17C-1-2. Vehicle.**

"Vehicle" means every device in, upon or by which any person or property is or may be transported or drawn upon a highway, except devices moved by human power or used exclusively upon stationary rails or tracks or wheelchairs.

#### **§17C-1-3. Motor vehicle.**

"Motor vehicle" means every vehicle which is self-propelled and every vehicle which is propelled by electric power obtained from overhead trolley wires, but not operated upon rails, except motorized wheelchairs.

#### **§17C-1-8. Bicycle.**

"Bicycle" means every device which does not have a motor attached and which is propelled by human power upon which any person may ride, having two tandem wheels either of which is more than twenty inches in diameter.

**§17C-1-30. "Pedestrian"** means any person afoot or any person using a wheelchair or other mobility assistance or person walking a bicycle.

#### **§17C-1-31. Driver.**

"Driver" means every person who drives or is in actual physical control of a vehicle.

#### **§17C-1-33. Police officer.**

"Police officer" means every officer authorized to direct or regulate traffic or to make arrests for violations of traffic regulations.

#### **§17C-1-35. Street or highway.**

"Street" or "highway" means the entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of

the public for purposes of vehicular travel.

**§17C-1-37. Roadway.**

"Roadway" means that portion of a highway improved, designed, or ordinarily used for vehicular travel, exclusive of the berm or shoulder. In the event a highway includes two or more separate roadways, the term "roadway" as used herein shall refer to any such roadway separately but not to all such roadways collectively.

**§17C-1-38. Sidewalk.**

"Sidewalk" means that portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for the use of pedestrians.

**§17C-1-43. Crosswalk.**

"Crosswalk" includes: (a) That part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or, in the absence of curbs, from the edges of the traversable roadway; and

(b) Any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface.

**§17C-1-44. Safety zone.**

"Safety zone" means the area or space officially set apart within a roadway for the exclusive use of pedestrians and which is protected or is so marked or indicated by adequate signs as to be plainly visible at all times while set apart as a safety zone.

**§17C-1-48. Traffic-control signal.**

"Traffic-control signal" means any device, whether manually, electrically, or mechanically operated, by which traffic is alternately directed to stop and to proceed.

**§17C-1-50. Traffic.**

"Traffic" means pedestrians, ridden or herded animals, vehicles, streetcars, and other conveyances either singly or together while using any highway for purposes of travel.

**§17C-1-52. Stop.**

"Stop," when required, means complete cessation from movement.

**§17C-1-55. School grounds.**

"School grounds" includes the land on which a school is built together with such other land used by students for play, recreation or athletic events while attending school.



**§17C-1-60. Parking area.**

"Parking area" means lots, areas or other accommodations for the parking of vehicles off the street or highway and open to public use with or without charge.

**§17C-1-61. Institution of higher education.**

The term "institution of higher education" shall mean "state colleges," "state college," "state universities" and "universities," "state university," and "university," and "community college" as defined in subsection (b), (c), (d), (e) and (f), section two, article twenty-six, chapter eighteen of this code and any other institution as defined by sections 401 (f), (g), (h) of the Federal Higher Education Facilities Act of 1963, as amended.

**§17C-1-65. Wheelchair.**

"Wheelchair" means a motorized or nonmotorized wheeled device designed for, and used by, a person with disabilities that is incapable of a speed in excess of eight miles per hour.

**§17C-1-66. Electric personal assistive mobility device.**

"Electric personal assistive mobility device" or "EPAMD" means a self-balancing, two nontandem-wheeled device, designed to transport only one person, with an electric propulsion system with average power of seven hundred fifty watts (one horse power), whose maximum speed on a paved level surface, when powered solely by such a propulsion system while ridden by an operator who weighs one hundred seventy pounds, is less than twenty miles per hour.

**CHAPTER 17C. TRAFFIC REGULATIONS AND LAWS OF THE ROAD.  
ARTICLE 3. TRAFFIC SIGNS, SIGNALS AND MARKINGS.**

**§17C-3-1. Adoption of manual and specifications for uniform system of traffic-control devices.**

The state road commission shall adopt a manual and specifications for a uniform system of traffic-control devices consistent with the provisions of this chapter for use upon highways within this state. Such uniform system shall correlate with and so far as possible conform to the system then current as approved by the American association of state highway officials.

**§17C-3-2. Placing and maintaining traffic-control devices and signs on state highways.**

(a) The state road commission shall place and maintain such traffic-control devices, conforming to its manual and specifications, upon all state highways as it shall deem necessary to indicate and to carry out the provisions of this chapter or to regulate, warn, or guide traffic.

(b) No local authority shall place or maintain any traffic-control device upon any highway under the jurisdiction of the state road commission except by the latter's permission.

**§17C-3-3. Local traffic-control devices.**

Local authorities in their respective jurisdictions shall place and maintain such traffic-control devices upon highways under their jurisdiction as they may deem necessary to indicate and to carry out the provisions of this chapter or local traffic ordinances or to regulate, warn, or guide traffic. All such traffic-control devices hereafter erected shall conform to the state manual and specifications.

**§17C-3-4. Obedience to traffic-control devices; official signs to be in proper position, etc; penalty.**

(a) The driver of any vehicle and the operator of any streetcar shall obey the instructions of any official traffic-control device applicable thereto placed in accordance with the provisions of this chapter, unless otherwise directed by a traffic or police officer, subject to the exceptions granted the driver of an authorized emergency vehicle in this chapter.

(b) Any person violating the provisions of this section is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one hundred dollars; upon a second conviction within one year thereafter, shall be fined not more than two hundred dollars; and upon a third or subsequent conviction, shall be fined not more than five hundred dollars.

(c) No provision of this chapter for which signs are required shall be enforced against an alleged violator if at the time and place of the alleged violation an official sign is not in proper position and sufficiently legible to be seen by an ordinarily observant person. Whenever a particular section does not state that signs are required, such section shall be effective even though no signs are erected or in place.

**§17C-3-5. Traffic-control signal legend.**

Whenever traffic is controlled by traffic-control signals exhibiting the words "go," "caution" or "stop," or exhibiting different colored lights successively one at a time, or with arrows, the following colors only shall be used and said terms and lights shall indicate and apply to drivers of vehicles and pedestrians as follows:

(a) Green alone or "go":

(1) Vehicular traffic facing the signal, except when prohibited under section two, article twelve of this chapter may proceed straight through or turn right or left unless a sign at such place prohibits either such turn. But vehicular traffic, including vehicles turning right or left, shall yield the right-of-way to

other vehicles and to pedestrians lawfully within the intersection or an adjacent crosswalk at the time such signal is exhibited.

(2) Pedestrians facing the signal may proceed across the roadway within any marked or unmarked crosswalk.

(b) Yellow alone or "caution" when shown following the green or "go" signal:

(1) Vehicular traffic facing the signal is thereby warned that the red or "stop" signal will be exhibited immediately thereafter and such vehicular traffic shall not enter or be crossing the intersection when the red or "stop" signal is exhibited.

(2) Pedestrians facing such signal are thereby advised that there is insufficient time to cross the roadway, and any pedestrian then starting to cross shall yield the right-of-way to all vehicles.

(c) Red alone or "stop":

(1) Vehicular traffic facing the signal shall stop before entering the crosswalk on the near side of the intersection or, if none, then before entering the intersection and shall remain standing until green or "go" is shown alone except as provided in paragraphs (2) and (3) of this subdivision (c).

(2) A vehicle which is stopped in obedience to a red or "stop" signal as close as practicable at the entrance to the crosswalk on the near side of the intersection or, if none, then at the entrance to the intersection, may cautiously make a right turn but such vehicle shall yield the right-of-way to pedestrians lawfully within a crosswalk and to other vehicular traffic proceeding as directed by the signal at said intersection, except that local authorities in their respective jurisdictions may by ordinance prohibit any such right turn against a red or "stop" signal at any intersection within such jurisdiction, which ordinance shall be effective when a sign is erected at such intersection giving notice thereof.

(3) A vehicle which is stopped in obedience to a red or "stop" signal as close as practicable at the entrance to the crosswalk on the near side of the intersection or, if none, then at the entrance to the intersection on a one-way street which intersects another one-way street on which traffic moves to the left, may cautiously make a left turn into said one-way street but such vehicle shall yield the right-of-way to pedestrians lawfully within a crosswalk and to other vehicular traffic proceeding as directed by the signal at said intersection, except that local authorities in their respective jurisdictions may by ordinance prohibit any such left turn against a red or "stop" signal at any intersection within such jurisdiction, which ordinance shall be effective when a sign is erected at such intersection giving notice

thereof.

(4) No pedestrian facing such signal shall enter the roadway unless he can do so safely and without interfering with any vehicular traffic.

(d) Red with green arrow:

(1) Vehicular traffic facing such signal may cautiously enter the intersection only to make the movement indicated by such arrow but shall yield the right-of-way to pedestrians lawfully within a crosswalk and to other traffic lawfully using the intersection.

(2) No pedestrian facing such signal shall enter the roadway unless he can do so safely and without interfering with any vehicular traffic.

(e) In the event an official traffic-control signal is erected and maintained at a place other than an intersection, the provisions of this section shall be applicable except as to those provisions which by their nature can have no application. Any stop required shall be made at a sign or marking on the pavement indicating where the stop shall be made, but in the absence of any such sign or marking the stop shall be made at the signal.

(f) The motorman of any streetcar shall obey the above signals as applicable to vehicles.

**§17C-3-6. Pedestrian walk and wait signals; penalty.**

~~(a) Whenever special pedestrian control signals exhibiting the words "Walk" or "Wait" are in place such signals shall indicate as follows:~~

~~(1) *Walk*.— Pedestrians facing such signal may proceed across the roadway in the direction of the signal and shall be given the right of way by the drivers of all vehicles.~~

~~(2) *Wait*.— No pedestrian shall start to cross the roadway in the direction of such signal, but any pedestrian who has partially completed his or her crossing on the walk signal shall proceed to a sidewalk or safety island while the wait signal is showing.~~

~~(b) Any person violating the provisions of this section is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one hundred dollars; upon a second conviction within one year thereafter, shall be fined not more than two hundred dollars; and upon a third or subsequent conviction, shall be fined not more than five hundred dollars.~~

Whenever special pedestrian-control signals exhibiting the "Walk" or "Don't Walk" or symbols of a "walking person" or "upraised palm" are in place, such signals shall indicate as follows:

(a) Flashing or Steady Walk or Walking Person-Any pedestrian facing the signal may proceed across the roadway in the direction of the signal and every driver of a vehicle shall yield the right of way to such pedestrian.

(b) Flashing or Steady Don't Walk or Upraised Palm-No pedestrian shall start to cross the roadway in the direction of the signal, but any pedestrian who has partially completed crossing on the walk signal shall proceed to a sidewalk or safety island while the don't walk or upraised palm signal is showing.

(c) Any person violating the provisions of this section is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one hundred dollars; upon a second conviction within one year thereafter, shall be fined not more than two hundred dollars; and upon a third or subsequent conviction, shall be fined not more than five hundred dollars.

#### **§17C-3-7. Flashing signals.**

Whenever an illuminated flashing red or yellow signal is used in a traffic sign or signal it shall require obedience by vehicular traffic as follows:

(1) Flashing red (stop signal). -- When a red lens is illuminated with rapid intermittent flashes, drivers of vehicles shall stop before entering the nearest crosswalk at an intersection or at a limit line when marked, or, if none, then before entering the intersection, and the right to proceed shall be subject to the rules applicable after making a stop at a stop sign.

(2) Flashing yellow (caution signal). -- When a yellow lens is illuminated with rapid intermittent flashes, drivers of vehicles may proceed through the intersection or past such signal only with caution.

### **CHAPTER 17C. TRAFFIC REGULATIONS AND LAWS OF THE ROAD. ARTICLE 5B. POSTMORTEM TESTS FOR ALCOHOL IN PERSONS KILLED IN MOTOR VEHICLE ACCIDENTS.**

#### **§17C-5B-1. Blood test for alcohol in drivers and adult pedestrians killed in motor vehicle accidents; time limit for conducting test; who may conduct test; express consent to withdraw blood from dead body granted; granting civil and criminal immunity to person conducting test; fee for test.**

When any motor vehicle driver or adult pedestrian dies in a motor vehicle accident in this state or dies within four hours after having been involved in a motor vehicle accident in this state, the physician in attendance, or law-enforcement officer having knowledge of such death, or the funeral director,

or any other person present when such death occurred, shall immediately report such death to the medical examiner of the county in which such death occurred. Upon receipt of such notice, the medical examiner shall take charge of the dead body and shall conduct, or shall cause to be conducted, within twelve hours after receiving such notice and before the dead body is embalmed, a blood test to determine the presence and percentage concentration of alcohol in the blood of such dead body.

The blood test required under this section shall be conducted only by a person qualified to conduct an autopsy under article twelve, chapter sixty-one of this code or by a doctor of medicine, doctor of osteopathy, registered nurse, trained medical technician at the place of his employment or county coroner who is deemed qualified by the office of medical examinations to conduct such blood test.

Any person who is to conduct a blood test under the provisions of this section is hereby expressly authorized to withdraw blood from the dead body in the quantity necessary to conduct such blood test. Any person withdrawing blood from the dead body and testing such blood and any hospital or clinic in which such blood is withdrawn and tested under the provisions of this section shall be immune from all civil and criminal liability which might otherwise be imposed.

Any person conducting a blood test under the provisions of this section shall receive a standardized fee in the amount determined by the office of medical examinations, which fee shall be paid from funds appropriated to the office of medical examinations.

Nothing contained in this section shall be construed to preclude the taking of a blood test by any other person having the right to take any such test or cause such test to be taken while the medical examiner has charge of the body.

**§17C-5B-2. To whom and how county medical examiners report results of blood tests; such reports admissible as evidence; use of reports only for statistical and highway safety purposes.**

Each county medical examiner shall immediately report the results of each blood test conducted under the authority of section one of this article by him, or conducted at his request, to the chief medical examiner of the office of medical examinations and to the department of public safety. Results of such blood test or any report thereof may be admissible in evidence, if material, in any action or proceeding of any kind in any court or before any tribunal, board, or agency.

The department of public safety shall compile the data from all such reports

submitted to it on a monthly basis. The department shall forward such compilations to the governor's highway safety administration and the department of motor vehicles. Such compilations shall be for statistical purposes and highway safety information and be disclosed or revealed in any manner necessary. The identity of any dead person whose blood was tested under the provisions of section one of this article may be disclosed or revealed when necessary for evidence in any action or proceeding of any kind in any court or before any tribunal, board or agency.

The department of public safety, the governor's highway safety administration and the department of motor vehicles shall make use of such compilations in a manner to provide accurate and useful statistical information to government and the public relative to achieving a reduction in motor vehicle accidents arising in whole or in part from the imbibing of alcohol by motor vehicle drivers and adult pedestrians.

**CHAPTER 17C. TRAFFIC REGULATIONS AND LAWS OF THE ROAD.  
ARTICLE 10. PEDESTRIANS' RIGHTS AND DUTIES.**

**§17C-10-1. Pedestrians subject to traffic regulations; powers of local authorities.**

(a) Pedestrians shall be subject to traffic-control signals at intersections as provided in section five, article three of this chapter unless required by local ordinance to comply strictly with such signals, but at all other places pedestrians shall be accorded the privileges and shall be subject to the restrictions stated in this article.

(b) Local authorities are hereby empowered by ordinance to require that pedestrians shall strictly comply with the directions of any official traffic-control signal and may by ordinance prohibit pedestrians from crossing any roadway in a business district or any designated highways except in a crosswalk.

**§17C-10-2. Pedestrians' right-of-way in crosswalks.**

(a) When traffic-control signals are not in place or not in operation the driver of a vehicle shall yield the right-of-way, slowing down or stopping if need be to so yield, to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger, but no pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close that it is impossible for the driver to yield. This provision shall not apply under the conditions stated in section three

paragraph (b) of this article.

(b) Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle.

**§17C-10-3. Crossing at other than crosswalks.**

(a) Every pedestrian crossing a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right-of-way to all vehicles upon the roadway.

(b) Any pedestrian crossing a roadway at a point where a pedestrian tunnel or overhead pedestrian crossing has been provided shall yield the right-of-way to all vehicles upon the roadway.

(c) Between adjacent intersections at which traffic-control signals are in operation pedestrians shall not cross at any place except in a marked crosswalk.

(d) No pedestrian shall cross a roadway intersection diagonally unless authorized by official traffic-control devices; and when authorized to cross diagonally, pedestrians shall cross only in accordance with the official traffic-control devices pertaining to such crossing movements.

**§17C-10-4. Drivers to exercise due care.**

Notwithstanding the foregoing provisions of this article every driver of a vehicle shall exercise due care to avoid colliding with any pedestrian upon any roadway and shall give warning by sounding the horn when necessary and shall exercise proper precaution upon observing any child or any confused or incapacitated person upon a roadway.

**§17C-10-5. Pedestrians to use right half of crosswalks.**

Pedestrians shall move, whenever practicable, upon the right half of crosswalks.

**§17C-10-6. Pedestrians on roadways; soliciting rides.**

(a) Where sidewalks are provided it shall be unlawful for any pedestrian to walk along and upon an adjacent roadway.

(b) Where sidewalks are not provided any pedestrian walking along and upon a highway shall when practicable walk only on the left side of the roadway or its shoulder facing traffic which may approach from the opposite



direction.

(c) No person shall stand in a roadway for the purpose of soliciting a ride from the driver of any vehicle.

**§17C-10-7. Penalty for pedestrians violating the provisions of this article.**

Any person violating the provisions of this article is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one hundred dollars; upon a second conviction within one year thereafter, shall be fined not more than two hundred dollars; and upon a third or subsequent conviction, shall be fined not more than five hundred dollars.

**§17C-10-8. Persons working on streets and highways.**

The driver of a vehicle shall yield the right-of-way to persons engaged in maintenance or construction work on a street or highway whenever he is notified of their presence by an official traffic-control device or flagman.

**CHAPTER 17C. TRAFFIC REGULATIONS AND LAWS OF THE ROAD.  
ARTICLE 10A. OPERATION OF ELECTRIC PERSONAL ASSISTIVE  
MOBILITY DEVICES.**

**§17C-10A-1. Definitions.**

For purposes of this article, the definition of an "electric personal assistive mobility device" is the same definition as previously set forth in section sixty-six, article one of this chapter, and "operator" shall refer to the operator of an electric personal assistive mobility device.

**§17C-10A-2. Equipment requirements and operating standards for electric personal assistive mobility devices; applicability of motor vehicle code; penalties.**

(a) An electric personal assistive mobility device shall be equipped with:

(1) Front, rear and side reflectors;

(2) A braking system that enables the operator to bring the device to a controlled stop; and

(3) If operated at any time from one-half hour after sunset to one-half hour before sunrise, a lamp that emits a white light that sufficiently illuminates the area in front of the device.

(b) An operator of an electric personal assistive mobility device traveling on a sidewalk, roadway or bicycle path shall have the rights and duties of a pedestrian and shall exercise due care to avoid colliding with pedestrians. An operator shall yield the right of way to pedestrians.

(c) Except as provided in this section, no other provisions of the motor vehicle code shall apply to electric personal assistive mobility devices.

(d) An operator who violates a provision of subsection (a) or (b) of this section shall receive a warning for the first offense. For a second or subsequent offense, the operator shall be punished by a fine of no less than ten dollars and no greater than one hundred dollars.

**CHAPTER 17C. TRAFFIC REGULATIONS AND LAWS OF THE ROAD.  
ARTICLE 11. OPERATION OF BICYCLES AND PLAY VEHICLES.**

**§17C-11-1. Obedience to article; duty of parents and guardians; applicability of article to bicycles.**

(a) It is a misdemeanor for any person to do any act forbidden or fail to perform any act required in this article.

(b) The parent of any child and the guardian of any ward shall not authorize or knowingly permit any such child or ward to violate any of the provisions of this chapter.

(c) These regulations applicable to bicycles shall apply whenever a bicycle is operated upon any highway or upon any path set aside for the exclusive use of bicycles subject to those exceptions stated herein.

**§17C-11-2. Traffic laws apply to persons riding bicycles.**

Every person riding a bicycle upon a roadway shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle by this chapter, except as to special regulations in this article and except as to those provisions of this chapter which by their nature can have no application.

**§17C-11-3. Riding on bicycle seats; carrying more than one person on bicycle.**

(a) A person propelling a bicycle shall not ride other than upon or astride a permanent and regular seat attached thereto.

(b) No bicycle shall be used to carry more persons at one time than the number for which it is designed and equipped-, except that an adult rider may carry a child securely attached to the adult rider in a back pack or sling manufactured for that purpose.

**§17C-11-4. Clinging to vehicles.**

No person riding upon any bicycle, coaster, roller skates, sled, or toy vehicle shall attach the same or himself to any streetcar or vehicle upon a roadway.

**§17C-11-5. Riding on roadways and bicycle paths.**

(a) Every person operating a bicycle upon a roadway shall ride as near to the right side of the roadway as practicable, ~~exercising due care when passing a standing vehicle or one proceeding in the same direction.~~ except; when overtaking and passing another bicycle or vehicle proceeding in the same direction, when preparing for a left turn at an intersection or into a private road or driveway, when riding in the right turn only lane, or when reasonably necessary to avoid conditions including, but not limited to, fixed or moving objects, parked or moving vehicles, bicycles, pedestrians, animals, surface hazards, or substandard width lanes that make it unsafe to continue along the right-hand curb or edge. For purposes of this section, a "substandard width lane" is a lane that is too narrow for a bicycle and a vehicle to travel safely side by side within the lane.

(b) Persons riding bicycles upon a roadway shall not ride more than two abreast except on paths or parts of roadways set aside for the exclusive use of bicycles. Persons riding two abreast, where allowed, shall not impede the normal and reasonable movement of traffic and shall ride within a single lane.

(c) Whenever a ~~usable path for bicycles has been provided~~ paved path has been constructed and designated for bicycles adjacent to a roadway, bicycle riders shall use such path and shall not use the roadway.

(d) Nothing in this chapter shall be construed as prohibiting persons from riding bicycles on or along shoulders of a street or highway.

**§17C-11-6. Carrying articles.**

No person operating a bicycle shall carry any package, bundle, or article which prevents the driver from keeping at least one hand upon the handle bars. Nothing in this chapter shall prohibit attaching a bicycle trailer or bicycle semitrailer to a bicycle if that trailer or semitrailer has been designed for such attachment.

**§17C-11-7. Lamps and other equipment on bicycles.**

(a) Every bicycle when in use at nighttime shall be equipped with a lamp on the front which shall emit a white light visible from a distance of at least five hundred feet to the front and with a red reflector on the rear of a type approved by the department which shall be visible ~~from all distances from fifty feet to three~~ for six hundred feet to the rear when directly in front of lawful upper beams of head lamps on a motor vehicle. ~~A lamp emitting a red light visible from a distance of five hundred feet to the rear may be used in addition to the red reflector.~~ In addition, every bicycle used at night shall be equipped with reflective material of sufficient size and reflectivity to be visible from both sides for six hundred feet when directly in front of lawful upper beams of head lamps on a motor vehicle. A lamp visible from both sides from a distance of at least five hundred feet may be used in lieu of the reflective material. A bicycle or its rider may be equipped with lights or reflectors in addition to those required by this section.

(b) No person shall operate a bicycle unless it is equipped with a bell or other device capable of giving a signal audible for a distance of at least one hundred feet, except that a bicycle shall not be equipped with nor shall any person use upon a bicycle any siren or whistle.

(c) Every bicycle shall be equipped with a brake ~~which will enable the operator to make the braked wheels skid on dry, level, clean pavement.~~ or brakes which will enable its driver to stop the bicycle within twenty-five feet from a speed of ten miles per hour on dry, level, clean pavement.

**§17C-11-8. Bicycles and human powered vehicles on sidewalks**

(a) A person propelling a bicycle upon and along a sidewalk, or across a roadway upon and along a crosswalk, shall yield the right of way to any pedestrian and shall give audible signal before overtaking and passing such pedestrian.

(b) A person shall not ride a bicycle upon and along a sidewalk, or across a roadway upon and along a crosswalk, where such use of bicycles is prohibited by official traffic-control devices or city ordinances.

(c) A person propelling a vehicle by human power upon and along a sidewalk, or across a roadway upon and along a crosswalk, shall have all the rights and duties applicable to a pedestrian under the same circumstances.

**§17C-11-9. Bicycle identifying number**

A person engaged in the business of selling bicycles at retail shall not sell any bicycle unless the bicycle has an identifying number permanently stamped or cast on its frame.

**§17C-11-10. Inspecting bicycles**

A uniformed law enforcement officer may at any time upon reasonable cause to believe that a bicycle is unsafe or not equipped as required by law, or that

its equipment is not in proper adjustment or repair, require the person riding the bicycle to stop and submit the bicycle to an inspection and such test with reference thereto as may be appropriate.

**CHAPTER 17C. TRAFFIC REGULATIONS AND LAWS OF THE ROAD.  
ARTICLE 11A. CHILD BICYCLE SAFETY ACT.**

**§17C-11A-1. Short title.**

This article shall be known and may be cited as the "Child Bicycle Safety Act".

**§17C-11A-2. Legislative findings and purpose.**

(a) The Legislature hereby finds and declares that:

(1) Disability and death of children resulting from injuries sustained in bicycling accidents are a serious threat to the public health, welfare and safety of the people of this state, and the prevention of such disability and death is a goal of such people;

(2) Head injuries are the leading cause of disability and death from bicycling accidents; and

(3) The risk of head injury from bicycling accidents is significantly reduced for bicyclists who wear proper protective bicycle helmets; yet helmets are worn by fewer than five percent of child bicyclists nationwide.

(b) The purpose of this article is to reduce the incidence of disability and death resulting from injuries incurred in bicycling accidents by requiring that while riding on a bicycle on public roads, public bicycle paths and other public rights-of-way of this state, all bicycle operators and passengers under fifteen years of age wear approved protective bicycle helmets.

**§17C-11A-3. Definitions.**

As used in this article:

(a) "Bicycle" means a human-powered vehicle with wheels designed to transport, by the action of pedaling, one or more persons seated on one or more saddle seats on its frame. Such term also includes a human-powered vehicle, and any attachment to such vehicle designed to transport by pedaling when the vehicle is used on a public roadway, public bicycle path or other public right-of-way, but does not include a tricycle.

(b) "Tricycle" means a three-wheeled human-powered vehicle designed for use as a toy by a single child under the age of six years, the seat of which is

no more than two feet from ground level.

(c) "Public roadway" means a right-of-way under the jurisdiction and control of this state or a local political subdivision thereof for use primarily by motor vehicles.

(d) "Public bicycle path" means a right-of-way under the jurisdiction and control of this state or a local political subdivision thereof for use primarily by bicycles and pedestrians.

(e) "Other public right-of-way" means any right-of-way other than a public roadway or public bicycle path that is under the jurisdiction and control of this state or a local political subdivision thereof and is designed for use and used by vehicular or pedestrian traffic.

(f) "Protective bicycle helmet" means a piece of headgear which meets or exceeds the impact standards for protective bicycle helmets set by the American national standards institute (ANSI) or the snell memorial foundation's standards for protective headgear or American society for testing and materials (ASTM) for use in bicycling.

(g) "Passenger" means any person who travels on a bicycle in any manner except as an operator.

(h) "Operator" means a person who travels on a bicycle seated on a saddle seat from which that person is intended to and can pedal the bicycle.

#### **§17C-11A-4. Requirements for helmet use.**

(a) It is unlawful for any person under fifteen years of age to operate or be a passenger on a bicycle or any attachment to a bicycle used on a public roadway, public bicycle path or other public right-of-way unless at all times when the person is so engaged he or she wears a protective bicycle helmet of good fit, fastened securely upon the head with the straps of the helmet.

(b) It is unlawful for any parent or legal guardian of a person under fifteen years of age to knowingly permit such person to operate or be a passenger on a bicycle or on any attachment to a bicycle used on a public roadway, public bicycle path or other public right-of-way unless at all times when the person is so engaged he or she wears a protective bicycle helmet of good fit, fastened securely upon the head with the straps of the helmet.

#### **§17C-11A-5. Sale of bicycle helmets.**

Any helmet sold or offered for sale for use by operators and passengers of bicycles shall be conspicuously labeled in accordance with the standard described in subsection (f), section three of this article, which shall

constitute the manufacturer's certification that the helmet conforms to the applicable safety standards.

**§17C-11A-6. Civil actions.**

A violation of section four of this article is not admissible as evidence of negligence or contributory negligence or comparative negligence in any civil action or proceeding for damages, and shall not be admissible in mitigation of damages.

**§17C-11A-7. Penalties.**

(a) Notwithstanding the provisions of section one, article eighteen of this chapter, any parent or legal guardian violating any requirement set forth in section four of this article shall be fined ten dollars or be required to perform two hours in community service related to a child injury prevention program which includes injury prevention education or both fined and required to perform such community service. Notwithstanding the provisions of section one, article eleven, chapter eight of this code, no court costs may be assessed to any person violating the requirements of section four of this article.

(b) In the case of a first violation of section four of this article, the court may waive the fine upon receipt of satisfactory proof that the person has a helmet or within a reasonable time from the date of the violation, purchased or otherwise obtained, a protective bicycle helmet.

(c) It is an absolute defense to a charge for a violation of this article that a parent or legal guardian is unable to pay for the protective bicycle helmet. Inability to pay may be demonstrated by the filing of a financial affidavit in accordance with the provisions of subsection (c), section one, article two, chapter fifty-nine of this code. Any person who demonstrates inability to pay shall be referred to the governor's highway safety program for assistance in obtaining the appropriate helmet or helmets.

**§17C-11A-8. Ordinances.**

Nothing in this article shall limit the right of any municipality to enact an ordinance on the use of bicycle helmets.

**§17C-11A-9. Bicycle safety program.**

(a) Commencing on the first day of July, one thousand nine hundred ninety-six, the governor's highway safety program shall initiate and conduct an educational and public awareness program designed to encourage people to comply with the requirements of this article.

(b) The governor's highway safety program shall make application for grants or any other funding to subsidize the costs of purchasing helmets for people who qualify under the provisions of subsection (c), section seven of this article.

## **CHAPTER 18. EDUCATION.**

### **ARTICLE 6. DRIVER EDUCATION.**

#### **§18-6-3. State board to establish minimum course standards; students with mental or physical defects; minimum standards specified.**

(a) The state board of education shall establish minimum standards for all driver education courses offered and made available to persons within the state, regardless of whether the courses are offered by public, private, parochial, denominational or commercial schools, but no person shall be permitted to enroll in any driver education course who has a known mental or physical defect that would prevent the person from qualifying for an operator's license, unless the mental or physical defect is controlled or corrected so the person could so qualify.

(b) The minimum standards shall provide at least that:

(1) All driver education courses offered within the state are taught by instructors certified by the state board as qualified for these purposes; and

(2) Each person enrolled in a driver education course shall receive practice driving and observation in a dual control automobile and instruction in at least the following:

(A) Basic and advanced driving techniques, including techniques for handling emergencies;

(B) Traffic regulations and laws of the road as provided in chapter seventeen-c of this code and other applicable state and local laws and ordinances;

(C) Critical mechanical parts of vehicles requiring preventive maintenance for safety;

(D) The vehicle, highway and community features that aid the driver in avoiding crashes; protect him or her and his or her passengers in crashes; and maximize the salvage of the injured;

(E) Signs, signals, highway markings and highway design features which require understanding for safe operation of motor vehicles;



(F) Differences in characteristics of urban and rural driving, including safe use of modern expressways;

(G) Pedestrian safety and bicycle safety in a program which shall include, but not be limited to, ensuring that the driver has knowledge and awareness of these groups sharing the roads of this state for the safety of pedestrians and bicyclists; and

(H) Motorcycle safety awareness in a program which shall include, but not be limited to, ensuring that the driver has knowledge and awareness of motorcycles sharing the roads of this state for the safety of motorcyclists.

(c) In addition, in driver education courses, participating students shall be encouraged to acquire first aid skills.

## **APPENDIX B: WEST VIRGINIA DEPARTMENT OF TRANSPORTATION POLICIES**

**Design Directive 811, Design Directive 813 and the Paved  
Shoulders Guideline may be found on the following pages.**

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DESIGN DIRECTIVE

DD-811

**CURB RAMPS AND SIDEWALKS**

~~October 1, 2003~~

In compliance with the Americans with Disabilities Act of 1990 curb cuts or ramps as per Standard Detail Sheet PVT7 of the Standard Details shall be provided at all existing marked and unmarked crosswalks for which the Division of Highways has responsibility. The Designer should keep this in mind on 3R and overlay type projects, and add curb cut construction accordingly. Bid items for Item 609, Sidewalk, and Item 610, Curbing may be used as required. Existing ramps will not be reconstructed if they are in compliance with current accessibility guidelines, unless they are damaged or destroyed by construction. In addition, the existing condition of a sidewalk or the absence of a sidewalk will not affect the decision of whether to add a curb ramp or not.

~~Where a Any sidewalk which is being constructed or reconstructed along a State highway is carried around a radius, and ended, the surface of the sidewalk will smoothly meet the existing ground or adjacent sidewalk where conditions permit. If the sidewalk being constructed or reconstructed extends through the crosswalk on the intersection street, curb cuts or ramps shall be provided.~~ shall be in full compliance with the Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines (July 23, 2004) (ADAAG), and the Draft Public Rights of Way Accessibility Guidelines (PROWAG).

In general, sidewalks, Sidewalks, when specified, shall be provide a clear travel or pedestrian access route at least 3 4' wide exclusive of the curb (PROWAG R301.3). Utilities, sign posts and street furniture may not encroach on this 4' wide route.

**When sidewalks are less than 5' in width, passing spaces with a minimum level clear space of 5' x 5' shall be provided at intervals not to exceed 200'. Driveways, building entrances, and public sidewalk intersections may be used for passing spaces, if they provide a minimum level clear space at least 5' x 5' with a surface similar to the sidewalk.**

**Where the sidewalk or walkway of a pedestrian access route is contained within a street or highway border, its grade shall not exceed the general grade established for the adjacent street or highway (PROWAG R3-1.4). If the grade is between 5% and 8.33% a 5' x5' level clear resting/passing area is recommended every 200 feet. If the grade is between 8.33% and 10% a 5' x5' level clear resting/passing area is recommended every 30 feet. If the grade is between 8.33% and 10% a 5' x5' level clear resting/passing area is recommended every 10 feet.**

**Additional guidance may be found in Section 14.0 of the ADAAG standards Chapter Four of the Americans with Disability Act and Architectural Barriers Act Accessibility Guidelines (July 23, 2004) (ADAAG) and the Draft Public Rights of Way Accessibility Guidelines (PROWAG). Copies may be obtained from the Engineering Division Access Board at <http://www.access-board.gov>**

**WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DESIGN DIRECTIVE**

**DD-813**

**BICYCLE/PEDESTRIAN ACCOMMODATION**

**January 31, 2010**

The goal of the West Virginia Division of Highways (WVDOH) is to design, construct and maintain a safe, efficient and economical highway system for the taxpayer. While motor vehicle traffic is the major concern in performing this task, bicyclists and pedestrians must also be given proper consideration.

In order to integrate the needs of the motorized and non-motorized users of our highway system, the WVDOH, in cooperation with the Federal Highway Administration (FHWA), adopted "The Statewide Plan for Accommodation of Bicycle Transportation and Pedestrian Walkways" dated ~~September 1997~~. Based on this document it is now the policy of the WVDOH that during the design of all highway construction projects, consideration will be given, as outlined herein, for the incorporation of facilities for the accommodation of bicyclists and pedestrians.

**Original signed by  
James E. Sothen, P. E.  
Director, Engineering Division**

**Attachment**

**BICYCLE/PEDESTRIAN ACCOMMODATION  
DESIGN DIRECTIVE 813  
DEFINITIONS**

**Bicycle:** Every vehicle propelled solely by human power upon which any person may ride having two tandem wheels except scooters and similar devices. The term “bicycle” for this publication also includes recumbent bicycles, three- wheeled, and four-wheeled human-powered vehicles ridden by adults, but not tricycles for children.

**Bicycle facilities:** A general term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling. This includes new or improved lanes, paths, or shoulders for use by bicyclists as well as traffic control devices, shelters, and parking facilities for bicycles and changing facilities.

**Bikeway:** Any road, path, or way which, in some manner, is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes. **NOTE:** All public highways in West Virginia are open to bicycle traffic: however, on facilities such as Interstate Highways, bicycles are prohibited except in some very limited circumstances, such as when a fully controlled access highway is the only link between two separate bikeway segments.

**Bicycle lane:** A portion of the roadway that has been designated by striping, signing and/or pavement markings for the preferential or exclusive use by bicycles.

**Bicycle Path:** A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right of way or within an independent right of way.

**Bicycle route:** A segment of a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational route markers with or without specific bicycle route number. Bicycle routes should establish a continuous routing but may be a combination of any and all types of bikeways.

**Bicyclist type:** There are three classes of bicycle riders, based on their skill levels defined as follows:

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

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

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

In most situations, due to the similarity in the level of experience, Groups B and C may be combined into a Group B/C which generally will be best accommodated by a network of independent bicycle paths.

**Category I Roadways:** Any highway facility that is a partially controlled access facility or any highways facility that contains four (4) or more travel lanes with design speeds greater than 40 mph.

**Category II Roadways:** Any non-access controlled highway facility or street not defined as being a Category I roadway.

**Combined Facility:** For the purposes of this directive, any facility provided for the benefit and use of both bicyclists and pedestrians.

**Pedestrian Facilities:** a facility proved for the benefit of pedestrian travel, including walkways, crosswalks, signs, signals, illumination and benches.

~~**Pedestrian Walkway Facilities:** A general term denoting improvements and provisions made by public agencies to accommodate or encourage walking. This includes new or improved lanes, paths or sidewalks.~~

**Rural Areas:** All parts of the highway system designated as “Non-Urban” in the Urban Area Classification of the Road Inventory Log.

**Shared Use Path:** A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Pedestrians, Skaters, wheelchair users, joggers, and other non-motorized users may also use shared-use paths.

**Trails:** Facilities that may be used by, but not limited to, non-motorized vehicles, horseback riders, cross-country skiers, and pedestrians.

**Urban Area:** All parts of the highway system designated as “Urbanized” in the Urban Area Classification of the Road Inventory Log.

## BICYCLES

During the environmental review and/or planning process, the WVDOH will assess ~~the need and potential for the routinely accommodate bicycles and pedestrians in the development of bicycle transportation facilities as a part of the project. The criteria in the "Statewide Plan for Accommodation of Bicycle Transportation and Pedestrian Walkways" September 1997 will be considered. It should be noted that the development of a bicycle facility may be combined with the development of a pedestrian walkway facility. The resulting combined facility would be designated for both pedestrian and bicycle use. The combined facility must meet the criteria for both bicycles and pedestrians while accounting for the required safe separation of the two transportation modes. The development of bicycle and pedestrian facilities may be combined into a joint facility designated for both bicycle and pedestrian use. The facility must meet the criteria for safe use by both bicycles and pedestrians as established in the AASHTO manuals (Guide for the Planning, Design, and Operation of Pedestrian Facilities" and "Guide for the Development of Bicycle Facilities".~~

~~If it is determined that bicycle facilities are to be incorporated in the project, the environmental documents shall include recommendations as to the type of bicyclist(s), as well as the type of facility to be considered in the design process. Bicyclists and pedestrians shall be included as a matter of routine. The decision to not accommodate them shall be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access by prohibition or by designing highways that are incompatible with safe, convenient bicycling and walking.~~

~~The Commissioner of Highways or the State Highway Engineer must approve, in writing, any decision to not accommodate bicycles or pedestrians on any facility designed, constructed or maintained by the WVDOH. The documents requesting an exemption from the requirement to accommodate bicycles and pedestrians must include sufficient cause for eliminating the accommodation.~~

The designer shall use the following criteria when determining the need for bicycle facilities in new construction or reconstruction projects: whether in urban or rural areas unless:

### A. Urbanized Areas

- ~~Bicycle facilities shall be established in all new construction or reconstruction projects that add a new highway or alter the functionality of an existing highway. Exceptions to this policy are described below.~~
- ~~Bicycle facilities may not be required if one or more of the following conditions exist:~~
  1. Bicycles are prohibited by law from using the roadway.
  2. The cost of development of the bicycle facility is greater than ~~ten (10)~~ twenty (20) percent of the estimated construction cost of the project.
  3. ~~Existing population conditions and other factors indicate an absence of need for bicycle facilities. Development costs such as right-of-way, utility relocation, environmental mitigation, historical resource avoidance, and others may be considered when determining the need to establish a bicycle facility.~~



## B. Rural Areas

- Designated bicycle facilities may be considered during the design phase of the project.
- All new construction or reconstruction projects that add a new highway or alter the functionality of an existing highway, shall as a minimum, be designed as a Category II Roadway.
- The designer shall consider the continuity of bicycle facilities on highways where the classification of the highway changes from urban to rural in relatively short distances.

The final decision for inclusion of bicycle facilities in the project will be made during the design process utilizing the above criteria. If the designer proposed to not incorporate bicycle facilities in the proposed project, written approval must be obtained from the Deputy State Highway Engineer-Project Development or Operations, as applicable.

Bicycles will be accommodated by one or more of the following methods:

- Designation of the project as a Bikeway or a Bicycle Route,
- Inclusion of a Bicycle Lane in the design of the project in urban areas either within the traffic area or along the shoulders; or
- Designation of or the inclusion of a Bicycle Path in the design of the project. Inclusion of a separate shared use path or paths.

Sidewalks should not be designated for bicycle use as a general rule. Bicyclists may be encouraged, with appropriate signing, to use short segments of sidewalks. One example of this would be a bridge structure that provides a safer environment to traverse the bridge. This would only be considered if the bridge sidewalk is wide enough to accommodate both pedestrians and bicyclists (See Design Criteria for Bicycle Paths contained herein). Where safety dictates, however, bicyclists may be required, with appropriate signage, to dismount and walk their bicycle along short sections of sidewalk where there are inadequate shoulders, such as crossing bridges or other structures. This should only be considered where the sidewalk is adequate to accommodate both pedestrians and bicyclists.

### Design Bicyclist

**To address the needs of bicyclists of various skill levels, the WVDOH shall use a classification of bicyclists. This system is a modification of the existing classification system used by AASHTO. This system is described as follows:**

**Group A – Advanced Bicyclists: This group consists of experienced riders who can operate under most traffic conditions, and compose the majority of the current users of collector and arterial highway systems. Group A travel is best facilitated by:**

- **direct access to destinations, usually via the highway system;**
- **the opportunity to operate at maximum speed, with minimum delay; and**
- **sufficient operating space on the roadway or shoulder to reduce the need for the bicyclist or motor vehicle operator to change position when passing.**

**Group B – Basic Bicyclists: This group consists of new or casual adult or teenage riders who are less confident and/or less competent (that Group A riders) to operate in**

~~traffic without special provisions for bicyclists. Group B riders prefer comfortable access to destinations, by a direct route or bicycle facility, which they perceive as safe.~~

~~Group C – Child Bicyclists: This group consists of pre-teen riders whose roadway use is initially monitored by their parents. Group C riders prefer the following:~~

- ~~➤ access to key destinations surrounding residential areas, including schools, recreation and shopping facilities, or other residential areas;~~
- ~~➤ highways with low motor vehicle speeds and volumes; and~~
- ~~➤ well defined separation of bicycles and motor vehicles, such as a separate bicycle path.~~

~~These classifications are utilized in the “design bicyclist” concept, in which the WVDOT accommodation procedures are focused on the expected user of a facility. Generally, Group A bicyclists are best accommodated by the construction of Bicycle Lanes or Bikeways. In most situations, due to the similarity in the level of experience, Groups B and C may be combined to produce a Group B/C design bicyclist, which generally will be best accommodated by a network of independent bicycle paths.~~

## DESIGN STANDARDS

The following standards have been developed for bicycle accommodation:

### A. Category I Roadways

- ~~➤ Designed for one way operation~~
- ~~➤ Bicycles to be encouraged to utilize right shoulder (with signing)~~
- ~~➤ Bicycles to be encouraged to use exit and entrance ramps shoulders (with signing)~~
- ~~➤ Minimum width of right shoulder (non-structure)\*~~
  - ~~○ Without rumble strip – 5’-0”~~
  - ~~○ With Rumble strip – 6’-6”~~
- ~~➤ Minimum width of right shoulder (bridge structure)\*~~
  - ~~○ Without rumble strip – 6’-0”~~
  - ~~○ With Rumble strip – 7’-6”~~
- ~~➤ Discontinue rumble strip in right shoulder taper areas~~
- ~~➤ Drainage grates shall be perpendicular to the traveled path of bicycles~~
- ~~➤ Bridge expansion joints must be bicycle safe on the right shoulder (no exposed finger dams)~~
- ~~➤ All structures shall have a combination of railings, fences or barriers with a minimum height of 4’-6”.~~
  
- The paved right shoulder of Category I roadways, where bicycles are not prohibited, shall be designated as bicycle lanes and appropriately signed and marked where the width is adequate. Shoulders will be paved with hot mix asphalt a width adequate for designation as a bicycle lane during any new construction, widening, and resurfacing. At locations where the shoulder width becomes too narrow for use as bicycle lanes, signage will be installed reading “BICYCLE LANE ENDS MERGE WITH TRAFFIC”.
- The minimum width of the right shoulder for marking as a bicycle lane along Category I Roadway
  - Without rumble strip – 4’- 0”

- With rumble strip or on a bridge structure – 5'-0"
- With rumble strip and on a bridge structure – 6'-0"
- Rumble strips shall be discontinued in the right shoulder taper areas
- Drainage grates shall be perpendicular to the direction of travel.
- Bridge expansion joints shall be bicycle safe (no exposed finger dams)
- All structures shall have a combination of railings, fences or other barrier with a minimum height of at least 4'-6"
- Bicycle lanes are designed for one way operation.
- Bicycles are required to use marked bicycle lane if present.

## B. Category II Roadways

- ~~Designed for one way operation~~
- ~~When the ADT is greater than 1000 vpd, shoulders may be paved if bicycle facilities are to be considered~~
- ~~All paved shoulders (if built) shall not contain rumble strips when shoulder width is less than 5'-0"~~
- ~~When the ADT is less than 1000 vpd minimum, paved shoulder widths of 2'-0" should be considered; however, paved shoulder width of 4'-0" or greater are encouraged.~~
- ~~All structures shall have a combination of railings, fences or barriers with a minimum height of 4'-6".~~
- ~~All structures shall have a minimum shoulder width similar to the approach roadway shoulder width, but does not have to exceed 5'-0"~~
- ~~Discontinue rumble strip in right shoulder taper areas~~
- ~~Drainage grates shall be perpendicular to the traveled path of bicycles~~
- ~~Bridge expansion joints~~
  - ~~If shoulder is 5'-0" or greater, no exposed finger dams on the right shoulder~~
  - ~~If shoulder is less than 5'-0", no exposed finger dams on full roadway~~
- ~~On curbed sections of roadways, width of right lane shall be 14'-0"~~
- The right shoulder of all Category II roadways shall be designated as a bicycle lane and appropriately signed and marked where the width is adequate. Shoulders will be paved with hot mix asphalt a width adequate for designation as a bicycle lane during any new construction, widening, and resurfacing if sufficient right-of-way exists. At locations where shoulder width becomes too narrow for use as bicycle lanes, signage will be installed reading "BICYCLE LANE ENDS MERGE WITH TRAFFIC".
- The minimum width of right shoulder for marking as a bicycle lane along the road or a structure on a Category II Roadway
  - Without rumble strip – 4'- 0"
  - With rumble strip – 5'-0"
- Rumble strips shall be discontinued in the right shoulder taper areas
- Drainage grates shall be perpendicular to the direction of travel.
- Bridge expansion joints shall be bicycle safe (no exposed finger dams)
- All new bridges or other structures shall be designed with a minimum shoulder width of 5 feet and shall have a combination of railings, fences or other barrier with a minimum height of at least 4' 6" to accommodate bicycle and pedestrian traffic.

- Bicycle lanes are designed for one way operation.
- Bicycles are required to use any marked bicycle lane if present.

### C. Bicycle Shared Use Paths

- ~~Designed for 2 way operation~~
- ~~Width~~
  - ~~Minimum travel width—8'-0" with 2'-0" graded shoulders~~
  - ~~Preferred travel width—10'-0" with 2'-0" graded shoulders~~
- ~~Bridge Width~~
  - ~~8'-0" minimum, 10'-0" preferred.~~
- ~~All structures shall have a combination of railings fences or barriers with a minimum height of 4'-6"~~
- ~~Must be at least 5'-0" from the edge of shoulder of parallel roadway or separated by a 4'-6" high combination of railings, fence or barrier~~
- ~~Superelevations~~
  - ~~Acceptable 2%, Max 5% (no crown)~~
- ~~Drainage grates to be perpendicular to travel path of bicyclists~~
- Separate shared use paths shall be constructed where bicycle traffic is prohibited along a Class I or Class II Roadway and no reasonable alternative exists. Shared use paths shall accommodate both pedestrians and bicycles.
- A shared use path must be separated from the edge of the shoulder of the parallel roadway by a minimum of 5'-0" or be separated by 4'-6" high combination of railings, fence or barrier.
- Shared use paths should be designed for two way operation.
- The minimum width of shared use paths and bridges with two way traffic shall be 8'-0" with 2'-0" graded gravel shoulders. The preferred width of shared use paths with two way traffic is 10'-0" with 2'-0" graded gravel shoulders. In urban areas where heavy use is expected even wider widths is preferred.
- The minimum width of shared use paths and bridges with one way traffic shall be 6'-0" with 2'-0" graded gravel shoulders.
- Drainage grates shall be perpendicular to the direction of travel.
- Bridge expansion joints shall be bicycle safe (no exposed finger dams).
- The superelevations (cross slopes) should be no more than 2%, with a maximum of 5% if there is no crown.
- All structures shall have a combination of railings, fences or other barrier with a minimum height of at least 4' 6".
- The vertical clearance to obstructions shall be a minimum of 8'-0".

NOTES: The values for shoulder width shown in DD-601 shall supersede the values shown above if the values in DD-601 are greater.

AASHTO Guide for Development for New Bicycle Facilities (1981) Guide for the Development of Bicycle Facilities (1999) is to be considered consulted for items not specifically addressed above.

## PEDESTRIANS

During the environmental review and/or planning process, the West Virginia Division of Highways will assess the need and potential for the development of pedestrian walkway facilities routinely accommodate pedestrians and bicycles in the development of transportation facilities as a part of the project. The criteria in the “Statewide Plan for Accommodation of Bicycle Transportation and Pedestrian Walkways” September 1997 will be considered. It should be noted that the development of a bicycle facility may be combined with the development of a pedestrian walkway facility. The resulting combined facility would be designated for both pedestrian and bicycle use. The combined facility must meet the criteria for both bicycles and pedestrians while accounting for the required safe separation of the two transportation modes. The development of pedestrian and bicycle facilities may be combined into a joint facility designated for both pedestrian and bicycle use. The combined facility will meet the criteria for safe use by both pedestrians and bicycles.

If it is determined that pedestrian walkway facilities should be considered, the environmental documents would include recommendations as to the type of facility to be constructed. Facilities to be considered are sidewalks, shoulders and/or separate paths.

Pedestrians and bicyclists shall be included as a matter of routine. The decision to not accommodate them shall be the exception rather than the rule. There must be exceptional circumstances for denying pedestrian and bicycle access by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling.

The Commissioner of Highways or the State Highway Engineer must approve, in writing, any decision to not accommodate pedestrians or bicycles on any facility designed, constructed or maintained by the West Virginia Division of Highways. The documents requesting an exemption from the requirement to accommodate bicycles and pedestrians must include sufficient cause for eliminating the accommodation.

The designer shall use the following criteria when determining the need for pedestrian walkway facilities in new construction or reconstruction projects whether in urban or rural areas unless;

### A. ~~Urbanized Areas~~

- ~~➤ Pedestrian walkway facilities shall be established in all new construction or reconstruction projects that add a new highway or alter the functionality of an existing highway. Exceptions to this policy are described below.~~
- ~~➤ Pedestrian walkway facilities may not be required if one or more of the following conditions exist:
  1. Pedestrians are prohibited by law from using the roadway.
  2. The cost of development of the pedestrian facility is greater than ten (10) twenty (20) percent of the total estimated cost of the project.
  3. Existing population conditions and other factors indicate an absence of need for pedestrian walkway facilities. Development costs such as right-of-way, utility relocation, environmental mitigation, historical resource avoidance, and others may be considered when determining the need to establish a pedestrian walkway facility.~~

### B. ~~Rural Areas~~

- ~~➤ Designated pedestrian walkway facilities may be considered during the design phase of the project.~~

- ~~All new construction or reconstruction projects that add a new highway or alter the functionality of an existing highway, shall as a minimum, be designed as a Category II Roadway.~~
- ~~The designer shall consider the continuity of pedestrian walkway facilities on highways where the classification of the highway changes from urban to rural in relatively short distances.~~

Pedestrians shall be accommodated by one or more of the following methods:

- Inclusion of sidewalks on both sides of the project.
- Inclusion of paved shoulders.
- Inclusion of separate shared use paths.

On bridge construction projects, a sidewalk shall be designed as a part of the bridge if sufficient pedestrian activity exists and there is not a suitable pedestrian crossing reasonably close to the bridge. In the case of bridge replacement projects, a sidewalk shall be designed as a part of the bridge if the existing structure has a sidewalk or if sufficient pedestrian activity exists and there is not a suitable pedestrian crossing reasonably close to the bridge.

Regardless of the decision to include or not include sidewalks, all new bridges or other structures shall be designed with a minimum shoulder width of four feet and shall have a combination of railings, fences or other barrier with a minimum height of at least 3' 6" to accommodate bicycle and pedestrian traffic.

Any pedestrian accommodation on a project must be in accordance with DD-811 (Curb Ramps and Sidewalks) and in accordance with the design standards noted below.

#### ~~A. Category I Roadways~~

- ~~All shoulders to accommodate both pedestrians and bicycles~~
- ~~Minimum width of shoulder (non-structure)
 
  - ~~Without rumble strip—5'-0"~~
  - ~~With Rumble strip—6'-6"~~~~
- ~~Minimum width of right shoulder (Bridge structure)
 
  - ~~Without rumble strip—5'-0"~~
  - ~~With Rumble strip—6'-6"~~~~
- ~~All structures shall have a combination of railing fences or barriers with a minimum height of 4'-6"~~
- Shoulders will be paved with hot mix asphalt a width adequate to accommodate both pedestrians and bicycles.
- The minimum width of the right shoulder to accommodate pedestrians is 4'-0".
- All new bridges or other structures for a Category I Roadway shall be designed with a minimum shoulder width of 5'-0" and shall have a combination of railings, fences or other barrier with a minimum height of at least 3' 6" to accommodate bicycle and pedestrian traffic.

#### ~~B. Category II Roadways~~

- ~~All shoulders to accommodate both pedestrians and bicycles~~
- ~~When the ADT is greater than 1000 vpd, shoulders may be paved if pedestrian walkway facilities are to be considered~~

- ~~When the ADT is less than 1000 vpd minimum, paved shoulder widths of 2'-0" should be considered; however, paved shoulder widths of 4'-0" or greater should be encouraged. In absence of paved shoulders, a stabilized shoulder of 2'-0" minimum or 4'-0" preferred widths should be encouraged~~
- Shoulders will be paved with hot mix asphalt a width adequate to accommodate both pedestrians and bicycles.
- The minimum width of right shoulder to accommodate pedestrians is 2'-0".
- The preferred width of right shoulder to accommodate pedestrians along the road or a structure on a Category II Roadway is 4'-0".
- All new bridges or other structures for a Category II Roadway shall be designed with a minimum shoulder width of 4'-0" and shall have a combination of railings, fences or other barrier with a minimum height of at least 3' 6" to accommodate bicycle and pedestrian traffic.

### C. Separate Pedestrian Shared Use Paths

- Facility shall accommodate both pedestrians and bicycles
- Designed for 2-way operation
- Width
  - ~~Minimum travel width — 8'-0" with 2'-0" graded shoulders~~
  - ~~Preferred travel width — 10'-0" with 2'-0" graded shoulders~~
- Bridge Width
  - ~~8'-0" minimum, 10'-0" preferred.~~
- ~~All structures shall have a combination of railings fences or barriers with a minimum height of 4'-6"~~
- ~~Must be at least 5'-0" from the edge of shoulder of parallel roadway or separated by a 4'-6" high combination of railings, fence or barrier~~
- Superelevations
  - ~~Acceptable 2%, Max 5% (no crown)~~
- Separate shared use paths shall be constructed where pedestrian traffic is prohibited along a Class I or Class II Roadway and no reasonable alternative exists. Shared use paths shall accommodate both pedestrians and bicycles.
- Shared use paths shall be constructed according to the guidelines provided under Bicycles.



AC

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways**

1800 Kanawha Boulevard East - Building Five - Room 110  
Charleston, West Virginia 25305-0430 • 304/566-3805

Joe Manchin III  
Governor

March 21, 2007

MEMORANDUM

TO: All District Engineers/Managers  
All Division Directors

FROM: Marvin G. Murphy, P. E., P. L. S. *MGM*  
State Highway Engineer

SUBJECT: PAVED SHOULDERS GUIDELINES

Effective immediately ALL PROJECTS for new construction, widening and resurfacing will include Hot Mix Asphalt (HMA) paved shoulders as outlined below.

1. The paved shoulder width for new construction on Freeways and Divided Arterials will be in accordance with the project plans.
2. Paved shoulders will be provided on all two lane Arterial, Collector and Local Road construction and resurfacing projects.
3. Paved shoulders should not be confused with road or pavement widening. It is essential that edge line striping be placed at the previous pavement edge.
4. The maximum paved shoulder width is to be 8 ft. It is not intended to remove and reset guardrail to achieve the maximum width. Variable widths are to be considered where predominately narrow shoulders have wide sections 500 ft. or greater in length. The width transition should be achieved at a taper rate based on average driving speed for the area (speed:1). Any remaining shoulder width, outside the 8 ft. paved width, is to be stabilized and existing shoulder aggregate can be used for this purpose.
5. Narrow shoulders are to be paved in accordance with the TYPICAL SECTIONS AND RELATED DETAILS, dated 2000, page 11, Resurfacing Roadway With Narrow Shoulders.



**PAVED SHOULDERS GUIDELINES**

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6. The HMA thickness for paved shoulders is to be 4" minimum including leveling course and overlays for resurfacing projects.
7. The pavement cross slope is to be maintained across shoulders 4 ft. and less. Shoulders wider than 4 ft. should be constructed with a 0.04 slope in tangent sections and a cross slope matching the lane slope in superelevated sections. A 0.04 breakover should be provided at the edge of lane, high side of superelevation.
8. Paved shoulders are to be provided for roads less than 16 ft.; however, the total maximum width, including paved shoulders, will be no greater than 15.5 ft.

MGM:Mm

cc: DDM, HD, HO, HP, CH, AC, CP, CC

## APPENDIX D: PROPOSED WEST VIRGINIA BICYCLE ROUTES

<b>WEST VIRGINIA BICYCLE ROUTE 1</b>		
<b>JEFFERSON COUNTY</b>		
This route could connect to Maryland Bicycle Route 67, if Virginia Cooperates.		
ROUTE NUMBER	BEGINNING	END
CR 25	Virginia State Line	Junction with SR 9
SR 9	Junction with CR 25	Junction with CR 27
CR 27	Junction with SR 9	Junction with SR 340
SR 340	Junction with CR 27	North to Virginia State Line

<b>WEST VIRGINIA BICYCLE ROUTE 2</b>		
<b>BROOKE COUNTY</b>		
ROUTE NUMBER	BEGINNING	END
CR 507	Ohio River Bridge in Weirton	Through Hancock County to the Junction with CR 1 in Brooke County
CR 1	Junction with CR 507	East to Pennsylvania State Line

<b>WEST VIRGINIA BICYCLE ROUTE 3</b>		
<b>JEFFERSON COUNTY</b>		
This route would connect to Maryland Bicycle Route 65.		
ROUTE NUMBER	BEGINNING	END
CR 1	Virginia State Line	Junction with SR 480
SR 480	Junction with CR 1	North to Maryland State line and Bridge in Shepherdstown

<b>WEST VIRGINIA BICYCLE ROUTE 4</b>		
<b>OHIO COUNTY</b>		
This route takes advantage of the extensive rail trail network in Wheeling as well as city Sts. This could be a major connector in U. S. Bicycle Route 50 proposed to follow a corridor around US Route 40.		
ROUTE NUMBER	BEGINNING	END
US 40 (Zane St)	Ohio State Line	Junction with South York St
South York St	Junction with Zane St	Junction with Virginia St
Virginia St	Junction with South York St	Junction with Ohio River Trail
Ohio River Trail	Junction with Virginia St at Wheeling Suspension Bridge	Junction with Wheeling Creek Trail
Wheeling Creek Trail	Junction with Ohio River Trail	Junction with Community St/Lava Ave in Parkview Section of Wheeling
Community St/Lava Ave	Junction with Wheeling Creek Trail	Junction with Bethlehem Boulevard CR 88
Bethlehem Boulevard CR 88	Junction with Community St/Lava Ave	Bethlehem Blvd becomes US 40, National Road
US 40	CR 88, Bethlehem Boulevard	Pennsylvania State Line

<b>WEST VIRGINIA BICYCLE ROUTE 5</b>		
<b>MONROE, GREENBRIER, POCAHONTAS, PENDLETON, GRANT, MINERAL COUNTIES</b>		
This is the first long route proposed. It follows US Bike Route Corridor 15 through West Virginia and nearly connects to US Bike Route 50 (proposed to follow a corridor around US 40) in Cumberland Maryland.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
US 219	Virginia State Line in Monroe County	Junction with CR 63 in Greenbrier County
CR 63	Junction US 219	US 60
US 60	Junction with CR 63	Junction with SR 92
SR 92	Junction with US 60	Junction with US 250 & SR 28 in Pocahontas County
SR 28	Junction with SR 92	Junction with SR 42 in Grant County
SR 42	Junction with SR 28	Junction with CR 5
CR 5	Junction with SR 42	Junction with CR 11 in Mineral County
CR 11	Junction with CR 5	Junction with SR 46
SR 46	Junction with CR 11	Junction with SR 28
SR 28	Junction with SR 46	Junction with SR 51
SR 51	Junction with SR 28	North to Maryland State Line

<b>WEST VIRGINIA BICYCLE ROUTE 6</b>		
<b>WOOD, RITCHIE, DODDRIDGE, HARRISON, BARBOUR, TUCKER GRANT, MINERAL COUNTIES</b>		
This route roughly parallels US 50. One alternate route nearly connects to US Bike Route 50 (proposed to follow US 40) in the eastern panhandle. It uses city Sts in Parkersburg and Clarksburg. Bicycles are prohibited on US 50 in Clarksburg. Allegheny Highlands Trail adjacent to Corridor H may be a better route and make part of this route outdated. In addition three alternatives exist from Romney to the State Line. A field review needs to be conducted to determine the preferred route prior to it being designated and signed.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
Ann St	Point Park in Parkersburg	Junction with Seventh Ave
Seventh Ave	Junction with Ann St	US 50 East
US 50	Junction with Seventh Ave	Junction with SR 20 in Harrison County
SR 20 (West Pike St)	Junction with US 50	Junction with West Main St
West Main St	Junction with SR 20	East Main St
East Main St	Junction with West Main St	Broadway Ave
Broadway Ave	Junction with East Main St	Junction with LaFayette St
LaFayette St	Junction with Broadway Ave	Junction with Washington St
Washington St	Junction with LaFayette St	Junction with High St
High St	Junction with Washington St	Junction with CR 23/9
CR 23/9	Junction with High St	Junction with CR 58

<b>WEST VIRGINIA BICYCLE ROUTE 6 (Continued)</b>		
<b>WOOD, RITCHIE, DODDRIDGE, HARRISON, BARBOUR, TUCKER GRANT, MINERAL AND HAMPSHIRE COUNTIES</b>		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
CR 58	Junction with CR 23/9	Junction with US 50
US 50	Junction with CR 59	Junction with SR 76
SR 76	Junction with US 50	Junction with US 119
US 119	Junction with SR 76	Junction with CR 6 in Barbour County
CR 6	Junction with US 119	Junction with CR 10
CR 10	Junction with CR 6	Junction with SR 92
SR 92	Junction with CR 10	Junction with SR 38
CR 38	Junction with SR 92	Junction with SR 72 in Tucker County
CR 72	Junction with SR 38	Junction with CR 5 in St. George
CR 5	Junction with CR 72	Cross bridge to Junction with CR 1 South
CR 1 South	Junction with CR 5	Junction with CR 7
CR 7	Junction with CR 1	Junction with CR 9
CR 9	Junction with CR 7	Junction with US 219
US 219	Junction with CR 9	Junction with SR 32
SR 32	Junction with US 219	Junction with SR 93
SR 93	Junction with SR 32	Junction with CR 1 in Grant County
CR 1	Junction with SR 93	Junction with CR 3/3
CR 3/3	Junction with CR 1	Junction with CR 3
CR 3	Junction with CR 3/3	Junction with CR 2
CR 2	Junction with CR 3	Junction with CR 5
CR 5	Junction with CR 2	Junction with CR 11 at Mineral County Line
CR 11	Junction with CR 5 at Grant County Line	Junction with US 50
US 50	Junction with CR 11	Romney in Hampshire County

<b>WEST VIRGINIA BICYCLE ROUTE 6a</b>		
<b>ALTERNATE ONE IN HAMPSHIRE COUNTY</b>		
<b>This alternate route connects to the C &amp; O Canal Towpath and which would allow bicyclists to continue their ride on into Washington DC.</b>		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
US 50	Junction with CR 11 in Grant County	Junction with SR 28 in Hampshire County
SR 28	Junction with US 50	Junction with CR 1
CR 1	Junction with SR 28	At Maryland State Line in Green Spring. Will connect to the C & O Canal Towpath here.

<b>WEST VIRGINIA BICYCLE ROUTE 6b</b>		
<b>ALTERNATE TWO IN HAMPSHIRE COUNTY</b>		
<b>This route appears to be more rural in nature with less traffic.</b>		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
US 50	Junction with CR 11 in Grant County	Junction with SR 29 east of Augusta Hampshire County
SR 29	Junction with US 50	Junction with SR 127 near the Forks of Cacapon
SR 127	Junction with SR 29	East to Virginia State Line near Glengary, VA.

<b>WEST VIRGINIA BICYCLE ROUTE 6c</b>		
<b>ALTERNATE THREE IN HAMPSHIRE COUNTY</b>		
<b>This route appears to have higher traffic volumes and may be the least desirable of the three alternative routes.</b>		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
US 50	Junction with CR 11 in Grant County	East to Virginia State Line near Winchester

<b>WEST VIRGINIA BICYCLE ROUTE 7</b>		
<b>HARRISON, MARION, AND MONONGALIA COUNTIES</b>		
This route would connect the American Discovery Trail which runs along the North Bend Rail Trail with the network of Rail Trails in Marion and Monongalia Counties and the Pennsylvania Bicycle Route "A" which appears to follow the Monongalia-Fayette Expressway. It also follows the rail trail network where possible.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
CR 11	At North Bend Rail Trail at Wolf Summit in Harrison County	Junction with CR 9
CR 9	Junction with CR 11	Junction with CR 20
CR 20	Junction with CR 9	Junction with US 19
US 19	Junction with CR 20	Junction with West Fork Rail Trail in Shinnston
West Fork Rail Trail	Junction with US 19	City of Fairmont and city bicycle route through city to MCTrail and Connection to Mon River Rail Trail
Mon River Rail Trail	Junction with MCTrail	Junction with Deckers Creek Rail Trail
Deckers Creek Rail Trail	Junction with Mon River Rail Trail	Junction with CR 75 in Dellslow
CR 75	Junction with Deckers Creek Rail Trail	Junction with CR 857
CR 857	Junction with CR 75	North to Pennsylvania State line and PA Bicycle Route "A"

## WEST VIRGINIA BICYCLE ROUTE 8

### MASON, JACKSON, ROANE, CLAY, NICHOLAS, WEBSTER AND POCOHONTAS COUNTIES

This route would provide a more scenic route across the middle of the state through many of the more rural counties. This route uses one paved Forest Service Road.

<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
SR 2	Begin at US 35 Bridge in Mason County	Junction with SR 87
SR 87	Junction with SR 2	Junction with SR 62 in Jackson County
SR 62	Junction with SR 87	Junction with US 33
US 33	Junction with SR 62	Junction with CR 26
CR 26	Junction with US 33	Junction with CR 40
CR 40	Junction with CR 26	Junction with CR 36
CR 36	Junction with CR 40	Junction with CR 30/4 in Roane County
CR 30/4	Junction with CR 36	Junction with CR 30/3
CR 30/3	Junction with CR 30/4	Junction with CR 15/5
CR 15/5	Junction with CR 30/3	Junction with SR 15
SR 15	Junction with CR 15/5	Junction with US 119
US 119	Junction with CR 15	Junction with CR 21
CR 21	Junction with US 219	Junction with SR 36
SR 36	Junction with CR 21	Junction with CR 34 in Clay County
CR 34	Junction with SR 36	Junction with CR 7
CR 7	Junction with CR 34	Junction with SR 16
SR 16	Junction with CR 7	Junction with SR 4
SR 4	Junction with SR 16	Junction with CR 46
CR 46	Junction with SR 4	Junction with CR 11
CR 11	Junction with CR 46	Junction with CR 1 in Nicholas County
CR 1	Junction with CR 11 in Clay County	Junction with SR 82
SR 82	Junction with CR 1 in Nicholas County	Junction with SR 20 in Webster County
SR 20	Junction with SR 82	Junction with CR 46 (or CR 15/7 which ever intersection has the big store)
CR 15/7	Junction with SR 20	Junction with CR 46
CR 46	Junction with CR 15/7	Junction with CR 46/2
CR 46/2	Junction with CR 46	Junction with USFS Road 86 (Williams River Road)
USFS Road 86 (Williams River Road)	Junction with CR 46/2	Junction with SR 150 (Highland Scenic Drive) in Pocahontas County
SR 150	Junction with USFS Road 86	Junction with US 219
US 219	Junction with SR 150	Junction with SR 39
SR 39	Junction with US 219	East to Virginia State Line

<b>WEST VIRGINIA BICYCLE ROUTE 9</b>		
<b>MINGO, LOGAN, BOONE, KANAWHA, JACKSON, AND WOOD COUNTIES</b>		
This route could connect to US BR 76, one of the two currently designated US Bicycle Routes, if Kentucky cooperated.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
US 119	Kentucky State Line in Mingo County	Junction with SR 61 (McCorkle Boulevard) in Kanawha County
SR 61	Junction with US 119	Junction with US 60 at Patrick St Bridge
US 60	Junction with SR 61	Junction with SR 21
SR 21	Junction with US 60	Junction with SR 14 in Mineral Wells, Wood County
SR 14	Junction with SR 21	Ohio River Bridge in Parkersburg

<b>WEST VIRGINIA BICYCLE ROUTE 10</b>		
<b>CABELL, PUTNAM, KANAWHA, FAYETTE, AND GREENBRIER COUNTIES</b>		
This route would follow the Midland Trail and would provide a southern cross state route. It is ridden by many bicyclist already.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
US 60	Kentucky State Line in Cabell County	Virginia State Line in Greenbrier County

<b>WEST VIRGINIA RECREATIONAL BICYCLE ROUTE L1</b>		
<b>LEWIS COUNTY</b>		
This loop recreational route is one frequently ridden by bicyclist from Harrison County.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
CR 1	Junction with US 19 in Weston	Junction with CR 8
CR 8	Junction with CR 1	Junction with CR 7
CR 7	Junction with CR 8	Junction with CR 13
CR 13	Junction with CR 7	Junction with US 33
US 33	Junction with CR 13	Junction with CR 15
CR 15	Junction with US 33	Junction with US 19
US 19	Junction with CR 15	Beginning at Junction with CR 1

<b>WEST VIRGINIA RECREATIONAL BICYCLE ROUTE L2</b>		
<b>CABELL COUNTY</b>		
This loop recreational route is listed in several guides to on road riding in West Virginia and is one of the rides identified by the Mountain State Wheelers.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
CR 15	US 60 in Milton	Junction with CR 11
CR 11	Junction CR 15	Junction with CR 1
CR 1	Junction with CR 11	Cross US 60 in Ona and continue south on CR 29

<b>WEST VIRGINIA RECREATIONAL BICYCLE ROUTE L2 (continued)</b>		
<b>CABELL COUNTY</b>		
CR 29	Junction with CR 1 and US 60	Junction with CR 47/1
CR 47/1	Junction with CR 29	Junction with 47
CR 47	Junction with CR 47/1	Junction with CR 25
CR 25	Junction with CR 47	Junction with CR 25/2
CR 25/2	Junction with CR 25	Junction with CR 25 (again)
CR 25	Junction with CR 25/2	Junction with CR 25/7
CR 25/7	Junction with CR 25	Junction with US 60 across from CR 15

<b>WEST VIRGINIA RECREATIONAL BICYCLE ROUTE L3</b>		
<b>POCAHONTAS COUNTY</b>		
This recreational route follows one route of the Cheat Mountain Challenge, a series of on-road bicycle races sponsored by Snowshoe Resort. Parts of it are recreational rides promoted by the Mountain State Wheelers published in several guides to road riding.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
CR 21	US 39 in Huntersville	Junction with CR 21/4 in Watoga State Park
CR 21/4	Junction with CR 21	Junction with CR 27/3
CR 27/3	Junction with CR 21/4	Junction with CR 27
CR 27	Junction with CR 27/3	Junction with US 219
US 219	Junction with CR 27	Junction with US 39
US 39	Junction with US 219	Junction with SR 150 (Highland Scenic Drive)
SR 150	Junction with US 39	Junction with US 219
US 219	Junction with US 39	Junction with CR 1
CR 1	Junction with US 219	Junction with SR 66
SR 66	Junction with CR 1	Junction with SR 28
SR 28	Junction with SR 66	Junction with CR 39/3
CR 39/3	Junction with SR 28	Junction with US 39
US 39	Junction with CR 39/3	Beginning at Junction with CR 1 in Huntersville

<b>WEST VIRGINIA RECREATIONAL BICYCLE CONNECTOR ROUTE CR1 CONNECTING PANHANDLE TRAIL TO WELLSBURG YANKEE TRAIL</b>		
<b>BROOKE COUNTY</b>		
This connection will allow bicyclist to ride from Pittsburgh to Weirton along a series of rail trails and then connect to rail trails in West Virginia.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
CR 4	Junction with Panhandle Rail Trail in Weirton	Junction with CR 8
CR 8	Junction with CR 4	Junction with SR 2
SR 2	Junction with CR 8	Junction with Wellsburg Yankee Rail Trail in Wellsburg



<b>WEST VIRGINIA RECREATIONAL BICYCLE CONNECTOR ROUTE CR2 CONNECTING ALLEGHENY HIGHLANDS TRAIL TO WEST FORK TRAIL</b>		
<b>RANDOLPH COUNTY</b>		
This rather long connection will link a developing trail along Corridor H in Elkins to the rail trails in the Greenbrier River Valley. There are two alternative routes proposed. One uses a US Forest Service road. Both routes use city Sts for the initial stages. A field review of both routes is necessary to determine the best route.		
<b>ALTERNATE ONE</b>		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
CR 1/7	In Elkins	Junction with CR 1
CR 1	Junction with CR 1/7	Junction with CR 9
CR 9	Junction with CR 1	Junction with CR9/3
CR 9/3	Junction with CR 9	Junction with CR 6
CR 6	Junction with CR 9/3	Junction with USFS Road 91
USFS Road 91	Junction with CR 6	Junction with CR 12/1
CR 12/1	Junction with USFS Road 91	Junction with CR 12
CR 12	Junction with CR 12/1	Junction with CR 27 at US 33
CR 27	Junction with CR 12 at US 33	Junction with West Fork Trail in Glady
<b>ALTERNATE TWO</b>		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
City Sts	Restored RR Depot in Elkins	Junction with CR 25/4
CR 25/4	Junction with City Sts	Junction with CR 25
CR 25	Junction with CR 25/4	Junction with CR 30
CR 30	Junction with CR 25	Junction with CR 22
CR 22	Junction with CR 30	Junction with West Fork Trail in Glady

<b>WEST VIRGINIA RECREATIONAL BICYCLE CONNECTOR ROUTE CR3 CONNECTING WEST FORK TRAIL TO GREENBRIER RIVER TRAIL</b>		
<b>POCAHONTAS COUNTY</b>		
This will link two long particularly scenic rail trails. Combined with the previous connection it will provide a corridor of designated off road bicycle routes from Parsons to the Lewisburg/ White Sulphur Springs area.		
<b>ROUTE NUMBER</b>	<b>BEGINNING</b>	<b>END</b>
US 250	Junction with West Fork Trail in Durbin	Junction with CR 250/13 in Durbin
CR250/13	Junction with US 250	Junction with CR 1
CR 1	Junction with CR 250/13	Junction with Greenbrier River Rail Trail at Cass Scenic Railroad State Park in Cass

## **APPENDIX D: SHARE THE ROAD FORMS**

**The forms for requesting Share The Road signs, the data collection guide and the form for collecting data on Share the Road signs may be found on the following pages.**

# Request for "SHARE THE ROAD" Sign West Virginia Division of Highways

ITEMS 1-6 TO BE COMPLETED BY APPLICANT; ALL OTHERS TO BE COMPLETED BY DOH

1) Date of request:	_____
2) Requested by:	_____
	(name & title)
	_____
	(organization & phone number)
3) City Council concurrence (if applicable)— attach resolution:	Yes      No
4) County Commission concurrence— attach resolution:	Yes      No
5) Why do you feel these signs are necessary?	_____
	_____
	_____
	_____
6) Applicant Comments	_____
	_____
	_____

Once approved by DOH, signs will be manufactured and erected (at DOH expense) at locations to be determined by DOH District Office, in accordance with DOH procedures. Maintenance of the signs will be the responsibility of the DOH.

7) Highway Information (for inventory purposes only— will not affect application):

a) Existing Sidewalks?\* Yes No

*\*City/County may have ordinance prohibiting operation of bicycles on sidewalks— please note if you are aware of such an ordinance*

b) Existing Shoulders? Yes No

c) Shoulder Surface Type and Width(s): \_\_\_\_\_

\_\_\_\_\_

8) WYDOH District Traffic Engineer Approval:

\_\_\_\_\_  
Signature











\_\_\_\_\_  
Date











9) Comments/Remarks:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## DATA COLLECTION GUIDE FOR SHARE THE ROAD SIGN PROJECT

<b>COLUMN 1 – SIGN</b>		
	BICYCLE	If just this diamond is present, record it as “B”.
	PEDESTRIAN	If just this diamond is present, record it as “P”. If the pedestrian is inside a crosswalk record it as “PCW”.
	HORSE	If just this diamond is present, record it as “H”.
	SHARE THE ROAD	A share the road placard may be found with any of the above diamond shaped signs. If with a bicycle diamond, record it as “BSTR”; with a pedestrian diamond, it is “PSTR”; with an equestrian diamond it is “HSRRH”.
	ARROW	The placard may display an arrow. Record these as “BAR_”, “PAR_”, and “HAR_” with an additional “L”, “R” or “A” indicating whether the arrow pointing- left, right or ahead.
	AHEAD	In other cases the placard may have the word “AHEAD”. Record these as “BAH”, “PAH” and “HAH”.
	BIKE ROUTE	Record these signs as BR. If there is an arrow on a placard below them record them as BRA_ with the appropriate letter for the direction as indicated above.
	USE SHOULDER	If the Bike Route sign has this placard below it, record it as BRUS.
	SHARE THE WALK	Record these signs, or variations of them as STW.
<b>COLUMN 2 – CONFORMING</b>		
	YES or NO	The signs pictured above are conforming signs. Indicated “YES” for those. Any other sign indicating Bicycles, Pedestrians, or Horses may be present that are not like the above, like the sign to the left, indicate “NO”.
<b>COLUMN 3 – ROUTE</b>		
<b>NUMBERS</b>	Insert the route number such as 60, 21/4 etc. in this column. On roads with more than one route number designation use US first then the state route number.	
<b>COLUMN 4- SIDE</b>		
<b>N, S, E, or W</b>	Indicate whether the sign is on the North, East, South or West SIDE of the road, not the direction you are traveling.	
<b>COLUMN 5 – LATITUDE</b>		
<b>NUMBERS</b>	Enter the Latitude reading on your GPS unit in digital degrees.	
<b>COLUMN 5 – LONGITUDE</b>		
<b>NUMBERS</b>	Enter the Longitude reading on your GPS unit in digital degrees.	
<b>COLUMN 6 – COMMENTS</b>		
Enter any comments such as the county, the condition of the sign, and whether or not it needs replacing.		
<b>BOTTOM OF THE PAGE</b>		
Use the three blocks at the bottom of the page to record the driver’s name, the date, and the data recorder’s name.		

									
<b>Bicycle</b>	<b>Pedestrian</b>	<b>Horse</b>	<b>Share the Road</b>	<b>Arrow</b>	<b>Ahead</b>	<b>Bike Route</b>	<b>Use Shoulder</b>	<b>Share the Sidwalk</b>	<b>Non-conforming</b>
<b>B</b>	<b>P or PCW</b>	<b>H</b>	<b>STR</b>	<b>AR</b>	<b>AH</b>	<b>BR</b>	<b>US</b>	<b>STW</b>	<b>NC</b>

SIGN	CONFORMING	ROUTE	SIDE	LATITUDE	LONGITUDE	COMMENTS

Driver	County	Date	Data Recorder
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## **APPENDIX E: CONTACT INFORMATION**

<b>WEST VIRGINIA DIVISION OF HIGHWAYS</b>
<p><b>Cabinet Secretary for Department of Transportation, and Commissioner of Highways</b>                  Paul A. Mattox, Jr., P.E.                  Building Five, Room 109                  1900 Kanawha Boulevard East                  Charleston WV, 25305-0430 Phone: 304-558-0444                  Fax: 304-558-1004</p>
<p><b>State Highway Engineer</b>                  Marvin Murphy                  Building Five, Room 164                  1900 Kanawha Boulevard East                  Charleston WV, 25305-0430                  Phone: 304-558-2804                  Fax: 304-558-5781</p>
<p><b>Director – Engineering Division</b>                  Gregory L. Bailey, P. E.                  Building Five, Room 317                  1900 Kanawha Boulevard East                  Charleston WV, 25305-0430                  Phone: 304-558-2885                  Fax: 304-558-0605</p>
<p><b>Director - Traffic Engineering Division</b>                  Cindy Cramer, P.E.                  Building Five, Room 550                  1900 Kanawha Boulevard East                  Charleston WV, 25305-0430                  Phone: 304-558-3063                  Fax: 304-558-1209</p>
<p><b>Director - Program Planning and Administration Division</b>                  Robert L. Pennington, P.E.                  Building Five, Room 863                  1900 Kanawha Boulevard East                  Charleston WV, 25305-0430 Phone: 304 558-3113                  Fax: 304 558-3783</p>
<p><b>Grants Administration/ Statewide and Urban Planning Section</b>                  Richard Warner                  Phone: 304-558-9629                  email:</p>



<p><b>Statewide and Urban Planning Manager</b> Perry Keller Phone: 304-558-9591 email:</p>
<p><b>Congestion Mitigation and Air Quality</b> Perry McCutcheon Phone: 304-558-9286 Email: <a href="mailto:perry.j.mccutcheon@wv.gov">perry.j.mccutcheon@wv.gov</a></p>
<p><b>Grants Administration Manager</b> Harold Simmons Phone 304-558-9618 email: <a href="mailto:harold.r.simmons@wv.gov">harold.r.simmons@wv.gov</a></p>
<p><b>State Bicycle/Pedestrian Coordinator</b> William C. "Bill" Robinson Phone: 304-558-9613 email: <a href="mailto:bill.c.robinson@wv.gov">bill.c.robinson@wv.gov</a></p>
<p><b>Transportation Enhancements Program Coordinator</b> Jeffrey L. Harpold Phone 304-558-9596 email: <a href="mailto:jeffrey.l.harpold@wv.gov">jeffrey.l.harpold@wv.gov</a></p>
<p><b>Scenic Byways Coordinator</b> Karen Ebert Allen Phone: 304-558-9573 Email: <a href="mailto:karen.e.allen@wv.gov">karen.e.allen@wv.gov</a></p>
<p><b>Safe Routes to School Coordinator</b> Rebecca Davison Phone: 304-558-9600 Email: <a href="mailto:rebecca.a.davison@wv.gov">rebecca.a.davison@wv.gov</a></p>

**Federal Highway Administration**  
Federal Highway Administration  
700 Washington Street, East, Suite 200  
Charleston, West Virginia 25301  
(304) 347-5436 (telephone)  
(304) 347-5103 (fax)

**State Historic Preservation Officer**  
Susan M. Pierce  
Deputy State Historic Preservation Officer  
WV Division of Culture and History  
The Cultural Center  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305  
(304) 558-0220 Ext. 158 (telephone)  
(304) 558-2779 (fax)

<b>WV DIVISION OF HIGHWAYS' DISTRICTS</b>
<p><b>District One:</b>                      John McBrayer, District Engineer/Manager                      WV Division of Highways, District 1                      1334 Smith Street                      Charleston, West Virginia 25301                      (304) 558-3001 (telephone)                      (304) 558-6391 (fax)  <i>Counties within District 1: Boone, Clay, Kanawha, Mason and Putnam</i></p>
<p><b>District Two:</b>                      Keith Chapman, District Engineer/Manager                      WV Division of Highways, District 2                      801 Madison Avenue                      Huntington, West Virginia 25701                      (304) 528-5625 (telephone)                      (304) 528-5614 (fax)  <i>Counties within District 2: Cabell, Lincoln, Logan, Mingo and Wayne</i></p>
<p><b>District Three:</b>                      James "Rusty" Roten, District Engineer/Manager                      WV Division of Highways, District 3                      624 Depot Street                      Parkersburg, West Virginia 26101                      (304) 420-4595 (telephone)                      (304) 420-4683 (fax)  <i>Counties within District 3: Calhoun, Jackson, Pleasants, Ritchie, Roane, Wirt and Wood</i></p>
<p><b>District Four:</b>                      Gary Clayton, District Engineer/Manager                      WV Division of Highways, District 4                      Post Office Box 4220                      Clarksburg, West Virginia 26302                      (304) 842-1550 (telephone)                      (304) 842-1518 (fax)  <i>Counties within District 4: Doddridge, Harrison, Marion, Monongalia, Preston and Taylor</i></p>
<p><b>District Five:</b>                      Lee Thorne, District Engineer/Manager                      WV Division of Highways, District 5                      Post Office Box 99 (US 50)                      Burlington, West Virginia 26710                      (304) 289-3521 (telephone)                      (304) 289-5085 (fax)  <i>Counties within District 5: Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral and Morgan</i></p>

**District Six:**

Robert Whipp, District Engineer/Manager

WV Division of Highways, District 6

1 DOT Drive

Moundsville, West Virginia 26041

(304) 843-4008 (telephone)

(304) 843-4085 (fax)

*Counties within District 6: Brooke, Hancock, Marshall, Ohio, Tyler and Wetzel*

**District Seven:**

Ron Hooten, District Engineer/Manager

WV Division of Highways, District 7

Post Office Box 1228 (Depot Street)

Weston, West Virginia 26452

(304) 269-0414 (telephone)

(304) 269-0422 (fax)

*Counties within District 7: Barbour, Braxton, Gilmer, Lewis, Upshur and Webster*

**District Eight:**

Michael R. Moran, District Engineer/Manager

WV Division of Highways, District 8

Post Office Box 1516 (US 219 N)

Elkins, West Virginia 26241

(304) 637-0220 (telephone)

(304) 637-0218 (fax)

*Counties within District 8: Pendleton, Pocahontas, Randolph, and Tucker*

**District Nine:**

Matthew Rowan, District Engineer/Manager

WV Division of Highways, District 9

103 1/2 Church Street

Lewisburg, West Virginia 24901

(304) 647-7450 (telephone)

(304) 647-7452 (fax)

*Counties within District 9: Fayette, Greenbrier, Monroe, Nicholas and Summers*

**District Ten:**

Thomas Camden, District Engineer/Manager

WV Division of Highways, District 10

270 Hardwood Lane

Princeton, West Virginia 24740

(304) 487-5228 (telephone)

(304) 487-5033 (fax)

*Counties within District 10: McDowell, Mercer, Raleigh and Wyoming*

<b>WEST VIRGINIA METROPOLITAN PLANNING ORGANIZATIONS (MPO)</b>
<p><b>Charleston Urbanized Area</b>            Mr. Mark A. Felton, Executive Director            Regional Intergovernmental Council            315 D Street            South Charleston, West Virginia 25303            (304)744-4258 (telephone)            (304)744-2534 (fax)            Email: markfelton@wvregion3.org            Counties within Area: Kanawha &amp; Putnam (WV)</p>
<p><b>Huntington-Ironton Urbanized Area</b>            Ms. Michele P. Craig, Executive Director            Mr. Saleem Salameh, Transp. Study Director            KYOVA Interstate Planning Commission            720 4th Avenue—PO Box 939            Huntington, West Virginia 25701            (304)523-7434 (telephone)            (304)529-7229 (fax)            Email: mcraig@citynet.net            ssalameh@citynet.net            Counties within Area: Lawrence (OH), Cabell &amp; Wayne (WV)</p>
<p><b>Hagerstown-Martinsburg Urbanized Area</b>            Mr. Robert Gordon, Director            Hagerstown/Eastern Panhandle Metropolitan Planning Organization            80 West Baltimore Street            Hagerstown, Maryland 21740            (240)313-2437 (Maryland office telephone)            (304) 263-1743 (West Virginia office telephone)            (240)313-2431 (fax)            Email: rgordon@hepmpo.net            Counties within Area: Washington (MD), Franklin (PA), Berkeley (WV),            Jefferson (WV)</p>
<p><b>Morgantown Urbanized Area</b>            Mr. Chester Parsons, AICP, Executive Director            Greater Morgantown Metropolitan Planning Organization            GMMPO            180 Hart Field Road            Morgantown, West Virginia 26505            (304)291-9571 (telephone)            (304)291-9573 (fax)            Email: parsons@planttogether.org            Counties within Area: Monongalia</p>

**Parkersburg-Belpre Urbanized Area**

Mr. Randy Durst, Transportation Director  
Wood-Washington-Wirt Interstate Planning Commission  
Post Office Box 247  
531 Market Street  
Parkersburg, West Virginia 26101  
(304)422-4993 (telephone)  
(304)422-4998 (fax)  
Email: randy.durst@movrc.org  
Counties within Area: Washington (OH), Wood (WV)

**Weirton-Steubenville Urbanized Area**

Dr. John C. Brown, AICP  
Executive Director  
BHJ Regional Council & Metropolitan Planning Commission  
124 North Fourth Street - Second Floor  
Steubenville, Ohio 43952  
(740)282-3685 (Ohio office number)  
(304)797-9666 (West Virginia office number)  
(740)282-1821 (fax)  
Email: jbrown@bhjmpc.org  
Counties within Area: Brooke & Hancock (WV), Jefferson (OH)

**Wheeling Urbanized Area**

Mr. William Phipps, Executive Director  
Mr. Bob Muransky, Transp. Study Director  
Belomar Regional Council and Interstate Planning Commission  
Post Office Box 2086  
Wheeling, West Virginia 26003  
(304)242-1800 (telephone)  
(304)242-2437 (fax)  
Email: bmuransky@belomar.org  
Counties within Area: Belmont (OH), Marshall & Ohio (WV)

**REGIONAL PLANNING AND DEVELOPMENT COUNCILS (RP&DC)**

**Region I:**

David N. Cole, Executive Director  
Region I Planning and Development Council  
1439 East Main Street, Suite 5  
Princeton, West Virginia 24740  
(304) 431-7225 (telephone)  
(304) 431-7235 (fax)  
*Counties within Region I: McDowell, Mercer, Monroe, Raleigh, Summers  
and Wyoming*

**Region II:**

Michele P. Craig, Executive Director  
Region II Planning and Development Council  
720 4th Avenue  
Huntington, West Virginia 25701  
(304) 529-3357 (telephone)  
(304) 529-7229 (fax)

*Counties within Region II: Cabell, Lincoln, Logan, Mason, Mingo and Wayne*

**Region III:**

Mark Felton, Executive Director  
BCKP Regional Intergovernmental Council  
315 D Street  
South Charleston, West Virginia 25303  
(304) 744-4258 (telephone)  
(304) 744-2534 (fax)

*Counties within Region III: Boone, Clay, Kanawha and Putnam*

**Region IV:**

W. D. Smith, Executive Director  
Region IV Planning and Development Council  
425 Main Street, Suite A  
Summersville, West Virginia 26651  
(304) 872-4970 (telephone)  
(304) 872-1012 (fax)

*Counties within Region IV: Fayette, Greenbrier, Nicholas, Pocahontas and Webster*

**Region V:**

James P. Mylott, Executive Director  
Mid-Ohio Valley Regional Planning and Development Council  
531 Market Street  
Parkersburg, West Virginia 26101  
(304) 422-4993 (telephone)  
(304) 422-4998 (fax)

*Counties within Region V: Calhoun, Jackson, Pleasants, Ritchie, Roane, Tyler, Wirt and Wood*

**Region VI:**

James L. Hall, Executive Director  
Region VI Planning and Development Council  
7003-C Mountain Park Drive  
White Hall, West Virginia 26554  
(304) 366-5693 (telephone)  
(304) 367-0804 (fax)

*Counties within Region VI: Doddridge, Harrison, Marion, Monongalia, Preston and Taylor*

**Region VII:**

Rosemary Wagner, Executive Director  
Region VII Planning and Development Council  
One Edmiston Way, Suite 225  
Buckhannon, West Virginia 26201  
(304) 472-6564 (telephone)  
(304) 472-6590 (fax)

*Counties within Region VII: Barbour, Braxton, Gilmer, Lewis, Randolph, Tucker and Upshur*

**Region VIII:**

Kenneth Dyche, Executive Director  
Region VIII Planning and Development Council  
Post Office Box 849  
Petersburg, West Virginia 26847  
(304) 257-2448 (telephone)  
(304) 257-4958 (fax)

*Counties within Region VIII: Grant, Hampshire, Hardy, Mineral and Pendleton*

**Region IX:**

Carol Crabtree, Executive Director  
Eastern Panhandle Regional Planning and Development Council  
400 West Stephen Street, Suite 301  
Martinsburg, West Virginia 25401  
(304) 263-1743 (telephone)  
(304) 263-7156 (fax)

*Counties within Region IX: Berkeley, Jefferson and Morgan*

**Region X:**

William Phipps, Executive Director  
Belomar Regional Council and Interstate Planning Commission  
Post Office Box 2086  
Wheeling, West Virginia 26003  
(304) 242-1800 (telephone)  
(304) 242-2437 (fax)

*Counties within Region X: Marshall, Ohio and Wetzel*

**Region XI:**

Dr. John C. Brown, Executive Director  
BHJ Regional Council and Metropolitan Planning Commission  
124 North Fourth Street—Second Floor  
Steubenville, Ohio 43952  
(740) 282-3685 (telephone)  
(304) 797-9666 (telephone)  
(740) 282-1821 (fax)

*Counties within Region XI: Brooke and Hancock*

## APPENDIX F: GLOSSARY OF TERMS AND ACRONYMS

The terms and acronyms defined below may or may not be used in this plan. They are, however, frequently used in discussions of bicycle and pedestrian issues. Legal definitions are provided in the West Virginia State Code; a selection of those definitions is included in Appendix A.

ADA	Americans with Disabilities Act; civil rights legislation passed in 1990, effective July 1992; mandated sweeping changes in building codes, transportation, and hiring practices to prevent discrimination against persons with disabilities
ADAAG	ADA Accessibility Guidelines for Buildings and Facilities
ADT	average daily traffic; the measurement of the average number of vehicles passing a certain point each day on a highway, road or street
at-grade crossing	the general area where two or more roadways, railways, and/or pathways join or cross, as in an "at-grade railroad crossing"
bicycle	Every vehicle propelled solely by human power upon which any person may ride having two tandem wheels except scooters and similar devices. The term "bicycle" for this publication also includes recumbent bicycles, three-wheeled, and four-wheeled human-powered vehicles ridden by adults, but not tricycles for children.
bicycle facility	an improvement or facility provided to encourage or accommodate bicycle travel, including bikeways, parking and storage facilities, changing facilities, as well as roadways not specifically designated for bicycle use
bicycle lane	a portion of a roadway which has been designated by striping, pavement markings, or other traffic control devices for the preferential or exclusive use of bicyclists
bicycle path	an access route, usually scenic, for the exclusive use of bicycles and pedestrians
bicycle route	a vehicular route, identified by a sign, that provides continuity to the bicycle transportation network
bicycle route system	A system of bikeways designated by the jurisdiction having authority with appropriate directional and informational route markers with or without specific bicycle route numbers. Bicycle routes should establish a continuous routing but may be a combination of any and all types of bikeways.
bicyclist type	AASHTO suggests three categories of bicyclists A, B, and C defined as follows:



	CLASS A	Advanced or experienced riders generally use their bicycles as they would a motor vehicle. They are riding for convenience and speed and want direct access to destinations with a minimum of detour or delay. They are typically comfortable riding with motor vehicle traffic; however they need sufficient operating space on the traveled way or the shoulder to eliminate the need for either themselves or a passing motor vehicle to shift position.
	CLASS B	Basic or less confident adult riders who may also be using their bicycles for transportation purposes (e.g. going to the store or visiting friends) but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by the faster motor vehicles. Thus basic riders are comfortable riding on neighborhood streets and shared-use paths and prefer designated facilities such as bicycle lanes or wide shoulder lanes on busier streets.
	CLASS C	Children riding on their own or with their parents may not travel as fast as their adult counterparts but still may require access to destinations in their community such as schools convenience stores and recreational facilities. Residential streets with low motor vehicle speeds shared-use paths and busier streets with well-defined pavement markings between bicycles and motor vehicles can accommodate children without their needing to ride in the travel lane of major arterials.
	bikeway	A generic term for any road, streetpath or way which in some manner is specifically designated for bicycle travel regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.
	bollard	a post or similar obstruction that prevents the passage of vehicles; the spacing of bollards usually allows the passage of bicycles and pedestrians; bollards may incorporate lighting
	buffer	a strip of land that physically and/or visually separates two land uses, especially if the uses are incompatible
	bus pullout/turnout	a section of pavement at a bus stop that allows buses to leave the flow of traffic while stopped to load and unload passengers
	bus zone	a portion of the roadway along the curb which is reserved for loading and unloading of either local transit or school buses
	center line	the line separating traffic traveling in opposite directions
	clearance, lateral	the width required for safe passage as measured in a horizontal plane
	clearance, vertical	the height required for safe passage as measured in a vertical plane

CMAQ	The Congestion Mitigation and Air Quality Improvement Program, a funding category in Title I of ISTEA that provides funds for projects and activities to reduce congestion and improve air quality
collector (street)	a street designated to carry traffic between local streets and arterials, or from local street to local street
commuter/ utility cyclist	An individual who uses a bicycle primarily to reach a particular destination for practical purposes, such as to purchase or deliver goods and services, or to travel to and from work or school. Messengers are classified as utility cyclists.
crosswalk	portion of a roadway designated for pedestrian crossing, marked or unmarked; unmarked crosswalks are the natural extension of the shoulder, curb line or sidewalk
crosswalk beacon	amber flashing lights, usually accompanied by a sign, used to notify motorists of a pedestrian crosswalk
culvert	a transverse drain under a roadway, canal, or embankment other than a bridge; most culverts are fabricated with materials such as corrugated metal and precast concrete pipe
curb	a rim along a street or roadway, an edge for a sidewalk; a curb is usually constructed from cement concrete, asphalt concrete, or granite; curbs create a physical barrier between the roadway and the planting strip, which provides a safer environment for pedestrians, and facilitates street drainage
curb bulb	an extension of the curb line into the roadway
curb cut	used to describe a depression in the curb to accommodate a wheelchair, mobility device or driveway
curb line	the edge of a roadway; it may or may not be marked by a curb
curb ramp	the area of the sidewalk, usually at the intersection, that allows easy access/transition for wheelchairs, strollers, and other wheeled equipment, between the sidewalk and the street
drainage swale	a shallow, grassy drainage channel that accommodates surface water runoff; used on street without curbs and gutters
driveway	the portion of the street or alley area which provides vehicle access to an off-street area through a depression in the curb
effective sidewalk width	the width of the sidewalk area available for walking or wheelchair travel, unobstructed by street furniture or other impediments
FHWA	Federal Highway Administration; agency of the USDOT with jurisdiction over highways
fire lane	an area on public or private property reserved for providing fire department access to structures, fire-sighting fixtures or equipment
fog line	the white line at the outside edge of the motor vehicle travel lane, used to designate the boundary of the vehicle travel lane
FTA	The Federal Transit Administration is the USDOT agency with jurisdiction over transit

grade	a measure of the steepness of a roadway, bikeway or walkway, expressed in a ratio of vertical rise per horizontal distance, usually in percent; e.g. a 5 percent grade equals 5 m of rise over a 100 m horizontal distance
grade separation	Vertical separation of travel ways so that traffic travels at different levels without interference such as a pedestrian overpass, or elevated roadway.
grade-separated crossing	an interchange between roadways, railways, or pathways that provides for the movement of traffic on different levels
green time	the length of time a traffic signal indicates a green light
highway	a general term denoting a public way for purposes of travel, including the entire area within the right-of-way
intersection	a place or area where two or more roads cross
ISTEA	Intermodal Surface Transportation Efficiency Act; 1991; implemented broad changes in the way transportation decisions are made by emphasizing diversity and balance of modes and preservation of existing systems over construction of new facilities
jaywalking	crossing a street illegally; includes walking against a traffic control device, or stepping out in front of a moving vehicle so as to present an immediate danger, whether in a crosswalk or not, or crossing at an intersection outside of a crosswalk
kiosk	a small freestanding structure either open or partially closed, where merchandise is displayed, advertised, or sold, or where notices are displayed
landmark	a building, structure or site that has historical or architectural significance, especially a structure designated as a landmark pursuant to the Landmarks Preservation Ordinance
landscape lighting	lighting that is designed to accompany and illuminate landscaping features
lane line	a solid or broken paint line or other marker separating lanes of traffic moving in the same direction
legend	Words, phrases, or numbers appearing on all or part of a traffic- control device.
loading zone	a portion of the street or alley, designated by a sign or pavement markings, reserved for picking up and dropping off people or property
loop detector	a wire buried in the street and connected to a traffic signal allowing the signal to sense the presence of vehicle traffic
major truck street	a street designated to provide access to trucks with local and non-local destinations
marked crosswalk	any portion of the roadway distinctly indicated for pedestrian or bicycle crossing by lines, marking, or other traffic control devices

median	a physical barrier, or a solid yellow or cross hatched pavement marking at least 18" in width, which divides any street into two or more roadways
motor vehicle	a vehicle that is self-propelled or designed for self-propulsion
MPO	Metropolitan Planning Organization; the agency designated by the governor to administer the federally required transportation planning process in urban areas with a population over 50,000; the MPO is responsible for the 20-year long range plan and the Transportation Improvement Program
MUTCD	Manual on Uniform Traffic Control Devices; approved by the Federal Highway Administration as a national standard for placement and selection of all traffic control devices on or adjacent to all highways open to public travel
NHS	National Highway System; designated by Congress; contains all interstate routes, a large percentage of urban and rural principal arterials, and strategic highways and connectors
NHTSA	National Highway Traffic Safety Administration
open space	land and/or water area with its surface open to the sky which is set aside to serve the purposes of providing park and recreation opportunities, conserving valuable resources, and structuring urban development and form
pavement markings	painted or applied lines or legends placed on a roadway surface for regulating, guiding or warning traffic
PBCAT	Pedestrian and Bicycle Crash Analysis Tool
pedestrian	a person on foot, in a wheelchair or walking a bicycle
pedestrian detectors	devices, usually push-button activated, that allow pedestrians or bicycles to change the signal light at a crosswalk
pedestrian facility	a facility provided for the benefit of pedestrian travel, including walkways, crosswalks, signs, signals, illumination and benches
pedestrian half signal	a traffic control signal often located at the junction of an arterial and a residential street, which provides pedestrian signals for crossing the arterial but not for crossing the residential street
pedestrian overpass	a pedestrian walkway above the grade of the roadway, which allows pedestrians to cross the roadway without interacting with motor vehicles
pedestrian refuge island	a defined area between traffic lanes that provides a safe place for pedestrians to wait as they cross the street
pedestrian scale lighting	overhead street lighting which is typically over the sidewalk instead of the roadway, and at a lower height than typical street light fixtures; providing illumination for pedestrians instead of motorists

pedestrian signals	electronic devices used for controlling the movement of pedestrians at signalized midblocks or intersections, which may include the “walk/don’t walk” messages or the symbolic walking person/hand message
pedestrian walkway	a surfaced walkway, separated from the roadway, usually of crushed stone, asphalt or concrete, and following the existing ground surface
pedestrian-friendly	describing an environment that is pleasant and inviting for people to experience on foot; specifically, offering sensory appeal, safety, street amenities such as plantings and furniture, good lighting, easy visual and physical access to buildings, and diverse activities
planting strip	the street right-of-way area lying between the constructed curb and the sidewalk
rail-trail	A shared-use path, paved or unpaved, built within the right-of-way of an existing or former railroad.
residential street	a non-arterial street that provides access to residential land uses, and connects to higher level traffic streets
resurfacing	the placing of a new surface on an existing pavement to improve its conformation or to increase its strength
retaining wall	a structure used to sustain the pressure of the earth behind it
right-of-way	a strip of land legally established for the use of pedestrians, vehicles or utilities; the legal right of one vehicle, bicycle, pedestrian or device to proceed in a lawful manner in preference to another vehicle, bicycle, pedestrian or device
roadway	the portion of the highway, including shoulders, intended for vehicle use.
rules of the road	the portion of a motor vehicle law that contains regulations governing the operation of vehicular and pedestrian traffic
rumble strips	A textured or grooved pavement sometimes used on or along shoulders of highways to alert motorists who stray onto the shoulder
SAFETEA-LU	Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users
school crossing	a crossing adjacent to a school or on established school pedestrian routes, designated as a preferred crossing for school users
school zone	an established reduced speed area; installed around established school crossing; speed limits are posted at 20 mph
Setback	the required or actual placement of a building a specified distance away from a road, property line, or other structures

shared-use path	a path physically separated from motor vehicle traffic by an open space or barrier and either within a highway right-of-way or within an independent right-of-way, used by bicyclists, pedestrians, joggers, skaters and other non-motorized travelers
shared roadway	a type of bikeway where bicyclists and motor vehicles share a travel lane
shoulder	the paved or unpaved area between the roadway edge and the property line; contiguous to the travel lanes; provided for pedestrians, bicyclists, emergency use by vehicles and for lateral support of base and surface courses
shoulder bikeway	a type of bikeway where bicyclists travel on a paved shoulder
shy distance	the distance between the edge of a travel-way and a fixed object
sidewalk	a walkway separated from the roadway with a curb, constructed of a durable, hard and smooth surface, designed for preferential or exclusive use by pedestrians
sidewalk bikeway	Any sidewalk signed and/or striped to permit bicyclists to share the sidewalk right-of-way with pedestrians.
sight distance	the length of roadway visible to a driver; the distance a person can see along an unobstructed line of sight
sign	provide information to motorists, pedestrians and bicyclists; black and white regulatory signs provide information on legal requirements; black and yellow warning signs advise about potentially hazardous roadway conditions; green or white guide/destination signs provide navigational information along streets, and inform about intersecting routes and important destination
skew angle	the angle formed between a roadway, bikeway or walkway and an intersecting roadway, bikeway, walkway or railway, measured away from the perpendicular
slope	ground that forms a natural or artificial incline
slope line	the line where the graded portion of the roadway from the center line toward the edge changes to the transition slope required to meet the surface of the abutting private property
SOV	single-occupancy vehicle
SR2S	Safe Routes to School
staired street	street rights-of-way on hillsides which have been developed as stairs for pedestrians, not roadways for motor vehicle use
STIP	Statewide Transportation Improvement Program; a multi-year transportation investment strategy which addresses the goals of the state long-range plan and lists priority projects and activities throughout the state
stop bar	a painted stripe across a traffic lane to indicate where vehicles should stop at a stop sign or a traffic signal

storm drain	a system of gutters, pipes or ditches used to carry storm water from surrounding lands to streams and lakes, and larger bodies of water
STP	Surface Transportation Program; one of the key capital programs in Title I of ISTEA; it provides flexibility in expenditure of road funds for nonmotorized and transit modes and for Transportation Enhancement Activities
street furniture	accessories and amenities placed on sidewalks for the convenience and accommodation of pedestrians; these may include such things as benches or other seating, trash receptacles, drinking fountains, planters, kiosks, clocks, newspaper dispensers, or telephones
street improvement	an improvement in the public right-of-way, whether above or below ground, such as pavement, sidewalks, or a storm water drainage system
street tree	a tree planted within public right-of-way
street tree grates	grates, usually metal and often decorative, that cover street tree pits and allow air and water to reach the soil
street tree pits	cutouts from a sidewalk or paved planting strip, to allow air and water to reach the trees planted in the cutout
streetscape	the visual character of a street as determined by elements such as structures, greenery, driveways, open space, view, and other natural and man-made components
structure	a bridge, retaining wall or tunnel
T-intersection	the meeting of two streets, usually perpendicular, where one of the streets does not continue through; approximately resembling the letter "t"
TEA	Transportation Enhancement Activities; the percent of the STP funds for Transportation Enhancement Activities (bike facilities, landscaping, etc)
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program; a multi-year investment strategy required under ISTEA which addresses the goals of the long-range plans and lists priority projects for the region
traffic actuated signal	a signal that responds to the presence of a vehicle or pedestrian (for motor vehicles, loop detectors; for pedestrians, usually push buttons)
traffic calming	transportation techniques, programs, or facilities intended to slow the movement of motor vehicles
traffic control device	any sign, signal, marking, or device placed or erected for the purpose of regulating, warning, or guiding vehicle traffic and/or nonmotorized traffic
traffic signal	any traffic device, whether manually, electrically or mechanically operate, which assigns right-of-way to vehicles and pedestrians at intersections

traffic volume	the given number of vehicles that pass a given point for a given amount of time (hour, day, year); see "ADT"
transit stop or transit station	a regular stopping place on a transit route that may include transit shelter and parking
travel lane	roadway lanes on which traffic moves
uncontrolled intersection	an intersection where the right-of-way is not controlled by a stop sign, yield sign, or traffic signal
urban area	the area immediately surrounding an incorporated city or rural community that is urban in character, regardless of size
urban trails	off-road trails, special bike lanes, and signed routes in the street right-of-way
USDOT	United States Department of Transportation
utility poles	poles used to carry utility wires, such as electric, cable television, or telephone; may belong to, telephone companies, power companies, or any combination of these
vehicle	any device in, upon or by which any person or property is or may be transported or drawn upon a highway, including vehicles that are self-propelled or powered by any means
walkway	a transportation facility built for use by pedestrians, including persons in wheelchairs; walkways include sidewalks, paths and paved shoulders
wide outside lane	a wider than normal curbside travel lane that is provided for ease of bicycle operation where there is insufficient room for a bike lane or shoulder bikeway
WVDOH	West Virginia Division of Highways
WVDOT	West Virginia Department of Transportation