

OPERATION, MANAGEMENT AND MAINTENANCE

The Black Diamond Trail will primarily be the responsibility of the New York State Office of Parks, Recreation and Historic Preservation (OPRHP.) The following sections outline the standards that the agency will operate, manage and maintain the multi-use, multi-purpose trail facility.

Ownership of Trail Facilities

The majority of the land the Black Diamond Trail will be constructed on and the infrastructure of the trail will be owned by OPRHP. There are, however sections of the trail corridor that will be built on lands owned or managed by other entities. The following sections identify the other parties that own or have interest in portions of lands of the trail corridor and which OPRHP will need to coordinate with for the construction, operation and maintenance of the trail.

Norfolk Southern Railroad

The trail will encounter the active Norfolk Southern Railroad line in two places along the trail between Robert H. Treman and Allan H. Treman/Cass Park. OPRHP will obtain a permanent easement to construct and operate the trail across railroad land.

New York State Electric & Gas Corporation

The Black Diamond Trail will be co-located with a electric transmission line on the trail segment between Allan H. Treman/Cass Park and Taughannock Falls State Park. The New York State Electric & Gas Corporation granted OPRHP a permanent easement to construct the trail on the corridor. Construction and long-term maintenance of the BDT will need to be coordinated with the utility company.

City of Ithaca

In accord with the 1983 Tripartite Agreement, the City of Ithaca secured property along the east and west sides of the Cayuga Inlet Flood Control

Channel within its municipal boundary for trail development. OPRHP will obtain a permanent easement from the City to construct the trail and support facilities on City property.

A portion of the Black Diamond Trail will follow the existing City of Ithaca's Cayuga Waterfront Trail in Cass Park. As the trail infrastructure is already in place, no ownership issues need to be addressed.

New York State Department of Transportation

The trail intersects with state highways along the route between Robert H. Treman State Park and Allan H. Treman State Marine Park/Cass Park. In all cases, the trail will pass under the state highways. While the property is owned by the State of New York, OPRHP will need to obtain joint occupancy agreements and work permits from the Department of Transportation to construct and maintain the trail within the boundaries of the state highways.

Tompkins County

Along the segment of trail between Allan H. Treman/Cass Park and Taughannock Falls State Park, the trail will cross, at grade, two Tompkins County roads. OPRHP will need to obtain a work permit from Tompkins County to construct and maintain the trail within the boundaries of the County's road rights of way.

Town of Ulysses

The trail will cross, at grade, seven Town of Ulysses roads along the segment of trail between Allan H. Treman/Cass Park and Taughannock Falls State Park. OPRHP will need to obtain a work permit from the Town of Ulysses to construct and maintain the trail within the boundaries of the Town of Ulysses road rights of way.

Management

Management responsibility for the Black Diamond Trail will be shared between OPRHP, the City of Ithaca and the Town of Ithaca according to the following schedule.

Robert H. Treman State Park to Buttermilk Falls State Park:

OPRHP, oversight by Robert H. Treman/Buttermilk Falls/Allan H. Treman park manager.

Buttermilk Falls State Park to Allan H. Treman State Marine Park/Cass Park:

OPRHP, oversight by Robert H. Treman/Buttermilk Falls/Allan H. Treman park manager; Town of Ithaca, and City of Ithaca. Exact extent of each party's management area will be defined prior to the official opening of the trail.

Allan H. Treman State Marine Park/Cass Park to Taughannock Falls State Park:

OPRHP, oversight by Taughannock Falls park manager.

Operation

Rules and Regulations

Public use of property under the jurisdiction of OPRHP is governed by the rules and regulations found in Title 9, Chapter I of Subtitle I of the Official Compilation of Codes, Rules and Regulations of the State of New York. In addition to these rules and regulations, trail-specific rules will be implemented for the Black Diamond Trail to minimize conflicts between permitted trail uses and recognize the transportation role the trail will play in the greater Ithaca area community. The expected conduct of trail users will be conveyed on trail signs and kiosks as illustrated on Figures V-22 and V-23, pages V-118 and V-119.

The following are issues that will be addressed with rules posted on all orientation and information kiosks, signs and brochures for the Black Diamond Trail.

- ◆ Hours of operation - including equipment requirements for after-dark use for trail use as a transportation corridor
- ◆ Allowable trail uses - clear statement of prohibited activities as well as the accommodated uses (e.g. no cars, trucks, motorcycles/scooters, atvs)
- ◆ Trail courtesy advisories - trail etiquette to minimize user conflicts.
- ◆ Safety equipment requirements - bicycle helmet requirements for children under 14 and recommendation to all others to wear helmets.

To the extent practicable, signs will include the universal symbol associated with the expected behavior to address communication with multi-lingual trail user needs.

Fees

OPRHP does not anticipate instituting a user fee for the trail. Fees that will apply to trail use are special-use permits and those that are already in place at the existing state park facilities, such as the vehicle-entrance fee.

Special-use permits are required for events and activities not regularly provided at a state park facility and that are sponsored by private or public groups. Fees for these events vary depending on the size and complexity of the events.

Black Diamond Trail patrons that begin their use of the trail in either Robert H. Treman, Buttermilk Falls or Taughannock Falls State Park may be required to pay a vehicle entrance fee if visiting the park during the main operating season when the fee is in effect.

Trail-Use Zones

The Black Diamond Trail is intended to provide a multi-use, multi-purpose, four-season facility for pedestrian and bicycle traffic and to a limited extent equestrian and snowmobile use. The extended types of uses that will occur on the trail will be dictated by the type of surface treatment of the trail treadway. The following sections identify the different trail-use zones.

Compacted Limestone-dust Treadway

This treadway treatment is recommended for two main segments of the Black Diamond Trail through areas that are less densely populated and have higher natural-features qualities. The surfacing provides a firm treadway that is useable by walkers, joggers, bicyclists, mobility-impaired users and horseback riders during the majority of the year. During the winter months when snow blankets the surface, the trail provides opportunity for use by cross-country skiers, snowshoers, and where allowable snowmobilers.

Asphalt Treadway

An asphalt treadway is recommended for three sections of the Black Diamond Trail. These areas are expected to experience higher volumes of traffic and provide a wider range of use by equipment type. The areas are expected to accommodate walkers, joggers, bicyclists, mobility-impaired users, in-line skaters, skateboarders and roller-skiers. Winter use will include cross-country skiers and snowshoers, if the trail is not plowed. Equestrian and snowmobile uses will not be allowed on this treadway.

Equestrian Use

Public input for the trail included interest in using some of the trail corridor for horseback riding. The area of interest in particular is the corridor between Allan H. Treman State Marine Park/Cass Park and Taughannock Falls State Park where the trail passes through agricultural areas. OPRHP will explore the potential to accommodate this use further during the construction phase.

Trail design recommendations to accommodate horseback riding as a use on a multi-use, multi-purpose trail include either constructing a separate trail parallel to the pedestrian and bicycle trail or a single wide treadway with wide shoulders to allow users to move aside. Because the Black Diamond Trail will be built on an abandoned railroad corridor with constrained cuts and fills, the separate trail

option may be limited in several areas. On-site assessment is necessary to determine if the trail can accommodate horses.

Snowmobile Use

Another user group that expressed interest through the public input process in utilizing portions of the Black Diamond Trail is snowmobilers. OPRHP administers and supports snowmobile trail and club activity across New York State. The interest of the snowmobile club includes a portion of the trail between Allan H. Treman State Marine Park/Cass Park and Taughannock Falls State Park, specifically the trail adjacent to Taughannock Falls. The use of the Black Diamond Trail will be as a pass-through connection to the trail system the club has secured on private lands across the Town of Ulysses. To the extent practical, OPRHP will accommodate the snowmobile use. The segments will be posted and a minimum snow cover will be set so that snowmobile use of the trail does not damage the surfacing.

Interpretive and Special Programs

OPRHP's mission includes providing interpretive opportunities that promote patron respect for natural, historic and cultural resources and expand patron enjoyment by sharing information about the state park facilities. The agency performs its interpretive service mission through printed materials (signs and brochures) and personal service programs (hikes and special programs.) Environmental educators develop these services, recommending appropriate programs for each facility. An Interpretive Management Guide was prepared for the Black Diamond Trail and is a supporting document to this master plan.

In addition to programs provided by OPRHP, organized user groups, civic groups and not-for-profit organizations use state park facilities for special programs. Examples of activities that occur in state parks are: bi- and triatholons, fun runs, fundraisers, art exhibitions, etc. The Black Diamond Trail will provide a venue for several

different special programs. Use of state park facilities by other entities is operated and managed by a permit system administered by the regional and park management. This system will be adhered to for the Black Diamond Trail.

Security

The Finger Lakes regional unit of the New York State Park Police will be responsible for oversight of the security of the Black Diamond Trail. The New York State Park Police utilize several different transportation modes to perform their patrol duties including bicycles and snowmobiles. It is anticipated that both will be utilized to patrol the Black Diamond Trail.



New York State Park Police Bicycle Patrol

During the busier operating season, May to September, OPRHP hires park public safety officers to supplement the park police units. Public safety officers perform the following security functions: patrol park facilities and grounds, maintain order, enforce various park ordinances and regulations, distribute tickets for violations of ordinances and regulations, and answer patron questions.

Significant interest has been expressed by Black Diamond Trail supporters to establish a Friends of the Black Diamond Trail group that could provide volunteer assistance in the area of operation and maintenance of the trail including a trail steward program to assist with trail safety. OPRHP has significant experience with friends groups and will support establishing a group for the Black Diamond Trail.

Physical elements that will be included in the development of the Black Diamond Trail to reinforce the safety and security of trail users include gates, bollards, fencing and signage. Figures V-19 and V-20, pages V-115 and V-116, illustrate designs for trail and road intersection treatments.

Emergency Response Plan

Situations that arise on the trail that require immediate police or medical assistance response will be handled through Tompkins County's E-911 system. Calls for emergency assistance are received at the central dispatch office of the County's emergency response office and dispatched to the closest identified police unit.

OPRHP will contact Tompkins County's E-911 center to notify them of the trail's operation and provide all relevant information regarding trail access points, mile-marker system for incident reporting, cellphone coverage issues and other facility detail as requested. In addition, access through the trail's security gates will be provided to all emergency response units.

OPRHP develops Emergency Action Plans (EAP) for each of its facilities. EAPs identify action plans for OPRHP staff to respond to evacuations, chemical spills, severe weather and medical emergencies. In addition to the response protocols for the different situations, the plans identify the chain of command for persons responsible for implementing the plans, contacts with outside emergency responders and contacts with utility companies. A plan will be prepared for the Black Diamond Trail.

Volunteer Services

As noted earlier, volunteer services are encouraged by the OPRHP. Volunteers can provide operation and maintenance support to supplement park staff responsibilities. Volunteer services can be provided through a Friends group or through established civic groups. Use of volunteer services benefit the short- and long-term operation of facilities by

allowing community members to take a more active part in supporting the success of a facility. OPRHP will use volunteers to operate and maintain the Black Diamond Trail.



In October 2000, volunteers helped with the initial clearing of a segment of the trail corridor near Taughannock Falls State Park to prepare it for future development.

Maintenance

Trail maintenance responsibilities will follow the schedule presented in the Management section on page V-103. Sections of the trail owned and managed by OPRHP will be maintained by state parks staff and volunteers. The segment of trail between Buttermilk Falls State Park and Allan H. Treman State Marine Park/Cass Park will be maintained by the City and Town of Ithaca. To ensure that a coordinated approach is taken to maintain the trail, OPRHP will establish a maintenance protocol with the City and Town of Ithaca.

At a minimum, OPRHP will establish procedures and schedules for maintaining the following trail features.

- ◆ Surface
- ◆ Safety Striping: pavement markings
- ◆ Safety and Security Structures: fencing, gates, bollards
- ◆ Signs: safety, orientation and interpretive
- ◆ Mowing and Vegetation Management: trailway clearance requirements, buffers and scenic vistas

- ◆ Drainage Structures
- ◆ Bridge Inspections
- ◆ Winter Maintenance: plowing or grooming for cross-country skiing.

Staffing

As noted in the Management and Maintenance sections, the portions of the trail owned and managed by OPRHP, will be placed under the care of park managers at the established state parks in Tompkins County. Trail infrastructure choices will emphasize low-maintenance follow up to reduce the need to add additional permanent staff to OPRHP. In addition, volunteer services will be sought for routine maintenance services (i.e. litter collection, clearing to maintain recommended clearances) through either a Friends group or an “Adopt a Trail” program, similar to NYS DOT’s “Adopt a Highway” program.

Equipment

Trail maintenance is greatly facilitated with smaller-than-conventional vehicles. Some trail-adapted maintenance equipment is already available in the Finger Lakes State Parks Region to support the miles of existing trails, including the multi-use, multi-purpose Catharine Valley Trail in Chemung and Schuyler counties.

Additional surface-grooming units will need to be acquired as segments of the Black Diamond Trail are constructed and opened for public use.

Land Acquisition

Land acquisition needs for the trail development, including short- and long-term maintenance and emergency access, were identified in the Trail Corridor section of this chapter. Other future acquisitions may be required to protect the integrity of the trail for the use, enjoyment and safety of the trail’s patrons.

The segment of the trail where future acquisition of additional lands for buffer may be necessary is the Allan H. Treman State Marine Park/Cass

Park to Taughannock Falls State Park. Presently the adjacent land uses along the 66-foot-wide trail corridor are complementary or supportive of the trail's goals and objectives. However, future land-use changes could negatively impact the operation of the trail for its multiple-use purpose. Construction occurring too close to the corridor or that creates a significant change in land cover upslope of the trail could significantly impact the trail drainage infrastructure. Where appropriate, additional acreage could be acquired to minimize or eliminate such an impact. Either fee or easement (conservation) could accomplish the protection of the corridor.

Establishing a strong working relationship with the governing boards, planning boards and zoning boards of appeal of the municipalities that will host the Black Diamond Trail could also assist in instituting a plan that will protect the integrity of the trail through appropriate land-use controls. An example of such a cooperative effort is the Town of Ithaca's adoption of a Conservation Zone for the steep slope area adjacent to the Black Diamond Trail corridor between Allan H. Treman State Marine Park/Cass Park and Taughannock Falls State Park.

IMPLEMENTATION

The Black Diamond Trail consists of three segments. While each segment can exist independently, together they provide a network of trails that connect a significant number of trip destinations in Tompkins County. OPRHP will progress construction of the 15-mile, multi-use, multi-purpose trail in phases. The intended order of the phased construction is as follows.

- ◆ Phase One: Allan H. Treman State Marine Park/Cass Park to Taughannock Falls State Park
- ◆ Phase Two: Buttermilk Falls State Park to Allan H. Treman State Marine Park/Cass Park:
- ◆ Phase Three: Robert H. Treman State Park to Buttermilk Falls State Park

Trail construction will progress as funding is available. OPRHP's current plan is to break ground on Phase One — Allan H. Treman to Taughannock Falls — in 2009. If the necessary funding commitments are secured in a timely manner, Phase One is projected to require 5 to 7 years to complete. The timeline to complete construction of Phases Two and Three will depend on a number of factors, including the availability of funding and acquisition of the remaining parcels needed for the trail as identified earlier in the chapter.

A further breakdown of each phase to progress construction may be explored if funding ceilings limit completing an entire phase. A shorter segment may be considered only if it results in completing a section of trail that links trip destinations.

COST ESTIMATE

Estimates for the trail construction by phase, as proposed earlier in the chapter, are presented below. The cost estimate represents construction completed by contract with a qualified construction firm.

The figures will change, at a minimum, annually, but are provided to present the expected scale of funding that will be needed for any one phase of the trail project and to give a general sense of the total project cost to complete the entire trail system.

Robert H. Treman State Park to Buttermilk Falls State Park: \$2.6 million

Buttermilk Falls State Park to Allan H. Treman State Marine Park/Cass Park: \$7.8 million

Allan H. Treman State Marine Park/Cass Park to Taughannock Falls State Park: \$3.9 million

Funding Sources

To complete the construction of the Black Diamond Trail, OPRHP will have to rely on a combination of funding opportunities. While much of OPRHP's capital construction is accomplished using its State Park Infrastructure Fund (SPIF), this fund source is limited and a significant backlog of existing

facilities rehabilitation projects will impact the amount of the fund that can be earmarked for new facility construction. Segment development of the Black Diamond Trail will be programmed into the capital fund schedule as additional funding sources are secured and staff resources are available to handle managing the project.

The following is a list of viable other sources of funding for construction of a multi-use, multi-purpose pedestrian and bicycle trail that OPRHP will seek to secure to help move the construction of the Black Diamond Trail along at a reasonable pace.

New York State

Local Waterfront Revitalization Program (LWRP)

The New York State Department of State encourages local waterfront communities to participate in the Local Waterfront Revitalization Program that provides assistance to communities to revisit the use and preservation of their waterfronts. The waterfront municipalities in Tompkins County prepared a LWRP. The Black Diamond Trail is a listed project within this plan. The development of trail-related waterfront projects, such as the construction of the interpretive center in the caboose in Cass Park, could be considered for funding through this program. The Department of State will provide 50% of the project cost to be matched by local funding or in-kind contributions.

Environmental Protection Fund (EPF)

New York State, through the Office of Parks, Recreation and Historic Preservation, seeks grant applications on an annual basis for projects in multiple categories, including park and trail development. Like the LWRP, the EPF is a 50/50 matching-grant program.

State Legislative Initiatives

Members of the New York State Legislature have access to funds that can support the development of a variety of community-based projects that improve the quality of life of the residents in their districts. These grants do not require a match.

Federal

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)

This is the latest version of the landmark legislation first passed by the United States Congress in 1991. The legislation recognizes the importance of developing a multi-modal transportation system that includes infrastructure for pedestrians and bicycles. The Act provides funds to construct pedestrian and bicycle facilities on an 80/20 reimbursement-for-cost basis. The required 20% match can be from local funding or in-kind contributions. Three sub-programs of the Act provide fund options for multi-use, multi-purpose trail projects.

The Transportation Enhancements Program (TEP)

This sub-program has been and continues to be the most viable program for funding pedestrian and bicycle projects, like the Black Diamond Trail. At the Federal level, the program requires states to utilize 10% of their Federal Surface Transportation Program allocation for enhancing the transportation system to move to a multi-modal system. Eligible projects for this program include bicycle and pedestrian facilities, preservation of historic transportation infrastructure, scenic beautification, environmental mitigation, safety and education for pedestrian and bicycle traffic and transportation museums. The program is administered by the New York State Department of Transportation.

OPRHP received some funding for the Black Diamond Trail under the 1991, ISTEA legislation. Approximately \$500,000 remains of the initial award. At present, NYSDOT is making \$150,000 available to complete planning and engineering services for Phase I construction.

Recreational Trails Program (RTP)

This program provides funds to develop multi-use trails that focus more on recreational use than on transportation, although projects may still have a transportation component/function. Awards under this program are typically small in size (i.e. under \$100,000.) The program is administered by the New York State Office of Parks, Recreation and Historic Preservation.

Transportation Improvement Program (TIP)

Historically, this program provides the funds to support the construction and rehabilitation of the traditional transportation system of motor vehicle, transit, rail and airline infrastructure. Facilities for pedestrians and bicycles, like the Black Diamond Trail, not associated with a project proposed for a highway system have not been able to compete for funds under this program. Discussions between the New York State Metropolitan Planning Organizations (MPO) serving upstate urban areas and the New York State Department of Transportation were initiated in 2005 to explore how the larger, more costly pedestrian and bicycle dedicated facilities can be submitted to be considered in the TIP program and compete equitably with highway projects. Starting in 2006, a portion of the TIP has been set aside to fund bicycle and pedestrian facilities.

RELATIONSHIP TO OTHER PROGRAMS

The development and operation of the Black Diamond Trail will involve coordination and cooperation with other agencies and entities. Listed below are the primary entities that OPRHP will work with to ensure the Black Diamond Trail contributes positively to the residents and visitors of Tompkins County.

New York State Electric & Gas Corporation (NYSEG)

For approximately 1.5 miles, the Black Diamond Trail will co-locate on a portion of the former railroad corridor, between Allan H. Treman and Taughannock Falls State Parks, with an electric transmission line owned and operated by the NYSEG. NYSEG granted OPRHP a permanent easement to develop, operate and maintain the Black Diamond Trail jointly on the property. Construction and maintenance standards, will be coordinated with NYSEG.

City of Ithaca

Operation and management of the segment of trail between Buttermilk Falls State Park and Allan H. Treman State Marine Park/Cass Park by the City of Ithaca is covered under the 1983 Tripartite Agreement. OPRHP and the City will work together to establish rules and regulations and maintenance standards that ensure trail users experience a seamless flow as they travel along the different segments of trail.

Town of Ithaca

The Town of Ithaca was included in the 1983 Tripartite Agreement to assist in securing corridor and operating and managing the section of the trail between Buttermilk Falls and Allan H. Treman State Parks. OPRHP and the Town will work together to establish the extent to which the Town will assist OPRHP with the operation and management of the Black Diamond Trail.

Ithaca/Tompkins County Transportation Council (ITCTC)

The ITCTC is the Metropolitan Planning Organization (MPO) for transportation planning and project funding for the Ithaca urbanized area in Tompkins County. The MPO is the conduit to manage the Federal transportation money allocated for the area. The ITCTC will provide OPRHP assistance for the agency's requests for funding

under SAFETEA-LU. Additionally, OPRHP will work with ITCTC to fulfill the MPO's mission to develop a multi-modal transportation system for the area.

**New York State
Department of Transportation (NYSDOT)**

NYSDOT constructed trail facilities as part of several state highway reconstruction projects that will become part of the Black Diamond Trail. Some of these features are located within the NYSDOT right of way. OPRHP will coordinate future maintenance with NYSDOT.

**New York State Department of
Environmental Conservation (NYSDEC)**

A significant portion of the Black Diamond Trail between Buttermilk Falls State Park and Allan H. Treman State Marine Park/Cass Park will parallel the Cayuga Inlet Flood Control Channel managed by the NYSDEC. Long-term maintenance of the channel banks and the trail will require coordination between OPRHP, the City of Ithaca and NYSDEC's Flood Control Unit.

Cayuga Nature Center (CNC)

A Black Diamond Trail trailhead facility will be constructed off Houghton Road with a trail connection built by the Cayuga Nature Center to its main building. This project will require coordination for construction and long-term operation and maintenance with the CNC.

Cayuga Lake Scenic Byway, Inc.

The Black Diamond Trail parallels the Cayuga Lake Scenic Byway, on the west side of Cayuga Lake, for approximately 3.5 miles. The two facilities can and will complement one another and joint promotion is strongly encouraged. OPRHP and the Cayuga Lake Scenic Byway, Inc. will coordinate promotion through established sign, brochure and web-site programs.

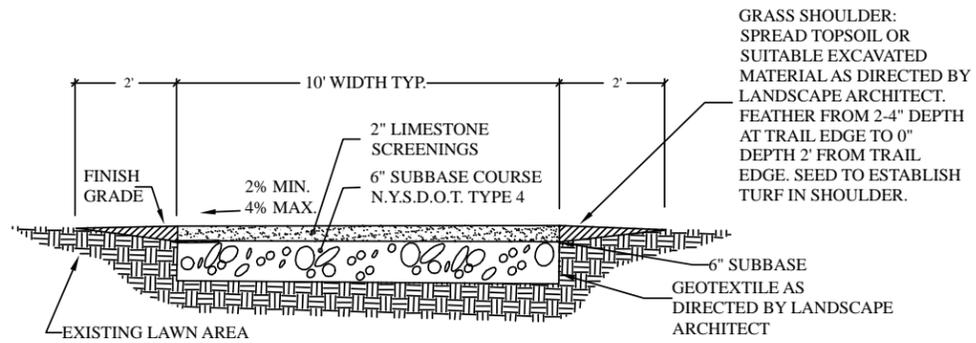
Erie Canal National Heritage Corridor

The Black Diamond Trail is located within the Erie Canal National Heritage Corridor. Joint promotion is strongly encouraged. OPRHP will work with the heritage corridor staff to ensure cross promotion.

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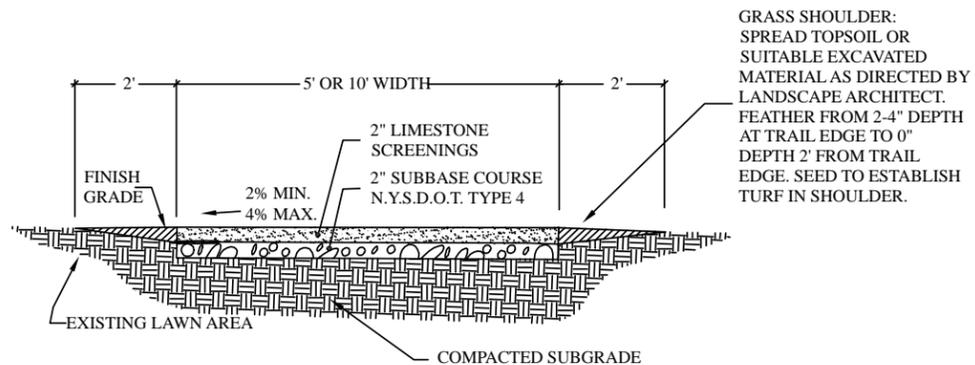
NOTES:

1. PITCH TRAIL SURFACE TO MAINTAIN EXISTING DRAINAGE PATTERN OR AS DIRECTED BY LANDSCAPE ARCHITECT.
2. SMOOTH AND COMPACT SUBGRADE PRIOR TO PLACING SUBBASE AND TRAIL SURFACE.



NOTES:

1. THIS DETAIL IS FOR USE ON RAILROAD GRADES WHERE EXISTING BASE IS WELL DRAINED AND SUITABLE FOR USE AS A TRAIL BASE. 2" AVERAGE DEPTH OF SUBBASE COURSE IS CONSIDERED A LEVELING COURSE IF FILL IS REQUIRED TO SMOOTH BASE BEFORE PLACEMENT OF TRAIL SURFACE.
2. PITCH TRAIL SURFACE TO MAINTAIN EXISTING DRAINAGE PATTERN OR AS DIRECTED BY LANDSCAPE ARCHITECT.
3. SMOOTH AND COMPACT SUBGRADE PRIOR TO PLACING SUBBASE AND TRAIL SURFACE.



1

STONE DUST TRAIL WITH 6" BASE

NOT TO SCALE

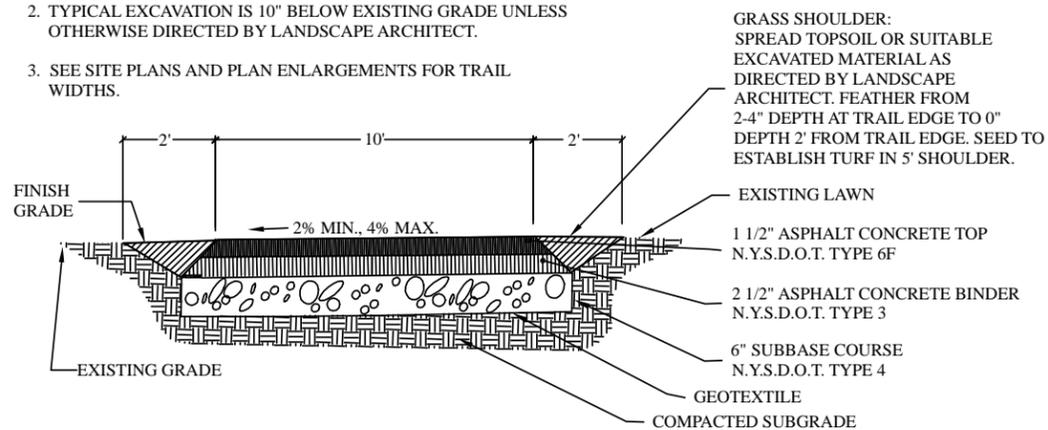
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STONE DUST TRAIL WITH 2" BASE

NOT TO SCALE

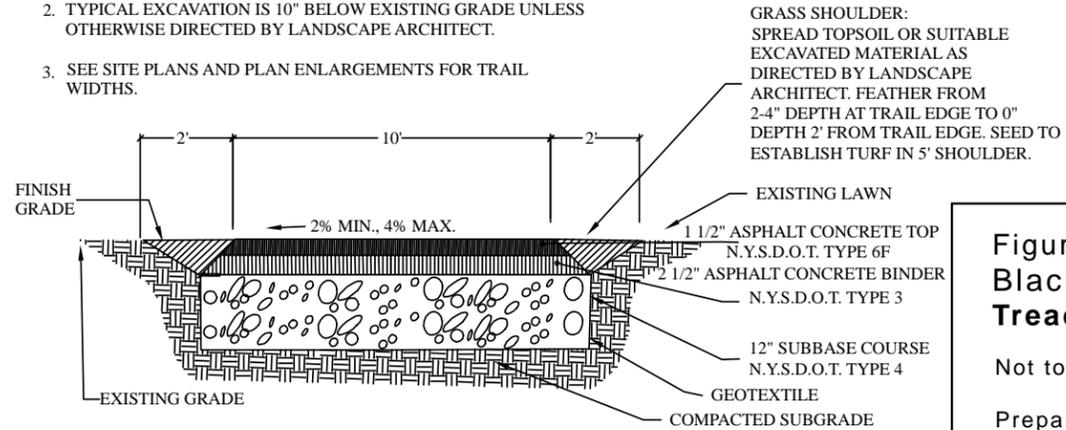
NOTES:

1. PITCH TRAIL SURFACE TO MAINTAIN EXISTING DRAINAGE PATTERN OR AS DIRECTED BY LANDSCAPE ARCHITECT.
2. TYPICAL EXCAVATION IS 10" BELOW EXISTING GRADE UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT.
3. SEE SITE PLANS AND PLAN ENLARGEMENTS FOR TRAIL WIDTHS.



NOTES:

1. PITCH TRAIL SURFACE TO MAINTAIN EXISTING DRAINAGE PATTERN OR AS DIRECTED BY LANDSCAPE ARCHITECT.
2. TYPICAL EXCAVATION IS 10" BELOW EXISTING GRADE UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT.
3. SEE SITE PLANS AND PLAN ENLARGEMENTS FOR TRAIL WIDTHS.



**Figure V-17
Black Diamond Trail
Treadway Cross Sections**

Not to Scale

Date: 4-2-02

Prepared by:
Northeast Greenways
Larsen Engineers

Prepared for: New York State
Office of Parks, Recreation and Historic
Preservation - Finger Lakes Region

3

ASPHALT TRAIL

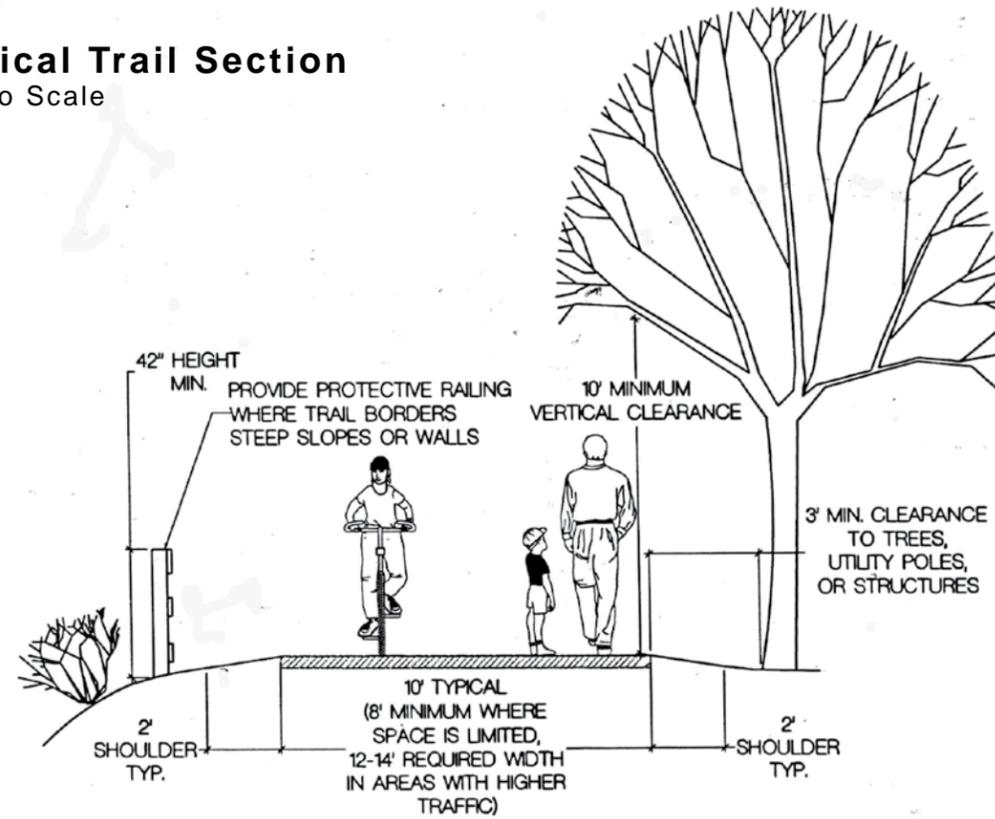
NOT TO SCALE

4

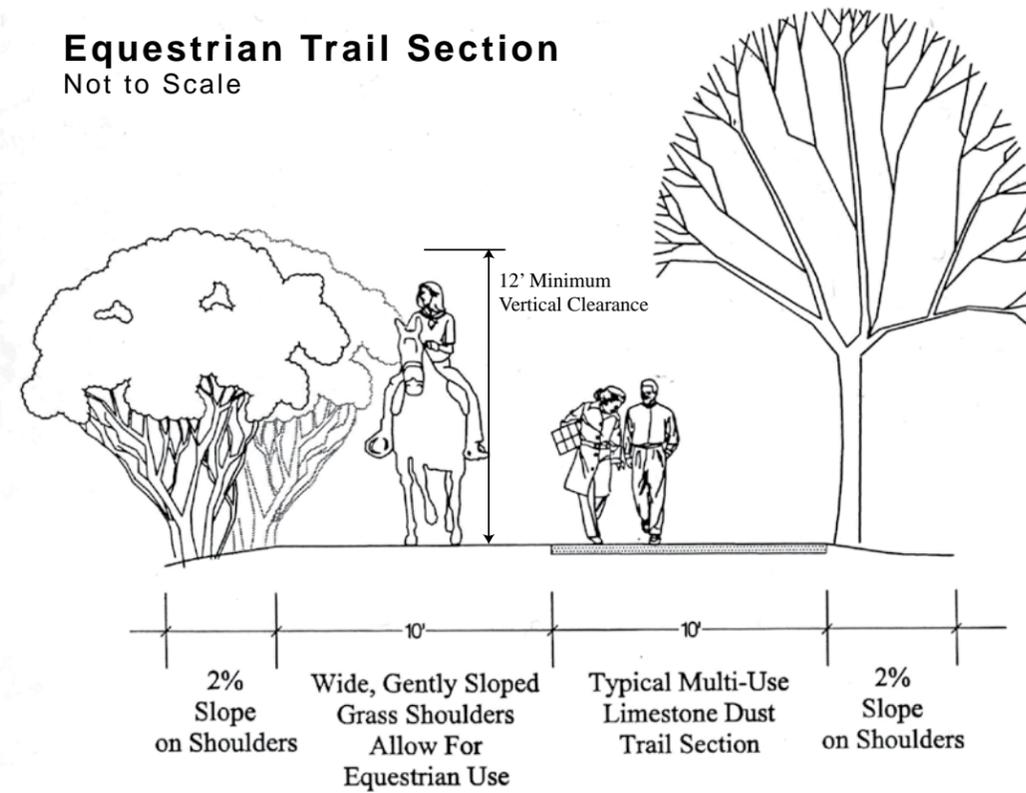
HEAVY DUTY ASPHALT TRAIL

NOT TO SCALE

Typical Trail Section
Not to Scale



Equestrian Trail Section
Not to Scale



Rail with Trail Section
Not to Scale

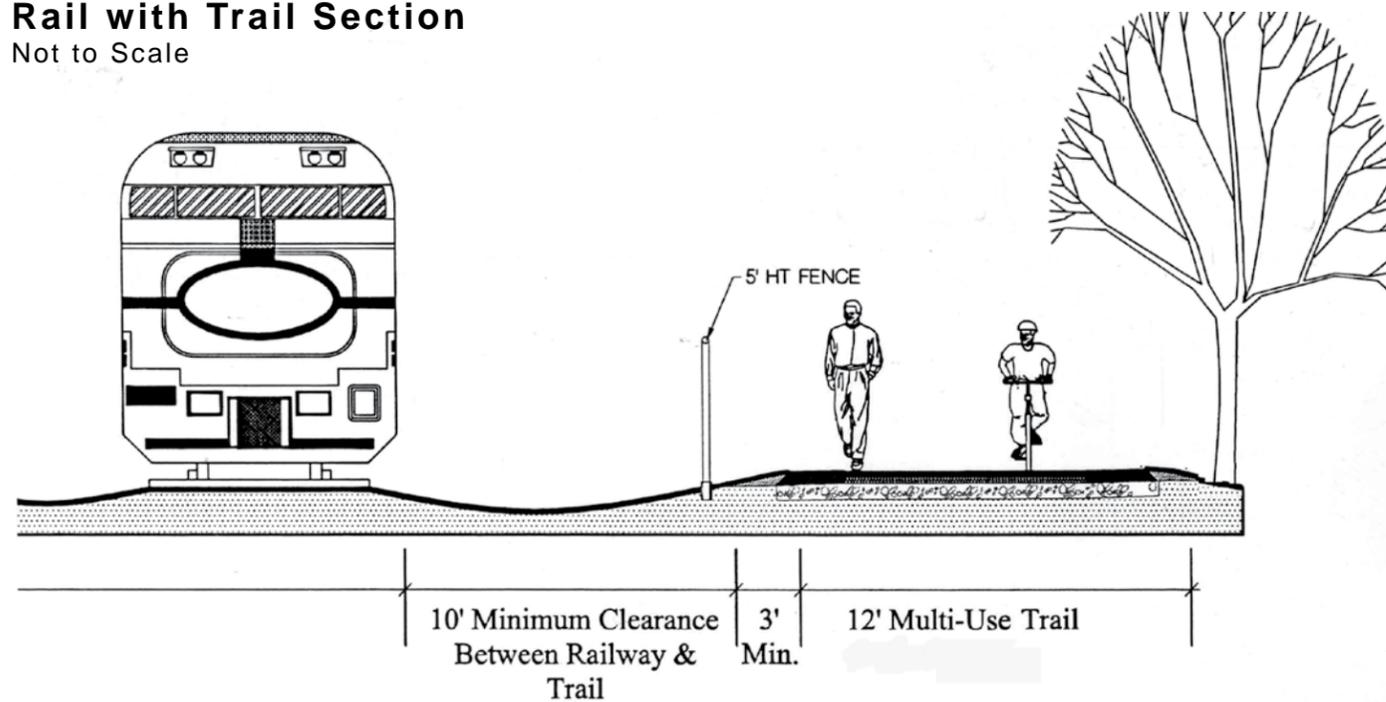
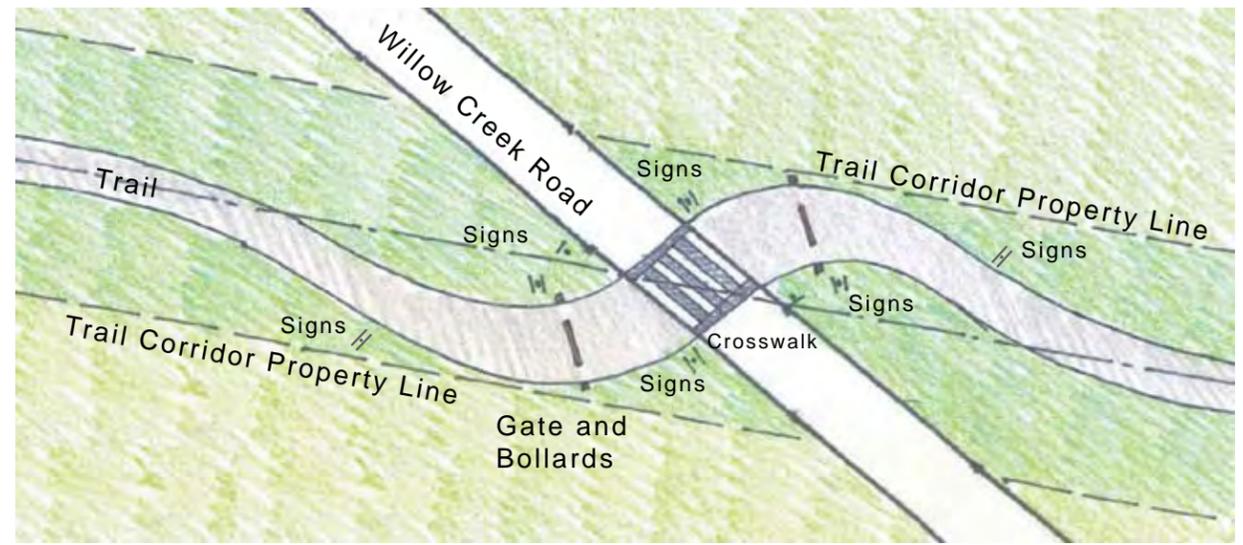
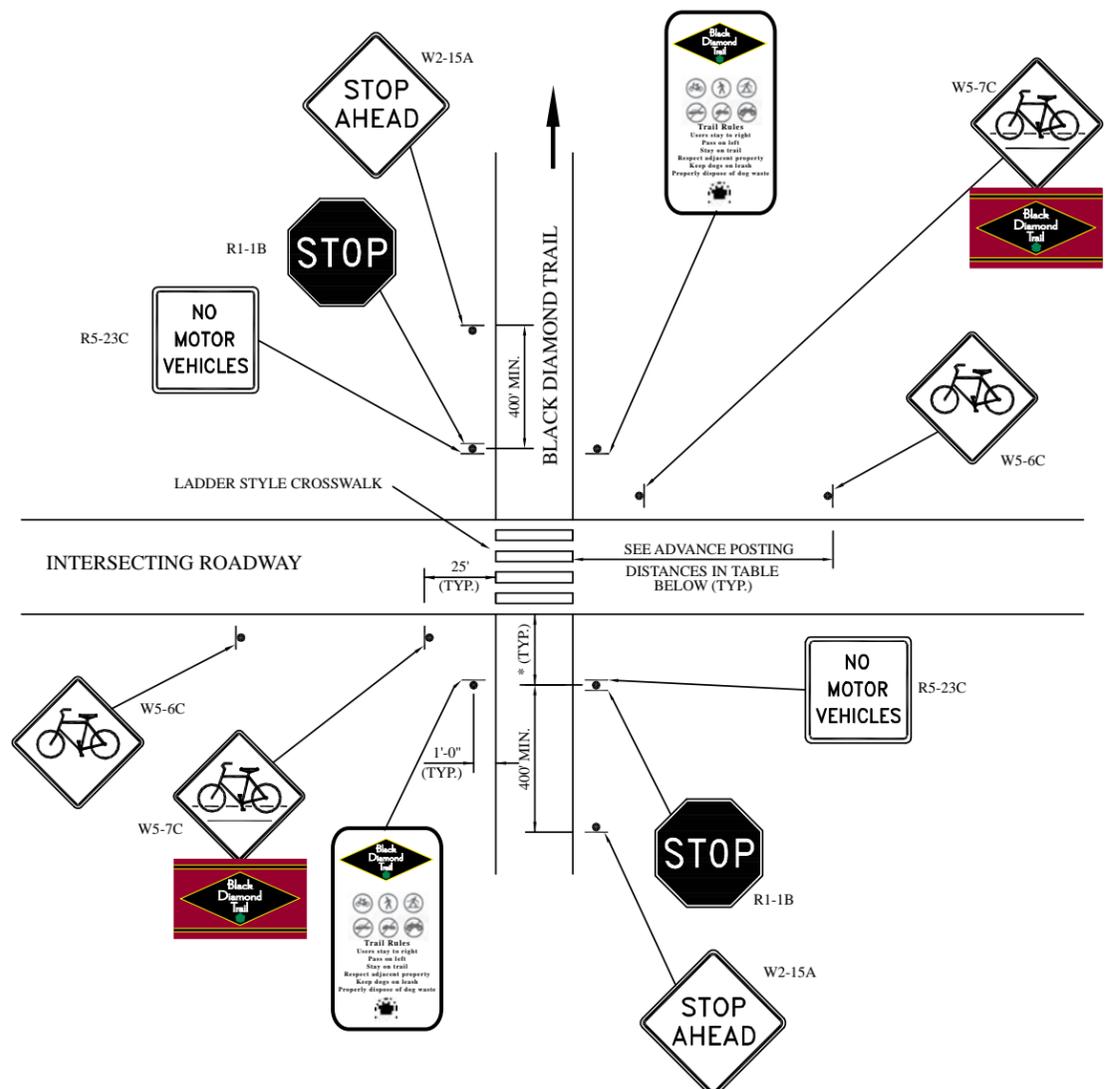


Figure V-18
Black Diamond Trail
Typical Trail Sections

Scale: Varies Date: January 2007

Prepared by: Northeast Greenways

Prepared for: New York State
Office of Parks, Recreation and Historic
Preservation - Finger Lakes Region



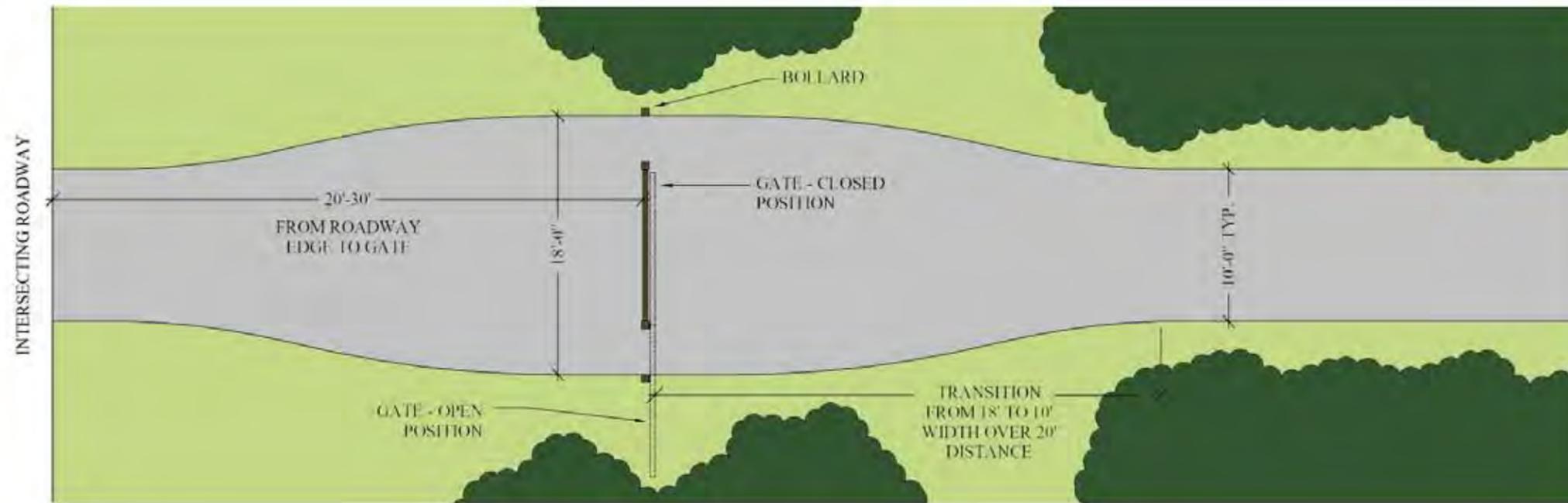
When the trail crosses roadways at an acute angle, trail alignment should be adjusted to create a crossing perpendicular, or as close to perpendicular as possible to the roadway. Not only will this enhance visibility, but tight radii will slow down trail users as they approach the intersection. It is important to maintain sight lines to traffic control devices (gates and bollards) and signage for trail users approaching the intersection.

85 PERCENTILE APPROACH SPEED (MILES PER HOUR)	20	25	30	35	40	45	50	55	60	65
ADVANCE POSTING DISTANCE (FEET)	200	260	355	450	545	640	735	830	920	1015

ADVANCED POSTING DISTANCES FOR SIGNS

Figure V-19
Black Diamond Trail
Typical Intersection Treatment

Not to Scale Date: 4-02-02
Prepared by: Northeast Greenways
Prepared for: New York State
Office of Parks, Recreation and Historic
Preservation - Finger Lakes Region



1 PROPOSED GATE AND BOLLARD LAYOUT AT ROADWAY INTERSECTIONS
NOT TO SCALE

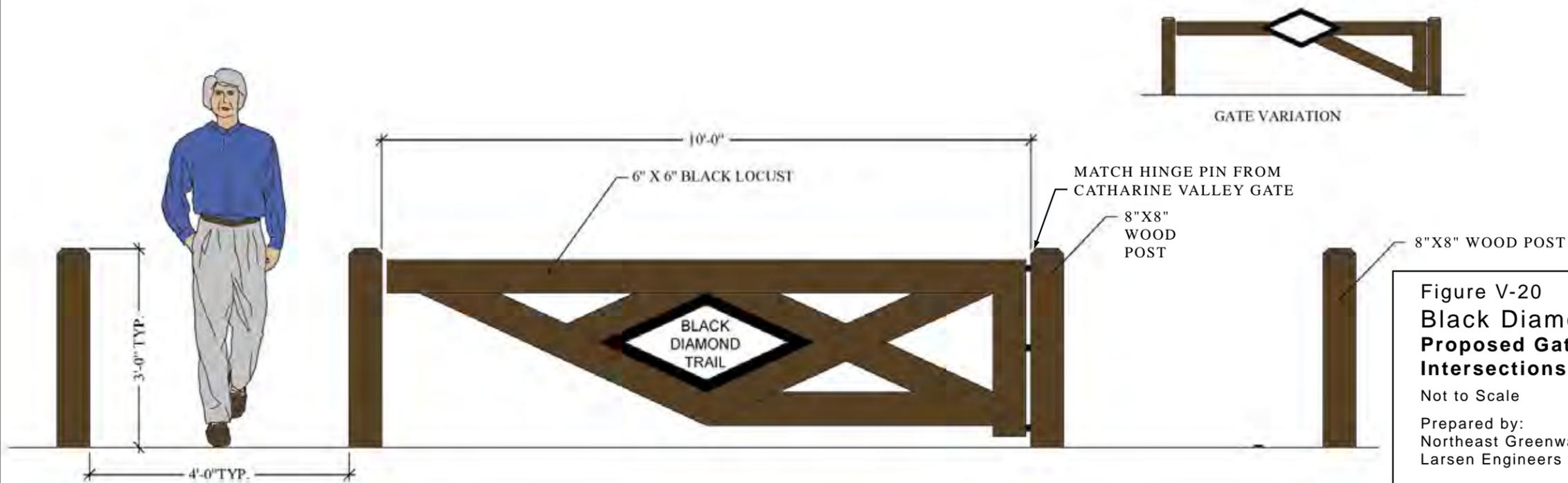
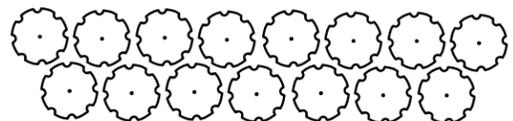
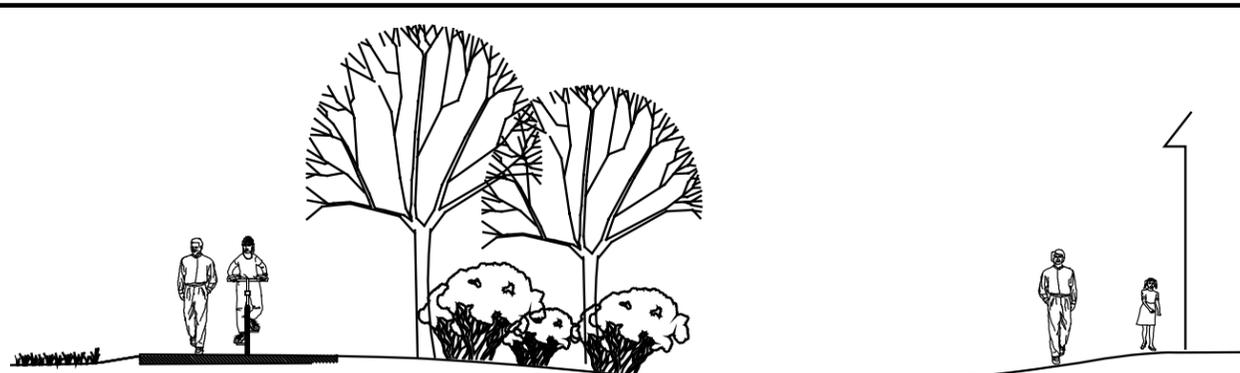


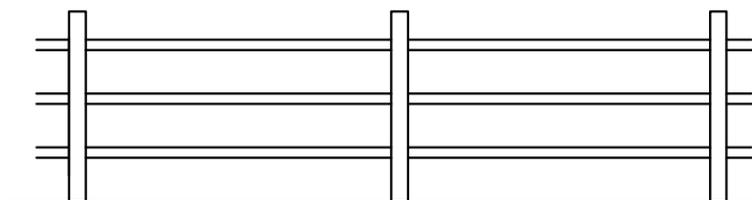
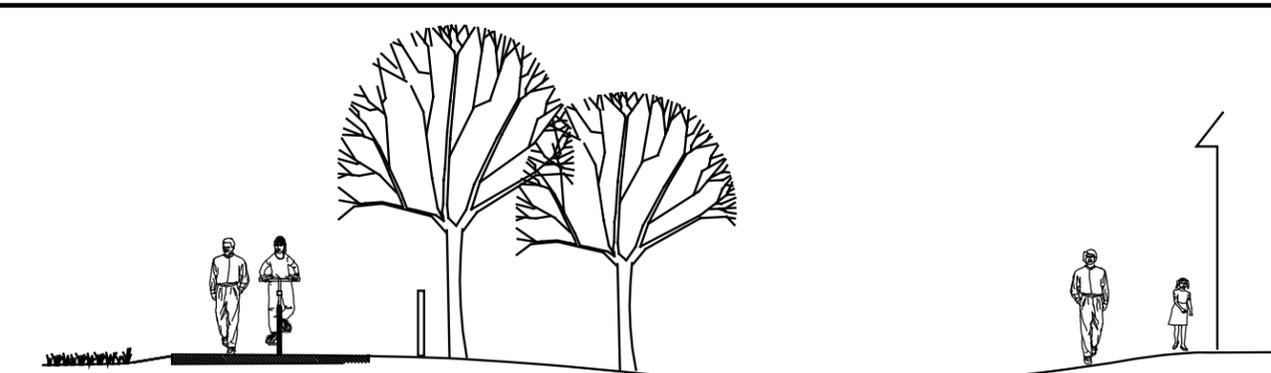
Figure V-20
**Black Diamond Trail
 Proposed Gate for Trail/Road
 Intersections**
 Not to Scale Date: 4-2-02
 Prepared by:
 Northeast Greenways
 Larsen Engineers
 Prepared for: New York State
 Office of Parks, Recreation and Historic
 Preservation - Finger Lakes Region

2 PROPOSED GATE - SECTION
NOT TO SCALE



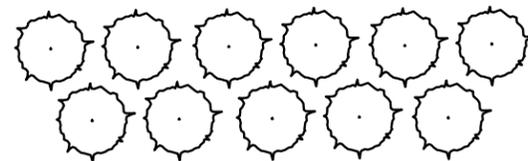
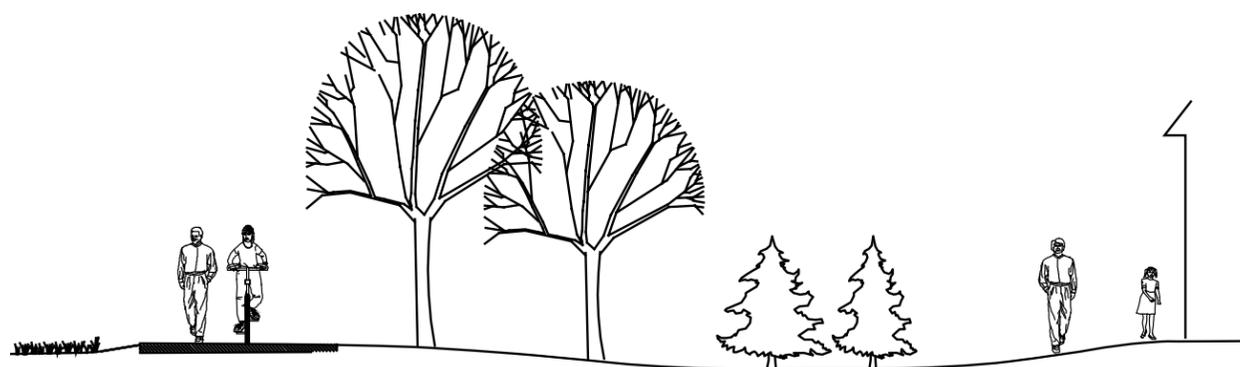
Shrub Planting Along Trail Edge

The use of deciduous, native shrub materials is the preferred technique for providing trail screening for adjacent property owners. Suitable species such as viburnums and dogwoods should be planted 6' on center (+/-) as needed to create a visual barrier or supplement existing hedgerow planting.



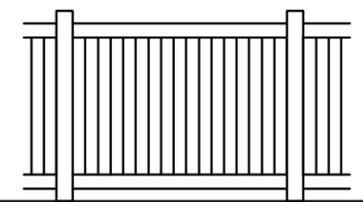
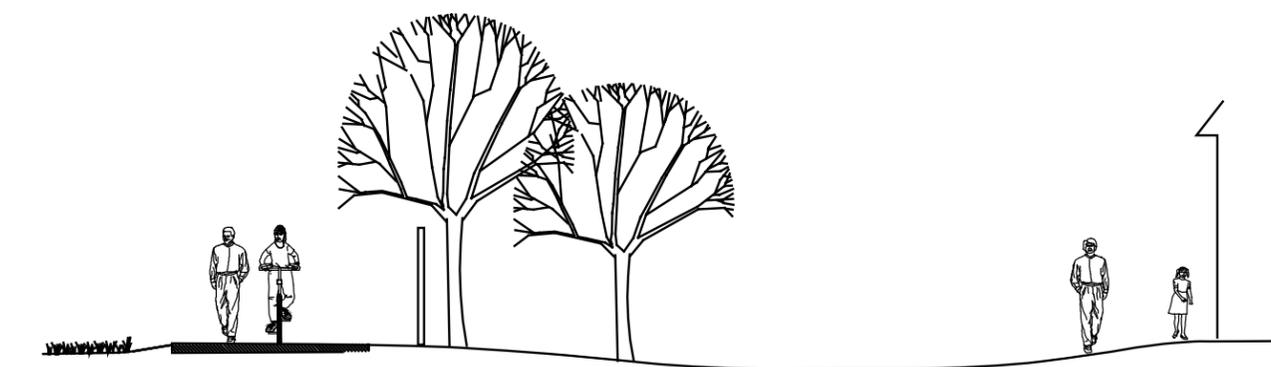
Post and Rail Fence

A post and rail fence provides an attractive edge treatment for the trail. While not visually screening the trail or adjacent properties, it suggests to trail users that they should respect adjacent private properties and stay on the trail.



Conifer Planting Along Trail Edge

Where a dense, year-round visual screen is requested, coniferous trees including spruce and hemlock are recommended. Trees can be planted from 15' to 20' on center and can range in size from 3' to 7' in height at planting time. Where a dense screen is required a double row of trees or a more random planting pattern can be effective.



Barrier Fence

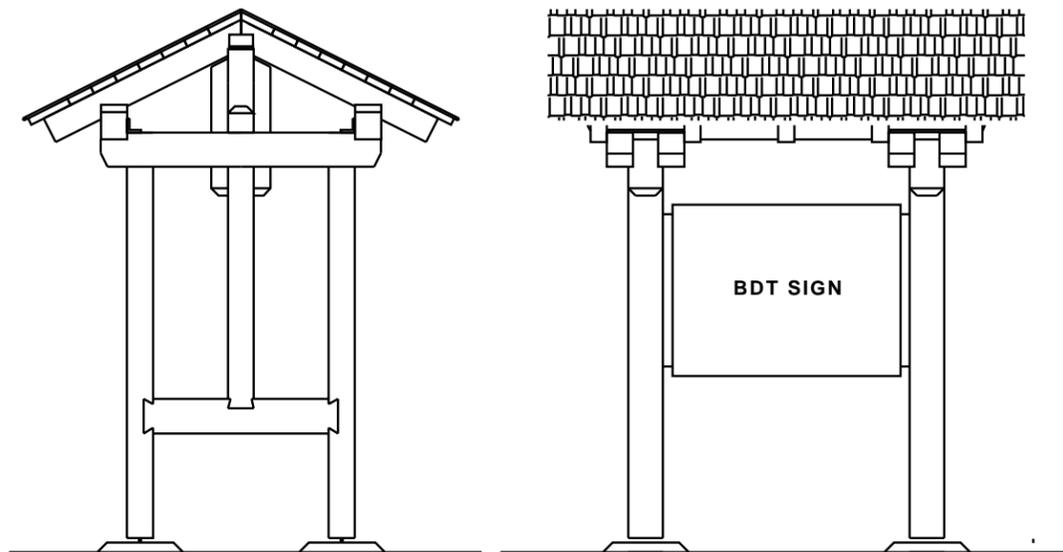
Where the trail is in close proximity to adjacent residences or other buildings a solid stockade fence is recommended to screen views for trail users and to preserve privacy for adjacent land owners. The fence should be at least 6' in height.

**Figure V-21
Black Diamond Trail
Screening Techniques for
Adjacent Properties**

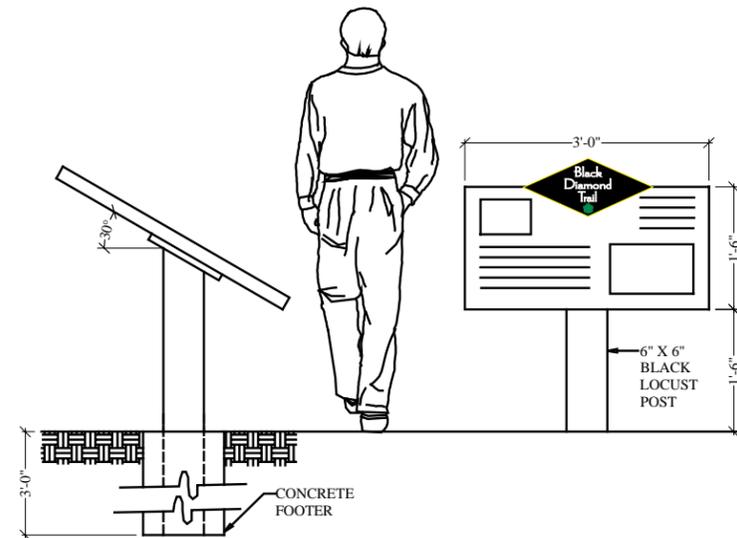
Not to Scale Date: 4-2-02

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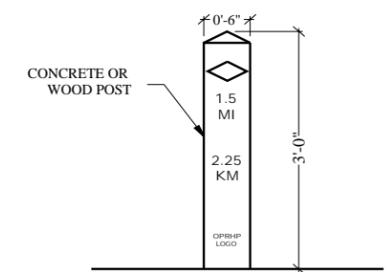
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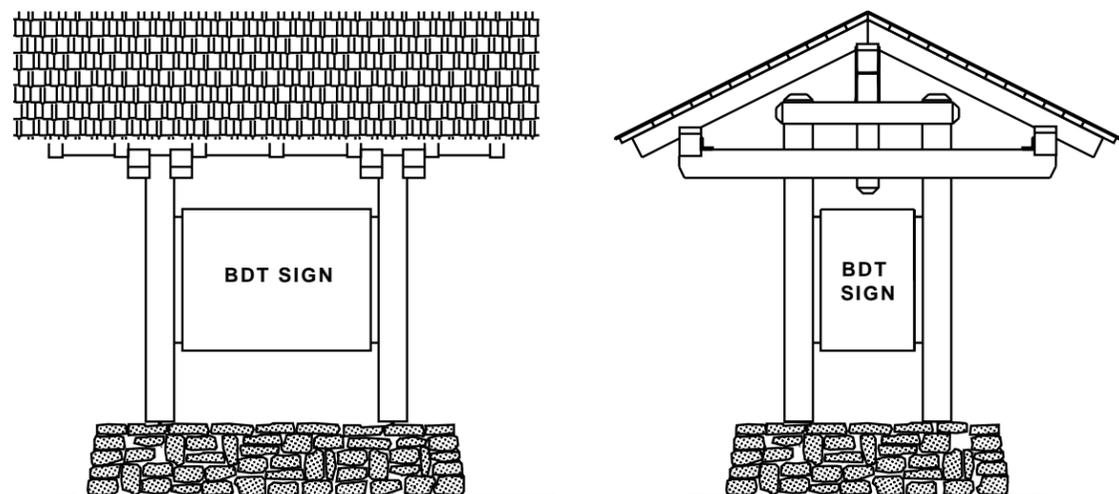
TWO-SIDED KIOSK



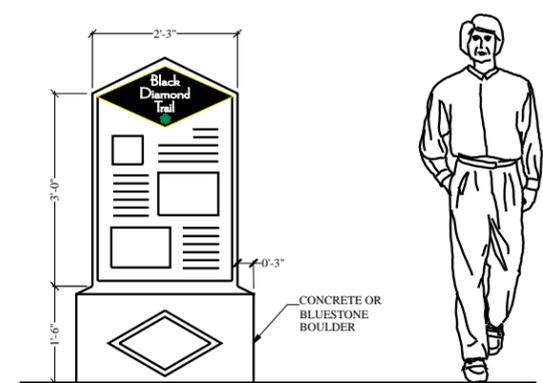
INTERPRETIVE SIGN



MILE MARKER



FOUR-SIDED KIOSK



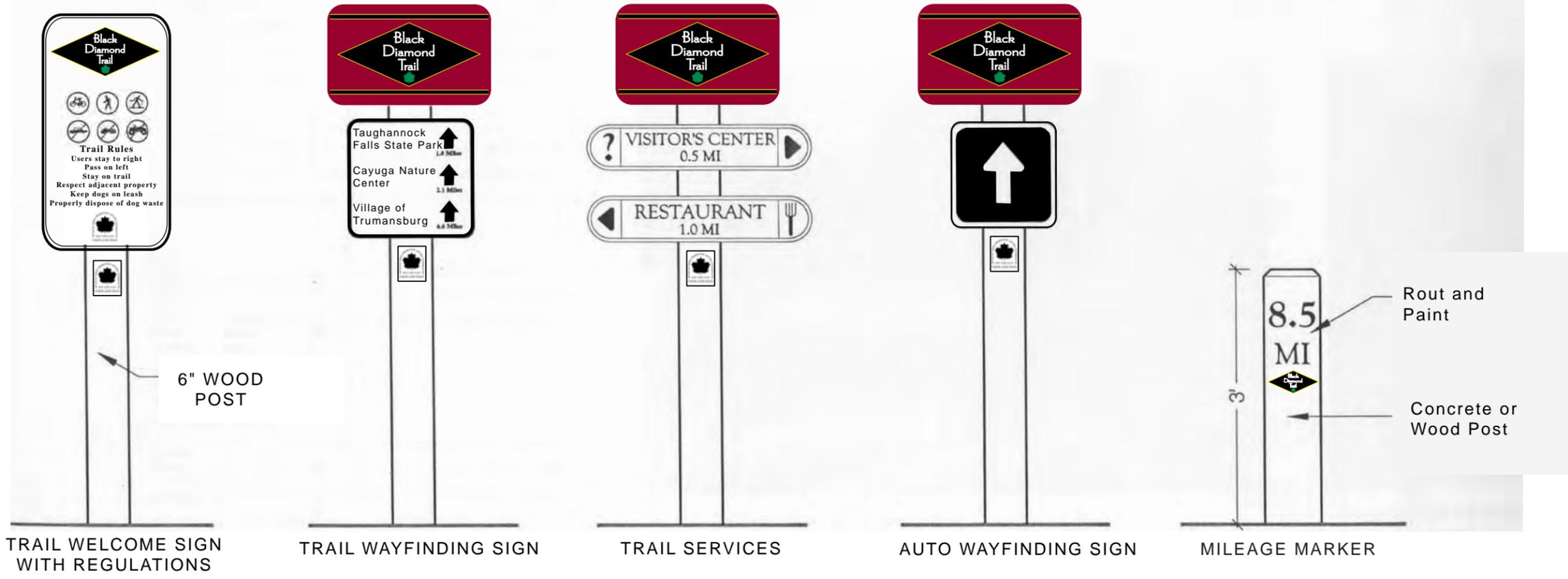
SMALL UPRIGHT DIRECTORY

Figure V-22
Black Diamond Trail
Kiosk and Interpretive Sign Designs

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TRAIL WELCOME SIGN WITH REGULATIONS

TRAIL WAYFINDING SIGN

TRAIL SERVICES

AUTO WAYFINDING SIGN

MILEAGE MARKER

Figure V-23
**Black Diamond Trail
 Trail Signage**

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