Virginia's State Trails

July 2018

Sign Plan

Acknowledgments

This document is presented by the Virginia State Trails Advisory Committee to provide guidance to trail partners seeking to advance Virginia's Statewide Trails. .

The Department of Conservation and Recreation would like to thank the following individuals who participated in the review of this document.

•Rick Burgess, VDOT Directional and Service Signing Program, Traffic Engineering Division
•Marc Lipschultz, VDOT Regulatory Signing Program, Traffic Engineering Division
•Albert Bryant, VDOT Landscape Architecture Section
•Bruce Drees, Tidewater Bicycle Association
•Forrest Atwood, DCR State Parks Division

This document uses imagery from the Manual on Uniform Traffic Control Devices (MUTCD) and the Pedestrian Bicycle Information Center (PBIC)

This document uses text and imagery from these resources provided by the National Park Service:

•*Potomac Heritage National Scenic Trail route marking & graphic identity guide*

•*Planning a Trailhead Kiosk,* developed for Appalachian Trail member clubs.

•*Interpretive Planning Toolkit* by Star-Spangled Banner National Historic Trail staff

This document uses text and imagery from these state resources:

•*Virginia State Park Sign Manual*

•*The Great Allegheny Passage Graphic Identity & Sign Guidelines Manual*

•*Trails Technical Document #2: Trail Signage Guidelines for the New York State Park System*

•*Pennsylvania Trail Design & Development Principles: Guidelines for Sustainable, Non-motorized Trails*

Other sources include

•*New Zealand Cycle Tracks*

•*Universal Signage Recommendation, NASBLA Paddlesports Committee*

EXECUTIVE SUMMARY

This document is intended for the lay person who may not otherwise understand federal restrictions on sign content and placement.
As standards are updated, this guidance may become out of date and should be used as a starting point for a broad overview of items to consider when signing a trail system

As momentum grows for Virginia's statewide system of trails, guidance for signing these routes is needed to encourage safe and seamless transitions. Trails that cross jurisdictions, pass through urban areas into the countryside and weave on and off-road must give travelers confidence in the network and make them want to come back.

This guide recognizes that resources are scarce, and that low-cost solutions are effective when well-planned and maintained. Rather than insisting on a suite of sign templates, this guide offers a *logo sign*, *bicycle route sign* and *thumbnail map* of each trail that local and regional partners can adapt to their own sign systems. For those who would like more guidance, particularly on sections of trail with shared identity, case studies are provided from the Potomac Heritage Trail.

Virginia's statewide network is made up of scenic, recreational and connecting trails. As the trunkline network is implemented, it may be necessary to update this guide with more specific information on the process for designation and specific regulations governing sign content and placement.

Regulatory and warning signs on bikeways should adhere to the Manual on Uniform Traffic Control Devices (MUTCD), whether or not they are in road right-of-way. Samples of these signs and many others are included in this document for reference.

Seven guidelines, proposed by the statewide trails advisory committee, are part of the 2018 Virginia Outdoors Plan.

- Trail signs should include a clear statement of ownership and management of each trail
- Trail signs and information materials should be readily available in order to give users the impression of a coherent, unified trail system, thus providing continuity of experience.
- Guidelines provide a menu of options for partners that are easy and affordable to implement.
- The guidelines suggest a family of signs for each statewide trail composed of a limited range of images, materials, and colors intended to reduce complexity and clutter in the Trail corridor, to establish a clear identity and continuity of experience, and to account for the existing design guidelines of partner agencies and organizations.
- Guidelines are designed to complement a range of interpretive media. Elements of the guidelines should be applied to other future media including Web pages, cell phone and tablet applications, brochures, maps, guides and more.
- Guidelines incorporate best practices pertaining to accessibility. Guidance from the Architectural Barriers Act (ABA) and the Americans with Disabilities Act (ADA) has been used to develop this document.
- With many trail segments sharing roadways, guidance adheres to state and federal Department of Transportation standards.

CHAPTER 1
THE STATE TRAIL EXPERIENCE

INTRODUCTION

Virginia's State Trails are a developing network of non-motorized trails that stretch across the state and connect the Eastern Seaboard.

State trail designation implies a standard of quality and a trail experience a notch above the rest. Beyond a well-maintained, stable surface, users on state trails will have expectations for consistent and well-placed signage, electronic and hard-copy navigation aids, and smooth transitions between connecting trails and on and off-road sections.

State trails are made up of many segments managed by others who work collaboratively to minimize user conflicts, maintain a firm and stable trail surface, and control vegetation and litter. Since trails are often free, all trail users share responsibility for trail upkeep.

Trail users also give back by supporting businesses in the communities they visit. State trails help connect residential and commercial areas to support local economies and encourage walking, horse-back riding and biking for short trips as well as long sojourns. Community members that strive to serve trail users well help businesses succeed and enrich their own lives by promoting what is essentially public health infrastructure.

Did You Know?

The Manual on Uniform Traffic Control Devices (MUTCD, written by the Federal Highway Administration is the national standard for all traffic control devices installed on any street, highway, or shared use path open to public travel? In accordance with 23 U.S.C. 109(d and 402(a, the MUTCD defines a bikeway as a generic term for any road, street, path, or way that 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.

PURPOSE

These guidelines are a "toolkit" for trail segment managers, intended to foster continuity between and among various segments of the State Trail network by establishing a consistent identity for the network through a set of clear, concise, and flexible tools. Consistency allows users to plan and execute travel with a high level of confidence. In addition, clear, consistent, and recognizable graphics will help develop and maintain an identity for the network and associated experiences among users, partner agencies and organizations. This established identity will encourage advocacy and promotion, and serve visitors both near and far.

These guidelines do not apply to water trails or to thematic driving trails like the Civil War Trails or the Crooked Road Heritage Music Trail. They also do not substitute for any standards required by local, state or federal codes.

The guidelines outlined in this document can be applied in a variety of trail contexts. The guidelines respect the need for segment managers to retain institutional identities and address organizational needs and goals.

Guidelines for On-Road Facilities and Shared Use Paths shall adhere to state and federal Department of Transportation sign standards, including the standards of the Manual on Uniform Traffic Control Devices (MUTCD). Throughout this document, guidance that applies to shared-use paths and roadways is highlighted in yellow.

The MUTCD does not apply to wayside exhibits, kiosks, anchor site signs, visitor service signs, wayfinding signs, mileage markers, etc., but it does apply to warning and regulatory signs on shared use paths, particularly where such paths intersect with public roads.

GUIDELINES

- Trail signs should include a clear statement of ownership and management of each trail
- Trail signs and information materials should be readily available in order to give users the impression of a coherent, unified trail system, thus providing continuity of experience.
- Guidelines provide a menu of options for partners that are easy and affordable to implement.
- The guidelines suggest a family of signs for each statewide trail composed of a limited range of images, materials, and colors intended to reduce complexity and clutter in the Trail corridor, to establish a clear identity and continuity of experience, and to account for the existing design guidelines of partner agencies and organizations.
- Guidelines are designed to complement a range of interpretive media. Elements of the guidelines should be applied to other future media including Web pages, cell phone and tablet applications, brochures, maps, guides and more.
- Guidelines incorporate best practices pertaining to accessibility. Guidance from the Architectural Barriers Act (ABA) and the Americans with Disabilities Act (ADA) has been used to develop this document.
- With many trail segments sharing roadways, guidance adheres to state and federal Department of Transportation standards. Any sign erected within VDOT-maintained right-of-way, or at intersections with VDOT-maintained roads, shall not be erected without prior approval from VDOT.

THE USER EXPERIENCE

The State Trail network today embodies a wide range of resource types, management interests, and users. The need to establish and maintain physical, graphic, and interpretive continuity between and among segments is essential for trail corridors with both state and national significance.

These guidelines are intended to further establish and improve the following experiences for trail users:

- The local experience - Users can confidently and safely navigate between trail segments managed by different partners.
- The long-distance experience - Users can confidently and safely navigate significant portions of—or the entire length of—trail corridors throughout Virginia.
- A sense of something larger - At key trailheads and destinations, users understand their current location in relation to the Trail network as a whole from both navigational and interpretive perspectives. This experience ties site-specific locations to local and regional histories.
- Services and amenities - There are opportunities for businesses to promote the connection to towns and other services that support the trail user.

GUIDANCE DOCUMENTS

These guidelines build off other planning efforts for each of the six State Trails. As best practices evolve, the guidelines will be revised. Future updates will be made periodically to document changes and links to other authoritative documents. Each trail in the network is listed on this page to links of available guidance that should serve as primary source material.

- Appalachian National Scenic Trail. This federal hiking trail follows the Blue Ridge Mountains from Maine to Georgia. This trail is managed through a partnership between the National Park Service, the Appalachian Trail Conservancy and a network of maintaining clubs.
- Beaches to Bluegrass Trail. This proposed statewide shared-use path and multi-use trail will connect communities between the Virginia Beach oceanfront and Cumberland Gap. An on-road route connects existing off-road segments. This trail is championed by regional trail groups desiring statewide connectivity.
- East Coast Greenway. This shared-use path connects urban areas from Maine to Florida, and is championed by the East Coast Greenway Alliance and local partners. An interim on-road route connects existing off-road segments.
- Great Eastern Trail. This hiking trail follows the Allegheny Mountains from New York to Alabama. Most of this trail through Virginia is on multipurpose trails through U.S. Forest Service lands. This trail is championed by the Great Eastern Trail Association and local partners.
- James River Heritage Trail Corridor. This land and water trail system follows the James River and some key tributaries from the Chesapeake Bay to the foothills of the Allegheny Mountains. This braided trail corridor is championed by local communities and organizations in the watershed.
- Potomac Heritage National Scenic Trail. This federal land and water trail system links the Potomac and upper Ohio river basins and follows the paths explored by George Washington. This trail is managed through a partnership between the National Park Service and local/regional land managers.

Several statewide trails like the James River Heritage Trail and the Potomac Heritage Trail are braided trail networks, incorporating water trails and land trails along the corridor to offer a variety of experiences.

These resources provide more information on water trail signs:

•National Water Trail System
•Best Management Practices Toolkit
•Iowa Water Trails Toolkit
•American Rivers Blue Trails Guide
•American Canoe Association Water Trail Resources

Virginia has two national scenic trails as authorized by the National Trails System Act (P.L. 90-543, as amended through P.L. 111-11), the Appalachian Trail and the Potomac Heritage Trail.

For more information on the National Trails Act, visit: http://www.nps.gov/ncrc/programs/nts/legislation.html.

Connecting Our CommonWealth

LEGISLATION AND ADMINISTRATION

These six trails are components of the Statewide System of Trails, authorized by the General Assembly in 1971 §10.1-204.

VDCR is authorized to enter into such agreements and to acquire interests as may be necessary to establish, maintain, protect, and regulate a statewide system of trails in order to provide for the ever-increasing outdoor recreational needs of an expanding population, and in order to promote public access to, travel within, and enjoyment and appreciation of the outdoor, natural, and remote areas of the Commonwealth.

DCR provides the following services to support the statewide trail system:

- Provide and disseminate statewide standards and policies for trail development (i.e. Greenways and Trails Toolbox)
- Provide educational experiences to encourage trail and greenway development (i.e. targeted regional workshops)
- Provide technical assistance to localities and NGOs (by request)
- Provide information for trail users (i.e. E-newsletter and website)
- Plan for and promote a connected statewide trails system (i.e. Virginia Outdoors Plan)

STATEWIDE TRAIL TYPES

Excerpt from §10.1-204

C. The statewide system of trails shall be composed of:

1. Scenic trails so located as to provide maximum potential for the appreciation of natural areas and for the conservation and enjoyment of the significant scenic, historic, natural, ecological, geological, or cultural qualities of the areas through which such trails may pass;

2. Recreation trails to provide a variety of outdoor recreation uses in or reasonably accessible to urban areas; and

3. Connecting trails or side trails to provide additional points of public access to recreation trails or scenic trails, or to provide connections between such trails, or to provide access from urban areas to major outdoor recreation sites.

D. Each trail shall be limited to foot, horse, or nonmotorized bicycle use, or a combination thereof, as deemed appropriate by the Department. The use of motorized vehicles by the public shall be prohibited along any of the scenic, recreation, or connecting or side trails.

Recreation, scenic and connecting trails may be single or multi use, or considered **a shared-use path**.

A shared-use path falls under a special category with more regulation because shared-use paths provide a transportation function. All newly constructed shared-use paths should be built to provide access for people with disabilities. In addition, existing shared-use paths should be improved to enhance access whenever possible. If improvements to existing facilities cannot be made immediately, it is recommended that information, including signage, be provided at all path entrances. This information should clearly convey objective information to trail users, including data about grade, cross slope, surface, and width.. Shared use paths are physically separated from motor vehicle traffic by an open space or barrier, and are either within the highway right-of-way or within an independent right-of-way. (U.S. Access Board). Like sidewalks and accessible routes, shared-use paths are subject to additional state and federal regulations but are also eligible for funding through transportation sources.

BRANDING

BusinessDictionary defines a brand as the unique design, sign, symbol, words, or a combination of these, employed in creating an image that identifies a product and differentiates it from its competitors. Over time, this image becomes associated with a level of credibility, quality, and satisfaction in the consumer's mind. This document addresses only the trail logo as one component of the trail brand.

THE TRAIL LOGO

Use of the Trail logo helps enrich the experience of travel by reinforcing the trail brand. Use of the trail logo provides visual continuity and recognizes formal relationships between trail segments and the Trail network and the trail management partners.

National park service trail logos are an official "Federal mark" published in the Federal Register.[1] With permission, the logo may be used on signs and in printed and electronic media such as brochures, guides, maps, and websites. The logo should not be used in place of a blaze or other means of marking a route in cases where directional guidance is necessary and/or desirable.

Contact each sponsoring agency to order copies of the logo signs when your trail section is designated. For the James River Heritage Trail and the Beaches to Bluegrass Trail, 12 x 18-inch signs can be ordered from the State Parks Logistics Center for a fee. DCR can also provide the artwork for local sign fabrication. DCR has the artwork for 3-inch decals, 3.5-inch plaques, and 9-inch plastic decals.

1. The design of the Trail insignia is part of a family of insignia for national historic and national scenic trails within the National Trails System. Authorities for development and use of the Trail insignia (or logo) can be found in the National Trails System Act of 1968 (as amended), 16 U.S.C. 124(a) and 1246(c) and in Protection of Official Badges, Insignia, etc. in 18 U.S.C. 701.3

TYPES OF SIGNS

The following sign types are used to provide information along the trail. They are discussed in more detail by chapter as indicated.

Chapter 2 Orienting the Visitor

- Wayside exhibits
- Trailhead kiosks
- Orientation signs
- Gateway signs
- Trail experience signs
- Difficulty level markers

Chapter 3 Wayfinding

- Directional and destination signs
- Arrival and welcome signs
- Mileage markers
- Blazes
- Shared identity signs
- Boundary signs

Chapter 4 Other Applications

- Etiquette signs
- Resource protection signs
- Volunteer or funder recognition signs

Chapter 5 Signs for Roads and Shared-Use Paths

- Bike route signs
- Regulatory signs
- Warning signs
- Signs at crossings and connections
- Destination list signs
- Pavement markers

CREATING A SIGNAGE PLAN

A signage plan enables the trail or route stakeholders to evaluate the needs and adequacy of the plan before ordering or installing signs. It also provides the basis for a sound budget for soliciting funds to design, fabricate and install the signs needed. To minimize costs and clutter, use existing sign posts if possible.

A sign plan requires four steps:

1) With your GPS device and camera in tow, conduct a sign survey by traveling in both directions to assess the signage needs of trail/route users

2) Create a reference table that records the information from your sign survey that includes the following fields:

- Sign number
- GPS waypoint
- Photo link
- Description of the physical location
- Distance from starting point
- Direction of travel
- Specific sign required
- Direction arrow required
- Proposed text (if any)
- Type of sign post (if any)
- Other relevant details

3) Create a map that identifies each sign point with blow-ups as needed for critical sections. A minimum scale of 1:250,000 is needed to show the level of detail required.

4) For complex intersections, provide zoomed-in aerial maps that detail the location and content of existing signs, show the proposed signs and where they will be co-located on existing signposts, and detail other information relevant to the intersection.

Sample notes from a sign survey, New Zealand Cycle Route

NEW ZEALAND CYCLE TRAIL SIGN SCHEDULE FOR: Golden Downs Trail (cycle route name) **Page:** 1 of 3

Route Section: St Arnaud to Wakefield **Survey direction:** Sth to Nth **Collected by:** Jonathan Kennett **Date:** 23/4/2012

Waypoint / Map Ref	Photo Ref	Physical Location of Sign	Odometer Reading	Direction Heading	Sign Type[1]	Arrow Direction[2]	Sign Text (Destination & Distance)	Sign Post	Other Details
①	0628	Cnr Ward + View roads	0km	east	ID	→		☐ Install new post ☑ 100x100 wooden ☐ Metal (round) ☐ Other (specify):	
②	0629	Cnr View + Kerr Bay roads	0·05km	Nth-east	ID	←		☐ Install new post ☑ 100x100 wooden ☐ Metal (round) ☐ Other (specify):	2 signs on 1 post.
	0630			west	ID	→			
③	0632	Cnr SH63 + Kerr Bay Rd	0·15km	Nth East	ID	→		☐ Install new post ☑ 100x100 wooden ☐ Metal (round) ☐ Other (specify):	2 signs on 1 post
	0633								
	0634			South west	ID	←			
④	0640	Cnr SH63 + Karere-Tophouse Road	4·8km	Nth	ID	←		☐ Install new post ☑ 100x100 wooden ☐ Metal (round) ☐ Other (specify):	First sign on Nelson post. Second sign on Chch post
	0641								
	0642			East or West	ID	↔			
⑤	0647	Cnr Karere-Tophouse + Tophouse roads	8·3km	Nth + South	ID	↔		☐ Install new post ☐ 100x100 wooden ☐ Metal (round) ☐ Other (specify):	
	0648								
	0649								
⑥	0654	Halfway between ⑤ and ⑦	13·5km	Nth + Sth	CD	↑		☑ Install new post ☐ 100x100 wooden ☐ Metal (round) ☐ Other (specify):	Choose suitable place on east side of the road, close to cyclists riding uphill. 2 signs on 1 post.
	0655					↑			

[1] NZCT SIGN TYPE: AI = Advanced Information; BE = Begin/Ends; AD = Advanced Direction; ID = Intersection Direction; CD = Confirmation Direction

[2] ARROW DIRECTION: ← ↖ ↔ ↑ ↗ →

Roadway and Trail sign continuity plan from the Columbia State Trail Highway

CHAPTER 2

ORIENTING VISITORS

Orientation signs are usually installed at trailheads where parking or transit is available. They may also be needed at trail intersections. They should provide general information about the trail, specific information about accessing the trail at this entry point, regulatory and safety information, and related maps and graphics.

WAYSIDE EXHIBITS

The National Park Service has prepared a comprehensive Wayside Exhibit Resource. Link: www.nps.gov/hfc/pdf/waysides/Wayside-Guide-First-Edition.pdf

TRAILHEAD KIOSKS

Trailhead kiosks provide the first and last impression of the trail. They indicate arrival, welcome visitors, and provide them with information that may be essential to their safety and enjoyment on the trail. They also offer the opportunity to educate and communicate information that helps solve management problems associated with visitor use.

Location

At vandal-prone trailheads, choose a kiosk location out of view of the casual parking lot user or cruiser. It is okay to situate the kiosk a few hundred yards down the trail.

Consider partnering with a local school or youth group for kiosk maintenance if vandalism is a recurrent problem.

Kiosk Content

•Trail logo or routed wooden trail name

•Thumbnail map of entire trail (option: also include a description of the entire route

•Approximate mileage to the trail's beginning and endpoints along with major attractions and points of interest

•Area map of trail with "you are here" indicator

•Area services (for gateway kiosks)

•Trail rating and assessed conditions if available, descriptions of trip alternatives if appropriate

•Emergency phone contacts (911, animal control, etc.)

•911 address (or equivalent location identifier)

•Contact information for trail management entity and partner logos, contacts and roles if appropriate

•Specific prohibitions or restrictions (regulatory signs)

•Safety and etiquette information to manage user conflicts

•Trail protection information (leave no trace, tread lightly)

•Interpretive information

•QR codes to appropriate websites (partners, local chambers of commerce, etc.)

•Appreciation to donors, volunteers and others who help make the trail and upkeep possible

•Save space for dynamic or changing content, like alerts, trail closures or relocations, temporary hazards, prescribed burns, volunteer opportunities, special events, hunting season information, etc.

Content Tips

The Appalachian Trail Conservancy provides this guidance on kiosk content to member clubs:

•Keep it brief

•Make it easy to read by using Arial font at a large point size, since most people stand about four feet from a sign

•Use an active voice

•Simplify the message so it's easy to understand

•Make sure it's relevant

•Use graphics, if possible, to enhance your message.

•Avoid acronyms, adverbs, contractions, cliches, and colloquialisms.

•Emphasize appropriate use by welcoming specific user groups, for example "Hikers Welcome."

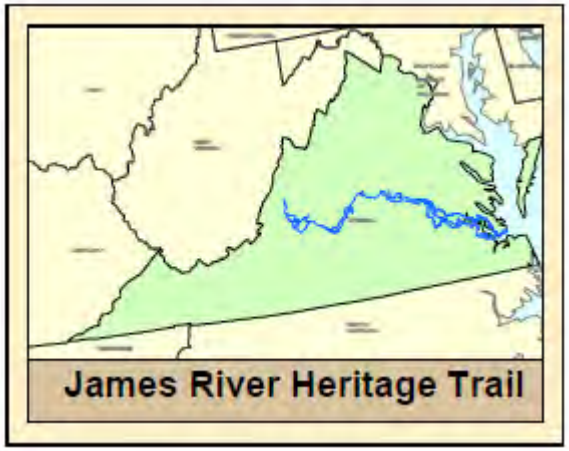
THUMBNAIL MAPS

These “thumbnail” maps can be used on materials where space is limited—such as a brochure or an application for a smart phone. The maps show the location and geographic expanse of the trail network.

A simplified version of the thumbnail map, without topographic detail and colors depicting land cover, can be used when space is limited and map details may not be clearly readable.

East Coast Greenway

Appalachian National Scenic Trail

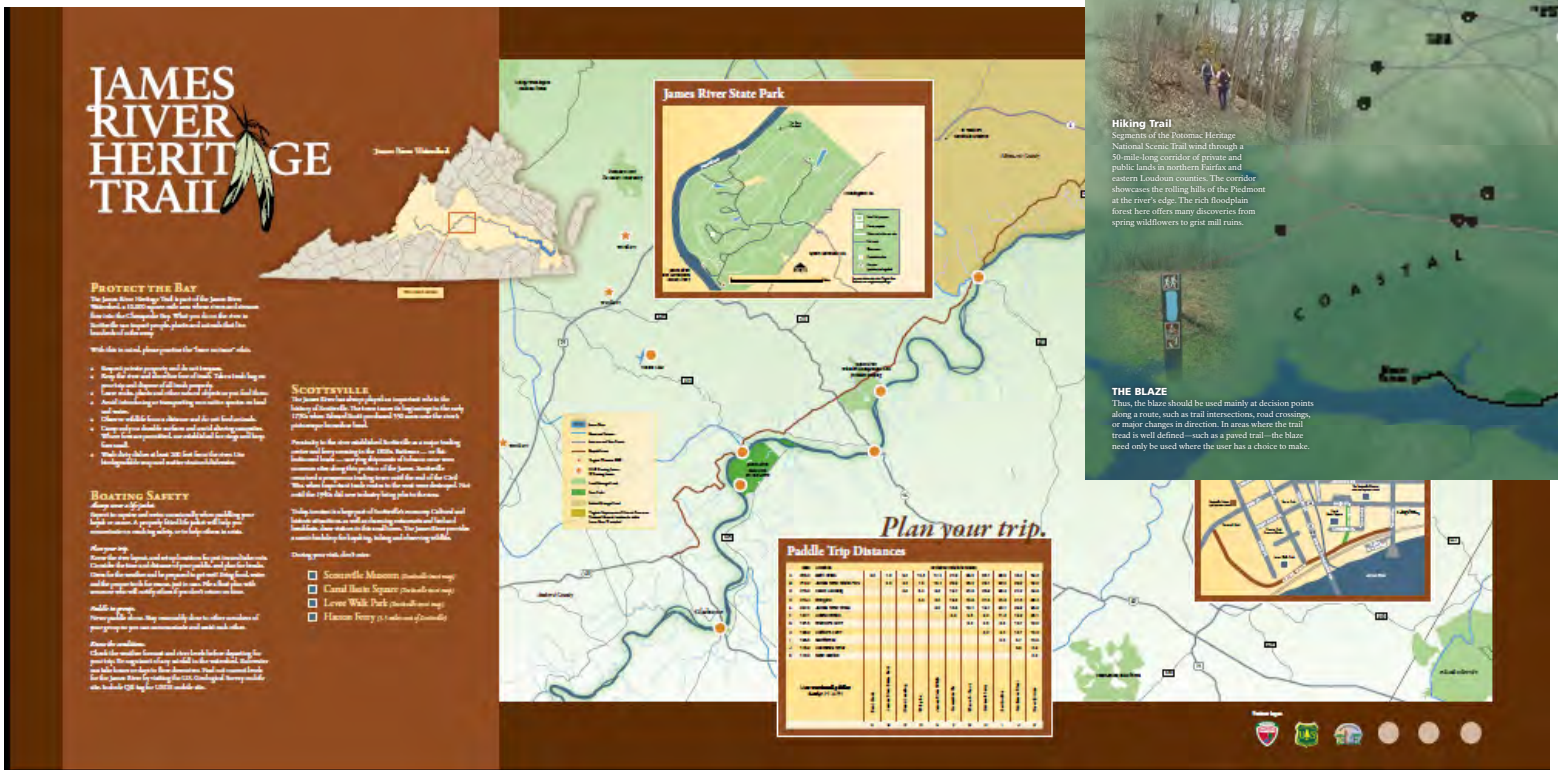


Great Eastern Trail

REGIONAL ORIENTATION

Orientation panels place users in the landscape, illustrate location in the context of the entire Trail network, and provide important information. These panels should also stimulate further interest in the Trail network.

The PHT regional panel shown here has been designed for use at trailheads and other key destinations in the network. The panel focuses on the bigger picture
(regional geographic scale) and is designed to give users a sense of something larger. The map is not intended to be used for navigation.

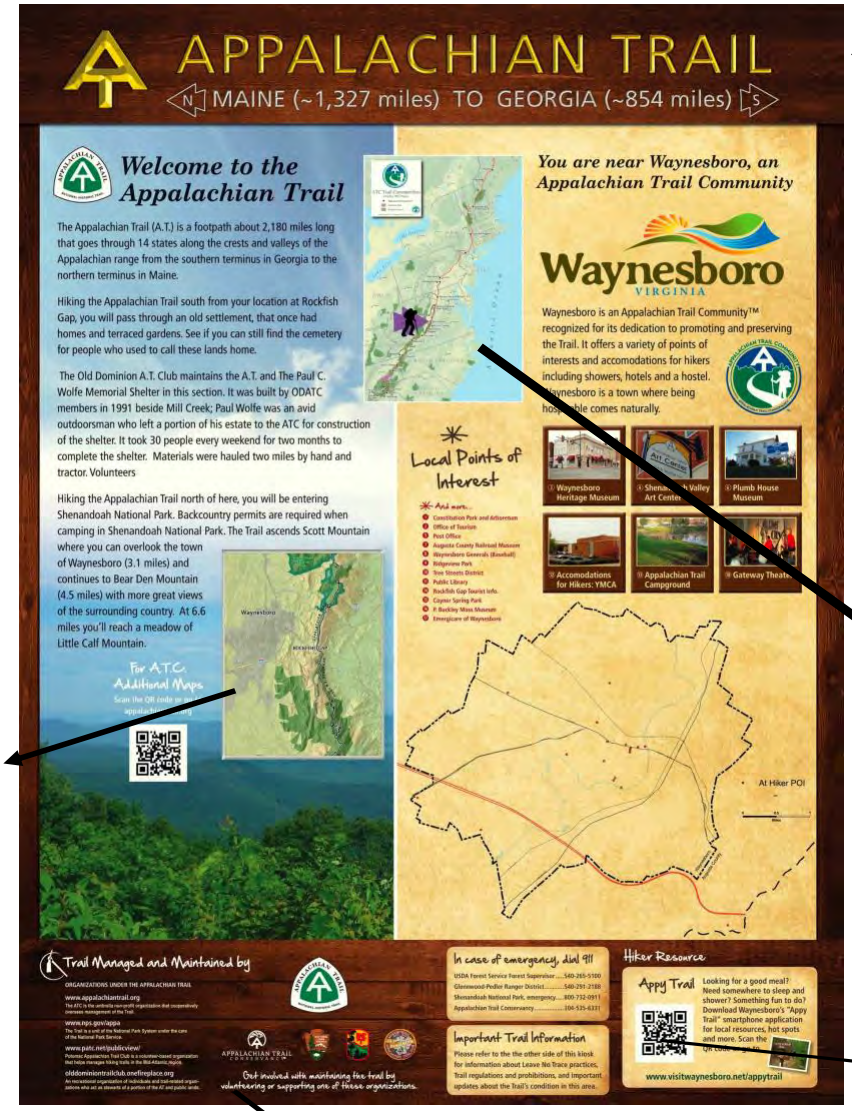


ANCHOR SITES

Anchor sites may be key historical locations, small towns, tourist destinations, or places where annual events are held that draw large numbers of people. Regional panels should be located at these junctions.

These trailheads are developed areas that provide, at a minimum, direct access to a state trail and include parking, multiple informational and interpretive panels, toilets, and a visitor contact person--either at a visitor center, library or supporting business. The signs at these trailheads should include a thumbnail map, a regional panel and a local experience panel.

Example: AT Community Sign



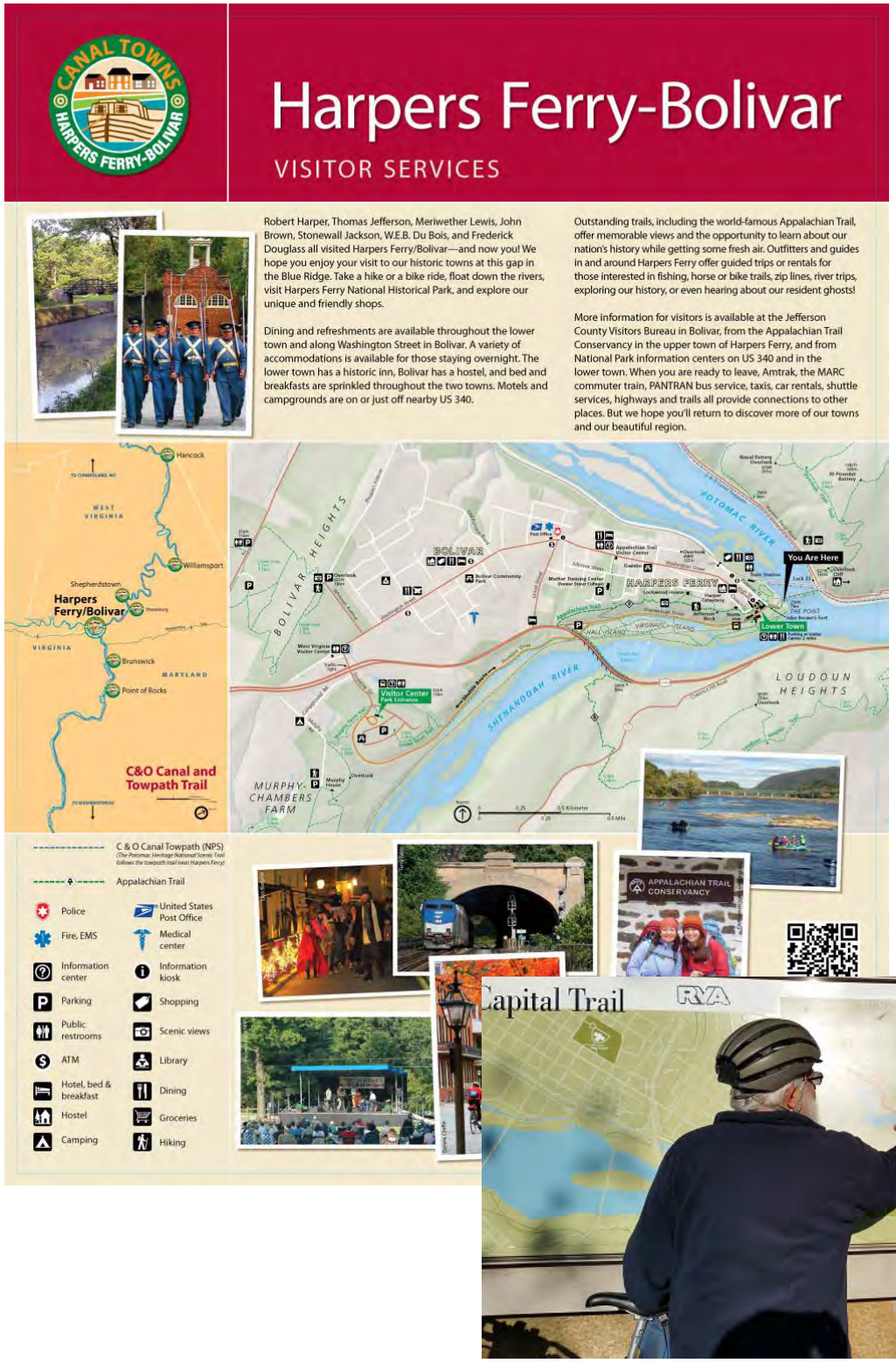
Area A.T. Map

Recommended: APPALACHIAN TRAIL Header in style presented, with approximate distances to Springer and Katahdin because it tells the story of the whole Trail and serves as an inspiration.*

Overview Map of entire A.T. may be a NPS strip map reproduced no shorter than 36'' or a simplified and smaller version available from ATC.

QR Code

Recommended: Who Manages the Trail tells the story of the cooperative management system and provides contact information for the partners – Trail club(s), ATC, and land-manager agency logos.



LOCAL EXPERIENCE

Navigational and related user information should be shown on a "local experience" map or panel that will often be accompanied by a regional orientation panel. The exact design and content of the local experience map or panel is flexible. The local experience panel should clearly indicate both the local trail and the statewide trail. Below are example of local experience panels in Pulaski and Galax, at both ends of the New River Trail State park. The map at left shows the local trail and the AT in Harpers Ferry. At bottom, cyclists plan their next trip referencing the regional inset.

GATEWAYS

When trail users approach urbanized areas, they should be welcomed by a gateway that directs them to services they need, creates a sense of place, promotes trail-oriented events, and recognizes businesses that give back to the trail.

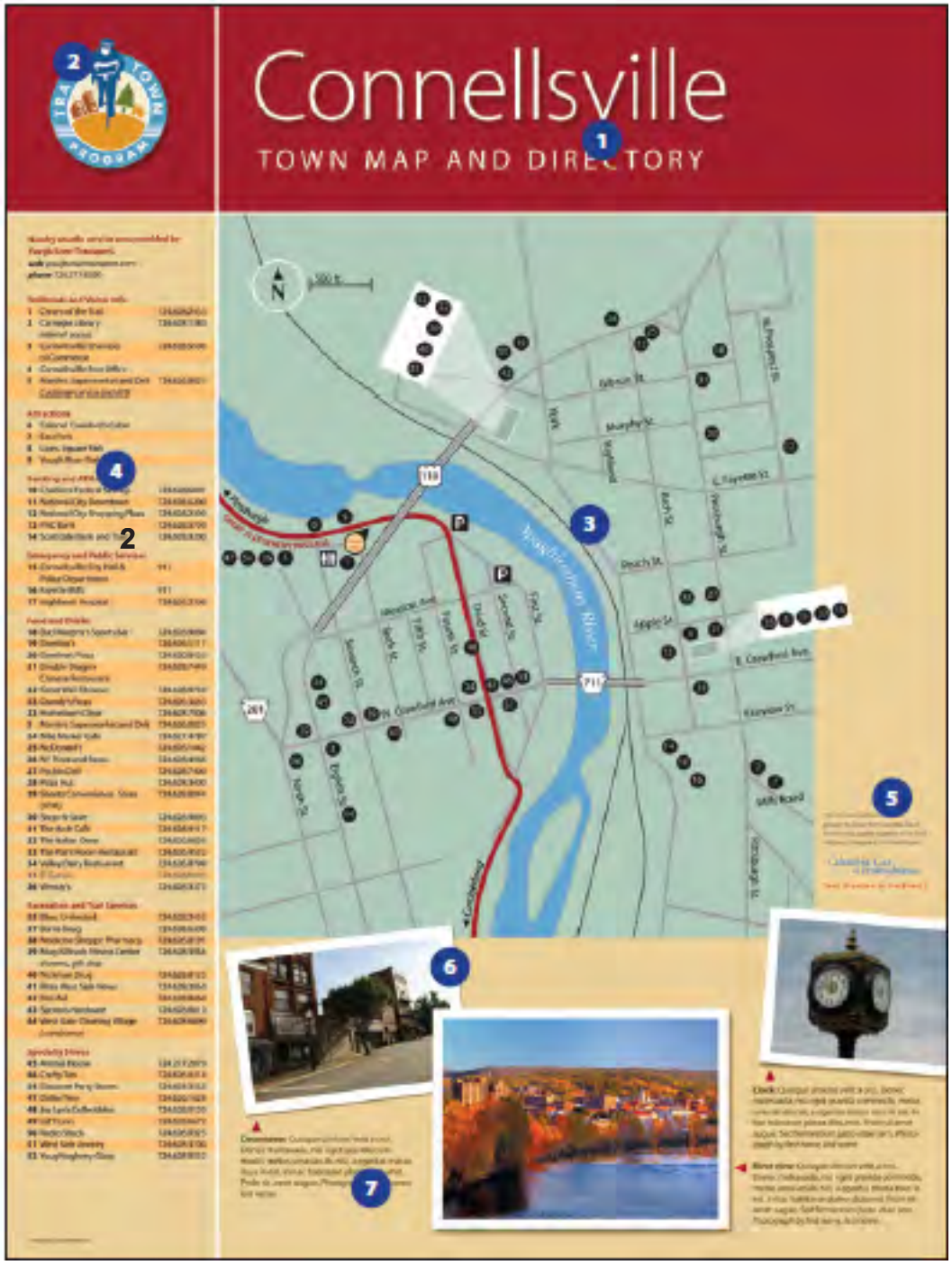
Gateways will typically provide long-range parking for trail users and have a choice of restaurants and lodging, with supporting businesses that will support shuttles, mail drops, vending machines and other services for trail users.

Gateway signs along the Great Allegheny Passage provide the following information:

1) Town identity and function of sign
2) Logo for Trail Town Program (this would be replaced with the state trail logo in Virginia)
3) A town map with numbered services that relate back to the directory in the left panel
4) Directory
5) Sponsor identification
6) Photos that highlight appealing views, not specific businesses
7) Photo captions

Note: Gateway signs erected within VDOT right-of-way must meet VDOT's requirements for Community Gateway signing.

Unless your sign is generating ad revenue, do not use specific business names. Opt for general categories like "lodging" and "food services" so your sign does not become dated when a business closes.



VISITOR SERVICES

Use of the following universal symbols for visitor services will help overcome language barriers.

Artwork for these symbols and others can be downloaded at this link: www.aiga.org/symbol-signs/

Lodging

Restrooms

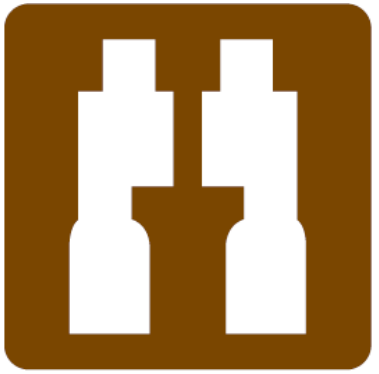
Parking

Hospital

Drinking Water

Food/Restaurant

Wildlife Viewing



Picnic Area

Camping

Carry on Launch Area

Road Biking

Cross-Country Skiing

Hiking

Paddling

Horseback Riding

Off-Road Biking

TRAIL EXPERIENCES

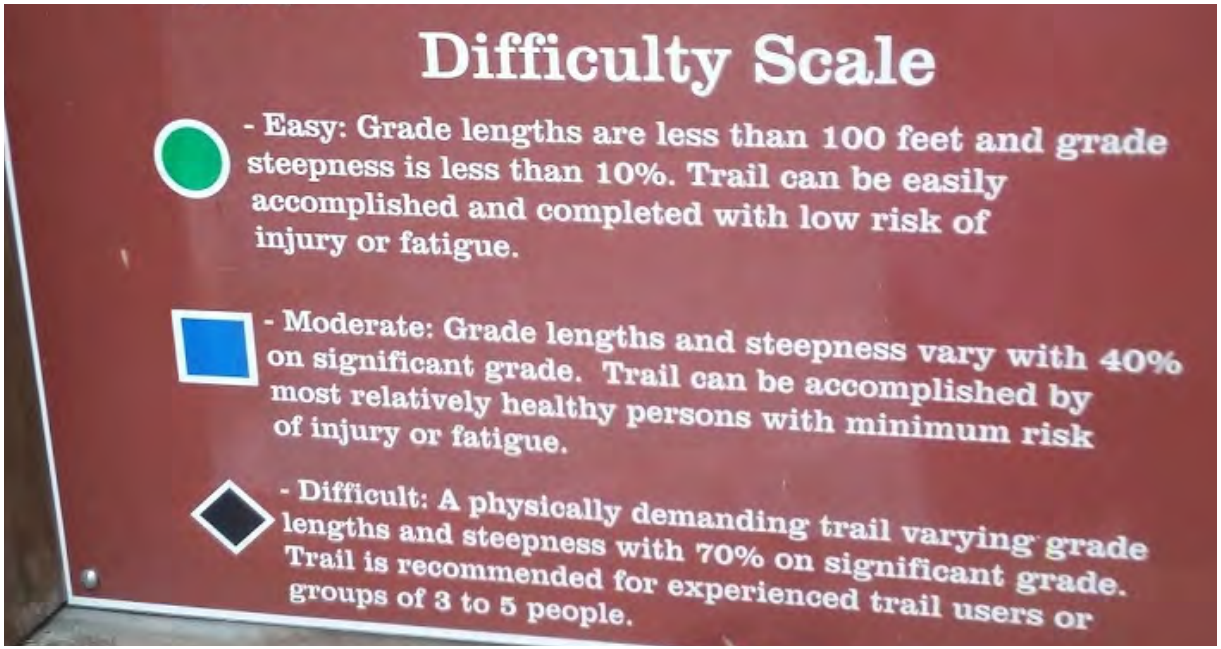
Building on the intent of Virginia Code and the National Trails System Act, trails within the statewide network provide one or more of the symbolized nonmotorized travel experiences. Consistent use of these—or similar symbols—will help users choose a route and experience. These symbols should be used on maps, signs, as well as interpretive and informational media.

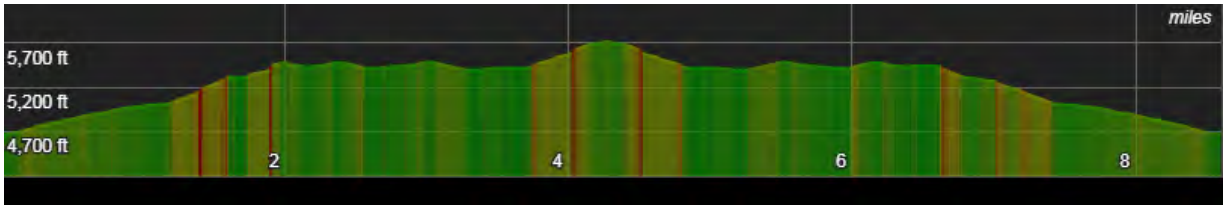
Note that colors change to red, white and black when indicating a prohibited use. For public bikeways, consult the MUTCD for guidance on these selective exclusion signs.

Pedal/Paddle Trail Crossing

TRAIL RATING SYSTEM

Potential users should have a sense of the challenges they will face on the trail prior to visiting the site. This information should also be at the trailhead kiosk. The colors and shapes on this page have become the standard for indicating level of difficulty in Virginia. For new or altered trails on federal lands or funded with federal funds, see the guidelines for accessible trailheads on page 39.





Another way of indicating difficulty is to include elevation gain and distance on a map profile.

Easiest (green)

More Difficult (blue)

Most Difficult (black)

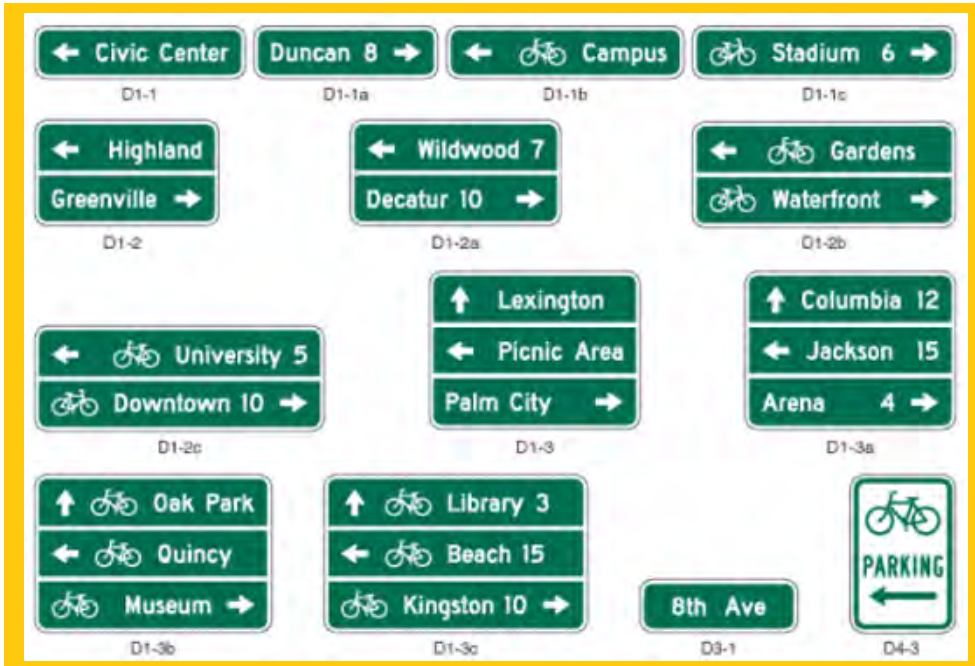
RATING FACTORS

Consider these rating factors when assigning difficulty levels to a trail.

- Trail width and corridor width
- Rugosity (variations in surface heights)
- Average gradient
- Maximum sustained grade
- Maximum grade
- Typical trail materials
- Duty of care
- User profile
- Typical drainage/waterway crossings
- Formality of trail structures
- Turn radii
- Steepness of side slopes

CHAPTER 3 WAYFINDING

DIRECTIONAL AND DESTINATION SIGNS



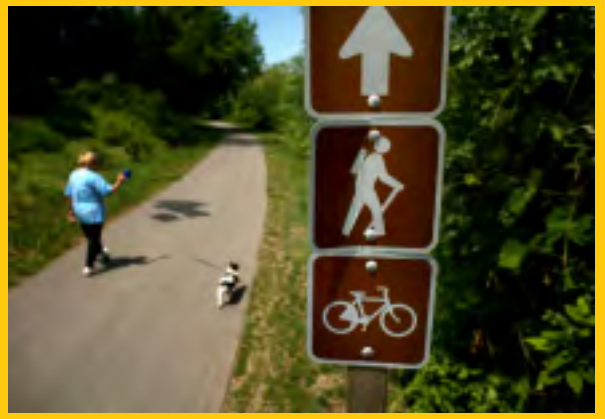
Guide signs and plaques for bicycle facilities from the MUTCD

Wayfinding signs help users navigate to and along trails. Getting lost can ruin a trail experience and discourage future trips. This chapter provides examples of different signs used for wayfinding. Examples of signs that promote both the local trail segment and the state trail are in the "shared identity" section of this chapter.

This chapter provides additional information on how and where to use signs in both urban and rural settings.

Directional signs on roads and public bicycle facilities are regulated by the MUTCD, indicated in yellow.

DIRECTIONAL SIGNS



Directional signs on public bicycle paths are covered in Chapter 9 of the MUTCD.

ARRIVAL AND WELCOME SIGNS

Arrival signs reassure trail users that they have reached their destination. Welcome signs make them feel valued. These signs are often used to convey etiquette messaging as well.

MILEAGE MARKERS

Mileage markers help orient trail users and expedite rescues if locations are entered into the 911 system.

Mile markers on pavement. LT 10.60 represents the Legacy Trail 10.6 miles north of the Venice Train Depot in Sarasota, Florida.

This sign in Dakota County uses the U.S. National Grid, a coordinate system originally used by the military now adopted by FEMA.

Mile marker along the Virginia Capital Trail.

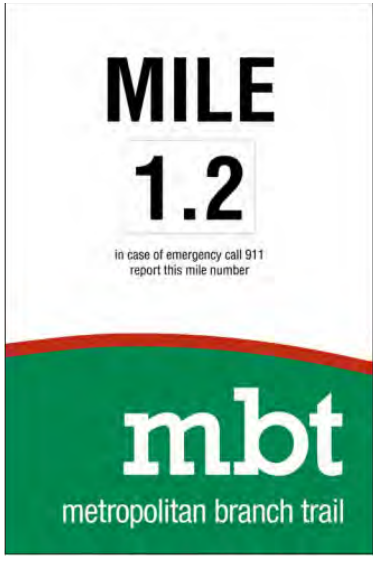
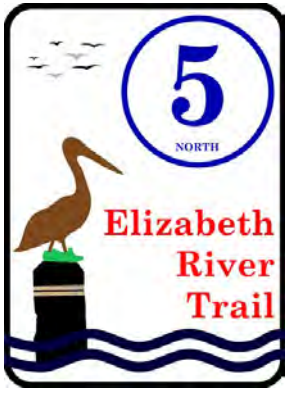


Image of mile marker signage being implemented by Delaware DOT.

911 Trail location marker, City of Lenexa, Kansas.



Mileage marker along the Elizabeth River Trail in Hampton Roads.

Historic mIle markers indicate that the Huckleberry trail follows an old train line.

THE BLAZE

Trails should be marked with a the appropriate color of paint blaze in both directions of travel. Where possible, the blaze should be placed at eye level (approximately six feet off the ground) on trees, posts, or rocks. The standard blaze should consist of a rectangle of paint two inches wide by six inches high.

White blazes reassure hikers that they are on the A.T. Two blazes indicate a turn. Dark blue blazes indicate a sidepath.

When To Use The Blaze

The blaze is a complement to the Trail logo on primary Trails. The Trail logo should not be used in place of the blaze. The overall purpose of the blaze is to communicate to trail users that they are following an intended route and to aid in navigational decisions.

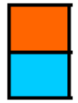
The blaze should be used mainly at decision points along a route, such as trail intersections, road crossings, and changes in direction. In areas where the trail tread is well defined—such as a paved trail—the blaze need only be used where the user has a choice to make. Minimal use of blazes and other forms of route marking reduce sign clutter.

The GET uses Nelson Aero Spot Green Glo spray paint, and a mark slightly higher than eye level--6 1/2 feet off the ground unless the tree is on a bank. Consider what will be most visible to the hiker.

Use a cardboard template with a 2x6" rectangular cutout. Hold the template close against the tree trunk, keeping the blaze trace vertical, and spray to make a blaze. Spray enough to make a solid mark, but with minimal rundown.

Use of the standard blaze along the Trail to reinforce user confidence about the route

Two or more trails can share the blaze, as in this example from Pennsylvania



Left Turn

Right Turn

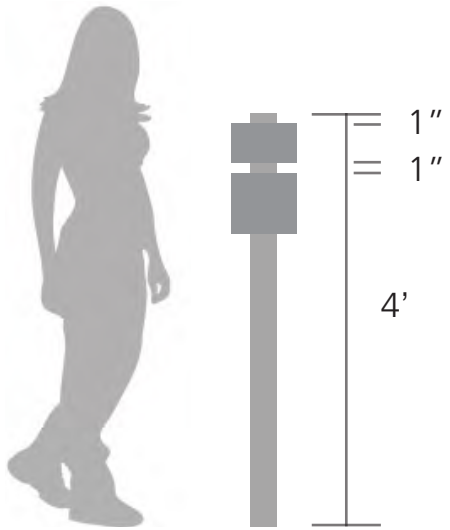
The PHT uses Pantone 299 blue blazes to mark the trail. A right turn should be marked with a double blaze, with the right rectangle offset slightly higher as shown below. A left turn would be the opposite.

SHARED IDENTITY EXAMPLES FROM THE PHT

Trail partners struggle with how to preserve a local trail's identity while recognizing regional or state trails followed by long-distance travelers. This section provides some examples of shared identity signs.

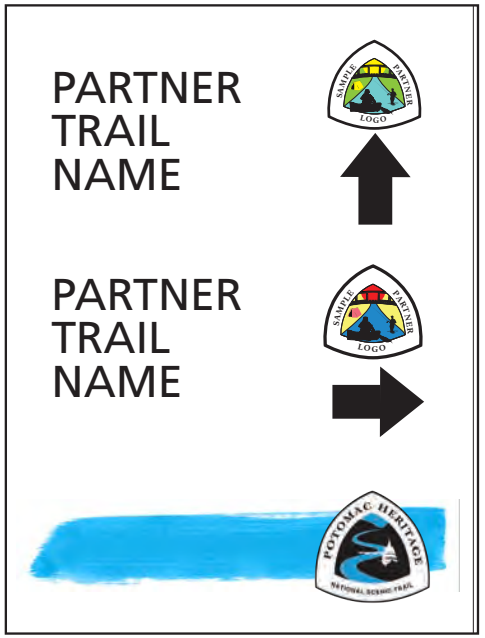
At Trail Intersections

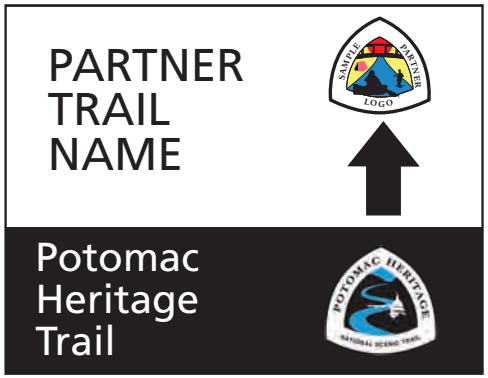
This sign does not separate information and includes a brush-stroke at the bottom to indicate that both trails are part of the PHT network.



Single Trail

The state logo should also be used where the user has to make a route choice. The signs below use separation between icons to show that the trail that goes straight ahead is also the Potomac Heritage National Scenic Trail (via the black banner) and that the trail that goes to the right is not part of the PHT network.





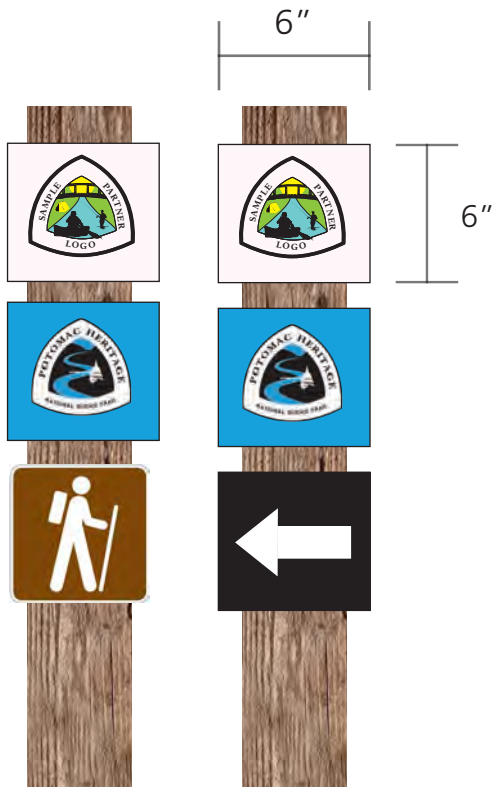
OPTION A

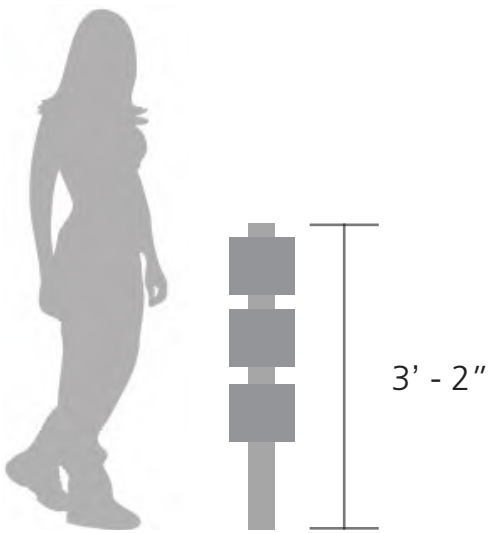
OPTION B

Option A Uses the logo and blaze oriented vertically, providing additional room to indicate permitted uses. Option B Uses only the PHT logo below the Trail partner name. This logo is available as a 3” sticker, 3.5” plastic decal, or 9” plastic decal from the PHT Trail Office. Note that the size of the information and the PHT logo should be generally proportional to each other.

Note the difference in sign placement for a rural equestrian trail (above) versus a rural shared-use path that allows bicycles (below) . The sign below follows setback guidelines from the MUTCD, which are designed to prevent high-speed collisions with sign posts. A mile marker sign has been placed too close to the trail in this example.

(A) (B)





RURAL AND NATURAL AREAS

Trail segments in rural and natural areas may use signs with a natural feel, such as wooden posts with small icons.

Mark the start of a trail and transitions between jurisdictions.

This image (A) shows use of the PHT logo beneath the information for the Trail segment manager, but above information showing what uses are permitted on the trail. The 4’x4’ post is suggested to be cut into a triangle shape at a 45 degree angle and the height should be 3’2” above ground.

Marking an intersection or change in direction.

This image (B) shows use of the PHT logo below the Trail segment information and above the navigational arrow.

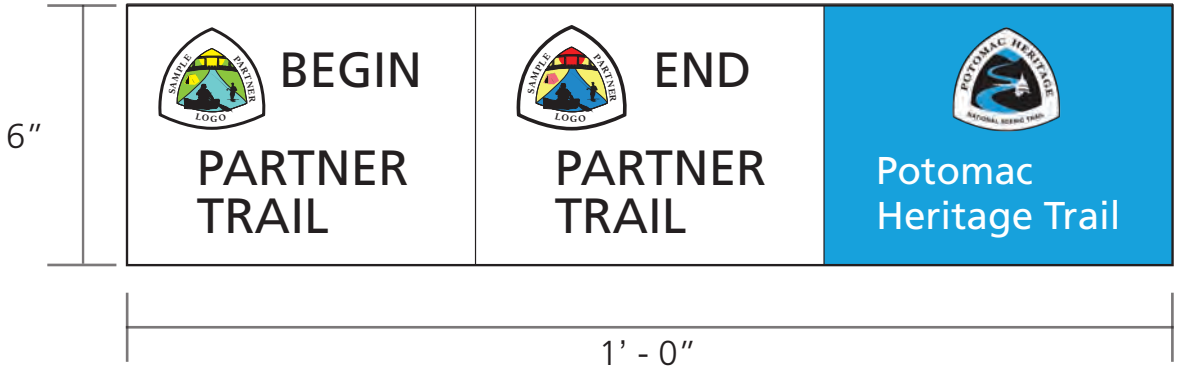
The PHT logo (3.5 inches) is mounted on a 6X6 inch blue metal square. The partner trail logo is mounted on a 6X6 inch metal square as well, color to be determined by the partner.

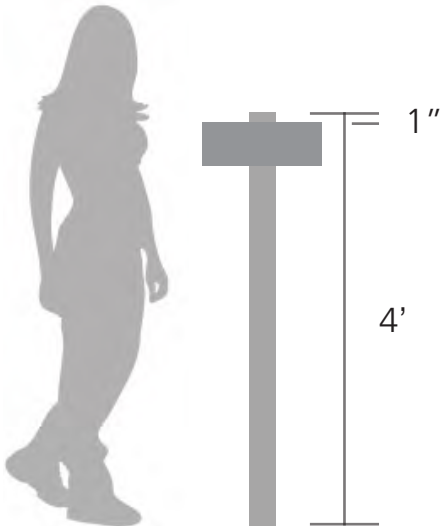
These signs are for illustration purposes only. When you fabricate a sign, be sure to round the edges to minimize the risk of injury.

It is a best practice to keep the bottom sign in your series at least 15 inches off the ground so that it doesn't get obscured by weed growth.

CHANGES IN TRAIL JURISDICTION

The state logo provides continuity between trails managed by different agencies and organizations. It is important to use the state trail logo or brand in transition areas between different trail segment managers. Use of the logo or brand on signage in these areas accomplishes two objectives: 1) it reinforces user confidence that they remain on a primary segment; and 2) it creates a geographic and thematic link between different jurisdictions.





BOUNDARY SIGNS

Monitoring and replacing boundary markers as needed is an important part of trail stewardship. The A.T. Corridor Stewardship Field Book provides comprehensive information on monitoring the trail corridor, maintaining its surveyed boundaries, and taking effective and efficient action to address encroachments.

CHAPTER 4

OTHER APPLICATIONS

MULTIMODAL HUBS

Public transit hubs, such as Virginia Railway Express (VRE) and Maryland Area Regional Commuter (MARC) Stations may serve as a location for visitors to enter or exit trail networks and should allow for the same level of signage and amenities as trailheads. A public transit hub that serves as a trailhead (and that is recognized on informational materials) may have bike lockers, safe pedestrian access to the Trail, and sidewalks and/or bike lanes along major motorized and nonmotorized access routes to the transit hub.

The Department of Rail and Public Transportation's Multimodal System Design Guidelines designate seven modal emphasis options. Many routes will emphasize more than one. The primary modal emphasis will have a significant impact on roadway cross section design.

Vision for Mulltimodal Transportation

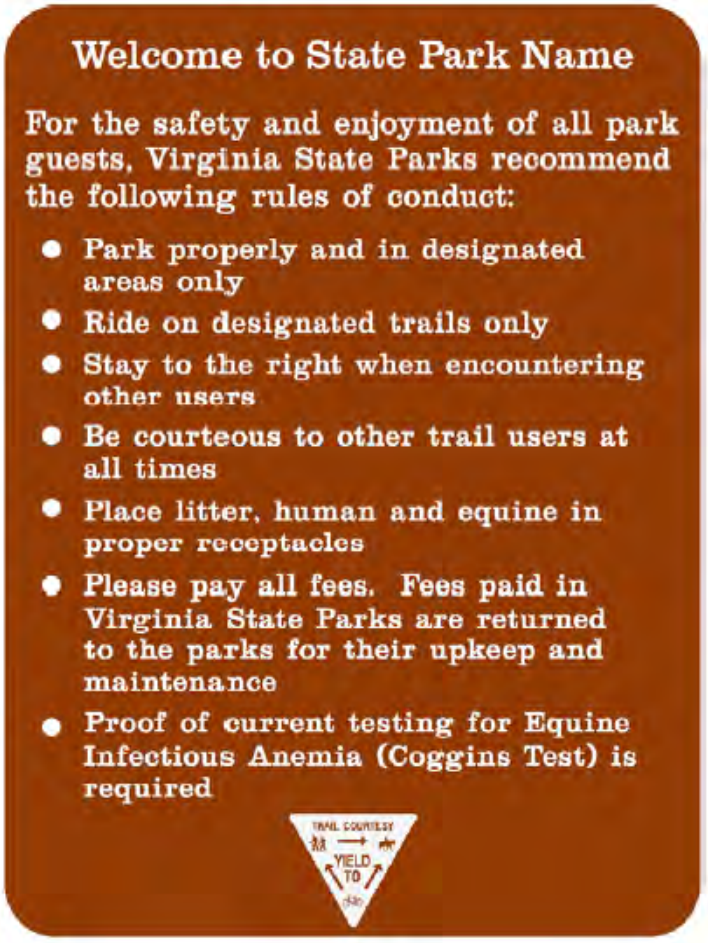
Virginia will have a coordinated system of roads, rails, ports, transit, bicycle, pedestrian and aviation resources that provides integrated and efficient options that meet citizen, visitor and business transportation needs.

- Governor's Multimodal Strategic Plan for the Commonwealth of Virginia, December, 2010.

"Gateway" branding concept for MBT entrances - Source: DCCAH

ENCOURAGING APPROPRIATE BEHAVIOR WITH ETIQUETTE SIGNS

Signs have an important role to play in raising awareness. Some visitors may not be aware of common courtesies, or need to be reminded. Pictograms can help overcome language barriers.



Metropolitan Washington Council of Governments, PBIC

Tucson advertising bus shelter, PBIC

RESOURCE PROTECTION SIGNS

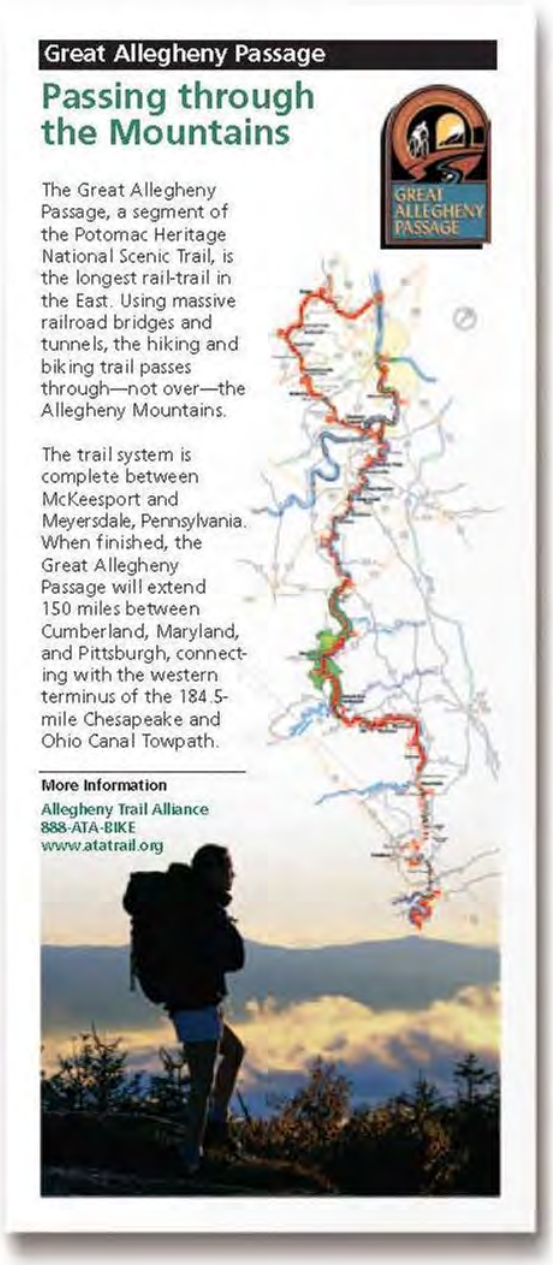
ADDING VALUE

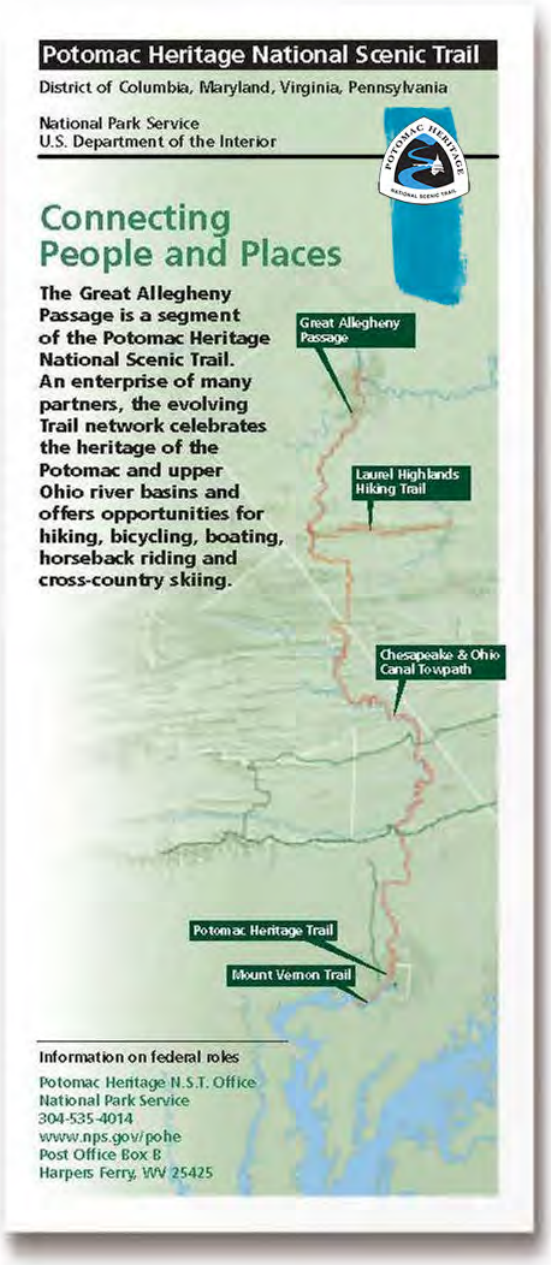
Trail signs can add value to the experience by educating users, some of whom may not be aware of conservation or historic preservation values.

VOLUNTEER OR FUNDER RECOGNITION SIGNS

Signs also are an opportunity to recognize the important funding streams or people that have made these special places possible. These signs gently remind trail users that help is needed for trail development and upkeep.

Trail funds can also be raised by offering sign sponsorships, engraved bricks, memorial benches or other amenities that recognize trail supporters.

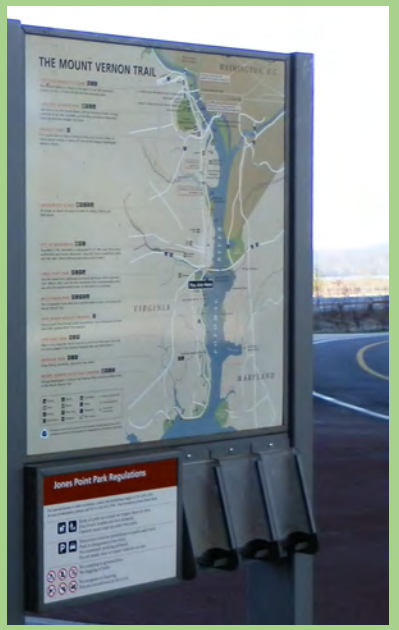




RACK CARDS

Designed to fit in a brochure rack, these cards inform readers about the existence and location of trail segments and of an association with the trail network. They are used for promotion and public education and not for site-specific user information. Rack cards are a relatively inexpensive way to print and distribute information about a specific trails or the state trail network. Placed at visitor centers or museums, for example, rack cards will explain local connections to the state trail network as a whole. At public events and visitor centers away from the trail, cards invite visitation and public participation. With a minimal initial investment, rack cards can be easily updated.

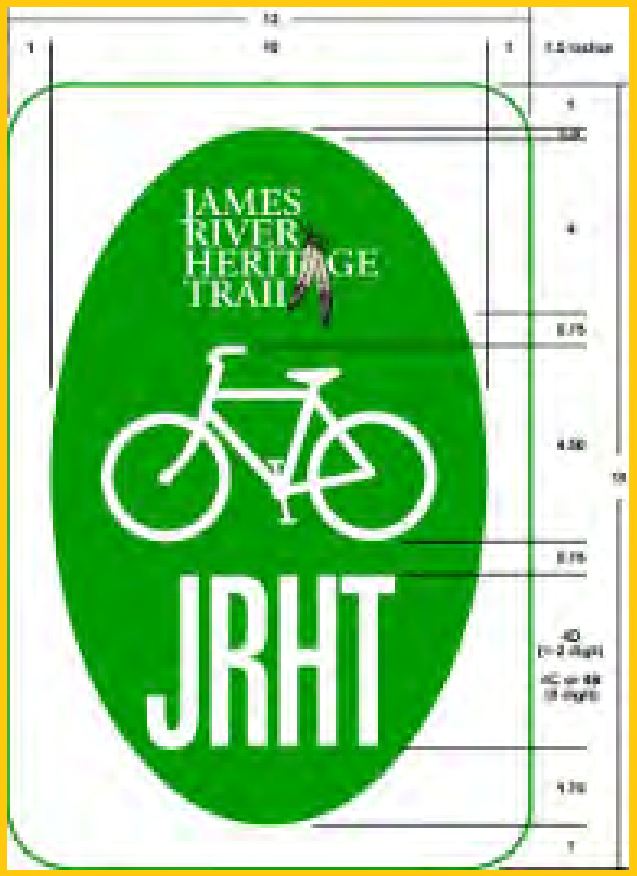
Typically 3.75 inches wide by 8.5 inches tall, rack cards are printed on both sides. Side A of the card contains information about the local trail segment and key messages about the trail's relationship to the state trail network; optional elements include a major illustration. Side B features a regional, state or national trail map to place the trail in its larger context.



CHAPTER 5

SIGNS FOR ROADS AND SHARED-USE PATHS

This chapter focuses on signs for roadways and public bike trails that must follow guidelines in the MUTCD. VDOT regulates these signs and they should be consulted for any project in their right-of-way or along public bikeways.



The Bicycle Route (M1-8) sign shall contain a route designation and shall have a green background with a retroreflectorized white legend and border. The Bicycle Route (M1-8a) sign shall contain the same information as the M1-8 sign and in addition shall include a pictograph or words that are associated with the route or with the agency that has jurisdiction over the route. (2009 MUCTD)

On-Road Bicycling Route
MUTCD M1-8a compliant

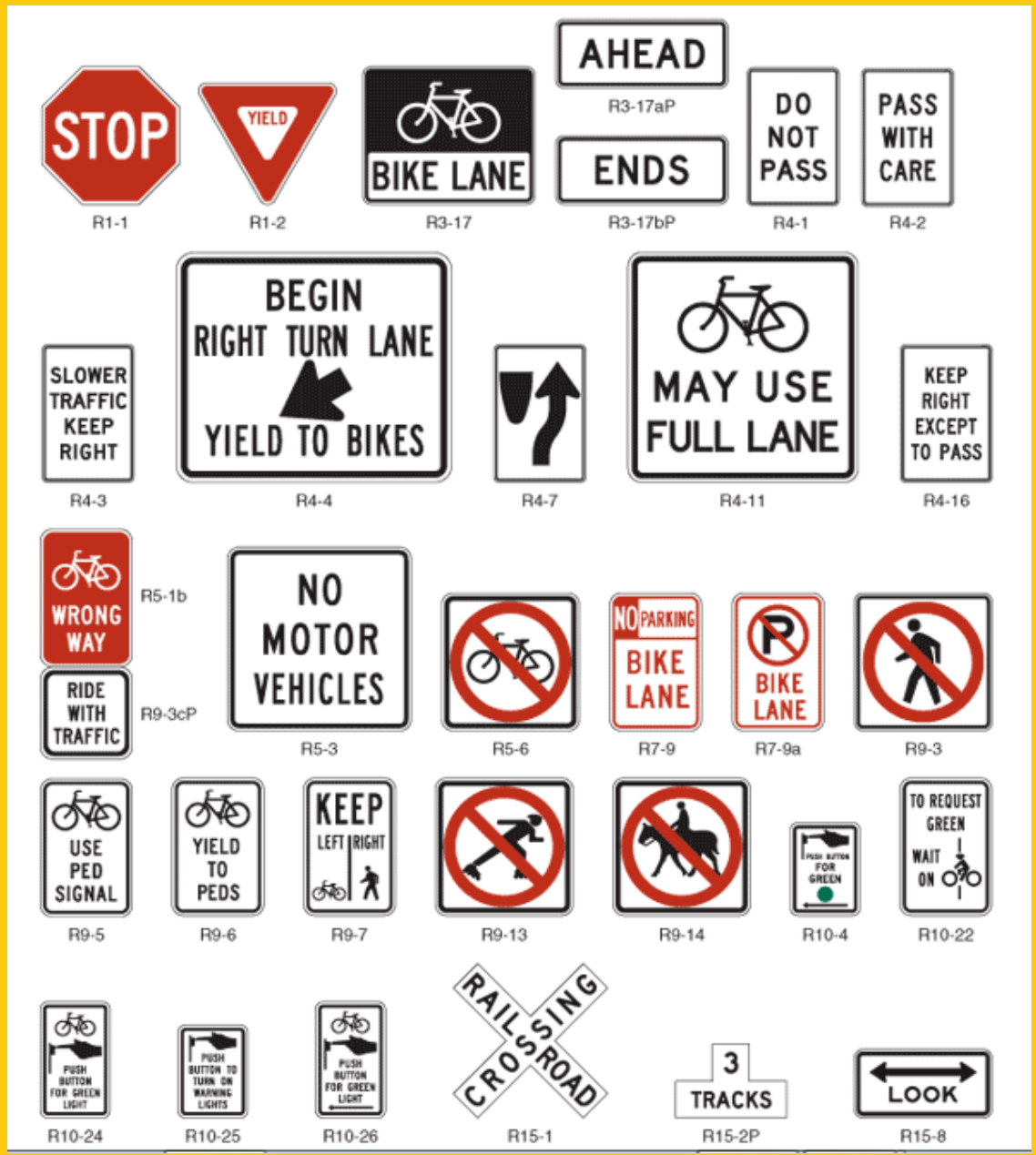
BIKE ROUTE SIGNS

These signs, referred to in the *MUTCD* as M1-8a, can be used along roadways to denote on-road bicycling routes. On-road routes are usually paved and present a very different experience and setting than that of off-road routes. This PHT sign is currently in use along roadways in the Northern Neck area of Virginia.

Trail segment managers should be aware of state and federal policies for planning, installing, and maintaining on-road Trail-related signs.

When placing these signs, consider roughness of the road, pinch points, busy intersections, steep gradients and the avoidance of obstacles that may distract cyclists.

Signs installed on VDOT right-of-way require a land-use permit. VDOT will review the design to ensure design standards are met, retro-reflective sheeting is used, and safety issues are resolved. The fabrication and installation of a small sign to VDOT standards, including separate post, foundation, and maintenance-of-traffic costs, is roughly $750 apiece. Contact your local VDOT representative for more information.



Regulatory signs and plaques for bicycle facilities from the MUTCD

REGULATORY SIGNS

Regulatory signs indicate or reinforce laws, regulations or requirements, the disregard of which may be considered a violation.

With every regulatory sign comes the expectation of enforcement.

RISK MANAGEMENT

Signs should conform to a risk management plan developed to ensure trail safety and minimize damaging lawsuits. The following items should be considered during plan development.

•Address unreasonable hazards and post warnings.

•Anticipate foreseeable activities and take reasonable steps to protect users

•Provide clear and concise messaging on warning signs, for example, a sign at the trailhead may read "This area contains hazards associated with water, rocks, cliff faces" etc. A sign closing an area is considered OK because duty of care is lowered

SIGN MAINTENANCE

Sign maintenance is important from a safety and liability perspective. Further, signs are highly visible and their maintenance level leaves the visitor with a positive or negative impression about the trail. Well-maintained signs convey a sense of pride and reduce vandalism while poorly maintained signs may contribute to a diminished visitor experience.

•Maintain a record of all signs, including location, GPS coordinates, type of sign, and photo.

•Inspect signs regularly, especially after each winter season, for weathering and visibility

•Repair or replace damaged or missing signs as soon as possible

•For signs mounted on living trees, loosen fasteners as necessary to accommodate growth of the tree

•Review signage content to ensure continued relevance and accuracy

•Obsolete, damaged, or surplus signs should be reused or recycled whenever possible

•Has the sign been patched or "overlaid"?

•Is the frame in good condition, free of mower damage, algae, etc?

•Is the sign clean, free of scratches, algae, and road film?

•Does the font match all other signs in this park?

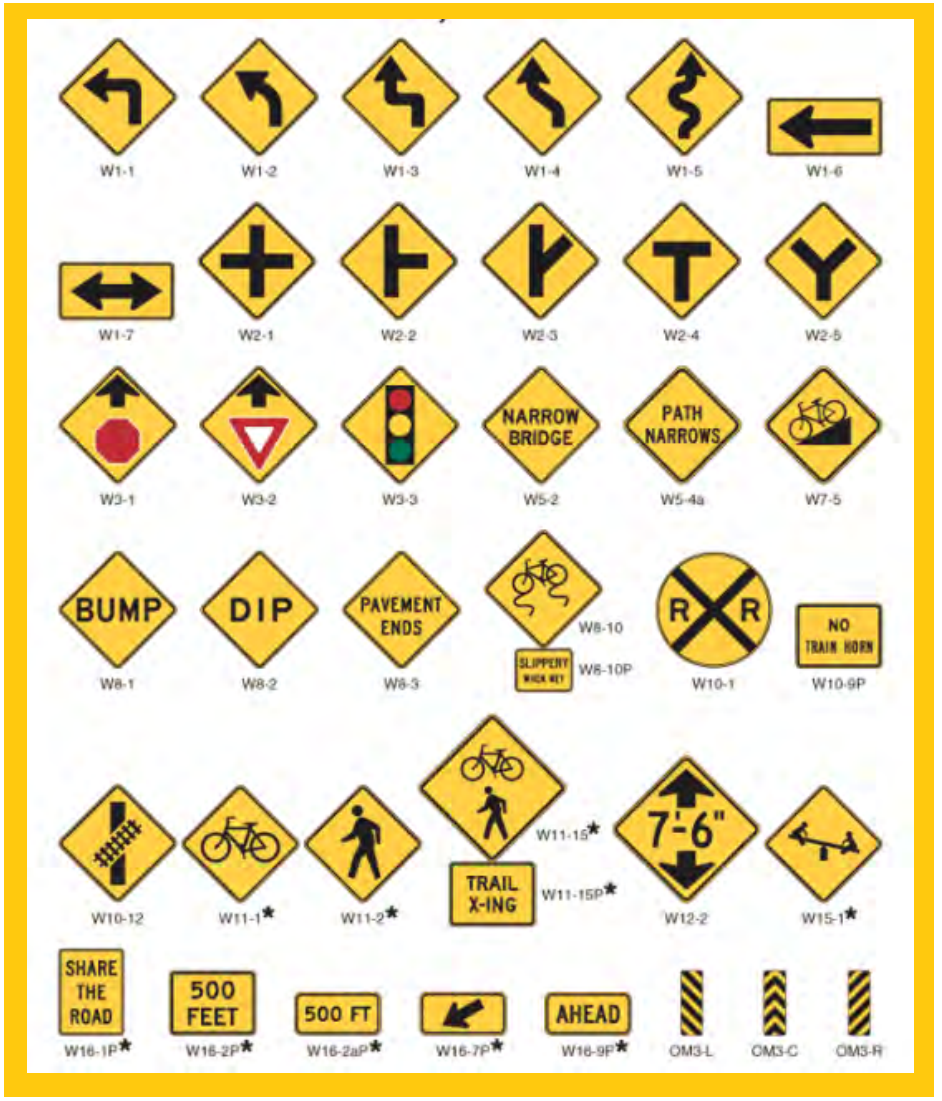
•Is it neatly presented, no tall grass, level and plumb?

•Is it mounted properly at its designated height above the ground?

•Are there bolts/ screws obscuring any letters?

WARNING SIGNS

There is a fine balance between providing good information and diminishing the trail experience with too much signage. An abundance of signage can also be a burden on the trail managers and those responsible for maintaining the signs.



Duty of Care

Trails have different levels of duty of care depending on the size of the land base, the proximity to the built environment, and whether areas are easy for youth to access. If fees are charged, there is a higher duty of care (consider charging a "parking" fee, not a trail entrance fee). Duty of care is higher on built structures.

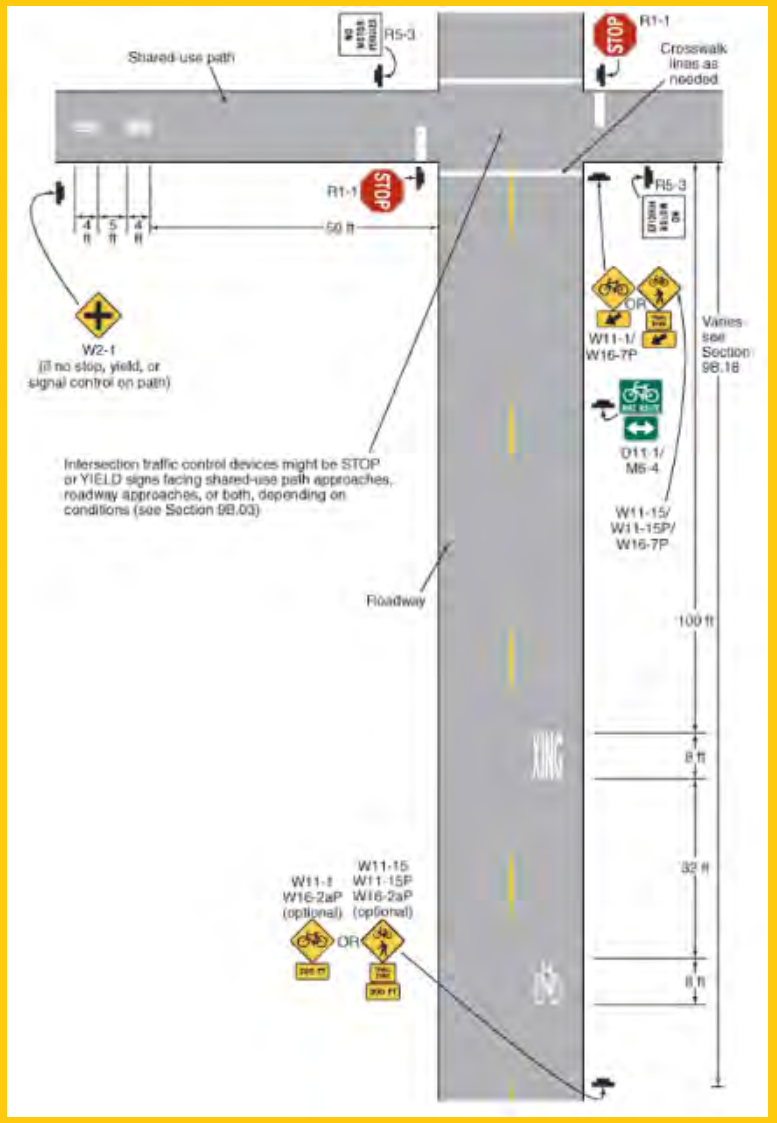
The U.S. Forest Service Recreation Opportunity Spectrum defines the spectrum from risk-taking (self reliant) areas to security/ comfort areas. The spectrum also moves from primitive to urban. Defining these zones can be part of risk management plan.

Warning sign for bicycle facilities from the MUTCD

ROAD CROSSINGS

When the trail or shared-use path crosses a roadway, it is critical to have adequate signage for all approaches. The MUCTD provides guidance for signing intersections with shared use paths.

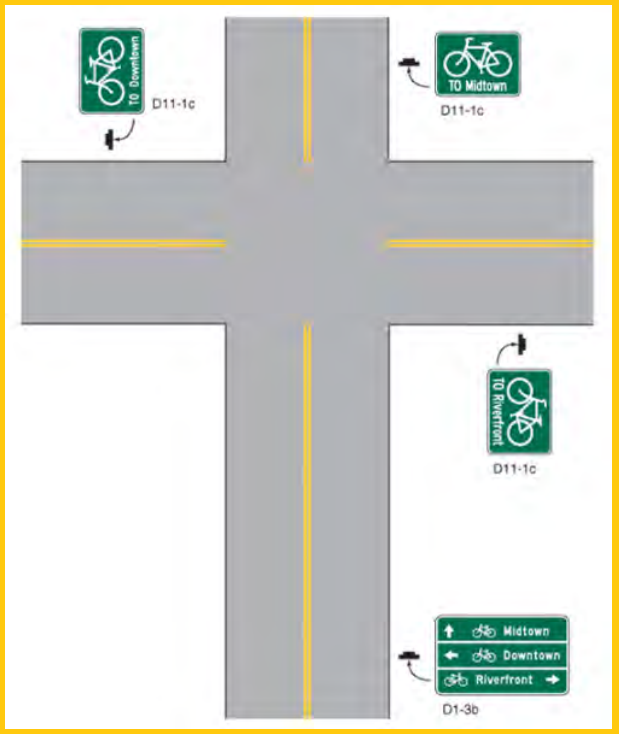
VDOT typically requires on-road signs to be 5-7 feet off the road surface, depending on whether the sign is in an urban or rural area. VDOT also has requirements for lateral offset for on-road facilities that may be different than offset for off-road facilities. At road crossings, be sure to coordinate with VDOT's local representative. That individual can be found at www.virginiadot.org/about/districts.asp.



PATH CROSSINGS

When a shared use path crosses another trail, consider stopping distances required for potential users in both directions.

The illustration to the left provides examples of signing and markings for a shared-use path crossing a roadway. The illustration below depicts two shared-use paths crossing each other (2009 MUCTD).



Pictured from left to right: driveway crossing, road crossing path crossing.

CONNECTING TRAILHEADS

Connecting trailheads connect to the larger state trail network and offer access to neighborhoods, businesses, attractions, access points or other loop trails. At their trailheads, connecting trails typically provide parking and a kiosk with information on the state trail connection as well as the connecting trail.

Regulatory information may change at these intersections, so it is important to review kiosk content and determine what information needs to be conveyed at this location.

TRAIL-ROUTE CONNECTIONS

When trail users transition from a connecting trail to a shared use path or especially an on-road route, it is important to convey the new hazards they may encounter, whether that is speeding bicyclists or vehicular traffic. Their skills may not be up to the new challenge.

It is recommended that any type of trail crossing be designed using right angles to maximize visibility. Clear sight lines and signage should be provided when trails intersect other trails to avoid conflicts between user groups.

Sign placement

A review of the questions below can help determine best sign placement.

•Would a smaller sign suffice?

•Is the sign of correct size for the message?

•Is the sign frame appropriate for the size of sign?

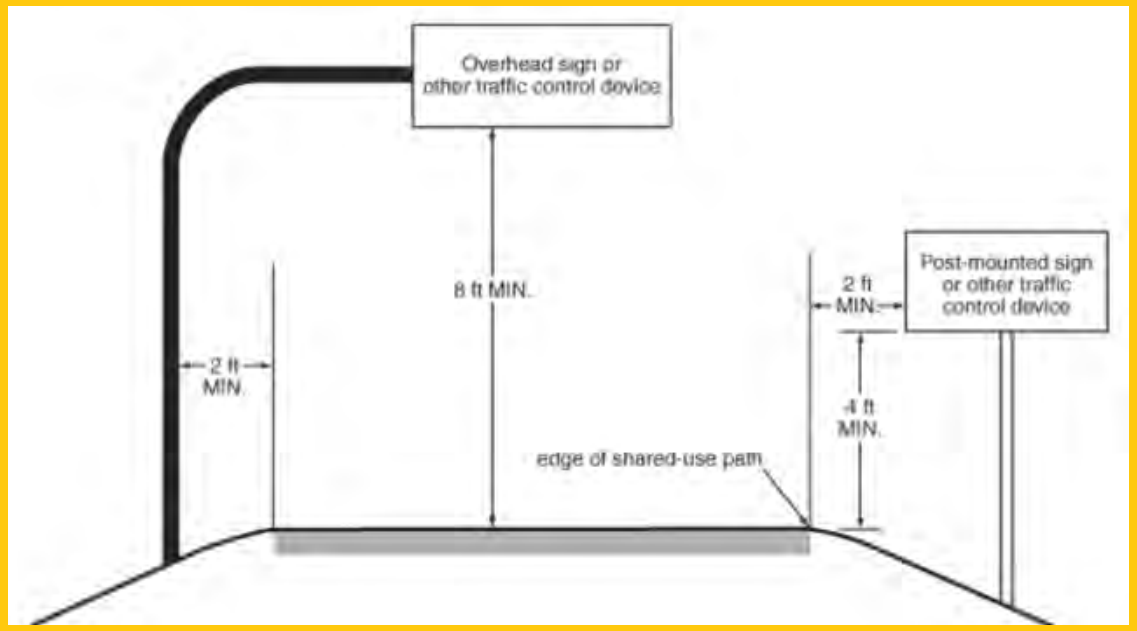
•Is the face canted slightly toward the road to prevent headlight glare?

•For bike routes, is the entire sign readable at the posted highway speed?

•Is it sufficiently distant from a directed turn to allow safe maneuvering?

•Does the sign block a significant natural vista or create a traffic hazard?

•Directional signs: Are there signs from both directions of travel?



MUTCD sign placement requirements for MUTCD regulatory/ warning/guide signs.

For other signs, it is advisable to meet these requirements to keep signs visible to trail users and reduce the risk that a bicycle will collide with the sign.

Eliminate Sign Clutter

A review of the questions below can help determine if a sign is really needed.

•Is this sign necessary?

•Does it accomplish its intended purpose?

•What would be the consequences if we eliminated it?

•Is this sign necessary in this place?

•Is it within sight of another related sign?

•Can the two be consolidated?

•Could the sign be replaced with an international symbol?

Locations

Sign spacing will depend on whether the trail is urban or rural, the level and type of use and the design or class of trail. At a minimum, consider placing signs at the following locations:

•Trailheads
•Campgrounds
•Intersections
•Overlooks
•Service facilities
•Trail crossings
•Transitions between wayfinding systems of adjacent land managers
•Road crossings
•Key roadways or connecting trails providing access to trail

What is wrong with this photo? All crosswalks must be bordered with retroreflective white striping. Signs do not conform to MUTCD guidelines.

PAVEMENT MARKINGS

Pavement can be used to mark transitions, identify hazards and regulate uses. They also can indicate mileage and direction.

Where guidelines allow, consider creative treatments that match the character of the surrounding landscape without contributing to sign clutter.

What is wrong with this photo? Don't use yellow to mark the crosswalk.through the roadway. Continuing the brick surface with white striping would work.

What is wrong with this picture? As a rule of thumb, slower traffic keeps to the right. Pavement markings can be a maintenance issue, particularly if your shared-use path is plowed in winter. Consider whether edge and center lane striping are really needed.

CHAPTER 6

RESOURCES FOR

TRAIL PARTNERS

Trail partners are encouraged to consult with each trail administrator for state trail sign projects. Agencies and organizations that manage trail segments may also contact DCR to request James River Heritage and Beaches to Bluegrass logo signs and artwork for signs, decals and stickers.

CONTACTS

FOR NATIONAL SCENIC TRAILS

Appalachian National Scenic Trail Office
P.O. Box 50
Harpers Ferry, WV 25425
304-535-6278
Appalachian Trail Conservancy
799 Washington Street
Harpers Ferry, WV 25425-0807
Phone:304.535.6331
Fax:304.535.2667
info@appalachiantrail.org

Potomac Heritage National Scenic Trail Office National Park Service
304-535-4016 or 4014
phnst@nps.gov
www.nps.gov/pohe
Website for the National Trails System Act of 1968 (as amended):
http://www.nps.gov/ncrc/programs/nts/legislation.html

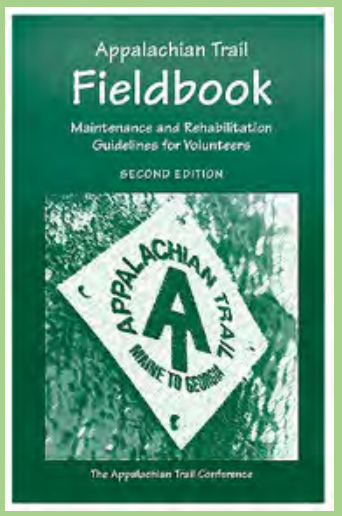
This kiosk provides space for statewide, regional and local experience content.

FOR STATE RECREATION TRAILS

East Coast Greenway Alliance
5826 Fayetteville Rd.
Suite 210
Durham, NC 27713
info@greenway.org
919-797-0619
www.greenway.org

Great Eastern Trail Association
Tom Johnson
118 Park Street S.E.
Vienna VA 22180-4609

The guidebooks at right can help direct volunteers working on sign plans for state trails.



APPEARANCE AND LAYOUT

Consider these suggestions throughout the design process.

•Maintain an even balance of graphics, text and blank space on signs

•Use different font types and weights to reflect the importance of information

•Use a consistent color palette for each sign type

•Keep text brief and convey information through international symbols if possible

KEEPING SIGNS AFFORDABLE

Keep the number of signs to the minimum number required. If one sign, placed properly, does not solve the problem, two or more probably won't either.

➢ Reduce or eliminate theft. Use "priority" screws to mount signs to frames.

➢ Reduce or eliminate damage. Train mowing crews in proper methods of mowing and trimming around signs.

➢ Maintain existing signs. Periodically wash algae, mildew, and road splatter from sign faces.

➢ Use "overlays" for frequently changed information such as operating hours and fees.

➢ Eliminate storage damage. Store seasonal and occasional signs wrapped in clear plastic to prevent scratches.

➢ Reduce or eliminate roadside damage from traffic and snow removal. Install signs 5-7 feet from the paved surface, depending on whether you are in an urban or rural area.

➢ Use the properly sized signs for the application. Signs that are too small are not effective and will eventually have to be replaced. Signs that are too large are obtrusive in the landscape and are wasteful.

➢ Specify state-approved reflective materials only when necessary (for regulated signs on roads and shared-use paths). The use of reflective materials nearly doubles the cost of a sign and should only be used when it is critical for the sign to be seen at night or in poor weather by headlight or flashlight.

➢ Request design and application assistance when ordering signs. Have text checked for conciseness and clarity of purpose. Make sure it says to the guest what you think it says.

➢ Request only the technological level of sign necessary for the application.

FONTS

In order to ensure that materials (including signs and brochures) have a high level of readability, the following fonts are recommended. See "Appendix A: Access for Everyone" for additional Outdoor Developed Area Guidelines that uphold the Americans with Disabilities Act (ADA) and the Architectural Barriers Act (ABA).

Arial
Optima
Trebuchet
Frutiger

Helvetica
Tahoma
Univers (Sans serif)
Century (serif)

COLORS

Use of these Pantone Matching System (PMS) colors will ensure consistency along the trail and with other trails in the network.

- Black: Regulation
- White: Regulation
- PMS 294 Blue: Road/tourist information
- PMS 469 Brown: Recreational/cultural
- PMS 342 Green: Directional guidance
- PMS 152 Orange: Traffic control
- PMS 187 Red: Stop or prohibition
- PMS 116 Yellow: Warning

ELECTRONIC APPLICATIONS

Digital signs offered by CIVIQ Smartscapes

The rapidly evolving world of digital signs opens up new possibilities for content rich and real time applications. Offering information in multiple languages, or up-to-date safety alerts--even free Wi-Fi--is possible at tourist hubs. Solar-powered "electronic paper" signs connected to the Cloud enable frequent updates.

In rural areas, solar applications can improve visibility and offer Wi-Fi access points for wireless Internet.

Beacon Technology

Both Android and Apple smartphones are compatible with current beacon technology known as BLE (Bluetooth low energy).

Proximity beacons in a simple wayfinding app can help direct people along the trail. Match-box size bluetooth devices placed along the route can trigger specific messages to smartphones within 300 feet.

This technology is affordable, efficient and easy to install and customize. Push notifications can be updated with podcasts, maps, photos, and special offers.

The technology also enables geo-fencing, a virtual fence created by GPS or radio signals to define geographic boundaries. This technology combines awareness of the user's current location with awareness of the user's proximity to other locations of interest.

The Department of Historic Resources uses beacon technology to push historical marker content out to passing smartphones so that people don't have to pull off the highway to learn more.

Picture left: Terrain360 uses images taken at specified intervals along the trail to recreate the trail experience for potential visitors. Each waypoint measures elevation along with an accurate GPS location, so that a trail profile can be generated.

Other Examples

The East Coast Greenway Alliance is using technology to minimize the number of signs they need to place along the route. On their website, you can find a trip planner set up to help anyone design their own custom East Coast Greenway itinerary. The trip planner provides a first-class cue sheet, complete with map and elevation profile, that can be printed or saved as a .pdf.

A mobile app allows users to add shared data--for example--scenic photos or the locations of public restrooms or bike shops.

The Alliance uses these tools in combination with signs for a comprehensive wayfinding system. These tools have helped raise the profile of the East Coast Greenway Alliance, which has grown dramatically over the past few years.

With funding through the Great American Outdoors Initiative, the Tennessee RiverPark app includes historic photos, maps, videos and web links to educate visitors.

DESIGN CRITERIA

These resources will help throughout the design process.

For Trails

Final Guidelines for Outdoor Developed Areas:
http://www.access-board.gov/guidelines-andstandards/recreation-facilities/outdoor-developedareas/final-guidelines-for-outdoor-developed-areas

Connecting our Commonwealth: The Virginia Greenways and Trails Toolbox: A How-To Guide for the Organization,Planning, and Development of Local Greenway and Trails Programs in Virginia
http://www.dcr.virginia.gov/recreational_planning/gree ntrailtools.shtml

For Shared Use Paths and Accessible Routes

Virginia Department of Transportation Road Design Manual, Appendix A, Section A-5:
http://www.extranet.vdot.state.va.us/locdes/Electronic_Pubs/2005%20RDM/RoadDesignCover Vol.1.pdf

Guidelines for Pedestrian Facilities in the Public Rights-of-Way: http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-ofway/proposed-rights-of-way-guidelines

American Association of State Highway and Transportation Officials (AASHTO) Guide for the Planning, Design and Operation of Pedestrian Facilities provides guidance on dimensions, use and layout of specific pedestrian facilities.

The Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9 is the primary source for traffic control for bicycle facilities:
http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm

ACCESS FOR EVERYONE

The Americans with Disabilities Act (ADA), the Architectural Barriers Act (ABA), and Outdoor Developed Area Guidelines for trailheads and trail signs provide guidance for designing facilities that welcome visitors of all abilities. State and local jurisdictions are required to comply with ADA guidelines, while federally managed sites or projects using federal funds must comply with ABA.

When a new trail information sign is provided at the trailhead on a newly constructed or altered trail designed for use by hikers or pedestrians, the sign must provide information about the accessible characteristics of the trail. This requirement applies to new trailhead information signs regardless of whether the newly constructed or altered trail complies with the technical requirements for trails.

The new trail information signs must include the following information:

Length of the trail or trail segment

Type of trail surface

Typical and minimum trail tread width

Typical and maximum trail grade

Typical and maximum trail cross slope

The full set of guidelines can be found at the following links:

http://www.access-board.gov/guidelines-and-standards/recreation-facilities/outdoor-developed-areas/a-summary-of-accessibility-standards-for-federal-outdoor-developed-areas

http://www.access-board.gov/guidelines-and-standards/recreation-facilities/outdoor-developed-areas

http://www.ada.gov/

The check lists in the appendix are provided so that existing and proposed trailheads and trail signage can be evaluated for their compliance with **ABA and Outdoor Developed Area Guidelines.**

Trailhead Information Signs
[F216.13 and 1017.10]

All hikers need trail information to make informed decisions. For example, hikers want to know which trail is most appropriate for the amount of time they have available, the people in their group, and the type of hike that best suits their needs or desires. Information about the accessibility of a trail enables people with disabilities to decide whether the characteristics of the trail are suited to their abilities. When this information is available on Web sites and in printed materials, it allows all hikers, including people with disabilities, the opportunity to understand the possible challenges of the trail before arriving at the trailhead.

APPENDIX

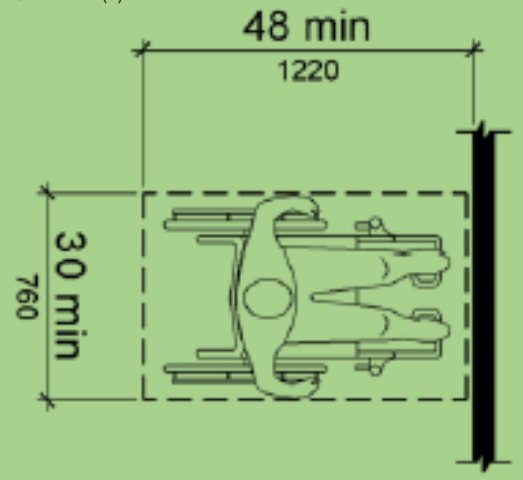
Architectural Barriers Act Checklist

Trailhead Kiosks

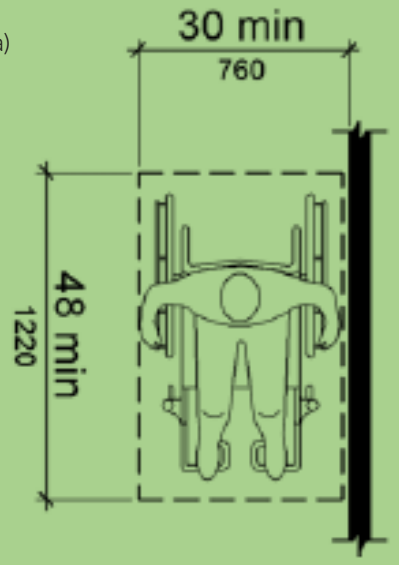
Yes	No	N/A	
☐	☐	☐	The letters are in a readable type face of sans serif (Arial, Optima, Trebuchet, Frutiger, Helvetica, Tahoma, or Univers) or serif (NPS Rawlinson or Century). NPS standard fonts, Frutiger and NPS Rawlinson, are preferable.
☐	☐	☐	Font size is 24pt (Helvetica) minimum.
☐	☐	☐	Regardless of type size, there is sufficient space between characters, words, and lines. The default settings of Frutiger and NPS Rawlinson provide ample space.
☐	☐	☐	Alignment is flush left and ragged right and hyphens are avoided.
☐	☐	☐	Black or white type color is used or at least a 70% contrast is distinguishable (e.g., black text on any light colors, white text on dark colors.) Contrast of typeface to background is between 70% and 95%.
☐	☐	☐	Understandable hierarchical patterns and layouts are used to simplify reading.

YES	NO	N/A	
☐	☐	☐	Purely decorative elements or graphics in the background are avoided so that text is presented clearly.
☐	☐	☐	Italicized and underlined text is avoided.
☐	☐	☐	Special effects to text are only on large display fonts or headers, not on secondary text.
☐	☐	☐	All-caps text is avoided.
☐	☐	☐	Graphics (photographs, diagrams, and maps) are enlarged accordingly without distortion, loss of detail, contrast, focus, or clarity of image.
☐	☐	☐	Photograph or image content contrasts with surrounding content clearly.
☐	☐	☐	Line drawings are clear and bold with limited detail and a minimum type size of 16pt for labels.
☐	☐	☐	Clear floor space is provided at kiosk, 2'6" × 4' (30" × 48") from a forward or parallel approach, with a 2% maximum slope in any direction on a firm and stable surface. See Figure 305.5.

FORWARD (a)



PARALLEL (a)



POSITION OF CLEAR FLOOR OR GROUND SPACE

Outdoor Constructed Features at Trailheads:

YES	NO	N/A	
☐	☐	☐	At least 20%, but no less than one, of each type of outdoor constructed feature provided at trailheads is accessible.
☐	☐	☐	Unless otherwise specified, one full unobstructed side of the clear ground space adjoins or overlaps an outdoor recreation route or a trail, as applicable, or another clear ground space.
☐	☐	☐	Openings in the clear ground space surface do not allow the passage of a sphere more than ½" in diameter.
☐	☐	☐	A handheld shower spray unit is provided, with a hose at least 4'11" (59") long and at least one fixed position 1'3" (15") minimum and 4' (48") maximum above the ground. EXCEPTION: When vandalism is a consideration, a fixed showerhead mounted at 4' (48") above the ground is allowed in place of a handheld shower spray unit.
☐	☐	☐	Operable parts of outdoor rinsing showers, such as handles or levers, are 1'3" (15") minimum and 4' (48") maximum above the ground. They are operable with one hand without tightly grasping, pinching, or twisting the rest, and with no more than 5 pounds of force. If self-closing devices are used, they remain open and allow water to flow for at least 10 seconds.

Benches:

YES	NO	N/A	
☐	☐	☐	Where provided, benches have companion seating clear space adjacent to the bench of 3' × 4' (36" × 48") adjoining an outdoor recreation access route or trail. The clear space does not overlap the trail and is a maximum 2% maximum grade in any direction. If necessary for drainage and the clear ground space is other than asphalt, concrete, or boards, a 5% maximum slope is allowed. 20%, but no less than one, of each type of bench provided at each location on the trail is accessible.
☐	☐	☐	Best practice: Bench seat is 3'6" (42") long minimum and between 1'6" (20") deep minimum and 2' (24") deep maximum. Bench seat surface is 1'3" (17") minimum and 1'5" (19") maximum above the finish floor or ground. Additional clear floor space is provided parallel to the short axis of the bench, 2'6" by 4' (30" × 48") from a parallel approach, with a 2% maximum slope in any direction on a firm and stable surface. See Figure 305.5.

Trash and Recycling Receptacles:

YES NO N/A

☐ ☐ ☐ Where provided, trash and recycling receptacles have a clear ground space of 3′ × 4′ (36″ × 48″) positioned for a forward approach to the receptacle opening OR 2′6″ × 5′ (30″ × 60″) positioned for a parallel approach to the receptacle opening. The clear ground space is a firm and stable surface with 2% maximum slope in all directions or 5% maximum where necessary for drainage and the surface is other than asphalt, concrete, or boards.

☐ ☐ ☐ Operable parts of trash and recycling containers, such as handles or latches, are 15″ minimum and 48″ maximum above the ground. They are operable with one hand without tightly grasping, pinching, or twisting the rest, and with no more than 5 pounds of force.

Viewing Scopes:

YES NO N/A

☐ ☐ ☐ Viewing scopes have a clear ground space of 3′ × 4′ (36″ × 48″) positioned for a forward approach to the viewing scope with a knee clearance of 2′3″ (27″) minimum and a toe clearance of 9″ minimum. The clear ground space is centered on the eyepiece of the viewing scope. The clear ground space is a firm and stable surface with 2% maximum slope in all directions or 5% maximum where necessary for drainage and the surface is other than asphalt, concrete, or boards.

☐ ☐ ☐ The eyepiece of the viewing scope used from a seated position is 3′7″ (43″) minimum and 4′3″ (51″) maximum above the ground surface. Other operable parts of the element, such as handles or levers, are located 1′3″ (15″) minimum and 4′ (48″) maximum above the ground and are operable with one hand without tightly grasping, pinching, or twisting the rest, and with no more than 5 pounds of force.

Trailheads:

YES	NO	N/A	
☐	☐	☐	Trailhead signage provides the following information: length of the trail or trail segment; surface type; typical and minimum tread width; typical and maximum running slope; and typical and maximum cross slope.
☐	☐	☐	At least one outdoor recreation access route connects accessible parking spaces and other arrival points; the starting point of the trail; and accessible elements, spaces, and facilities within the trailhead.
☐	☐	☐	**Existing trailheads.** Elements or spaces are altered but the circulation path to the altered space or element is not changed at existing trailheads. If so, the circulation path does not have to be altered to comply with the technical requirements of outdoor recreation access routes. If the circulation path to the trailhead is altered and a condition for exception does not permit full compliance with a specific provision in the technical requirements for outdoor recreation access routes, the circulation path must comply with the specific provision to the extent practicable.

Outdoor Exhibits and Maps:

Non-tactile Exhibits and Maps:

YES	NO	N/A	
☐	☐	☐	Objects are identified and it is communicated to visitors that the objects are NOT meant to be touched.
☐	☐	☐	When possible, alternative formats such as audio descriptions and large print displays are provided for learning and understanding what the exhibits are meant to convey

Tactile and Interactive Exhibits and Maps:

YES	NO	N/A	
☐	☐	☐	**Parallel Approach.** Exhibit surface is 3′ (36″) long minimum and 3′ (36″) high maximum
☐	☐	☐	**Forward Approach.** Exhibit surface is 2′-6″ (30″) long minimum and 3′ (36″) high maximum, with 2′-3″ (27″) minimum knee clearance space under the counter.
☐	☐	☐	Objects are identified and it is communicated to visitors that objects are meant to be touched.
☐	☐	☐	Tactile models, maps, reproductions, and other exhibits are available whenever possible.

YES	NO	N/A	
☐	☐	☐	The model is made of materials that are comfortable to touch, resistant to wear, and finished with a coating that allows for routine cleaning.
☐	☐	☐	There are no applied or glued elements on the model, but instead it is cast, carved, or CNC (computer numerical control) routed as one piece.
☐	☐	☐	Color and images are incorporated in the materials, spray applied, or ink-jet printed. There is no brush-painted detail or self-adhesive vinyl decals or type used.
☐	☐	☐	Varieties of texture are used to differentiate features, such as topography and vegetation, on the model.
☐	☐	☐	Details of the model are in the appropriate scale and are discernible by finger touch.
☐	☐	☐	Clear floor space is provided at exhibits, 2′6″ by 4′ (30″ × 48″) from a forward or parallel approach, with a 2% maximum slope in any direction on a firm and stable surface. See Figure 305.5.

YES	NO	N/A	
☐	☐	☐	Reach ranges for tactile and interactive exhibits and maps from a forward approach that is unobstructed are between 1′3″ (15″) minimum and 4′ (48″) maximum. See Figure 308.2.1. If the reach is obstructed a maximum of 1′8″ (20″), the reach may be 4′ (48″) maximum , while where the obstruction is between 1′8″ (20″) and 2′1″ (25″), the reach may be 3′8″ (44″) high maximum. See Figure 308.2.2.
☐	☐	☐	Reach ranges for tactile and interactive exhibits and maps from a parallel approach that is unobstructed no more than 10″ are between 1′3″ (15″) minimum and 4′ (48″) maximum. See Figure 308.3.1. If the side reach is obstructed no more than 10″ maximum in depth and 2′10″ (34″) maximum in height, the high side reach is 4′ (48″) maximum in height. See Figure 308.3.2. Where the reach depth is between 10″ and 2′ (24″), the high side reach shall be 3′10″ (46″) maximum for a reach depth of 2′ (24″) maximum. See Figure 308.3.2.

Interpretive Waysides:

YES	NO	N/A	
☐	☐	☐	Letters are in a readable typeface of sans serif (Arial, Optima, Trebuchet, Frutiger, Helvetica, Tahoma, or Univers) or serif (NPS Rawlinson or Century). NPS standard fonts, Frutiger and NPS Rawlinson, are preferable.
☐	☐	☐	Font size is 24pt (Helvetica) minimum.
☐	☐	☐	Regardless of type size, there is sufficient space between characters, words, and lines. The default settings of Frutiger and NPS Rawlinson provide ample space.
☐	☐	☐	Alignment is flush left and ragged right and hyphens are avoided.
☐	☐	☐	Black or white type color is used or at least a 70% contrast is distinguishable (e.g., black text on any light colors, white text on dark colors. Contrast of typeface to background is between 70% and 95%.
☐	☐	☐	Understandable hierarchical patterns and layouts are used to simplify reading.
☐	☐	☐	Purely decorative elements or graphics in the background are avoided so that text is presented clearly.

YES	NO	N/A	
☐	☐	☐	Italicized and underlined text is avoided.
☐	☐	☐	Special effects to text are only on large display fonts or headers, not on secondary text.
☐	☐	☐	All-caps text is avoided.
☐	☐	☐	Graphics (photographs, diagrams, and maps) are enlarged accordingly without distortion, loss of detail, contrast, focus, or clarity of image.
☐	☐	☐	Photograph or image content clearly contrasts with surrounding content.
☐	☐	☐	Line drawings are clear and bold with limited detail and a minimum type size of 16pt for labels. Tactile signage should be used whenever possible.
☐	☐	☐	Clear floor space is provided at work surfaces, 2’6” by 4’ (30” × 48”) from a forward approach, with a 2% maximum slope in any direction on a firm and stable surface. See Figure 305.5.
☐	☐	☐	Interpretive waysides provide 2’3” (27”) minimum knee clearance under the surface.

Event Announcements:

YES	NO	N/A	
☐	☐	☐	Event announcements are provided with information to contact the park (email and phone number) to request special accommodations that may be needed.
☐	☐	☐	Event announcements are provided in a variety of formats including large print, audio, and/or accessible PDF to meet the needs of diverse audiences.

Audio-Visual Systems and Videos:

YES	NO	N/A	
☐	☐	☐	Videos include open and/or closed captioning. The captions display spoken dialogue as printed words on television screens, computer monitors, projection screens, captions boards, and other visual displays. Text should indicate identification of speakers and nonverbal sound effects. Subtitles refer to translation only. Captions display vocabulary relevant to the audience. Open captioning is recommended as a best practice, and NPS guidelines state that all new media must be open-captioned, i.e., on at all times. A black bar underneath text is also recommended as a best practice to increase readability for users.

YES	NO	N/A	
☐	☐	☐	Black or white type color is used or at least a 70% contrast is distinguishable. Contrast of typeface to background shall be between 70% and 95%.
☐	☐	☐	Graphics (photographs, diagrams, and maps) are enlarged accordingly without distortion, loss of detail, contrast, focus, or clarity of image.
☐	☐	☐	Photograph or image content clearly contrasts with surrounding content.
☐	☐	☐	Transcripts are available for videos in standard, large print format, and/or accessible digital documents (e.g., PDFs).

Cell Phone Tours and Audio Programs:

YES	NO	N/A	
☐	☐	☐	Black or white typeface colors are used on cell phone tour indicator signage of at least a 70% contrast and are distinguishable. Contrast of typeface to background shall be between 70% and 95%.
☐	☐	☐	Letters of cell phone tour indicator signage are in a readable typeface of sans serif (Arial, Optima, Trebuchet, Frutiger, Helvetica, Tahoma, or Univers) or serif (NPS Rawlinson or Century). NPS standard fonts, Frutiger and NPS Rawlinson, are preferable. Font size is 24pt (Helvetica) minimum and provides sufficient space between characters, words, and lines.
☐	☐	☐	Transcripts are available for cell phone tours in standard, large print format, and/or accessible digital documents (e.g., PDFs).
☐	☐	☐	If applicable, walking routes are accessible with 3′ (36″) minimum width and 5′ (60″) minimum diameter turning spaces.

YES	NO	N/A	
☐	☐	☐	Where stopping points are provided at elements, they allow 2′6″ × 4′ (30″ × 48″) clear space from a forward or parallel approach with a 2% maximum slope in any direction on a firm and stable surface. See Figure 305.5. If necessary for drainage, slip underneath elements may be 8.33%.

Conditions for Exceptions:

The conditions in AGODA 1019 are the basis for using the exceptions to the requirements for outdoor constructed features and trails. On trails, the exceptions apply only on the portion of the route where the condition applies. The trail is required to fully comply with the requirements in chapter 10 of the AGODA at all other portions of the route where the conditions do not apply.

YES	NO	N/A	
☐	☐	☐	This project will use an exception in AGODA 1019.2 for outdoor constructed features and trails.
☐	☐	☐	Compliance is not feasible due to terrain.
☐	☐	☐	Compliance cannot be accomplished with the prevailing construction practices.
☐	☐	☐	Compliance would fundamentally alter the function or purpose of the facility or the setting.

Compliance is precluded by the:

- ☐ Endangered Species Act (16 U.S.C. §§ 1531 et seq.)
- ☐ National Environmental Policy Act (42 U.S.C. §§ 4321 et seq.)
- ☐ National Historic Preservation Act (16 U.S.C. §§ 470 et seq.)
- ☐ Wilderness Act (16 U.S.C. §§ 1131 et seq.)
- ☐ Other federal, state, or local law the purpose of which is to preserve threatened or endangered species; the environment; or archeological, cultural, historical, or other significant natural features

PHT
COURT SQ
KINGS HWY

NO
MOTOR
VEHICLES

Dedicated To
The Memory Of
MARGOT WADLEY
Author Of
The Gripping Beast
From Her Friends & Family
2001

JAMES W. (TAD) STEGER
MEMORIAL WALKING TRAIL
DEDICATED TO THE SENIOR CITIZENS OF PULASKI
DISTANCE ONE LAP 1 1/5 MILE