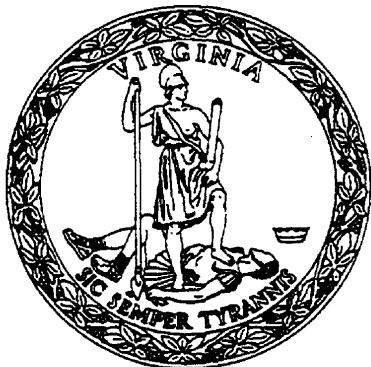


**REPORT OF THE
DEPARTMENT OF CONSERVATION AND RECREATION**

**A FEASIBILITY STUDY FOR THE
ESTABLISHMENT OF A HORSE
TRAIL CONNECTING THE
VIRGINIA HORSE CENTER AND
THE HOMESTEAD HOTEL**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



HOUSE DOCUMENT NO. 54

**COMMONWEALTH OF VIRGINIA
RICHMOND
2000**

James S. Gilmore, III
Governor

Paul Woodley, Jr.
Secretary of Natural
Resources



David G. Brickley
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

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December 20, 1999

To the Honorable James S. Gilmore, III, Governor
And the General Assembly of Virginia

It is with great pleasure that I present to you the findings of the study of the feasibility of developing a horse trail connecting the Virginia Horse Center in Lexington with The Homestead in Hot Springs. The Department of Conservation and Recreation has conducted this study in accordance with House Joint Resolution 525. The study has determined that it is both feasible and desirable to develop such a horse trail. It is recommended that the trail go through Douthat State Park.

The horse trail would be approximately 75 miles long and would provide access to some of our most scenic landscapes in Rockbridge, Alleghany, and Bath Counties. It should become popular for recreational trail riding as well as for world class level competitive events such as the Pan Am Games and the Olympics. It will compliment the outstanding facilities already offered at the Virginia Horse Center. It should also create significant economic opportunities within the region.

The Department of Conservation and Recreation wishes to thank the enthusiastic support it received in the conduct of this study from Senator Malfourd W. "Bo" Trumbo and Delegate R. Creigh Deeds, sponsors of House Joint Resolution 525. Many citizens, local governments, agency representatives, the Virginia Horse Council, and businesses and organizations provided assistance and lent their support. There is strong support within the region for developing this trail system and the necessary infrastructure. I am pleased to add my support to theirs.

Respectfully submitted,

Sincerely,

A handwritten signature in black ink that reads "David G. Brickley".

David G. Brickley

Attachment

PREFACE

House Joint Resolution 525 directed the Department of Conservation and Recreation to study the feasibility of developing a horse trail that would connect the Virginia Horse Center in Lexington with The Homestead in Hot Springs. The Department of Conservation and Recreation thanks the members of the Horse Trail Feasibility Study Committee for the many hours of assistance they provided in developing this study. In particular, thanks go to Albert Nicely for his thorough understanding of horses, riders, and wagon drivers; and especially for his knowledge of the trail resources in the study region. Frank Farmer is commended for having the vision to see the potential benefits to be derived from having such a trail and for building support for that vision. Larry Dew did much of the preliminary route study and alternatives development. Senator Malfourd W. "Bo" Trumbo and Delegate R. Creigh Deeds shared the vision and sponsored the resolution that authorized the feasibility study. The members of the Virginia Horse Council were highly supportive and had representatives at all meetings. Many citizens participated along with federal, state, and local agency representatives and provided insight, advice, and solutions to the many obstacles identified in the early analysis. The staff at Douthat State Park hosted our many meetings and demonstrated the 'can do' spirit that will ensure the success of the Virginia Horse Center to The Homestead Horse Trail. Robert S. Munson, from the Division of Planning and Recreation Resources, was the principal investigator and author of this report.

**Virginia Horse Center to The Homestead Horse Trail
Feasibility Study**

Table of Contents

	Page
Preface	i
Executive Summary	1
I. Introduction	3
A. Reason for Study	
B. Study Area	
C. Study Process	
D. Environmental Assessment	
II. The Region	8
A. Land Ownership Patterns	
B. Major Transportation Corridors	
III. Existing Horse Trail Components	9
A. Existing Public Facilities	
B. Key Elements and Destinations	
C. Support Facilities	
D. Demand for Horse Trails	
E. Supply of Horse Trails	
IV. Resource Analysis	11
A. Natural Resources	
1. Landform Characteristics	
2. Geology and Soils	
3. Hydrology	
4. Vegetation	
5. Wildlife	
B. Recreational Resources	
1. Facilities	
2. Use Levels	
3. Wilderness	
4. Scenery	
C. Cultural and Historic Resources	
1. Cultural Resources	
2. Historic Resources	
V. Issues and Findings	16
A. Introduction	

	1. Environmental Impacts	
	2. Routing	
	3. Private Property	
	4. Management, Operations, and Maintenance	
	5. Construction Costs	
	6. Support Facilities	
	7. Funding	
	8. Virginia Horse Center Impacts	
	9. Health and Safety	
	10. Wilderness	
	11. Driving Trail	
	12. User Conflicts	
	13. Law Enforcement	
	14. Conversion of Uses	
	15. Fees and Charges	
	16. Justification for the Trail	
	17. Promotion and Information Dissemination	
	18. Use of Trails at the Homestead	
VI.	Criteria for Evaluation of Route Segments	26
VII.	Recommendations	27
VIII.	Recommended Trial Route Description by Segment	28
	A. Horseback Riding Trail	
	B. Driving Trail	
IX.	Horse Trail Route Maps	33
	Appendix	
I.	House Joint Resolution 525	36
II.	Cost Analysis	37
III.	Trail Standards	43
IV.	Landowner Liability Act, Title 29.1, Chapter 5, Sect. 29.1-509	46
V.	Equine Activity Liability Act, Chapter 27.5, Sect. 3.1-796.130-133	48

Virginia Horse Center to The Homestead Horse Trail Feasibility Study

Executive Summary

House Joint Resolution 525 (Appendix I.) charged the Department of Conservation and Recreation with conducting a study to determine the feasibility of creating a horse trail joining the Virginia Horse Center in Lexington and The Homestead in Hot Springs. The Virginia Horse Center to The Homestead Horse Trail is an idea that has been gathering momentum for several years. The exciting success of the new Virginia Horse Center has demonstrated the amount of enthusiasm there is in Virginia for equestrian activities. Trail riding is a popular activity enjoyed by many horse owners. A popular competitive event is horse endurance rides that use trails like the one being proposed. Completion of this trail could bring competitors from across the country and around the world. The positive publicity and economic benefits to be derived from these events are significant.

The beautiful scenery and large blocks of publicly owned land in this corridor makes the setting for this horse trail very practical and attractive. The Jefferson and George Washington National Forest, Douthat State Park, and Goshen Wildlife Management Area provide large contiguous blocks of public lands through which to route the horse trail. Major components of the proposed trail have been identified on these public lands. Where private lands must be crossed, easements or rights-of-way will need to be acquired.

Two different types of trails are proposed by this study. The first is a horseback riding trail and the second is a wagon/carriage driving trail. The riding trail is almost 75 miles long. The driving trail is nearly 55 miles long. Two alternatives for the first segment of the riding trail have been identified. Opportunities for loops and side trips are plentiful. The potential for completing both trails is high.

The Department of Conservation and Recreation held four planning meetings with the Feasibility Study Steering Committee and one public input meeting to develop the findings of this report. The result of this analysis is that it is both feasible and desirable to develop a horse trail that connects the Virginia Horse Center in Lexington with the Homestead Hotel in Hot Springs. If developed and managed properly, this trail will become a popular resource for recreational trail riding as well as for competitive events. The high quality facilities at the Horse Center will be complimented by the addition of these trails. The resulting package will place the Commonwealth in the position of being able to compete on a national and international level to host equestrian competitive events such as the Pan Am Games and the Olympics.

FINDINGS

- It is both feasible and desirable to develop a horse trail that will connect the Virginia Horse Center in Lexington with The Homestead in Hot Springs.
- The trail should go through Douthat State Park.
- A route across approximately fifteen miles of private land between the Horse Center and

Goshen Pass will have to be identified and developed. The route as temporarily identified lies on the shoulder of lightly traveled state roads in this eastern section. Two alternatives have been identified for the riding route in this section.

- Campgrounds and parking areas will need to be developed.
- Economic benefits will accrue to localities as private enterprises evolve to meet the need for lodging, food, and support services for trail riders.
- A 501-C-3 non-profit corporation should be formed to provide overall coordination, fund raising, recruiting of volunteers, publicity, programming, and operation of the trail. It is understood that it will take several years for the corporation to attain competency in all of these areas. A government agency will serve as the agency partner to assist in the interim.
- The Department of Conservation and Recreation should serve as the agency partner for the non-profit trail organization. The role of agency partner will require the addition of 5 new personnel to Douthat State Park's staffing level. They will be charged with providing administration, development, engineering, environmental reviews, construction supervision, training, and law enforcement for the both the riding and driving trail. Douthat State Park will also need to provide administrative and support facilities for the horse trail staff.
- The trail should be developed in four phases.
 1. First Phase should be an Environmental Impact Study and is estimated to cost \$200,000. This study is required because so much of the trail will be located on federal lands.
 2. Second Phase should be development of the majority of the trail on public lands and those private lands where leases have been conditionally approved. Necessary campgrounds and support facilities on public lands are included in this phase. This phase also includes the driving trail. This phase is estimated to cost \$1,460,000.
 3. Third Phase would involve development of the trail across private lands on the eastern end of the trail. Building community support for this corridor should begin now. This phase is estimated to cost \$757,500
 4. The Forth Phase will develop the spur trails from Douthat to Clifton Forge and Covington. This phase is estimated to cost \$ 200,000.
- In addition to the costs of construction, annual costs for staffing and operating the trail will be approximately \$400,000, for DCR, and another \$275,000, for the non-profit corporation. Annual maintenance costs are estimated at \$50,000-\$100,000 depending on weather, use levels, and amount of volunteer support available.
- The costs estimated above reflect a combination of two types of development costs. Where it is practical to expect that volunteers would do the work, costs are low. Where it is expected that the project will be undertaken by contractors, the estimates reflect 1999 costs. The combined figures are low because of the contributions expected from the volunteers who have already come forward with offers to help.
- The timetable for each phase of development is as follows.

Phase 1	1.5 years
Phase 2	2.5 years
Phase 3	2.0 years
Phase 4	2.0 years

Some of these phases and the time associated with them can run concurrently.

VIRGINIA HORSE CENTER TO THE HOMESTEAD HORSE TRAIL FEASIBILITY STUDY

I. Introduction

A. Reason for study

House Joint Resolution 525 (Appendix I.) directed the Department of Conservation and Recreation (DCR) to study the feasibility of developing a horse trail linking the Virginia Horse Center in Lexington with The Homestead located in Hot Springs. The purpose of the horse trail is to allow recreational trail rides and competitive trail riding events utilizing the mostly existing trails in the high country between two nationally recognized attractions: the Virginia Horse Center and The Homestead .

Horse trail riding is an increasingly popular sport. Horse ownership numbers increase annually as do the number of owners who participate in trail riding events. Horse trail riding events are major components of nationally and internationally sanctioned competitive games. The Virginia Horse Center provides facilities for many types of equine competitive events. The addition of highly scenic and challenging horse trails enhances this area's attractiveness for major equestrian competitions.

B. The Study Area

The two main termini for the horse trail are the Virginia Horse Center in Lexington and The Homestead in Hot Springs. The two end points are approximately 30.5 miles apart.

The study corridor for the feasibility study encompasses all of those lands lying between Route 81 and the Virginia-West Virginia Line and lying within a fifteen-mile wide corridor running north and south of I-64.

1. Jurisdictions

The study area involves the counties of Rockbridge, Alleghany and Bath as well as the cities of Lexington, Covington, and Clifton Forge. Much of the identified trail corridor lies on public lands. These include lands administered by the:

- U. S. Forest Service, George Washington-Jefferson National Forest
 - James River and Warm Springs Ranger Districts
- Virginia Department of Game and Inland Fisheries
 - Little North Mountain, Lake Robertson, and Goshen Wildlife Management Areas
- Virginia Department of Conservation and Recreation
 - Goshen Natural Area and Douthat State Park
- Virginia Department of Transportation
 - Secondary roads and parking areas.

Virginia Horse Center

The trail would also cross some private lands. On some of these lands landowners have been contacted and conditional approval given to the concept of the horse trail. These include:

Westvaco
Virginia Hot Springs Company
Goshen Boy Scout Reservation
The Homestead

Other private lands will have to be crossed between the Horse Center and Goshen Pass. As initially proposed, the trail is located on secondary road shoulders. The ideal scenario moves the trail off of roads and on to a cross-country trail that would lie on private lands. No specific route of this trail has been identified.

C. The Study Process.

The Feasibility Study was conducted by the Department of Conservation and Recreation with the aid of a steering committee composed of local government representatives, horse enthusiasts, public land managers, and interested citizens. Staff from the Department of Conservation and Recreation facilitated the steering committee meetings, the public meeting, did corridor research, and wrote the report.

Four steering committee meetings were held at Douthat State Park as well as a public information and input meeting. The public meeting was advertised in local newspapers. Approximately forty persons attended the public input meeting, asked questions, and provided information useful to the study effort. A high percentage of the attendees supported the trail concept. Some recommendations for minimizing conflicts between user groups were made.

It was decided early in the process to try to identify both a driving trail and a riding trail. It was agreed that the two did not have to use the same routes. Local supporters of the trail had spent a number of years identifying potential routes. These proposals as well as numerous other routes identified in the study were fully investigated. Staff met with land managers within the corridor and identified constraints and routes with the capability to handle horse trail use. Following identification of potential routes, those with the highest potential were field evaluated. Based on the findings of the field reviews, preferred routes were identified. These were presented at the public information meeting. No opposition was raised to use of any of the identified preferred routes.

The two temporary alternative routes of the trail between the Horse Center and Goshen Pass lie on lightly traveled secondary roads. The goal is to move the trail off of secondary roads and on to cross country trails. In this corridor, all of the lands are privately owned. No preferred route has been delineated between Goshen Pass and the Virginia Horse Center. Local public support for the horse trail will need to be developed before an off-road route through this area can be identified.

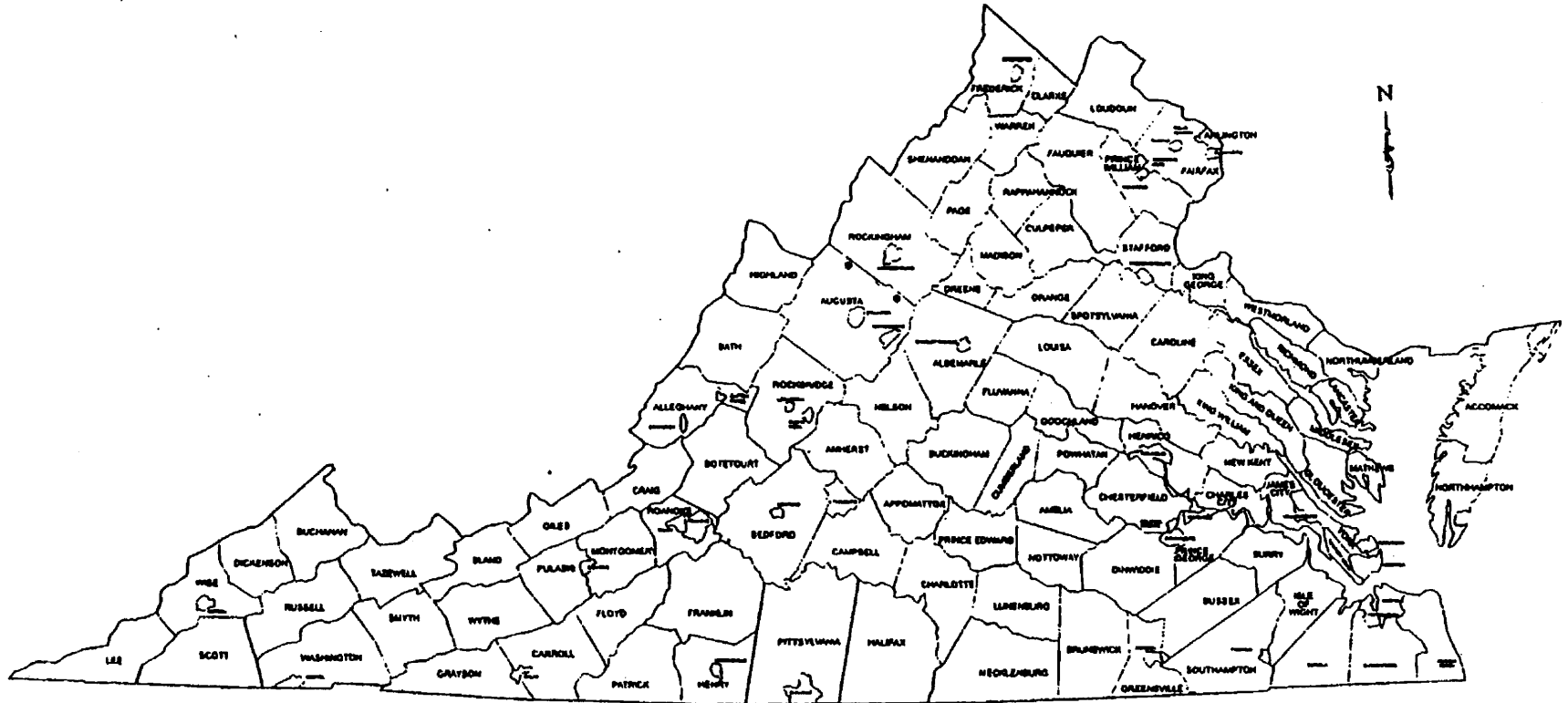
The steering committee identified numerous issues that have been addressed in the conduct of the feasibility study. Planning standards have been established for parking and staging areas, camping grounds, stream crossings, trail widths, user safety, and resource protection. Management, operations, and maintenance issues as well as government agency responsibilities have been addressed. The role of private trail clubs, private citizen supporters, and private enterprise has been delineated.

D. Environmental Assessment

Land managing agencies responsible for lands that would be crossed by the trail identified requirements that will have to be met before the horse trail can be established. An environmental assessment will need to be completed and a decision rendered favorable to construction of the trail across these lands prior to initiating any new construction. Adequate support facilities and an established cadre of builders and maintainers will also need to be in place before the system is advertised as being open to the public. Current agency budgets and staffing levels are not adequate to absorb the cost of this proposed trail.

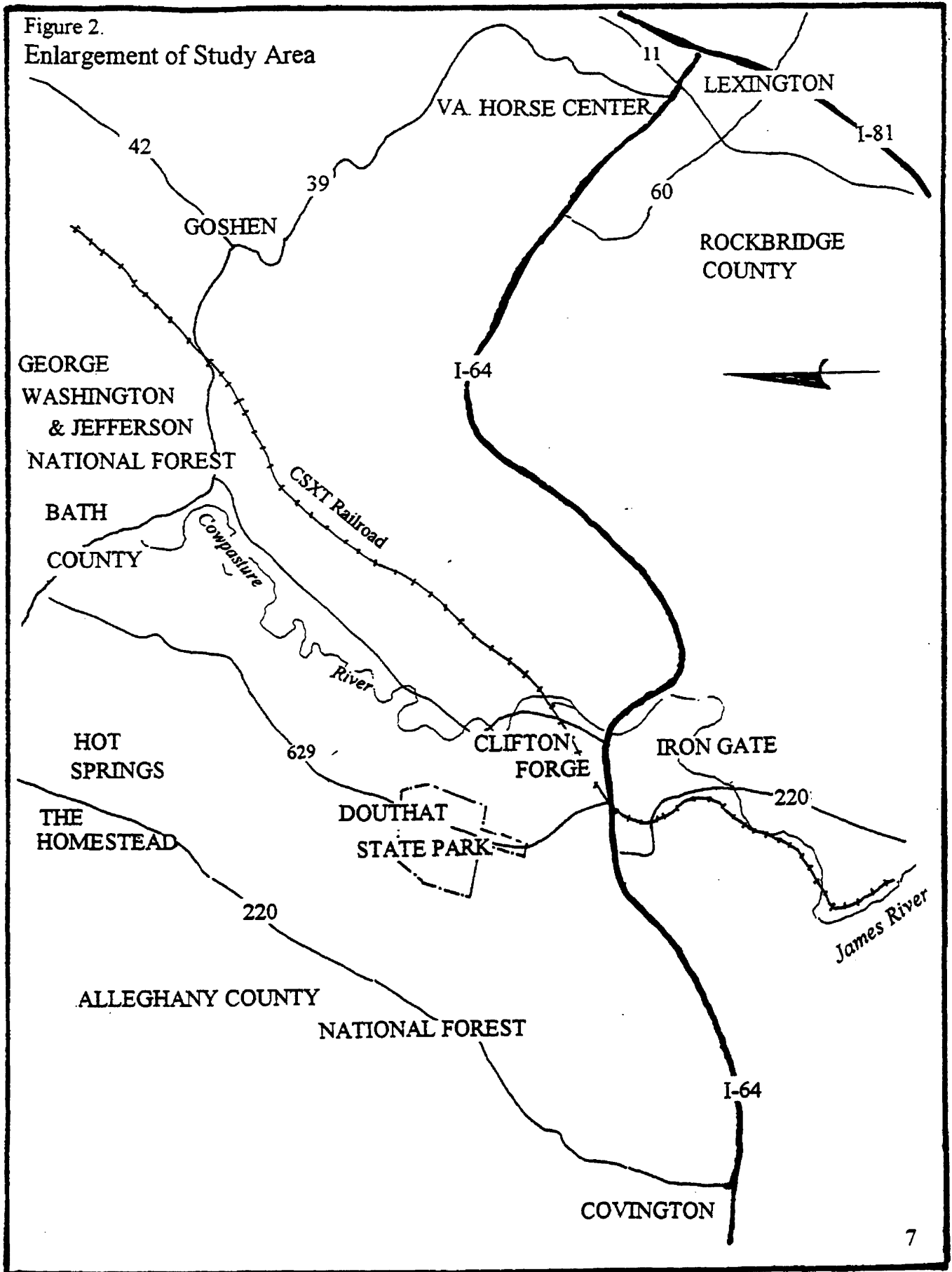
Figure 1. Map of Study Area

COMMONWEALTH OF VIRGINIA



VIRGINIA HORSE CENTER TO THE HOMESTEAD
HORSE TRAIL FEASIBILITY STUDY
DEPARTMENT OF CONSERVATION AND RECREATION
DECEMBER 1999

Figure 2.
Enlargement of Study Area



II. The Region

A. Land Ownership Patterns

Land ownership within the study region is a mosaic of public and private holdings. The U. S. Forest Service manages large blocks of land that tend to follow the mountainous high country, while the wider stream valleys are in private ownership. The Department of Game and Inland Fisheries manages the Little North Mountain and Goshen Wildlife Management Areas which lie in western Rockbridge County. They also administer Lake Robertson in western Rockbridge County that is operated by the county recreation department. The Department of Conservation and Recreation manages Douthat State Park in Alleghany and Bath Counties. The Goshen Pass Natural Area is administered by the Department of Conservation and Recreation.

Much of the proposed wagon driving trail and portions of the riding trail lies on Virginia Department of Transportation (VDOT) right-of-way. One VDOT commuter parking lot has been identified as a potential staging area.

Some large corporate land holdings lie within the study area. WESTVACO owns several large tracts of timberland. The Virginia Hot Springs Company and the The Homestead own lands near the western terminus. The Boy Scouts of American own the Goshen Scout Reservation.

The remaining lands through which the trail passes are privately owned. These private lands include large farms as well as small subdivisions. Some large power lines and gas pipelines crisscross the region. In no parts of the study area did the underlying fee beneath these utility corridors belong to the power companies in areas that would benefit the routing of the trail.

B. Major Transportation Corridors

The study region is bisected by I-64 and the parallel sections of Route 60 from west to east. North to south roads serving the region are Routes 39, 42, 780, 220, and 629. I-64 serves as a barrier to movement across it except where underpasses already exist. Choosing a route that would allow such a crossing was a key design consideration when southern routes were contemplated.

The CSXT railroad bisects the study area between Clifton Forge and Millboro. It is very difficult to obtain permission from the railroad to use portions of their right-of-way or to cross the tracks except at an existing crossing. This limitation funnels the horse trail to existing crossings.

III. Existing Horse Trail Components

A. Existing Public Facilities

- The Virginia Horse Center is an excellent facility to anchor the eastern end of the horse trail. Parking, camping, sanitation and watering facilities are present.
- State secondary roads and rights-of-way make up portions of the route where off road trails do not exist. The VDOT commuter parking lot at the Kerrs Creek is a good staging area for wagon driving trips.
- The DCR parking lot at Goshen Pass can be used as a staging area.
- Existing roads and trails on the Goshen and Little North Mountain Wildlife Management Areas might be used for portions of the riding trail.
- The public use facilities at Lake Robertson could be expanded to accommodate wagon drivers. A horse camp could be developed there.
- The U. S. Forest Service provides trails, roads, picnic areas, and camping sites along both proposed trail corridors. Some potential sites for support facilities have been identified in the Blacks Run area on the Warm Springs Ranger District. In the vicinity of the work center in Covington may be another potential trailhead.
- Douthat State Park has existing trails that can be upgraded to support horse riding and driving use. Horse camping and day use areas are proposed for Douthat State Park.
- Trailhead opportunities exist near the Route 629 exit of I-64 near Clifton Forge. The trail from the parking area will lead to Douthat State Park or to Covington.
- The discontinued Alleghany Scenic Railway line between Covington and Hot Springs is privately owned and may be a potential way to connect the horse trail to Lake Moomaw if public use can be arranged.

B. Key Elements and Destinations

Key elements of the horse trail include the two major termini at the Virginia Horse Center in the east and The Homestead in the West. Douthat State Park has been identified as a major element of the trail because the new master plan for the park calls for the development of horse support facilities that will be important components of the trail system.

Other key destinations identified by the steering committee are Goshen Pass, Clifton Forge, Covington and Lake Moomaw. In addition to the main trail system connecting the Horse Center with The Homestead , a system of trails has been identified that connects these additional key destinations.

The steering committee also recommended that the riding trail should avoid using asphalt roads whenever possible and should strive to avoid vehicular traffic. This has been accomplished except between the Horse Center and Goshen Pass and in a few cases where the proposed corridor has been forced on to roads as it goes through sections of private lands.

The driving trail, by necessity, uses roads and will be a part of the traffic mix on those roads. For the most part, lightly traveled gravel roads were identified.

C. Support Facilities

For horseback riders and wagon drivers to use the trail they will need to have a series of support facilities in place. These include parking areas, campgrounds, picnic and rest stops, watering facilities, directional and informational signing, and maps and brochures depicting the trail route and providing trip planning information.

- Parking lots will need to be large enough to handle the large truck and trailer rigs so popular among trail riders. Lots should probably be constructed with a capacity for 40 rigs minimum. They may not need to be that large initially, but adequate land should be acquired to expand to that size in the future as use grows. Overflow areas should also be added if terrain allows. Water should be available at these staging areas if possible.
- Campgrounds for horse trail users should be provided at 12-15 mile intervals. It is best if stalls are provided so that horses are kept out of the camping sites. Water, sanitation facilities and a hardened camping area are desirable. At Douthat State Park, hot showers and water and electric hookups are proposed in the campground. Private horse camping facilities will be encouraged along the trails as well as other hospitality features such as bed and breakfasts, lodges, and other types of facilities that might cater to horse trail users and provide support facilities for boarding the horses overnight.
- Informational brochures, kiosks, and directional signage will need to be developed and in place before the trail can be considered open.
- Brochures for trip planning purposes that describe the trail system and the range of opportunities in the area will need to be made broadly available.
- Trail maps will detail routes, support facility locations, hazards, emergency telephone numbers, rules for use, etc. These will be available at trailheads and at cooperating agency service locations.
- Informational kiosks will be located at trailheads. They will provide a map of the trail, list current conditions, hazards, and closed areas, emergency numbers, rules for use, and any special information such as fire danger or hunting season warnings.
- Directional signing will be placed at key intersections and use areas along the trail. Since signs can be damaged or stolen, paint marking on trees and posts will also serve to mark the route of the trail. A system similar to the Appalachian Trail paint blazes can be used. A bright color other than white should be used to mark the trail.

D. Demand for Horse Trails

The 1984 *Virginia Outdoors Plan* reported that the percentage of Virginians who participated in trail riding as a recreational activity was 6 percent, or approximately 324,000 persons. By the time the 1996 *Plan* was published, the number of Virginians participating in trail riding activities had increased to 414,000 persons and the number of times per year that they rode had increased substantially. This combination of the number of riders combined with the number of times each rider goes trail riding each year translates into a demand for 162 miles of horse trail statewide.

Numerous other publications and comments from citizens would indicate that the number of riders and the frequency of trips has been increasing. The number of horse owners has shown a major increase in the last decade.

E. Supply of Horse Trails

The supply of designated horse trails in Virginia was measured in the 1996 *Virginia Outdoors Plan* at 1895 miles of trail. While the supply of trails available for horse riding exceeds the measured demand, much of what is inventoried is lightly used due to a number of factors. The distribution of those trails is clustered mainly in the western part of the state on National Forest lands. When evaluating the adequacy of the supply of a recreational resource many factors are considered such as distribution, types of uses, experience offered, usability, support facilities, information available to allow public use, and many other factors.

The lack of adequate trailhead facilities such as parking, directional signs, maps, and loop opportunities limit the number of trails that get much use. It is important that trail riders have parking available at both ends of a trail, or opportunities to loop back to the trailhead for a trail system to receive much use. Long distance trails need to offer campsites, water supplies, and staging areas at appropriate intervals to allow users to plan trips adequately.

When looking at the contrast between experiences offered, an example might be to compare two different trails. The New River Trail State Park is 57 miles long and open for horse trail riding. It is the same type of riding experience for all 57 miles—a cinder base, 8-foot wide and a 2 percent or less grade. The proposed Horse Center to The Homestead Horse Trail will be approximately 75 miles long and will be mostly a mountainous, cross-country trail—a significant contrast to the New River Trail. Both will be popular, but for different reasons.

Lack of information is the critical missing element where most horse trail users are concerned. The key to making the Horse Center to Homestead Horse Trail a success will be the planned system of support facilities and the availability of good informational brochures for trip planning. Few other horse trails in Virginia have all of these components in place.

IV. Resource Analysis

A. Natural Resources

1. Landform Characteristics

The landform characteristics in the study area are customary for the valley and ridge geologic province of the Allegheny Highlands. The mountains trend from northeast to southwest and are composed of hard sandstones, limestones, dolomites, and shales. The rivers and streams that

flow through their valleys tend to be flashy and rise quickly following storm events. The wider valleys are well populated and contain a mix of farms, residential, small town, and industrial areas.

Iron ore was mined throughout much of this region and thousands of acres of the timber that clothed the hillsides were converted to charcoal to fuel the furnaces. The remains of the mines, the haul roads, and the furnaces can still be found throughout the region. Much of the formerly charcoaled land has become National Forest and is once again a healthy, productive forest.

2. Geology and Soils.

The mountains that characterize this region are geologically old. They date from the Paleozoic era. The rocks have been subjected to extremes of pressure and the movement of the earth's crust over millions of years. The spectacular results of this pressure and the folding of the surface are visible at the numerous road and stream cuts in the region. Silurian Tuscarora Sandstone is the predominant hard rock that comprises the backbone and much of the exposed rock seen on these mountains. It is resistant to erosion and therefore remains after the softer shales and limestones have eroded away.

Some of the well known landmarks in the area have Tuscarora Sandstone cores. Two examples are Big House and Little House Mountains.

The type of the soils on the mountainsides tends to differ by the composition of their parent material. Where limestone or dolomite is present, they are more productive than where sandstone and shale are the parent. Coves and alluvial plains have the deeper soils. Productivity is low on many of the thinner soiled steep slopes in the region. Valleys with limestone parent material are highly productive farmlands.

3. Hydrology

The Allegheny Highlands are well watered with perennial streams flowing through each valley. Underground streams, springs, and seeps--common in calcareous areas, keep the many feeder streams flowing even during periods of drought. The Jackson, the Cowpasture, and the Maury are the major drainages. They all flow into and create the James River. The horse trail will be crossing many of the major drainages in the region as it passes from east to west. The Maury, Little Calfpasture, Calfpasture, Brattons Run, Pads Creek, Cowpasture, Wilson Creek, Jackson River, and many smaller tributaries will be crossed on a bridge or by fording. The trail will avoid wetlands, seeps, springs, and damage to riparian areas in an effort to protect water quality and to maintain a good trail surface.

4. Vegetation

Vegetation in the study area is primarily Appalachian hardwood forest predominated by oaks and hickories. Cove hardwood species are common on the better sites. Yellow pines are frequently found on dry, south facing, poorer quality sites. White pine and hemlock can be found on some of the higher elevation or more northern aspects in well watered locations. Maples, yellow poplar, ash, beech, cherry, and birch are common hardwoods with the oaks and hickories on

better quality sites.

Understory vegetation is typical with mountain laurel, dogwood, redbud, sourwood, serviceberry, witch hazel, and blueberries common. A review of natural heritage resources in the vicinity of the proposed trail indicates that no major impacts should be encountered that would preclude use of the trail by horsemen.

Crossing the private lands will put the trail in proximity to farms, fields, gardens, and ornamental shrubs, trees, and flowers. Most of the route will probably be through woodlands and pasture. No impacts to important habitats or sensitive areas are expected.

5. Wildlife

Wildlife within the study area includes all of the native vertebrate and invertebrate species common to the Appalachian Mountains. Trail users can expect to encounter many animals, birds, and insects. Some reptiles and amphibians may also be seen. Black bears, raccoons, skunks, and opossums would be the only wildlife with which conflicts might arise. These problems would most likely be only by chance encounter or in campgrounds. The environmental assessment will identify any sensitive habitats or species that could be impacted by the trail users. The trail will be routed to avoid these areas.

B. Recreational Resources

1. Facilities

Recreational facilities offered in the region include those provided by government and the private sector. Public facilities are offered by local, state, and federal agencies. At the local level, Rockbridge, Alleghany, and Bath Counties and the Cities of Lexington, Clifton Forge, and Covington offer a variety of park and recreational facilities. Playgrounds, ball fields, basketball courts, trails, campgrounds, fishing access, and tennis courts are offered as outdoor recreation activities. In addition, indoor facilities for a wide range of activities are offered.

The state offers many outdoor activities at Douthat State Park which include swimming, boating, fishing, camping, picnicking, nature study, cabins, trails, and adventure programming. The wildlife management areas offer hunting, fishing, hiking, nature study, and trail use opportunities. The facilities at state colleges in the area offer some recreational facilities that meet local needs.

The federal government manages the many recreational areas on the National Forests in the region. Trails, campgrounds, fishing lakes and trout streams, boating, hunting, nature study, and dispersed camping are offered. In addition, the National Forests in the region offer a wilderness experience not available on other lands.

Private recreational facilities in the area include campgrounds, golf courses, play fields, riding trails and show rings, swimming pools, lakes, fishing areas, and private hunting preserves. Fishing is offered at Lake Merriweather at the Goshen Scout Reservation. Many private summer

camps provide their clients with a broad range of outdoor recreational facilities and activities.

a. Trails in the area.

There is a very comprehensive trail network already existing in the study area. Most of the trails are used by hikers, although some mountain bicycle use occurs. There are few designated horse trails in the study area that are specifically managed and maintained for horseback riding use, but there has been a long tradition of trail use by horsemen in this region. Use levels of the existing trail system have been fairly light and no serious trail degradation problems have been noted.

The large acreage of National Forest land is well roaded and has a good trail system. Many of the roads that are not actively open and being maintained for motorized vehicle use are being used as trails.

On Wildlife Management Areas, administrative roads, hunter access roads, and hunter access trails combine to make a comprehensive system of trails on the Wildlife Management Areas.

Douthat State Park has many miles of well maintained, mapped, and marked trails. Many of these connect with trails in the National Forest. None of the trails in the park have been specifically hardened or widened to support horse use, but those that are conducive to horse use have been identified and can be upgraded as resources are made available.

The Chessie Nature Trail is a local trail that joins Lexington with Buena Vista along the banks of the Maury River. This former railroad bed is well used. It is not presently suitable for horse use.

The Goshen Boy Scout Reservation contains an extensive trail system. Several of the trails on the reservation currently support horse use. Others have been identified as being suitable for horse use with improvements.

Saddle clubs in the region frequently trail ride on combination public-private trails. Many landowners allow limited trail riding on their land. By using existing trails on private land with public trails, many combinations of trail rides are possible. Trails on private land are not generally open to the public, but have been made available by landowners to the clubs for special events or under certain conditions.

2. Use levels

The level of use of these recreation areas differs by area, facility, season, and day of the week. Many facilities receive heavy use and exceed their design capacity. Others are lightly used and can handle additional use without site degradation if maintenance is adequate. Douthat State Park, for instance, experiences heavy use of its existing developed facilities and trails. Staff work diligently to keep up with the maintenance on these facilities. The addition of miles of horse trails, staging areas, campgrounds, and other support facilities will necessitate the addition of staff and operating and maintenance funds to the normal complement of resources available to operate Douthat State Park. Similar impacts to the Forest Service can be expected.

3. Wilderness

The U. S. Forest Service administers two wilderness areas in the study area. Steering committee members recommended that the proposed horse trail not go through these wilderness areas due to the steep terrain and concerns for exceeding party size guidelines for wilderness use. The existing trails in the Rough Mountain and Rich Hole Wilderness Areas are lightly used and only minimally maintained. They would not support sustained horse traffic without substantial upgrades.

4. Scenery

Scenery in the study area is spectacular in many areas. The long views of mountains marching off over the horizon are common. From high elevation overlooks, the river valleys lie before you like a patchwork quilt of farm fields, forest plots, and neatly kept homes, lawns and gardens. In the more forested sections of the proposed trail corridor, the views will be more intimate and the forest floor with its diversity of vegetation, wildflowers, shrubs, trees, wildlife, and geology will be the ever-changing scenery. Since the trail is nearly 75-miles long, the scenery changes frequently. Whether riding a ridge, fording a river, or ascending a drainage--the scenery is certain to be interesting and varied.

C. Cultural and Historic Resources

1. Cultural Resources

The lands in the study area were inhabited by native Americans as much as 10,000 years ago. Stone tools found in the study area date to the Paleo-Indian period. Archeological research conducted in the study area finds evidence of Archaic period (roughly from 8000 BC to 1000 BC) transient campsites and some larger campsites situated along the James River and its major tributaries. Woodland period (1000 BC to European contact) evidence is considerably lighter. This preponderance of Archaic period sites as opposed to Woodland period sites is unusual in the state. Most other areas of the state contain more instances of Woodland period occupation. There is a high probability that native American artifacts will be found along the trail corridor. Proposed support facility sites will be assessed for cultural and historic resources prior to any construction or ground disturbing activities taking place.

2. Historic Resources

The European settlement of this area was initiated in the middle of the eighteenth century. Most of this early settlement took place along the river bottoms and other easily accessible areas. The Scotch-Irish who came down the Valley from Pennsylvania were the first settlers. Most of the early records of land deeds date to the period between 1820-1850.

The establishment of the iron mining and smelting industry brought people, roads, canals, and eventually the railroad to the region. Early settlers were farmers but most later arrivals came for the jobs offered by the iron industry and the businesses that supported it. In later years the economy expanded to include many industries and a diversified economy.

V. ISSUES AND FINDINGS

A. Introduction

The steering committee met four times to identify and discuss issues. The public information and input meeting also identified issues. The following analysis identifies each issue raised. Following the issue is the finding of the feasibility study.

1a. Environmental Impacts Issues

- Development of the trail and its subsequent use by horsemen will have an impact on areas through which the trail passes.
- Soil erosion and compaction as well as exposure of tree roots, loss of duff, and soil permeability will accompany use of the trail over time.
- Impacts to wildlife and especially nesting activities near the trail may be an issue.
- Impacts to water quality will occur from runoff, at stream crossings, and near use areas where horses are stabled.
- Avoid sensitive environments.
- Do not exceed the carrying capacity of the trail or the support facilities.
- An Environmental Impact Study will have to be conducted to identify environmental impacts and to address their mitigation.

1b. Environmental Impacts Findings

- Horse trails require more attention to surface stabilization and hardening than hiking or bicycling trails.
- Highly erodible soils should be avoided or aggressively hardened with gravel.
- Water management is critical, so trail upgrades and new construction will require good design and proper installation of dips, slopes, water bars, and turnouts.
- Wetlands, seeps, and riparian areas should be avoided.
- Stream crossing should be hardened at the approaches and cross on a hard bottom.
- Bridges and culverts should be avoided because of the construction costs and maintenance requirements.
- Trail support facilities will be located in areas that will not impact sensitive resources.
- Campgrounds and parking areas will be properly designed and constructed.
- Horses will not be kept in campground areas where people camp.
- Watering facilities will be provided for horses as will holding facilities designed to provide safe places for the horses while protecting trees and other vegetation from damage.
- Manure management systems will be provided. Stormwater runoff from horse holding areas will be properly managed to prevent impact to area surface waters.
- A reservation system will need to be established to ensure that the carrying capacity of use areas is not exceeded.
- An Environmental Impact Study will need to be conducted to identify the potential impacts of the trail and appropriate mitigation measures to address those impacts. No one land managing agency affected by this trail has the resources to conduct this study. A private consulting firm will have to be hired to conduct the study.

2a. Routing Issues

- The trail should use existing trails as much as possible.
- The old stage coach route through Hulls Gap, down Guys Run and then up Brattons Run should be studied.
- The Trail should connect the Homestead with the Virginia Horse Center, go through Goshen Pass, Douthat State Park, and include areas of Rockbridge, Bath, and Alleghany Counties,.
- The riding trail should avoid paved roads and minimize shared use with motor vehicles.
- Power lines and other utility rights-of-way should be used where possible.
- From the Horse Center to Goshen Pass the trail will have to pass through 10.5 miles of private land. Selection of a route through this land is problematic.
- Route 630 in Bath County has been discontinued.

2b. Routing Findings

- The choice of a preferred corridor for the trail was based on the input received in the issues identification process. While some suggested routes were not included (Hulls Gap, Guys Run) others were found to meet the requirements and are being recommended as segments of the preferred trail alignment.
- The Bath County Board of Supervisors will need to bring Route 630 back in to the secondary road system.
- Two trail corridors have been identified. The first is a riding trail for horseback riders. The second is a driving trail for wagons and carriages.
- Wilderness areas were avoided.
- Rockbridge, Bath, and Alleghany Counties are included, as are the cities of Covington and Clifton Forge.
- The trail goes through Douthat State Park.
- A route has been identified that connects to the The Homestead .
- No off-road route has been identified between the Horse Center and Goshen Pass. This 10.5-mile section lies across private land. While the distance can be covered using existing lightly traveled roads, it is preferred that it be located on a separate alignment. Following an effort to build community support for the trail, it is possible that a trail corridor will be identified.
- A potential route using portions of the former Alleghany Scenic Railroad bed would extend the trail to Lake Moomaw.
- The driving trail begins at the Horse Center and ends at Douthat State Park. It uses existing secondary roads and Forest Service administrative roads except for a short section of new construction leading into Douthat State Park.
- A review of utility corridors found that no lines that are located parallel to the proposed alignment of the trail are owned in fee by the power companies. Therefore, only limited use of power line corridors is currently proposed and that use is on public lands. Some use of utility corridors may be possible when locating the trail across private lands.

3a. Private Property Issues

- The trail will have to cross private land if it is to avoid being located on public roads.
- Private property rights will have to be protected.
- Acquisition of a right-of-way will require funding.
- Private landowners will want to know that adequate law enforcement and maintenance staff will be available to protect their interests.
- The trail will have to cross the CSX Railroad corridor.
- The trail may have to pass through the Goshen Scout Reservation.
- The trail may have to pass through WESTVACO and Virginia Hot Springs Company lands.
- Easements will be needed.
- Liability of landowners to suits for damages must be addressed.

3b. Private Property Findings

- The proposed trail route passes through several parcels of private land. The Goshen Scout Reservation may provide an agreement to allow trail users to pass through the reservation using designated existing trails and roads. The Council is considering the development of some horse camping facilities as well as a bunkhouse format for overnight visitors. Use of some of these facilities may be limited during the Scout summer camp season.
- The trail is proposed to pass through lands belonging to WESTVACO. These lands are well roaded and would be suitable for trail use. A lease or memorandum of understanding will need to be developed with the company that recognizes the company's right to manage the property for the production of fiber. Liability will also need to be adequately addressed.
- The trail will need to pass through lands belonging to the Virginia Hot Springs Company. A lease, memorandum of understanding, or other form of permit will be needed to pass through this land. The same is true for the The Homestead property.
- Where the trail crosses other private property, either donated or purchased right-of-way will need to be acquired. In many places, fencing and gates may need to be installed.
- Liability of the landowner will need to be addressed. The Landowner Liability Act (Title 29.1-509) and the Equine Activity Liability Act (Title 27.5, Section 3.1-796.130-133) will assist in addressing these concerns. (see Appendix IV and V)

4a. Management, Operations, and Maintenance Issues

- A management entity will have to be established to manage the trail, enter into easement agreements, provide for funding, maintenance and operations, and to provide assurances to landowners that their interests will be protected.
- The day to day management of the trail will require a staff to provide support to trail users, perform maintenance, provide trip planning information, maps, advertising, event scheduling, facility reservations, and the many other elements of the operations of the trail.
- Horse trails require considerable maintenance as the trail tread wears with use and requires frequent repair. Storm events may close long portions of the trail because of damaged tread or downed trees.
- The U.S. Forest Service, Department of Game and Inland Fisheries, and Department of

Conservation and Recreation all indicated that staff and funding resources were not adequate to take on responsibility for the trail. Each offered to provide some assistance on their lands but require that another entity be established with responsibility for the trail.

4b. Management, Operations, and Maintenance Findings

- A 501.C-3 private non-profit corporation is proposed as the coordinating entity for this trail. This organization will resemble the Appalachian Trail Conference in organization and function.
- It is proposed the Department of Conservation and Recreation, and specifically staff from Douthat State Park, serve as the agency partner to the non-profit. This models the relationship that exists between the Appalachian Trail Conference and the National Park Service. Five additional staff will be needed to provide this function.
- Public land management agencies will continue to manage and provide law enforcement on their own lands. DCR will have to assist with law enforcement on U.S.F.S. lands.
- Construction, maintenance, and operations of the trail corridor and support facilities will initially be undertaken by DCR with the assistance of the non-profit and volunteers. The responsibility of these activities should evolve to the non-profit over time. Agencies will provide support as they are able.
- The non-profit will seek to form a coalition of trail clubs and other organizations to help develop, manage, and maintain the trail through volunteer efforts and donations of monies, materials, equipment, and labor.
- Land managing agencies will provide technical expertise and ensure that environmental, construction, and maintenance standards are met.

5a. Construction Costs Issues

- Signs, information kiosks, and blazing will be needed.
- Staging and parking areas and campgrounds will have to be developed.
- Sanitary facilities and drinking water should be provided at trailheads and campgrounds.
- Stables should be provided at campgrounds.
- Budgets for land managing agencies do not have any funds for this trail project. The cost of constructing the trail and the source of funding to construct it are significant issues.
- While much of the route on public land lies on existing trails, many miles of these trails were not designed or constructed with horse use in mind. Therefore, these trails will need to be upgraded, hardened, widened in some cases, and improvements made to grading, water management structures, and stream crossings.
- New trail segments will need to be constructed to link those segments already existing.
- Trails constructed across private lands may require fencing and gates.

5b. Construction Costs Findings

- The cost of conducting the environmental impact study, renovating existing trails, and constructing new trail tread will be expensive.
- Acquisition of trail corridor across private lands will also be expensive, especially to cover

the costs of doing the legal work associated with those real estate transactions.

- The direct cost of buying fencing, gates, signs, kiosks, parking areas, building campgrounds, restrooms, and developing waste water treatment and drinking water systems will be substantial. An itemized breakdown of costs is included in Appendix II.
- The non-profit organization proposed above would be responsible for raising the funds, soliciting the grants and seeking the donations of materials, equipment, monies, and volunteer labor.
- DCR will have to oversee the design, contracting, purchasing, and construction of projects not undertaken by volunteers.

6a. Support Facilities Issues

- In addition to the actual trail itself, users of the trail will require support areas and facilities. These include campgrounds, parking areas, rest stops, sanitary facilities, drinking water, and informational and directional signing.
- It was suggested that campsites should be spaced approximately 12-15 miles apart.
- Campgrounds can be fully developed or primitive.
- Other types of overnight accommodations were also recommended such as bed and breakfasts, inns, motels, and different types of campgrounds.
- The private sector should be encouraged to provide these accommodations where possible.

6b. Support Facilities Findings

- Trail support facility standards should be utilized as outlined in Appendix III.
- Parking areas and campgrounds are needed at reasonable intervals along the trail. It is recommended that campgrounds be spaced at 12 to 15-mile intervals.
- Each campground, parking area, and rest stop along the route should provide restrooms and drinking water.
- Parking areas should be large enough to handle 40 vehicles.
- Campgrounds should be designed to handle forty camping units. Initially they can be smaller, but room to expand should be identified when a site is chosen.
- Tentative locations for campgrounds are at Goshen Pass, Blacks Run, Douthat State Park, and Lake Robertson.
- Several locations where private campgrounds would be viable were also noted. These were proposed near Rockbridge Baths, California, and Griffith. The Goshen Scout Reservation may develop overnight facilities for trail riders. However, these facilities may be closed during the summer camp season. An alternate campground will be needed. A location east of Goshen Pass should be identified.
- Trailhead parking areas are proposed at the Horse Center, Rockbridge Baths, Goshen Pass, Blacks Run, Griffith, Douthat State Park, Clifton Forge, Covington, Kerrs Creek, and Lake Robertson. The sites at Kerrs Creek and Lake Robertson are for wagon drivers. The parking areas at Blacks Run and Douthat State Park will need to be larger to accommodate wagons.

7a. Funding Issues

- Funding the costs associated with the development and management of this trail system is a

major issue.

- Agency budgets will not absorb these costs.
- Local governments have no funds appropriated for this project.
- A 501.C-3, non-profit corporation was recommended as an entity to be established to coordinate the fund raising that will be needed to develop and manage the trail. This entity could solicit grants, donations, and government appropriations for the various elements of the trail.
- Volunteers could also help defray the cost of developing the trail and maintaining it.

7b. Funding Findings

- Agency budgets will not be able to absorb the cost of developing or managing and maintaining the horse trail.
- If the Department of Conservation and Recreation is going to serve as the agency partner with the non-profit organization formed to manage the trail, then operational funds and staff will be needed to provide for this assistance. It is estimated that a minimum of five new staff persons will be required to provide technical assistance and supervision of trail volunteers and contractors during the initial construction phase of the trail. In addition, support facilities for these staff will be needed.
- The development and operation of the proposed horse campground and day use areas on the park will require additional staff resources and operating funds.
- Operating other campgrounds will be the responsibility of the non-profit organization working with the specific land management agency or with DCR through a lease agreement.
- Funding for developing and managing the trail will have to be raised through a number of sources. Grants, appropriations, donations, and volunteer labor and services will all have to be sought to fund the development and management of the trail and the promotional and informational brochures that will need to be published.
- The trail can be maintained by volunteers. Trail clubs and other organizations could adopt sections of the trail to maintain. This is the same system that is used to manage the Appalachian Trail. DCR may need to provide coordination and heavy equipment assistance.

8a. Virginia Horse Center Impacts Issues

- The Virginia Horse Center is the eastern terminus of the Trail. The center contains a variety of facilities to support horse shows and competitions of many types.
- Providing for the needs of trail riders may require additional parking, camping, and other support facilities in excess of current supply.
- Additionally, issues were identified involving the dovetailing of the operations of the horse trail into those of the horse center. The logistics and mechanics of doing so will need to be worked out.
- A reservation system will be required.

8b. Virginia Horse Center Impact Findings

- The Virginia Horse Center offers facilities for a variety of equestrian events and competitions.

- Adding trail riding and driving support facilities may overtax existing levels of development for parking, restrooms, camping, and cause traffic congestion.
- The Horse Center will incur costs to serve this additional use.
- An equitable means of collecting fees to offset these costs will need to be established.
- New connector trails will need to be constructed to lead trail users from the parking areas to the trail.
- A reservation system will need to be developed that ensures that the number of users does not exceed the capacity of the Horse Center or the other support facilities along the trail.
- Due to its location as the eastern terminus for the trail, the Horse Center will be expected to act as a clearinghouse for information about the trail. The non-profit managing organization will need to be proactive and work closely with the Horse Center staff to provide solutions to problems the trail creates.

9a. Health and Safety Issues

- The health and safety of trail users is an issue.
- Providing for the security of trail users and their property requires adequate law enforcement staff throughout the trail corridor.
- Injuries or other emergencies that occur to users or horses while out on the trail will require some form of communication equipment to call for assistance.
- Emergency response personnel will have to have information about the location of the trail and best routes for accessing all areas of the trail.
- Safe drinking water and sanitary facilities will be required at use areas.
- Trail users will need to understand about hunting seasons, areas open to public hunting, and steps to take to avoid possible injury.
- Brochures and information disseminated to users should provide directions to medical care facilities and telephone numbers for emergency response units.

9b. Health and Safety Findings

- A registration system will be established which keeps track of all trail users and their itinerary.
- Geographic Information System technologies may become available that will allow managers to track registered riders.
- Communication equipment in the form of portable digital phones will allow instant communication in the event of an injury or emergency.
- Law enforcement and emergency medical personnel in the region will be informed of the trail location and best access roads to each segment.
- Trail riders will have emergency telephone numbers listed in their trail guides.
- Trail directional signs and mile markers will help trail users identify their location on the trail.
- Trail guides and signage will inform users about hunting seasons and the location of lands open for hunting.

10a. Wilderness Area Issues

- Wilderness area management limits party size to ten at any one time. This could be a significant limiting factor with some groups or types of competitions.
- Also, due to the limitations placed on the use of power equipment in wilderness areas, trail maintenance and repair following major storm events could be difficult.
- Both the Rough Mountain and Rich Hole Wilderness areas have very few trails and very rugged terrain through which a horse trail would be difficult to construct and maintain.

10b. Wilderness Area Findings

- The proposed trail routes do not go into designated wilderness areas.

11a. Driving Trail Issues

- There is a need for a driving trail as a component of the riding trail that is the purpose of this feasibility study.
- This trail can use a different route than the riding trail, but should start at the horse center and provide for safe driving opportunities.
- Use of paved roads should be minimized.

11b. Driving Trail Findings

- A driving trail that begins at the Virginia Horse Center is proposed.
- This trail is located on existing lightly traveled state roads and U. S. Forest Service administrative roads.
- Much of the route is on gravel roads.
- The driving trail ends at Douthat State Park, but opportunities to extend it to other locations west and north of the park have been identified.

12a. User Conflicts Issues

- There is a concern that the designation of the horse trail on some existing trails will preclude use of those trails by other users.
- There is also a concern that the horse trail will only be available for use by competitors in special events and not by other users.
- Conflicts between hikers, bicyclists, and horsemen while using the same trail are a concern.

12b. User Conflicts Findings

- Concerns for the impacts horses will have on hikers and bicyclists who presently use the trails proposed for the horse trail have been expressed.
- All users of this trail system will be encouraged to adopt "Share-the Trail" yield practices. Signs and printed material will remind users of the hierarchy of yielding.
- Trail maintenance will need to be kept at high levels so that the trails do not become damaged and difficult to walk or ride a bicycle on.

13a. Law Enforcement Issues

- Protection of the lands through which the trail passes from inappropriate uses and protection of private property of users and landowners were identified as issues.

- There is a need for landowners to be assured that a law enforcement presence is available to protect them from inappropriate uses and unlawful users.
- A law enforcement entity will be needed to ensure that users comply with all rules and regulations for use of the trail.

13b. Law Enforcement Findings

- The U. S. Forest Service has law enforcement officers operating on federal lands in the study area. However, they are spread thinly over the forest and will need considerable external assistance to manage incidents on this trail. Because of this, concurrent jurisdiction should be given to state park law enforcement officers on all U. S. Forest service lands through which the trail passes. A lease of the corridor to DCR may need to be executed for this to take affect.
- State law enforcement officers at Douthat State Park and game wardens for the Department of Game and Inland Fisheries provide law enforcement on the lands they manage.
- State police will provide law enforcement services throughout the region.
- Local law enforcement officers have concurrent jurisdiction on federal and state lands in the study area.
- For the trail on private land, state police and local law enforcement officers will be the primary source for assistance.
- For hunting and fishing law violations, game wardens will have primary jurisdiction.
- It is helpful to have a cadre of volunteer trail riders who remind users of rules, trail ethics, and good stewardship practices.

14a. Conversion of Uses Issues

- An issue was raised concerning the affect establishment of the horse trail would have on current uses of public lands through which the trail will pass.
- The Goshen and Little North Mountain Wildlife Management Areas (WMA) are managed for wildlife habitat enhancement and to provide for the uses of hunters and anglers.
- Locating a horse trail through these areas may impact management direction and create conditions that can cause conflicts between hunters and trail users.
- The same sorts of concerns were expressed for the National Forest lands.
- The George Washington National Forest Plan does not identify a horse trail and associated support facilities on either of the two Ranger Districts through which the trail passes. Locating the trail as proposed is a conversion of approved use of these areas. Road designations should not be changed by the addition of horse use.
- The trails in Douthat State Park are designed and maintained for pedestrians. Adding horses will change the look and character of the trails, and the type of experience users will have.

14b. Conversion of Uses Findings

- The routing of the horse trail through Goshen and Little North Mountain Wildlife Management Areas will affect the way in which these areas have been used in the past.
- Large numbers of horseback riders in these areas may affect the relationship between wildlife and people, and interrupt hunting activities.

- The presence of many horsemen in the WMA creates a shooting hazard and adds an element of frustration to hunters who find others down range of a potential shot at game. To address the issue, the trail has been routed around the inside perimeter of the Goshen WMA, thereby lessening the opportunities for hunter-trail rider conflicts and reducing impacts on habitat management activities.
- The conversion of hiking/bicycling trails to horse use does impact the type of experience users might be expecting. The heavy use of a trail by horsemen does result in manure problems that many hikers find unpleasant. These problems will continue and the only recourse for some users is to find another trail in the area to use that does not include horses.
- In Douthat State Park and in the National Forest, only a select few trails will be upgraded to support horse use as part of this trail system. Adequate supplies of hiking and bicycling trails will still be available to meet the demand transferred from the horse trail.
- The contractor conducting the environmental assessment will provide information that the two ranger districts will use to determine what impact the trail will have, if it requires an amendment of the Forest Plan, and if there is support for doing so.
- The environmental impact study will identify impacts and necessary mitigation which the district rangers will use in the decision making process.

15a. Fees and Charges Issues

- The question of how to finance the development and management of the trail evolved into questions of fees and charges.
- It was generally stated that fees should be reasonable and charged for use of support facilities but not for use of the trail itself.
- The question of how to collect fees and charges and to allocate these monies to the appropriate managing entity needs to be addressed.

15b. Fees and Charges Findings

- Fees and charges should be collected for use of parking areas and campgrounds—not for the use of the trail.
- Event participation fees can be charged to defray the cost of sponsoring events and as a way for the non-profit trail management entity to raise revenue.

16a. Justification for Trail Issue

- The question of need arose as an issue. Since there is a large supply of horse trails in the region, why build this one?

16b. Justification for Trail Findings

- Demand for long distance Trails with support facilities and good information for trip planning purposes appears to be high.
- There is a desire to promote tourism in Virginia and economic benefits to the Commonwealth and to localities.
- The Virginia Horse Center is a first class equine event facility that caters to all horse events and competitions except trail riding events. By adding a first class competitive trail to the

range of opportunities provided at the Horse Center, it raises the attractiveness of the center to a higher level when competing for selection as the venue for national and international competitions.

- Several types of events were identified as being appropriate for a long distance trail such as the proposed.
- National and international competitions feature types of cross country rides as endurance events.
- The Pan Am Games and the Olympics each include long distance horse rides in their programs of events.
- Organizations such as the American Quarter Horse Association sponsor competitions for their members and trail riding is one of those events. Many other breed organizations hold similar events.

17a. Promotion and Information Dissemination Issues

- Promoting the trail and the support system will be a major requirement for this trail to become popular. How will it be promoted?
- How will information be disseminated?

17b. Promotion and Information Dissemination Findings

- The non-profit horse trail managing organization and the Virginia Horse Council will provide for the development of proper brochures, media events, advertisements, radio announcements and articles in related horse publications to get the word out about the existence of the trail and to solicit bids for competitions.
- In addition to the non-profit advertising, the Virginia Horse Center will include the trail in their inventory of resources to use in the vicinity.

18a. Use of Trails at The Homestead Issue

- The horse trails at The Homestead are operated for the exclusive use of their customers. This trail should not be promoted as if it is going to The Homestead since under current policy the general public will not be able to use these trails.

18b. Use of Trails at The Homestead Findings

- The Homestead may allow use of their trails under certain conditions. A use agreement or lease will need to spell out these conditions.

VI. CRITERIA FOR EVALUATION OF ROUTE SEGMENTS

A. Horseback Riding Trail Route

The riding trail route selection criteria include the following considerations:

- Priority given to existing trails on public lands suitable for horse use.
- Trails on public lands that could be upgraded to horse use without serious impact were also considered.

- No paved roads or high volume gravel roads should be included.
 - The CSXT railroad could only be crossed at an existing public crossing.
 - Creeks and rivers would probably be crossed using existing bridges or fords. Identify crossing areas suitable for fording.
 - The trail should go through Douthat State Park.
 - Wilderness should be avoided.
 - Provide high country trail segments with good views.
 - Provide water for horses at reasonable distances.
 - On corporate lands identify existing roads and trails away from use areas.
 - Try to use utility corridors.
 - Stay away from sensitive biological areas, historic and cultural areas, highly erodible soils, springs, seeps, and riparian areas.
 - Sections with steep slopes and poor footing should be avoided (shaley areas).
 - Identify sources of water for horses.
 - Identify potential campgrounds.
 - Identify potential parking areas and staging areas.
 - Minimize maintenance costs by good location selection.
 - Rest Areas, campgrounds, and staging areas should average 10-15 miles apart.
- B. Driving Trail Route
- Route should lie on lightly used roads and trails.
 - Rest areas, campgrounds and staging areas should average 15 miles apart.
 - Watering facilities should be provided at reasonable intervals.

VII. RECOMMENDATIONS

- A. It is both feasible and desirable to develop a horse trail that connects the Virginia Horse Center in Lexington with The Homestead in Hot Springs.
- B. Much of the trail will be located on existing trails and roads on public lands.
- C. A driving trail is also feasible from the Horse Center to Douthat State Park.
- D. Douthat State Park lies in the middle of the study area and the master plan calls for the development of horse camping and parking areas. The trail should be routed through Douthat State Park.
- E. Proposed horse camping and day use facilities at Douthat State Park should be priorities for funding.
- F. A 501.C-3 non-profit organization should be formed to coordinate development, fund raising, and to maintain the trail and its support facilities. This entity should raise monies from various sources to develop and operate the trail. It will be modeled after the Appalachian Trail Conference in organization and function.
- G. The Department of Conservation and Recreation should serve as the government agency partner to assist the work of the non-profit. Much of the work of implementing the trail plan will need to be done by DCR staff operating from Douthat State Park in the early years of this project and until the non-profit develops adequate

experience and resources to assume some of the responsibilities. Five additional staff at Douthat State Park will be needed to provide this support.

- H. Funding should be provided to conduct an environmental impact study of the trail on federal, state, and private lands.
- I. Local citizen supporters of the trail should work together with local government and landowners to identify an off road route between the Virginia Horse Center in Lexington and Goshen Pass.
- J. State, federal, and local governments should work together with supporters of the trail to see that it is constructed and adequately supported and maintained.

VIII. THE RECOMMENDED HORSE TRAIL ROUTE BY SEGMENTS

A. Horseback Riding Trail

The Horseback Riding Route is designated by (R-) followed by the segment number.

R-1. Virginia Horse Center to Goshen Boy Scout Reservation.

Two different routes have been identified to get from the Horse Center to Goshen Pass.

Alternative Route One stays east of the Maury River and does not require a fording of the River.

Alternative Two lies west of the Maury River and requires two fords. When the River is too deep to ford, the eastern route can be used.

Alternative Riding Route One. Virginia Horse Center to Goshen Boy Scout Reservation. (23.2 miles)

(Note: a campground may need to be developed between these two points to shorten the distance that must be covered in one day.)

This segment is presently identified on the shoulder of state secondary roads. The preferred scenario would not use road shoulders but would go cross-country through pastures, down fence rows, and through forests. Much of the land through which the trail in this segment must pass is privately owned. The specific cross-country route of this segment has yet to be delineated.

From the Virginia Horse Center, cross Route 39 and proceed to Route 645. Go north on Route 645 for 2.8 miles to Route 728. Turn left on Route 728 and proceed for one mile to Route 622. Turn right on Route 622 and follow it 2.1 miles to Timber Ridge. Turn left on to Route 716 and proceed 1.7 miles to the intersection with Route 727. Turn right and go 1.2 miles to the intersection with Route 712. Turn left and proceed for 2 miles through Bustleburg, cross over Route 252, and proceed to the intersection with Route 729. Stay on Route 712 as it shares a short section with Route 729 and turn right to stay on Route 712 when it leaves Route 729. Continue on Route 712 for 1.1 miles to the intersection of Route 602. Turn left on Route 602 and go .6 miles to a right turn on to a private road that becomes a jeep trail and leads to Jump Rock on the Little North Mountain Wildlife Management Area.

From Jump Rock follow the Tuscarora Trail north along the ridge to the Kelso Trail. Turn left on to the Kelso Trail and proceed until it intersects with the Hunter Access Trail. Turn right and follow the trail to the Hunter Access Road. The Hunter Access Road joins Route 615. Turn right and follow Route 615 around the upper end of Lake Merriweather to the intersection with Route 601. Turn left on Route 601 and go .2 miles to a left turn onto a parallel trail that leads to the Goshen Scout Reservation Horse Camp.

Alternative Riding Route Two. Virginia Horse Center to Goshen Boy Scout Reservation. (14.4 miles). Much of this route lies on lightly traveled gravel roads. It may be possible to keep the trail on these roads if they are not paved and if traffic volume stays light. Otherwise, a cross-country route should be developed.

From the Horse Center proceed along a trail to the ford of the Maury River at Horseshoe Bend and then downstream along the Maury River to the confluence with Kerrs Creek. Pick up the old farm road and proceed west to the intersection with Route 602. Turn left and proceed under I-64 to the intersection with Route 631. Turn right and proceed for .8 mile to Route 624. Turn right, crossing Kerrs Creek on a low water bridge and proceed for 1.4 miles to the intersection with Route 625. Turn left and proceed to a hard right turn onto Route 624 (1 mile). Follow Route 624 for 3 miles to the intersection with Route 602. Turn left on Route 602 and proceed .9 mile to the intersection with Route 623, the Fredericksburg Road. Turn left and proceed on the Fredericksburg Road to the intersection with Route 39, a distance of two miles. Turn left along the shoulder of Route 39 towards Goshen Pass and proceed to the ford of the Maury River (.3 miles). Ford the river and turn left on Route 732 and proceed up the road until it joins the jeep road that leads to Jump Rock. This is where alternatives one and two merge.

From Jump Rock follow the Tuscarora Trail north along the ridge to the Kelso Trail. Turn left on to the Kelso Trail and proceed until it intersects with the Hunter Access Trail. Turn right and follow the trail to the Hunter Access Road. The Hunter Access Road joins Route 615. Turn right and follow Route 615 around the upper end of Lake Merriweather to the intersection with Route 601. Turn left on Route 601 and go .2 miles to a left turn onto a parallel trail that leads to the Goshen Scout Reservation Horse Camp.

Alternate Route: In the event that the Boy Scout Reservation is closed to horse trail use during their operating season, the DCR lands near the swinging bridge will be used for horse staging and camping. From Jump Rock follow the hunter access trail to the vicinity of the swinging bridge and ford the river to the access area.

R-2. Goshen Boy Scout Reservation to Black Run Horse Camp (14.5 miles)

From the Horse Camp at the Scout Reservation proceed up the road to the intersection with the Anderson Trail. Turn left on the Anderson Trail and follow it to the crossing of Route 601. Turn Right on Route 601 and proceed to Route 39. Follow the shoulder of Route 39 to a crossing at the intersection of the Guys Run Road. Proceed up Guys Run Road to the sign

indicating the Horse Trail and follow the trail through the Goshen Wildlife Management Area to the Gochenour Hunter Access Trail. Follow the Gochenour Trail to the Route 780 crossing. Proceed Across Route 780 where marked and then across Brattons Run and over to the Black Run Road. Turn left on the Black Run Road and proceed to the Horse Camp.

Alternate: If starting at the DCR access area near the swinging bridge, proceed on the shoulder of Route 39 to the intersection with Guys Run Road and then follow directions above.

R-3. Black Run Horse Camp to Douthat State Park. (21.2 miles)

Proceed from the Horse Camp up Black Run Road to Route 633 and turn right. Proceed to the intersection with FS Road 362, the Orebank Trail. Proceed out the Orebank Trail to the connector trail that leads to an intersection with Pads Creek Road, Route 630. Turn left on the Pads Creek Road and follow it through the ford of the Cowpasture River and to the intersection with Route 42. Cross Route 42 on to the WESTVACO property and follow the signed trail to the Douthat Connector Trail across U. S. Forest Service lands. This trail will connect to the Brushy Hollow Trail and proceed either to the Horse Camp or to the park's Horse Trailer Parking Area which are both located near the southern border of the park.

R-4. Douthat State Park to The Homestead (15.2 miles)

From the Horse Trailer Parking Area proceed on the horse trail north to the Stoney Run Trail intersection. Turn left and follow to the intersection with the Locust Gap Trail. Turn right and proceed to the intersection with the Blue Suck Falls Trail. Turning right on the Blue Suck Falls Trail will lead to the Huff's Trail. Turn left on the Huff's Trail and follow it to Laurel View Trail and right to the Backway Hollow Trail and turn left. Follow the Backway Hollow Trail to the intersection with the Salt Stump Trail and turn left. Follow the Salt Stump Trail to the top of Middle Mountain and pick up the Middle Mountain Trail turning right. The Middle Mountain Trail follows the ridge and then down a finger until it intersects with Smith Creek Road, FS Road 125. Turn left and proceed two tenths of a mile to the head of Brushy Ridge Trail on the right. Proceed up the flank of Warm Springs Mountain on Brushy Ridge Trail to Trappers Lodge and the intersection with the Delafield Road. Turn left and proceed to the intersection with the Homestead Bridle Trail. Turn left and proceed to the trail head.

SPUR TRAILS TO OTHER KEY DESTINATIONS

R-5. Covington to Douthat State Park. (17.5 miles)

From the staging area near the U.S. Forest Service work center off of Route 220 on Smokey Bear Lane in Covington, the trail proceeds up Fore Mountain on FS Trail 473, the Fore Mountain Trail, to its intersection with the Middle Mountain Trail. Proceed on the Middle Mountain Trail to the Stony Run Trail and turn right, thereby entering Douthat State Park.

Follow the Stony Run Trail to the Horse Camp or to the Horse Trailer Parking Area.

R-6. Clifton Forge to Douthat State Park (7.2 miles)

This trail would begin near the interchange of Route 629 and I-64 near Clifton Forge. An area for a parking lot will need to be acquired in this vicinity. The trail will follow Route 1408 to its intersection with FS Trail 446 and then proceed on existing unnamed trails up the ridge north of I-64 and west of Route 629 until it connects with the McGraw Hollow Trail. It will then proceed north on the McGraw Hollow Trail to FS Trail 587. Turn right and proceed to the intersection with the Middle Mountain Trail, FS 473. Turn right and proceed to the intersection with Stony Run Trail. Turn right on the Stony Run Trail, entering Douthat State Park, and proceed to the Horse Trailer Parking Area or to the horse campground. This trail also connects to the Fore Mountain Trail and thereby to Covington.

R-7. The Lake Moomaw Spur Trail

This trail is for long range planning purposes. It comes off of the Fore Mountain Trail and skirts Dolly Anne around to the Dry Run Trail. It then crosses Route 220 and at Interval picks up the discontinued Alleghany Highlands Scenic Railroad bed. Following the old railroad grade, the trail would go along the Jackson River to Natural Well where it would turn left onto Route 687. Crossing the Jackson River the route will continue up the hill to the intersection with Route 666 where it would turn right and proceed up the hill to a proposed horse trailer parking lot and horse camp on Morris Hill.

B. THE DRIVING TRAIL

The Driving Trail Route is denoted by (DR-) followed by the segment number.

DR-1. Horse Center to Kerrs Creek VDOT Commuter Parking Lot. (6.1 miles)

Description: From the Horse Center a trail will need to be improved that will lead from the trail head and staging area in a northwesterly direction to the ford of the Maury River at Horseshoe Bend, thence across private lands to Route 602. Left along Route 602 and over the bridge of Kerrs Creek and under I-64 to intersection with Route 631. Right on Route 631 to Route 60. Right on Route 60 to Route 623 to the VDOT Park and Ride on the right.

DR-2. Kerrs Creek to Lake Robertson (11.6 miles)

From the Park and Ride at the Kerrs Creek exit on Route 64 go right on Route 60 for .3 miles and turn left on Route 631. Proceed on Route 631 to Route 638 turn left and proceed to intersection with Route 641. Turn Right on Route 641 and proceed to intersection with Route 672. Turn left on Route 672 and proceed to intersection of Route 251. Turn right on Right 251 to intersection with Route 770. Turn left on Route 770 and proceed to Route 652 and turn right

into Lake Robertson. Overnight camping facilities are proposed at Lake Robertson.

DR-3. Lake Robertson to Black Run Horse Camp. (14.5 miles)

From Lake Robertson Horse Camp proceed west on Route 770. Climb up the mountainside to the intersection with Forest Service Road FS 447, Top Drive. Turn right and follow FS-447 to the intersection with Route 780. Take Route 780 under I-64 to the intersection with Route 850 and turn right. Proceed on Route 850 to the intersection with Route 633. Turn left on Route 633 and follow it through California and across Route 780, past Rockbridge Alum Springs, to the intersection with Black Run Road. Turn right and proceed to the horse camp.

DR-4. Black Run Horse Camp to Douthat State Park (21.3 miles)

From the Horse Camp proceed out Forest Service Road 328A to the intersection with Route 633. Turn right and go to the intersection with Route 630, Pads Creek Road. Turn left onto Route 630 and proceed on Pads Creek Road to the ford of the Cowpasture River. Ford the river and then proceed to the intersection with Route 42. Cross Route 42 and enter the WESTVACO property on the signed road. Follow the signs to the Douthat connector trail through Forest Service land and then on to Douthat State Park and the horse camp or staging area.

Note: There are several options for wagon driving in the Douthat State Park area that can be used to extend the trip.

IX. HORSE TRAIL ROUTE MAPS

Figure 3. Virginia Horse Center to The Homestead Horse Trail, Western Section

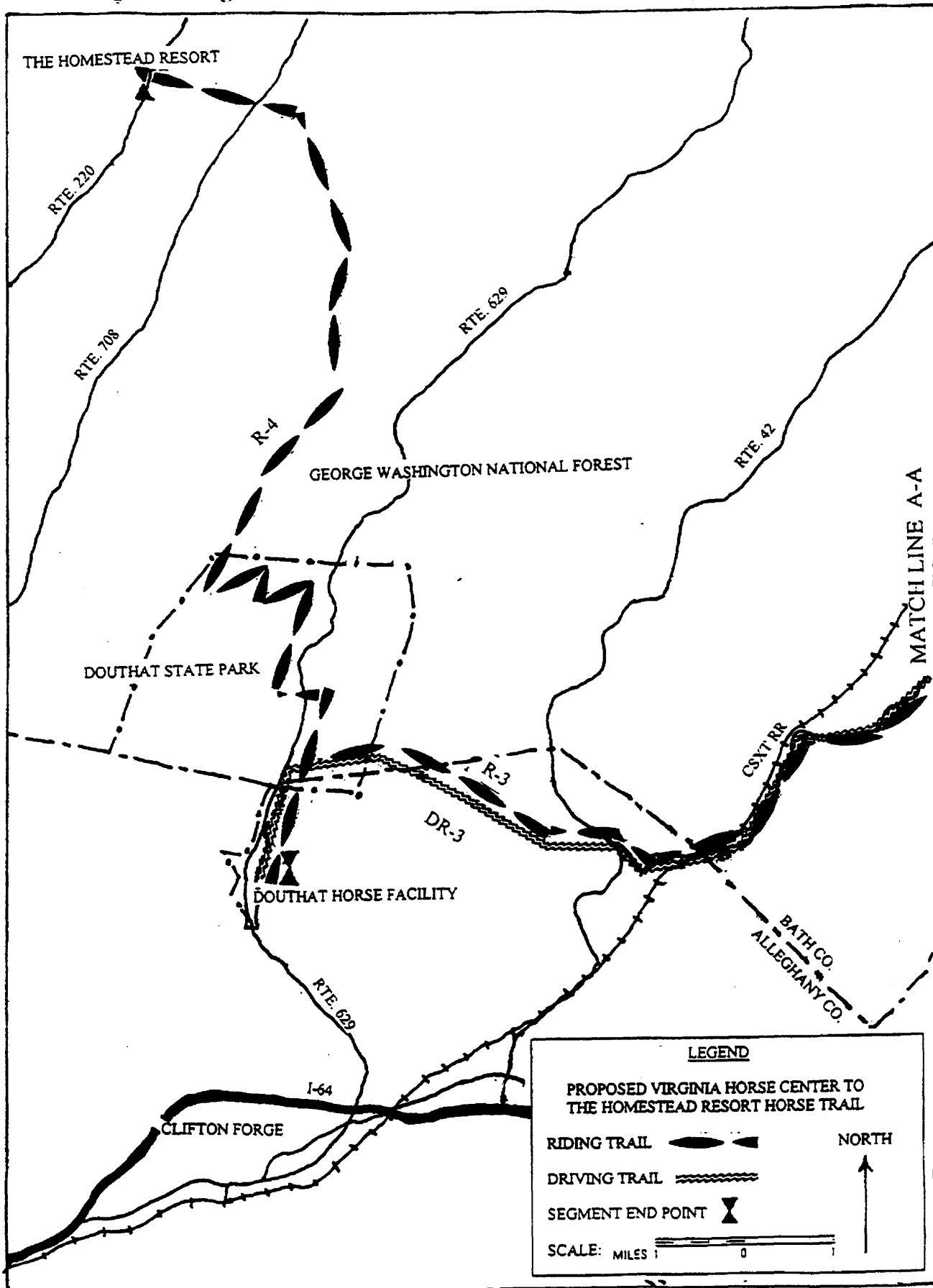


Figure 4. Virginia Horse Center to The Homestead Horse Trail, Middle Section

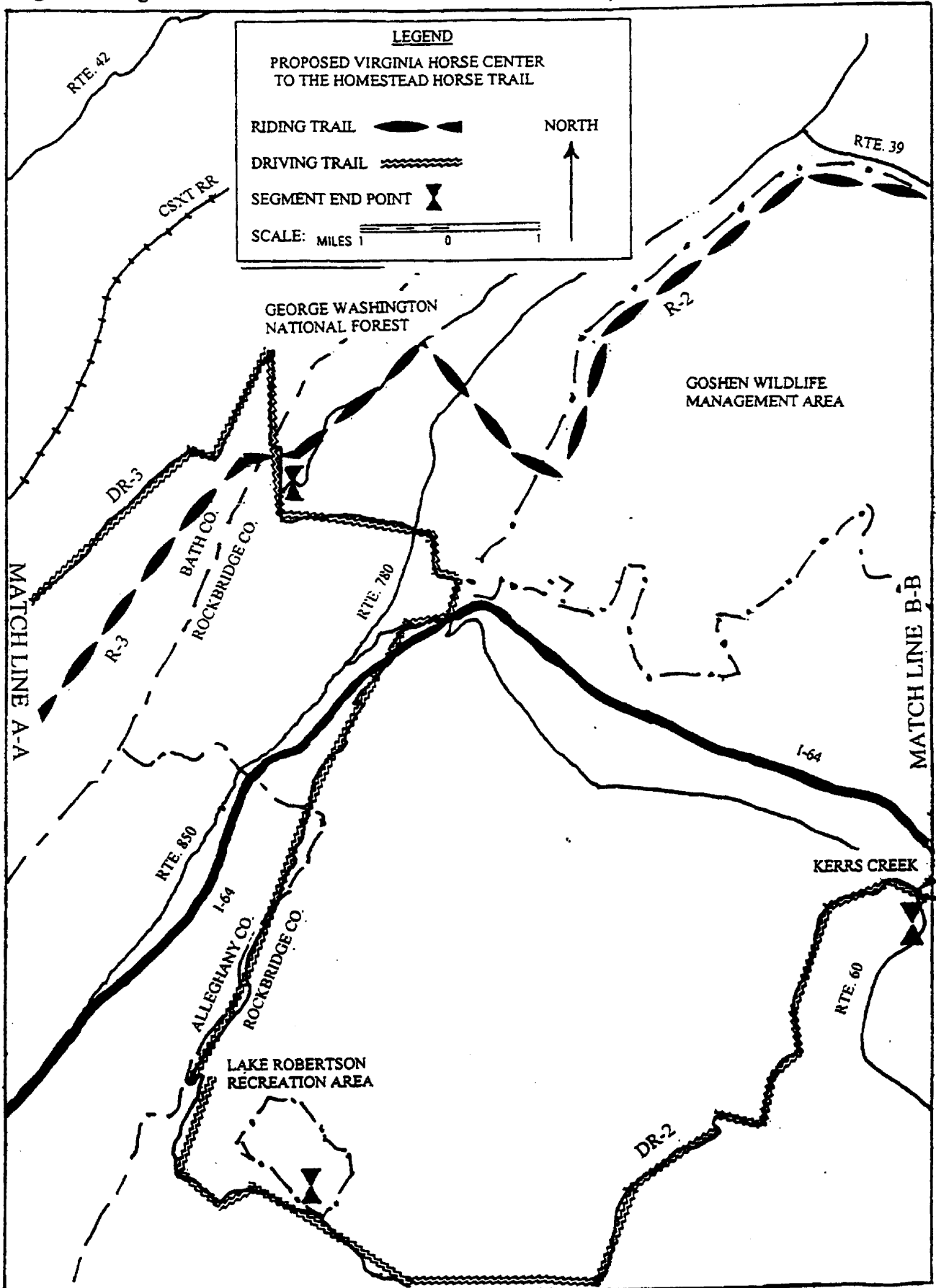
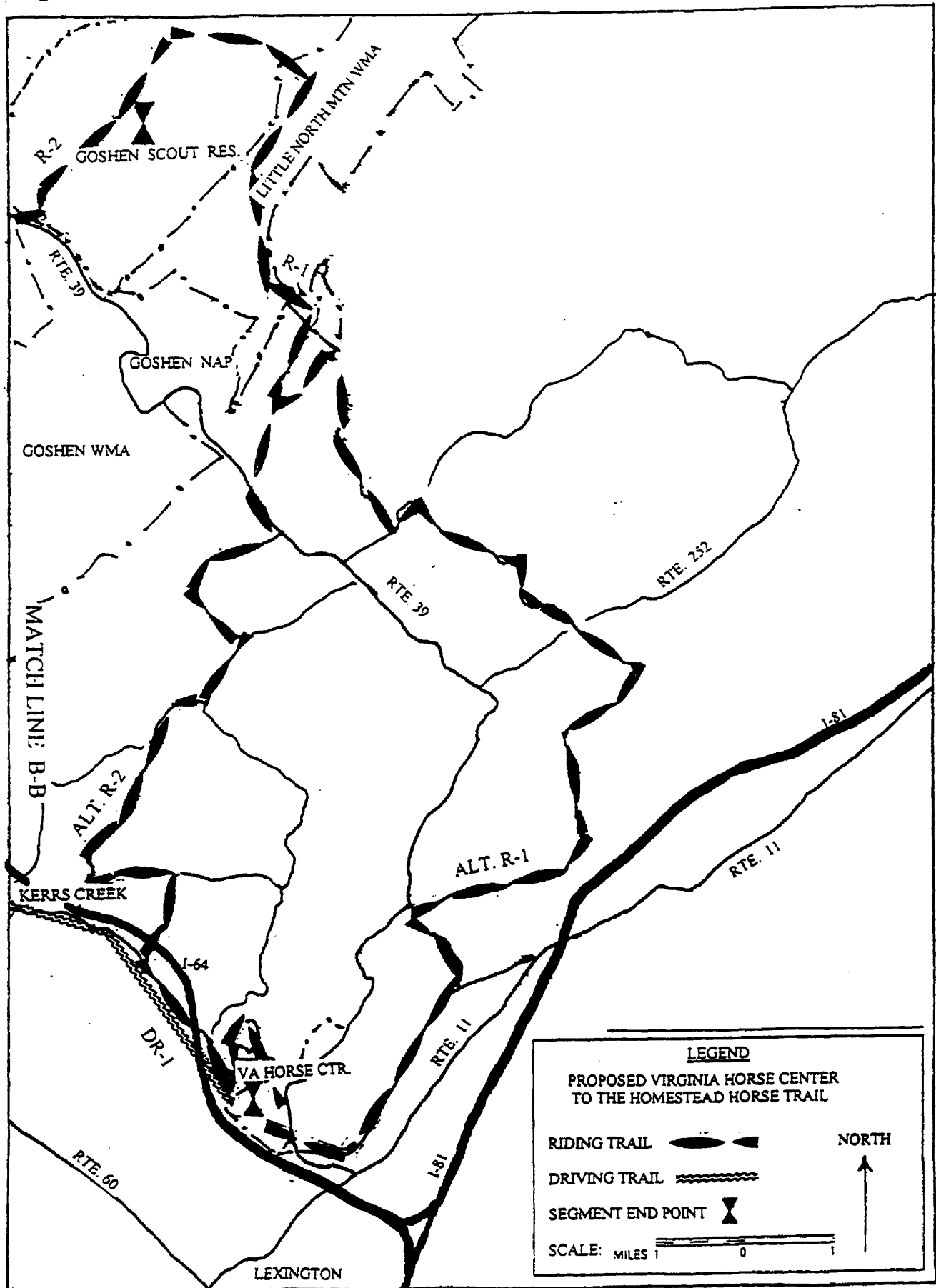


Figure 5. Virginia Horse Center to The Homestead Horse Trail , Eastern Section



APPENDIX I

HOUSE JOINT RESOLUTION NO. 525

Requesting the Department of Conservation and Recreation to study the feasibility of creating a horse trail between the Virginia Equine Center in Lexington and the Homestead Hotel.

Agreed to by the House of Delegates, February 5, 1999

Agreed to by the Senate, February 18, 1999

WHEREAS, the popularity of horse trail riding is growing significantly bringing tourist dollars to areas that support riding activities and additional business for establishments such as farriers and feed stores; and

WHEREAS, there are a number of potential trail routes through valleys and parks and along mountain ridges between the Virginia Equine Center in Lexington and the Homestead Hotel in Bath County which would provide for exceptional trail riding experiences; and

WHEREAS, such a trail would provide numerous opportunities for recreational activities including overnight camping trips, day trips, and local community volunteer support for trail upkeep; and

WHEREAS, the routes include public and private lands and lands in utility rights-of-way; and

WHEREAS, a thorough analysis of the potential routes, land owner issues, recreational opportunities, maintenance and facility needs, and local support is needed before a route may be selected for such an equestrian trail; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Department of Conservation and Recreation be requested to study the feasibility of creating a horse trail between the Virginia Equine Center in Lexington and the Homestead Hotel. The study shall include a review of potential routes, land owner issues, potential uses of utility rights-of-way, recreational opportunities, maintenance and facility needs, and local support.

All agencies of the Commonwealth shall provide assistance to the Department for this study, upon request.

The Department shall complete its work in time to submit its findings and recommendations to the Governor and the 2000 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Patrons: Senator Malfourd W. "Bo" Trumbo and Delegate R. Creigh Deeds

APPENDIX II

COST ANALYSIS

A. Trail Costs

Development of the riding trail involves several elements. Where existing trails on public lands are being used, there will be costs to upgrade those trails to accommodate horse use. Sections of closed forest management roads may need to be reopened by removing some of the vegetation that may have grown up in the road. All existing trails will need to have trees limbed up, water management structures upgraded, erodible soils hardened, and stream crossings and fords brought up to standard.

Where the proposed trail will cross private lands, delineation of the corridor across private land may require acquisition of easements or right-of-way through donations, purchase, or lease. The cost of these acquisitions needs to include the costs of survey, title, and legal fees associated with such real estate transactions. Even donated sections of the trail corridor will have legal and other real estate transfer costs associated with their conversion to trail corridor.

New trail construction on public and private lands will vary according to the soil type, terrain, vegetation, hydrology, and aspect. The costs identified below use averages and assume that over a given length of trail there will be more and less expensive sections to construct. The cost of acquiring trail corridor lands also includes a range that will be dependent upon the type of land use the owner is presently practicing; whether productive farmland, pasture, or forest is involved, and many other variables. Fencing is another cost that will be variable over the route and will depend upon the requirements of individual landowners.

Costs for campgrounds and parking areas will be variable depending upon land ownership, site conditions, and level of development proposed. Figures given will be averages for what is really a wide range. Costs could be much higher or considerably lower, depending upon local conditions and degree of development. Also, the costs given tend to be conservative as it is intended that volunteer labor and donations of equipment use and materials will characterize the development of this trail system.

1. Segment R-1, Horse Center to Goshen Pass.

This segment is presently located entirely on secondary roads. Establishment of the trail corridor on private lands will require acquisition by donation, or purchase of about 13.5 miles of corridor. The corridor should probably be 50 feet wide on average, with some wider sections where cut, fill, or water management structures will impact a wider area. An assumption that 7 miles of this corridor should be fenced is used as an average estimate. Gates will of course be included where needed as part of the fencing requirement.

Note: When computing costs for the westerly route, a lesser distance of 10.5 miles should be used instead of the 13.5 miles for the eastern route. The higher figure is used in this report.

Average cost per acre for acquisition (includes all legal and real estate costs)= \$5000.
13.5 miles (5280 feet * 13.5 miles * 50 feet wide / 43560 sqft/acre = 81.8 acres
81.8 acres * \$5000/acre = \$409,000.

Fencing 7 miles of this corridor at an average cost of \$8,000/ mile = \$56,000.

A parking area and perhaps a campground should be developed in the area east of Little North Mountain in the vicinity of Rockbridge Baths. A parking/staging area with appropriate facilities and 20 spaces will require approximately 1.5 acres of land @ \$7500. Construction costs will equal approximately \$35,000.

If a campground is developed on the DCR property at the swinging bridge it will cost approximately \$250,000. The parking and staging area will cost approximately \$40,000. This area would be developed if the proposed Boy Scout facilities are not developed.

Total cost for segment R-1 = \$757,500

2. Segment R-2 Goshen Pass to Black Run Camp

The first few miles of this segment will be on Goshen Scout Reservation lands or on Little North Mountain WMA. Trails in this area have been developed for pedestrian use. Adding horse use will require upgrades. The cost of development of a campground and overnight facilities in this segment is tentatively planned as a Scout Council project. If it does not materialize, then a campground will have to be developed by the private sector nearby or lands will need to be acquired for development of an overnight facility.

New trail will need to be developed through portions of the Goshen WMA and to connect Gochenour Road with Blacks Run Road. Existing trails will need to be upgraded.

Construct 2.2 miles of trail @ \$10,000 per mile = \$22,000

Upgrade 9 miles of trail to horse trail standards @ \$3000/mile = \$27,000

Expand parking area on DCR land in Goshen Pass to handle up to 20 horse trailer rigs. \$18,000

Total cost for Segment R-2 = \$67,000.

3. Segment R-3, Black Run Camp to Douthat State Park

The proposed horse camp along Black Run Road could also be developed on private land near California or Rockbridge Alum Springs. If a private developer does not come forward, then a primitive campground is proposed in one of the fields along Black Run Road. Restroom facilities and drinking water would be the only two amenities.

The riding trail follows mostly existing trails and roads in this segment. Fords of several creeks including Pads Creek and the Cowpasture River will require some approach improvements. The

Bath County portion of Route 630 needs to be returned to the secondary road system. This will require funds from VDOT to bring the road back into service. As it lies presently, it is suitable for horse use by riders and wagons. Portions may need to be relocated off of CSXT railroad property. The route across WESTVACO lands west of Griffith lies mostly on existing management roads. A connector trail through Forest Service lands to Douthat state Park will need to be constructed.

New trail construction=3.2 miles @ \$10,000 per mile = \$32,000

Upgrade existing trail to horse standards 10.1 miles @ \$3,000/ mile = \$31,000

VDOT upgrades to 1.4 miles of Route 640 in Bath County = \$400,000

The day use area at Douthat State Park will require the construction of a 30-rig parking area with staging room for wagons. This will require approximately 2 acres of land and \$50,000 to construct. Restrooms and horse watering facilities will also be needed. = \$65,000

The horse campground at Douthat will contain forty sites plus stalls for 120 horses. The campground will be full service and have electric and water hookups. The Bathhouse will contain showers.

Horse Campground cost = \$350,000

Total Segment R-3 Costs = \$898,000

4. Segment R-4, Douthat to The Homestead

Very little new trail construction will be needed in this segment. Upgrading existing trails to horse standards will need to occur on all of the trails proposed for use in Douthat State Park as well as the Middle Mountain Trail and the Brushy Ridge Trail.

Upgrade existing trail: 10 miles @ \$3000 per mile = \$30,000

Over night facilities and parking exist at both ends so no new facilities are needed.

Cost for segment R-4 = \$30,000

5. Other costs.

a. Environmental Assessment

The proposed trail crosses federal, state, and private properties. The related and connected actions associated with the development of this trail triggers the requirement of the National Environmental Policy Act to conduct an environmental impact study of the cumulative impacts of the development and operation of this trail. This analysis is very large in scale and will require the contracting of a private environment planning firm to conduct the study. No state or federal agency affected by this proposal has the resources to conduct such a study. The estimated cost for conducting this EIS is approximately \$200,000.

b. Signs

The informational and directional signs needed for the trail will be another expense item. Each trailhead parking area will need an information kiosk with bulletin boards displaying maps, rules, safety information, emergency numbers, and other pertinent information such as hunting seasons, conditions for use, etc. Additionally, directional signing may be needed along the trail route. Paint blazes on trees and posts should substitute for most signs, but where several trails intersect, signs are useful. Initial sign costs should be budgeted at \$ 75,000 for the first year. Replacement of lost or damaged signs and the opening of new facilities that come on line over time and will require additional signs. Budget \$50,000 for phase three and four.

c. Brochures

Trail guides, maps, and advertising brochures will need to be developed. The range of costs for preparation, printing, and distribution is varied but never inexpensive. A good three-color trail guide can cost over \$20,000 for a run of just 10,000. Maps can be expensive if good information is provided at a suitable scale for trail use. Guidebooks are even more expensive. Probably a printing and publication budget of \$50,000 should be assumed for the first few years.

d. Staffing

The recommended management entity for the trail project is to form a non-profit, 501.C-3, organization. This entity's early efforts would be assisted by the Department of Conservation and Recreation who would assign five new employees at Douthat State Park to assist the non-profit as an agency partner. The responsibility of the DCR staff will be to provide all of the administrative and management support for the development and operation of the trail including environmental scoping of each project, administration of contracts, supervision of projects by contractors and volunteers, coordination with other agency staff, law enforcement, design and engineering assistance, purchasing of services, materials, and equipment, training, and public information services. The non-profit would be mostly involved in recruiting volunteers, raising funds, publicity, publications, and reservations management, particularly in the early phases of development of the system and the 501-C.3. As the non-profit becomes more experienced, some of the duties of the agency partner can be absorbed or shared. The other land managing agencies would also provide assistance where possible for activities on lands they manage. There are presently no funds or staff available from the U.S. Forest Service to assist with this project.

The non-profit would raise funds to cover its expenses through various means such as grants, memberships, donations, and volunteers. It is assumed that the other land managing agencies will have no resources to contribute to this project, and therefore DCR will have to assume these costs and staffing needs. The total cost for five new employees and their support equipment and materials is \$400,000 per year.

2. Driving Trail

The driving trail will require a connector trail from the western edge of the Horse Center property that will connect with Route 602. This new trail is approximately 1.2 miles long and will cost \$12,000 to build. The Kerrs Creek park and ride may need to be expanded to accommodate an additional 10 horse trailers and wagon rigs. The half acre enlargement should

cost about \$8,000.

Camping and staging facilities are proposed for Lake Robertson. This facility should be a low level developed campground. Rest rooms with showers should be provided for the campers as well as a hardened campsite for each wagon party. Stalls or other suitable area should be developed for horses to over night. This property belongs to the Department of Game and Inland Fisheries but is leased to Rockbridge County for recreational purposes. Funds will need to be provided for the development of the campground and support facilities. The cost will probably average \$ 220,000.

Watering facilities will need to be established along the trail. The costs of these should be just a few hundred dollars for each of the six or seven that will be needed..

Most of the wagon route lies on existing state secondary roads and Forest Service roads. In some places improvements may need to be made to the shoulders and ditch line to minimize problems encountered by the wagons. Turnouts may be required on narrow roads. The cumulative costs of these improvements may rise as high as \$30,000 a year in the first few years while the trail is being established and problems worked out.

3. Maintenance

Maintenance of the trail will be an ongoing effort. Volunteers will probably form the backbone of the maintenance crews that will work on water management, surface stabilization, vegetation management, and the many other elements of trail maintenance and improvement. The standard horse trail takes twelve years to get hardened enough to withstand frequent use. This hardening activity must take place continuously during that twelve-year period, with the first three years being the worst. During this period maintainers will identify all of the softer soils, steeper slopes, erodable areas, and water management problems. Stone dust, fine gravel, wood chips, and good construction techniques can be used to harden the trail and reduce erosion and trail tread decay. The annual cost for tools, materials and equipment to move the materials around will probably average \$20,000-\$30,000. If trail relocations require heavy equipment use, that number could rise considerably.

Maintenance of campgrounds, cleaning of sanitary facilities, collection of trash, mowing of grass and management of other vegetation will be daily and weekly costs of maintaining the trail and its support facilities. Volunteers can and will do some of this, but eventually a maintenance staff will need to be employed by the non-profit to handle these requirements.

4. Spur Trails

It is estimated that it will cost approximately \$200,000 to acquire the trail corridor, parking and staging areas, and to develop the trail surface on the two spur trail routes linking Douthat with Clifton Forge, and Covington. The Lake Moomaw Spur will require acquisition funds for the railroad bed as well as several segments across private land. The campground and staging area at Morris Hill will be another expense. No estimate is given for this spur as the cost of the railroad bed is unknown.

5. Other

a. Non-profit Entity Operations Costs

Providing office space, equipment, and staff to support the operations of the non-profit managing entity will require funding that can increase over time to the \$250,000 per year range, depending upon how many staff they employ. While these funds will be raised independently by the non-profit, they are a true cost of the establishment and management of the trail.

b. Horse Center Additional Costs

New costs will be incurred by the managers of the Virginia Horse Center. Additional parking and staging areas may need to be developed and the campground may have to be expanded. These costs could exceed \$100,000 depending upon site conditions, location, and capacity added. Operational costs at the Center may also go up as more visitors, and more facilities and events to manage accompany the establishment of this trail.

c. Virginia Department of Transportation

VDOT may incur additional costs in providing for safer use of secondary roads that carry wagons and trail riders. Improved shoulders, better vegetation management, signage, and other costs may arise. It is difficult to put a figure on this amount.

d. U.S. Forest Service

The Warm Springs and James River Ranger Districts will incur administrative and maintenance costs associated with the horse trail and any support facilities constructed on U.S.F.S. lands. Even though a non-profit entity and DCR assume management and maintenance costs, Forest Service staff will need to be involved in the training of volunteers, supervision of the quality of their work, periodic patrol of the trail and with law enforcement issues. Staff time will also be required to assist with the completion of the environmental assessment. Equipment and other resources may also be occasionally made available, adding to operational costs. Current budgets do not support any elements of this new proposal.

APPENDIX III.

TRAIL AND SUPPORT FACILITY STANDARDS

A. Trail Standards

1. Trail Width

Horse trails should be a minimum width of 5 feet, with a horizontal clearance beyond the tread of 1-foot for trees and rocks, and 3 feet for limbs, logs, and brush.

2. Vertical Clearance

Clearance above the trail should be a minimum of 10 feet.

3. Trail Surface

The trail surface should be usable when wet and not too dusty when dry. The surface should be resistant to normal use and erosion and composed of compacted materials. The earthen forest floor, or natural soils in an open field usually serve well as trail surface material with routine maintenance to address ruts, holes, and drainage problems. Where additional materials are needed to minimize erosion or severe compaction and wear to the trail, mulch, wood chips, fine gravel such as stone dust, or other similar materials work well. Large gravel should be avoided. Cut all vegetation at or below ground level. Avoid loose shale on slopes.

4. Trail Grade

More than a 10 percent grade is difficult for horses and riders to maintain and can contribute to erosion problems which require water bars and other structures. The maximum sustained grade should be 8-10 percent.

5. Construction Techniques

Trail construction techniques should be those recommended in publications such as *Trail Construction and Maintenance Notebook*, USFS, or *Trail Development and Management*, Virginia State Parks. Some special considerations apply to horse trails.

Bridges and other crossings must be sound, solid, and able to accommodate the weight of the horse and rider (1800 lbs. minimum). Nails, screws, or bolts are set flush, and no loose or widely spaced boards should be present. Butt joint all decking boards. Treated pine holds up better to hooves than hardwood. Side rails on bridges should be used if the bridges are over three feet high.

Fords are preferable to bridges or culverts in almost all cases. Harden approaches and cross on a solid bottom.

Steps should not exceed 6 inches of rise over 36 inches of run.

The narrower or more closed in a trail is, the more likelihood of a horse spooking at close distances. Allow adequate (50 feet) field of vision in front, to the rear, and around curves. Make

curves and turns as wide as possible.

6. Special Considerations

All horses should have a current (within 12 months) negative Coggins (Equine Infectious Anemia) certificate.

B. Support Facility Standards

1. Parking Areas

a. Size and capacity

Most trailhead parking areas for this horse trail should be designed to accommodate up to forty truck and trailer rigs at one time. Initial development of parking areas may be for fewer rigs, but space should be available for expansion to forty spaces. Intermediate accesses should provide parking for 15-25 truck and trailer rigs depending upon the section. When choosing a site for development of a parking area, consideration should be given to the potential need for expansion of the lot. Many rigs exceed forty feet in length although the average is only twenty-eight feet long. Room must be provided for unloading and loading horses out of the traffic flow area. Spaces should be approximately sixty feet long and fifteen feet wide. Drive through spaces are preferred. The traffic flow through the parking area should be one-way except at the entrance/exit.

For parking areas designed to support wagon/carriage drivers, even more room is needed because of the additional trailer rig needed to haul in the wagons or carriages. Leave additional room to allow for the movement of horses as they are all harnessed and hitched to the wagons.

b. Sanitation Facilities

Sanitation facilities should be provided at developed parking areas along the trail. Manure management should also be addressed.

2. Campgrounds

A range of camping opportunities can be provided along the trail. It is expected that some private facilities will be developed as the horse trail begins to get use. In the interim, camp sites will need to be provided on public lands along the trail. Some areas where camping can be provided have been identified in the report.

a. Primitive camp sites.

Primitive camping can be provided in two ways. The first is dispersed camping and the second is designated primitive campground camping. In dispersed camping, no facilities are provided. The camper chooses a spot to camp and spends the night there. This site could be anywhere along the trail corridor. Trail users need to be encouraged to seek dispersed sites out of view of the trail for dispersed camping.

Primitive campgrounds can be developed to lessen the cumulative impact of large amounts of

dispersed camping within the trail corridor. Primitive sites could include a designated camping area with sanitation facility, water spigot, mowed grassy area for tent placement, or hardened tent pads in a wooded area. Horses would be provided an area with a picket wire, paddock, or stalls. Manure management facilities should be provided as well as horse watering facilities.

b. Developed campgrounds

A developed campground is proposed in the master plan for Douthat State Park. This campground will contain forty hardened sites designed for horse trailer rigs that include camping trailer amenities. Sites will have water and electric hookups, picnic tables, lantern posts, and be up to seventy feet deep. Bath houses with warm water showers will be provided. Horses will be provided with covered stalls.

Not all developed campgrounds along the trail need to be as highly developed as that proposed for Douthat State Park. However, a hardened camp site, potable water, restrooms, and horse stalls should be provided. Facilities for watering horses and perhaps for washing horses should be provided. Developed campsites should accommodate vehicles. Primitive campsites can be back country sites that are not accessible by motor vehicle.

APPENDIX IV

LANDOWNER LIABILITY ACT

§ 29.1-509

Duty of care and liability for damages of landowners to hunters, fishermen, sightseers, etc

A. For the purpose of this section:

"Fee" means any payment or payments of money to a landowner for use of the premises or in order to engage in any activity described in subsections B and C of this section, but does not include rentals or similar fees received by a landowner from governmental sources or payments received by a landowner from incidental sales of forest products to an individual for his personal use, or any action taken by another to improve the land or access to the land for the purposes set forth in subsections B and C of this section or remedying damage caused by such uses.

"Land" or "premises" means real property, whether rural or urban, waters, boats, private ways, natural growth, trees and any building or structure which might be located on such real property, waters, boats, private ways and natural growth.

"Landowner" means the legal title holder, lessee, occupant or any other person in control of land or premises.

B. A landowner shall owe no duty of care to keep land or premises safe for entry or use by others for hunting, fishing, trapping, camping, participation in water sports, boating, hiking, rock climbing, sightseeing, hang gliding, skydiving, horseback riding, foxhunting, racing, bicycle riding or collecting, gathering, cutting or removing firewood, for any other recreational use, or for use of an easement granted to the Commonwealth or any agency thereof to permit public passage across such land for access to a public park, historic site, or other public recreational area. No landowner shall be required to give any warning of hazardous conditions or uses of, structures on, or activities on such land or premises to any person entering on the land or premises for such purposes, except as provided in subsection D.

C. Any landowner who gives permission, express or implied, to another person to hunt, fish, launch and retrieve boats, swim, ride, foxhunt, trap, camp, hike, rock climb, hang glide, skydive, sightsee, engage in races, to collect, gather, cut or remove forest products upon land or premises for the personal use of such person, or for the use of an easement as set forth in subsection B does not thereby:

1. Implicitly or expressly represent that the premises are safe for such purposes; or
2. Constitute the person to whom such permission has been granted an invitee to whom a duty of care is owed; or
3. Assume responsibility for or incur liability for any intentional or negligent acts of such person or any other person, except as provided in subsection D.

D. Nothing contained in this section, except as provided in subsection E, shall limit the liability of a landowner which may otherwise arise or exist

by reason of his gross negligence or willful or malicious failure to guard or warn against a dangerous condition, use, structure, or activity. The provisions of this section shall not limit the liability of a landowner which may otherwise arise or exist when the landowner receives a fee for use of the premises or to engage in any activity described in subsections B and C of this section. Nothing contained in this section shall relieve any sponsor or operator of any sporting event or competition including but not limited to a race or triathlon of the duty to exercise ordinary care in such events.

E. For purposes of this section, whenever any person enters into an agreement with, or grants an easement to, the Commonwealth or any agency thereof, any county, city, or town, or with any local or regional authority created by law for public park, historic site or recreational purposes, concerning the use of, or access over, his land by the public for any of the purposes enumerated in subsections B and C of this section, the government, agency, county, city, town, or authority with which the agreement is made shall hold a person harmless from all liability and be responsible for providing, or for paying the cost of, all reasonable legal services required by any person entitled to the benefit of this section as the result of a claim or suit attempting to impose liability. Any action against the Commonwealth, or any agency, thereof, for negligence arising out of a use of land covered by this section shall be subject to the provisions of the Virginia Tort Claims Act (§8.01-195.1 et seq.). Any provisions in a lease or other agreement which purports to waive the benefits of this section shall be invalid, and any action against any county, city, town, or local or regional authority shall be subject to the provisions of § 15.2-1809, where applicable.

APPENDIX V

EQUINE ACTIVITY LIABILITY ACT

§ 3.1-796.130

Definitions

As used in this chapter, unless the context requires a different meaning:

"Directly engages in an equine activity" means a person who rides, trains, drives, or is a passenger upon an equine, whether mounted or unmounted, but does not mean a spectator at an equine activity or a person who participates in the equine activity but does not ride, train, drive, or ride as a passenger upon an equine.

"Equine" means a horse, pony, mule, donkey, or hinny.

"Equine activity" means (i) equine shows, fairs, competitions, performances, or parades that involve any or all breeds of equines and any of the equine disciplines, including, but not limited to, dressage, hunter and jumper horse shows, grand prix jumping, three-day events, combined training, rodeos, driving, pulling, cutting, polo, steeple chasing, endurance trail riding and western games, and hunting; (ii) equine training or teaching activities; (iii) boarding equines; (iv) riding, inspecting, or evaluating an equine belonging to another whether or not the owner has received some monetary consideration or other thing of value for the use of the equine or is permitting a prospective purchaser of the equine to ride, inspect, or evaluate the equine; and (v) rides, trips, hunts, or other equine activities of any type however informal or impromptu that are sponsored by an equine activity sponsor.

"Equine activity sponsor" means any person or his agent who, for profit or not for profit sponsors, organizes, or provides the facilities for an equine activity, including but not limited to pony clubs, 4-H clubs, hunt clubs, riding clubs, school- and college-sponsored classes and programs, therapeutic riding programs, and operators, instructors, and promoters of equine facilities, including but not limited to stables, clubhouses, ponyride strings, fairs, and arenas at which the activity is held.

"Equine professional" means a person or his agent engaged for compensation in (i) instructing a participant or renting to a participant an equine for the purpose of riding, driving, or being a passenger upon an equine or (ii) renting equipment or tack to a participant.

"Participant" means any person, whether amateur or professional, who directly engages in an equine activity, whether or not a fee is paid to participate in the equine activity.

§ 3.1-796.131

Horse racing excluded

The provisions of this chapter shall not apply to horse racing, as that term is defined by § 59.1-365.

§ 3.1-796.132

Liability limited; liability actions prohibited

A. Except as provided in § 796.133, an equine activity sponsor or an equine professional shall not be liable for an injury to or death of a participant engaged in an equine activity.

B. Except as provided in § 3.1-796.133, no participant or parent or guardian of a participant who has knowingly executed a waiver of his rights to sue or agrees to assume all risks specifically enumerated under this subsection may maintain an action against or recover from an equine activity sponsor or an equine professional for an injury to or the death of a participant engaged in an equine activity. The waiver shall give notice to the participant of the risks inherent in equine activities, including (i) the propensity of an equine to behave in dangerous ways which may result in injury to the participant; (ii) the inability to predict an equine's reaction to sound, movements, objects, persons, or animals; and (iii) hazards of surface or subsurface conditions. The waiver shall remain valid unless expressly revoked by the participant or parent or guardian of a minor. In the case of school and college sponsored classes and programs, waivers executed by a participant or parent or guardian of a participant shall apply to all equine activities in which the participant is involved in the next succeeding twelve month period unless earlier expressly revoked in writing.

§ 3.1-796.133

Liability of equine activity sponsors, equine professionals

No provision of this chapter shall prevent or limit the liability of an equine activity sponsor or equine professional who:

1. Intentionally injures the participant;
2. Commits an act or omission that constitutes negligence for the safety of the participant and such act or omission caused the injury, unless such participant, parent or guardian has expressly assumed the risk causing the injury in accordance with subsection B of §3.1-796.132; or
3. Knowingly provides faulty equipment or tack and such equipment or tack causes the injury or death of the participant.

