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Executive Summary

Background:

In 2002, Nelson County received a Transportation Enhancement Grant to finalize design work and begin construction on a seven-mile multi-use trail running along the right-of-way of the Blue Ridge Railway, a defunct, short-line spur that at one time linked the communities of Massies Mill and Piney River to the Southern Railway at Tye River. By the end of 2003, construction of the first two miles of the trail between Piney River and Roses Mill was complete, and with the receipt of additional grant funding in subsequent years, the County expects the entire route to be cleared and opened for public access by the end of 2008. The original grant application, as well as a series of local and regional plans, discusses the need to continue the Blue Ridge Railway Trail in order to connect it to two important regional recreation destinations: The Blue Ridge Parkway to the west and James River to the east. The data in these existing plans support the regional findings in the 2007 Virginia Outdoors Plan showing a public need for the project and desire to continue the trail through Nelson County, located in Region 10 (Thomas Jefferson Planning District) and possibly Amherst County, located in Region 11 (Region 2000 Regional Commission).

What is not clear from these planning documents, however, is precisely which route the proposed continuation of the Blue Ridge Railway Trail will follow. In fact, the regional greenways plan for Region 10 shows the trail generally following the North Fork of the Piney River along the Amherst-Nelson border west into the mountains, whereas maps prepared by the firm that designed the existing trail show the future trail continuing along the old railroad grade to Massies Mill, and then following the Tye River past the Appalachian Trail to the small community of Nash, Virginia. To the east of Tye River, the process of identifying a route has not evolved much past the task of drawing lines on a map, and no land has yet been acquired for the future trail corridor. These unresolved issues and discrepancies regarding the precise alignment of the Blue Ridge Railway Trail raise important questions, not the least of which is whether there exists a better approach for selecting a route. Certainly the remaining railroad right-of-way should be acquired and developed into a multi-use trail, and efforts to seize the opportunity afforded by the existence of this historic transportation corridor should be continued. Nevertheless, the trail to the Blue Ridge Parkway and James River should also take advantage of all the area has to offer, including more of the breathtaking scenery, unspoiled nature, and a rich historical tradition in this remarkable part of Virginia. The trail should also fulfill the specific needs of individual user groups to provide them with a sense of challenge and adventure, rather than the collective needs of all users as is typical with the conversion of a gently-graded railroad corridor into a multi-use, rail-to-trail.

Plan Summary:

This plan, The Blue Ridge Discovery Trail: A Vision & Concept Plan, contains recommendations for connecting the Blue Ridge Railway Trail to Tye River Overlook, located in James River State Park, and Yankee Horse Ridge Overlook, located at milepost 34.4 on the Blue Ridge Parkway. The unique name of this trail reflects the different approach used to create the route for this trail vis-à-vis the Blue Ridge Railway Trail as well as the fact that the trail utilizes only a portion of the railroad grade that is the basis for the route of that trail. The Blue Ridge Discovery Trail will be co-aligned with the seven-mile Blue Ridge Railway Trail through the central part of the project area, and at least one alternative route requires the Blue Ridge Railway Trail to be
continued along the remaining railroad right-of-way between Piney River and Massies Mill. In fact, this plan identifies not just one but six possible, or alternative, corridors using a spatial analysis described in Chapter Three of this document. This analysis, or model, is at the heart of the plan for the Blue Ridge Discovery Trail since it produces a method for identifying these suitable corridors, which connect twelve points of interest located throughout the eastern and western portions of the project area.

In general, the model ranks all of the land area within a pre-defined project area according its suitability for the trail. Suitable land types are those having the highest combined suitability score due to their unique physical, scenic, natural, historical, and/or recreational characteristics and or ownership status. These combined values are derived using ESRI Geographic Information Systems (ArcGIS) software to perform a spatial overlay of individual data layers representing each of these characteristics. The data layer values for a given cell are added together to produce a combined suitability score for that cell, which corresponds to a fixed area of land. This process results in a combined value for all cells, and thus all of the land area, within the project area. The resulting map distinguishes suitable land types from less suitable land. Since the proposed corridors connect land having high suitability scores, a trail utilizing one of these routes can provide the optimal recreational experience to trail users.

Comprehensive trail planning practice typically distinguishes between a concept plan, which describes a vision for a recreational trail, and a master plan, which involves a more thorough site analysis (Flink, Olka & Seams, 2001, p. 30). This trail contains all of the elements of a traditional concept plan as well as some of the elements of a master plan, such as a detailed description of the trail corridors and desired amenities, but stops short of containing all of the information required for a full-blown master plan. In general, the plan contains all of the information needed to convey to the public the vision of what the trail ought to be, including guidelines for designing facilities and amenities, while leaving the precise design details for future phases. The first chapter provides background information relevant to this planning effort, including the specific purpose of the plan, an overview of different types of recreation trails and terminology, and discussion of the various benefits of greenways and trails. The second chapter discusses the need for the project, provides an overview of the project area, and contains a detailed description of eleven places of interest within the project area. The third chapter contains the actual plan, including goals and objectives, a detailed description of the data layers and methodology used to produce the alternative routes, a segment by segment description of those routes, a list of major facilities and amenities proposed along the route, and a discussion of themes that will guide creation of the trail’s interpretive/educational component. The fourth chapter covers the relationship of this plan to existing local, regional, state, and federal planning efforts, lists specific policies for trail construction within special areas such as the Appalachian National Scenic Trail corridor and designated wilderness areas, and describes the steps that need to be followed to finalize and implement the trail plan.

The plan concludes with some remarks about how future efforts to develop the Blue Ridge Discovery Trail and Blue Ridge Railway Trail can complement each other in order to create a sophisticated network of trails in this part of Virginia. Such a network would allow for circuit trips as well as increase recreational opportunities for recreational trail users of all stripes. The inherent strength of the approach discussed in this plan lies in its flexibility since the spatial model can be modified if necessary to accommodate changing public demand for recreation facilities expressed via a democratic process. Ultimately, this flexibility is necessary to fulfill the opening line in the plan’s motto so that the closing statement can become the official motto of the Blue Ridge Discovery Trail: “A Vision of the Future, A Pathway to Our Past.”
CHAPTER ONE: OVERVIEW

Introduction

In a speech announcing his retirement on the campus of the University of Virginia, five-term United States Senator John Warner described Nelson and Amherst counties in Central Virginia as “hallowed grounds” because of the significant role these communities played in the history of his family (U.S. Senator). Certainly many residents of this region would agree with the Senator’s high praise for an area that marks the eastern gateway to Virginia’s Blue Ridge Mountains, if for different reasons. The history of the foothills and mountains that comprise the Religious Range of the Blue Ridge Mountains in Amherst and Nelson counties, combined with the magnificent natural scenery and numerous outdoor recreational opportunities, make the region a significant draw for tourists and permanent residents alike. The region features state and national parks, forests, and other public lands created to protect these resources for future generations as well as numerous private landholdings that preserve significant historic and natural sites. Although certain areas located at or near the periphery of Charlottesville, Lynchburg, and Lexington-Buena Vista are experiencing some degree of urbanization and/or suburban sprawl, the rural areas that are the focus of this plan are characterized by small farms and pastoral scenery that appears much as it did when the first Europeans settled here.

Background – The Blue Ridge Railway Trail:

One of the unique historic resources in this part of Central Virginia is the Virginia Blue Ridge Railway, the longest operating profitable shoreline railroad in the United States. The railway was constructed in 1915 to haul chestnut trees out of the Blue Ridge Mountains following arrival of the chestnut blight. In its heyday, the railroad ran from Tye River, Virginia at the junction with what is now the Norfolk-Southern Railroad, to Massies Mill and then on logging lines up into the mountains. Later, the railroad carried passengers and then chemicals from industrial plants located in the Piney River area. After the railroad ceased operations in 1981, the rails and railroad ties were taken up along much of the route (Nelson County, 2002, pp. 15-16). The original railroad land was purchased by a private landowner for the purpose of donating the right-of-way to Nelson and Amherst counties for constructing a recreation trail, and, in 2001, purchase of the historic depot building in Piney River was approved by the Nelson County Board of Supervisors and County Administrator (Nelson County, 2002, pp. 1-4).

In 2002, Nelson and Amherst counties successfully applied for funding under the Virginia Department of Transportation Enhancement Program to construct a seven-mile, multi-use trail for horseback riders, bicyclists, and pedestrians along the right-of-way of the abandoned railway between the communities of Tye River and Piney River in Nelson County (Map 7). In addition to trail construction, the specific elements of the project are:
• Restoration of five Railroad Bridges that span the Piney River and a tributary in two places and the Tye River and tributary in three places;

• Acquisition and restoration of the depot building as a trail headquarters/tourist office and a railway museum;

• Future trail easement acquisition beyond the seven miles envisioned in this project so that the vision of creating a contiguous trail from the Blue Ridge Parkway to the James River can be achieved (Nelson County, 2002, p. 1).

By 2003, the first two miles of the trail between Piney River and Roses Mill were completed, including the repair of the bridge at Roses Mill and construction of trailhead parking at these two locations. The enhancement grant for the project’s second phase allowed for the purchase of the remaining five miles between Roses Mill and Tye River. Construction activities are currently underway of that section including surfacing, repair and re-decking of the remaining bridges, stream bank stabilization, and drainage improvements. The Commonwealth Transportation Board recently approved a $350,000 allocation to complete the entire trail between Naked Creek and Tye River (Faulconer). In all, the total amount budgeted for phases I and II is around $2.2 million (Nelson County, 2002, p. 20). The laying of gravel and clearing out of the remaining unopened trail is expected to be completed by the summer of 2008, which will allow visitors to explore the entire length of the trail for the first time (Faulconer, 2007). Although listed as an element of the project, acquisition of land beyond the seven miles has not yet taken place.
Purpose

Description of Problem:

The proposal for the BRRT establishes a vision for creating a continuous trail from the Blue Ridge Parkway to the James River. A map contained in the enhancement grant proposal illustrates one possible route the trail could follow to the east and west to reach these destinations. To the west of the Village of Piney River, this route generally follows the boundary between Nelson and Amherst counties along the Piney River up into the mountains. East of the Village of Tye River, the route follows the Tye River until it reaches the James River at the Village of Norwood (Nelson County, 2002, p. 7). However, recent maps produced by the private consultant for the project show a different proposed route for this planned extension of the BRRT west of Piney River, following the old railroad grade northward to Massies Mill and following the Tye River from there to an intersection with the Appalachian Trail near Tyro. These maps do not show this proposed trail connecting to Montebello and the Blue Ridge Parkway about five miles to the west (LPDA). Certainly, the seven-mile trail currently under construction can provide only limited connectivity between points of interest in this part of Central Virginia. The inadequacy of this existing trail and discrepancy among different plans regarding the precise alignment of the future trail give rise to the question: What is the best route?

Although the enhancement grant proposal states that the old railroad bed “extends to the top ridge of the Blue Ridge mountains, thereby connecting with both the Parkway and the Appalachian Trail”, USGS topographic maps of the area show the railroad grade for the Virginia Blue Ridge Railway extending only as far west as Massies Mill and eastward only as far as the Village of Tye River, about eight miles (as the crow flies) short of the James River. Furthermore, although all of the various routes provide a beautiful setting along the Tye and Piney rivers, they are not based upon an inventory of the most significant natural, scenic, recreational, and historic destinations within this part of Central Virginia. In addition, these routes do not connect places of interest through lands also possessing unique natural, historic, or recreational significance in order to provide the optimal experience to trail visitors. For instance, users would occasionally glimpse the mountains that are the main attractions for many tourists to this area and contribute so much to the scenery, but have no direct access since there are currently few established trails to the tops of these peaks. Also, the old railroad grade for the Virginia Blue Ridge Railway bypasses many of the most significant historic and recreational sites. So how does one address these deficiencies and utilize the best route for a contiguous trail from the Blue Ridge Parkway to the James River?

Statement of Purpose:
This plan, *The Blue Ridge Discovery Trail: A Vision & Concept Plan*, serves as a comprehensive planning proposal for a continuous multi-use trail from the Tye River Overlook at James River State Park in Buckingham County to Yankee Horse Ridge Overlook on the Blue Ridge Parkway in Rockbridge County. These starting and ending points of the BRDT were selected for their scenic, recreational, and educational value and because they are located in a straight line, more or less, from the eastern and western terminuses of the existing BRRT along the line formed by the Tye-Piney river system. Because a protected right-of-way already exists in the central portion of the project area, the BRDT will be co-aligned with the existing seven miles of the BRDT between the villages of Piney River and Tye River. Beyond this established corridor and between the eastern and western terminuses of the trail, the BRDT will link additional significant "points of interest" located between the James River and Blue Ridge Parkway within a predefined project area. The potential or ‘alternative’ routes used to connect points of interest were identified using the results of a spatial analysis performed in order to derive the combined natural, scenic, historic, and recreational value of all land within the project area. Thus, the proposed routes link major points of interest within the project area utilizing the most suitable route, that is, those that traverse lands having the highest combined values. By basing the alternatives on these criteria, the trail will optimize the overall experience of visitors and increase its attractiveness to both local and non-local users with diverse recreational interests.

In some places, the mountainous terrain within the project area produces slopes and conditions that preclude use of the trail by horseback riders and bicyclists. Absent these physical constraints, however, all recreational uses will be considered on all or some of the BRDT to allow users to enjoy and discover the area’s history and natural beauty at their own pace and on their own terms. To achieve this, only certain modes of travel or types of uses may be allowed on sections of the trail so that conflicts between uses are kept to a minimum and experiences and/or encounters that tend to interfere with one’s ability to enjoy the surroundings do not occur. These restrictions are intended to accomplish the stated purpose of the Blue Ridge Discovery Trail, which is:

To provide a place where people can discover and interact with the unique historic and natural setting of the Blue Ridge and its eastern foothills, where visitors can explore landscapes that are some of the oldest on Earth and learn about how these places have hosted and sustained countless generations in their quest to survive and prosper in Virginia’s Blue Ridge Mountains.
Overview of Recreational Trail Types, Functions, and Characteristics

The Virginia Outdoors Plan defines a trail as “a linear corridor, on land or water, with protected status and public access for recreation and transportation” (Parsons Harland Bartholomew & Associates, 2002, p. 1-6). As such, all land-based trails in Virginia fall under the broader category greenways, which are defined by the same source as “open space corridors that can be managed for conservation, recreation, or alternative transportation” (Parsons Harland Bartholomew & Associates, 2002, p. 1-2). A recreational trail corridor, which includes not only the trail itself by the protected land on either side, is considered a recreational greenway. These are usually based on “natural corridors as well as canals, abandoned railroad beds, and other public rights-of way” but can include private land that has received some form of protective status in order to preserve the trail corridor from encroachment by adjacent private land development.

Recreational trails provide opportunities to interact with the natural environment for an array of outdoor enthusiasts. This variety gives rise to the need to categorize outdoor trails by type based upon the user group(s) for which the trail was designed as well as its characteristics. These include the trail’s width, surface, and grade as well as structures and amenities, scenery, and potential for solitude provided along the trail route. When multiple uses are allowed, interactions between different groups of users must be carefully considered and properly managed to reduce the potential for conflict. Low volumes of multi-use traffic can be accommodated relatively easily and without added design requirements through the imposition of posted rules regarding what members of one user group must do when encountering people utilizing a different mode of travel. Examples include:

- Those traveling by foot along a narrow shared-use path are required to move aside when being passed by horseback riders and encouraged to avoid making sudden movements.
- Bicyclists must yield to pedestrians at all times along a paved multi-use trail.

As anticipated or actual traffic volumes increase, the width and surface of the trail should be increased to accommodate the additional activities. In some cases, a separate tread (i.e. surface)
must be established and marked for a specific use(s) when that activity cannot be accommodated on the same surface or along the same route as other permitted uses.

As discussed previously, the BRRT, once finished, will function as a non-motorized, multi-use trail, meaning that the trail was designed for and can be used by hikers, bikers, equestrians, and in-line skaters, among others. Trail surfaces along multi-use trails are typically paved with asphalt or macadam. The BRRT can also be classified as a rail-trail since it follows the abandoned bed and right-of-way of the historic Blue Ridge Railroad. These trails typically involve a gentle grade along rivers and streams and are wide enough to allow two trails users to pass one another side-by-side without the need for one of them to veer off the trail. A short section of the proposed BRRT at Tye River, Virginia falls within the category rails-with-trails because the trail will be located parallel to and within the right-of-way of an operating railroad track.

Beyond the well-graded BRRT route, however, use of all or part of the BRDT may be limited to certain users, such as hikers and equestrians, who are less constrained by the uneven terrain and challenges afforded by the natural topography and slope. As Table 1.1 shows, bicyclists are constrained by steep, longitudinal slopes to a greater degree than equestrians and pedestrians. South of the Village of Tye River, the natural topography makes an equestrian trail possible where trail surfaces, width, and grade (10% maximum) would be variable and appropriate facilities would be provided such as hitching posts, steps for mounting/dismounting, and other trailhead facilities (i.e. additional area for parking and maneuvering trailers). The mountainous section of the potential trail corridor west of Piney River and through the George Washington National Forest is marked by dramatic elevation changes, providing an excellent opportunity to establish a hiking trail offering physical challenges and dramatic scenic rewards. Such trails typically feature packed soil and naturally occurring leaf litter, fallen logs, and vegetative debris.

<table>
<thead>
<tr>
<th>Trail User</th>
<th>Average Speed (mph)</th>
<th>Longitudinal Slope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>3-7</td>
<td>No restriction</td>
</tr>
<tr>
<td>Person in wheelchair</td>
<td>3-7</td>
<td>3% preferred; 5% maximum</td>
</tr>
<tr>
<td>Bicyclist</td>
<td>8-10</td>
<td>3% preferred; 8% maximum</td>
</tr>
<tr>
<td>Equestrian</td>
<td>5-15</td>
<td>10% maximum</td>
</tr>
</tbody>
</table>

Table adapted from Flink et al, 2001, p. 63

In addition to slope, different uses have different sight distance requirements. Providing the acceptable sight distance forward and rearward helps to maintain safety along the trail, as the following image illustrates:

![The narrow width of this wooden bridge on a hiking trail near the Blue Ridge Parkway denotes it a bridge and trail designed exclusively for pedestrians.](image_url)
Finally, one of the most recognizable qualities of a successful recreational trail involves the **continuity** of the experience for trail users. The following excerpt from the Virginia Greenways and Trails Toolbox defines and describes the concept in detail:

“Continuity in a trail or trail system gives it a quality that will enhance the experience offered as well as encourage repeat use, and create a growing constituency. Continuity exists when the sequence of views and experiences along a trail occur in a smooth and logical order. For example, a trail that passes a pond then climbs a ridge to an overlook where the pond is again viewed has continuity. But if that trail climbed the ridge and never gave a view back to the pond, continuity would be lacking. Continuity is also created when a trail exposes users to a series of features in a recognizable order. A trail that follows a stream to its headwaters then climbs a ridge for the return loop would have more continuity than one that repeatedly switched back and forth across the stream and up and down the flanking ridges.” (p. 1-7)

The potential to create continuity along the BRDT is strong given the dramatic elevation range within the project area and numerous scenic vantage points and viewsheds. This factor, although difficult to quantify, will be given priority in selecting points of interest and identifying possible trail routes linking these scenic, interesting, or otherwise important places.
Benefits of Recreational Trails

Greenways and trails produce a number of benefits that accrue not only to individual users but also to the community at large. These fall into two general categories: (1) those that produce a direct monetary benefit to the community and (2) those that are difficult to quantify using dollars and cents but are nevertheless important.

Economic Benefits:

The economic benefits associated with trails and greenways are numerous and significant to the economic foundations of the communities where they exist. These benefits accrue to local businesses, the local government, and ultimately the residents of the community (Parsons, Harland, Bartholomew, & Associates, 2002, p. 1-12). The first set of economic benefits arises from increased tourism from visitors residing outside of the area. Trails generate revenues for food, lodging, automotive services, and recreation-oriented businesses as well as surveying, engineering, and construction companies during trail design and construction (Commonwealth of Virginia, 2007, p. 84). As the popularity of the trail and community grow, opportunities for new businesses are created for local entrepreneurs (Parsons Harland Bartholomew & Associates, 2002, p. 1-12). The second category of benefits involved those that accrue to all residents of the community through increased property values, tax revenues, and savings to taxpayers through reduced public costs associated with flood damage, pollution of waterways, and chronic health problems. Finally, the quality of life within a community, which typically includes whether recreational opportunities are present, is a major reason for corporate relocation decisions because of its importance to employees (Commonwealth of Virginia, 2007, p. 84). Expanding the diversity of the economic base within a community produce benefits both to those who obtain jobs in the sectors affected as well as the entire community by increasing property and sales tax revenues.

A recent study of user demographics, preferences, and economics for the Virginia Creeper Trail, a similar rail-to-trail project in Southwestern Virginia, indicates that people are willing to travel considerable distances to use such trails and contribute significant amounts of money to the local economy during such outings. Non-local visitors traveled, on average, 260 hours and 4.6 hours to reach the VCT. These users spent an average of three hours and covered an average seventeen miles, mostly by biking (75% listed it as their preferred activity). The non-locals combined with local visitors to spend nearly $2.5 million over the sample period on expenses related to their recreational trip(s). Spending by non-local visitors in the area alone generated $1.6 million in economic impacts and supported nearly 30 jobs (Commonwealth of Virginia, 2004, pp. 33-4). To be sure, the BRRT and BRDT are not located within quite such a favorable area for outdoor recreation as the VCT; the midpoint of the VCT, Damascus, Virginia, is known as “Trail Town U.S.A.” because of its location at the intersection of five major trails. However, even if these economic benefits cannot be duplicated precisely within central Virginia, the study of VCT users...
suggests that such trails can attract people from long distances, as well as their money, to rural parts of Virginia to enjoy the natural beauty of the Blue Ridge Mountains.

Additional Benefits:

The non-economic benefits of greenways and trails include:

- **Transportation** – Trails are not only places for outdoor recreation; they enhance local transportation in and around the community by connecting population centers to popular destinations. Trails expand the range of transportation modes available to the public and reduce traffic congestion. For this reason, planners regard trails as an indispensable component in the effort to enhance multi-modal transportation within communities and create sustainable regional transportation networks.

- **Conservation** – The conservation of natural resources is a primary objective for establishing greenways and trails. For example, when a riparian buffer strip along a stream or waterway is protected from development or disturbance, filtration of runoff from sediment and other pollutants can occur, improving water quality and protecting vital habitat and landscape corridors for wildlife.

- **Flood Control** – By protecting floodways and floodplains adjacent to waterways from development, greenways reduce the potential for devastating and costly effects of flooding on properties and man-made structures. Thus, flood control is an economic as well as an intrinsic benefit of trails and greenways.

- **Historic Preservation** – Trails not only connect people to nature, they also connect them to their past. Facilities such as the Blue Ridge Railway Trail, Virginia Creeper Trail and W&OD Trail serve to educate users about the history of transportation for the movement of people and goods during previous eras. By linking historic structures, features, and landscapes, trails increase awareness about and interest in local history as well as visitation to these places.

- **Recreation** – Of course, the primary purpose of establishing trails and greenways is to provide places for people to walk, jog, and/or ride. Trails routed along waterways produce the added benefit of providing public access points to recreational waters for canoeing, kayaking, and fishing. Given the increasingly sedentary lifestyle of many Americans and the rising obesity rates, providing places for people to exercise is necessary to improving fitness and creating and active and healthy population (Parsons Harland Bartholomew & Associates, 2002, p. 1-11).
User Preferences

Successful trail projects are designed to meet the preferences of likely users. Often, trail organizations or government agencies survey user groups and stakeholders before a trail is constructed to determine the type of trail they would like to see in their community. Even so, no citizen planning process can obtain the same wealth of information that can be gathered once a trail has been completed since many users of regional trails are visitors who reside outside of the community and, therefore, are unable to attend community planning workshops. To obtain input from non-locals, user surveys should be conducted to determine their level of satisfaction with facilities and conditions in order to ensure that facilities are meeting the needs of all users. In the case of the BRDT, user preferences can be ascertained more easily than with other trail systems since a section of the Blue Ridge Railway Trail has already been opened to the public, with the remaining sections to be completed soon. To the extent that BRRT users are similar to potential BRDT users, a survey of the former would help trail managers determine where improvements can be made, if any, and how future trail additions and extensions can be designed to meet their needs. An important study of a similar regional trail facility, the Virginia Creeper Trail, is discussed below in order to highlight the variety of information such surveys can provide and to emphasize the implications such studies have for planning, managing, and maintaining regional recreation trails.

Assessment of User Preferences – Virginia Creeper Trail (VCT):

The results of the VCT study are discussed in detail not to suggest that the attitudes and preferences of visitors to the BRRT or BRDT would be identical to those of the VCT, but rather to demonstrate several interesting trends with respect to user preferences for a railway trail that is very similar to the BRRT and BRDT in terms of type, setting, and location.

One aspect of the VCT study that has particular relevance to planning for the BRDT involves the examination of user preferences and attitudes regarding various trail attributes and characteristics, trail management issues, and user benefits. With respect to the first, the so-called “four S’s” – scenery, safety, structures, and surfaces – were ranked highest in importance compared to such issues as conflicts, crowding, and parking. In terms of conditions observed along the trail, restrooms and trail surfaces received a ranking of “fair” or “poor” from a greater number of respondents compared to other attributes. Still, only fifteen percent of respondents ranked them as such and the study concluded that “users are pleased with conditions and important trail-related issues are not being overlooked.” (Commonwealth of Virginia, 2004, pp. 15-16) User preferences regarding trail surfaces were especially interesting, as users overwhelming preferred the use of cinders and crushed limestone to paved surfaces (Commonwealth of Virginia, 2004, p. 19). Unfortunately, the motivations for such preferences were not gauged, but may have involved biases toward such activities as skateboarding and roller-blading or the potential for conflict with the natural scenery, which users rated as
excellent and especially important (Commonwealth of Virginia, 2004, pp. 19-20).

To gauge the success of trail management efforts on the VCT, responses to five policy statements were assessed pertaining to general maintenance, funding for maintenance, and crowding. Most notably, users agreed overwhelmingly regarding the importance of maintaining the trail to attract visitors to the area. Further, there was general agreement regarding the use of local tax dollars to support trail maintenance, with 79 percent agreeing or strongly agreeing with this method of funding. Interestingly, a higher percentage of local users agreed with this method than non-local users. These local users also comprised the core of those who expressed opposition to the imposition of user fees to support trail maintenance; in general, user fees were not regarding as the best way to maintain trail facilities and infrastructure among those surveyed. In addition, results indicate that crowding on the trail is not regarding as a serious problem or area of significant concern. Taken together, the results suggest that, among the various alternatives to finance trail maintenance, strong support exists for the continued use local taxation and volunteer efforts to maintain the trail, especially among local visitors (Commonwealth of Virginia, 2004, pp. 18-19).

The most popular activity reported on the VCT was biking (55 percent) followed by walking (33 percent). Jogging, camping, nature viewing, horse riding, and fishing comprised the remaining twelve percent. Biking was the preferred activity of non-local while walking was the primary activity enjoyed by a majority of locals. With respect to activities with which visitors were willing to share the trail, an overwhelmingly majority disapproved of permitting gas-powered golf carts, motorized bicycles, ATVs, and horse-drawn carts along the VCT, even for disabled users. Respondents were somewhat more accommodating regarding the use of electric golf carts for disabled users, with about half favoring their use and half either disapproving of them or indicating their neutrality (Commonwealth of Virginia, 2004, p. 20).

The final series of questions asked as part of the study pertain to the various benefits visitors gain from using the VCT and their attitudes regarding features in the surrounding area. The most significant benefits users received were health/fitness and opportunities to view nature. Eighty-five percent of respondents ranked the importance of these personal benefits as high. Less important to visitors were benefits associated with a sense of community and animal companionship, possibly as a result of the high number of non-local users surveyed who are not part of the local community and not likely to bring their pet on a trip. Finally, responses to questions about the relative importance and condition of local area features indicate that eating establishments and outdoor attractions located nearby are most important to trail users and that both are provided at good or excellent levels (Commonwealth of Virginia, 2004, pp. 16-17).

The results of the VCT study highlight several broad trends that have implications for the planning, design, and implementation of rural, multiple-use trails like the BRDT. The results of the study suggest that the use of paved surfaces such trails should be avoided in favor of soft surfaces such as crushed limestone or cinders, even at the expense of accommodating certain uses. To that end, trail surfaces and facilities should be designed primarily for non-motorized...
recreational uses such as walking, jogging, bicycling, and horseback riding instead of motorized activities or even certain non-motorized activities such as in-line skating or skateboarding. Furthermore, despite the rural character of the VCT and BRRT, safety and convenience are major considerations that must be addressed throughout the planning process. For a great number of users, concerns about safety seem to trump the need for solitude; visitors may feel safer when sharing the trail corridor with other people than the do when they have it all to themselves. Finally, the quality of the scenery is especially important to recreational trail users. Scenic quality along such trails should be protected and optimized, and opportunities for users to understand and interpret the natural beauty around them should be provided to enhance users’ experiences.
CHAPTER TWO: BACKGROUND

Need For Project

A survey of BRRT trail users as well as BRDT stakeholders is needed to assess the precise needs and preferences of likely BRDT users. Although no such surveys have yet been conducted, several recent public opinion surveys and studies of recreational trail users and citizens help validate the need for such a trail in Central Virginia and have important implications for the planning and design of the BRDT and related facilities.

2007 Virginia Outdoors Plan & 2006 Virginia Outdoors Survey:

Results of the 2007 Virginia Outdoors Survey indicated that walking for pleasure is the most popular outdoor recreation activity in Virginia. Seventy-one percent of respondents listed it as their favorite outdoor recreation activity, and an additional sixteen percent preferred hiking and/or backpacking. Forty-nine percent indicated a need for additional walking and hiking facilities, and another 40 percent of Virginians indicated that trails for bicycling are needed (Commonwealth of Virginia, 2007, pp. 22-3). Public meetings used to develop the VOP revealed that the greatest needs pertaining to trails and greenways were for improved access to recreational waters and trails located closer to home (Commonwealth of Virginia, 2007, p. 20). The public also indicated a need for existing and future trails to be managed for multiple uses where appropriate (Commonwealth of Virginia, 2007, p. 17). The BRDT will help satisfy the statewide demand for trails that meet these criteria since the trail corridor provides access to the Tye and Piney rivers, will accommodate multiple uses including the most popular recreational activities in the Commonwealth, and is located less than one hour from the population centers of Lynchburg, Charlottesville, Waynesboro, Lexington, and Staunton.

At the regional and local level, citizens also expressed the need for increasing recreational trail mileage. In Region 10 (Thomas Jefferson Planning District), respondents indicated that more on- and off-road bike trails, rails-to-trails, and equestrian trails are needed. More significant for the BRDT, connectivity for alternative transportation was also listed as a major issue, with citizens and public officials stating that local parks should connect to trunkline trail systems and trails on federal lands should be extended to connect to adjacent communities. A 2005 survey of Charlottesville residents found that 70 percent of respondents wanted additional walking and biking trails. In addition, this option had the highest percentage select it as one of the four most important facilities as well as the most important facility (Commonwealth of Virginia, 2007, p. 437). In Region 11 (Region 2000), the favorite outdoor activity of residents was walking for pleasure and the greatest need was for walking and jogging trails located closer to home. Additional unmet needs include tent camping sites, access to recreational waters, and open spaces for hunting (Commonwealth of Virginia, 2007, p. 455).

The 2006 Virginia Outdoors Survey uses a standardized methodology based on survey findings and inventory data to quantify the demand for various outdoor recreational facilities by region. The table below summarizes the combined results for regions 10 and 11 and includes those recreational activities and facilities addressed in this plan for the BRDT:
The data appears inconclusive regarding the demand for the three of the most significant activities that can be supported through creation of the BRDT, most noticeably for walking, jogging, and bicycling. In addition, the results regarding demand for hiking and equestrian trails seem to conflict somewhat with the need for these amenities as expressed by the citizens of these regions. Indeed, the negative values for hiking trails in the near-term and horseback riding trails in both the near- and long-term indicate a surplus of trails miles exist for these purposes. The VOP states that “regions that show surpluses of recreational facilities may be tourist destinations and actually experience shortages during prime recreation seasons.” Thus, the data for demand should not be taken as independent evidence that additional trail facilities are not needed but should be

<table>
<thead>
<tr>
<th>Activity</th>
<th>Activity Days</th>
<th>Demand</th>
<th>Units</th>
<th>Supply</th>
<th>2010 Needs</th>
<th>2020 Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycling, Other</td>
<td>632,404</td>
<td>45</td>
<td>Miles</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tent camping</td>
<td>206,969</td>
<td>1,221</td>
<td>Sites</td>
<td>957</td>
<td>264</td>
<td>330</td>
</tr>
<tr>
<td>Freshwater fishing</td>
<td>1,468,240</td>
<td>1,033</td>
<td>Stream miles</td>
<td>440</td>
<td>593</td>
<td>X</td>
</tr>
<tr>
<td>Hiking, backpacking</td>
<td>738,542</td>
<td>379</td>
<td>trail miles</td>
<td>420</td>
<td>-41</td>
<td>16</td>
</tr>
<tr>
<td>Horseback riding</td>
<td>123,828</td>
<td>53</td>
<td>Miles</td>
<td>99</td>
<td>-46</td>
<td>-37</td>
</tr>
<tr>
<td>Jogging, running</td>
<td>5,930,452</td>
<td>475</td>
<td>mile trails</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nature study, programs</td>
<td>141,517</td>
<td>21</td>
<td>Sites</td>
<td>6</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Picnicking away from home</td>
<td>491,772</td>
<td>1,276</td>
<td>Tables</td>
<td>1,889</td>
<td>-613</td>
<td>-419</td>
</tr>
<tr>
<td>Visiting historic sites</td>
<td>688,570</td>
<td>59</td>
<td>Sites</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visiting natural areas</td>
<td>783,651</td>
<td>133</td>
<td>NI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hunting</td>
<td>1,015,385</td>
<td>166,512</td>
<td>Acres</td>
<td>118,283</td>
<td>48,229</td>
<td>73,366</td>
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<tr>
<td>Walking for pleasure</td>
<td>14,085,376</td>
<td>NA</td>
<td>NA</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird watching</td>
<td>111,445</td>
<td>NA</td>
<td>NA</td>
<td>NI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NA: not applicable, no standard needed
NI: not inventoried
(-): indicates surplus
x – Data tables in the VOP do not describe the methodology used to calculate values for the column “2020 Needs” for this activity; values for the “2010 Needs” column (same activity) were calculated by subtracting the supply from the demand as was clearly used to calculate demand for the other activities listed in the table.
considered alongside public opinion indicating a need for more trails for equestrians and hikers/backpackers. Further, the data indicating a positive demand for additional tent camping sites, stream mileage for freshwater fishing, hunting lands, and nature study sites, all of which will be satisfied to some extent through creation of the BRDT, coincides with the results of public opinion surveys indicating a need for these facilities.

Region 2000 Greenways & Blueways Plan:

This plan “presents a snapshot of present conditions in the region, details a vision for the development of a network of greenways and blueways that criss-cross the region, and acts as a reference document that can inform discussions throughout the implementation steps.” Development of the plan occurred following an extensive public participation process involving public meetings and opinion surveys targeted to specific interest groups as well as the community at large. Responses to several questions posed on the surveys are of particular relevance to the BRDT. When quizzed about what the plan should accomplish, the top three responses were to develop a regional system of trails, protect water quality with buffers along streams and rivers, and provide access close to home and work for health exercises. When asked a question pertaining to use of regional greenways and blueways, respondents indicated a preference for walking and jogging, biking, learning about native landscapes, learning about the history of the region, and visiting with friends. Finally, in response to the question regarding the type of corridor respondents most valued, results indicate a preference (in order) for (1) multiple-use corridors for biking, walking, hiking, and rollerblading, (2) single-use corridors for walking or hiking, (3) on-road bicycle lanes, (4) canoe and kayak water corridors, and (5) natural community corridors where natural area protection takes precedent over human uses.

These results, unlike the VOS, are not based on statistical sample of the population of the region, nor do they necessarily demonstrate a need or demand for these facilities. Nevertheless, the preference for protection of stream buffers and natural community corridors demonstrate a concern on the part of trail users and citizens active in trail planning for environmental considerations to be incorporated into the planning and design of future trails. Also, the results demonstrate a desire on the part of these same individuals for future trails to provide educational opportunities whereby trail users can learn about natural communities and the history of the region. Each of these issues is addressed in the planning and design of the BRDT (see Section III: The Plan).

Regional Greenways Plan - Thomas Jefferson PDC:

This regional plan is more condensed than the Region 2000 plan and serves “as a guide for localities in the future as they consider and plan for the development of greenways and trails within their boundaries and as they look towards their neighboring localities with an even greater vision for regional connections.” Public input was solicited by the PDC through meetings with planning staff in each of the counties, meetings with Jefferson Area Bicycling and Walking Advisory Committee (JABAWAC), and public workshops designed to identify an overall vision as well as priorities for proposed greenway corridors in the region. Using questionnaires and comment forms, planners were able to ascertain users’ preferences and needs. Residents in each county expressed a desire for additional walking, hiking, and jogging facilities in the region for the purposes of viewing scenery, wildlife viewing, bird watching, and reading interpretive signs. Citizen advocates and various bicycling groups also indicated a need for more off-road bicycle accommodation for families, young children, and less experienced adult riders. Interestingly, the survey did not find a high demand for additional mountain biking accommodation. Finally, since “Central Virginia is world renown for its equestrian activity,” it is perhaps not surprising that...
horseback riding is a popular activity in the region and that additional public off-road trail facilities are needed for this activity.
Description of Project Area

Defining the shape, extent, and orientation of the polygon to serve as the project area for the BRDT proved somewhat difficult. A rectangle seemed the best choice given the fact that a linear geographic feature, in this case, the Tye-Piney river system, would be used as the basis for the general alignment of the BRDT through Amherst and Nelson counties (Map 1). The length of the rectangle, therefore, was more or less determined by the distance between the desired starting and ending points of the trail. Determining the width was more problematic. Making the project area too narrow would leave out certain destinations and possibly invite criticism that the boundaries of the project area were chosen arbitrarily and failed to include numerous points of interest in the adjacent localities. On the other hand, increasing the width of the project area would increase the likelihood that the one of the identified “alternative” routes would be too circuitous, causing the BRDT to veer too far from the Blue Ridge Railway Trail corridor and Tye-Piney River system. Ultimately, the width of the rectangle was determined by the geography of the mountainous portion of what became the project area: the Priest, Friar, and Cardinal would be included in the project area to serve as the basis of several alternatives routes over these mountains since the trail cannot traverse all three peaks without involving considerable elevation changes, meandering, and disruptions to continuity. The southwestern boundary included two large conservation easements just south of the Friar but attempted to steer north of the Mount Pleasant National Scenic Area, which is currently served by an adequate system of trails and located too far outside of the Tye-Piney River corridor to be logically considered part of the project area. The opposite (northeastern) boundary of the rectangle was located just south of the Three Ridges Wilderness Area for essentially the same reasons.

History:

The history of the project area covers at least three centuries of European and several millennia of Native American settlement in this region of Virginia (Appendix 1). This history is interpreted and discussed as part of the educational component of the Blue Ridge Discovery Trail, which will be communicated to visitors through signage along the trail as well as detailed brochures available to users at trailheads. Therefore, information about individual people, places, and events of historic importance are covered in greater detail in the Educational/Interpretive section beginning on Page 73.

Topography & Water:

The project area is characterized by diverse topography and spans two physiographic provinces: the Piedmont Plateau and Blue Ridge. The eastern and central portions of the project area are primarily located in the former, which has terrain characterized by rolling hills and moderate elevation (less than 1,500 feet) and relief, most of which can be found adjacent to the numerous
streams that criss-cross this region (Map 2). An interesting characteristic of the topography within the Piedmont is the presence of two prominent ridges in the eastern section of the project area: Buffalo Ridge and the ridgeline formed by Turner and Findlay mountains. These narrow, wooded ridges are oriented southwest to northeast on the western side of the James River, rising above the adjacent stream valleys and offering potential vantage points to gaze out over the surrounding countryside and glimpse the impressive mountains to the west.

The western section is located within the Blue Ridge province and features higher elevations, dramatic relief, and steep slopes formed by several peaks that comprise what is referred to as the Religious Range: The Priest (elev. 4,063 ft.), The Friar (elev. 3,357 ft.), and the Cardinal (elev. 3,690). Although the mountains in this section of the Blue Ridge are smaller than some of the highest peaks in Southwestern Virginia and parts of the Appalachian Mountain range, they are visible from miles away and tower above the pastoral landscape in the valleys on the eastern side of the range. These peaks are located mostly within the George Washington National Forest and are drained by swift-moving, cold-water tributaries of the major rivers that flow through the project area, including the North Fork of the Piney River and Little Piney River. Just to the east, several prominent foothills are present below the Religious Range; these include Little Mountain and Thompson Mountain near Lowesville and Bryant Mountain and Cabell Mountain near Popular Flats.

The project area generally follows the line formed by the Tye-Piney river system. Other major rivers include portions of the Tye, Piney, Buffalo, and James. The Piney River meets the Tye just upriver from where the BRRT crosses the latter on an old railroad bridge between the villages of Tye River and Roses Mill. The Buffalo is located just to the south of the Tye and joins that river about a mile before its confluence with the James River. The segment of the James River within this area is one of 67 river segments within the Commonwealth that have been identified as worthy of evaluation for inclusion in the state system of scenic rivers. On the western side of the Blue Ridge, the small mountain streams that originate within the project area flow westward towards Irish Creek, a tributary of the South River in the Shenandoah Valley. There are also numerous small, man-made ponds and lakes, only one of which is publicly owned: Lake Nelson. Two of the largest ponds on private land are identified on the USGS topographic map as tailings ponds for an inactive quarry in the Village of Piney River.
Demographics & Development Trends:

An analysis of the demographic data for census tracts and blocks demonstrates the area’s rural character. The project area includes portions of three census tracts in Nelson and Amherst counties (Map 3), all of which have low population densities relative to more developed areas within their respective counties. The population and housing unit density of census blocks were used to determine the distribution of people within the project area itself. These maps confirm that most of the population (Map 4) and housing units (Map 5) are concentrated in the central portion of the project area along major highways and in villages located at or near the intersections of these highways. The highest population densities are around 100-200 people per square mile in the relatively small (in terms of area) census blocks in or near the villages of Colleen, Arrington, Massies Mill, and Shady Lane in Nelson County and just north of Clifford in Amherst County. The map of housing density closely matches that for population density, with the same census blocks having the highest housing unit densities (50-100 units per square mile). However, the map showing vacancy rate (Map 5) illustrates an inverse relationship, with the more rural census blocks having some of the highest vacancy rates. In the mountainous, western part of the project area, this is mostly due to the fact that there are a higher number of vacant housing units used intermittently for seasonal and/or recreational purposes.

Determining the rate of population change and housing development at the block level is not possible since the census block geography differs between decennial censuses. These trends, therefore, must be inferred by looking at the tract and county data, although the changes at the tract level may not involve changes within the project area, but could arise instead from increases/decreases within a part of the tract located outside of the area. From 1990 to 2000, Tract 101 in Amherst County increased in population from 4,439 to 5,064, a net increase of 14.1% compared to 11.6% for the county as a whole. Tract 9501 in Nelson grew from 4,847 to 5,336 (10.1%) and Tract 9503 (also in Nelson) grew from 4,141 to 4,448 (7.4%) while the county experienced an overall increase of 11.1%. From 2000-2007, the populations of Nelson and Amherst counties were projected to increase more slowly, by 5.0% and 3.3%, respectively. This corresponds to a likely increase in residential housing units based upon the number of building permits issued annually for new single-family homes during the same period:

| Table 2.2 Annual Building Permits Issued By County |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                 | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | Total |
| Amherst         | 93    | 109   | 118   | 107   | 117   | 124   | 183   | 108   | 959   |
| Nelson          | 112   | 116   | 120   | 157   | 201   | 216   | 156   | 123   | 1,201 |

Blue Ridge Discovery Trail

“Pathway to Our Past”
**Land Cover & Use:**

Residential, commercial, and industrial developments within the project area are sparse; the only concentrations of such uses are in the small villages that dot the landscape (Map 6). The largest non-agricultural or forestry use (in terms of area) is an industrial mining operation owned by Luck Stone Corporation located just to the west of the Village Piney River. Land owned or controlled by local governments is confined to the Blue Ridge Railway Trail corridor and the public schools within the project area: Tye River Elementary School near Colleen in Nelson County, Nelson County High School and Nelson Middle School near Lovingston, and Temperance Elementary School near Lowesville in Amherst County. The federal government owns large tracts of land in the western portion of the area within the boundaries of the Pedlar Ranger District of the George Washington National Forest. State government agencies own smaller pieces of land in the eastern part of the area; like the federally-owned parks and forests, these destinations are described in more detail in the “Points of Interest” section.

The western-northwestern portion of the project area is dominated by hardwood forest intermixed with small, isolated patches of mixed forest, pine forest, and forest harvests in and around the George Washington National Forest (Map 6). Abutting the mountains to the east, large areas of agricultural land are present on flatter terrain along the river and stream valleys and secondary roads, whereas mixed hardwood forest dominates the slopes and higher elevations atop prominent foothills. East of U.S. 29, the predominant land cover classification changes to forest harvests on private land, much of which is owned by forest products companies, especially Mead Westvaco. As such, the forest is different here, as hardwood forests on the easternmost ridges yield to stands of pine and mixed forest in lower elevations areas. Agricultural land is less prevalent is this part of the project area and concentrated mostly along the valleys of the Tye and James rivers.

**Transportation Network:**

Although no interstate highways cross the area, one federal and three state and U.S. highways serve as primary transportation routes (Map 1). The major north-south highways are U.S. 29 (four lanes, divided) and Virginia Route 151 (two-lanes). Virginia Route 56 (two-lanes) connects these two highways between Colleen and Shady Lane, just north of the Village of Piney River. From there, Route 56 leaves the project area and follows the Tye River north and west to Tyro and Montebello. A section of the 469-mile Blue Ridge Parkway, managed as a national park by the National Park Service, skirts the...
far northwestern portion of the project area. Important state secondary roads include Route 778, a striped, two-lane road connecting Va. Route 151 at Shady Lane to U.S. Route 60 through Lowesville, and the system formed by routes 666 and 827, which combined with USFS Road 63 provide access to and across the mountains through Salt Log Gap.

Two active rail lines cross the area. The Norfolk-Southern line between Lynchburg and Charlottesville generally parallels U.S. Route 29 to the southeast and divides the project area roughly in half, connecting the villages of Tye River, Arrington, and Shipman. At one time, the Blue Ridge Railroad, now abandoned, provided rail access from the Norfolk-Southern railroad at Tye River to the western portion of the project area as far as Piney River and Massies Mill. Farther to the southeast, the CSX line between Lynchburg and Richmond runs along the western bank of the James River and passes through the villages of Buffalo Station and Norwood.

Recreational & Cultural Resources:

The cultural and recreational areas serve as the basis of the spatial analysis used to devise the potential or “alternative” routes for the BRDT. These places are considered points of interest that will be connected by the trail through the project area using the best (i.e. most suitable) route. For specific information regarding areas of interest, refer to the Points of Interest chapter starting on Page 28. Cultural and recreational areas not specifically listed as points of interest will nevertheless be considered as a possible location for the trail based upon the analysis described in the chapter entitled Data & Methodology beginning on Page 40.
Points of Interest

1. **Yankee Horse Ridge Overlook (Blue Ridge Parkway National Park):**

This overlook is located at milepost 34.4 on the Blue Ridge Parkway and features a reconstructed section of narrow-gauge railroad, including a small trestle across Wigwam Creek, and a short side trail to scenic Wigwam Falls. The overlook is named after a ridge that descends westward from Elk Pond Mountain and slants across the parkway, which in turn is named for an incident during the Civil War during which an exhausted horse of a hard-riding Union soldier dropped while ascending the ridge and had to be shot (Albright, 1994, p. 67). A group of Cherokee from Irish Creek once hunted and camped near the stream on Wigwam Mountain; local whites referred to the camping shelters as wigwams, hence the name. When a band of Indians residing in the mountains descended into nearby Lexington, Virginia around the turn of the 1800s suffering from smallpox, they were banished to the mountains and ordered to stay put. Some of the current residents of the Irish Creek Valley are believed to be descended, at least in part, from these natives. The reconstructed railroad spur at Yankee Horse Ridge Overlook is all that remains of a logging railroad that came up the mountains along Irish Creek from the west to a camp at Norvell Flats directly beneath the parkway. The National Park Service maintains several picnic tables along the railroad just above the parking area. One source describes the scenery at the overlook this way, “The picture of stream and trestle beneath the sun-laced of hemlock, birch, and maple is a quiet moment of delight and wonder” (Lord, 1981).

The site is an ideal location for the western terminus for the trail due to its scenic beauty and historical significance. The logging railroad and waterfall that dominate the scene are important for creating continuity of experience for individuals who travel from one of the trail to the other, where railroads and water are also prominently featured (see #12 below). The BRDT would likely begin at the base of Wigwam Falls, where an informal trail leads around the left side of the falls to the top. From this point, one continues to ascend along the creek to an intersection of unnamed...
2. **The Priests (George Washington National Forest):**

The two largest mountains in the Religious Range, The Priest and Little Priest, are part of a 5,726-foot wilderness area designated by Congress in 2000 (Carroll, 2002, p. 40). The area is located between the Tye and Piney rivers and incorporates a large part of the national forest between these two river valleys. Although the entire wilderness could not be included in the project area, the south- and southeast-facing slopes, as well as the peaks of the two mountains, are included. In addition to steep, rugged terrain and deep, V-shaped hollows, The Priest Wilderness contains five miles of the Appalachian Trail, which provides the best access to the interior of the area from Crabtree Falls Road (Route 826) as well as the 4,063-foot summit the area’s namesake. The ridges are covered with second-growth forest, a testament to the fact that logging activity once reached some of the steepest and most remote parts of the Blue Ridge Mountains. In the coves and hollows, tulip poplar, maple, basswood, and hemlock form the overstory. Muscadine grape, dogwood, rhododendron, and mountain laurel dominate the understory in many parts of the wilderness area (Carroll, 2002, p. 40). The source of Rocky Run is a small spring just below the saddle between The Priest and Little Priest on the eastern side of the ridge. The landscape is rugged and wild, providing perfect habitat for deer, black bear, bobcat, raccoon, possum, and wild turkey.

Although the A.T. is the only established trail within the wilderness, the Appalachian Trail Guide to Central Virginia and various maps of the area show a side trail to the Little Priest from the A.T. about two-tenths of a mile before one reaches a separate side trail to The Priest Shelter (traveling north on the A.T.). This trail is actually an overgrown logging road as evidenced by the presence of a rusted metal rim from an old logging truck about a half mile from the A.T. From here, the old road passes between two small, unnamed peaks topped by large rock formations that provide excellent den habitat for timber rattlesnakes, which are apparently not accustomed to nor terribly concerned about chance encounters with humans. Although no longer maintained, the trail is fairly discernable and easy to follow until it reaches a point just above the saddle between The Priest and Little Priest. At this point, the old road veers off abruptly downhill to the east. On the other side of
the saddle, another trail emerges and leads uphill through thickets of mountain laurel and rhododendron to the top of the Little Priest, where in the summer the forest floor is covered by bright-green ferns soaking up the patches of sunlight that make it through a dense canopy of chestnut oaks. This is a quintessential Blue Ridge scene. Just downhill from the summit to the south, dense thickets of mountain laurel conceal large outcroppings of granite with breathtaking views of the mountains and valleys to the south, most prominent of which are the Friars, Cardinal, Mount Pleasant, and the Piney River thousands of vertical feet below. To the southeast, the villages of Woodson and Lowesville are also evident from this spectacular vantage point.

The 1964 Wilderness Act established the National Wilderness Preservation System for the purposes of permanently protecting large, roadless tracts of land where “earth and its community are untrammeled by man, where man himself is a visitor who does not remain.” In 1975, the law was amended to allow the designation of smaller areas in the eastern United States, resulting in the creation of the James River Face Wilderness in Virginia. Since then, three subsequent pieces of legislation have added sixteen wilderness areas within Virginia’s national forests, including The Priest Wilderness, for a total of 89,863 acres (Carroll, 2002, p. xi). The law and subsequent regulations restrict many types of human activities within the wilderness and guide the recreational usage of such areas. Permanent structures (other than existing structures) and motorized forms of travel and equipment, including chainsaws for the maintenance of recreational trails, are not permitted in accordance with the provision that wilderness “generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable” (United States Forest Service, 2007, p. 26). This ensures that recreational experiences emphasize solitude and challenge, and visitors “rely on their own personal physical abilities and primitive recreation skills, accepting the inherent risks associated with adverse weather conditions, isolation, natural physical hazards, and primitive travel and communications” (United States Forest Service, 2007, p. 26-7).

3. **The Friars (George Washington National Forest):**

At 3,357 feet and 2,930 feet respectively, The Friar and Little Friar just to the south are the two smallest peaks that make up the Religious Range. Although these mountains may lack the dramatic height of their neighbors to the north, they are extremely rugged peaks that rise steeply above the adjacent valleys. Although there are currently no established trails leading to the top of The Friar, a difficult bushwhack
The wooden summit of the Little Friar can be seen from this vantage point atop The Friar

up the steep northwestern ridge to the summit is a rewarding experience as one ascends through dense thickets of mountain laurel to secluded, wooded summit strewn with boulders and covered with chestnut oak. A large, south-facing rock face located just southeast of the peak affords excellent views of the Piney River and villages of Woodson and Lowesville, and provides ideal habitat for hawks and other raptors. The understory vegetation encountered in this area is mostly new growth that has sprouted up since a forest fire charred thousands of acres in this part of the national forest in the summer of 2007. The mature trees growing on ridges and in the hollows seem to have survived this fire, although the smaller species and abundant mountain laurel and rhododendron appear to have fared worse. The summit of the more diminutive Little Friar is almost entirely wooded, although there does appear to be large exposed rock face on the southern side of that mountain as well. There are only a few informal trails within this area and only one established trail: the King Creek Trail, which appears on PATC Map 13 of the Appalachian Trail and is listed in the First Edition of the Hiking Guide to the Pedlar District, although it was subsequently removed from later editions of the book. Several state secondary roads form the boundary of the area, including Route 629 and Route 698, which provide principal access to these mountains.

Unlike the Priest, Congress has not designated The Friar and its environs as wilderness, although the area is one of several inventoried roadless areas that are managed in a similar fashion by the Forest Service and designated as a Remote Backcountry Area under the latest version of the Proposed George Washington Revised Land Management Plan. The remote, rugged character of the natural landscape, where evidence of natural processes predominate over human activities, guides the agency’s management approach as it pertains to recreational usage of this mountainous region. Specifically, the Plan states that such “Remote Highlands provide…isolated areas where visitors can obtain a degree of solitude and challenge associated with a semi-primitive recreation experience in large remote areas…” and “large tracts of backcountry recreation opportunities” (United States Forest Service, 2007, pp. 42-3). These opportunities include “hiking, horseback riding, mountain biking, hunting, fishing, and camping associated with backpacking. Visitors are afforded the opportunity to be self-reliant on their outdoor skills in an environment away from such comfort and convenience amenities normally found in developed recreation areas” (United States Forest Service, 2007, pp. 43-4). All such policies are intended to create places where “little evidence of other users and low interaction among users occur, except along existing roads and trails.” To help achieve this, recreation facilities such as trailhead parking, bulletin boards, and vault toilets are allowed only at the perimeter of such areas (United States Forest Service, 2007, p. 44).

4. **North Fork Piney River (George Washington National Forest):**

The mountainous area drained by the uppermost segment of the North Fork of the Piney River, Elk Pond their many unnamed tributaries feature dramatic scenic beauty combined with wild, remote setting. These quick-flowing, cold-water streams form narrow valleys and
hollows buffered by steep slopes leading up to high-elevation ridges and mountains with names that invite further speculation regarding their origin, such as Elk Pond Mountain, Porter’s Ridge, and Wolf Ridge. The source of the North Fork consists of a spring and small, man-made pond located just below the unnamed ridge that forms the crest of this section of the Blue Ridge Mountains. The remnants of a homestead in this location, evidence of numerous logging roads, and artifacts from what was once a popular Native American hunting ground provide testament to the fact that even in this seemingly remote region of the mountains, human activity, if not settlement, has been present on the landscape for quite some time. From this point, the North Fork descends dramatically, flowing swiftly through chutes between large granite boulders and over numerous small waterfalls, dropping some 1,500 feet in elevation over the two and half miles or so between Elk Pond Branch and its confluence with the South Fork.

This is a scenic, remote, and wild expanse of land located entirely within the GWNF that offers abundant opportunities for outdoor recreation activities, the most popular of which are hiking, hunting, and camping. The bulk of this area is managed as a Dispersed Recreation Area by the Forest Service or is considered part of the Appalachian Trail corridor, which bisects the area. The remainder, mostly south of the Piney River, is managed as General Forest. The Lovingston Spring Trail, which used to be the A.T. before that trail was rerouted to its present location, runs parallel and just to the west of the A.T. along the main ridgeline. Beginning at its intersection with the A.T. at Greasy Springs Road (USFS 1176A), the Lovingston Spring Trail passes Lovingston Spring, the source of the South Branch of Wigwam Creek to the west, and crosses the 4,034-foot summit of Elk Pond Mountain before rejoining the A.T. at Porters Gap. Since the BRDT will be oriented east-west, it will have to cross both of these north-south trails, creating numerous opportunities for circuit hikes to destinations such as Wolf Rocks on the A.T., which affords fantastic views of the North Fork and surrounding mountains and valleys.

Brochures and informational material describing the BRDT through this area should seek to educate the public about an environmental threat to forested ecosystems along stream valleys in the Blue Ridge Mountains. All of the majestic hemlocks that once towered over this remote stream valley have fallen victim to the hemlock wooly adelgid, an invasive insect species that has decimated these majestic trees. The destructive pest has left trees in the vicinity of where the A.T. crosses the North Fork looking like, according to one source, a
“haunted forest” thick with the skeletons of these decaying giants (Sheaffer, 2002, p. 47). Unfortunately, the valley is only one such example of this phenomenon in the Blue Ridge Mountains.

5. **Appalachian National Scenic Trail:**

The forest management plan describes the A.T. as a “way, continuous from Mt. Katahdin in Maine to Springer Mountain, Georgia, traversing the George Washington National Forest by foot travel through the wild, scenic, wooded, pastoral, and culturally significant lands of the Appalachian Mountains” (United States Forest Service, 2007, p. 31). Approximately one-quarter of the 2,175-mile footpath is located in Virginia, and the section that traverses the northwestern portion of the project area provides hikers with “a feeling of remote isolation within the George Washington National Forest” (Albright, 1994, p. 110). The AT in this area crosses the North Fork of the Piney River and Elk Pond Branch, passes rock outcroppings at Wolf Rocks, Spy Rock, Maintop Mountain, and The Priest that offer breathtaking views, and crosses numerous old logging roads and trails, both established and informal, that provide abundant opportunities to explore the rugged, remote country on either side of the trail corridor. Several Forest Service roads (FSRs) and side trails provide access to the A.T. from Route 56, the Blue Ridge Parkway, and secondary roads approaching the mountains from the east. These include the blue-blazed trail that leads from a parking area behind the Fish Hatchery in Montebello to the A.T near Spy Rock, and the Crabtree Falls Road - Shoe Creek Jeep Trail which crosses the A.T. near Crabtree Meadows. There are two lean-to shelters on this section of the trail, Seeley-Woodworth Shelter and The Priest Shelter, as well as numerous camping sites where hikers and backpackers can pitch a tent for an overnight stay.

The desired condition of the AT corridor, which extends a minimum of 100 feet in width on either side of the actual trail, is summed up by the USFS in the statement: “All activities in
this Special Area are designed to maintain or enhance the A.T. experience.” To accomplish this, “all management activities are to be designed to protect the Appalachian Trail experience, preserve and strengthen the role of volunteers and volunteer organizations, provide opportunities for high quality outdoor recreation experiences, and provide for the conservation and enjoyment of the nationally significant scenic, historic, natural and cultural qualities of the land through which the Trail passes” (United States Forest Service, 2007, p. 30). To this end, all uses other than pedestrian uses are prohibited along this section of the A.T.

6. **Woodson’s Mill:**

This well-preserved and fully operational grist mill near the village of Lowesville was originally constructed in 1794 by Guiliford Campbell and was called “Big Piney Mill.” The present structure is an example of four-story post-and-beam construction and was completed in 1845 and later expanded after the Civil War. The mill continues to function in its original role, grinding flour using a small Fitz-type wheel to produce electricity and a large 12½-foot steel Fitz wheel which drives the mill stone (Nelson County, 2008). The structure is considered by historians to be one of the state’s finest examples of an intact 19th century mill and is listed on both the National Register of Historic Places and the Virginia Landmarks Register. Although the property is privately owned and not open to the public, the mill can be easily viewed from SR 778 and is located less than a half mile from where the road intersects the railroad grade for the Blue Ridge Railway.

7. **Lake Nelson:**

This 40-acre impoundment near the Village of Arrington in Nelson County was created in 1958 and is owned by the Virginia Department of Game and Inland Fisheries. The DGIF also owns a strip of land approximately twenty feet beyond the waters edge around the entire perimeter of the lake. The lake is a popular spot for fishing and wildlife watching and is kept stocked with various species of fish such as largemouth bass, black crappie, bluegill, reedear sunfish, catfish, and grass carp. In the fall and winter, waterfowl such as mallard, black duck, gadwall, American widgeon, ruddy duck and hooded merganser join the large groups of resident Canada geese that call the lake home. Birdwatchers will also catch glimpses of migratory shorebirds, sandpipers, kildeers, eastern tiger swallowtail, and the
brightly colored American goldfinch. Facilities include a parking area, boat ramp for electrically powered motor boats (outboard motors are prohibited), canoes and paddleboats, and numerous benches near the shore to support fishing, bird watching, or simply sitting and enjoying the scenery and tranquility of this natural setting (Virginia Department of Game and Inland Fisheries, 2008). The privately owned Lake Nelson Campground, located one mile from the lake, is open annually from April 1st to October 31st and provides facilities for tent campers as well as RVs and camping trailers.

8. **Oak Ridge Estate:**

Oak Ridge Estate is a 200-year old mansion and country estate formerly owned by various businessmen prominent in Virginia history, including tobacco planter Robert Rives (1764-1845), U.S. and Confederate Congressmen William Porcher Miles (1822-1899), and Wall Street financier Thomas Fortune Ryan (1851-1928). The Holland family purchased the 4,800-acre estate, which includes 50 outbuildings, for the purposes of restoration in 1989. The estate is currently open to the public for paid tours, special events such as wedding receptions, and equestrian activities including horse shows and races. The estate includes a game preserve that is available to members of the Oak Ridge Hunt Club for the purposes of hunting bear, deer, turkey, fox, and dove on the property (Oak Ridge Estate).

Saint Marys Church, a picturesque, stone catholic chapel constructed in 1901 at the request of Ryan, is located on Route 653 near the estate. The Oak Ridge Railroad Overpass, manufactured in 1882 and in continuous usage since that time, carries Route 653 over the Norfolk-Southern Railroad about a quarter mile from the church. The overpass is an extremely well preserved single span, Pratt-style metal truss bridge, and is considered one of the best remaining examples a type that once guided vehicles over such obstacles throughout the Commonwealth (Loth, 1999, p. 332). The bridge is listed on the Virginia Landmarks Register and National Register of Historic Places.
9. **Turner/Findlay Mountain:**

This long ridgeline is the most prominent mountain feature within the eastern part of the project area. Crossing the project area southwest to northeast beginning at the Tye River, Turner Mountain climbs to an elevation of 1,102 feet before descending to an elevation under 500 feet along Rucker Run in Canada Gap. Northeast of this point, the ridgeline is called Findlay Mountain and reaches an elevation of 1,223 feet before descending again to about 750 feet at Gleasons Gap. Although certainly not high in elevation compared to the more mountainous parts of the project area, much of the ridgeline is situated about 500 feet above the valleys on either side, providing possibilities for views of the mountains to the west and James River to the east. Since the ridge runs almost perpendicular to the project area and completely bisects all but a small portion of it, the BRDT will invariably cross the ridge unless it is routed through one of the gaps or around the southwestern end of the mountain.

According to the Thomas Jefferson Regional Greenways Plan, Findlay Mountain provides "potential scenic viewed opportunities on either side of the ridge" and has been incorporated into the PDC’s regional greenways network. The numerous land parcels along the ridge are privately owned but not intensely developed; there are only a few residential structures or cleared, open areas along the ridgeline. The southernmost of these clearings was selected as one of three “points” of interest along this long, linear mountain feature, and corresponds to a small clearing on what looks like a jeep trail near the top of Turner Mountain overlooking the Tye River. The other two are high points along the ridge that would require the creation of an opening in the forest cover for the purpose of constructing an observation deck or tower along the trail from which to look out over the surrounding landscape.

10. **Cunningham’s Island (James River State Park):**

Although not contiguous to James River State Park, this prominent island in the middle of the James River to the east of the park is owned and managed by the Department of Conservation and Recreation. The island is almost completely wooded except for the sandbars along the shoreline, and divides the James River into two relatively narrow channels that are perhaps 275 and 115 feet across at their narrowest, providing one of the shortest possible crossings of the river. This section of the James River has been identified as worthy of further evaluation for possible inclusion in the state system of scenic rivers pursuant to the Virginia Scenic Rivers Act of 1970. The law provides additional protections to designated river segments that possess “superior natural and scenic beauty, fish and wildlife, and historic, recreational, geologic, cultural, and other assets.” Designation of this segment of the river as a state scenic river would not add restrictions to the construction of pedestrian bridges across the river, but would allow for closer review of such development projects by local and state agencies, including the Virginia Scenic River Board, in order to consider scenic and other resources in planning and design.

11. **Tye River Overlook (James River State Park):**

The Tye River Overlook is a wooden observation deck located in James River State Park (Buckingham County) where one can experience views to the west of the Tye and James rivers, the village of Norwood, and the Blue Ridge Mountains. The mile-long trail from the park's main road (Va. Route 606) to the overlook provides a pleasant walk along an old farm
road past a family cemetery and through a mixed hardwood forest on the bluffs above the James River. A short side trail leads to the well-maintained observation platform situated about 200 vertical feet above the point where the Tye River flows into the James River. Visitors can sit on one of the wooden benches and observe trains crossing the steel-truss, CSX Railroad bridge over the Tye River at Norwood about a half mile away. Over twenty miles in the distance, one can make out the faint outline of the Blue Ridge Mountains on the western horizon. The view is a special feature of the park and provides one of the more scenic vistas available to the public anywhere in the Virginia Piedmont.

The site is an ideal location for the eastern terminus of the BRDT since the scene combines a number of visual elements that make this scenic, interpretive trail unique and are necessary to provide a sense of geographic and historical continuity for BRDT users. Visitors will observe two rivers that served as important highways for the transport of goods during the early history of the Commonwealth, and well as modern railroads used for transporting coal and other natural resources from the mountains to the coast, thus linking transportation past to transportation present. Further, the presence of the railroad and railroad bridge at both the eastern and western ends of the trail, combined with the fact that railroad history is evident along the seven-mile length of the BRRT, will educate the public about the significance of rail transport to the movement of goods and resources from the Blue Ridge to destinations throughout the Commonwealth, country, and beyond. Finally, from this overlook marking the eastern end of the trail, users can glimpse the distant Blue Ridge Mountains far on the horizon where the western terminus lies. The sight of the Religious Range in the distance beckons modern-day adventurers to explore the origins of the Tye River by following it to its source deep in these ancient mountains, as did the first visitors of European descent.
CHAPTER THREE: THE PLAN

Goals & Objectives

Goal #1:

Develop the Blue Ridge Discovery Trail as a regional recreational destination, similar to the Virginia Creeper Trail in southwestern Virginia, with its own unique identity, character, and user characteristics.

Objective: To the maximum extent practical, utilize softer surfaces such as granular stone and/or naturally occurring surfaces, as opposed to asphalt or concrete.

Objective: Adopt an approach for selecting grades, widths, surfaces, and facilities that maintains the existing characteristics of the landscape to the maximum extent practicable.

Objective: Where possible, utilize existing paths, farm roads, woods roads, logging roads, abandoned railroad grades, wildlife trails, utility easements, and private roads, both active and inactive, for the route of the trail in order to minimize any additional physical imprint on the landscape.

Objective: Choose the location of man-made signs, restroom facilities, benches, refuse containers, and other such facilities carefully to reduce the visual and psychological impact of trail facilities on the existing landscape.

Goal #2:

Accommodate the growing public demand for various uses of recreational trails in Central Virginia by permitting multiple uses of the trail corridor where possible and compatibility among those uses.

Objective: Allow multiple uses on designated segments where physical constraints such as steep slopes are not present or can be addressed without sufficient modifications to the physical landscape. Design these segments to be inclusive of as many uses as possible, and allow for circuit trips with the Blue Ridge Railway Trail, Appalachian Trail, and local pedestrian, equestrian, and bicycle routes.

Objective: Limit use of certain trail segments by bicyclists, equestrians, or both depending on the degree to which the longitudinal slope inhibits such uses. Thus, pedestrians should be permitted in all types of terrain, equestrians and pedestrians on segments with moderate physical constraints, and all three major uses on segments where physical constraints such as steep slopes are not present.

Objective: Establish rules of etiquette and right-of-way for sections permitting multiple uses in order to ensure the safety and enjoyment for all users.
Goal #3:

Design the trail so that certain sections cater to specific types of users having particular interests and varying levels of ability and/or mobility.

**Objective:** Locate multi-use (i.e. pedestrians, equestrians, and bicyclists) sections primarily in the eastern half of the project area between Tye River and James River State Park.

**Objective:** Locate equestrian and pedestrian only sections throughout the project area where practical.

**Objective:** Locate pedestrian only sections primarily in the western half of the project area between Piney River and the Blue Ridge Parkway.

Goal #4:

Select a route providing high-quality scenery and a high degree of continuity along the trail corridor between points of interest.

**Objective:** Design scenic overlooks and/or observation platforms at strategic locations along the trail so visitors can view the route behind them and see what lies ahead.

**Objective:** Incorporate illustrations into the trail’s interpretive component so visitors can recognize distant landforms (peaks, rivers, ponds, etc.).

Goal #5:

To the maximum extent practicable, acquire right-of-way across private land using the least obtrusive and/or invasive means possible.

**Objective:** Adopt guidelines for acquiring right-of-way whereby land for the trail corridor is acquired only after the full participation of and consultation with private landowners.

**Objective:** Whenever possible, acquire easements or other agreements whereby the landowner is allowed to retain ownership of his or her property.

**Objective:** Use condemnation (i.e. eminent domain) only as a last resort, when all other options, and alternative routes, have been investigated and pursued.

Goal #6:

Ensure that all goals and policies of this plan are consistent with those of the local and regional plans for the areas through which the trail passes. Ensure the these recommendations are consistent with all planning efforts on state/federal public lands including the James River State Park (DCR), Appalachian National Scenic Trail, Blue Ridge Parkway (NPS), and George Washington National Forest (USFS).
• **Objective:** Ensure that the planning policies contained herein are approved by all appropriate local, regional, and federal agencies and authorities for consistency with existing plans and policies prior to selection of the preferred alternative.

• **Objective:** Design the trail to have as little detrimental impact on these recreational resources as possible.

**Goal #7:**

Pursue federal and state grant funding from a variety of sources for the design and construction of trail facilities and improvements.

• **Objective:** Pursue funding from as many different sources as possible, including federal, state, and local government, as well as private companies and individuals, to build broad support for the project.

**Goal #8:**

Develop informational content to educate trail users about significant natural and cultural resources, people, places, and events of historical importance, and environmental issues affecting lands along the trail corridor.

**Objective:** To the maximum extent practicable, provide continuity in terms of how educational information is provided to visitors, so as a visitor travels the trail from one end to the other, one topic of information can be tied to the next. Consider incorporating this information into a timeline within the trail’s interpretive brochure or signage, thereby allowing a narrative about the area’s past and present to develop and evolve over the course of the journey.

**Goal #9:**

Help create temporary employment opportunities for people within the project area and surrounding communities during the design and construction of the trail. Foster the creation of permanent, service-sector jobs and small businesses serving trail users from outside of the project area and adjacent communities.

**Objective:** Develop a system for tracking, or counting, employment created by the project for promotional and informational purposes.

**Goal #10:**

To the maximum extent practicable, use materials for trail construction that are produced or originate within the project area or surrounding communities.

**Objective:** Develop guidelines for giving priority to local suppliers and contractors in the awarding of construction contracts.
Data & Methodology

Data Variables:

- **Roads:** Distance from roads and noisy highway traffic is necessary for producing tranquility along the trail and creating opportunities for solitude. The shapefile for primary and secondary roads will be buffered and then converted to a raster data layer to give preference to areas located greater than 200 feet from major highways and 100 feet from county roads.

- **Streams, wetlands, and riparian buffers:** Stream corridors, wetland areas, and adjacent riparian buffers provide a unique and interesting setting for recreational trails. However, water resources must be protected and trail improvements constructed with water quality protection in mind. To this end, areas located within 125 of a stream (i.e. the riparian buffer) will be preferred to areas located outside of this buffer. Furthermore, lands located within 15 feet of a stream or wetlands area will be considered largely unsuitable due to the greater potential for erosion and other direct impacts to water quality from human activities in this zone. This will not exclude specific points within the zone from serving as places to access recreational waters, but will minimize concentrated recreational activity within the 15-foot buffer that can cause widespread damage to soils and vegetation.

- **Slope:** Slope is a significant limiting factor in planning the route of the trail. Excessive slopes (> than 20%) will be considered prohibitively steep except over very short distances due to the fact that such conditions tend to exclude all but the most athletic trail users. Slopes between 15 and 20 percent are considered slightly more suitable but are still too steep to be sustained over anything but short distances. Slopes between 10 and 15 percent are also too steep to use a sustained grade for a hiking or recreational biking trail but provide a challenging experience for hikers in more remote mountainous areas where such slopes are prevalent. Slopes between 5 and 10 percent are ideally suited to the needs and preferences of the widest variety of potential rail uses. Slopes less than 5% are considered slightly less suitable than those in the previous category but certainly more desirable than steep slopes (i.e. >10%) since they are well-suited to more leisurely activities such as walking, horseback riding, or recreational biking.

- **Natural Value:** The values in this dataset were derived by combining several conservation data layers into a single weighted raster layer that represents the suitability of ecologically significant lands within the trail corridor for the types of outdoor recreation envisioned on the BRDT. The importance of these individual data layers to the overall values in the final dataset are discussed below:
a. **Virginia Natural Landscape Assessment (VANLA) Core Natural Areas** – This layer obtained from DCR and created from satellite imagery identifies unfragmented natural areas called *cores*, which consist of large, medium, and small patches of natural land cover with at least 100 acres of interior conditions. The data also identifies smaller habitat fragments located within otherwise suburban or urban areas. Natural area cores not only provide valuable habitat for a wide range of species but also confer benefits to people in terms of open space and recreation. Therefore, large cores are considered the most conducive to recreational activities since they allow trail users to experience wildlife in its undisturbed habitat while reducing the potential that trail construction and outdoor recreation activities will severely affect the ecology of these cores. Applying the same logic, medium-sized cores are less desirable than large cores for selecting a potential trail route, and small cores and habitat fragments are considered less suitable still due to the potential for conflict between outdoor recreation needs and the imperative to preserve vulnerable habitats.

b. **Virginia Natural Landscape Assessment (VANLA) Natural Landscape Blocks** – These larger areas buffer and support natural area cores and were created by aggregating cores and adding natural land cover data. They are bounded by major roads and unsuitable land cover greater than 100 meters across. Natural Landscape Blocks are classified into four categories: (1) NLB contains at least one large core, (2) NLB contains no large cores but at least one medium core, (3) NLB contains no large or medium cores but at least one small core, and (4) NLB contains no cores, only habitat fragments. Class 1 areas will be considered most suitable, Class 3 areas less so, and Class 4 areas less suitable still as possible locations for the trail. There are no Class 2 lands within the project area.

c. **Virginia Natural Landscape Assessment (VANLA) Natural Landscape Corridors** – Landscape corridors are strips of natural cover that traverse a matrix of largely anthropogenic land covers to connect cores ranked in the ecological integrity classes C1 or C2, that is, those having Outstanding Ecological Integrity or Very High Ecological Integrity, respectively. This layer also contains nodes, lower-ranked (i.e. C3, C4 or C5) cores and habitat fragments that intersect landscape corridors and become components of them. The layer represents a network of connected natural lands that support each other to attenuate some negative impacts of over-development. In this analysis, landscape corridors will be regarded as the most suitable and nodes slightly less suitable as a location for the trail.

- **Development Potential:** The Virginia Conservation Lands Needs Assessment (VCLNA) Vulnerability model was developed by DCR’s Division of Natural Heritage for the purposes of mapping the relative threat that a particular area will be converted from its current use to urban use. The values in this dataset were derived by combining several separate data layers showing the threat to land in the Commonwealth from future urban, suburban, and rural development into a single weighted raster layer. Thus, by comparing predicted urban, suburban, and rural growth rates to landscape characteristics, the model illustrates the predicted growth pattern for Virginia and areas where growth is most likely to occur within the project area. Areas experiencing a medium to high threat of predicted growth are considered less favorable in selecting the trail route due to the potential that such future growth will directly affect sights and sounds along the trail to the detriment of visitors. Areas under low to medium threat are more suited to trail development because there is less likelihood that future development will encroach on trail resources.
• **Historical/Cultural Value:** DHR and DCR maintain data layers showing the cultural and historical value of land. The cultural layer shows the cultural value of land as indicated by the presence of an archeological or architectural site, American Indian Land, or federal, state, or local park. Areas that have cultural and historic value will be preferred over areas that have none since routing the trail across or near such lands provide opportunities to educate trail users about local history.

• **Recreational Value:** This layer shows the recreational value of land as indicated by the presence of public recreational opportunities. Areas having a high value will be considered preferable to those having lower values.

• **Land Use:** The Virginia Department of Forestry maintains this layer, which contains a detailed classification of Virginia by forest type, including deciduous, coniferous, and mixed forest, forest harvests, and urban or agricultural areas. For the purposes of this analysis, hardwood forests, mixed forest, and grassland will be considered the most suitable land use classifications. Pine forest, forest harvest, cropland, and natural barren land will be considered less suitable. Water, pavement, rooftop, residential/industrial, bare soil, and mine/quarry land will be considered largely unsuitable for the trail, except where the trail must cross these features (i.e. road and stream crossings).

• **Viewsheds:** A *viewshed* represents anything that can be seen from a particular vantage point. To promote continuity, the trail should be routed across areas that provide the best visibility from points of interest since this will allow people to view the route they recently traveled as well as the path lying ahead.

• **Ownership:** The Department of Conservation and Recreation maintains this data layer showing the boundaries for lands currently under conservation easement. These private lands are considered favorable as a possible location for the trail since they are owned by private individuals who have volunteered to limit the future partition and development of their land. Since these landowners have already placed their land in a protected status, they may be more accommodating than other landowners with respect to having a recreational trail on their property.

New development can encroach on trail resources, spoiling scenery and affecting visitors’ experiences.
Methodology:

1. **Merging** – In cases where multiple datasets corresponding to a single variable were needed for the project area, these separate datasets were merged to produce a single coverage or grid spanning the entire project area. This was necessary primarily for county-level elevation and stream data since the project area encompasses portions of several counties.

2. **Projecting** – In order to perform a raster overlay analysis, all input data layers must be projected into the same coordinate system. In this case, each layer was converted to Universal Transverse Mercator (UTM) Zone 17 to match the projection of the Digital Elevation Model (DEM). To transform the datum for each vector data layer from NAD83 to NAD27, the NADCOM datum transformation method was used.

3. **Buffering** – Buffers were created around streams, primary roads, and secondary roads in order to obtain the area located within the required distance of these features as well as the remaining area located outside of these features. The Multiple Ring Buffer (Proximity) tool was used in ArcToolbox to obtain buffers corresponding to the desired distances from these features (see Step 6 below).

4. **Clipping** – Each of the input data layers was clipped to match the extent of the project area polygon. For data in vector format, the Clip (Analysis) tool was used in ArcToolbox. For data in raster (grid) format, the Raster Calculator (Spatial Analyst extension) was used to multiple the values of the input grid by the value of the project area grid. The values of all pixels in the latter were set to 1.

5. **Data Conversion** – Before performing the raster overlay analysis, all input data layers were converted to raster grids. This conversion was performed using the Convert function (Spatial Analyst extension) and a cell size of 30 meters to match that of the Digital Elevation Model (DEM). The `ScaleValue` field was used as the basis for the conversion (see Step 6 below).

6. **Ranking the Data** – To rank the data for each individual layer within the overall model, a five-point suitability scale was created whereby higher values represent high levels of suitability. Thus, a value of one for a particular grid cell indicates the lowest suitability score possible for that characteristic (slope, distance from streams, etc.) whereas a value of five represents the highest, with values falling between those two extremes representing areas of moderate suitability. For certain characteristics where only two opposing values (i.e. suitable or unsuitable) are desired, suitable values will be given a score of 5 and unsuitable values a score of 1. For data originally in vector format, these rankings were applied through the creation of a new field in the attribute table (`ScaleValue`) before the data was converted from vector to raster. For raster data, the existing values for each cell were simply reclassified to obtain the desired ranked values. The table below illustrates how this ranking scheme was applied to each of the individual data layers within the model.
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### Viewsheds

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### Conservation Easements

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#### Overlay Analysis

Once the previous steps were completed, several overlay analyses were performed whereby the individual cell values of each of the thirteen contributing data layers were added together in some fashion using the Raster Calculator (Spatial Analyst extension) to arrive at a combined value. Depending on the equation used to combine the values, the result should yield an overall suitability value for each cell within the combined raster grid. The type of equation used to evaluate the combined value of the thirteen individual data layers is of particular relevance to the outcome of the analysis. For instance, one way to combine the values is to simply add them together for each of the thirteen contributing data layers and divide the total by the number of layers. The result illustrates the average cell value for each 30 x 30 meter cell within the project area and was created by entering the following equation into the Raster Calculator:

\[
\frac{([\text{Primary Roads}] + [\text{Secondary Roads}] + [\text{Streams}] + [\text{slope}] + [\text{cores}] + [\text{blocks}] + [\text{corridors}] + [\text{vulnerability}] + [\text{cultural}] + [\text{recreation}] + [\text{land-use}] + [\text{viewsheds}] + [\text{ownership}])}{13}
\]

The obvious problem with using this equation to arrive at a final suitability score is that not all of the variables listed in the previous section are represented by a single data layer. For instance, *Natural Value* is represented by three separate layers (habitat cores, blocks, and corridors) that must be combined into a single value. Likewise, the value for the variable *roads* is actually a combination of the values for the primary and secondary road buffers. In fact, there are ten data variables, so the value for each variable represents one-tenth (0.1) of the total combined value. In order for the combined value to fall within the range 0-1, wherein cells having a value of 1 correspond to land that is most suitable or desirable as a possible route for the trail, the five-point suitability scale must be adjusted so that each value...
represents a fraction of 1 as opposed to a fraction of 5. Therefore, a calculation was performed using Raster Calculator in which the suitability values in each contributing data layer were multiplied by 0.2. The resulting grids were named using the convention: [Layer Name]_Dec.

Once completed, the contributing data layers were combined using the following equation:

\[
((0.1) \times ((\text{Primary_Dec} + \text{Secondary_Dec}) / 2)) + ((0.1) \times (\text{Streams_Dec})) + ((0.1) \times (\text{slope_Dec})) + ((0.1) \times ((\text{cores_Dec} + \text{blocks_Dec} + \text{corridor_Dec}) / 3)) + ((0.1) \times (\text{vulnerability_Dec})) + ((0.1) \times (\text{cultural_Dec})) + ((0.1) \times (\text{recreation_Dec})) + ((0.1) \times (\text{land_use_Dec})) + ((0.1) \times (\text{viewsheds_Dec})) + ((0.1) \times (\text{ownership_Dec}))
\]

The result shows the suitability of each cell as a potential route of the trail based upon a scheme in which each variable is considered equally important. This is called the Equal Weight option (Map 7). Cells with values closer to 1 are most suitable, whereas cells closer to 0.2 are the least suitable.

One of the advantages of applying weights to the different variables is that the weighted factors can be adjusted depending on which variables are deemed most important. Thus, if slope is considered the most important variable, the ranked value for slope can be multiplied by a factor greater than 0.1 so that that variable represents more than one-tenth of the total combined value, provided that the other variables must then be multiplied by smaller factor to ensure that the total value adds up to 1. In the following example, the variables were ranked differently to highlight physical characteristics of the landscape in order to ensure that the recreational needs of potential users are given priority. The following equation emphasizes such characteristics as slope, land use, natural value, and viewsheds (scenery) over considerations such as distance from roads or streams, and produces a slightly different result. The result is named the Recreation option since these variables were considered (by the author) the most fundamental in establishing the trail in a particular place (Map 8).

\[
((0.05) \times ((\text{Primary_Dec} + \text{Secondary_Dec}) / 2)) + ((0.05) \times (\text{Streams_Dec})) + ((0.2) \times (\text{slope_Dec})) + ((0.15) \times ((\text{cores_Dec} + \text{blocks_Dec} + \text{corridor_Dec}) / 3)) + ((0.05) \times (\text{vulnerability_Dec})) + ((0.05) \times (\text{cultural_Dec})) + ((0.05) \times (\text{recreation_Dec})) + ((0.2) \times (\text{land_use_Dec})) + ((0.15) \times (\text{viewsheds_Dec})) + ((0.05) \times (\text{ownership_Dec}))
\]

A comparison of the Equal Weight and Recreation options illustrates that more cells in the latter have high values since more cells have high suitability values for the variables that were assigned higher weights (slope, land use, natural value, and viewsheds). This opens up more potential areas of the landscape for consideration as a possible trail route. The flexibility inherent in the model allows stakeholders and citizens the ability to assign weights to the different variables during public meetings in order to emphasize those characteristics they view as the most important. By merely adjusting the weighted values, the results of the model can be changed to give priority to physical and natural features, cultural and historic places of interest, relative threat from human development, or any such combination of landscape features that are deemed critical by citizens and/or stakeholders in deciding upon the best route. For the purposes of selecting alternative routes for this plan, the Equal Weight option was used since it can be considered the simplest (i.e. default) and least-biased alternative. Where connections between clusters of “suitable” pixels were made difficult due to the existence of an intermediate area of “unsuitable” land, the recreation model was used in order to better discern differences among pixel values and select the least unsuitable and/or shortest path. In general, suitable pixels where deemed to be those with as close to a value of
0.6 (Equal Weight Model) or 0.7 (Recreation Model) as possible, since these correspond to values of 3 and >3, respectively, under the original ranking system.
Alternative Routes

Route Selection Issues:

The results of the analysis were used to determine the alternative routes described below (Map 8). When viewed at a relatively small scale, wherein Points of Interest overlay data in the Equal Weight and Recreation models, a number suitable pixels and viable routes linking these points become evident. Even at larger scales, a number of possible paths can connect two features spaced even a relatively short distance apart. So which path is the best route, and who makes this determination? These questions are posed not to suggest that an ideal solution exists, but rather to point out that two different individuals looking at the data might decide differently regarding the best path to use. The numerous possibilities created by the data model give rise to opportunities whereby stakeholders and citizens can come together to decide upon the best route based upon considerations both internal and external to the model. For instance, these individuals may decide that a relatively flat strip of land along a stream is preferable to another piece of land along a small ridge as a means of connecting two nodes, despite the fact that both have roughly the same suitability score. Or, the same group may decide that the former is better due to the presence of a hostile landowner along the latter. Thus, the alternatives discussed below represent only a fraction of what is possible, especially over short segments of the trail whereby a number of paths can be utilized to make connections between “suitable” clusters of pixels.

In many parts of the project area, the most suitable land for the trail is also the most suitable land available to private landowners for a home or building site. In mountainous or hilly country, buildings are often constructed on the only flat land available, and in heavily timbered areas surrounded by evergreens, they may be situated in the middle of a patch of shade-producing hardwoods. Thus, identifying potential routes is only a first step in choosing the best one, which must also take into consideration factors such as building placement, property ownership, and others external to the data model and methodology. Wherever possible, the trail has been routed around structures or clusters of buildings (like those found on a farm). This intentional re-routing further underscores the fact the alternatives presented below represent general and approximate locations for the trail only. Any future determination regarding the precise alignment of the trail at a particular location or across private property will only be made following consultation with and participation by affected private property owners. Such considerations involve future policy choices that are not factored into this analysis.

Proposed Alternatives:

**Alternative A-1: Tye River Overlook to Tye River – South**

<p>| Distance: | 13.95 miles |
| Difficulty Rating: | Easy to moderate; terrain involves several short, easy, ascents/descents across low ridges and through narrow stream/river valleys. |</p>
<table>
<thead>
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<th><strong>Approximate walking time:</strong></th>
<th>8 hours</th>
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| **Elevation (meters):**       | Minimum: 104  
                               | Maximum: 255  
                               | Average: 189 |
| **Natural slope:**            | Average: 11.2% |
| **Land status:**              | State park land (public) from Tye River Overlook to James River crossing. Privately-owned land from James River crossing to Tye River. |
| **Proposed conditions, surface(s):** | Natural surface trails and dirt/gravel forest access roads through a patchwork of hardwood, pine, and mixed forests, separated by the occasional agricultural field and/or scattered residence in the area near Buffalo Mountain and in the vicinity of Saint Stephens Church. The route crosses several smaller tracts that have been recently harvested for timber. |
| **Proposed trail type/use(s):** | Hiking (pedestrian), recreational biking, horseback riding |
| **Average ranked value:**     | 0.57 (Equal Weight Model)  
                               | 0.68 (Recreation Model) |
| **Description of section:**   | This section begins in James River State Park, at the parking area located near the intersection of the Cabell Trail and Va. Route 606. Since there is no parking available at the trail’s eastern terminus (Tye River Overlook), trail users would have the option of either traveling a short distance (< 1 mile) east on the Cabell Trail to the overlook and then backtracking to the parking area, or starting the trek eastward to the western end of this section. As proposed, the route through the park will be co-aligned with the Cabell Trail and a small section of the River Trail until the latter reaches a point nearest the James River where a small stream emanating from Taylor Pond flows into the James River. At this point, the route leaves the park and crosses the James River by bridge before ascending the steep bluff on the opposite side of the river. The route crests an unnamed, 800-foot knoll before descending to intersect with Va. Route 626. |
On the other side of Route 626, the trail follows a private road (Mundy’s Lane) that summits Buffalo Ridge and runs along the ridge crest for perhaps 1.5 miles. The road provides access to forested tracts located along the ridge and passes through alternating stands of pine and hardwood forest. At a clearing on top of the ridge, the trail leaves the road and descends rather steeply to cross an unnamed, intermittent stream. On the other side, the trail climbs to the top of the next ridge where it crosses an access road to timberlands before descending again to intersect with another intermittent stream. After climbing through an understory of mixed hardwoods, the trail emerges from the forest and crosses several farm fields separated by yet another narrow, wooded stream valley. The trail descends gradually through a hardwood forest to the mouth of the Buffalo River near its confluence with the Tye River.

On the other side of the Buffalo, the route ascends to the top of the ridge and roughly parallels the Tye River through hilly, wooded terrain on the river’s western side. Almost all of the land crossed in this short segment between the Buffalo and Tye is protected within a conservation easement. The trail emerges from the forest, traverses the edge of an open pasture, and crosses a power line corridor before descending to the Tye River at the Va. Route 654 bridge. A short side trail is proposed in this location to cross the river and link the trail to the small clearing atop the bluffs overlooking the river that is listed as the main Point of Interest along this section. Although short, this climb would be fairly difficult given that it involves roughly 300 feet of elevation gain in little over half a mile.

Once across Route 654, the trail ascends to crest high ground on the western side of the river, passes near several houses and crosses the private road to these residences before heading into a pine forest on the road’s north side. The route crosses several driveways and/or private roads and passes through hardwood forests punctuated by the occasional pasture as it meanders through this (relatively) developed rural area to the northeast of
Segment 4

Saint Stephens Church. Due north of the church, the trail crosses two intermittent streams and crests two unnamed, 700-foot hills before turning sharply north and paralleling Va. Route 739 along a old farm road. Finally, the route descends to Route 739 and follows it across the Tye River, reaching the western end of this section at the planned parking area for the Blue Ridge Railway Trail at the Village of Tye River.
## Alternative B-1: Tye River Overlook to Tye River – Central

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<td><strong>Approximate walking time:</strong></td>
<td>12 hours (1.5 days)</td>
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</tbody>
</table>
| **Elevation (meters):** | Minimum: 104  
| | Maximum: 337  
| | Average: 186 |
| **Natural slope:** | Average: 11.7% |
| **Land status:** | State park land (public) at Tye River Overlook and Cunninghams Island, with a tract of private land located in between.  
Privately-owned land from James River crossing to Tye River. |
| **Proposed conditions, surface(s):** | Natural surface trails and dirt/gravel forest access and farm roads through mostly mature pine and mixed forests in the easternmost segment, as well as several small and/or narrow tracts that have been recently harvested for timber and replanted with young pines. There are several large, unbroken tracts of hardwood forest atop Turner Mountain as well as in the westernmost segment between Arrington and Tye River. The west-central part of the section passes near the Village of Arrington where there are clusters of residential homes and rural land uses (agricultural fields, impoundments, barns, old roads, etc.) |
| **Proposed trail type/use(s):** | Hiking (pedestrian), horseback riding |
| **Average ranked value:** | 0.55 (Equal Weight Model)  
| | 0.66 (Recreation Model) |
| **Description of section:** | This section begins in James River State Park, at the parking area located near the intersection of the Cabell Trail and Va. Route 606. Since there is no parking available at the trail’s east terminus (Tye River Overlook), trail users would be required to travel a short distance (< 1 mile) east on the Cabell Trail to the overlook before continuing the trek towards the western end of this section. Beginning at the overlook, the section follows the Cabell Trail eastward to the park boundary and continues along the same |
road once it exits the park, passing a farm and crossing a small creek until it reaches a point across the James River from Cunninghams Island near Va. Route 605. The route crosses the river’s main channel as well as the publicly-owned Cunninghams Island before crossing the second, narrower branch to the opposite (northern) shore.

The trail turns abruptly to the west along the river until it reaches the mouth of the Tye River and crosses the CSX line into the Village of Norwood. The route then crosses Va. Route 626 at Christ Church and ascends the hill bordering the town to the north. Upon cresting the hill, the trail intersects with an unnamed trail and follows this path along the ridge for just over half a mile before turning to the west and descending to Joe Creek. On the western side of the creek, the trail climbs through a pine forest and crosses a small network of forest access roads before reaching Va. Route 655. The route stays on high ground to the west of this road, running roughly parallel to another forest access road before turning to the north and crossing Rucker Run. The route runs along the western stream bank for about a half a mile before turning again to the west and crossing a large area of private land bordering Turner Mountain where evidence of logging activity is especially prevalent. Over the next 1.5 miles, the trail traverses this expanse of young pines and intersects with several logging roads that are part of a sophisticated network of such access roads criss-crossing the area. The trail bypasses a small pond and crosses an unnamed stream that drains the southeastern slope of Turner Mountain before intersecting with a power line right-of-way and ascending over 500 feet in elevation to the crest of Turner Mountain, where pines once again give way to hardwoods.

The trail descends eastward down the steep, northwestern slope of Turner Mountain towards a rural residence located on a private road off of Va. Route 661, then switches back east before turning north again and crossing a small intermittent stream. The route passes between several residences located off of Route 734 and crosses another stream before ascending gradually to the top of a small hill where it intersects with Route 662 near the junction of Route 661. The trail meanders for less than a mile through
hardwood forest until it reaches a point located 0.2 miles south of the junction of routes 661 and 663 (0.75 miles south of Arrington), near a spring that marks the source of Jones Creek, which flows south and empties into the Tye River after about two miles.

From this point, the trail passes through the wooded area close to Jones Creek behind the numerous houses that dot the landscape along routes 663 and 823. The route crosses a pasture and passes a small pond located at the end of a private road coming off of Route 663 before turning northwest and ascending to the top of a ridge where it intersects with a trail that runs along the ridgeline. In this area west of 663 between Tye River and Arrington, the trail passes through a relatively new, large-lot the subdivision. The trail stays to the north of houses located on the north side of the subdivision road for the first mile through this area before turning sharply to the south, crossing the road several times and descending to Brown Creek. The trail then climbs a small ridge, intersects an old road, and then descends again to cross Long Branch. The route then ascends to meet the Southern Railroad line and stays beside the railroad right-of-way for about 0.4 miles into Tye River and the parking area at the eastern terminus of the Blue Ridge Railway Trail.
### Alternative C-1: Tye River Overlook to Tye River – North

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</tr>
<tr>
<td>Approximate walking time:</td>
<td>14 hours (1.75 days)</td>
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</tbody>
</table>
| Elevation (meters): | Minimum: 104  
Maximum: 362  
Average: 191 |
| Natural slope: | Average: 10.9% |
| Land status: | State park land (public) at Tye River Overlook and Cunninghams Island, with private land located in between.  
Privately-owned land from the James River crossing to Lake Nelson, and between Lake Nelson and Tye River.  
State-owned land (VGIF) surrounding the shoreline of Lake Nelson. |
| Proposed conditions, surface(s): | Natural surface trails and forest access and farm roads through large tracts that show evidence of current or recent logging activity, including several mature pine stands and recently cut-over areas comprised of young pines. The only large tracts of hardwood forest encountered in this section are located on the ridges and slopes of Findlay Mountain as well as the westernmost segment between Arrington and Tye River. The first area of significant pasture/crop land encountered is located in the vicinity of historic Oak Ridge Estate. The west-central portion of the section passes near the Village of Arrington where there are clusters of residential homes and rural land uses (agricultural fields, impoundments, old roads, barns, etc.) |
| Proposed trail type/use(s): | Hiking (pedestrian), biking, horseback riding |
| Average ranked value: | 0.54 (Equal Weight Model)  
0.65 (Recreation Model) |
| Description of section: [Segment 1] | The first segment in this section is identical to that for Alternative B; the description of the segment matches the description for Segment 1 under that alternative. |
On the other side of the James River, the route crosses the CSX railroad and Va. Route 626 about 0.9 miles east of the Village of Norwood and heads northwest into a recently cut-over area, gradually ascending 300 feet in elevation over the next 1.1 miles to the top of the ridge overlooking the river, where it intersects with an unnamed trail. The trail turns west along an active logging road and skirts the southern edge of another timber tract as it descends 300 feet to Joe Creek. The trail turns north and follows the creek upstream for 0.7 miles, crossing it several times. After crossing a tributary, the trail emerges into another timbered tract, encounters another logging road, and enters a large tract of pine and mixed forest as it continues north to intersect with Va. Route 722. The trail crosses under a power line, over a small stream, and climbs the step southeastern slope to the wooded summit of Findlay Mountain, about 0.7 miles southwest of Gleasons Gap.

The route descends north-northeast from the summit and enters a conservation easement. Near the base of the mountain, the trail passes near a pond and turns to the east, crossing a field and following a farm road almost to its end before leaving the protected property and descending to cross Meadow Creek and Rucker Run. The trail continues across the narrow pasture on the western side of the creek, crosses a small wooded area and then along the edge of a pasture before intersecting with Va. Route 653 near the crest of a small, wooded hill. On the other side of Route 653, the trail crosses a cut-over area and enters a wooded patch, paralleling the road for about half a mile before reaching the bridge at the
edge of a small field. From this point, a short side trail along Route 653 can be created to connect the trail to historic Saint Marys Church, less than a quarter mile distant.

The trail turns abruptly south-southwest and descends gently from the high ground near the bridge and through a cedar-pine forest to cross a small tributary of Bobs Creek. The trail then crosses the creek itself just below the dam and spillway of Lake Nelson and reaches the open area along the northern shore of the lake, just one mile southwest of the bridge and within view of the main parking area.

The trail crosses over the dam and traces the scenic northern and western shore of Lake Nelson before turning south and ascending gently through hardwoods and mixed forest to intersect with Va. Route 655 near two residences located on opposite sides of the road. The route then enters a patch of hardwoods surrounded by farm fields near a farmhouse before crossing an open area and reaching Va. Route 661 south of Arrington. At this point, the route heads south between and behind numerous houses located along that road and reaches a point located 0.2 south of the junction of routes 661 and 663, near the source of Jones Creek.

The final segment in this section is identical to Segment 4 under Alternative B; the description of the segment matches the description for Segment 4 under that alternative.
## Alternative A-2: Piney River to Yankee Horse Ridge Overlook – South

| Distance: | 19.47 miles  
|          | 1.45 miles  
|          | 21.01 miles  |
| Difficulty Rating: | Moderate to difficult given the length and elevation changes; terrain involves moderate to very steep ascents/descents through the Blue Ridge Mountains and eastern foothills. |
| Approximate walking time: | 16 hours (2 days) |
| Elevation (meters): | Minimum: 214  
| | Maximum: 1155  
| | Average: 640 |
| Natural slope: | Average: 18.3% |
| Land status: | Privately-owned land from Piney River to the base of The Friar.  
| | National forest (federal) land from the base of The Friar to the Lovingston Springs Trail located atop the Blue Ridge, with one tract of private land near the intersection of the south and north forks of the Piney River.  
| | Private land from the crest of the Blue Ridge to the top of Wigwam Falls near the Blue Ridge Parkway.  
| | National park (federal land) from the top of Wigwam Falls to Yankee Horse Ridge parking area. |
| Proposed conditions, surface(s): | The first 1.5 miles, which is co-aligned with the Blue Ridge Railway Trail, follows the relatively flat railroad grade corresponding to the future BRRT expansion west of Piney River, and will have a crushed stone or other surface similar to the section of the BRRT already constructed. In this settled area around Piney River and Lowesville, the trail passes a sand/gravel mine as well as several farms and rural residences. On the other side of Lowesville, visitors will follow natural surface trails and old logging roads to the top and along the wooded ridge of Thompson Mountain. Near the Village of Woodson, the trail traverses numerous fields and bypasses many houses while crossing the Piney River valley to the foot of the Friar. Within the George Washington National Forest, the trail stays almost entirely beneath an unbroken canopy of the mixed hardwoods that occupy the summits, slopes, and stream valleys within the Blue Ridge mountain range, at times emerging onto a rock outcropping with sweeping views. In the mountains, the natural surface in places will consist more of rocks and small boulders than dirt. The trail will also follow several active and... |
inactive forest access roads in this section.

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<td>Average ranked value:</td>
<td>0.57 (Equal Weight Model)</td>
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<td>0.65 (Recreation Model)</td>
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**Description of section:**

**[Segment 1]**

The first 1.5 miles of this 2.3-mile segment utilizes the old railroad grade for the future BRRT expansion west of the parking area and restored depot building in Piney River (on Va. Route 151), which marks the western terminus of the existing BRRT. Just past the Luck Stone quarry (located on the opposite side of the river), the route leaves the railroad grade and follows the Piney River upstream through the woods on the northern side of the river and across a field to Route 778 at Woodsons Mill.

The trail follows an intermittent stream past the mill and several houses and ascends over the next half a mile to the crest of the southernmost ridge of Little Mountain. The trail continues along the ridge and meets an old trail near the base of a steep slope to the south of the main ridgeline. The route leaves this trail and ascends this slope, climbing 300 feet in perhaps half a mile. At the end of this climb, the route passes near the summit of Little Mountain (elev. 1318 ft.) and intersects with a trail that runs along the relatively narrow, flat ridgeline formed by Little and Thompson mountains, both of which are covered entirely with mixed hardwood forest. At 0.4 miles, the trail makes another brief climb, this time about 100 feet to a point near the summit of Thompson Mountain. The trail continues along the ridgeline and follows a trail downhill to a prominent knoll where the main trail forks off to the right. The trail descends steeply to the lower, northern ridge and continues along the flat ridgeline to a small knoll located just south of a small creek that flows downhill into the Piney River at the Village of Woodson, about 0.65 miles to the west-southwest.

**[Segment 2]**

At this point, the trail turns west and descends through hardwood forest to the Piney River, Route 666, and the Village of Woodson. The trail crosses the Piney River on the Route 666 bridge and follows south along the western edge of Va. Route 630 in front of a number of houses and farms that line that side of the road. The trail then turns sharply west at a forested patch separating two residences and crosses two farm fields before entering a large, wooded tract along an unnamed creek. The route stays in the woods along the creek, crosses Va. Route 723, and continues along the stream, which flows through an orchard located off of Route 630. As the stream branches off, the trail route follows the middle branch for a short distance, and then crosses over to the northern branch as it passes beside a small pond. The route traces the wood line near the main residence on Route 630 until it reaches Crawleys Creek 0.35 miles past the end of the
state-maintained road. The trail follows the southern branch upstream and crosses into the national forest, and then continues to ascend steeply past a spring marking the stream’s source to a saddle located between the summits of The Friar and Little Friar. A relatively short, but steep, side trail could be constructed in this location to connect to the rock outcroppings located near the summit of the Little Friar. Rather than attempt to climb the steep southern slope of The Friar, the route continues westward along this face until it meets the southwestern ridge leading to the summit of that mountain. The trail then turns northeast and ascends over the next 0.6 miles to the large rock face located just south of the summit.

This segment begins with a steep descent down the northwestern ridge of the mountain, through thickets of mountain laurel charred by a recent forest fire, until the trail reaches a prominent saddle located about halfway between The Friar and The Cardinal. At this point, the trail route turns north and east while descending steeply along an intermittent stream towards the Piney River, about a mile and 900 feet in elevation below. At the river and USFS Route 63, the trail leaves the national forest and continues upstream (westward) through private property along the road and South Fork of the Piney River, reentering the national forest after 0.5 miles. At the point where a small stream flows into the South Fork from the north, the trail turns east and begins the steep climb to the top of Wolf Ridge, reaching a prominent saddle at about 0.6 miles. The trail then turns back to the northwest and continues the steep climb to the main ridgeline. Upon reaching the next “step” (a prominent, south-facing spur) along this climb, the trail meets a trail/logging road that runs west along the south face of the ridge and follows it a point where a rugged, rock-strewn 4X4 road (USFS Route 263) crosses a small, intermittent stream just to the northeast of Brush Mountain. The route then follows this road as it meanders uphill northeast towards a saddle below an unnamed, 3700-foot peak that marks the highest point on Wolf Ridge, and then downhill again to the North Fork of the Piney River.

This trail follows the North Fork of the Piney River westward and upstream along an old road, crossing the Appalachian Trail at 0.9 miles and passing the remnants of an old homestead after another 0.45 miles, including a small impoundment near the origin of the North Fork. The trail then continues along the road to the crest of the main ridgeline of the Blue Ridge Mountains, where the road intersects with another 4X4 road that runs along the ridge, as well as the blue-blazed Lovingston Springs Trail, in this location.

The route continues west and descends gradually towards a spur that runs downhill to the north. The trail then cuts back and descends briefly but steeply towards a draw that runs into the southern branch of Wigwam Creek. Upon reaching the creek, the trail follows it downstream along an old logging road (or possibly railroad) bed towards Wigwam Falls, crosses the creek and descends steeply along the left (northern) side of the waterfall. The trail then follows the stone/gravel loop trail to the left past massive
granite boulders and across the restored, narrow-gauge railroad bridge before finally reaching the western terminus of the trail at Yankee Horse Ridge parking area.
## Alternative B-2: Piney River to Yankee Horse Ridge Overlook – Central

| Distance:          | 19.54 miles  
|                   | 1.54 miles  
|                   | 21.08 miles  
| Difficulty Rating: | Moderate to difficult given the length and elevation changes; terrain involves moderate to very steep ascents/descents through the Blue Ridge Mountains and eastern foothills.  
| Approximate walking time: | 16 hours (2 days)  
| Elevation (meters): | Minimum: 214  
|                   | Maximum: 1155  
|                   | Average: 651  
| Natural slope:     | Average: 19.1%  
| Land status:       | Privately-owned land from Piney River to the base of The Friar.  
|                   | National forest (federal) land from Coghill Ridge near the summit of The Friar to the Lovingston Springs Trail located atop the Blue Ridge, with one tract of private land near the intersection of the south and north forks of the Piney River.  
|                   | Private land from the crest of the Blue Ridge to the top of Wigwam Falls near the Blue Ridge Parkway.  
|                   | National park (federal) land from the top of Wigwam Falls to Yankee Horse Ridge Parking Area.  
| Proposed conditions, surface(s): | Same as Alternative A, Piney River to Yankee Horse Ridge Overlook  
| Proposed trail type/use(s): | Hiking (pedestrian)  
| Average ranked value: | 0.56 (Equal Weight Model)  
|                   | 0.66 (Recreation Model)  

“Pathway to Our Past”
[EXCEPT FOR SEGMENT 3, THIS ROUTE IS IDENTICAL TO ALTERNATIVE A-2. THUS, THE ALTERNATIVE REPRESENTS A DIFFERENT ROUTE TO THE SUMMIT OF THE FRIAR, AND ALL SEGMENTS EXCEPT SEGMENT 3 ARE IDENTICAL TO ALTERNATIVE A-2]

The segment begins with the trail continuing north along the main ridgeline formed by Thompson Mountain to the east of Woodson and Jacks Hill. After a mile, the route turns west and drops off the ridge towards Jacks Hill, crossing a small stream before reaching Va. Route 666 near the junction with Route 827. The trail crosses the Piney River on the Route 827 bridge in Jacks Hill and begins the steep ascent to the crest of Coghill Ridge, a long linear feature approaching the summit of The Friar from the east. The trail begins the climb via switchbacks before crossing an old road near a south-facing spur off of the main ridge, at an elevation of 2,189 feet. The trail continues uphill for another 0.6 miles before reaching the first peak on the ridge (2,574 ft.), then turns southwest and continues to ascend along the ridge towards the large rock face just south of the summit of The Friar. In all, this ascent to the top of The Friar involves 2,400 feet of elevation gain over 3.3 miles.
### Alternative C-2: Piney River to Yankee Horse Ridge Overlook – North

| Distance: | 17.62 miles  
|           | 7.16 miles  
|           | 24.78 miles  |
| Difficulty Rating: | Strenuous and difficult given the length and dramatic elevation changes; terrain involves very steep ascents/descents through the Blue Ridge Mountains. |
| Approximate walking time: | 16 hours (2 days) |
| Elevation (meters): | Minimum: 240  
|                      | Maximum: 1223  
|                      | Average: 872  |
| Natural slope: | Average: 20.8% |
| Land status: | Privately-owned land from the BRRT near Massies Mill to the national forest boundary, about third of the way up the Little Priest.  
| | National forest (federal) land designated as wilderness in the vicinity of The Priest and Little Priest. Outside of the boundaries of the wilderness area, the trail is routed mostly through the national forest but crosses a large tract of private land in the vicinity of Shoe Creek, Cash Hollow, and Louisa Spring Branch.  
| | Private land from the crest of the Blue Ridge to the top of Wigwam Falls near the Blue Ridge Parkway.  
| | National park (federal land) from the top of Wigwam Falls to Yankee Horse Ridge Parking Area. |
| Proposed conditions, surface(s): | The section of the trail that is coaligned with the Blue Ridge Railway Trail follows a relatively flat railroad grade, and will have a crushed stone or surface similar to the section of the BRRT already constructed. Beginning at the point where the trail breaks away from the BRRT, the trail passes near farms and rural residences lying at base of the Little Priest along Rocky Run. Upon ascending the southern slope of the Little Priest, the trail enters the forest and stays almost entirely beneath an unbroken canopy of mixed hardwoods that occupy the summits, slopes, and stream valleys within the Blue Ridge mountain range, at times emerging onto a rock outcropping with sweeping views. The trail also emerges several times into small mountain meadows, most notably in Cash Hollow and Porters Gap. Through the mountains, the natural surface will consist more of rocks and small boulders than dirt. The trail will also follow several active and |
inactive forest access roads in this section.

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**Description of section:**

Beginning on the old railroad bed corresponding to the future BRRT expansion, about 1 mile west of Massies Mill, the route crosses a branch of Rocky Run and intersects Va. Route 666. The trail continues north across two additional branches of Rocky Run then turns west, following the northern branch for a short distance before crossing back over the two streams between two rural residences. After crossing a driveway, the trail continues west through the woods before intersecting with Va. Route 679. The trail follows along the edge of the road in front of some houses and across the main branch of Rocky Run, then turns north and follows it upstream through the woods on the western side of creek. The trail meets an old road and continues upstream until the creek splits into two branches. Here, the trail turns south and then west again as it ascends to the summit of the Little Priest by climbing up an east-west spur. After 1.5 miles of steep climbing, the spur and trail meet another prominent spur that emanates from the top of the mountain to the southeast. The trail switches back numerous times as it continues up this ridge to the northwest for another 1.3 miles before reaching the rock outcropping just below the summit. In all, the ascent to the top of the Little Priest along this route involves a strenuous hike of 2,500 feet in elevation gain in about 3 miles.

The trail descends from the summit to the northwest towards the saddle located between The Priest and Little Priest. The trail intersects with an old logging road and follows it uphill towards a prominent knoll. From here a side trail will continue along the old road until it reaches the Appalachian Trail about 0.7 miles west of The Priest, making possible a side hike via that route to the summit of The Priest. From this junction, the main trail turns sharply west and descends steeply from the ridge to Shoe Creek roughly 1,000 feet in elevation below. Near a small branch of the creek, the trail meets an old logging road and follows it downhill to the Shoe Creek Jeep Trail, then turns southwest along the jeep road and continues downhill to the main branch of the creek where several roads converge. The trail follows on of these roads west and uphill to the top of a ridge before turning north along the road and ascending to the top of an unnamed, 3,400-foot peak to the immediate south of Cash Hollow. The trail drops off the peak and descends briefly to reach Cash Hollow Road. The trail continues downhill along Cash Hollow Road as it follows a tributary of Shoe Creek past several houses along the road. Just past one house, a branch emanating from the steep slope beneath Spy Rock flows into the creek from the west; the road follows the branch uphill towards a saddle on the ridge east of Louisa Spring Branch, then crests the ridge and descends to that creek.
Next to an open meadow and small mountain farm, the trail finally leaves the road and heads west, following along the hillside north of the farm and then climbing the top of Porters Ridge. Atop the ridge, the trail meets a well-maintained trail that runs north along Porters Ridge, and follows for about half a mile until it intersects with an old road. The trail then follows this old road downhill to Porters Gap (elev. 3,520 ft.).

This segment of the trail is coaligned with the Lovingston Springs Trail, and follows it to the top of Elk Pond Mountain before descending to the junction of several roads/trails atop the main Blue Ridge.

The last segment in this section is identical to Segment 6 for Alternative A; the description of the segment matches the description for Segment 6 under that alternative.
**Structures & Amenities**

**Site-Specific Facilities:**

The following improvements/facilities are proposed at specific locations along the trail and are shown on the individual maps of the various alternatives (Maps 9-14):

1. **Puncheons** – A *puncheon* is a wooden walkway used to cross small streams and fragile terrain. Puncheons are proposed at shallow or intermittent stream crossings. Running planks should be constructed down the center for horses and bikes to travel on (Parsons, Harland, Bartholomew, & Associates, 2002, pp. 4-23, 24). Topped-log puncheons using native species for logs and timbers should be employed on pedestrian-only sections of the trail within the Blue Ridge Mountains to reinforce the historic/natural character of the area. In designated wilderness or remote backcountry areas, shallow, seasonal streams can be crossed using well-placed stepping-stones since this option results in the least environmental impact (Parsons, Harland, Bartholomew, & Associates, 2002, p. 4-27).

2. **Bridges** – There are a number of river and stream crossings along the trail that require the construction of new bridges, including the James River, Buffalo River, and Rucker Run. Other river crossings can be accomplished through the adaptive reuse of the existing automobile bridges. The Oak Ridge Railway Overpass can be utilized to cross the Norfolk-Southern rail line without any structural modifications given the low traffic volumes along Route 653, and provided that the Virginia Department of Historic Resources is consulted and appropriate signs are installed along the roadway to alert drivers and ensure the safety of trail users. In certain locations where high-volume automobile bridges are present, at the Route 739 crossing of the Tye River and Route 666 crossing of the Piney River, the existing footings and piers should be utilized to construct a trail bridge below grade underneath the existing roadway. At the Route 654 crossing of the Tye River, the old footings from the single-lane structure that once crossed the river are located beside the new bridge and should be evaluated and used to construct a trail bridge if found to be structurally sound.
All bridges should be engineered to be wide and stable enough to accommodate proposed uses. For bridges that accommodate bicycles and horses, 4-inch-thick, pressure-treated planks should be used for bridge decking. For sections where only pedestrians will use the bridge, 2-inch planks may be substituted (Flink et al, 2001, p. 78). Metal railings should be installed at the appropriate height based upon the intended usage of the trail (42 inches above the decking for pedestrians; 54 inches for bicyclists/equestrians). Signs should be installed to encourage equestrians to walk horses across the bridge for safety reasons (Flink et al, 2001, p. 79).

3. Parking Areas – Parking areas are proposed at major road crossings or at strategic locations to allow for end-to-end trips or circuits with other bike routes or trails. The major difference between parking areas proposed on equestrian sections versus those that accommodate only pedestrians and bicycles involves their size; pedestrian spaces require a minimum length of 45 feet compared to the standard 18 feet for typical automobile parking spaces. In addition, sufficient space should be provided for turning radii at the entrances to the lot as well as the equestrian parking spaces, and hitching posts installed near the rear of these spaces. The number of spaces and size of a specific parking lot will depend on the proposed uses and anticipated demand at that location as well as limitations imposed by terrain, site access, and/or ownership issues. Vehicle blocks comprised of stone or wood should be used rather than concrete in order to create a “natural” look. Parking lot surfaces should be comprised of crushed stone to allow rainwater to infiltrate into the soil, thereby reducing runoff and improving water quality while reinforcing the rural character of the surrounding area.

4. Barriers – Where the trail crosses a private or public road with vehicular traffic, barriers and/or gates should be installed to prevent vehicle usage of the trail and minimize the damage from 4-wheel drive, ATVs, and other vehicles to the trail surface or facilities. This does not apply to locations where the trail shares the right-of-way with a private driveway or roadway that conveys vehicular traffic and does not have restricted access. In places where the trail shares a right-of-way with forest access road to private timberlands, locked “forestry-style” gates should be installed across the road at entrances to/from public roads in order to restrict access to authorized vehicles only. On the western sections of the trail within the Blue Ridge and eastern foothills, wooden barrier fences similar to those found on the Appalachian Trail should be constructed in order to prevent bicycle, motorcycle, and/or ATV usage of the trail. Bollards should only be used to control motor vehicle access to the trail in more densely developed areas, near the villages of Tye River and Piney River where the BRDT intersects with the BRRT, as well as in Norwood and Lowesville.

5. Information Kiosks – Kiosks, or bulletin boards, should be provided at public road crossings to convey information to visitors about the trail route and conditions, including a map of the
route; information about permitted uses, corridor sharing and user etiquette; a description of potential hazards; and a listing of places of interest. Informational brochures with detailed descriptions of historical and natural attractions (i.e. points of interest) should also be provided.

6. **Climbing Turns** – A *climbing turn* is a reversal in direction that maintains the existing grade going through a turn without the need for a constructed landing (Parsons, Harland, Bartholomew, & Associates, 2002, p. 4-29). They are the preferred method for ascending gradual slopes like those encountered in the eastern sections of the trail. Terrain dips should be constructed at regular intervals along ascents/descents and undulating trail segments to accommodate runoff and reduce erosion.

7. **Switchbacks** – A *switchback* is also a reversal in direction but requires the construction of a relatively level landing. These are used on steeper terrain with grades of 15 to 20 percent. Retaining walls with appropriate fill material are used to construct the landing, and drainage structures are installed at the upper approach and platform to ensure that the landing is not eroded away. Crib walls should be constructed of native stones or logs to reinforce the historic/natural character of the trail.

8. **Observation Tower** – An observation tower is proposed atop Turner-Findlay Mountain for users to enjoy the vista and scenery. Since evidence of forestry/timber activity abounds in this area, the tower should be designed to appear similar to observation towers used by firefighters to spot wildfires, except that should be much shorter in height compared to such structures for obvious reasons of function and safety. An open area should be cleared around the base of the tower and trees selectively removed downhill of the structure to ensure an unobstructed “sight-line” view. Informational signage should be provided to educate visitors regarding the importance of timber harvesting to the regional economy, both past and present, as well as forestry best management practices.

9. **Scenic Overlooks/Vistas** – Selective clearing should be employed at specific locations on Buffalo and Turner-Findlay Mountains to open up views and provide destinations for trail users along these segments. A survey should be performed prior to clearing in order to identify any potential significant plant species and ensure that damage to such resources from clearing activity does not take place (Parsons, Harland, Bartholomew, & Associates, 2002, p. 4-34). West of the Village of Piney River, all of the scenic overlooks proposed are naturally-occurring and do not require additional clearing.

10. **Overnight Facilities** – Overnight areas are proposed at regular intervals and appropriate locations in order to accommodate multi-day and extended trips along the trail, including end-to-end trips. The type of facility envisioned for the trail is a semi-primitive campsite with space spaces for pitching tents, a safe and reliable potable drinking water source, a privy
(or outhouse), and trash receptacles enclosed by wooden containers to keep out animals. Outhouses should be of simple design and constructed of wood, similar to those found along the Appalachian Trail. Pump wells should be installed to provide water where practical. Wooden hitching posts should be installed where equestrian uses are allowed and simple post-style bicycle racks provided for bicyclists. One or more wooden picnic tables should be installed so that campers can congregate together for meals. The need for campsites increases the area of land that must be acquired for the trail in areas where they are proposed; campsites should be large enough to accommodate perhaps as many as five or six tent sites. In addition, campsites should be set back from the trail as much as 500 feet, separated by a vegetated buffer, with access provided via a side trail in order to ensure that activities on the trail do not interfere with camping and visa versa.

Trail-Wide & Use-Specific Facilities:

1. **Signs & Markers** – Signs have diverse styles that reflect their various purposes. In general, signs can be grouped into the following categories:

   a. **Informational & Directional Signs**: Informational signs help orient trail users geographically, highlight points of interest, and convey distance and directional information. Kiosks, distance markers, and trail identification signs are all considered informational signs. To promote the rural character of the trail, distance markers should be placed at less frequent intervals (every half mile or mile) than typically found on paved, multi-use trails and only on multiple-use sections. Signs should be installed to community the difficultly level of various segments of the trail (Flink et al, 2001, pp. 88-9). Distance and directional signs should be placed at trailheads, parking areas, minor access points, and public road crossings. In general, informational and directional signs should consist of a standard brown, metal sign with a white border and white lettering mounted on a wooden post.

   b. **Regulatory & Warning Signs**: Regulatory signs are the standard traffic control devices and include stop and yield signs, right-of-way signs, and exclusion signs (i.e. those excluding particular uses) (Flink et al, 2001, p. 88). These signs should be of the minimum size and number required under the *Manual on Uniform Traffic Control Devices (MUTCD)* (Flink et al, 2001, p. 89). Signs should also be installed where relevant to communicate special regulations to trail visitors, including unusual or dangerous trail conditions, informing users about proper camping procedures and/or trail etiquette, and educating users about practices to ensure their safety (Birchard & Proudman, 1981, p. 22).
c. **Educational Signs:** Educational/interpretive signs communicate information about points of interest as well as other features or areas having unique historical or natural significance. These signs should be relatively large and posted at the correct height (about 5 feet or so) to allow visitors to read them while standing up at the place of interest. Educational signs should be fabricated from fiberglass, plastic, or recycled material and sealed to protect colors and messages from weathering and deterioration. Signs should be avoided in places where they have the potential to detract from the natural surroundings or diminish the trail experience (Flink et al, 2001, 91). Instead, small markers should be placed at the place of interest containing a number or other label that corresponds to a description within an informational brochure that discusses the historic or natural significance of that place.

2. **Benches** – Benches should be installed at points of interest and at regular intervals along the trail to give users a chance to rest and enjoy their surroundings. Sites for benches should take advantage of the variety encountered along the trail. For instance, where the trail emerges from a wooded area into an open pasture, a bench place along the edge of the woods allows visitors to enjoy the shade and take in the vista. Sites next to streams and near stream crossings are also appropriate places for benches. Benches should be simple in terms of their design and construction, with seat backs on multi-use sections and slap-type design on pedestrian-only sections. In the case of the latter, benches should be made from flat topped boulders or split-faced logs, whereas for the former, locally produced wood products should be used (Flink et al, 2001, p. 99).

3. **Stiles** – Stiles are steps or ramps used by pedestrians to cross fences (Birchard, 123-4). Since most of these are located in the western part of the project area, and since the sections through this area are pedestrian-only, they should be employed primarily in this area. Although there are several types of stiles commonly used along the Appalachian Trail, the ramp and staircase styles are arguably the easiest to cross and most useful for hikers carrying
backpacks. The Lincoln-log style commonly used by the U.S. Forest Service should be constructed where possible since this structure conveys a natural look and blends in with the surroundings in places near or within the national forest.

4. **Terrain/Grade Dips** – Terrain dips are reversals in the grade of the trail at drainage features and natural terrain dips. Along a descending section of trail, the grade will be reversed for about 10 to 20 feet at drainage ways or natural ravines before the trail continues its descent. These man-made features are simple to design and easy to maintain, and keep water running down a hillside from being carried by the tread. They also work with the prevailing drainage system by using existing terrain features as the basis for the grade reversal (Parsons, Harland, Bartholomew, & Associates, 2002, p. 4-17).

5. **Restrooms** – Full-service restrooms, with connections to water and sewer, are proposed at selected parking areas. Only a few additional full service facilities are provided over and above those at parking areas on the BRRT. At other parking areas, portable toilets (port-a-johns) are proposed to accommodate visitors’ needs. In either case, landscaping or opaque fencing should be used to screen restrooms from view from adjacent residences and soften the view from public roads. Accommodations such as wheelchair-accessible stalls for disabled individuals should also be provided.

6. **Bicycle Racks** – Bike racks should be provided at parking areas, minor access points and camping areas along sections open to bicycle use.

7. **Hitching Posts** – Hitching posts should be installed at parking areas, points of interest, campsites, and at regular intervals along sections open to equestrian use.
Educational/Interpretive Component

Creating opportunities for trail users to interpret the things they see along the trail helps provide them with a rewarding and memorable experience. Along the BRRT, signs will be posted to present the unique history of the Blue Ridge Railroad so visitors can learn about its contribution to the movement of goods and economic development of the area. Because the BRDT is not confined to a historic railroad corridor, the trail can expose visitors to larger set of historical and cultural sites and, thus, a broader understanding of the forces that have shaped the landscape. The trail’s interpretive element, however, should not be limited to historical information. The scenic landscapes and natural features in Central Virginia provide an additional basis to teach visitors about natural processes and resources as well as threats to these ecosystems. Providing an environmental education to the public helps them to understand various threats to these landscapes and can motivate people to want to protect natural resources for themselves and future generations to enjoy.

Often, educating the public about complex scientific and historical issues is easier if it can be organized into themes or associated with a larger context. This is especially true in an area like the BRDT project area, which has a large number and remarkable variety of landforms, resources, artifacts, and archeological sites. Indeed, certain themes seem to surface with regularity when one looks at the storied history and natural diversity of the places along the route of the Blue Ridge Discovery Trail. These themes should be included on trail signs and brochures and appear above all information communicated to the public so that visitors can relate what they learn to other topics of information organized under the same theme. These themes are further grouped into three broad categories to explain all that visitors will discover along the trail: The People, The Places, and The Land. Since the historic and natural record includes too many people, places, and events to be covered adequately in this concept plan, the following descriptions are considered a summary rather than a complete inventory of items that should be incorporated into the educational/interpretive component of the Blue Ridge Discovery Trail.

- **The People:**
  - **Native People:** Evidence of Native American history is prevalent within the project area, especially in the Blue Ridge, where some native peoples settled after they were forced from the lowlands. Visitors should be reminded that Native Americans in this part of Virginia possessed a rich, thriving culture before Europeans arrived to settle the area. The information presented under this theme should focus on the various aspects of that way of life, including the names and unique culture of the various tribes that inhabited the area, their language, customs, and settlement patterns.
  - **Early Settlers:** The history of the first Europeans to explore the interior of Virginia and crest the Blue Ridge Mountains, including expeditions by John Lederer and Governor Alexander Spotswood, should be discussed under this theme. Lederer’s account from his 1669 expedition to the Appalachians contains an interesting anecdote and hand-drawn illustration of a wild cat riding a deer. Lederer writes of “a doe seized by a wild cat…the creature being even spent and breathless with the burden and cruelty of her rider” (Minichiello & White, 1997, p. 52). The first people of European ancestry to settle the rich land and fertile soils of Virginia’s piedmont were squatters, who were replaced by
wealthy Virginia families with ties to the Virginia colonial government beginning in the late seventeenth century. Information about these early settlers should discuss the relationship between socio-economic status, family connections, and access to land in this part of Virginia (Fischer & Kelly, 2000, p. 85). It should also include a profile of individuals such as Robert Rose, a Scottish parson who owned 33,000 acres in this part of Virginia during the colonial period and was responsible for many places names (e.g. Roses Isle, Roseland, Roses Mill). Rose was also an early explorer of the mountains, and his diary contains an interesting account of an expedition to the source of the North Fork of the Piney River during which he and his companions spent several days trekking through these mountains (Sheaffer, 2002, p. 18). This story provides a colorful tale and should enrich the experience of modern visitors to those same places.

- **Area Residents:** Although this theme overlaps somewhat with the previous one, it will discuss the history of prominent (and not so prominent) individuals who resided within the area during later (post-colonial) eras. This theme need not cover only famous individuals, but may also include ordinary people or families who perhaps owned a particular farm or are buried in a family cemetery along the trail route. The specific individuals covered may vary depending on which route the trail takes, but should include the various owners of Oak Ridge Estate (see Points of Interest) and Peter Cartwright, a Methodist minister who was born in this part of Virginia. This theme should also discuss recent or contemporary figures that made important contributions to the community.

- **The Places:**
  
  - **Transportation System:** Transportation is a reoccurring theme is the history of the area and a major focus of the educational content provided to trail users. Evidence of how transportation has shaped the region is located throughout the area, including at the beginning and end of the trail. During the period of early settlement, rivers and wagon roads provided the principal means of accessing the area from the east, and beginning in 1831, efforts to improve navigation on the James River led to construction of the James River-Kanawha Canal. In 1880, construction of the Richmond and Allegheny Railroad along the James River to link Clifton Forge and Richmond effectively killed that canal project before it was completed (Sheaffer, 2002, p. 21). The Blue Ridge Railroad was only one example of how railroad technology contributed to dramatic changes in the landscape by providing a way to extract the natural bounty, namely timber and mineral resources, from the mountains. The reconstructed section of narrow-gauge railroad at Yankee Horse Ridge Overlook on the Blue Ridge Parkway is a living relic of one of the numerous branch lines built to haul the once innumerable chestnut trees out of the Blue Ridge. Although rail transport has since declined as a way of moving people with the construction of automobile highways like U.S. 29 and U.S. 60, railroads continue to move a considerable amount of freight daily through the area.
Buildings & Structures: Since there are probably too many historic structures to cover, a complete inventory of such buildings in the area needs to be performed in order to select a certain number to highlight along the selected route. Obviously, buildings listed on the National Register of Historic Places and/or Virginia Landmarks Register should receive precedence, as should points of interest. In addition, the buildings incorporated into the interpretive component of the trail will vary depending on which alternative route is selected. Even seemingly mundane structure like old tobacco barns and split-rail fences provide a subject to describe to visitors. To showcase the evolution of architectural styles, materials, and techniques used in building construction, structures from different eras should be incorporated into this theme.

Towns & Villages: No treatment of the settlement of the area would be complete without a discussion of the settlements themselves. Many of the towns and villages in the area have an interesting history related to their location on an important transportation route, the emergence of an important business or industry in the town, or birth of an important historical figure. Also, certain towns may be the setting of a significant historical or even current event. A discussion of this theme should include information about how small towns and villages have changed over time with relative decline of the traditional, natural resource-based economic activity in this rural area.

The Land:

Landforms: Much of the information presented here will discuss the processes and forces that have shaped the physical landscape visitors will encounter, including the mountains, rivers, and forests. In addition, this theme should cover the man-made activities that have altered the landforms, such as mining and timbering activity that has caused visible marks on physical landscape that endure to this day. This theme is also a good place to introduce the history of many interesting place names in this part of Virginia, many of which involve colorful tales about early settlers of this region.

Flora & Fauna: The diversity of the landforms gives rise to a variety of plant and animal life that are the subject of this theme. The Blue Ridge alone is home to 29 types of snakes, 70 species of mammals, a couple of hundred kinds of birds, more than 1,400 flowering plants, at least 70 species of fish, and more than 130 species of trees, which is almost as many as in all of Europe (Nash, 1999, p. 3). In addition to the giving facts about these organisms, the interpretive information should discuss growing threats to the ecosystems and habitats from human activities. The interpretive component of Blue Ridge Discovery Trail should seek to provide an environmental education so that during their trip, visitors will become more aware and informed about steps they can take to protect the landscapes they encounter. Environmental issues that should be included are:

- Loss of biological diversity – There are about 400 rare species inhabiting the thin line formed the Blue Ridge that occupy specific niches and are considered endemic to this mountain chain. The Blue Ridge shelters 13 animal and 18 plant species that appear of the federal list of endangered or threatened species (Nash, 1999, p. 4). The declining number of many species can be traced to human activities that result in habitat loss, fragmentation, or destruction.
Invasive species – The destruction that non-native species have had on the Blue Ridge ecosystem in almost incalculable and continues to grow. The chestnut blight fungus alone, which first appeared in Brooklyn in 1904, spread though eastern forests like wildfire, destroying 224 million acres by the mid-1920s. Pure stands of chestnut used to dominate in the Blue Ridge, and these stands were the focus of much of the logging activity since they were the most economically important tree in the eastern U.S. (Nash, 1999, p. 32). European gypsy moths, anthracnose dogwood fungus, and hemlock woolly adelgid are just a few of the more recently introduced species that are devastating the majestic forests of the Blue Ridge. Noxious weeds are also invading the mountains, replacing native flowering plants and decimating habitat for insects, turtles and birds (Nash, 1999, pp. 42-3).

Air and water pollution – The three biggest issues with respect to pollution are acidification of stream and soils from acid rain, declining visibility and air quality from smog pollution, and the effects of climate change, which can cause dramatic and sometime unpredictable changes to forested ecosystems. In additional to concerns about visibility and human health problems, air pollution from ozone, sulfur dioxide, and nitrogen dioxide may stunt the growth of spruce, oaks, and pines in the Blue Ridge (Nash, 1999, p. 61). When this pollution combines to yield acid rain, the increasing acidification of streams and rivers can eliminate native brook trout, which as susceptible to even minor fluctuations in acidity and water temperature, from mountain streams (Nash, 1999, p. 52).

Land Use: The landscape in this part of Virginia has been modified by humans in ways that are too numerous to mention in this theme. Some of the more important issues that should be covered include the history of important industrial activities, such as mining, logging, and manufacturing activities, in the area. In addition, this theme provides an opportunity to teach people about how current land uses are changing and evolving within the area, and, specifically, how residential and commercial development continues to encroach and put pressure on habitats in the Blue Ridge. Spurred on by the construction of new highways and roads, residential subdivisions and vacation houses are being built in places that were once considered too steep and inaccessible to be considered prime real estate. This theme should not only highlight the problem, but also discuss some common sense steps people can take to build sensitively in a scenic mountain landscape (Nash, 1999, p. 88).
CHAPTER FOUR: IMPLEMENTATION

Relationship to Other Plans

Several local, regional, and state planning documents recommend expanding the BRRT in order connect it to the Blue Ridge Parkway and Appalachian Trail to the west and James River to the east. These plans also contain general goals and objectives pertaining to the development of future outdoor recreational trail facilities within the counties and regions affected by the BRRT and BRDT. Specific goals and objectives listed below are those that will be accomplished, at least to some degree, through the creation of the BRDT and implementation of the strategies contained in this plan. This section, then, describes the various planning goals, objectives, and recommendations currently in place for the jurisdictions affected by the trail in order to emphasize the extent to which this plan advances and conforms with these existing local, regional, state, and federal planning policies.

Virginia Outdoors Plan (2007):

Creation of the BRDT through Central Virginia will advance the following broad regional and statewide goals listed in the most-recently updated Virginia Outdoors Plan. These pertain to improved interagency cooperation, marketing of trail opportunities, facility design, and land and water conservation:

- DCR should partner with VDOT and the Virginia Department of Rail and Public Transportation (DRPT) to develop a process for negotiating with rail companies to provide opportunities for trails along and across rail corridors. (Statewide)

- DCR should adopt and disseminate a uniform trail assessment system and coordinate the development of standard sign templates. This will help users negotiate multi-jurisdictional trails and encourage private and government entities to promote a consistent brand. (Statewide)

- Local and regional trail managers should provide information about their trail at trailheads, in brochures and on websites so users can choose sections within their skill and capability levels. (Statewide) (pp. 81-2)

- Regional and local organizations should connect trail facilities located in the adjacent counties. (Region 11)

- Regional and local organization should evaluate utility easements and private trails for public use according to the adopted Region 2000 Greenways and Blueways Plan. (Region 11)

- The following river segments are potential Virginia Scenic Rivers and should be evaluated to determine suitability for designation: The Tye River in Nelson County. (Regions 10 & 11) (p. 443, 456)
In addition, the recommendations contained in this Plan accomplish a number of specific recommendations contained in the VOP for implementing trails and greenways within Region 10 (Region 2000 Regional Commission) and Region 11 (Thomas Jefferson Planning District). For Region 11, the VOP states that "national, state, regional, and local organizations should extend the Virginia Blue Ridge Railway Trail along the old railroad right-of-way along the Piney and Tye Rivers to the Appalachian Trail" (p. 457). For Region 10, the VOP recommends expanding the BRRT, although this proposal is less detailed: "development of the Virginia Blue Ridge Railway Trail, a joint effort between Nelson and Amherst counties, should be continued" (p. 439).

**Region 2000 Greenways & Blueways Plan (2003):**

The overall goal for this regional plan is to facilitate the development of a regional greenways and blueways system that helps meet community goals for connectivity, economic development, natural resource protection, alternative transportation, flood hazard mitigation, and recreational and educational opportunities. This concept plan for the BRDT accomplishes the following broad goals and objectives of this regional planning initiative:

- **Goal 2: Provide an additional transportation alternative to cars**
  - Objective 2: Improve linkage between communities and destination landscapes throughout the region

- **Goal 5: Increase recreational and healthy life style options**
  - Objective 2: Increase the number and variety of recreational opportunities

- **Goal 6: Ensure sound growth management decisions**
  - Objective 2: Delineate connections for alternative travel between new destinations

- **Goal 7: Create additional opportunities for education**
  - Objective 2: Enhance common outdoor recreational destinations by providing easy to access information about the history of the area. (p. 1-4)

The plan will be incorporated into the comprehensive plans of the local governments and envisions four phases of trail projects beginning with a series of pilot projects within each of the localities and culminating with the completion of a regional trail network. The plan states that “completion of this corridor will allow increased connectivity within Region 2000 and can serve as a connection point to future trail systems in neighboring counties (p. 2-9).” The expansion of the BRRT is listed as Pilot Project 2 of the Phase 1 Pilot Projects for Amherst County. The objective for this proposed project states: “Substantial investment has already been made in the project and its completion is important to the community. Long range plans are to extend this corridor to the Appalachian Trail and south to the James River (p. 3-10)”

The implementation program in the Region 2000 Greenways & Blueways Plan emphasizes the creation of a governance structure headed by the regional commission and identifies tasks and timelines for acquiring funding, conducting future planning and creating land development regulations, initiating negotiations with private landowners, and, finally, constructing the various projects. The planning process for the BRDT will largely coincide with these regional
implementation activities, albeit through a slightly different process discussed in greater detail in Section III: The Plan. The greatest point of divergence between the implementation strategies recommended in that section and those in the regional plan involve the creation of a steering committee to accomplish these various tasks as opposed to the regional entity proposed in the Region 2000 plan.

**Regional Greenways Plan - Thomas Jefferson PDC (2005):**

A series of visioning meetings with stakeholder groups and individuals was held early in the plan development process to develop a regional vision for a network of greenways in Region 10. This effort resulted in the identification of several common themes designed to guide the planning and implementation of individual projects. The themes relevant to the BRDT are:

- Development of greenways to serve a variety of functions in the region, with an emphasis on recreation, open space preservation, stream protection, tourism and transportation;
- Accommodation of many different users including hikers, bicyclists, equestrians, and the handicapped;
- Provide a quiet and scenic experience. (p. 3)

In addition to these general themes, the BRDT plan accomplishes each of the goals and objectives of the regional greenways plan including:

- Goal: Provide increased recreation, education, and transportation opportunities for a variety of local and tourist related trail users in the region.
  - Objectives:
    - Identify and develop connections to existing and planned trails in the region.
    - Identify, develop, and promote potential trail themes in an area such as the Civil War, orchards and vineyards, early river transportation and technology, etc.
    - Provide educational opportunities along trails through interpretive displays.
    - Identify and develop trails that connect people to key attractions and destination points.
    - Consider various trail users during trail planning and implementation including pedestrians, bicyclists, equestrians, persons with disabilities, and others.

- Goal: Use greenways to protect sensitive natural/cultural resources in the region and preserve open space.
  - Objectives:
    - Identify greenway corridors that may serve to protect sensitive natural and/or historic features and manage the corridors appropriately.
    - Consider the development of greenways as a mechanism to protect open space from future development
    - Encourage developers to incorporate greenways and open space into their development plans.
• Goal: Provide a local and regional system of trails and greenways in Central Virginia through partnership and coordination.
  o Objectives:
    ▪ Empower grass roots trail supporters and champions in the area to help build momentum for trail development efforts.
    ▪ Encourage coordination between localities to develop greenways and trails that cross local boundaries. (p. 9)

With respect to the BRRT, the plan states “it is envisioned that the fully completed trail will run from the Blue Ridge Parkway to the James River in Nelson (p. 21)” The entire BRRT route is designated a local greenway and one section of the larger James River regional greenway corridor, spanning the western and southeastern edge of Nelson County and providing connections to destinations that include Crabtree Falls, the George Washington National Forest, the Appalachian Trail, local orchards, and the James River (p. 45). Continuation of the BRRT to the AT and James River is considered a near-term priority (p. 49).

To accomplish this, implementation strategies are divided into several categories or broad steps:
(1) Incorporate regional planning goals, objectives, and recommendations into local comprehensive plans and pursue periodic updates; (2) Organize community outreach and support; (3) Develop individual greenway/trail location, design, and management plans, (4) Secure funding; and (5) Ensure coordination between local and regional partners and funding agencies. The development of this Plan for the BRDT accomplishes the following specific action items listed within Steps (2), (3), and (4) above:

• Market and promote successful trail development (Step 2) (p. 51)
• Identify primary purpose(s) of each greenway (Step 3)
• Determine user groups to be accommodated (Step 3)
• Investigate alternate corridor locations as necessary (Step 3)
• Design trails for appropriate user groups (Step 3)
• Identify potential volunteer groups for construction and maintenance (Step 3)
• Identify potential local, state or federal funding sources (Step 4) (p. 52)

**Amherst County Comprehensive Plan (2007):**

The recently adopted comprehensive plan for Amherst County contains a description of the BRRT as a seven-mile “hiking/biking/equestrian trail” linking the communities of Piney River and Tye River. Constructing the BRDT helps achieve several of the County’s broad planning goals and objectives for parks and recreation. These include:

• Goal #1: Provide adequate and varied activities/programs/services to satisfy the needs of the residents of and visitors to Amherst County.
  o Objective #1: Prepare and implement a comprehensive plan for park and recreation facilities and programs, including a plan for greenways and blueways within the County.
    • Strategy: Consider multiple uses of future land acquisitions.

• Goal #2: Maximize utilization of parks and recreation services for all ages.
  o Objective #1: Promote the year round use of public facilities for recreation.
• Strategy: Advertise the park and recreation assets of the community, including the county’s walking and biking trails…
• Strategy: Develop facilities and programs that have multiple users… (p. 79)

The lack of detail in these statements suggests that the Parks and Recreation section may need to be updated in the future to conform more closely to regional greenways plan. The only reference to expansion of the BRRT is contained in the Land Use Plan (see below), and this recommendation is not accompanied by maps from the regional greenways plan showing any specific alignment for the proposed expansion.

Land Use Element:

The Land Use Plan establishes goals, objectives, and strategies for the development of all land within the jurisdiction. With respect to open space, these include:

• Goal #2: To promote the preservation and use of open space and encourage viable agricultural and forest land uses to protect the County’s natural beauty, rural character, wildlife habitats and water resources.
  o Objective #2: Enhance public land access where funding may be available. (p. 125)

One of the implementation strategies for the accomplishment of this goal states that the County will “continue expansion of…[the] Virginia Blue Ridge Railway Trail,” which brings the comprehensive plan into general conformity with the regional greenways plan (p. 125). Additional strategies for the implementation of the proposed expansion are assumed to be the same as those contained in the regional plan.

Other land use policies encourage a low-density pattern of development within the Amherst section of the project area and future uses that are conducive to the creation of a scenic recreation trail through this rural area. The land use plan includes a map indicating the future use (in general) of various parts of the county. As the map shows, most of the county within the project area is designated for future agricultural and forestry use as part of the Agricultural-Limited and Agricultural-General classifications (p. 123). The former designation includes most of the rural, western part of the project area and promotes the creation of large, unbroken parcels to “maintain rural qualities in areas so designated” (p. 120). The later buffers the U.S. 29 corridor between the Agricultural-Limited designation and future residential uses to the south of the project area. The plan’s description of this area states that lot sizes will remain large, but should be transitional, that is, smaller that those allowed in the Agricultural-Limited designation but larger than lots in future residential parts of the county. Unfortunately, the plan does not specifically state the desired density of land within either of these two land use areas. This omission could leave the BRDT vulnerable to encroachment by residential land uses in the future, possibly resulting in a degradation of scenic quality along the trail as well as complicating efforts to acquire right-of-way from private landowners. This, of course, can be overcome through the implementation of strict zoning and subdivision regulations for these areas.

Nelson County Comprehensive Plan (2002):
The goals and principles for outdoor recreation state the County’s long-term expectations. The principles are similar to the objectives contained in other plans:

- **Goal:** Promote a diversity of recreational opportunities for Nelson’s citizens and for those who visit the county as tourists.
  - **Principle:** Support the development of county greenways, including the Blue Ridge Railway Trail, and new greenways, for recreation, and to preserve open space and protect river and stream corridors.
  - **Principle:** For increased recreational and tourism opportunities, provide access and connection to key destination points and attractions (p. 12).

The comprehensive plan for Nelson County also contains a Bicycle and Pedestrian Plan describing the County’s proposed network and facilities as well as a Greenway Plan to increase or improve recreation, tourism, and environmental protection. The former designates the entire BRRT, both the existing (constructed) trail as well as the planned expansion, as a future bicycle/pedestrian trail, while the later designates this same route as a proposed greenway. In addition, the goals and recommendations of the regional greenways plan for Nelson County have been incorporated into the local comprehensive plan. These include several that are applicable to the BRDT:

- Increased recreational and tourism opportunities, provide connections to key destination points and attractions, including: George Washington National Forest…, the Blue Ridge Rail Trail…, and the Appalachian Trail; Scenic views of the Blue Ridge Mountains…, Tye River, and James River.

- Develop greenways for open space preservation and stream protection (p. 49).

The plan states that the Tye River/Piney River/Blue Ridge Rail Trail Corridor Greenway was proposed for both pedestrians and cyclists in order to provide “key connections [and]…recreational opportunities.” According to the plan, “The Virginia Blue Ridge Rail Trail along the Piney and Tye Rivers will eventually connect cyclists from the Blue Ridge Parkway down the mountains to the James River.” The BRRT will also “offer a pedestrian path from the Piney River to the Norfolk-Southern rail line east of Highway 29 on an abandoned railroad along scenic river corridors. A similar trail could be developed along the Rockfish River, and James River, creating a diamond of trails encircling the county (when the Appalachian Trail is considered) and connecting most major communities” (p. 47). These statements reinforce the notion that expansion of the BRRT is meant to provide connectivity with other planned or existing bicycle routes and pedestrian trails in order to create circuit opportunities for such users. The BRDT will make several of these circuits possible while allowing different user groups to enjoy their respective pastimes free from potential conflict with each other, that is, along that portion of the BRDT that does not coincide with the BRRT route.

The Nelson County Comprehensive Plan states that these goals and recommendations will be implemented primarily via updates to the County’s five-year Capital Improvement Program (CIP) and zoning and subdivision policies (p. 53-5). The plan does not, however, discuss the specifics about how zoning regulations applicable to private land development will help foster the proposed greenway projects without a concerted effort on the part of the locality to negotiate with these landowners to acquire land and/or conservation easements across private property. Additional strategies for expanding the BRRT are assumed to be the same as those contained in the regional greenways plan.
Land Use Element:

The land use plan for Nelson County does not specifically address future greenways and/or trails as a type of land use. Unlike the Amherst County plan, all recommendations pertaining to these uses are discussed in the Bicycle and Pedestrian Plan or the Greenway Plan (see above).

The future land use map designates most of the project area for future rural and farming use. The description of these areas promotes agricultural and open space uses while discouraging large-scale residential and commercial development that conflicts with these uses. Also permitted are small-scale industrial and service uses that complement agricultural production (p. 39). Rural and farming areas provide a pastoral and scenic setting for the BRDT through Nelson County. The plan does not, however, specify the desired density of such areas. This lack of detail may leave the BRDT vulnerable to encroachment by future residential or commercial development, unless strong, enforceable regulations limiting the allowable density of rural and farming areas are incorporated into the County’s zoning and subdivision ordinances.

Nelson County has several planned development areas within the project area. The Industrial Park in Colleen is designated as a future Light Industrial area and the intersection of Route 655 and 29 (also in Colleen) is shown as a Light Industrial/Mixed Commercial area. The Secondary Light Industrial areas are located Southwest of Arrington on Route 665 (Wilson Hill Road) and in Piney River. Route 29 at Kingswood, Route 29 at the Current Truck Stop, and Route 29 at Tye River Road (Route 739) are shown as future Secondary Light Industrial/Commercial areas (p. 42). For the most part, the BRDT west of Piney River and east of Route 29 (Tye River) can simply be routed around these future development areas. The potential for expansion of light industrial operations and/or commercial establishments in these two locations, however, could have an adverse affect on sights and sounds along the BRRT once construction of the current seven-mile length of the trail has been completed.

George Washington Revised Land Management Plan (In Progress):

The national forest management plan is a strategic land management plan for managing existing resources on federally-owned land and, therefore, serves a function and purpose that is different from local or regional plans. However, the plan does contain broad “desired conditions” for various site-specific and forest-wide resources within the George Washington National Forest, which comprises a significant proportion of the BRDT project area. These desired conditions direct land management activities and are similar to the planning goals that guide comprehensive plan development in that they, in some cases, “may be achievable in the relatively near future, while in some cases [they] may only be achievable over a long period of time”. The desired conditions applicable to recreational trails within the national forest are of particular relevance to the BRDT since future projects and activities must be consistent with the desired conditions and objectives and “not foreclose the opportunity for maintenance or attainment of the applicable desired conditions over the long-term.”

Most of the GWNF within the project area that is not managed as a Remote Backcountry Area, Wilderness Area, Appalachian Trail Corridor, or Dispersed Recreation Area falls into the category “General Forest.” The following broad-based, forest-wide desired conditions will apply to the BRDT through these areas within the GWNF:
• A spectrum of high-quality, nature-based outdoor recreation opportunities that reflect the exceptional resources of the Forest and interest of the recreating public are provided in an environmentally sound and financially sustainable basis. The rugged mountain landscape makes premier sightseeing and trail use the focus of recreation.

• Infrastructure (Interstates; the Blue Ridge Parkway; roads; trails; including the Appalachian National Scenic Trail) facilitates easy access.

• The Forest provides trail opportunities for varied interests and skill levels from quality day trips to long distance trips.

• Seasonal flora, waterfalls, streams, and lakes, wildlife, and pristine scenery set the stage for a wide availability and variety of quality outdoor recreation experiences. Lakes, streams, upland forests, and historic sites provide the attraction for day and overnight camping visits by urban recreationists.

• Most of the Forest provides the opportunities for hunting, fishing, camping, and other quality dispersed recreation experiences. There are many opportunities for visitors to learn about natural and cultural resources and how to recreate responsibly. (p. 15-6)

The desired conditions for specific areas of the national forest are discussed in the section *Special Area Considerations* beginning on Page 86.

**Blue Ridge Parkway General Management Plan (In Progress)**

The Blue Ridge Parkway encompasses 82,000 acres of federal land with over 1,000 miles of boundary and 500,000 acres of scenic viewsheds within a mile of its boundary. The National Parks and Recreation Act requires all units of the national park system to have a general management plan. The plan guides the preservation of resources, visitor use, and decision-making for the next 15 to 20 years, and ensures that “parkway managers and stakeholders share an understanding of the resource conditions, opportunities for visitor experiences, and general kinds of management, access, and development that will best achieve the parkway’s purpose” (National Park Service, 2008, p. 3).

The National Park Service is currently in the process of drafting the parkway’s new General Management Plan, which is expected to be completed by 2010. The agency has reached Step 3 of this six-part planning process, in which the agency presents preliminary alternative concepts, or visions of the parkway’s future, to the public for consideration and comment. The preferred alternative is the course of action the agency will ultimately follow, and will guide preparation of the draft and final plans. The plan for the BRDT should be updated once the plan has been approved to ensure that the goals and objectives for the trail through this small area of federal land are consistent with the National Park Service’s planning policies. Nevertheless, at this preliminary stage, one can see how the various alternatives will manage trail resources in order to determine the extent to which they are amenable to various uses on the short segment of the Blue Ridge Discovery Trail through parkway land.

• **Alternative A: Continuation of current management practices:**
  
  o Maintain and manage most of the existing trail system for current types and levels of visitor use.
- Continue to prohibit off-road bicycling within the parkway boundaries.
- Continue to allow equestrian use on designated trails.

- **Alternative B: Emphasis on original parkway design and traditional driving experience:**
  - Same as alternative A. Also, construct some new walking paths to enhance opportunities in, and better link, visitor use sites within parkway recreation areas. Manage trails in several recreation areas to allow for increased capacity to accommodate potential growth in recreational demand.
  - Develop backcountry multiuse trails that accommodate mountain bikes in areas of high demand, where resource sensitivity is minimal, and some resource impacts are acceptable.
  - Develop improvements for equestrian use in designated areas.

- **Alternative C: Emphasis on original parkway design and traditional driving experience:**
  - Same as alternative A. Also, construct some new trails to enhance opportunities to better link parkway recreation areas with off-parkway locations along the parkway that are outside the urban areas.
  - Pursue the development of paved, multiuse trails parallel to, but separate from, the parkway in the four urban areas of the parkway — Waynesboro, Roanoke, Boone/Blowing Rock, and Asheville — to enhance opportunities for pedestrians and bicyclists to safely recreate within the parkway corridor where traffic levels are higher and opportunities to link to regional trail systems are available. Bicycles would only be permitted on roads and multi-use paved trails.

Due to the park’s complexity, the plan will also address the management of 7 planning segments and 13 recreation areas. Yankee Horse Ridge Overlook, located at Milepost 34.4, is not located in one of the planning segments or special management zones identified on the map of preliminary alternatives (National Park Service, 2008, p. 8).
Special Area Considerations

This section lists specific policies that will affect where and how the Blue Ridge Discovery Trail is constructed within these areas. In the national forest, they include sensitive or special areas such as the Appalachian Trail Corridor, Remote Backcountry Areas, Wilderness Areas, and Dispersed Recreation Areas. The following information, therefore, lists specific policy statements that serve a different purpose than long-range, guiding principles discussed in the previous section. These policies will affect construction of the trail once the preferred route has been chosen. The specific policies applicable to the BRDT will depend on whether or not the trail intersects these land types and, thus, on the specific route selected.

George Washington National Forest:

Appalachian Trail Corridor:

The following specific guidelines govern project design, including trail crossings, within this area:

- Following consultation with the ATC, recreational uses crossing the Appalachian Trail or within the corridor may be authorized if located to minimize undesirable effects to the Appalachian Trail environment.
- Development of additional recreational facilities is limited to those compatible with the Appalachian Trail. (United States Forest Service, 2007, p. 79).

Remote Backcountry Areas:

Regarding future recreational trail construction, the following specific policies guide project design within Remote Backcountry Areas, all of which have definite implications for the design of the BRDT and related facilities in this area:

- Trails should be constructed to the minimum standard necessary to prevent resource damage and protect visual quality and visitor safety.
- Local site materials should be primarily used in trail construction and maintenance.
- Snags along trails should not be normally felled unless they present a definite safety hazard.
- Bridges and culverts should not be installed for visitor convenience, but may be established for safety and resource protection.
- Old roads and logging trails should be used where feasible in planning and developing trail systems.
- Water holes may be created at one-half mile intervals where reliable water sources are absent. (United States Forest Service, 2007, p. 88)

Wilderness Areas:

The following policies guide new trail construction in designated wilderness areas within the national forest:
• Native and local site materials should be used in trail construction and maintenance.
• Construction of additional trails in wilderness is avoided unless essential for safety of visitors, distribution of users, or to minimize resource damage.
• Trails should be constructed, located, and maintained to the minimum standard necessary for protection of the soil, water, vegetation, visual quality, user safety, and long-term maintenance. Trails should appear to be part of the wilderness environment and not an intrusion upon it.
• Activities associated with the Appalachian Trail should be planned and carried out in cooperation with appropriate A.T. partners.
• Blazing of trails can occur only on the Appalachian Trail.
• The use of trail bridges or foot logs should be minimized. Bridges should not be constructed for user convenience. Bridges may be constructed if necessary for wilderness resource protection or for safety reasons. Bridges should be designed to minimize impact on the wilderness resource. Bridges should be located that minimize the size and complexity of the structure.
• A minimum number of signs should be provided for the regulation or information of the user and the protection of the wilderness resource. Distances to destination points should not be included on trail signs or directional arrows within the wilderness. The use of trail maps should be encouraged.
• Interior signs and posts should be made of unstained wood with routed letters.
• Groups, including commercial and organized groups, entering the wilderness should not exceed 10 persons.
• Excess campsites should be naturalized or rehabilitated. Temporary or permanent site closures are considered when other management techniques are not successful. Camping may be limited to designated sites. Supervisor's Orders may be employed to restrict overnight camping and campfires where needed to reverse or arrest unacceptable impacts. (United States Forest Service, 2007, pp. 76-7)

Dispersed Recreation Areas:

There are no specific policies to guide trail construction through these areas; thus, trail projects will be evaluated to the desired conditions are being maintained. The following conditions apply to specific sub-classifications within Dispersed Recreation Areas. Each of the various alternatives routes may pass through one or more of these areas:

• For a **semi-primitive nonmotorized recreational opportunity (SPNM)**, the area is remote. Visitors feel that they are removed or at least distanced from the sights and sounds of human activity. Visitors experience solitude and serenity as well as opportunities for self-discovery, challenge and risk-taking. Access to this area is difficult where travel is by animal or is human-powered. Visitors rely on their own knowledge for information. No facilities are provided for the comfort and convenience of visitors. The land provides a high degree of naturalness with little or no evidence of human-made changes to the environment.

• For a **semi-primitive motorized recreational opportunity (Subclass 2)**, motorized access by the public is highly restricted or nonexistent. Existing roads are maintained and infrequently used. Opportunities to practice wildland skills and to achieve feelings of self-reliance exist. Public access in primarily by foot, thereby providing a degree of challenge, risk, and self-reliance. The area has high probability of isolation from sights
of human activities though an occasional road, power line, or evidence of vegetation manipulation may be seen. Visitors perceive themselves as removed from human activities and experience feelings of solitude and serenity, but occasional distant sounds may be heard. The likelihood for meeting other recreationists is low. Visitors may see gated roads or tank traps to regulate access into an area. Recreation facilities are rare, limited to protection needs and designed to be unobtrusive on the landscape. The area can have a high degree of naturalness.

• For a semi-primitive motorized recreational opportunity (Subclass I) (SPM1), roads may be open year-round, open seasonally, or closed year-round depending on site-specific considerations. Travel is generally over motorized trails or high-clearance, four-wheel drive roads. Opportunities for solitude are less than with SPM2 or SPNM. A degree of challenge and risk-taking can be experienced in some areas. Opportunities for developing self-reliance on driving skills may be experienced on the most primitive roads. The area has moderate probability of isolation from sights and sounds of human activity. Visitors may experience short-term feelings of solitude, but occasionally nearby and distant sounds may be heard. The likelihood of meeting other recreationists is medium, with visitors encountering other parties of the size as theirs. Visitors may see gated roads or tank traps to regulate access into an area. Visitor information facilities are very limited and blend well with the natural environment. The area can have a high degree of naturalness.

• For a roaded natural recreational opportunity, full access is available. The area is not remote. Visitors experience comfort and security but feelings of solitude, challenge, and risk are not to be expected. The challenge and risk level is low. Other recreationists would frequently be encountered due to concentrated use. The areas often take on a mosaic of development and resource evidence from highly modified areas to pockets of unmodified lands. The RN area is characterized by natural appearing environments with evidence of sights and sounds of man. Resource modification and utilization practices harmonize with the natural environment. Developed campgrounds, picnic areas, trailhead, and interpretive sites may be present within this setting for the enhancement of the visitors’ recreational experience or the protection of the site and resources. (United States Forest Service, 2007, p. 18).

Appalachian National Scenic Trail:

In addition to the guidelines applicable to the Appalachian Trail Corridor within the GWNF, the Appalachian Trail Conservancy, a volunteer-based, private nonprofit organization responsible for cooperative management of the trail, has developed a Local Management Planning Guide which contains the following policies applicable to side, connecting, and co-aligned trails. This document is meant to aid local trail maintenance organizations and clubs in their local planning effort. The policies in this document affect all trail development within the Appalachian Trail Corridor; its purpose is twofold: (1) to consolidate all existing ATC and federal policies affecting Trail management in a single reference document for clubs and cooperating agencies, and (2) to answer questions on how to prepare a local management plan and what to include in a plan (Appalachian Trail Conference, 2007):

A. Procedure for Recommending Approval of New Hiking Trails Entering the Appalachian Trail Corridor – All new hiking trails entering the Appalachian Trail corridor should be approved by the local Trail club, the landowning agency, and the
ATC regional vice chair. Approval by the ATC regional vice chair will be based on the criteria set forth below in part C and any additional criteria provided in the local management plan(s) for the area.

B. **Procedure for Recommending Action by the Secretary of the Interior or Agriculture for Formal Designation of a Side or Connecting Trail** – Formal designation of side or connecting and co-aligned trails requires action by the secretaries of the interior or agriculture or their designee(s). Proposals for formal designation shall be reviewed by the local Trail club, the ATC regional vice chair, and the ATC Board of Managers. The recommendation of the Board of Managers shall be transmitted to the representative of the appropriate secretary. In addition, review and recommendation processes may occur within the National Park Service, the U.S. Forest Service, and/or state agencies as appropriate. ATC review and recommendations shall be based on the criteria set forth below in part C and any additional criteria identified in the local management plan(s) for the area.

C. **Criteria for (1) Recommending Approval of New Hiking Trails Entering the Appalachian Trail Corridor or (2) Recommending Action by the Secretary of the Interior or Agriculture for Formal Designation of A Side or Connecting Trail**:

1. The trail will only enhance or improve the Appalachian Trail
2. The Appalachian Trail is preeminent over the new or designated trail.
3. The trail will allow only foot traffic.
4. The trail will provide significant access to the Appalachian Trail or between the Trail and significant scenic, natural, or cultural resources and/or trail facilities.
5. The Appalachian Trail will take precedence on trail signing and marking.
6. Dual marking will be avoided on any new coaligned trail; however, other trails may be identified on A.T. signs. ATC also will work to establish this standard for existing coaligned trails.
7. A.T. managers will cooperate in developing standards for construction, design, and maintenance of trails that intersect the Appalachian Trail. ATC will encourage adoption of standards that protect resource values and prevent environmental damage in a manner consistent with resource protection on the Appalachian Trail.

Also, the NPS and USFS, which manage the trail jointly with the ATC, maintain the following policies with respect to trails that cross the A.T.:

- **NPS** – The A.T. park manager will evaluate all proposals for formal designation and take action based on the following criteria:

  1. It has undergone review according to ATC’s prescribed process.
  2. It provides the potential for promoting greater public enjoyment of the Appalachian Trail.
  3. It has received the concurrence of the landowner(s).

- **USFS** – Side trails may be developed to provide other recreational opportunities or to decrease areas of overuse on the A.T. The national forest planning process will
evaluate the management and protection of side trails. (Appalachian Trail Conference, 2007)
Future Steps

1. **Build An Organization** – The first step towards carrying out the planning vision contained in this document is to create a formal, not-for-profit entity responsible for completing the remaining activities in the planning process and pursuing implementing steps in order to make the project a reality. Building an effective trail organization is critical to the planning and implementation processes since the fulfillment of the vision contained in this document depends on having a dedicated and tireless group of citizen volunteers to assess costs and identify funding for the project, make important decisions to resolve land acquisition and trail design issues, and procure professionals to carry out design and construction tasks.

Numerous models for such organizations exist, including the Blue Ridge Railway Trail Foundation, which helped bring that project to fruition. Indeed, the foundation could serve as the trail organization for this project, or the BRDT organization could be an offshoot of the foundation. In general, the group should be a non-profit 501(C) 3 multi-user trail interest group comprised of citizens and stakeholders dedicated to creation of the Blue Ridge Discovery Trail, with an elected Board of Directors responsible for making important decisions about the structure, financial resources, and membership of the organization through a democratic process. Membership should be stakeholders from the surrounding communities, with as many as possible coming from communities within the project area.

One of the first major tasks of the new Board is to form a Project Steering Committee (PSC) comprised of the most energetic and enthusiastic stakeholders and volunteers. These should include representatives and advocates from various user groups, including hikers, bikers, and equestrians, as well as interested citizens, affected landowners, and business leaders that can advocate for the project to their less-enthusiastic peers. The Steering Committee will be responsible for most of the big decisions regarding the planning and implementation of the trail. Meetings of the trail organization and Steering Committee should be held not less than every month. To ensure close cooperation between the trail organization and local and regional government agencies, meetings of the Steering Committee should be conducted at the Region 2000 PDC, Thomas Jefferson PDC, or one of the local parks and recreation departments so public officials can be present to offer advise and communicate local requirements.

2. **Obtain Public Involvement & Community Support** – Public participation is key to a successful trail planning effort. Generating trust between the trail organization and the surrounding community can be accomplished through a comprehensive public involvement campaign (Flink et al, 2001 39). The first step in this effort is consult with adjacent and affected landowners before the idea for the trail goes public in an effort to obtain their opinion early in the process. They may be some property owners that are receptive to the idea of a trail passing through, or near, their property, whereas others may be against the project from the outset. In order to allay concerns about increased crime, decreased property values, or liability, professionals and public officials specializing in these areas should be present at meetings with landowners or consulted for their opinions on such issues. There are a number of relevant studies that have been conducted regarding these issues that refute claims about the negative impacts of trails (Flink et al, 2001, p. 40); trail advocates should emphasize the results of these studies. Other concerns about maintenance, trespassing, and loss of privacy can be addressed through various design or management solutions.
The overarching goal of the public outreach effort should be to gather as much public support from landowners and participation from the community as early as possible. There are a number of proven methods and public meeting formats that can help achieve this, including citizen advisory committees (CACs), one-on-one meetings, surveys, planning and design workshops, and public hearings (Flink et al, 2007, pp. 44-6). All of these methods are proposed at different stages (and in the order listed) for maximizing public participation in the planning and design of the BRDT. A Citizen Advisory Subcommittee should be formed in the very beginning by the Steering Committee and should include a variety of stakeholders from different public agencies, community organizations, user groups, local businesses, and affected property owners (Flink et al, 2001, p. 44). This group will be responsible for developing consensus among committee members and collecting and inventorying responses and opinions to inform critical decisions made by the Steering Committee.

3. **Refine The Plan** – The primary action to be taken in this step involves finalizing the routing and design. The routing alternatives presented in this plan represent a few of the possibilities. However, feedback from citizen surveys and public forums may yield additional alternatives, especially if the weighted values in the spatial model are modified to reflect the majority opinion of participants. If the alternatives are left as is, the steering committee must still choose the best alternative(s). Once the route is agreed upon, several additional steps need to be completed in order to convert this concept plan to a trail master plan. These include development of the following:

1) **Implementation timetable**: The steering committee is responsible for determining which sections of the trail should be opened first and what improvements (facilities, structures, etc.) should receive priority. These activities should be grouped into phases, with Phase I representing the minimum necessary to open a particular section for public use so that a useable recreational corridor results from the completion of any one phase (Parsons Harland Bartholomew & Associates, 2002, p. 3-10).

2) **Cost estimates**: Cost estimates should be prepared by a professional engineering or land planning and design firm specializing in linear recreation facilities (trails, greenways, etc.). General estimates should be made for each element of the plan, including each of the facilities proposed in this document. These projections should be based on the average cost of recent trail projects that are similar in size, scope, and general location (i.e. Central Virginia).

3) **Funding Plan**: There are a number of sources of information about federal, state, local, and private sources of funding for trail projects, including the 2007 Virginia Outdoors Plan and *Trails for the Twenty-First Century: Planning, Design, and Management Manual for Recreational Trails* by the Rails-To-Trails Conservancy. Two of the most common sources of funding for trail development in the Commonwealth are the Virginia Transportation Enhancement Grant Program, which is the state program for disbursing federal surface transportation funds, and the federal Recreational Trail Program (RTP). In addition, the localities along the trail route should be consulted and amend their Capital Improvements Program in order to dedicate a source of matching funds should federal and state aid be awarded. Private sector funds from land trust organizations, local businesses, national and local foundations, and individual sponsors should also be pursued (Flink et al, 2001, pp. 131-2). The funding plan
should address each of the major costs identified in the cost estimate and should not neglect any potential source of available funding.

4) **Management Plan**: A management plan is at the heart of any trail project. The management plan covers all aspects related to the management and operation of the trail. It must be detailed enough to cover topics such as trail administration, security, trash collection, promotion, and routine maintenance (Parsons Harland Bartholomew & Associates, 2002, p. 3-10).

4. **Create an Implementation Plan** – The implementation plan will contain specific action steps and strategies for implementing the project master plan, as well as a description of the party responsible for carrying out each task and specific timetable for when that task should be completed. The action steps that need to be included are:

1) **Land Acquisition** – In order to comply with one of the goals outlined in this plan, land for the trail should be acquired using the least invasive and obtrusive (to the landowner) method possible. This means that acquisition should only involve willing sellers or voluntary donors, and that every effort should be made to maintain private ownership of property within the trail corridor (Flink et al, 2001, p. 121). Applying this criterion, the trail organization should attempt first to acquire use (as opposed to ownership) of the land through creation of a trail easement in which the private landowner grants legal rights of public access to/ across his or her property. Where willing sellers are available, the trail organization should seek to purchase the property as opposed to the local government. Donations and dedications of private land are always welcomed and can result in substantial tax credits or other benefits to the private donor (Flink et al, 2001 122). The best method for purchasing land is through bargain sale or fee-simple purchase. Lease purchases should be negotiated when no other viable alternative is available.

2) **Project Design** – The design of trail facilities is best accomplished using a professional landscape architecture and/or engineering firm with demonstrated ability and competence in designing multi-use trails. Selection of the right firm to do the job follows a competitive bidding and interviewing process. In general, preparation of computer “before-and-after” photographs and architectural drawings should be prepared for each unique setting along the entire length of the trail. Site plans and construction drawings are needed primarily along multi-use sections of the trail since pedestrian footpaths require less in the way of professional design work.

3) **Permitting & Regulatory Compliance** – During the design phase and prior the start of construction, the consulting engineer must ensure that all applicable regulations have been followed and necessary permits obtained. The list of federal, state, and local laws with which construction activities must comply includes federal and state versions of the Environmental Policy Act (EPA) for any project that uses federal and/or state funds. In addition, specific activities such as stream crossings may require compliance with federal and/or state wetlands laws and regulations. A variety of local permits must be secured prior to construction in order to control runoff and minimize erosion, obtain approval of site plans and ensure compliance with zoning laws, and ensure that proposed water and wastewater disposal systems meet Health Department (VDH)
requirements. Once these permits have been secured, construction drawings for restroom facilities and certain other improvements must be submitted to and approved by local building officials before required building permits are issued.

4) **Construction** – The construction of trail facilities is the final step in implementing the trail vision. The construction company should be procured by the trail organization or Steering Committee and have experience in constructing trails and trail-related facilities. Materials should be specified on construction drawings so that locally produced and environmentally friendly materials are used to the maximum extent practical. The implementation plan should be specific when it comes to construction activities so that the contractor knows exactly what has to be completed by a specified deadline. In general, the services of professional contractors will be used more often on multi-use sections of the trail. Wherever possible, trail clearing and construction work on pedestrian-only sections of the trail where natural surfaces will be used should be performed by trained volunteers.
CHAPTER FIVE: CONCLUSION

This plan describes a concept and vision for a recreation trail linking the existing Blue Ridge Railway Trail, located along the Nelson-Amherst border in Central Virginia, to the Blue Ridge Parkway in the west and James River in the east. This proposed extension is not the first to be put forth. As discussed in the opening chapter of this document, the original grant proposal recommended that the BRRT be continued to link these two regional recreational destinations. Although several plans show the future trail continuing along the overgrown right-of-way of the Blue Ridge Railway to Massies Mill, and along the Tye River to Norwood, no corridor has been identified as the definite location for this planned extension. This plan identifies a number of potential corridors that could serve as the basis for this route. These routes represent several potential ways to connect points of interest and were identified using a spatial model that ranks the suitability all of the land within the area based upon its physical, natural, scenic, recreational, and historic value. The corridors in this plan, therefore, are based upon a true inventory of interesting destinations located in this part of Virginia, and the resulting trail will connect these places in a way that optimizes the recreational experience of the trail user as well as the vitality of local communities and ecosystems. This approach contracts to the typical one whereby an existing railroad grade or greenway corridor is simply converted into a recreational trail. In order to distinguish this trail from the Blue Ridge Railway Trail, as well as identify it as a facility that offers people a chance to visit and discover more of the rich history, people, and landscapes that make the area unique, it has been named the Blue Ridge Discovery Trail.

This is not to say, of course, that the Blue Ridge Railway Trail should not be expanded as variously proposed. Certainly the localities, agencies, and organizations involved in this effort, including the Blue Ridge Railway Trail Foundation, should continue their work to convert the old railroad grade into a multi-use trail. Further, these groups should continue to identify the most suitable route for lengthening the BRRT beyond the railroad right-of-way. Thus, this plan for a separate trail is meant to supplement these ongoing efforts with respect to the BRRT rather than supplant them. If plans for both the BRRT and BRDT are implemented, the two facilities will complement each other, providing opportunities for circuit hikes in the western section as well as expanded resources for bikers, equestrians, and pedestrians throughout the area. The BRDT would give people who desire to take “the path less traveled” a chance to do so, whereas others who prefer an easy stroll along a well-graded trail may prefer to stay on the BRRT. If trail planners or public officials experience difficulty acquiring land for the latter, due, say, to the objections of landowners along the planned route, one of the corridors shown in this plan could be used to make the connection to the James River, Blue Ridge Parkway, or both. Alternatively, these organizations could utilize the spatial model described in this document to select an altogether different route, since the land suitability maps reveal many more suitable corridors. This underscores the utility of the approach followed in this plan, namely, its inherent flexibility. If a problem arises along the preferred alternative, such as property in the path of the proposed trail is suddenly subdivided or developed into residential housing, the trail can simply be rerouted onto another corridor.

The principal strength of this plan, however, involves the simple, scenic beauty of the landscapes along the proposed Blue Ridge Discovery Trail, a pathway that links people to the natural wealth and history of this remarkable area and allows them to experience firsthand the people, events, and places that make it such an interesting place to visit. It also lies in the simplicity of the trail...
concept: a pathway linking the most attractive recreational destinations in Central Virginia through landscapes featuring fantastic scenery and steeped in a rich history, both before and after the first inhabitants made their mark here. People from all parts of Virginia and beyond should discover and delight in the beauty of the Blue Ridge Mountains of Virginia by supporting the effort to make the Blue Ridge Discovery Trail a reality. Only when visitors can travel the entire length of the trail will the latter half of the trail motto be realized at the expense of the former: “A Vision of the Future, A Pathway to Our Past.”
Bibliography


U.S. Senator John Warner Chooses Rotunda as Backdrop to Announce Retirement (2007,
August 31). Retrieved 2 December 2008 from the UVAToday website:
Appendix 1: Historical Timeline

1650 Agents dispatched by Abraham Wood and William Byrd into the hinterlands become the first individuals of European origins to settle Virginia’s mountains. Many intermix with Indians and adopt Indian lifestyles, leading to the formation of a mixed Creole culture in the early Virginia backcountry.

1669 John Lederer, searching for an overland route through the Appalachians to the Pacific Ocean, becomes the first European known to have reached the crest of the Blue Ridge.

1716 Governor Alexander Spotswood leads expedition into the Shenandoah Valley, cresting the Blue Ridge Mountains at Swift Run Gap in present-day Shenandoah National Park.

1728 Colonel William Mayo makes the first survey of the area.

1735 Richard Tye discovers and names the Tye River.

1747 Reverend Robert Rose, a Scottish parson with 33,000 acres in the area, builds his house, “Bear Garden,” near confluence of the Tye and Piney rivers.

1749 Rose and two other men, John Blyre and Henry Bunch, explore to Porters Gap and Elk Pond Mountain, the North Fork of the Piney River, and Lovingston Spring.

1751 Joshua Fry and Peter Jefferson draw the oldest surviving accurate map of the area.

1761 Amherst County is created by legislative act.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>1716</td>
<td>A band of Cherokee suffering from smallpox is banished from Lexington to the nearby mountains. They establish a campsite on Wigwam Mountain near the headwaters of Irish Creek.</td>
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<tr>
<td>1807</td>
<td>Nelson County is formed from part of Albemarle County.</td>
</tr>
<tr>
<td>1831</td>
<td>Work on the James River-Kanawha Canal begins, reaching Balcony Falls (Glasgow) by 1850.</td>
</tr>
<tr>
<td>1855</td>
<td>The Irish Creek tin mine, in operation until 1917, opens.</td>
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<tr>
<td>1860s</td>
<td>During the war, a Union soldier shoots his exhausted horse during an ascent of what becomes known as “Yankee Horse Ridge.”</td>
</tr>
<tr>
<td>1864</td>
<td>Union and Confederate forces clash near the Village of Tye River.</td>
</tr>
<tr>
<td>1880</td>
<td>The Richmond and Allegheny Railroad is constructed along the bank of the James River, linking Clifton Forge to Richmond.</td>
</tr>
<tr>
<td>1911</td>
<td>George Washington National Forest is authorized by Congress and six years later is officially established as the Shenandoah National Forest.</td>
</tr>
<tr>
<td>1916</td>
<td>The South River Lumber Company of Cornwall, Va. begins operating, ultimately laying 57 miles of railroad track to haul trees out of the mountains. Around the same time, the Leftwich Timber Company, later the Woodson Timber Company, begins hauling timber to the Piney River area to the east.</td>
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</tbody>
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