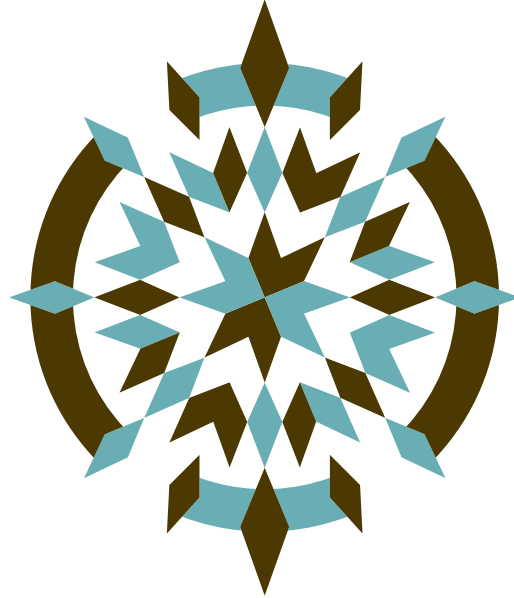

CAROLINA THREAD TRAIL
GREENWAY MASTER PLAN
FOR CHEROKEE COUNTY
COMMUNITIES



**CAROLINA
THREAD
TRAIL**

*Weaving
Communities
Together*

SEPTEMBER 2012





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acknowledgements

The following organizations signed resolutions of support at the outset of this effort to work with neighboring communities and with the Carolina Thread Trail to plan, design, and build trails that will connect our communities:

Town of Blacksburg

City of Gaffney

Cherokee County

**Overmountain Victory National Historic Trail
Committee**

Limestone College

Cherokee Chamber of Commerce

Cherokee Historical Preservation Society

Cherokee County Development Board

Appalachian Council of Governments

Kings Mountain National Military Park

Cowpens National Battlefield

Ten at the Top

Spartanburg Community College

Gaffney Board of Public Works

Cherokee Recreation District

Cherokee County Tourism Committee

Gaffney Downtown Business Association

*Cherokee County
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The Steering Committee also served as the Technical Advisory Team who assisted in collecting and analyzing data, and proposing alternative scenarios for consideration by the public .



EXECUTIVE SUMMARY

The Carolina Thread Trail Greenway Master Plan for Cherokee County Communities outlines the steps necessary to preserve natural amenities, conserve historic sites, and provide public recreation facilities through greenway and trail development. This plan is the first step in the process of developing a network of trails through the municipalities and communities in Cherokee County. Trail segments will link county residents and visitors to the sites and destinations that make Cherokee County unique, and will connect county residents to trails across the Carolina Thread Trail region.

This plan is the result of a 12 month planning process led by the Carolina Thread Trail and developed by a county appointed steering committee made up of county residents and regional representatives. The goal of the Carolina Thread Trail is to connect the people, businesses, and communities of the 15-county Carolina Thread Trail region, located in North and South Carolina, through a network of trails that will promote economic development, healthy lifestyles, and the protection of land and sites that make the region unique.

The primary deliverable produced through this planning process is a map that depicts recommended trail segments connecting Cherokee County residents to local and regional destinations. These routes were developed using the input provided by county residents, gathered throughout the planning process, as the primary source of guidance. Carolina Thread Trail segments are represented on the map with pink lines. Other connection opportunities, which are trails identified as providing further countywide connectivity, are displayed with green lines. Trail segments are shown as ¼-mile wide corridors. The actual location of each trail within the corridor will be finalized by local municipalities as trail segments are developed.

The Carolina Thread Trail Greenway Master Plan for Cherokee County Communities includes 94.1 miles of trails located along stream/river corridors, road rights-of-way, undeveloped land, and utility corridors. In addition, a total of 53.5 miles of blueways have been identified along the Broad River and Pacolet River along the York and Union County lines.

The development of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities will occur over many years. Trail segments will probably be developed one at a time, focusing first on priority segments and taking advantage of trail development partnerships and funding opportunities. As development continues within the county and land uses evolve, trail segment locations and priorities may need to take better advantage of site conditions and connection opportunities. The following steps are recommended to begin the process of transforming planned trail segments into real trails. These steps outline a trail planning process that is fair, consistent, and achievable for the residents of Cherokee County.

ADOPT MASTER PLAN

Once the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities has been reviewed and approved by the steering committee, the next step in the trail development process is adoption of the master plan by Cherokee County, the city of Gaffney, and the town of Blacksburg. Adoption of the greenway master plan may include revisions to the master plan based on comments from municipal entities and advisory groups. By adopting the final master plan, the county, city, and town underscore their support for the development of trail segments within Cherokee County. Each municipal entity is encouraged to revisit existing zoning and land development ordinances



to make revisions and additions to their ordinances to create trail supporting initiatives. Floodplain development restrictions and regulations, land development regulations, zoning ordinance requirements, and open space dedication requirements should be revised or created for the protection of the county's environmental resources and development of trails.

BUILD PUBLIC SUPPORT

The Carolina Thread Trail Greenway Master Plan for Cherokee County Communities is a product of the residents of Cherokee County, and was developed by a dedicated group of county residents who served on the steering committee. The location of the Carolina Thread Trail in Cherokee County was based primarily on feedback received from county residents through the master plan process, and should be championed forward by county residents. The second step of the trail development process involves continued public involvement and support for the Carolina Thread Trail in Cherokee County.

It is the recommendation of this master plan that Cherokee County create a Greenways and Trails Advisory Commission, comprised of county residents, government officials, regional entities, local utility providers, and state transportation agencies. This commission will provide input on all greenway issues, provide feedback on greenway related planning and acquisition decisions, build support for greenway implementation, and help coordinate the construction and maintenance of trails.

Partnerships with recreation providers and organizations involved with land preservation can be beneficial in the development of trails. Both groups share common goals with trail supporters. Relationships with

such organizations enable municipal entities to offset trail land acquisition, development, and maintenance costs by pooling available funds. Expertise offered by recreation and conservation partners can provide valuable insight for trail construction, trailhead development, access, and land or easement acquisition.

PLAN AND DEVELOP PRIORITY GREENWAY SEGMENTS

It is unrealistic to expect Cherokee County to develop all 94 miles of Carolina Thread Trail within a short period of time. A phased implementation plan for land acquisition, funding, design, construction, and maintenance of trails is necessary. Initial greenway development efforts should focus on Carolina Thread Trail priority greenway segments. The following criteria have been developed to identify the priority trail segments within Cherokee County:

- Public support
- Availability of land/right-of-way
- Functional connection
- Population served
- Partnership potential
- Funding availability

A complete list of the priority greenway segments can be found on page 50 of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities.

The following Cherokee County Carolina Thread Trail segments have been identified as regional priority, priority, and secondary trail segments as recommended by the steering committee. These trail segments, presented in no particular order, represent the Carolina Thread Trail segments that meet the selection criteria developed and presented within this master plan.



Regional Priority Trail Segments:

Route A: Overmountain Victory Trail Corridor

Route N: Kings Mountain National Military Park Corridor

Priority Trail Segments:

Route E: Broad River South Corridor

Route H: Limestone College Corridor

Route I: West Gaffney Corridor

Route K: Broad River North Corridor

SECONDARY TRAIL SEGMENTS:

Route B: Western Cherokee County Corridor

Route J: North Gaffney Corridor

EVALUATE LAND OR RIGHT-OF-WAY ACQUISITION OPTIONS

The completion of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities signals the end of the first step in trail development and the beginning of the crucial second step: funding and financing. Cherokee County must begin to identify funding sources for land acquisition, design, construction, and maintenance of the Carolina Thread Trail. Many government entities are unable to fully fund the development of every mile of trail within a network using in-house funds. It is recommended that Cherokee County develop a multi-tiered approach for funding trail development using a variety of financing options, including local, state, federal, and private funding sources.

The most effective method for funding the Carolina Thread Trail and other local trails within Cherokee County will involve a combination of public and private funding sources. Appendix 5 of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities report provides specific funding sources and programs that may be used for trail development.

EVALUATE LAND OR RIGHT-OF-WAY ACQUISITION OPTIONS

The acquisition of land for trail development is an important and necessary step of the trail development process. Land acquisition provides the land resources necessary for development of trails, protects sensitive environmental and natural resources, and preserves historic and cultural treasures. Cherokee County should utilize a variety of land acquisition methods, which may include purchase, donations, zoning and development regulations, developer contributions, and/or rail corridors for the protection and preservation of land for trail development. Detailed descriptions of these methods can be found on page 52 of this document.

DESIGN, CONSTRUCT AND MAINTAIN TRAILS

As Cherokee County, municipalities within the county and their partners select a segment(s) of the Carolina Thread Trail and acquire necessary land and/or easements for the trail, the design and construction of the trail can begin. The county and its trail partners will need to determine the desired use or uses for each trail segment. The trail width and trail surface material will be determined by the desired use(s), existing site conditions, cost of construction, and required level of maintenance. Typical trail surface materials include natural surface, crushed stone, asphalt, and concrete. Appendix 6 of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities, beginning on page 73, provides further description and trail design guidelines for the development of trails within Cherokee County. this document.



CONCLUSION

The Carolina Thread Trail Greenway Master Plan for Cherokee County Communities represents a citizen led collaborative planning process for the provision of trails throughout Cherokee County. Now that the master planning process is complete, it is the responsibility of the citizens of Cherokee County, the city of Gaffney and the town of

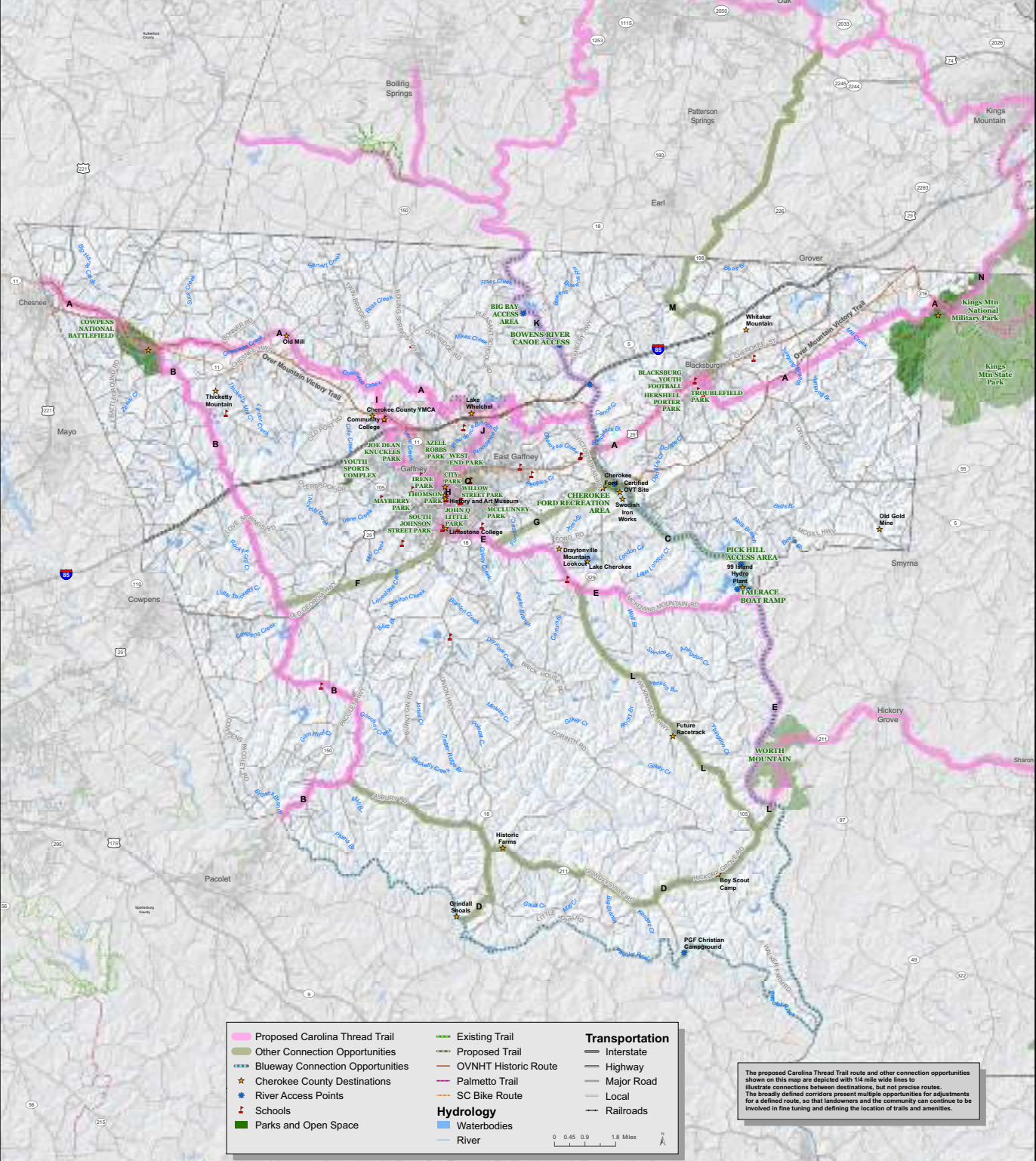
Blacksburg to transform this plan from lines on a map to trails on the ground. The Carolina Thread Trail will provide important connections through Cherokee County, linking residents to the places that make the county and region unique.



The Broad River



Carolina Thread Trail Master Plan for Cherokee County Communities Proposed Connection Opportunities



The proposed Carolina Thread Trail route and other connection opportunities shown on this map are depicted with 1/4 mile wide lines to illustrate connections between destinations, but not precise routes. The broadly defined corridors present multiple opportunities for adjustments for a defined route, so that landowners and the community can continue to be involved in fine tuning and defining the location of trails and amenities.

Special thanks to the following data providers: ESRI, Cherokee County. Map created by the Trust for Public Land on February 9, 2012. Created in ArcMap 9.3.10. Map Projection: NAD 1983 UTM Zone 17N. TPL, The Trust for Public Land, and The Trust for Public Land logo are trademarks of The Trust for Public Land. Copyright © 2012 The Trust for Public Land. www.tpl.org Information on this map is provided for purposes of discussion and visualization only.

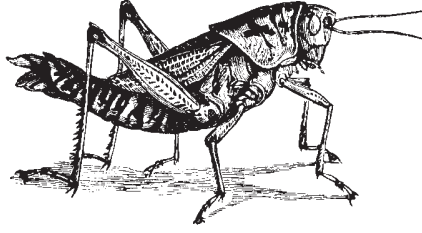
COMMUNITY INPUT

A guiding principle of the Carolina Thread Trail is “respect for the land and respect for the land owner.” This begins during the initial stages of trail development by allowing county residents to help determine the locations of trail segments. The master planning process provided opportunities for public input throughout Cherokee County.





Overmountain Victory National Historic Trail at Lake Wheelchel



CHAPTER 1. INTRODUCTION

The Carolina Thread Trail Greenway Master Plan for Cherokee County Communities provides a long-term vision and implementation strategy for the development of a countywide trail network providing connections to local and regional destinations. The proposed trail network will take many years to complete and require a cooperative effort between citizens, organizations, municipalities, and landowners. Once developed, these trails will provide transportation options, serve as linear parks, support economic growth, and link cultural resources. The Carolina Thread Trail planning effort illustrates that Cherokee County shares the vision of regional connectivity with the other participating counties in North and South Carolina. Together, 15 counties make up the Carolina Thread Trail network.

The Carolina Thread Trail Greenway Master Plan for Cherokee County Communities has been carefully crafted by a volunteer steering committee. This committee consists of representatives from the three National Parks, two colleges, Overmountain Victory Trail committee, three municipalities, and county planning and recreation staff. The steering committee participated in the public input process, developed alternate trail routes throughout the county, and created the vision presented in the final Carolina Thread Trail Greenway Master Plan maps and report.

The Carolina Thread Trail Greenway Master Plan for Cherokee County Communities report serves as a guide for the development process of the Carolina Thread Trail routes through Cherokee County. In addition, the report provides information on the benefits of trails, the existing conditions of Cherokee County's geography, population, and economy, and a detailed summary of the proposed trail network. Recommended actions for adopting the plan, establishing the priority routes, planning specific

trails, building those trails, and funding the development of the Carolina Thread Trail network in Cherokee County are also provided.

WHAT IS A GREENWAY?

Before providing more specific information, let's take a step back and answer a very important question: What is a greenway? Greenways are linear parks consisting of undeveloped or lightly developed land, usually containing trails. Greenway trails, also referred to as greenways or trails, support multiple uses which can include walking, jogging, cycling, horseback riding, and, in some cases, canoeing and kayaking.

Greenways can exist in both natural and man-made settings. Natural greenway settings may include areas along streams, rivers, and wooded areas. Man-made greenway settings include utility easements, railroad corridors, and road rights-of-way. Most greenways provide recreational, environmental, social, and health-based benefits for the communities in which they are located. Greenway networks, much like the Carolina Thread Trail, consist of a network of greenway trails that provide recreation and transportation connectivity to a large area. Well-conceived greenways connect people to destinations, such as parks, schools, libraries, and commercial areas.

CAROLINA THREAD TRAIL

The Carolina Thread Trail is a network of trails weaving through a 15 county region in North and South Carolina. This regional trail network aims to connect the approximately 2.3 million residents of the region to local and regional destinations. The Carolina Thread Trail will link built environments to nature, showcase the region's unique history, and allow people of all ages and abilities to get



outdoors and enjoy the places they call home.

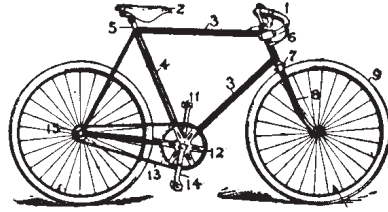
The Carolina Thread Trail is a private, non-profit entity led by Catawba Lands Conservancy with support from Foundation For the Carolinas and local communities. Communities located within the 15 county Carolina Thread Trail region have signed resolutions of support and agreed to work with their surrounding communities to create an integrated network of trails. Each trail located within the region will be planned and built by the communities located within the Carolina Thread Trail region. The Carolina Thread Trail provides each community with resources that assist in the development of greenway master plans and grant opportunities to help transition planned routes into built trails. Communities included in the Carolina Thread Trail region have agreed to develop the local and regional trail network while adhering to the following guiding principles:

- Connectivity and collaboration: Ensuring connectivity by helping communities communicate with counties and counties communicate with one another.
- Inclusiveness and free access to all: The Carolina Thread Trail will be a free asset available to those living in urban, suburban, and rural environments.
- Leverage: Private capital will be used to stimulate planning and development activity and to attract local, state, and federal resources for projects that will benefit the region.
- Respect for the land and respect for the landowner: Include and educate landowners during the planning and development process. Routes identified as part of the master plan are broad corridors that represent multiple opportunities. For each segment, adjustments to the route can be incorporated as more landowners are engaged

The name for the Carolina Thread Trail was developed in large measure to the region's rich history in weaving fabric and textile production. Many hands will be needed to help weave the miles of trails into the region's communities. Since each segment of the Carolina Thread Trail will be developed by the community in which it is located, trail segments are sure to have a unique look and feel. It is the underlying desire that each community promotes and develops an interconnected network of trails that will sustain this effort known as the Carolina Thread Trail.



Broad River



CHAPTER 2. GREENWAY BENEFITS

Any good investment provides a beneficial return. Trails provide a great return on the investment required if properly planned, built, and maintained. The benefits of trails are multifaceted and the subject of numerous studies and reports. The following overview of the many benefits provided by trails is divided into four categories:

- Connecting Communities
- Health Benefits
- Economic Impact
- Environmental Benefits

CONNECTING COMMUNITIES

The primary function of transportation facilities, be it urban streets, rural roads, or interstate highways, is to connect one place to another. Trails serve the same purpose. Well planned trails provide useful connections between homes, schools, businesses, parks, and other nearby destinations. The Carolina Thread Trail serves as the 'interstate' greenway system, linking trails that make local connections in Cherokee County to similar greenway networks in other towns, cities, and counties within the Carolina Thread Trail region. This is the concept of Connecting Communities.

Provide neighborhood connections

Connections to trail facilities allow residents to choose the form of transportation they would like to use on a daily basis. The absence of trail facilities dictates that all trips, no matter how short, are made via automobile. A recently completed study by the U.S. Department of Transportation, the Federal Highway Administration, and the Bicycle and Pedestrian Information Center indicates that when bicycle, pedestrian, and other trail-type facilities are available, people will use those facilities. Their study indicates that the number of trips taken by residents from their homes

to nearby destinations using non-vehicular modes of transportation increased by 25% since 2001. During this same time period, funding for the development of bicycle, pedestrian, and other trail-type facilities has increased.¹ The provision of dedicated bicycle and pedestrian facilities, like trails, provides alternative choices in transportation.

Facilities for all to use and enjoy

Where most transportation facilities are exclusively designed for vehicles, trails are designed to be inclusive of most non-motorized modes of travel. Trails are designed to accommodate a broad range of users, including different age groups and abilities. The trails designed to be part of the Carolina Thread Trail network will be easy to access. Some trails will be located along local streams, creeks and rivers, while others may be located within the rights-of-way of roads, at times separated from roadway travel lanes for safety, perhaps by sidewalks and bike lanes. Trails are made to accommodate a variety of non-vehicular uses including walking, jogging, cycling, skating or rollerblading, and in some instances, horseback riding. For this reason, trails are designed to be wide enough to support all potential uses. Trails are primarily built with materials that provide stable and consistent surfaces that meet the requirements of the Americans with Disabilities Act. Trails are designed to minimize steep slopes to allow the trail to be utilized and experienced by people of all abilities.

Connects communities to nature

Much has been written recently about people's need to interact with nature. Last Child in the Woods, by Richard Louv, explores the reduced connection between children, its effects on children, and how that connection can be made again.² A recent article in Landscape Architecture



Magazine shares that doctors in Japan have found that brief walks through wooded areas increase the body's production of NK cells used to fight off virus-containing cells.³ Trails provide physical connections to nature in any environment, whether it is through a wooded floodplain within an urban context, or a conservation easement or nature preserve in the more rural parts of Cherokee County.

Builds regional partnerships

Planning and developing a regional trail network which will cross municipal, county, and state lines cannot be accomplished without the dedication of a group of

stakeholders. Each entity must make a conscious decision to become part of a larger group to take the idea of the Carolina Thread Trail and make it a reality. Cherokee County and its participating municipalities have agreed to be active participants in this process. Lines of communication within and beyond Cherokee County have been established and will be strengthened over time as the planning and implementation of segments of the Carolina Thread Trail move forward.

HEALTH BENEFITS

Many people understand that exercise is healthy and it is something that most people agree they need to do more often. However, many people lose sight of just how important exercising is and how it can positively affect day to day life. Experts continue to draw links between exercise and its positive effects on our health. Parks and recreation facilities that offer a safe location for exercise, like trails, can provide residents with easily accessible options for a healthier lifestyle.

Encourages physical activity

Trails can be constructed in a variety of environments. Traditional parks often require certain types of land for development, provide amenities that support a single activity, and can be much more costly to develop. The adaptable nature of trails provides an advantage when compared to traditional parks. Trails serve as convenient and accessible venues that support a variety of recreational activities, such as walking, cycling, running, canoeing or kayaking (on blueways), and horseback riding. Trails can help make the choice to exercise easier.

The Mayo Clinic released an article detailing seven benefits that regular exercise can provide to all people, regardless of



Mulberry Chapel Methodist Church



age, sex, or ability.⁴ Improving your mood, fighting chronic disease, boosting energy level, managing weight, and improving sleep are among a few ways regular exercise can improve the quality of daily life.

Relieves stress and improves psychological health

Many studies have been conducted to measure the benefits regular exercise offers our physical health. Researchers are beginning to study the positive effects exercise can have on mental health. A Duke University study tracked subjects suffering from depression. The study results indicated that depression was successfully treated for 60% of test subjects who exercised just 30 minutes a day for three days a week without the use of medication. Interestingly enough, the study also found that depression was successfully treated for the same percentage of test subjects who only used antidepressant medication.⁵

Health care professionals have been slow to encourage exercise as part of a treatment plan for anxiety, opting first for medication. Some within the research community are trying to change this. Two researchers (Jasper Smits of Southern Methodist University and Michael Otto of Boston University) have written a book for mental health professionals and are currently developing literature for general physicians and the public, encouraging the prescription of exercise. Such prescriptions would include recommended amounts, or doses, of exercise. Helpful tips for beginning and continuing an exercise program will be included within each prescription.⁶ The direct link between regular exercise and the reduction of anxiety are unknown. Major questions linger as to which types of exercise work best, how much exercise is enough, and how exactly exercise helps with anxiety. Theories of the exercise/

anxiety relationships include the brain's chemical response to activity; the affect exercise has on improving sleep, and the sense of accomplishment given to participants of regular exercise. Despite the insufficient scientific data on the subject, many agree that the benefits stretch beyond physical health.

It is important to provide easily accessible parks and recreation facilities for residents to use for exercise and recreation. Upon the completion of the Carolina Thread Trail Greenway Master Plan and the development of trails within Cherokee County, residents will have a large network of dedicated multi-use facilities. These facilities will extend the current recreational infrastructure in the county providing additional places for residents to exercise.

ECONOMIC IMPACT

The positive impacts trails have on communities are far-reaching. Economic data from communities where trails have been developed provide real world numbers on the direct and indirect positive economic impacts trails provide. These numbers help justify the expenditure of public dollars to develop recreational facilities that provide both an improved quality of life and positive long term economic impacts on nearby businesses, municipalities, and homeowners.

Increases property values

Trails are one of the most desired amenities that homeowners look for when purchasing a house. A recent study by the National Association of Realtors shows that over 50% of Americans agree that homes and businesses should be located within walking distance of stores and shops to reduce the use of automobiles for every shopping



trip.⁷ Armed with this information, many developers provide trails as amenities within new home communities. One study in North Carolina indicated that a developer put a premium on homes located near trails. Despite this higher price, the homes nearest to the trails sold first. Homeowners are willing to pay more for homes located near trails.⁸ The convenience of living within a short distance from trails provides added value to nearby properties.

Attracts tourism

Many communities that have invested in their local and regional trail networks have found that these trail networks attract visitors. Visitors provide a much needed boost to local economies when trails are properly marketed. The communities along the KATY Trail, a 185-mile trail in Missouri, partnered together to attract outdoor enthusiasts interested in two-to-four day excursions.⁹ This combined marketing effort allows local towns to benefit from marketing exposure they would not be able to afford otherwise.

Economic benefits associated with trails are not just limited to large regional trail networks. These benefits can also be experienced in small, rural towns. Abingdon and Damascus, Virginia are two small towns connected by the Virginia Creeper Trail. A survey of trail users conducted as part of a study by the Virginia Department of Conservation in 2004 estimates that trail users pump \$2.5 million into the local economy.¹⁰ Over half of those surveyed were not locals, but visitors who came to the area to ride on the Virginia Creeper Trail. This popular trail has provided southwest Virginia with jobs and income that would have otherwise been spent elsewhere.

Ability to attract new business and retain nearby businesses

Businesses are located along highly traveled roadways to attract potential customers. A business located along a high volume highway increases the exposure that a business has to the traveling public. Increased exposure results in increased revenue. Restaurants, hotels, gas stations, and other industries that cater to the motoring public seek locations that give them the best chance of attracting customers.

As the popularity and use of trails continues to grow, business owners have taken notice in a similar fashion. Business owners in New Orleans located, and in some cases moved, their businesses to be closer to the Lafitte Greenway.¹¹ Business owners along the Great Allegheny Passage Trail and the C&O Canal Trail have experienced increases in revenue since the completion of those trail networks.¹² Several owners report repeat customers from one year to the next, a trend that contributes to staying in business. Bicycle shops, bed and breakfasts, campgrounds, restaurants, and other similar businesses have found success by locating near trails.

Within the Carolina Thread Trail network, Green Way Cycle Rentals was established in fall 2011 on the Avon/Catawba Creek Greenway in Gastonia NC. Realizing its success, the business has returned in 2012 for the season renting bicycles, tricycles and tandems along the trail for family enjoyment. Lulu on the Greenway opened in 2011 along the Little Sugar Creek Greenway in Charlotte and serves lunch, brunch and dinner on a daily basis.

Some government agencies have found it helpful to produce literature and guidelines to help local communities take full economic advantage of trails. The Iowa Department of Transportation developed a handbook entitled



*Implementing Trail-Based Economic Development Programs.*¹³ The handbook provides a list of guiding principles that helps communities determine the types of businesses that will be most likely be frequented by trail users and identifies the best locations for those businesses. Case studies from similar communities, lessons learned by communities located along existing trails, and a step-by-step, how-to guide for the development of a plan for capitalizing on trail recreation are also provided.

ENVIRONMENTAL BENEFITS

Most folks understand the benefits that trails provide; however, many do not realize the environmental benefits trails can provide. These benefits may be the most important within the Carolina Thread Trail region, given the ever expanding development of previously undeveloped lands. Cherokee County's population grew by only 5% between 2000 and 2010 according to 2010 Census data. However, the development associated with any growth can negatively impact our natural resources. Trails help preserve natural amenities, protect agricultural lands, improve water and air quality, and provide habitats for native wildlife.

Preserve natural and agricultural land uses

Trails possess the unique ability to provide transportation facilities and connections between communities while protecting and preserving existing land uses. Most roadways impact wide swaths of land, require extensive site disturbance, and invite development. Trails, by contrast, work within narrow corridors, respond to existing land features, and help preserve existing natural features and land uses. Conservation easements or fee simple purchases of land for trails helps ensure that protected natural open space is preserved. These conservation efforts may also

protect rural and agrarian land uses through agricultural conservation easements which restrict development, but allow for agricultural operations to continue in perpetuity.

Improve water quality

The protection and preservation of natural areas along streams provides many very important benefits. Riparian buffers, or protected, undeveloped, and forested lands along either side of streams, act as filters for runoff into streams. These buffers have been shown to remove pollutants, such as sediment, phosphorus, and nitrates from runoff.¹⁴ The trees within riparian buffers help to shade existing streams, keeping temperatures down and sustaining native fish populations. The roots of vegetation within riparian buffers help to stabilize soils within floodplains, thereby reducing the risk of stream bank erosion.



Downtown Blacksburg



The linear nature of trails mimics the natural alignment of streams and water courses. The similar nature of the two provides added benefit in the protection of personal property within floodplains. The National Flood Insurance Program states that the average annual costs of losses, due to floods over the last 10 years within the U.S., equals \$2.7 billion.¹⁵ The cost of damage to homes and structures can be dramatically reduced by protecting floodplains through the implementation of development restrictions and the acquisition of lands for trails.

Improve air quality

Trails can help improve air quality in two distinct ways. First, trails provide alternative transportation routes. An EPA study in 2006 revealed that pollution from automobiles causes over half of the carbon monoxide, over a third of the nitrogen oxides, and almost a quarter of the hydrocarbons in our atmosphere. When properly planned, trails can be used by cyclists and pedestrians to commute to and from work, visit a park, or run errands. The reduced use of automobiles

for such trips decreases the amount of pollution being delivered to the atmosphere.¹⁶

The second way trails improve air quality is through the trees they preserve and protect. Trees can help reduce air pollutants such as carbon monoxide, nitrogen dioxide, ozone particulates, and sulfur dioxide through gas intake in leaves. Tree surfaces can intercept pollution particulates in the air.¹⁷ Preserving trees along trails within urban areas can have a significant impact on reducing the amount of localized air pollution.

Provide wildlife habitats and wildlife corridors

Natural, undeveloped lands provide habitats for numerous varieties of flora and fauna. Trails help to preserve these natural areas, protecting habitats for birds, mammals, and plants. Trails also provide connectivity between fragmented natural areas within urban environments. Signage can be added to trails to educate trail users on the types of local plants and animals that benefit from the preservation of land on which these facilities exist.



Pick Hill Access on the Broad River



CHAPTER 3. EXISTING CONDITIONS

GEOGRAPHY OF THE STUDY AREA/LAND COVER

Cherokee County is immediately south of the North Carolina state line in the upstate of South Carolina. The county is bordered by Spartanburg County to the west, Union County to the south, York County to the east, and to the north by Rutherford and Cleveland Counties in North Carolina.

Cherokee County is approximately 397 square miles in size with 393 sq. miles in land and about 5 sq. miles in water. Formerly known as the Old Iron District, iron mining was a major activity up to the Civil War. Textiles were also important to this area as was agriculture. Due to the recent declines in these areas, the county is looking to new directions both economically and culturally to help redefine itself. Interstate 85 runs through the northern part of the county providing most of the county's growth along this corridor. Approximately 30.6 miles of the Broad River flows through Cherokee County, of which 16.2 miles forms the eastern boundary of the county. The Pacolet River flows 22.9 miles along the southern boundary of Cherokee County.

Two municipalities are located in Cherokee County: the city of Gaffney, the county seat, and the town of Blacksburg. Unincorporated communities located in Cherokee County include Cherokee Falls, Draytonville, East Gaffney, and Thicketty.

HISTORY

Cherokee County was originally home to the Cherokee Indians for whom the county was named. Cherokee County was established in 1897 and was comprised from portions of Spartanburg, Union and York Counties.

Cherokee County is home to three National Parks: Overmountain Victory National Historic Trail, Cowpens National Battlefield, and Kings Mountain National Military Park. Cherokee County was the site of two significant battles of the Revolutionary War that became the turning point in the war. The first major patriot victory in the war after the British invaded Charleston occurred in October 1780, known as the Battle of Kings Mountain. Then in January 1781, the armies of Daniel Morgan and Nathaniel Greene defeated Colonel Banastre Tarleton's British army at the Battle of Cowpens. The last 35 miles of the 330-mile Overmountain Victory National Historic Trail extend from the South Carolina line through Cherokee County and Cowpens National Battlefield to the terminus at Kings Mountain National Military Park. The Overmountain men followed this corridor on their way to the Battle of Kings Mountain.



Centennial Monument at Kings Mountain National Military Park



POPULATION

According to the 2010 US Census, Cherokee County has a population of 55,342. The 2000 US Census showed a countywide population of only 52,537. Cherokee County is 24th in the state in terms of population. The median age of residents in Cherokee County is 37.9 years of age. Cherokee County has a total of 23,368 housing units.

ECONOMY

The textile industry has dominated Cherokee County's economy for almost 100 years, and up to the Civil War, iron mining was a major activity. The county has made significant strides in recent years to diversify the economy. The current distribution of employment within Cherokee County is led by manufacturing, but also includes: private industry, trade, transportation & utilities, education & health services, finance, insurance & real estate, and construction. The top employers within Cherokee County include Nestle USA, The Timken Company, Freightliner, Milliken & Co., UPS Freight, Hamrick Mills, Hamrick Industries, Brown Packing Co., Springfield LLC, and Parkdale Mills. The Premium Outlets-Gaffney located along I-85 is a major attraction and is visited by over 3,000,000 people a year.

Cherokee County School District provides public education for the entire county. County schools include one primary school, eleven elementary schools, four middle schools, two high schools, and one vocational school. Total public school enrollment in Cherokee County was 12,165 in 2000. Two schools of higher learning have campuses in Cherokee County; Limestone College is located in Gaffney as well as the Cherokee County campus of Spartanburg Community College.

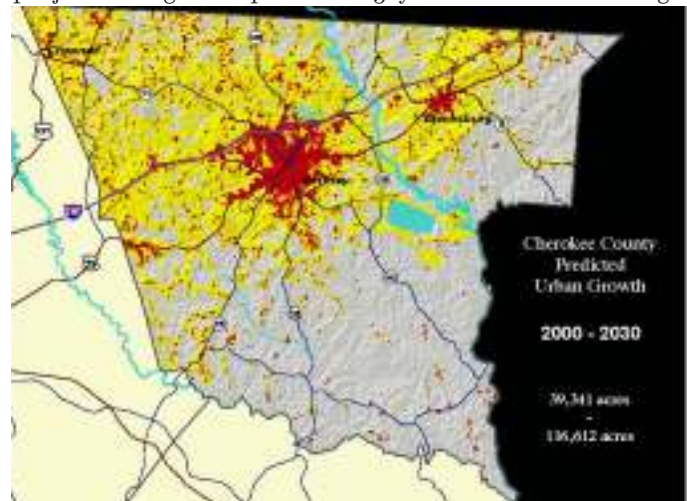
According to 2010 ESRI Business Analyst estimates, the median income of Cherokee County residents is

\$41,640, right around the statewide average in South Carolina. The SC Department of Employment & Workforce estimates the unemployment rate for Cherokee County is 12.9% for December 2011. For the same time period, the unemployment rate for South Carolina is 9.5% and 8.3% for the United States.

DEVELOPMENT TRENDS

Population projections for Cherokee County indicate continued growth. The county experienced a 5.3% population growth from 2000 to 2010 according to the US Census Bureau and is spurred by continued development along the I-85 corridor due to the area's close proximity to Greenville-Spartanburg, SC and Charlotte-Mecklenburg, NC.

The Strom Thurmond Institute at Clemson University developed a Land Development Model in 2009 that illustrates the projected urban growth in Cherokee County. The study illustrates the correlation between population growth and land development from 1990 to 2000 and projects this growth pattern in 5-year increments through



Land Development Model - Cherokee County 2000 to 2030 Projected Growth



2030. In 1990, only 4.7% (11,919 acres) of Cherokee County's 251,520 acres of land was developed. This equals 0.267 acres of land developed per person. In 2000, 15.64% (39,341 acres) of the county's total land was developed. This equals 0.749 acres of land developed per person, a significant increase. In 2010, 25.26% (63,531 acres) of the county's total land was developed. This equals 1.15 acres of land developed per person, another significant increase. Projections show that by 2030, 46.4% (116,612 acres) of county land will be developed.

EXISTING PARKS

Most of the parks, recreation, and trail facilities in Cherokee County are provided and maintained by the Cherokee Recreation District (CRD). The CRD operates and maintains 20 park facilities primarily in Gaffney and Blacksburg. The Gaffney Board of Public Works operates and maintains the facilities at Lake Whelchel, while the National Park Service operates and maintains the trails and facilities at the three National Park sites in Cherokee County. Duke Energy operates and maintains boating access



Blacksburg Youth Baseball Park

facilities along the Broad River. Parks, recreation and trail facilities in Cherokee County include the following:

Cherokee Recreation District:

Blacksburg Area

Troublefield Park: lighted baseball field with concession stand, restrooms, and press box for high school baseball and two (2) lighted tennis courts.

Blacksburg Youth Baseball Park: lighted youth baseball field with concession stand, restrooms, press box, and picnic shelter. Facility is used for youth baseball.

Hershel D. Porter Park: lighted baseball field for Blacksburg Little League baseball.

Blacksburg Playground: small park with playground equipment for younger children, and restrooms.

Blacksburg Football Practice Field: practice field for Blacksburg Little League football.

Gaffney Area

J. Lowery Love Football Field: lighted football field with concessions, restrooms and press box. Hosts county-wide youth football.

Commissioners Field: lighted baseball field with concession stand and restrooms. Hosts Gaffney High School baseball and Gaffney American Legion baseball.

Babe Ruth Field: baseball field used for Babe Ruth baseball and practice for junior high school baseball teams.

Wayne Fuller Field: softball field.

Youth Sports Complex: four (4) lighted baseball fields with concessions, restrooms and press box used for tournament play. There is also a paved ¼ mile walking path.

Thomson Park: contains four (4) lighted tennis courts, picnic shelters, grills, restroom facilities and playground equipment.



Frederick Street Park: non-lighted youth baseball/softball field used for practice for organized leagues.

South Johnson St.: playground area.

Cherokee Ford Recreation Complex: four (4) lighted regulation softball fields with concession stand, restrooms, press box and playground. The complex is used for most softball including industrial leagues, Men's and Women's open leagues and church leagues, and girls youth softball. Complex is used for most softball tournaments. The tennis courts are no longer in playing condition.

Park Place: a 2.5 acre park with a playground, covered picnic tables and covered stage.



Walking trail at the Youth Sports Complex

Gaffney Area (City)

Irene Park: lighted youth baseball field with concession stand, restrooms and press box used for Dixie Youth Major League (10-12), Pee Wee, and Minor League baseball regular season and tournament play. There is also a 75' x 100' swimming pool with bathhouse.

Mayberry Park: lighted baseball field for youth baseball (5-12) and practice for Gaffney Little League football.

McCluney Park: playground equipment, 2 picnic shelters, restrooms, practice field, and walking path.

Azell Robbs Park: two regulation basketball courts, playground equipment, and a large grass free play area.

Railroad Ave. Park: playground area with basketball goals and a picnic area.

City Park: located between city administration building and fire department. Provides seating areas with gardens and a water feature.

John Q. Little Park: tranquil park with seating, gardens, and a water feature.

City Skate Park: provides half pipes, grinding rails, ramps, and other skateboard obstacles.

West End Park: small children's playground.

National Park Service

Overmountain Victory National Historic Trail (OVNHT): approximately 35 miles of the 330-mile trail come through Cherokee County. Not all of the trail has been constructed yet as a hiking trail, but the trail predominately follows SC 11 from Chesnee through Cowpens National Battlefield, passes by Lake Whelchel, crosses the Broad River and eventually ends at Kings Mountain National Military Park. Currently 3.1 miles of trail have been constructed.

Kings Mountain National Military Park: this 3,945 acre park features several hiking trails throughout the park,



including a 3 mile trail connecting to the Garner Creek Backcountry campsite, a 16-mile park loop trail, the 2.5 mile Browns Mountain Trail, and the 3 mile (6 miles roundtrip) Clarks Creek trail to Lake Crawford. There is also a 1.5 mile paved battlefield trail adjacent to the visitor center. 16 miles of equestrian trails traverse both the National Military and Kings Mountain State Parks. The park straddles the Cherokee County/York County line.

Cowpens National Battlefield: 845 acres with a visitor center, picnic area with shelter, a partially paved 1.3 mile battlefield trail and other hiking and equestrian trails. The Overmountain Victory National Historic Trail moves through Cowpens.

Gaffney Board of Public Works

Lake Whelchel: 150 acre lake serves as the primary source of water for the city of Gaffney. A boat landing and picnic shelter with restrooms are provided just off I-85. Fishing and boating are permitted on the lake. The Overmountain Victory National Historic Trail traverses just south of the lake.

Joe Dean Knuckles Park: located in downtown Gaffney. Offers a walking path, benches, bench swings, and gardens.

Duke Energy Recreation Access Areas

Gaston Shoals Lake:

Big Bay Access Area: boat ramp, parking and a concrete fishing platform.

Gaston Shoals Fishing Trail and Canoe Portage: located north of Gaston Shoals Dam and Powerhouse.

Bowens River Canoe Access and Bank Fishing Area: located just south of Gaston Shoals Dam and Powerhouse.

Ninety Nine Island Lake:

Cherokee Ford Recreation Area and Canoe Portage: located adjacent to Cherokee Ford Recreation Complex. No facilities or boat ramps. Canoe portage is located south across from Cherokee Falls.

Pick Hill Access Area: boat launch ramp and parking.

Canoe Portage, Tailrace Fishing Area and Boat Ramp: just south of Ninety Nine Islands Dam and Powerhouse.



Lake Whelchel



South Carolina Department of Natural Resources

Lake Cherokee Fishing Pier: located just east of Gaffney on Highway 105. Provides fishing and parking.

Other:

Horace Lee Lattimore Recreational Complex (Cherokee Falls): provides a lighted baseball field (Herbie Livingstone Field) with press box, playground, picnic pavilion, and restrooms.

EXISTING TRAILS

In Cherokee County, existing trails are limited to the boundaries of several county and state facilities. The Carolina Thread Trail Greenway Master Plan aims to expand trails throughout the county. The existing trails currently within Cherokee County are as follows:

- **Cowpens National Battlefield:** partially paved 1.3 mile battlefield trail and other natural surface hiking and equestrian trails.
- **Kings Mountain National Military Park:** 3 mile natural surface trail connecting to the Garner Creek Backcountry campsite, a 16-mile natural surface park loop trail, the 2.5 mile natural surface Browns Mountain Trail, a 3 mile (6 miles roundtrip) natural surface Clarks Creek trail to Lake Crawford, and a 1.5 mile paved battlefield trail adjacent to the visitor center. 16 miles of equestrian trails cross through both the National Military and Kings Mountain State Parks.
- **Overmountain Victory National Historic Trail:** 3.1 miles of natural surface trail has been constructed to date from Cowpens National Battlefield to Lake Whelchel.
- **Youth Sports Complex:** ¼ mile paved walking track.

COMMUNITY PLANS

Various community plans have been developed for Cherokee County. The following plan includes information pertaining to greenways and trails that was utilized in the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities process.

Feasibility Study 2010-2011: How Walkable, Bikeable, and Physical Activity Ready is Our Limestone College and City of Gaffney Community



Overmountain Victory National Historic Trail at Lake Whelchel



The above study recently conducted by Dr. Maria Felicia Cavallini of Limestone College focused on ten objectives to help promote safe and pleasant pedestrian and bicycle amenities while increasing physical activity and endorsing successful communities within four zones in Gaffney. The four zones studied were:

- Limestone College
- Gaffney Residential Historical District
- Downtown Gaffney
- The Mill Neighborhood

The ten objectives studied in the plan include:

- Increasing the quality of life in Gaffney
- Developing Limestone College in the flagship position
- Creating a vision for Limestone and Gaffney that would include the implementation of walking trail maps connecting all four zones
- Living in a place that supports policy and environmental change relating to chronic diseases
- Building on the natural connection already established through a safer, more walkable Gaffney
- Designing a walking trail plan for Limestone College in Gaffney that could benefit the entire community
- Using instruments and other pertinent information to identify safe and scenic walking routes
- Creating walking maps that connect all four zones
- Printing and distributing maps to the Gaffney community
- Presenting the final report to local, regional, and federal funding sources

After conducting the feasibility study, assessment criteria was scored and analyzed culminating in proposed walking trails/routes within each of the four zones. The proposed trail distances include:

- Limestone College – 1.3 miles (loop trail)
- Gaffney Residential Historical District – 5.9 miles (sidewalks)
- Downtown Gaffney – 0.6 miles (new trail/existing sidewalks)
- The Mill Neighborhood – 1.8 miles (new trail/existing sidewalks)



Limestone Springs at Limestone College



DESTINATIONS

Cherokee County has a number of unique destinations that showcase the area's natural amenities and historic landmarks.

Overmountain Victory National Historic Trail¹⁸

The 330-mile Overmountain Victory National Historic Trail commemorates the military campaign that led to a patriot victory at the battle of Kings Mountain in the fall of 1780. On September 24, 1780 Col. William Campbell set out from Abington, Virginia with 400 mounted Virginia militiamen to the southeast joining forces with 600 more militia in Tennessee on September 26. On September 30, 350 men marching from Surry County, North Carolina joined this patriot force. This group of men arrived at Cowpens on October 6 and crossed the Broad River at Cherokee Ford early on October 7 before engaging in the decisive battle at Kings Mountain that afternoon that brought the revolution back to life for the Patriots. The OVNHT was authorized by the U.S. Congress in 1980 and the trail is administered by the National Park Service. A commemorative motor route uses public highways now, but the eventual goal is to establish a 330-mile non-motorized route for hiking, cycling and horseback riding. The southernmost 35 miles extend through Cherokee County.

Cowpens National Battlefield¹⁹

Cowpens is located in northwest Cherokee County, just outside of Chesnee, SC. The Battle of Cowpens took place on January 17, 1781 towards the end of the Southern Campaign of the American Revolution and of the Revolutionary War. The Battle of Cowpens became known as the turning point of the war in the South, part of a chain of events leading to the eventual Patriot victory at Yorktown. General Daniel

Morgan defeated Lieutenant Colonel Banastre Tarleton in the battle known for “double envelopment,” a military tactic of the British, leading to the surrender of Tarleton’s forces. Today, Cowpens National Battlefield is comprised of 845 acres with a visitor center, picnic area with shelter, a partially paved 1.3 mile battlefield trail and other hiking and equestrian trails. The Overmountain Victory National Historic Trail comes through Cowpens.

Kings Mountain National Military Park²⁰

On October 7, 1780, after a 14 day march, a group of militiamen from North Carolina, South Carolina, Georgia, Virginia and Tennessee led by Cols. William Campbell and Isaac Shelby, met with and defeated Maj. Patrick Ferguson and his British forces at Kings Mountain. The over mountain men accomplished their mission in little more than an hour eliminating Cornwallis’s entire left flank, including Ferguson. This group of militiamen fighting with guerilla tactics turned the tide on Britain’s attempt to conquer the South and the United States.



Cowpens National Battlefield



Lake Whelchel

Lake Whelchel was formed in 1964 through the impoundment of Cherokee Creek and one other unnamed creek. The 150-acre lake serves as the water supply for the city of Gaffney and as a popular recreation area for fisherman. The Overmountain Victory National Historic Trail passes along the southern banks of the lake.

Limestone College

Located in Gaffney, Limestone College, founded by Dr. Thomas Curtis and son William Curtis, was established in 1845 as the first women's college in South Carolina and one of the earliest in the United States. The college was

developed on the site of the Limestone Springs, a natural mineral springs which was thought to have healing powers and attracted visitors from around the world. Limestone became fully coeducational in the late 1960's. Ten buildings are included on the National Register of Historic Places. Limestone is an accredited non-denominational Christian college offering four-year liberal arts degrees. Currently, there are more than 825 traditional day students and 2,800 Extended Campus students enrolled at eight sites in South Carolina and on-line. Limestone's total enrollment is more than 3,500 making it the largest private, regionally accredited institution in South Carolina.



Limestone College



U. S. Monument at the Kings Mountain National Military Park



CHAPTER 4. PROPOSED TRAIL NETWORKS

PLANNING PROCESS

A steering committee was formed to assist in the development of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities. Representatives from Cherokee County, the city of Gaffney, the town of Blacksburg, the state and national parks, and other local advisory groups and organizations were appointed to the steering committee. To provide countywide and regional insight to the steering committee, representatives from the Cherokee County Recreation District, Overmountain Victory Trail Committee, Duke Energy, Spartanburg Community College, Limestone College, Ten at the Top, Cherokee County Chamber of Commerce, Gaffney Visitors Center and Art Gallery, Appalachian Council of Governments, Cherokee County, Cherokee County YMCA, Upstate Carolina Medical Center, Blacksburg Business Administration, City of Gaffney, and Carolina Thread Trail were included. The steering committee and consultants for the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities followed the planning process summarized below.

May 2011

A project kick-off meeting was conducted to begin the planning process. The steering committee, consultants, and representatives from Carolina Thread Trail discussed the trail planning process, addressed the scope of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities, and reviewed the project schedule. Potential locations and dates for three community engagement sessions were selected. Existing parks, trails, schools, and cultural sites were located on the project base map and potential county destinations were identified.

June 2011

Public involvement is critical to any successful public planning process. The steering committee reviewed the community engagement session open house format. Trail survey questions were drafted by the consultant and reviewed and revised by the steering committee. Survey questions were designed to gather information from county residents on general trail information, current trail use, recreation habits, potential or desired trail use, and demographic information. Methods of community outreach were discussed to get the word out about the engagement sessions.

August 2011

Community engagement sessions were held at Corinth Baptist Church, Gaffney Visitors Center and the Blacksburg Community House. Each community engagement session was formatted as an informal open house. Each session was designed to introduce residents to the Carolina Thread Trail, gather input regarding current trail use, and identify destinations around Cherokee County that citizens would like to access using future trails. Participants were asked to draw on maps provided at each session to indicate where they would like to see trails. An online survey was available for county residents unable to attend one of the three community engagement sessions.

October 2011 through December 2011

The input gathered through the three community engagement sessions and the online survey served as the basis for locating potential trail routes throughout Cherokee County. The steering committee, which also served as the project's technical advisory team, met regularly over the course of several months to identify an



interconnected network of potential trail routes throughout Cherokee County. The resulting draft greenway master plan identified approximately 151.4 miles of trails and 53.5 miles of blueways. An inter-jurisdictional meeting was held with representatives from the adjacent counties (Spartanburg and Cleveland Counties) to review the current master planning effort in Cherokee County. Connections to adjacent counties were verified to ensure the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities will provide regional connections to adjacent counties.

January 2012 through February 2012

The preliminary trail routes identified by the technical advisory team were reviewed in the field. The consultants embarked on a driving and walking tour of each potential

route to review the existing topography and character, to identify potential obstacles, and to assess the feasibility and ease of trail construction. Routes with significant obstacles or conditions not conducive to a safe, enjoyable trail environment were relocated.

February and March 2012

Draft master plan review forums were held at Corinth Baptist Church, Blacksburg Community House, and Spartanburg Community College (Cherokee Campus). Participants reviewed input gathered through the three previous community engagement sessions and the online survey. The draft trail routes, which were developed using this input, were presented. The length, type of trail (on-road or off-road), and connections provided by each potential trail segment were discussed. Participants were



Steering Committee Meeting



asked to select five potential trail routes they believed were most beneficial to Cherokee County. An online survey was available for county residents unable to attend the draft master plan review forums.

March 2012 through June 2012

Using input received from the draft master plan review forums and the second online survey, the steering committee/technical advisory team refined the potential trail routes to create the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities. The consultant created the draft master plan report, summarizing the entire planning process, for review and comment from the steering committee.

CAROLINA THREAD TRAIL GREENWAY MASTER PLAN FOR CHEROKEE COUNTY COMMUNITIES

The recommended Carolina Thread Trail route through Cherokee County is 94.1 miles of trails located along stream/river corridors, road rights-of-way, undeveloped land, and utility corridors. The vast majority of the recommended trails are located along existing road rights-of-way (50.4 miles) and along stream/river corridors (25.7 miles). In addition, a total of 53.5 miles of blueways have been identified along the Broad and Pacolet Rivers.

The pink lines on the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities map represent the final Carolina Thread Trail segments within the county. These lines are shown as 1/4-mile wide corridors. The mapped routes represent the intended location of the Carolina Thread Trail, but do not represent the actual location of trails. Final trail locations will be determined as each Carolina Thread Trail segment is designed in more

detail by the county and its municipalities.

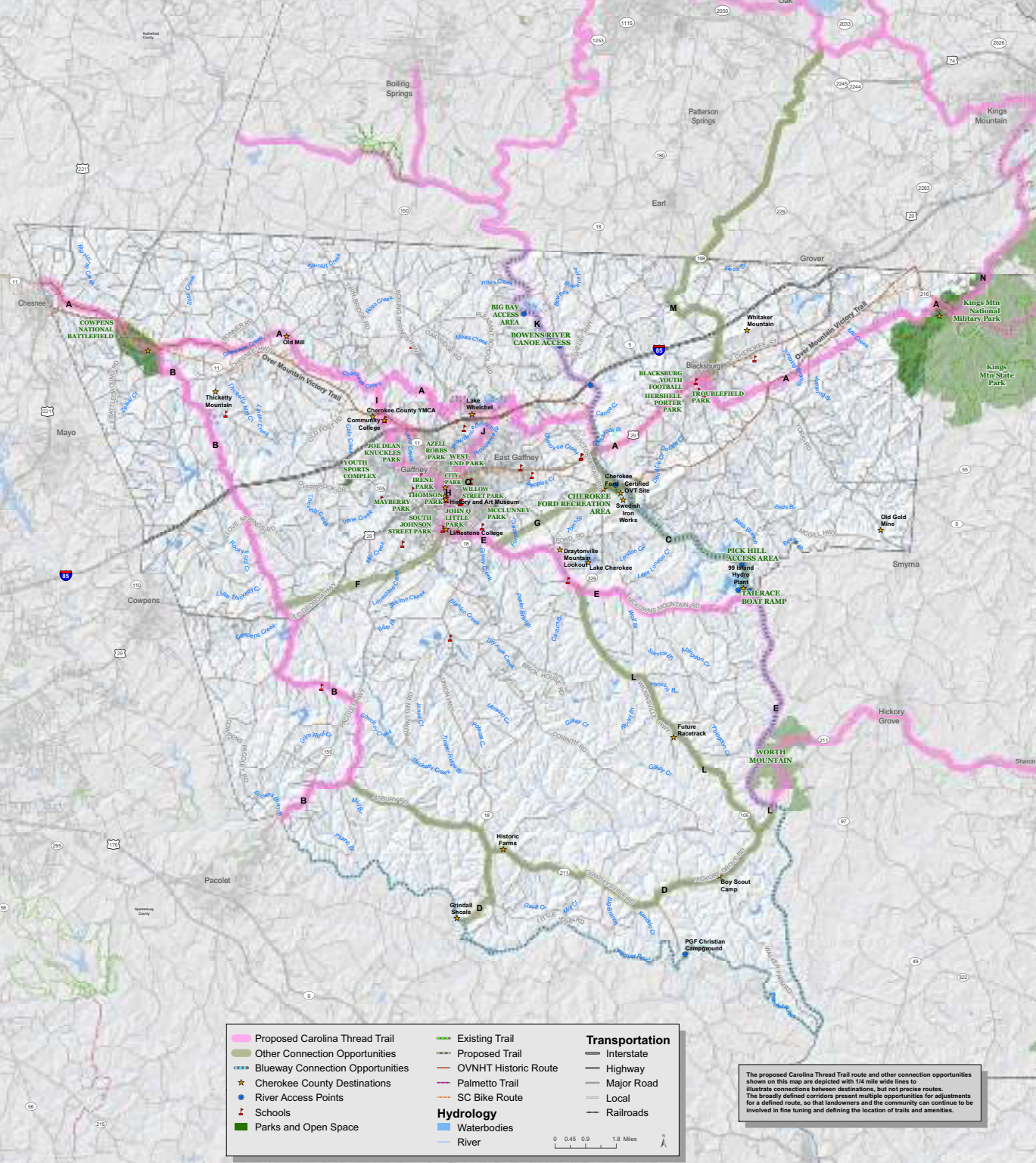
The Carolina Thread Trail in Cherokee County will provide connectivity to several unique and treasured destinations. Cowpens National Battlefield, Broad River, Kings Mountain National Military Park, Overmountain Victory National Historic Trail and Limestone College represent the most popular county destinations as indicated by county residents. These places represent some of the county destinations located within 1/2 mile of the proposed Carolina Thread Trail routes. The proposed trail corridors are located within 1/4 mile of ten of the county's 25 public schools. The Cherokee County Carolina Thread Trail links to two adjacent counties located within the Carolina Thread Trail region, Cleveland and York Counties, as well as one county outside the Carolina Thread Trail region (Spartanburg).

Both municipalities in the county are linked by the recommended Carolina Thread Trail segments. Approximately 43.1% of Cherokee County residents live within 1/2 mile of the proposed routes. This includes 43.1% of Cherokee County's children, 44.3% of the county's seniors, and 45.5% of low income households.

The steering committee also identified 51.9 miles of additional trails called "Other Connection Opportunities". These trail segments did not meet the criteria for population service, regional connectivity, or destinations served set during the planning process to be considered Carolina Thread Trail routes. However, these trail segments provide important connections within Cherokee County. "Other Connection Opportunity" trails provide connectivity to two counties not located within the Carolina Thread Trail region: Spartanburg and Union Counties.



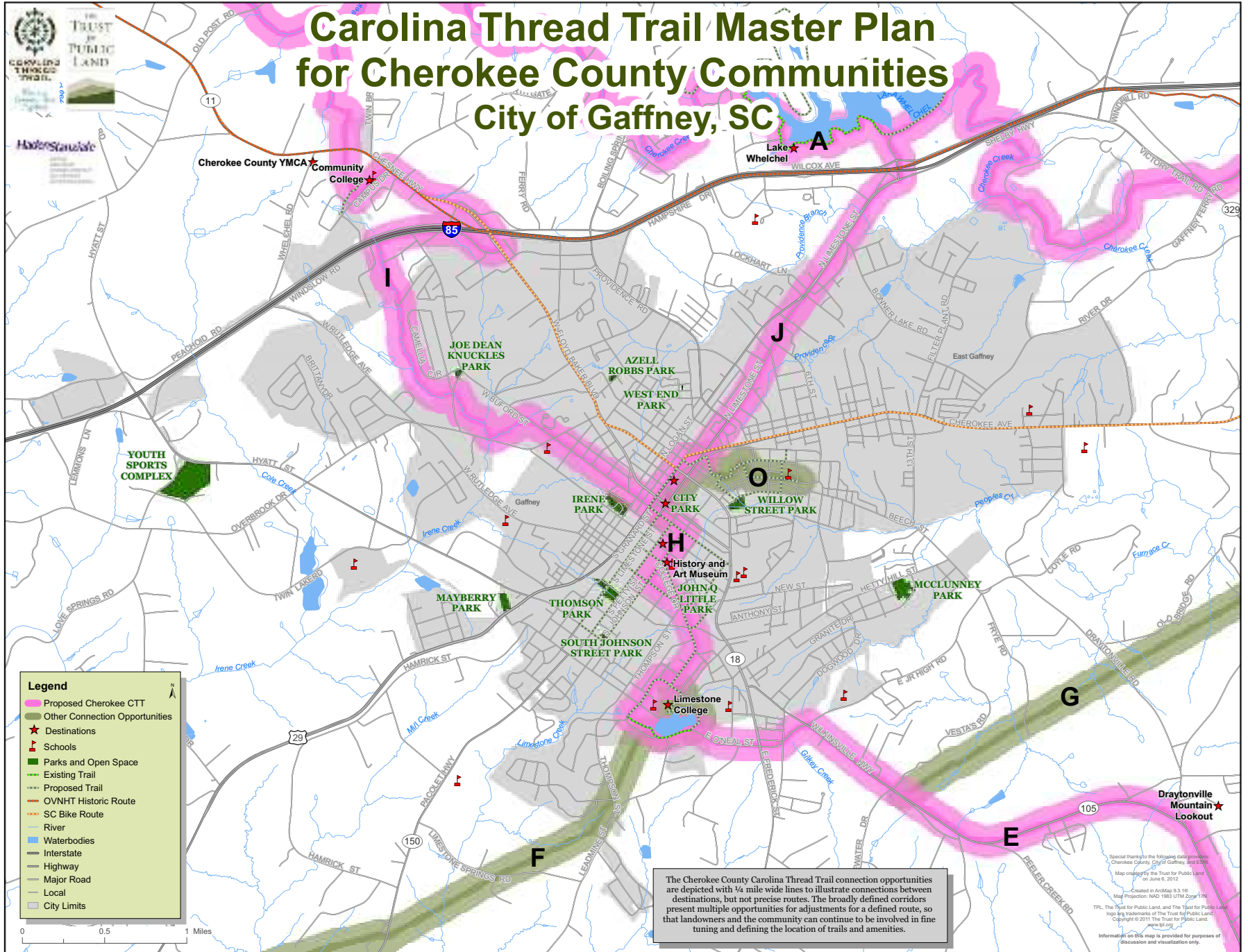
Carolina Thread Trail Master Plan for Cherokee County Communities Proposed Connection Opportunities



The proposed Carolina Thread Trail route and other connection opportunities shown on this map are depicted with 1/4 mile wide lines to illustrate connections between destinations, but not precise routes. The broadly defined corridors present multiple opportunities for adjustments for a defined route, so that landowners and the community can continue to be involved in fine tuning and defining the location of trails and amenities.

Special thanks to the following data providers: ESRI, Cherokee County. Map created by the Trust for Public Land on February 8, 2012. Created in ArcMap 9.3.10. Map Projection: NAD 1983 UTM Zone 17N. TPL, The Trust for Public Land, and the Trust for Public Land logo are trademarks of The Trust for Public Land. Copyright © 2012 The Trust for Public Land. www.tpl.org Information on this map is provided for purposes of discussion and visualization only.

Carolina Thread Trail Master Plan for Cherokee County Communities City of Gaffney, SC



Legend

- Proposed Cherokee CTT
- Other Connection Opportunities
- Destinations
- Schools
- Parks and Open Space
- Existing Trail
- Proposed Trail
- OVNHT Historic Route
- SC Bike Route
- River
- Waterbodies
- Interstate
- Major Road
- Local
- City Limits

The Cherokee County Carolina Thread Trail connection opportunities are depicted with ¼ mile wide lines to illustrate connections between destinations, but not precise routes. The broadly defined corridors present multiple opportunities for adjustments for a defined route, so that landowners and the community can continue to be involved in fine tuning and defining the location of trails and amenities.

Special thanks to the following data providers:
 Cherokee County, City of Gaffney, and USGS
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CHEROKEE COUNTY CAROLINA THREAD TRAIL SEGMENTS

Greenways

Overmountain Victory National Historic Trail Corridor (Route A)

Route profile:

- 37.3 miles in length
- 10.7 miles via stream/river corridor
- 15.1 miles via existing road ROW
- 3.1 miles via existing trail
- 1.8 miles via new overland trail
- 6.6 miles via utility corridor

Access opportunities:

- Connects to Carolina Thread Trail in York County, SC via Kings Mountain National Military Park.
- Provides an important regional east-west Carolina Thread Trail connection via the Overmountain Victory National Historic Trail.

Population within 1/2 mile of segment:

- 6,057 residents
- 162 residents per trail mile

Destinations within 1/2 mile of segment:

- Cowpens National Battlefield
- Overmountain National Historic Victory Trail
- Lake Whelchel
- Broad River
- Hershell Porter Park
- Troublefield Park
- Kings Mountain National Military Park

Challenges and Opportunities:

- Provides important regional Carolina Thread Trail connection and connects two Carolina Thread Trail region counties and one non-Carolina Thread Trail county.
- May help spur development of the non-motorized segments of the Overmountain Victory National Historic Trail at an accelerated pace.
- Corridor will use existing segments of the OVNHT.



Cherokee County Carolina Thread Trail: Overmountain Victory Trail Corridor



Western Cherokee County Corridor (Route B)

Route profile:

- 19.6 miles in length
- 19.6 miles via existing road ROW

Access opportunities:

- Connects to Spartanburg County, SC

Population within 1/2 mile of segment:

- 1,810 residents
- 92 residents per greenway mile

Destinations within 1/2 mile of segment:

- Cowpens National Battlefield
- Overmountain Victory National Historic Trail
- Goucher Elementary School

Challenges and Opportunities:

- Segment is predominately within road ROW, additional easements would create a more diverse trail character.

Broad River South Corridor (Route E)

Route profile:

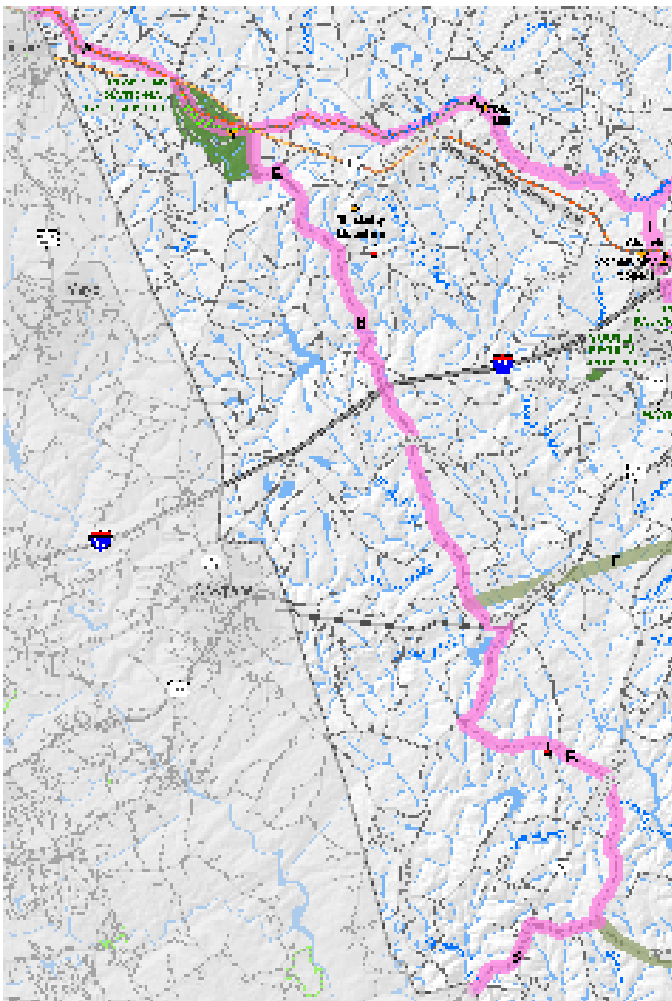
- 17.5 miles in length
- 7.1 miles via stream/river corridor
- 10.4 miles via existing road ROW

Access opportunities:

- Connects to Carolina Thread Trail in York County, SC via Worth Mountain.
- Connects Downtown Gaffney to the Broad River
- Provides access to the Broad River.

Population within 1/2 mile of segment:

- 2,217 residents
- 127 residents per greenway mile



Cherokee County Carolina Thread Trail: Western Cherokee County Corridor



Cherokee County Carolina Thread Trail: Broad River South Corridor



Destinations within 1/2 mile of segment:

- Downtown Gaffney
- Limestone College
- Draytonville Elementary School
- Broad River
- Tailrace Boat Ramp (Ninety Nine Islands)

Challenges and Opportunities:

- Important connection to the Carolina Thread Trail in York County
- Improvements may be needed to the Hwy 211 bridge over the Broad River.

Limestone College Corridor (Route H)

Route profile:

- 2.2 miles in length
- 1.8 miles via new trail
- 0.4 miles via existing trail

Access opportunities:

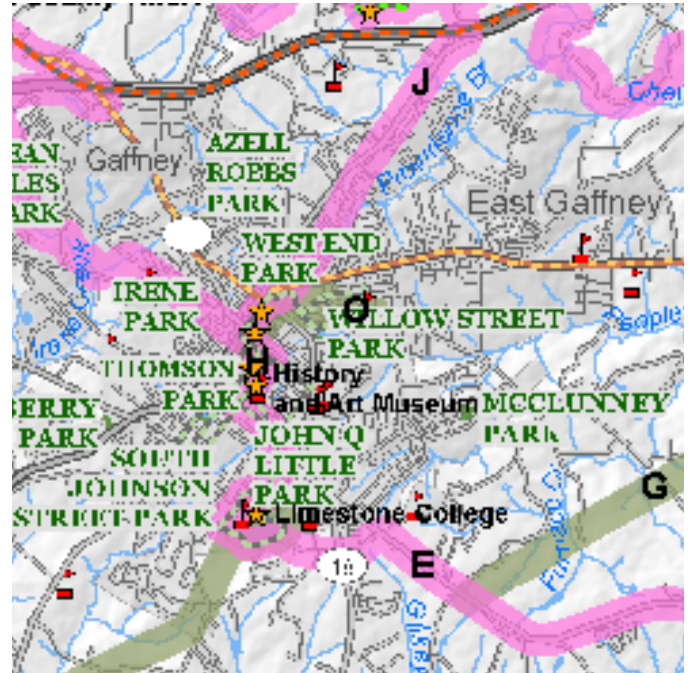
- Connects three segments of the Cherokee County Carolina Thread Trail
- Connects Limestone College to Downtown Gaffney

Population within 1/2 mile of segment:

- 3,691 residents
- 1,678 residents per greenway mile
- 825 students at Limestone College

Destinations within 1/2 mile of segment:

- Limestone College
- Downtown Gaffney
- South Johnson Street Park
- Thomson Park
- John Q. Little Park
- Granard Middle School
- Cherokee County History and Art Museum



Cherokee County Carolina Thread Trail Segments: Limestone College Corridor and West Gaffney Corridor

Challenges and Opportunities:

- Provides critical north-south connector in Downtown Gaffney.
- Sidewalk improvements and widening will be required.

West Gaffney Corridor (Route I)

Route profile:

- 5.8 miles in length
- 0.8 miles via stream/river corridor
- 2.8 miles via existing road ROW
- 1.7 miles via utility corridor
- 0.5 miles via new trail



Access opportunities:

- Connects Downtown Gaffney to the Overmountain Victory National Historic Trail.
- Provides connectivity to Spartanburg Community College and the Cherokee County YMCA.

Population within 1/2 mile of segment:

- 4,540 residents
- 783 residents per greenway mile

Destinations within 1/2 mile of segment:

- Irene Park
- Joe Dean Knuckles Park
- Downtown Gaffney
- Spartanburg Community College
- Cherokee County YMCA

Challenges and Opportunities:

- Providing a safe crossing on Hwy 11 over I-85 may be challenging.

North Gaffney Corridor (Route J)

Route profile:

- 2.9 miles in length
- 2.4 miles via existing road ROW
- 0.5 miles via new trail

Access opportunities:

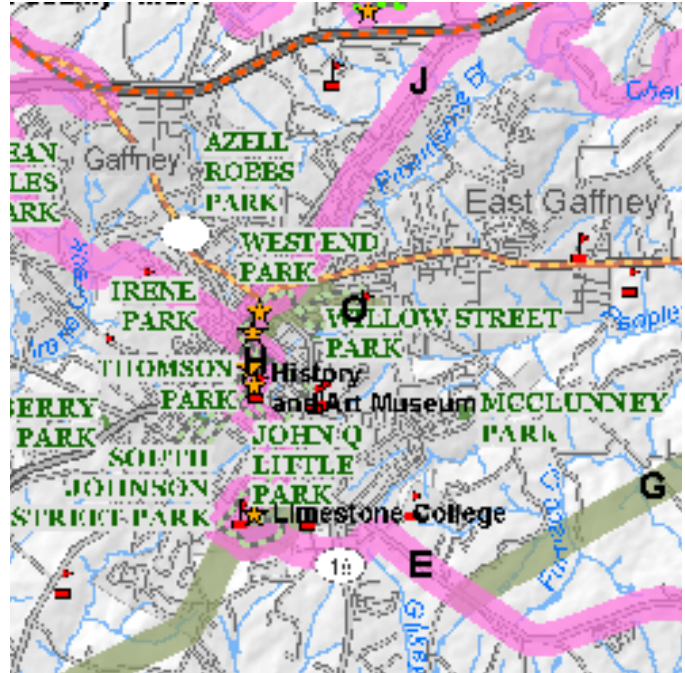
- Connects Downtown Cherokee to Lake Whelchel

Population within 1/2 mile of segment:

- 4,263 residents
- 1,470 residents per greenway mile

Destinations within 1/2 mile of segment:

- Downtown Gaffney
- Gaffney Visitors Center
- Lake Whelchel
- Overmountain Victory National Historic Trail



Cherokee County Carolina Thread Trail: North Gaffney Corridor

Challenges and Opportunities:

- Providing a safe crossing on Pleasant School Road over I-85 may be challenging.

Broad River North Corridor (Route K)

Route profile:

- 7.2 miles in length
- 7.2 miles via stream/river corridor

Access opportunities:

- Ties into Carolina Thread Trail in Cleveland County, NC.

Population within 1/2 mile of segment:

- 1,013 residents
- 14 residents per greenway mile

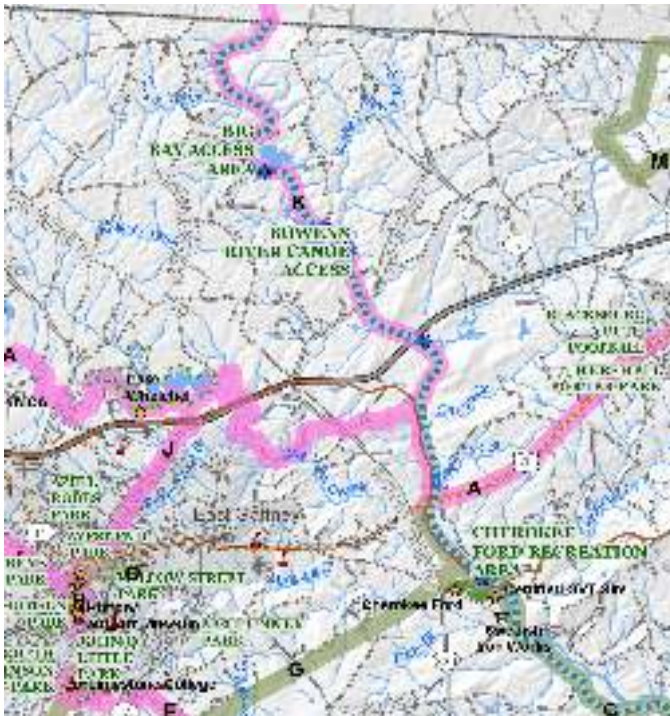


Destinations within 1/2 mile of segment:

- Broad River
- Big Bay Access Area
- Bowens River Canoe Access

Challenges and Opportunities:

- Long contiguous river-based trail provides great long hike/ride opportunities.
- Lack of destinations along greenway segment.
- Challenging bank areas for greenway to pass under Hwy 18 and I-85.



Cherokee County Carolina Thread Trail: Broad River North Corridor

Kings Mountain National Military Park Corridor (Route N)

Route profile:

- 1.6 miles in length
- 1.6 miles via new trail

Access opportunities:

- Provides connection to the Carolina Thread Trail in Cleveland County, NC.

Population within 1/2 mile of segment:

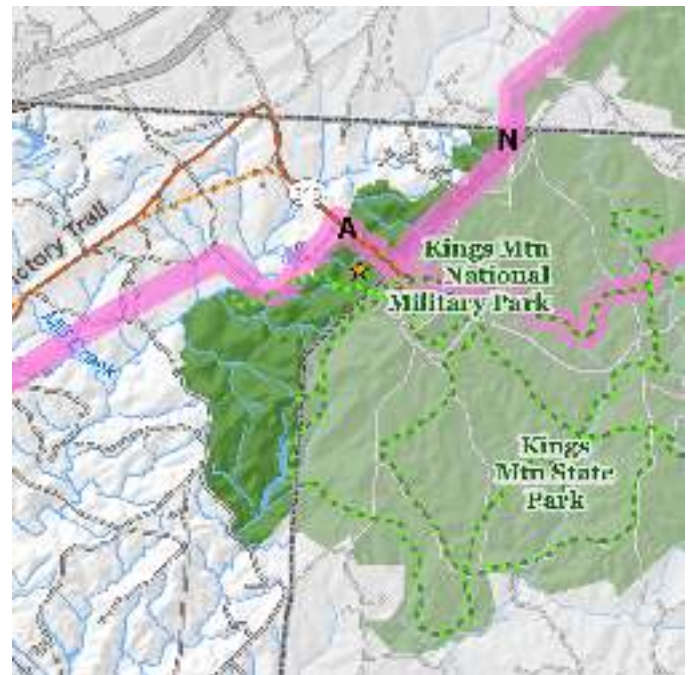
- 132 residents
- 82 residents per greenway mile

Destinations within 1/2 mile of segment:

- Kings Mountain National Military Park
- Overmountain Victory National Historic Trail

Challenges and Opportunities:

- Provides important regional Carolina Thread Trail connection to Cleveland County.
- Need to coordinate best acceptable route with National Park Service.



Cherokee County Carolina Thread Trail: Kings Mountain National Military Park Corridor



Blueways

Two blueways, or water based trails, were identified as part of the planning process.

Broad River Blueway

Route profile:

- 30.5 miles in length
- 30.5 miles via stream/river

Access opportunities:

- Provides connection between Cleveland County, NC and York County, SC.
- Can share facilities, if developed, with Broad River North and Broad River South Corridors.

Destinations within ½ mile of segment:

- Broad River
- Big Bay Access Area
- Bowens River Canoe Access
- Pick Hill Access Area
- Tailrace Boat Ramp (Ninety Nine Islands)
- Cherokee Ford
- Swedish Iron Works
- Pacolet River

Challenges and Opportunities:

- Water level is low in many spots; need better wayfinding for portage trails.
- Improved signage, access areas for parking and boat put-in/take out points are the only infrastructure needed.



Cherokee County Carolina Thread Trail:
Broad River Blueway Corridor



Pacolet River Blueway

Route profile:

- 23.0 miles in length
- 23.0 miles via stream/river

Access opportunities:

- Provides connection between Spartanburg, Union and York Counties.

Destinations within 1/2 mile of segment:

- Grindall Shoals
- PGF Christian Campground
- Pacolet River
- Broad River

Challenges and Opportunities:

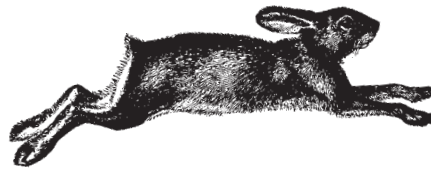
- Signage, additional access areas for parking and boat put-in/take out points are the only infrastructure needed.



Cherokee County Carolina Thread Trail:
Pacolet River Blueway Corridor



Broad River at Cherokee Ford



CHAPTER 5. RECOMMENDED ACTIONS FOR IMPLEMENTATION

The completion of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities by the steering committee signifies the beginning of the implementation process of trails in Cherokee County. The process of trail development can be difficult at times and requires a strong commitment to continuing the process through to completion. The following goals detailed within this section simplify the trail development process and provide a step by step process for transforming a planned route into a built trail.

ADOPT MASTER PLAN

Once the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities has been reviewed and approved by the steering committee, the next step in the trail development process is adoption of the master plan by Cherokee County, the city of Gaffney, and the town of Blacksburg. Adoption of the greenway master plan may include revisions to the master plan based on comments from municipal entities and advisory groups. By adopting the final master plan, the county, city, and town underscore their support for the development of trail segments within



Spartanburg Community College Cherokee County Campus

Cherokee County. Each municipal entity is encouraged to revisit existing zoning and land development ordinances to make revisions and additions to those ordinances to create trail supporting initiatives. Floodplain development restrictions and regulations, land development regulations, zoning ordinance requirements, and open space dedication requirements should be revised or created for the protection of the county’s environmental resources and development of trails.

Master Plan Adoption Checklist

- Incorporate revisions and additions to the master plan upon completion of steering committee review and comment of draft master plan.
- Provide final draft master plan to municipal agencies and advisory groups for review and comment.
- Present the final Carolina Thread Trail Greenway Master Plan to municipal entities for master plan adoption.
- Develop amendments to floodplain, land use, zoning, and open space regulations.

BUILD PUBLIC SUPPORT

The Carolina Thread Trail Greenway Master Plan for Cherokee County Communities is a product of the residents of Cherokee County. This plan was developed by a dedicated group of county residents who served on the steering committee and technical advisory team. The location of the Carolina Thread Trail in Cherokee County was based primarily on feedback received from county residents through the master plan process. This master plan should be championed forward by county residents. The second step of the trail development process involves continued public involvement and support for the Carolina Thread Trail in Cherokee County.

It is the recommendation of this master plan that



Cherokee County create a Greenways and Trails Advisory Commission. This commission will provide input on all greenway issues, provide feedback on greenway related planning and acquisition decisions, build support for greenway implementation, and help coordinate the construction and maintenance of trails. It is recommended that the commission provide municipal officials with an annual report detailing trail development efforts and progress. This group may host special events on completed segments of trails to showcase ongoing implementation efforts and engage county residents regarding future trail development plans.

This commission should be comprised of county residents, government officials, regional entities, local utility providers, and state transportation agencies. County residents, appointed by the county's municipal entities, should represent the county and its two municipalities. This will ensure that each area of Cherokee County is equally represented on the advisory commission. Each of the county's municipal entities should appoint one advisory commission member to serve as a liaison to their respective council. Representation from regional planning and tourism organizations will provide a broader perspective and share Cherokee County's plans beyond the county boundaries. Representatives from local utility providers like Duke Energy and Piedmont Natural Gas will help reduce conflicts between trails and utilities during trail planning and construction. Representation from roadway and rail transportation agencies can stay informed of current and future trail development plans, renovate or construct appropriate infrastructure for trail facilities, and assist in eliminating trail conflicts within rights-of-way.

It is important that the Greenways and Trails Advisory Commission communicate with other county agencies,

boards, and commissions, in particular the Cherokee Recreation District, Cherokee County Public Works, Cherokee County Chamber of Commerce, and the Cherokee County Development Board. Coordination between these agencies, boards, and commissions with ensure planning efforts are not duplicated, and that county, state, and federal funds are being utilized as efficiently and effectively as possible.

Partnerships with recreation providers and organizations involved with land preservation can be beneficial in the development of trails. Both groups share common goals with trail supporters. Relationships with such organizations enable municipal entities to offset trail land acquisition, development, and maintenance costs by pooling available funds. Expertise offered by recreation and conservation partners can provide valuable insight for trail construction, trailhead development, and land or easement acquisition.

Public Support Checklist

- Create the Cherokee County Greenways and Trail Advisory Commission
- Appoint resident representatives to advisory commission
- Identify municipal, regional, state, and utility representatives for advisory commission
- Develop method for communication between county agencies, boards and commissions
- Develop partnerships for trail development, especially with the Overmountain Victory Trail Committee



Historic Home in Southern Cherokee County



PLAN AND DEVELOP PRIORITY SEGMENTS

It is unrealistic to expect Cherokee County to develop all 94 miles of Carolina Thread Trail within a short period of time. A phased implementation plan for land acquisition, design, construction, and maintenance of trails is necessary. Initial greenway development efforts should focus on Carolina Thread Trail priority greenway segments. The following criteria have been developed to identify the priority trail segments within Cherokee County.

Public Support

It is important that the residents of Cherokee County embrace the initial Carolina Thread Trail facilities. Input received from county residents through the draft master plan review forums and online survey should be utilized. Trail segments which garnered a high response through the public involvement process should be included on the initial trail prioritization list. Input from the Greenways and Trails Advisory Commission (once established) will also be valuable in identifying priority trail segments which county residents will support.

Availability of Land/Right-of-Way

A crucial step in the trail development process is the acquisition of land for trail construction. The ownership and availability of lands along Carolina Thread Trail segments must be identified. It is important to begin to acquire land and/or easements for trail development along all trail segments, but most importantly along priority segments. Carolina Thread Trail corridors where land is currently owned, under conservation easement, or within trail friendly easements should be considered priority segments.

Functional Connection

The most popular, well-used, and effective trails link two or more destinations and have distinct termination points. Priority trail segments in Cherokee County must provide connections between multiple destinations (cultural facilities, parks, schools, colleges, neighborhoods, commercial areas, etc.). Responses from the community engagement sessions, draft master plan review forums, and online surveys illustrate which destinations within Cherokee County are considered most important. Trail sections that provide access to the most popular and/or multiple destinations should be considered priority trail segments.

Population Served

Trails benefit communities as recreation resources and transportation amenities. These benefits increase exponentially when trails are located within populated areas. The connections created by trails in populated and easily accessible areas provide Cherokee County residents with alternatives for commuting to work, attending events, running errands, exercising, or visiting friends. Carolina Thread Trail segments located within populated areas should be considered priority segments.

Partnership Potential

Trails developed through partnerships positively benefit two or more parties and allow each to extend their funds by sharing the costs of the development. The state, National Park Service, Cherokee County, local municipalities, non-profit organizations, local businesses, and individual land owners are all potential partners in the development of the Carolina Thread Trail. Partnerships can include shared construction costs, land and/or labor swaps, or other



financial considerations. Carolina Thread Trail segments within Cherokee County that may be developed through partnerships should be considered priority segments.

Funding Availability

No trail project can be developed and completed without first identifying the appropriate resources to fund the project. Potential funding sources for each of Cherokee County’s Carolina Thread Trail routes should be identified. SCDOT should be contacted and funding allocated for planned trails along state roads and highways during new construction and existing roadway improvement projects. Partnerships between two or more entities may be necessary or preferred for trail development. Priority segments of the Carolina Thread Trail in Cherokee County should have available funding for the development, completion, and maintenance of the project.

Plan and Develop Priority Trails Checklist

- Identify the three to five most popular trail routes per input gathered through the Carolina Thread Trail master planning process
- Determine which Carolina Thread Trail trail segments are along or within property under public or non-profit ownership
- Identify the three to five trail segments located within more heavily populated areas
- Identify the three to five trail segments that connect the most popular county destinations per input gathered through the Carolina Thread Trail master planning process
- Identify and develop partnerships with organizations who share the vision of and interest in development of the Carolina Thread Trail in Cherokee County
- Determine the availability for funding Carolina Thread Trail trail development in Cherokee County

Priority Trail Segments

The following Cherokee County Carolina Thread Trail segments have been identified as regional priority, priority, and secondary trail segments as recommended by the steering committee. These trail segments, presented in no particular order, represent the Carolina Thread Trail segments that meet the selection criteria developed and presented within this master plan.

Regional Priority Trail Segments:

- Route A: Overmountain Victory Trail Corridor
- Route N: Kings Mountain National Military Park Corridor

Priority Trail Segments:

- Route E: Broad River South Corridor
- Route H: Limestone College Corridor
- Route I: West Gaffney Corridor
- Route K: Broad River North Corridor

Secondary Trail Segments:

- Route B: Western Cherokee County Corridor
- Route J: North Gaffney Corridor

IDENTIFY FUNDING AND FINANCING

The completion of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities signals the end of the first step in trail development and the beginning of the crucial second step: funding and financing. Cherokee County must begin to identify funding sources for land acquisition, design, construction, and maintenance of the Carolina Thread Trail. Many government entities are unable to fully fund the development of every mile of trail within a network using in-house funds. It is recommended



that Cherokee County develop a multi-tiered approach for funding trail development using a variety of financing options. The following summarizes several trail funding opportunities.

Public Funding

There are several options available to assist Cherokee County in funding the development of the Carolina Thread Trail using public funding.

Federal Funding Options:

Federal funding programs for trail development are typically provided through two methods. The first federal funding method involves federal appropriations of funds to specific state agencies. These state agencies are charged with distributing, managing, and overseeing the expenditure of the funds. The second federal funding method provides local or county agencies direct funding for trail development. Congressional earmarks have been used in the past to fund certain trail projects, but recent scrutiny of this practice may limit or cease such funding. Appendix 5 of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities report provides specific federal funding programs that may be used for trail development.

State Funding Options:

Most state funding available to counties within South Carolina for trail development are managed through SCDOT and the South Carolina Parks, Recreation, and Tourism Department. Most state appropriated funding is limited to specific types of projects and requires matching funds of varying percentages of the funding request. Cherokee County will need to carefully review all state grant programs

and plan appropriately for providing matching funds when required. Appendix 5 of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities report provides specific state funding programs that may be used for trail development.

Local Funding Options:

Traditionally local governments, like Cherokee County and the municipalities located within the county, have utilized three sources for funding trail development.

- Discretionary annual spending, called the General Fund in Cherokee County, refers to spending that must be agreed upon on an annual basis. Trail development funds would need to be appropriated within the county's annual budget to a specific department's annual operating budget and would range in value annually.
- Dedicated funding of trail development would require Cherokee County to identify permanent funding sources specifically for trail development or for capital improvements, which could include trail development.
- Debt financing refers to the government agency borrowing funds for the development of trail facilities through loans or bonds. Such funding sources require repayment of funds over a specified period of time.

The sources used to fund trail development in Cherokee County will be tied to the county's budgetary resources, taxing capacity, political will, and voter preference. Cherokee County and the municipalities located within the county have shown an interest and dedication to trail development with their support of the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities.



Private Funding

Trail development in Cherokee County may be funded by private sources that support the Carolina Thread Trail, understand the benefits of trails, and understand the need for additional transportation and recreation facilities. Private funding sources may include individual donors, non-profit organizations, foundations, philanthropic organizations, and businesses. The Carolina Thread Trail is conducting a private capital campaign to gather private funds for trail development grants. These grants may be used by communities to fund the planning, land acquisition, design, and construction of trails along adopted Carolina Thread Trail routes. It is recommended that Cherokee County and the county's Greenways and Trails Advisory Commission (once established) develop additional fund raising programs. Funds gathered through donations of personalized bricks to be displayed at greenway trailheads or within prominent trail plazas can fund portions of trail construction. "Buy a Foot" programs allow local businesses and citizens to provide private funding for the construction of trail facilities. Adopt-a-trail programs can be used to help maintain trails through volunteer labor.

The most effective method for funding the Carolina Thread Trail and other local trails within Cherokee County will involve a combination of public and private funding sources. Appendix 5 of this report provides specific funding sources and programs that may be used for trail development.

Funding and Finance Checklist

- Identify federal funding opportunities for trail development and determine which sources to pursue
- Identify state funding opportunities for trail development and determine which sources to pursue

- Identify local funding opportunities for trail development and determine which sources to pursue
- Identify private funding opportunities for trail development and determine which sources to pursue
- Develop programs to encourage private local funding for trail development
- Allocate funds for matching grants which Cherokee County plans to pursue for trail development

EVALUATE LAND ACQUISITION OPTIONS

The acquisition of land for trail development is an important and necessary step of the trail development process. Land acquisition provides the land resources necessary for development of trails, protects sensitive environmental and natural resources, and preserves historic and cultural treasures. Cherokee County should utilize a variety of land acquisition methods for the protection and preservation of land for trail development.

Purchase

Cherokee County may choose to acquire land by fee-simple purchase. Such acquisitions are common for government entities and ensure control over the level of development and protection of the land. Land that could serve a dual purpose by accommodating both trail development and other public facilities or services would be ideal. This scenario justifies the purchase of the land by using public funds more effectively. Organizations, such as land trusts, can assist government entities in the purchase of land for less than market value by offering tax deductions to the selling landowner through a bargain sale.

Donations

Landowners may wish to donate their property to a local government or land trust. Donations of land may occur if



the landowner has no more use for the property, no heirs are present to receive the land, or tax and estate deductions are sought by the landowner. Landowners may prefer to donate an easement on the property. Such easements allow for certain agreed upon uses of the property, but the landowner retains ownership of the property.

Zoning and Development Regulations

Government entities across the United States have developed restrictions and regulations along major rivers, streams, and creeks. These regulations have been developed to protect water quality, limit development activity within close proximity to streams, and preserve habitats along water courses. River, stream, and creek regulations often require buffers of varying widths to be located on either side of a water course. Uses within the buffers are often restricted to passive recreation, public boating and utility uses, and in some cases, preservation, conservation, or agriculture. Other zoning and development regulations that have proven helpful in the acquisition of land include setbacks along streams, floodplain development restrictions, and required dedication of open space.

Developer Contributions

Government entities have the option to require, request, and/or incentivize developers to contribute land, build trail facilities, or both as part of their development project. Most government entities create a GIS database of the final adopted Carolina Thread Trail routes for reference. Future developments located along segments of the adopted trail would be asked or required to incorporate the Carolina Thread Trail into their design plans. A review of the incorporation of the trail segments into design plans should be conducted during the development plan review process.

Most developers are open to accommodating regional trails within their developments for two reasons: most people view trails as a wonderful community amenity and most developers can place a premium on lots or housing units located within close proximity to the trail.

Rail Corridors

Typically abandoned rail corridors make great locations for trail development. The gradual slopes and narrow, cleared nature of rail corridors reduce clearing and construction costs for trails. Cherokee County should work with underlying landowners and SCDOT to determine the current status of rail corridors within the county. Owners and operators of active railroads are traditionally unwilling to allow trail development within rail rights-of-way due to safety concerns.

Land Acquisition Options Checklist

- Identify land for fee simple purchase that may house multiple county or municipal facilities.
- Discuss property and/or easement donations with local landowners along Carolina Thread Trail segments.
- Develop regulations for the protection of natural resources and allowance for passive recreation uses along rivers, streams, and creeks.
- Work with developers to incorporate trails in developments along the adopted Carolina Thread Trail segments in Cherokee County.
- Understand the current status of abandoned rail lines with SCDOT.
- Discuss trail development along and across active rail corridors with owners/operators.



DESIGN, CONSTRUCT, AND MAINTAIN TRAILS

As Cherokee County, municipalities within the county, and their partners select a segment(s) of the Carolina Thread Trail and acquire necessary land and/or easements for the trail, the design and construction of the trail can begin. The county and its trail partners will need to determine the desired use or uses for the trail. The trail width and trail tread material will be determined by the desired use(s), existing site conditions, cost of construction, and required level of maintenance. Trails within floodplains or those located in heavy use areas may need to be paved with asphalt or concrete. Both surfaces are more costly to construct, but will reduce maintenance costs after flooding and under heavy foot traffic. Boardwalks may be necessary within environmentally sensitive areas to reduce the impact of the trail. Natural surface, mulch, or stone trails may be best suited for historically significant sites where site impacts should be minimized. Public input received during the Carolina Thread Trail Greenway Master Plan for Cherokee County Communities process revealed that county residents preferred to use trails for walking, hiking, and cycling.

The costs to develop and maintain trails will vary depending on trail tread material, existing site conditions, culverts, bridges, and additional safety measures. Budget estimates for trail construction may be developed during the design phase of a trail, using recent figures from similar projects to estimate construction costs. The actual costs of trail development may not be known until competitive bids for trail construction are opened. Trail tread materials vary in construction and maintenance costs. Typically, trail tread materials with higher construction costs, like asphalt and concrete, have lower maintenance costs. The topography of a site, the presence of floodplains, required creek crossings, and the amount of existing vegetation are typical existing site conditions that may affect trail development costs.

Trail planning should include those maintaining and securing the trail. It is financially irresponsible to build a trail that is impossible or too costly to maintain. Cherokee County must identify the entity(ies) that will be responsible for the trail maintenance during the initial phase of trail design. Interaction during the design process will allow the county to be mindful of both construction and maintenance costs.

Cherokee County should also include emergency service personnel and representatives from local police and sheriff departments during the trail planning process. These personnel will assist in developing safe trails that utilize principles of Crime Prevention through Environmental Design (CPTED). These principles allow designers, governmental officials, and other personnel to develop safe facilities that are inviting and reduce perceived criminal activity. Designing open visible spaces along trails improves visibility and encourages natural surveillance. Clear and accessible entrances to the trail, like trailheads, provide access control by defining spaces and creating designated points of entry or exit. Proper maintenance and community programs held along trails show that the trail is cared for, creating a sense of ownership. Regular patrols along trails provide a safe trail environment. Signage, kiosks, trail brochures, and informational programs can reinforce tips on staying safe and enjoying the trail.

Design, Construction, and Maintenance Checklist

- Determine the preferred use or use(s) for the trail.

- Design trail to accommodate preferred uses, respond to existing site conditions, and create an enjoyable trail environment.

- Include maintenance and security entities in the planning of the trail.

- Develop a maintenance and operations plan for trail upkeep.



CHAPTER 6. CONCLUSION

The Carolina Thread Trail Greenway Master Plan for Cherokee County Communities represents a citizen led collaborative planning process for the provision of trails throughout Cherokee County. Now that the master planning process is complete, it is the responsibility of the citizens of Cherokee County, the city of Gaffney, the town

of Blacksburg, and the Overmountain Victory National Historic Trail Committee to transform this plan from pink lines on a map to trails on the ground. The Carolina Thread Trail will provide important connections through Cherokee County, linking residents to the places that make the county unique.



The Howser House at Kings Mountain National Military Park



Overmountain Victory National Historic Trail at Cowpens National Battlefield



APPENDIX I: CAROLINA THREAD TRAIL COMMUNITY ENGAGEMENT SESSIONS SUMMARY

Public involvement is an important aspect of any public planning effort. Three community engagement sessions were held in various locations around Cherokee County. Each session was designed to educate residents on the benefits of trails, introduce county residents to the greenway master planning process, and identify the types of uses residents prefer trails to accommodate. Participants were also asked to identify their top five destinations within Cherokee County. Destinations are defined as the places that people want to be able to access using trails. Schools, parks, natural resources, cultural amenities, and downtown areas are some examples of destinations. The input received from the community engagement sessions was used to directly influence the locations of potential Carolina Thread Trail routes within Cherokee County.

A total of 31 Cherokee County residents participated in the community engagement sessions. The location and attendance for each session is included below:

Southern Cherokee County

Corinth Baptist Church
190 Corinth Road
Gaffney, SC
Tuesday, August 2
4:30 pm to 6:30 pm
Attendance: 12

Gaffney

Gaffney Visitors Center
210 West Frederick Street
Gaffney, SC
Thursday August 4
11:30 am to 1:30 pm
Attendance: 14

Blacksburg

Blacksburg Community House
103 S. Shelby Street
Blacksburg, SC
Thursday, August 4
4:30 pm to 6:30 pm
Attendance: 5

Community engagement session participants were asked to answer two initial questions (on boards) related to large maps of Cherokee County. Those questions and the results of those questions are below.

Where do you live in Cherokee County?

Corinth Meeting (12 attendees)

- Corinth 5
- Macedonia 2
- Wilkesville 1
- Outside County 2
- No Answer 2

Gaffney (14 attendees)

- Corinth 2
- Gaffney 5
- Grassy Pond 1
- Macedonia 1
- Thicketty 1
- Outside County 3
- No Answer 1

Blacksburg (5 attendees)

- Blacksburg 1
- Cashion Crossroads 1
- Gaffney 2
- No Answer 1



Overall (31 attendees)	
• Corinth	7
• Macedonia	3
• Wilkinsville	1
• Gaffney	7
• Grassy Pond	1
• Thicketty	1
• Blacksburg	1
• Cashion Crossroads	1
• Outside County	5
• No Answer	4

4. Lake Whelchel	1
4. Cowpens National Battlefield	1
4. Overmountain Victory National Historic Trail ..	1
4. Kings Mountain National Military Park	1

5. Overall	Total Selections
<i>(Top 10 selections shown)</i>	
1. Cowpens National Battlefield	13
2. Kings Mountain National Military Park	12
2. Overmountain Victory National Historic Trl ..	12
4. Broad River	11
5. Lake Whelchel	8
5. Gaffney Historic District	8
7. Downtown Gaffney	7
8. Gaffney Visitors Center	6
9. Cherokee County Library-Main Branch	5
9. Whig Hill Cemetery	5

What places do you visit in Cherokee County? (Select your Top 5)

Southern Cherokee Meeting	Total Selections
<i>(Top 5 selections shown)</i>	
1. Cowpens National Battlefield	6
1. Overmountain Victory Trail	6
3. Kings Mountain National Military Park	5
4. Broad River.....	4
5. Spartanburg Community College	3
5. Lake Whelchel.....	3
5. Whig Hill Cemetery	3

Gaffney	Total Selections
<i>(Top 5 selections shown)</i>	
1. Downtown Gaffney	7
2. Kings Mountain National Military Park	6
2. Gaffney Visitors Center	6
2. Cowpens National Battlefield	6
2. Gaffney Historic District	6

Blacksburg	Total Selections
<i>(Top 5 selections shown)</i>	
1. Broad River	2
1. Downtown Blacksburg	2
1. Cherokee Ford Recreation Complex	2
4. Pick Hill Access Area	1
4. Tailrace Boat Ramp	1

In addition to the above questions, meeting participants were asked to fill out a survey. The survey included questions regarding current trail related activities, opinions of the importance of trails, the importance of trail benefits, factors that discourage trail use, and several demographic questions. The paragraphs below summarize the survey results from each of the three community engagement sessions.



Gaffney Community Engagement Session



Southern Cherokee Meeting

Two-thirds of participants who attended the Community Engagement Session held at Corinth Baptist Church agree that trails in Cherokee County are very important and that they currently use trails on a monthly basis. All of the participants indicated that they would use trails more often and at least monthly if they were more easily accessible.

Walking and canoeing/kayaking were the highest ranked trail related activities that participants currently engage in, followed by hiking (distance), running/jogging, and mountain biking all tying for second. Hiking (distance) was the highest ranked preference when asked what activity they would like to be able to participate in on trails followed by the other three activities above. Geocaching was included as a write-in response.

It is important to understand how county residents view trails, both positively and negatively. Participants were asked to rank the most important benefits provided by trails. Protecting the environment/land conservation ranked first, followed closely by recreation/exercise, and providing environmental education opportunities. Participants were then asked to list the biggest factors that discourage trail use. Lack of information about local trails ranked the highest, followed by lack of interest. Lack of off road trails, lack of definition, lack of time, and lack of nearby destinations all ranked third.

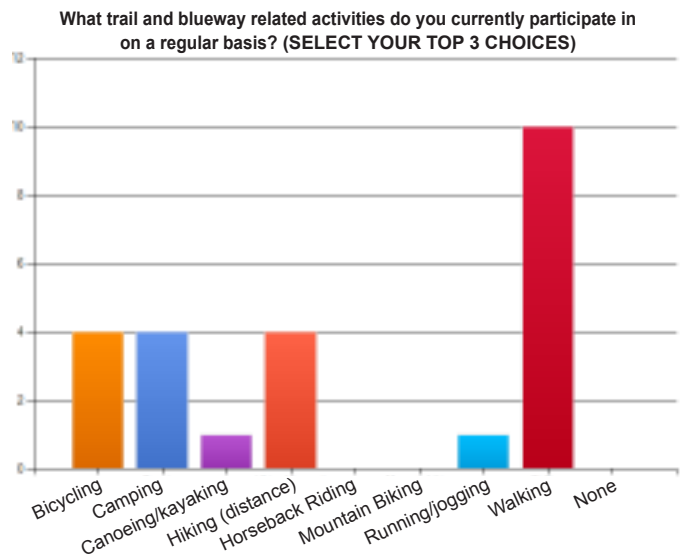
The final survey items asked participants to share any additional comments or concerns they have regarding the Carolina Thread Trail. The only comment received at this open house was “I think the biggest issue with selling this idea to this community is the community’s lack of exposure to greenways. Unfortunately, this county is mostly of the mindset that group sports facilities are the only type of

recreation worth funding. Best of luck, Cherokee County NEEDS this!”

Gaffney Meeting

Almost all (91%) of participants who attended the Community Engagement Session held in Gaffney agree that trails in Cherokee County are very important. Over one-third of the participants indicated that they currently visit parks or natural areas to use trails on a monthly basis, while 20% of the participants use trails on a weekly basis. Two-thirds of the participants indicated that they would use trails on a weekly basis if they were more easily accessible, while the remainder of participants (33%) indicated they would use more easily accessible trails on a monthly basis.

Almost all of the session participants (90%) indicated that walking is the trail related activity that they engage in on a regular basis, followed closely by hiking (distance), bicycling, and camping all ranking second. When asked which activity they would most like to participate in on trails in the future, participants again indicated that walking was most preferred, with bicycling, camping and hiking (distance) all favored as a second preference.





Recreation/exercise topped the list for the most important benefits provided by trails, followed by providing historical education opportunities and providing environmental education opportunities. Protecting the environment/land conservation and creating tourism and economic development were a very close third. The biggest factors listed that discourage trail use were lack of information about local trails, personal safety concerns, and lack of off-road trails and lack of nearby destinations which tied for third.

The majority of additional comments were positive in nature, stating that this is a great way to promote quality of life by making greenways and blueways available to our community. One commented the more trails the better. A representative of the library noted that the library can share the information with the public.

Blacksburg Meeting

All of the participants at the Community Engagement Session in Blacksburg felt that trails are very important in Cherokee County. Half of the participants currently use trails on a weekly basis compared to 25% who use trails on a monthly basis. When asked how often they would use trails if they were more easily accessible, all of the participants indicated they would use trails weekly. This illustrates a desire for more easily accessible trails among participants.

When asked what trail related activities they currently participate in regularly, three-quarters (75%) of participants indicated they walk on a regular basis, followed by hiking (distance), camping, and bicycling. Participants indicated they would participate in more hiking (distance) activities in the future if trails were made more easily accessible.

Like in Gaffney, recreation/exercise was the most important trail benefit to participants, followed by protecting the environment/land conservation. The biggest factors that discourage trail use included lack of accessible facilities ranking the highest, followed by personal safety concerns.

Additional comments are supportive of the development of trails in Cherokee County, noting that the trails support space preservation and places for family activities.



Potential Trail Routes from Blacksburg Community Engagement Session



APPENDIX 2: ONLINE SURVEY SUMMARY - SUMMER/FALL 2011

An online survey was created to accommodate and include residents that could not attend any of the community engagement sessions. It is important to the master plan process to gather as much information as possible from residents of Cherokee County about their vision of the Carolina Thread Trail. The survey included questions regarding current trail related activities, opinions of the importance of trails, the importance of trail benefits, factors that discourage trail use, and several demographic questions. A total of 61 Cherokee County residents completed the online survey. The input received from this online survey was used to directly influence the locations of potential Carolina Thread Trail routes within Cherokee County. The survey results are summarized below.

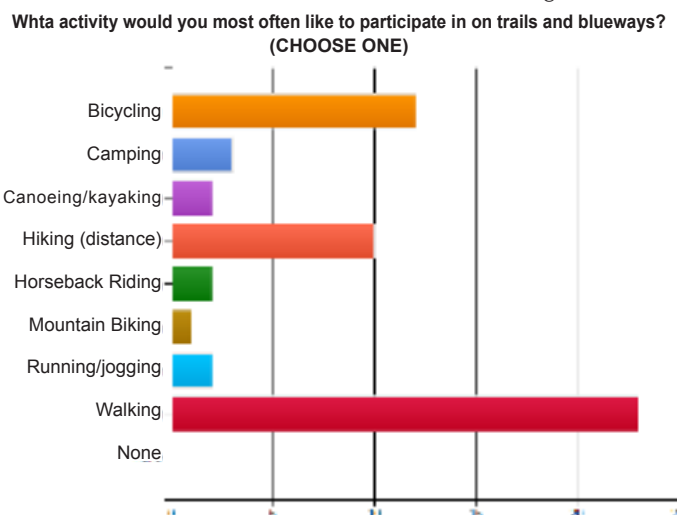
Participants were asked to rank the importance of trails in Cherokee County. Almost two-thirds (60%) feel that county trails are very important, while 35% believe trails are important, and only 5% feel that trails are somewhat important. Participants were asked how often they currently use trails in parks and natural areas. 31% indicated that they use trails on a weekly basis, 25% of participants indicated that they use trails on a monthly basis, 40% say they use trails on a yearly basis, and only 4% never use trails. Next, participants were asked to indicate how often they would use trails if they were more easily accessible. Almost two-thirds (64%) stated that they would use more easily accessible trails weekly, 31% indicated they would use trails monthly, followed by 5% who would use trails yearly.

Participants were asked to indicate which trail related activities they currently participate in on a regular basis. 74% of participants selected walking as the trail related activity they currently participate in regularly. Distance hiking ranked second with 44%, followed by bicycling (41%), and running/jogging (24%). Next, participants were

asked to indicate which trail related activities they would like to participate in on future trails. 42% of participants indicated they would like to use Cherokee County trails for walking, followed by bicycling (22%) and distance hiking (18%). A few participants wrote in responses that were not provided on the survey. Write in activities included geocaching (3), and fishing (1).

It is important to understand how county residents view trails, both positively and negatively. Participants were asked to rank the most important benefits provided by trails. Recreation/exercise was the highest ranked choice, followed by protecting the environment/land conservation, and creating tourism and economic development. Participants were then asked to list the biggest factors that discourage trail use. Lack of information about local trails was the highest ranked response, followed by lack of accessible facilities, and personal safety concerns (tied), and lack of nearby destinations.

Online survey participants were asked to rank the top five places or destinations within Cherokee County they would like connected with trails. Cowpens National Battlefield and the Broad River ranked the highest, both





with 36 responses, followed by the Kings Mountain National Military Park (29 responses), Overmountain Victory Trail (21 responses), Limestone College (14 responses), and Lake Whelchel (13 responses).

Participants were asked to list trails they have visited and enjoyed. The responses varied between trails located within Cherokee County, trails located within the region, and trails located in other parts of South Carolina and beyond. Cherokee County trails noted include the trails at Cowpens National Battlefield, Kings Mountain National Military Park, Overmountain Victory Trail, and Kings Mountain State Park. Regional trails listed include Broad River Greenway, Swamp Rabbit Trail, and trails at Table Rock Mountain. Participants also listed segments of the Carolina Thread Trail, Palmetto Trail, Mountains to Sea Trail, Mary Black Rail Trail, Appalachian Trail, and trails on Hilton Head Island as trails outside of the region that they have visited and enjoyed. The trails indicated above range in width from 4 feet wide to 10 feet wide. Trail tread materials vary from natural surface to paved asphalt trails.

Online survey participants were asked to indicate where they live within Cherokee County. 13% of participants live in the Gaffney area, followed by Grassy Pond (11%), Cherokee Creek (6%), and Blacksburg, Cashion Crossroads, and Macedonia each at 2%.

The final survey items asked participants to share any additional comments or concerns they have regarding the Carolina Thread Trail in Cherokee County. An overwhelming majority of comments were positive and in favor of the development of trails within the county. Participants see trails as an extension of recreation facilities in Cherokee County, understand the potential economic benefits trails can bring to the county, and possess the need for safe, off-road trails for various recreation activities. Below are a few

comments provided by online survey participants:

“Cherokee County should pass the Hospitality Tax to fund this and any other tourism projects.”

“This is great for our children to keep them healthy and active! Thanks to everyone involved.”

“This is a need for Cherokee County!”

“Keep getting the word out about the project as it will greatly benefit Cherokee and surrounding counties.”

“Love the Broad River Greenway in NC. It would be great to extend the trails down through Cherokee County.”

“I hike, bike, run, and ride horses. I enjoy all of these activities, but don’t do much of them for lack of a variety of places to go. Plus, any place that is fit for hikers does not allow bikes and I prefer to have someone else with me when I run as not to be alone. Where we moved from you had the C&O Canal that linked D.C. to Cumberland where people could, hike, bike, camp, and horseback ride all together. Then there was the Washington and Old Dominion railroad bed that was turned into 45 miles of paved trails for biking, hiking, skateboarding, and rollerblading. Along side it they put in a gravel trail for horses. What also helped these trails was the fact there were a multitude of places to park and be able to get on and off and the road crossings were both marked for the trail users and the motorists coming up on the crossings. These trails were up in northern VA and MD but they worked well because some people could commute to work on the W&OD trail.”



APPENDIX 3: DRAFT MASTER PLAN REVIEW FORUMS SUMMARY

The locations of potential Carolina Thread Trail routes throughout Cherokee County were generated directly from the input received from county residents during the community engagement sessions and online survey in the late summer and fall of 2011. A series of trail routes was identified by the Steering Committee based on resident feedback. Each potential trail route was ground truthed to ensure accuracy and adjusted if field conditions were not easily adaptable or probable costs were too great for trail construction.

A Draft Cherokee County Carolina Thread Trail Master Plan map was created. The draft master plan consisted of 151.4 miles of potential Carolina Thread Trail routes and 53.9 miles of blueway routes within Cherokee County. Three draft master plan review forums were held in various locations around Cherokee County. Each forum was designed to share feedback gathered through the community engagement sessions and online survey, review the steps used by the Steering Committee to identify and verify potential trail routes, and review each of the potential trail routes with county residents.

A total of 35 Cherokee County residents participated in the draft master plan review forums. The location and attendance for each session is included below:

Southern Cherokee County

Corinth Baptist Church
190 Corinth Road
Gaffney, SC
Tuesday, March 6
6:00 to 7:30pm
Attendance: 6

Gaffney

Spartanburg Community College
Cherokee Campus
523 Chesnee Highway (Highway 11)
Gaffney SC
Tuesday, February 28
6:00 to 7:30pm
Attendance: 7

Blacksburg

Blacksburg Community House
103 S. Shelby Street
Blacksburg SC
Thursday, March 1
6:00 to 7:30pm
Attendance: 22



Draft Master Plan Review Forum in Southern Cherokee County



Review forum participants were also asked to fill out a new survey. Survey items included questions regarding participant's top five preferred Carolina Thread Trail segments, anticipated uses on future Cherokee County trails, and several demographic questions. The paragraphs below summarize the survey results from all three of the draft master plan review forums.

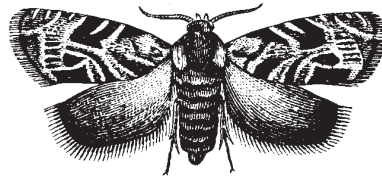
The primary focus of the Draft Master Plan Review Forums was to review the potential Carolina Thread Trail segments in Cherokee County and gather preferences for the trail. Participants were asked to identify the five trail segments they felt were the most important. Segment A connecting the Spartanburg/Cherokee County line to the Cherokee/York County Line ranked the highest. The second

highest was Segment B (Cowpens National Battlefield to Grindall Shoals) followed by Segment K (Cleveland / Cherokee County Line to the Cherokee/York County Line). Segment E (Limestone College to the Broad River) and Segment J (Downtown Gaffney to Lake Whelchel) tied for fourth while Segment I (Downtown Gaffney to Spartanburg Community College) and Segment M (Cleveland/Cherokee County Line to Blacksburg) tied for fifth.

95% of the participants support the Cherokee County Carolina Thread Trail Master Plan while 5% said they might support it. None of the participants were totally against the Master Plan. 68% of the participants did not take part in the first round of community engagement sessions or the online survey.



Draft Master Plan Review Forum in Blacksburg



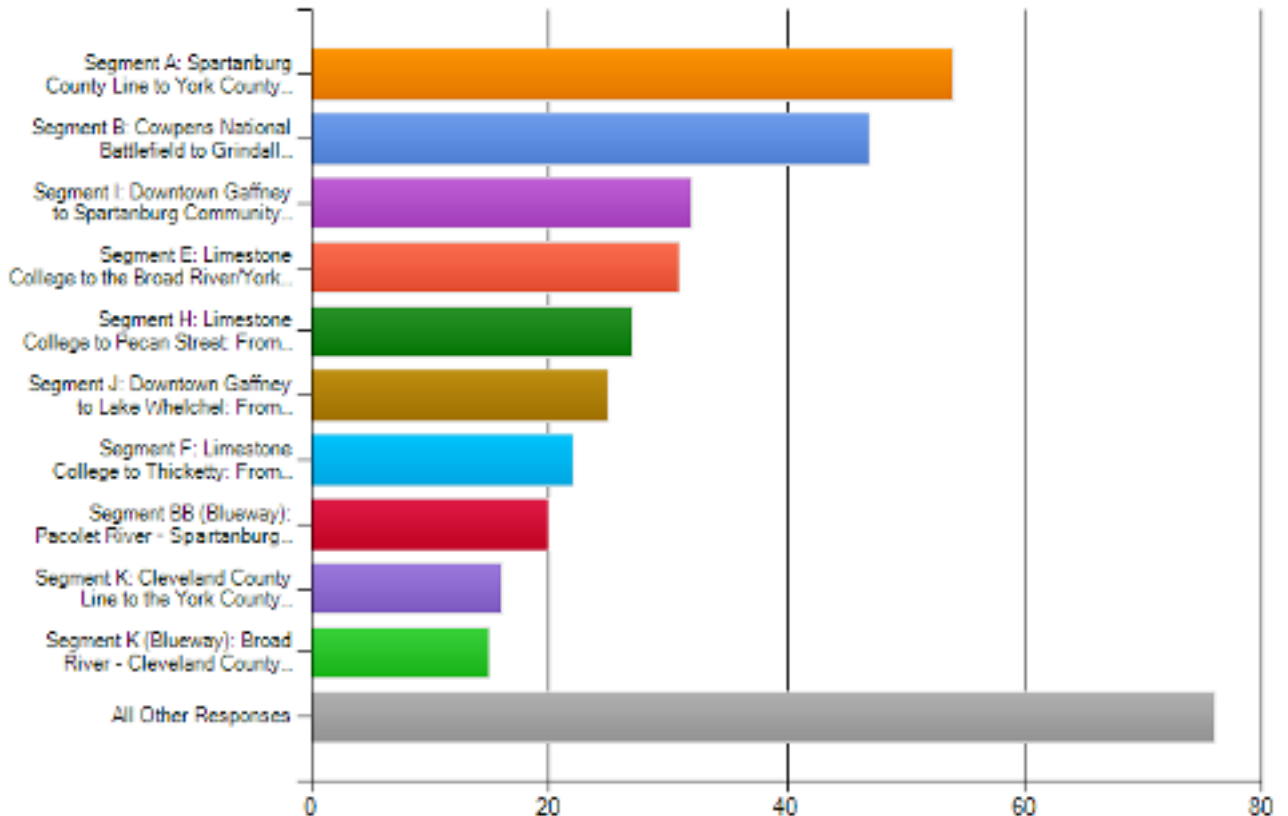
APPENDIX 4: ONLINE SURVEY SUMMARY - WINTER 2012

A second online survey was created in an effort to gather as much information as possible from residents of Cherokee County about their preferred routes for the Carolina Thread Trail. The survey included questions regarding participant's top five preferred Carolina Thread Trail segments, anticipated uses on future Cherokee County trails, and several demographic questions. A total of 83 Cherokee County residents completed the online survey. The input received from this online survey was used to identify the final Carolina Thread Trail routes within

Cherokee County. The survey results are summarized below.

Segment A, connecting the Spartanburg/Cherokee County line to the Cherokee/York County line via the Overmountain Victory National Historic Trail, was the highest ranked trail segment. Online survey participants then selected Segment B (Cowpens National Battlefield to Grindall Shoals), Segment I (Downtown Gaffney to Spartanburg Community College), Segment E (Limestone College to the Broad River), Segment H (Limestone College to Pecan Street), and Segment J (Downtown Gaffney to Lake Whelchel).

The Carolina Thread Trail is intended to be the primary routes for the greenway trail and blueway system in Cherokee County. Blueways are water based trails for canoeists and kayakers. Which of the following segments are the most important segments to you for the Carolina Thread Trail. (SELECT YOUR TOP FIVE (5) SEGMENTS)



98% of the participants support the Cherokee County Carolina Thread Trail Master Plan while 1% said they might support it and 1% do not support it. 57% of the participants did not take part in the first round of community engagement sessions or the online survey.

Combining the results of the online survey with the draft master plan review forums the top ten trail segments in order are:

1. **Segment A:** Spartanburg/Cherokee County line to the Cherokee/York County line via the Overmountain Victory National Historic Trail
2. **Segment B:** Cowpens National Battlefield to Grindall Shoals

3. **Segment E:** Limestone College to the Broad River
4. **Segment J:** Downtown Gaffney to Lake Whelchel
5. **Segment H:** Limestone College to Pecan Street
6. **Segment F:** Limestone College to Thicketty
7. **Segment K:** Cleveland/Cherokee County Line to the Cherokee/York County Line
8. **Segment M:** Cleveland/Cherokee County Line to Blacksburg
9. **Tie - Segment K (Blueway):** Broad River - Cleveland County Line to the York County Line and **Segment BB (Blueway):** Pacolet River - Spartanburg County Line to the Broad River



U.S. Monument at Kings Mountain National



APPENDIX 5: ALTERNATIVE FUNDING SOURCES

FEDERAL FUNDING SOURCES

Transportation Enhancement Program

Since 1992, the SCDOT Commission has elected to allocate a portion of available funds to the Transportation Enhancement Program. The program facilitates and provides a greater opportunity for local governments to collaborate with the agency to pursue a broad range of non-traditional transportation related activities such as bicycle and pedestrian facilities, streetscaping, scenic and landscaping programs, and historic preservation. Transportation Enhancement Funds are available under the current Federal Transportation Legislation SAFETEA-LU, extended through September 30, 2012, (Formerly Transportation Equity Act for the 21st Century also known as TEA 21 and previously known as ISTEA) and allocated by the South Carolina Department of Transportation.

In 2008, the SCDOT Commission established categories to focus its federal enhancement dollars on projects that accomplish one or more of the following:

- Bicycle and Pedestrian Facilities (including new construction and modification to existing trails)
- Preservation of Abandoned Rail Corridors (including land acquisition and trail development)

More information can be found at:

www.scdot.org/getting/community/_bikepedfacility_safety.aspx

Transportation Enhancement Office:

P.O. Box 191

955 Park Street, Room 424

Columbia, SC 29201-0191

Tel: 803/737-1952

Safe Routes to School

In 2005, Congress provided funding for each state to have a Safe Routes to School (SRTS) Program. SRTS enables and encourages children, including those with disabilities, to safely walk and bicycle to and from school. SCDOT's Safe Routes to School Program assists schools and communities in the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools while promoting a healthy lifestyle for children and their parents.

SRTS is a reimbursement program of 100% federal funds with no matching required. Schools are eligible to receive up to \$200,000 for funding Safe Routes to Schools projects and programs. These funds are divided into either infrastructure or non-infrastructure programs. Any school with grades K-8, school district, municipality, or other government entity may apply. The timeframe for the next SRTS funding cycle has not been established as the transportation bill MAP-21, a new 2-year federal funding program which includes SRTS, was just authorized June 28, 2012

More information can be found at:

www.scdot.org/getting/saferoutes.aspx

SC Department of Transportation

Safe Routes to School Program

P.O. Box 191

955 Park Street, Suite 327

Columbia, SC 29201-0191

Tel: 803/737-4073



STATE FUNDING SOURCES

South Carolina Department of Parks, Recreation & Tourism

The following grants are administered through the South Carolina Department of Parks, Recreation & Tourism:

Recreational Trails Program

The Recreational Trails Program (RTP) is a Federal-aid assistance program designed to help States provide and maintain recreational trails for both motorized and non-motorized recreational trail use.

- Grant Cycle – Annually, (applications solicited in December and the deadline is in March)
- Administered by the Federal Highway Administration
- Trail type: Off-Road motorcycles, ATV's, mountain bikes, equestrians or hikers are eligible
- Eligibility: Qualified private organizations, municipal, county, State or Federal government agencies are eligible
- All Applications graded utilizing Open Project Selection Process (OPSP) reviewed by a grading team
- Required Match: This is an 80-20-match program
- Min./Max. grant request: \$10,000/\$100,000

More information can be found at:

www.scprrt.com/our-partners/grants/trails.aspx
SC Department of Parks, Recreation & Tourism
1205 Pendleton St. Room 225
Columbia, SC 29201
Tel: 803/734-1042

Land and Water Conservation Fund (LWCF)

LWCF is a federally funded reimbursable grant that can be used for acquisition or development of land for public outdoor recreational use purposes.

- Grant Cycle: Two year (for 2012 funding, grant applications were due mid-June for the fall cycle)
- Grant Use: Land acquisition or facility development for public outdoor recreation
- Applications graded utilizing Open Project Selection Process (OPSP) reviewed by a grading team
- Required Match: This is a 50-50 match program

More information can be found at:

www.scprrt.com/our-partners/grants/lwcf.aspx
SC Department of Parks, Recreation & Tourism
1205 Pendleton St. Room 225
Columbia, SC 29201
Tel: 803/734-1042

Park & Recreation Development Fund (PARF)

The PARF grant program is a state funded non-competitive reimbursable grant program for eligible local government or special purposes district entities within each county which provide recreational opportunities.

- Grant Cycle: Monthly (application deadline is the 10th of each month)
- Non-competitive program available to eligible local governmental entities within each county area for development of new public recreation facilities or enhancement/renovations to existing facilities
- Projects need endorsement of majority weighted vote factor of County Legislative Delegation Members



- Required Match: This is an 80-20 match program
- Eligible entities notified of new allocation amounts each July

More information can be found at:

www.scprrt.com/our-partners/grants/pard.aspx

SC Department of Parks, Recreation & Tourism

1205 Pendleton St. Room 225

Columbia, SC 29201

803/734-1042

Email: recreationgrants@scprrt.com

LOCAL FUNDING OPTIONS

Bond Referendums

A bond referendum can be placed on a county or municipal ballot to finance land acquisition and site development costs for greenways and trails. Bonds come in many forms such as revenue bonds, general obligation bonds, and special assessment bonds. Since voters must approve bonds, it is critical to educate the public on the mission and intent of the bond in order to gain support and approval.

Impact Fees

Impact fees are one-time charges levied by a local government on new development. Unlike dedication fees that might be required through the development process, one time impact fees can be applied to finance nearby public services such as parks, recreation facilities, and greenways/trails made necessary by the introduction of new residents in an area.

Payment in Lieu of Fees

Where land dedication does not occur through the development process, a municipality could require a payment in lieu of dedication. These fees can be applied to finance acquisition of land or development of nearby greenways and trails. Text adding payment in lieu of fees needs to be incorporated into a zoning ordinance before it can be implemented.

Foundations and Friends Groups

Foundations and/or Friends Groups serve a useful purpose as these support groups fill a void that cannot be filled by government entities. Due to the nature of government, many potential donors who may be supportive of greenways and trails are more likely to donate to a non-governmental entity rather than the government itself. Therefore, interested citizens often recognize this void and organize themselves as either a Friends Group or a Foundation. Some Friends Groups or Foundations will even seek a 501(c)3 status allowing for further grant opportunities. Examples of successful trails Friends Groups can be viewed at:

- Kings Mountain Gateway Trails, Inc.: www.kmgatewaytrails.org/
- Little Tennessee River Greenway: www.littletennessee.org/
- Mecklenburg County, NC: www.partnersforparks.org/
- Friends of the High Line: www.thehighline.org/

Sponsorships

“Adopt-A” Series: Cherokee County or one of the municipalities can promote greenways and trails while generating interest by developing a local Adopt-A-Stream, Adopt-A-Greenway, Adopt-A-Blueway or Adopt-A-Trail



program that identifies the organization for providing walk through clean up, litter removal and environmental awareness programs, two to four times a year. This helps offset maintenance costs in municipal budgets. Organizations are recognized with markers or signs.

PRIVATE FUNDING SOURCES

American Hiking Society National Trails Fund

The American Hiking Society National Trails Fund, created in 1998, is the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting and maintaining foot trails in America.

The National Trails Fund grants (ranging from \$500 - \$5,000) help give local organizations (must be registered as a 501(c)3) the resources they need to secure access, volunteers, tools, and materials to protect America's cherished hiking trails.

More information can be found at:

www.americanhiking.org/our-work/national-trails-fund/

American Hiking Society

1422 Fenwick Lane

Silver Spring, MD 20910

Tel: 800/972-8608

Fax: 301/565-6714

Email: info@AmericanHiking.org

Bikes Belong

The Bikes Belong Coalition was formed in 1999 as the national coalition of bicycle retailers and suppliers working

to put more people on bikes more often. Bikes Belong provides funding from helping create safe places to ride to promoting bicycling. They carefully select projects and partnerships that have the capacity to make a difference. Grant applications are accepted on-line, 2-3 times per year (February, August, October) for up to \$10,000 to assist local organizations in bicycle facility and policy development.

More information can be found at:

www.bikesbelong.org

Bikes Belong Coalition

Boulder CO

Tel: 303/449-4893

Email: mail@bikesbelong.org

Carolina Thread Trail

Carolina Thread Trail offers implementation grants for segments of the Carolina Thread Trail on system-wide Carolina Thread Trail master plans that have been adopted.

There are three types of implementation grants:

- Corridor Planning Grants: up to \$20,000 towards identification of trail alignment(s) on a specific parcel(s) along the Carolina Thread Trail.
- Land Acquisition Grants: up to \$150,000 towards land or easement acquisition for trail segments and open space for viewsheds, riparian buffers, wildlife habitats or recreation along the trail segments of the Carolina Thread Trail.
- Construction Grants: up to \$150,000 towards completion of construction design and building of trail segments of the Carolina Thread Trail.



More information can be found at:
www.carolinathreadtrail.org/resources/funding-sources/
Carolina Thread Trail
105 W. Morehead Street
Charlotte, NC 28202
Tel: 704/376.2556
Fax: 704/342.3340

Conservation Alliance

The Conservation Alliance is a group of outdoor businesses that supports efforts to protect specific wild lands and waterways for their habitat and recreation values. Applicants (must be registered as a 501(c)3) must be nominated by a member of the Alliance. There are two funding cycles annually in the summer and winter with a maximum grant request of \$35,000.

More information can be found at:
www.conservationalliance.com/grants
The Conservation Alliance
PO Box 1275
Bend, OR 97709
Tel: 541/389-2424
Email: info@conservationalliance.com

Kodak American Greenways Awards Program

Eastman Kodak Company, The Conservation Fund and the National Geographic Society team up each year to present the Kodak American Greenways Awards Program. One major element of the Program involves “seed” grant awards to organizations (501(c)3s get preference) that are growing the nation’s network of greenways, blueways, trails and natural areas that demonstrate the convergence of

economic prosperity and the environment.

Eligible projects can include elements such as greenway, blueway or trail mapping, ecological assessments, surveying, conferences, and design; developing brochures, interpretative displays, audio-visual productions or public opinion surveys; building a foot bridge, signage or other physical improvement or addition to a greenway or blueway; planning a bike path; and many other creative projects. In general, grants can be used for any appropriate expense needed to complete, expand or improve a greenway including planning, technical assistance, legal and other costs. Grant applications are accepted on-line, annually in June for up to \$2,500.

More information can be found at:
www.conservationfund.org/kodak_awards
The Conservation Fund National Office
1655 N. Fort Myer Drive, Suite 1300
Arlington VA 22209-3199
Tel: 703/525-6300
Fax: 703/525-4610
Email: kodakawards@conservationfund.org

Duke Energy Foundation

The Duke Energy Foundation is the core of Duke Energy’s support and development of sustainable communities and actively works to improve the quality of life in our communities, lending expertise in the form of leadership and financial support through grants to charitable organizations. At the core of The Duke Energy Foundation is its commitment to the community, with a focus in four areas:

Environment:



- Programs that support conservation, training and research around environmental initiatives.
- Initiatives that support the efficient use of energy, but that also do not create a conflict with the programs approved in the regulated jurisdictions (reducing cost of utility service).

Economic Development:

- Initiatives that support the company's economic development strategies (may vary by region).
- Skills and workforce development.

Education:

- Pre K-12 education focused on science, technology, engineering and math (STEM).
- Higher education, focused on (STEM) and environment related programs.

Community Vitality:

- Human services, arts, cultural, and community safety.
- Community leadership development.

Grant applications are accepted on-line through their webpage at:

www.duke-energy.com/community/foundation.asp

The Timken Company Charitable Trust

The Timken Company Charitable Trust was established in 1947 to support the communities where Timken associates live and work. Each year, the Trust awards grants to non-profit agencies in the United States that are helping to strengthen our communities.

The focus of the Timken Charitable Trust is on supporting local communities through the Arts, Education and Community and Economic Development. Preference is given to organizations where associates of The Timken

Company are actively engaged. The following are guidelines for applicants:

- Timken supports 501(c) (3) public charities or equivalents that are supporting programs in the United States.
- Timken focuses on agencies serving their local plant communities. All requests for support should be discussed with a local Timken representative prior to application.
- Timken's primary focus areas are arts, education and community and economic development.
- Preference is given to those agencies providing the broadest community outcomes aligned with Timken's focus areas and that engage Timken associates as volunteers.
- Timken will consider a limited number of requests from community basic needs organizations, but our primary support for this focus area is through the local United Way.
- In general, Timken doesn't support agencies focused on health-related research, capital projects, national programs or any individual sponsorships.
- Timken has an annual grant review process with a deadline of September 1 for the following calendar year and will consider requests in between our annual meeting on a limited basis.

Grant applications can be submitted on-line at:

<http://www.timken.com/en-us/about/citizenship/CharitableTrust/Pages/default.aspx>



APPENDIX 6: DESIGN GUIDELINES

The following design guidelines have been established to assist municipalities and other stakeholders in constructing trails and amenities that will provide safe and sustainable trail corridors for Cherokee County. These guidelines allow trail construction and character to be developed uniformly throughout the county regardless of which entities are constructing trail segments. The design guidelines are to be used as a toolkit with the understanding that actual site conditions may dictate adjustments in final trail design. These design guidelines have been organized into the following categories:

Types of Greenways/Trails

Greenways can mean many different trail facility types. The trail types that may be constructed in Cherokee County may include natural surface trails, paved or unpaved multi-use trails, sidewalks, bike lanes, shared roadways, sidepaths, equestrian trails, or multi-use trails with equestrian use.

Trail Environments

The trail corridors designated for Cherokee County occur in many different environments, each providing a unique experience. When constructing trails, it is important to be mindful of the environment for that specific trail corridor, so that those environments are not damaged during construction or as a result of future trail use. Likewise, long term sustainability of trails should be considered based on the environments in which they are being constructed. Trail environments to be discussed include creekside trails, trails within floodways or floodplains, underpasses, utility easements, rail crossings, and rails with trails.

Accessible Trail Design

It is important to consider accessibility when designing trails, not only relating to alternate transportation, but from a recreation standpoint as well. Standards for accessibility have been established by the U.S. Department of Justice through the Americans with Disabilities Act, U.S. Department of Transportation, Federal Highway Administration, AASHTO, and the U.S. Access Board with Accessibility Guidelines for Outdoor Developed Areas. This section will address trail design to meet the needs of users with varied mobility requirements.

Blueway (Paddle) Trails

Over 53 miles of blueways are planned in Cherokee County to be developed along sections of the Pacolet and Broad Rivers. Blueway facilities have increased in popularity over recent years. While the waterways serve as ready-made trails, a few support facilities are needed for blueway development. These facilities include access points, parking, portages, and signage.

Trail Structures

Development of trails within certain environments will create the need for additional facilities or structures including boardwalks, pedestrian/bicycle bridges, railings, and drainage and erosion control measures. These structural elements support trail use, help provide a safe trail experience, reduce a trail's impact on the environment, and reduce trail maintenance.



Trail Amenities

Trail users will need accommodations or support facilities along the trail corridors. Inclusion of these support facilities will provide points of access to trails, encourage continued trail use, and create local character for trails. Typical amenities within a trail environment include trailheads and parking, seating, overlooks, signage/wayfinding, tables, trash receptacles, pet waste stations, opportunities for public art, and in some areas, restroom facilities.

Trail Character in Cherokee County

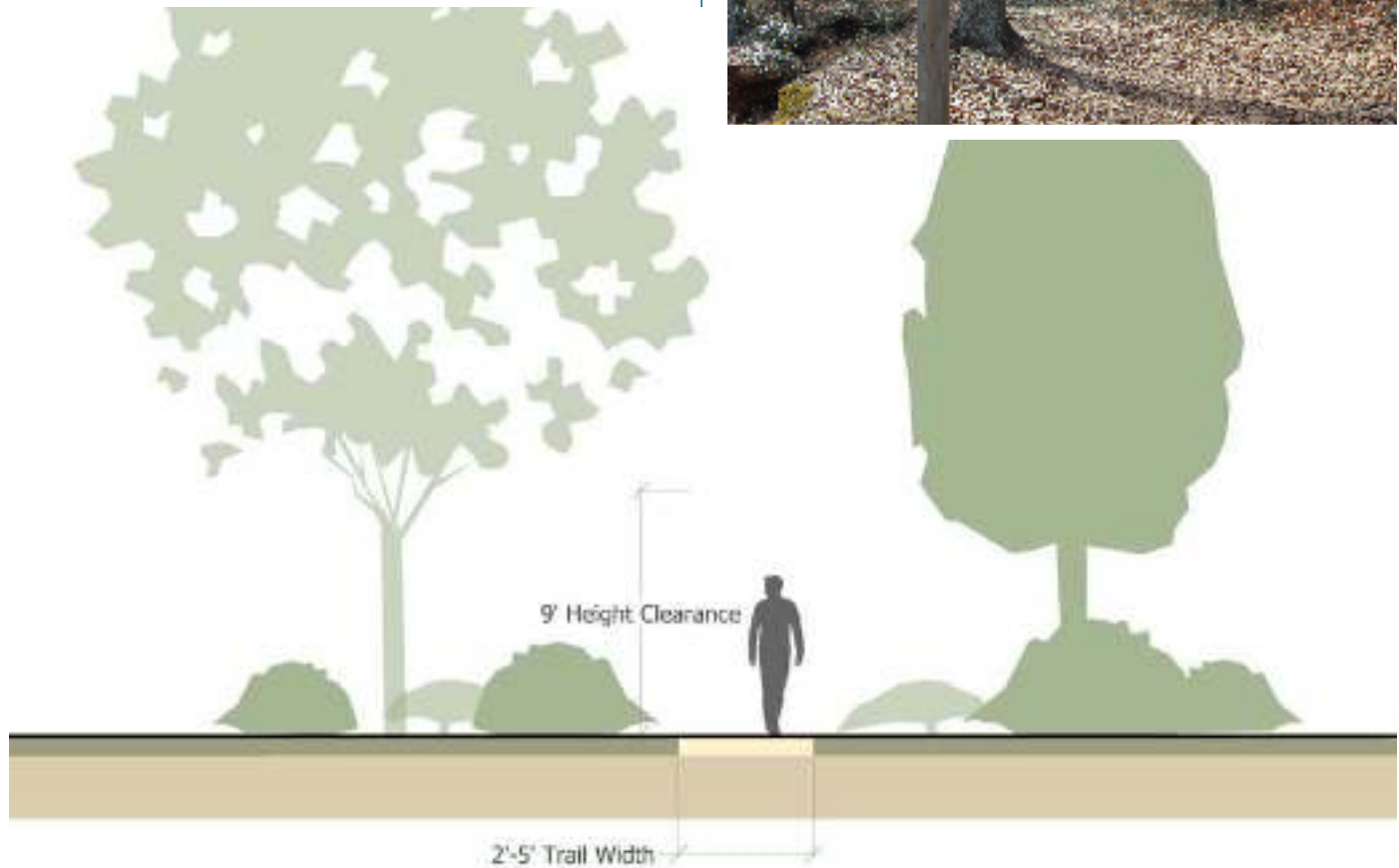
Each county within the Carolina Thread Trail network has its own unique character that should be maintained. While uniformity of trail construction will occur throughout the network, it is important to promote the character of unique areas in Cherokee County. Areas identified in these design guidelines include I-85 overpasses, downtown areas in Gaffney and Blacksburg, Cowpens National Battlefield, Overmountain Victory National Historic Trail, Kings Mountain National Military Park, blueways, corridors along Highway 29, Highway 150, McKowns Mountain Road, and other county road rights-of way.

TYPES OF GREENWAYS/TRAILS

Natural Surface Trails

Most users will associate natural surface trails with hiking trails often found in natural park settings. These types of trails typically serve hikers more so than cyclists. Minimal site preparation or construction is needed. Recommended guidelines include:

- Maintain a trail width of two to five feet
- Maintain a vertical clearance of at least nine feet
- Trail surface is typically native materials such as dirt, rock, soil, forest litter, or mulch
- Be mindful of grade change; trail should follow contours to avoid steeper slopes
- Route trail around trees and other site features wherever possible
- Provide positive drainage for trail surface, but minimize extensive removal of existing vegetation or adjacent surfaces





Multi-Use Trails – Paved

Multi-use trails are the most common type of greenways (or greenbelts) within municipal park systems and trail networks. These trails can be used by hikers, walkers, joggers, cyclists, users in wheelchairs, and parents with strollers accommodating all levels and abilities of users.

Recommended guidelines include:

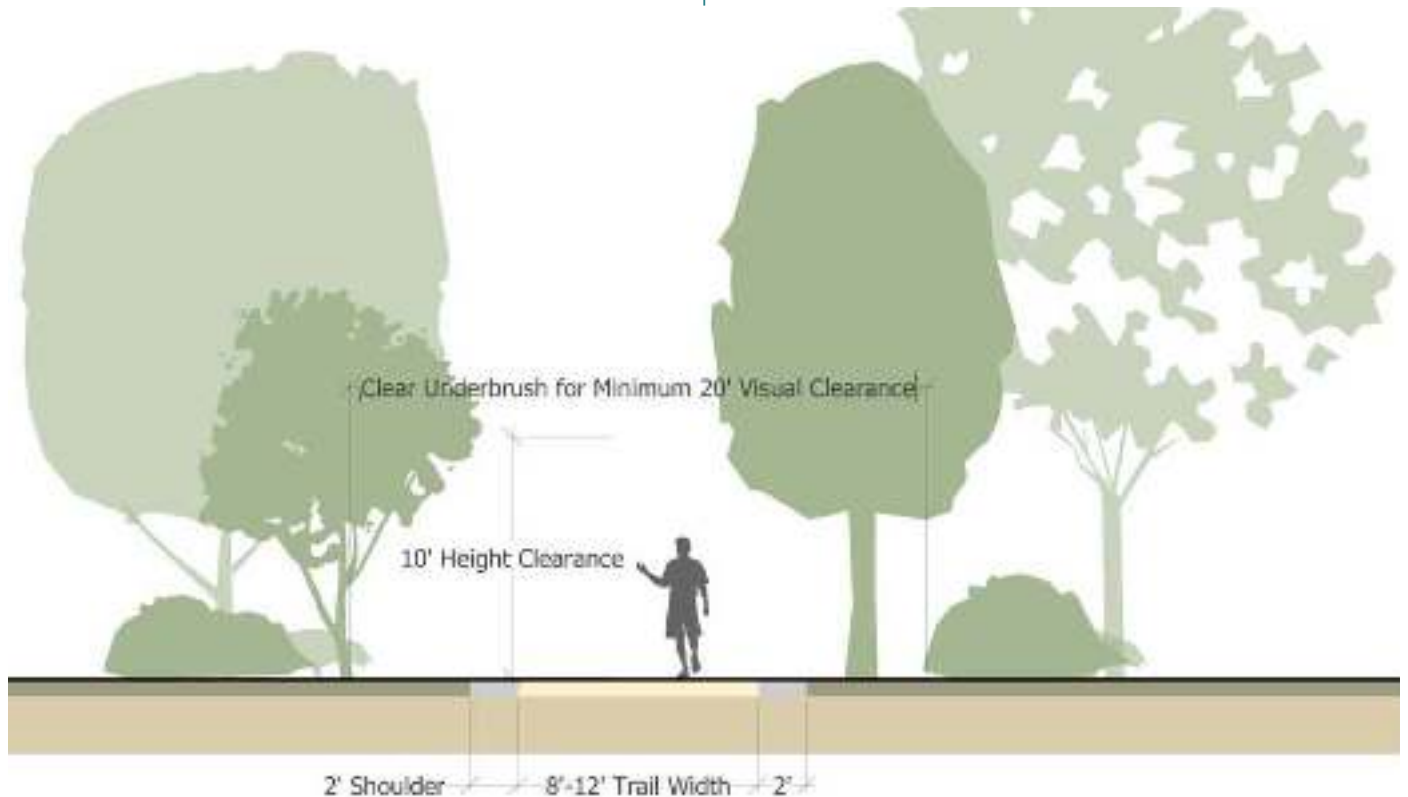
- Maintain a paved trail width of 8 to 12 feet; 10 feet is the most common
- Maintain a vertical clearance of at least 10 feet
- Provide a two foot graded (gravel) shoulder on each side of the trail
- Use asphalt or concrete pavement
- Consider pervious pavement in less clay-like soils
- Provide an aggregate base course (ABC) under the asphalt
- Consider using geotextile fabric under the ABC in softer soil conditions
- Specify concrete for use in highly floodprone areas
- Provide centerline stripes on trails with high volumes of users and around curves



Asphalt



Concrete





Multi-Use Trails – Unpaved

Unpaved multi-use trails are often found in upland areas. With proper compaction, these trails can also be used by hikers, walkers, cyclists, users in wheelchairs, and parents with strollers accommodating all levels and abilities of users. Unpaved trails are often less expensive to construct, but can cost more to maintain depending on trail location, soil compaction, topography, and weather patterns. Joggers, runners, and some cyclists prefer unpaved trails. Recommended guidelines include:

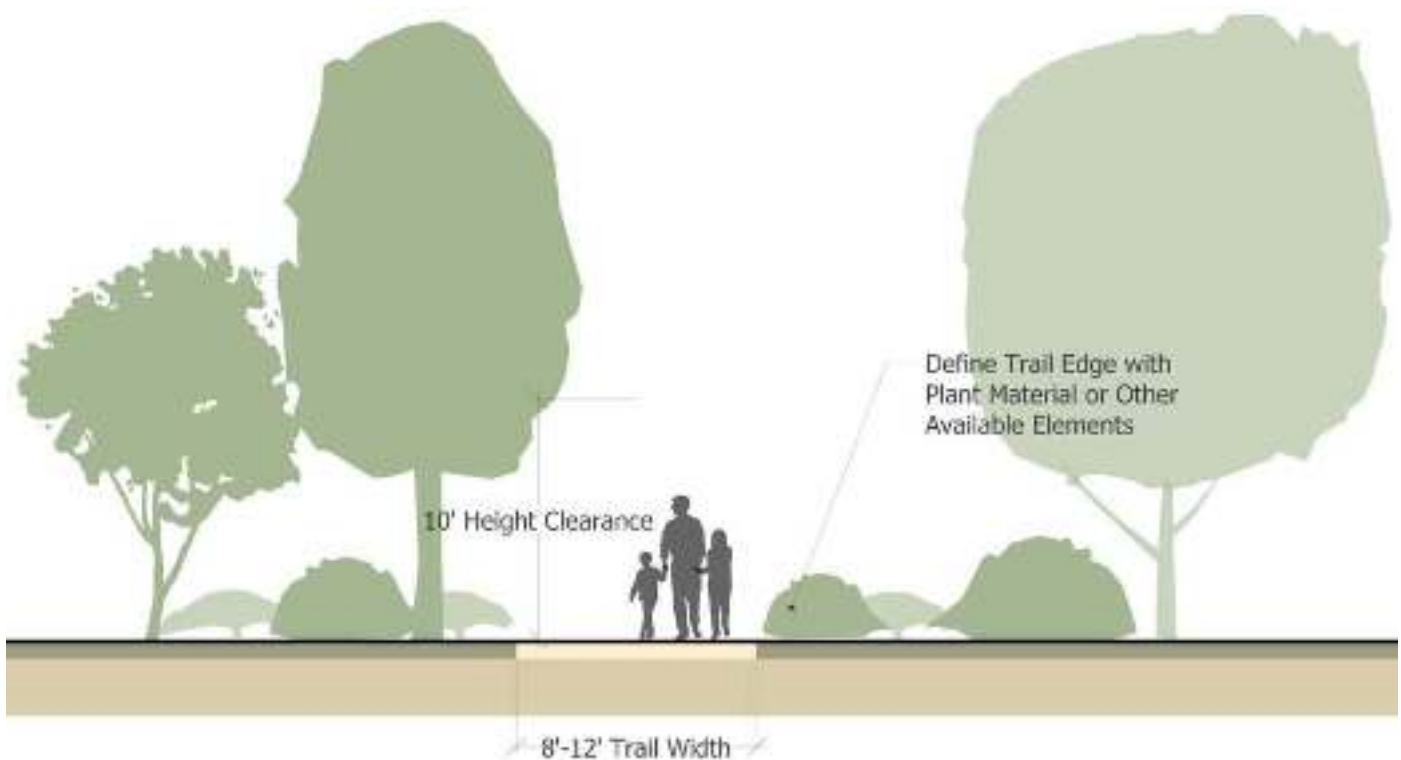
- Maintain a paved trail width of 8 to 12 feet; 10 feet is the most common
- Maintain a vertical clearance of at least 10 feet
- Soft surface trail materials may include graded aggregate stone (crusher run, decomposed granite, soil cement)
- May require an aggregate base course (ABC) under the surface course
- In softer soil conditions, consider using geotextile fabric under the surface course or ABC (if using)
- Consider providing edging along both sides of the trail to maintain trail surface materials
- Monitor trail surfacing after rain events to minimize ruts and drainage channels



Screenings



Pit gravel

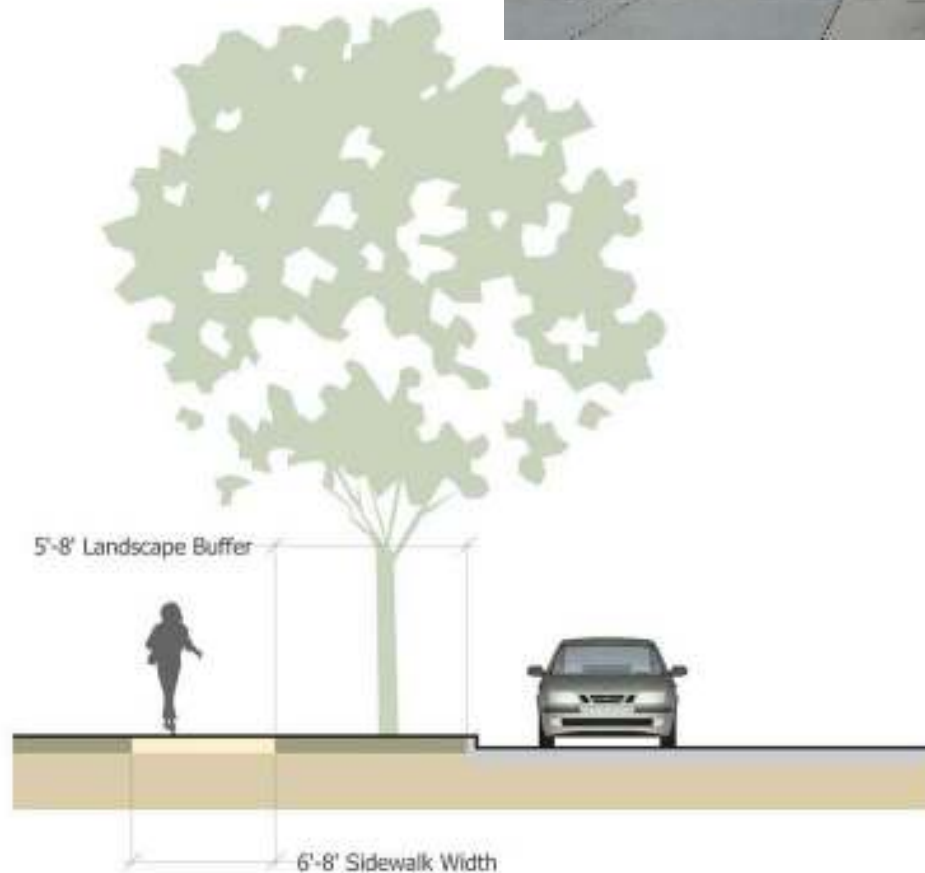




Sidewalks

This greenway trail plan makes use of existing sidewalks through the downtown areas in Gaffney and Blacksburg. Sidewalks often become overland connectors between trails. In some instances, greenway master plans have encouraged the completion of sidewalk systems to help finish trail corridor connections. Sidewalks typically serve pedestrians and do not accommodate cyclists. For new sidewalks, recommended guidelines include:

- Minimum sidewalk width of 6 feet; 8 to 10 feet preferred, especially if an extension is allowed
- Provide a five to eight foot landscaped buffer between the roadway and the sidewalk if room is available
- Use a light broom finish perpendicular to the direction of travel
- Provide accessible ramps and crosswalks at all intersections or street crossings





Bike Lanes and Shared Roadways

On roadways where vehicle traffic volumes are less than 3,000 cars per day or where travel lanes are 14 to 18 feet wide, it may be possible to create shared roadway usage for cyclists either as a signed use or a wide outside lane. Bicycle lanes are also an option, especially if the traffic volume is greater than 3,000 cars per day. These types of facilities are generally provided for more skilled cyclists and not for most families or children. Recommended guidelines for bike lanes include:

- Bike lanes should be a minimum of four feet wide; five feet six inches preferred
- Drain grate openings should be perpendicular to the direction of travel
- Maintain clean paved surfaces
- Regulatory signage should be used in conjunction with painted signage on the surface (see signage section)

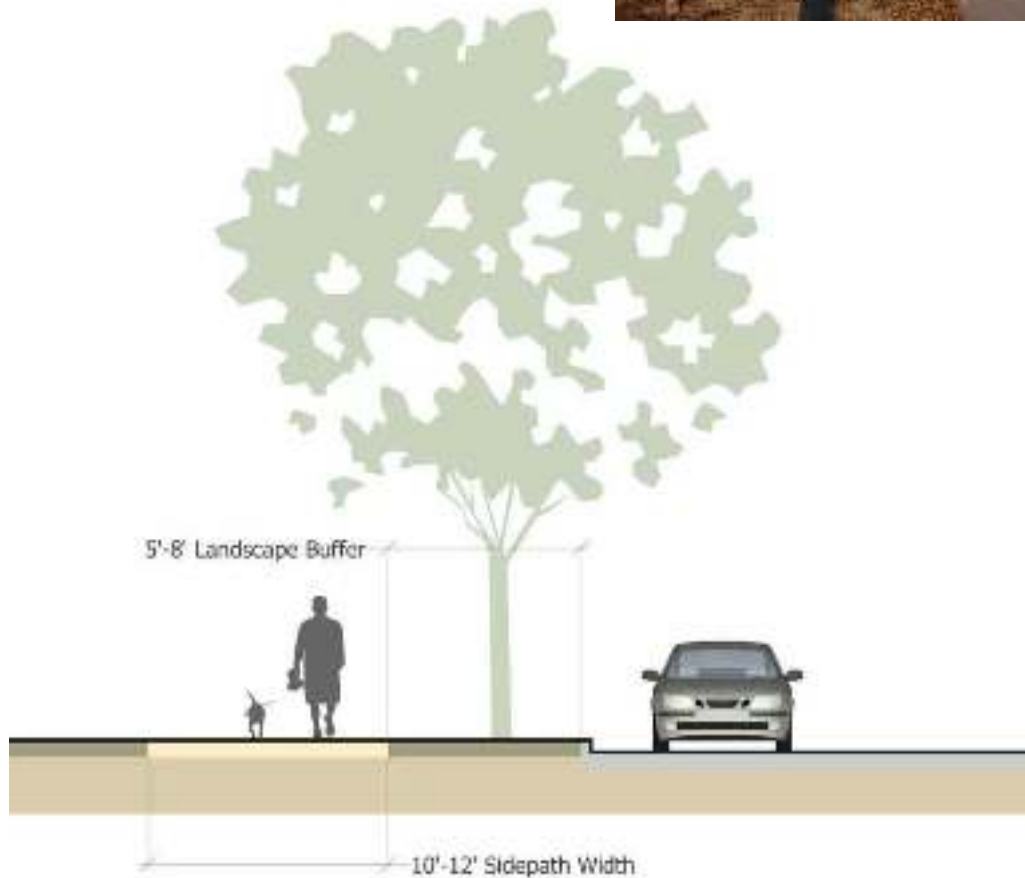




Sidepaths

When the primary trail is street based and has limited driveway/intersection crossings, a sidepath is recommended along one side of the roadway. In Cherokee County this might occur along some of the more rural two lane roads. Recommended guidelines for sidepaths include;

- Sidepaths should be 10 to 12 feet wide
- Sidepaths should be set back at least five feet from the edge of the roadway with a vegetated buffer wherever possible
- Provide concrete or asphalt surfacing
- Provide accessible ramps from sidepaths to roadway
- Install bollards at intersections/roadways to prevent vehicles on the sidepath





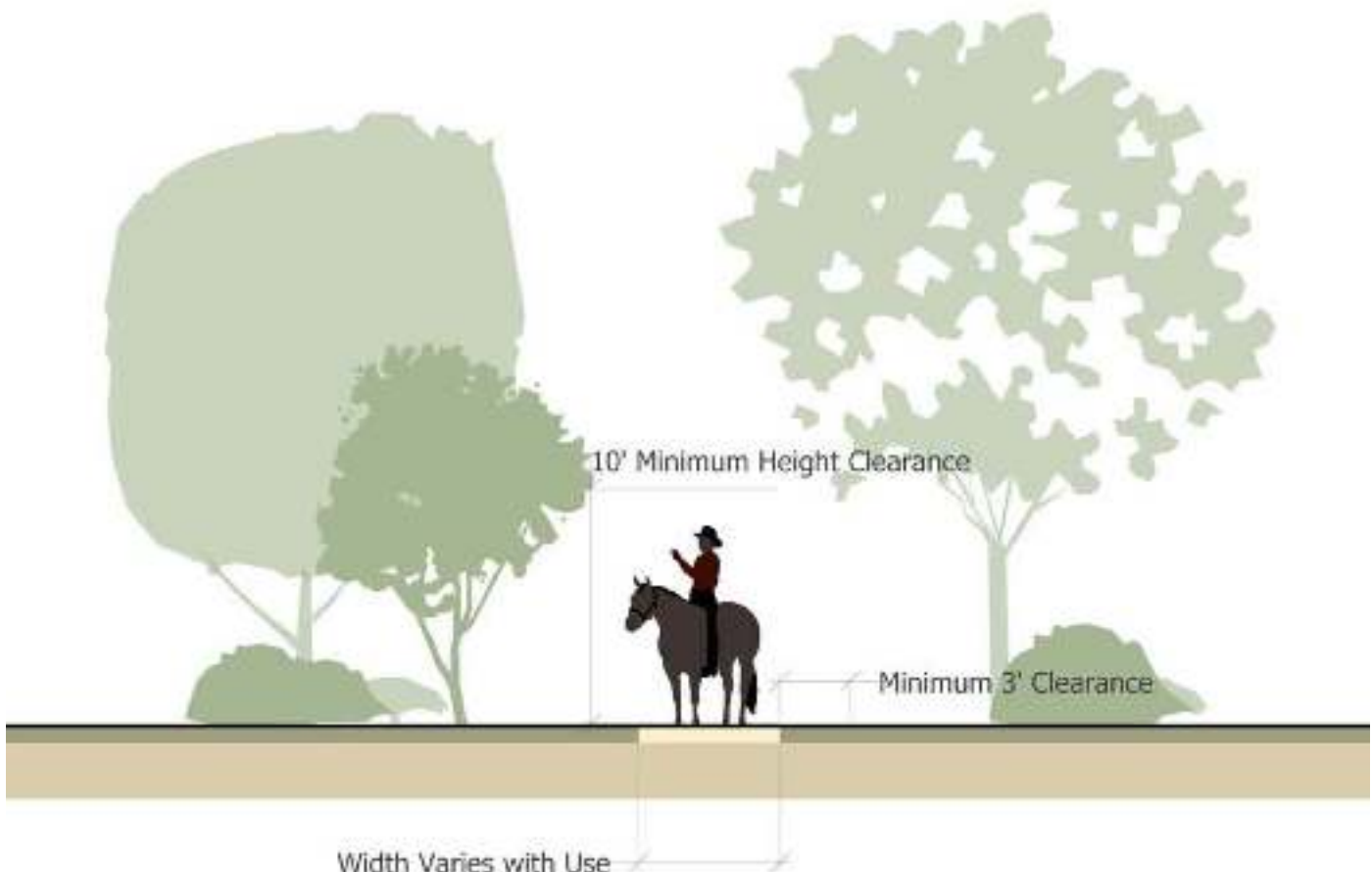
Equestrian Trails

Equestrians prefer separate trails for their use not only for the types of rides they do, but for safety concerns of the riders and their horses. Horses can be easily startled by hikers and cyclists. Equestrians can use a wide area of space depending on whether they ride individually or in groups. Horses can be hard on trails, making trails more difficult to use for hikers and cyclists after rain events or during continued wet conditions.

Equestrian facilities need to provide enough space for horses and their riders to feel at ease, allow horses to ride away from trail edges, offer good visibility, avoid natural hazards, and provide safe interaction with other trail users. Dirt or stabilized dirt is the preferred trail surface, though crushed stone like granite screenings is also acceptable. Water crossings are preferred over bridge or boardwalk crossings which would require hoof mats on the treads. Based on USDA/FHWA guidelines there are suggested widths and clearance tolerances for standard single and

double track (side by side riding/passing) equestrian trails as follows:

- Trail width for single track ranges from one-and-a-half to two feet for low development; three to six feet for moderate development; eight to 12 feet for high development
- Horizontal clearing width which is equal to the trail width, plus 3 feet each side ranges from five-and-a-half to eight feet for low development; nine to 12 feet for moderate development; 14 to 18 feet for high development
- Trail width for double track ranges from five to six feet for low development; eight to 12 feet for moderate and high development
- Horizontal clearing width, which is equal to the trail width, plus three feet each side ranges from 10 to 12 feet for low development; 14 to 18 feet for moderate and high development
- Vertical clearance should be 10 to 12 feet



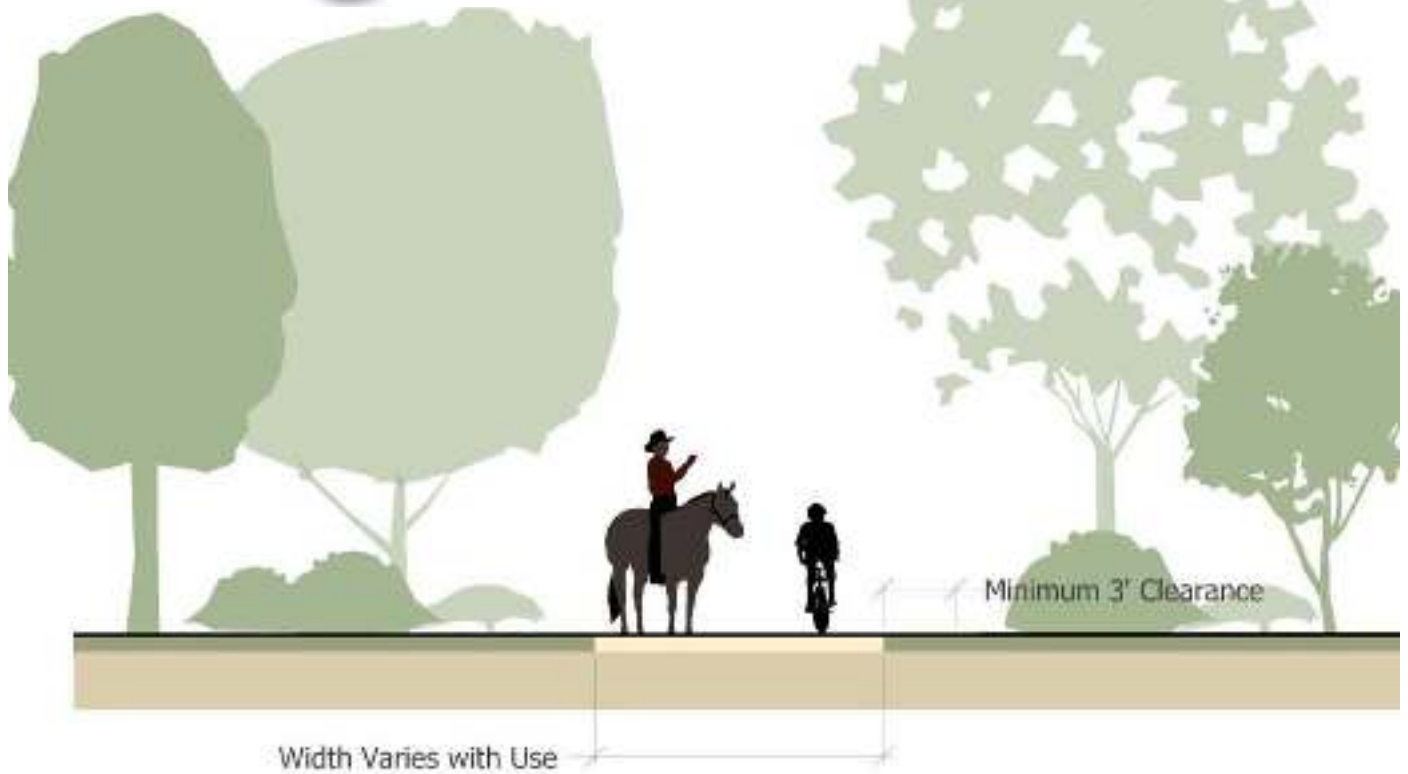


Multi-use Trails with Equestrian Use

There are many multi-use trails across the country that also include equestrian use. It is important to install appropriate signage indicating trail protocol, especially noting that hikers and cyclists yield to equestrians at all times. Trail sub-base and sub-grade need to be firm and prepared properly. Maintenance of shared trails should be a priority due to the multiple uses during wet conditions and the need for more constant manure removal.



SHARE THE TRAIL





TRAIL ENVIRONMENTS

Creekside Trails

Creekside trails occur more often in more populated or developed areas. Road ROWs and density may warrant a shift in trail development to the rear of lots if stream channels are present and can provide a connectivity link. Trails are located immediately adjacent to the stream channel, thus flooding frequency needs to be considered. Retaining walls and gabion walls may be required due to the potential tightness of this type of trail corridor. Walls also help to protect the trail from erosion and flooding. Recommended guidelines for creekside trails include:

- Minimum trail width should be ten feet with no shoulders
- Provide concrete surfacing to withstand prolonged flooding and high-velocity stream flow
- Trail amenities should be minimized along creekside trails; retaining walls could also serve as seatwalls



Trails within Floodways

These trails are similar to creekside trails, but the trail is not located immediately adjacent to the stream channel. A vegetative buffer or streamside zone is established between the stream channel and trail. Potential flooding is infrequent and more periodic. Recommended guidelines for trails within floodways include;

- Minimum trail width should be ten feet with no shoulders
- Provide asphalt or concrete surfacing to withstand flooding and stream flow dependant on frequency of flooding
- Provide a proper sub-base to increase longevity and sustainability of trail



Trails within Floodplains

This type of trail is located outside of the floodways. A vegetative buffer between the stream channel and trail is left intact. Occasional flooding may occur during major rain events. Recommended guidelines for trails within floodplains include;

- Minimum trail width should be ten feet with two foot graded shoulders on each side
- Provide asphalt surfacing; aggregate stone surface can be used in upland situations
- Provide a proper sub-base to increase longevity and sustainability of trail; a geotextile fabric may need to be installed in softer soils



Underpasses

Opportunities may arise when trail corridors can be routed under existing bridges or through culverts to avoid on road crossings. This will typically occur when the trail follows a stream channel. Recommended guidelines for underpasses include:

- Underpass width should be at least 12 feet
- Vertical clearance of the underpass should be at least eight feet; 10 feet preferred
- Ensure proper drainage is designed to avoid pooling of water
- Lighting is recommended for safety within the underpass

Utility Easements

Utility easements can often be used for trail construction as long as joint-use easements are created with the utility company and property owner(s). Most common use of easements involves sewer and electric utilities where trails can be developed along edges of the ROWs.

Gas easements are more stringent and typically only allow trail crossings within their ROWs. Utility companies should be notified early in the planning and design process, so that easements and agreements can be completed in a timely manner and all parties are well informed. All utility ROW guidelines and restrictions should be reviewed and adhered to. Recommended guidelines for utility easements include:

- Trails within utility easements shall meander as necessary to accommodate elevation change and provide positive drainage
- For electric transmission ROWs, the trail width shall not exceed 5 feet in width, not including graded shoulders; trail surfacing shall be soft surface
- Trails should be located at least 25 feet away from transmission tower pads
- Trails may cross under power transmission lines at an angle not less than 30° from the center line
- In most sewer ROWs, the trail can parallel the ROW as long as the trail is not located over the actual sewer line (except for trails that cross the ROW)





Rail Crossings

Where trails may have to cross rail lines at-grade, efforts should be made to ensure visibility and safety for all users. Ideally, at-grade rail crossings should occur in conjunction with existing sidewalk or vehicular crossings, but this is not always the case. Recommended guidelines for rail crossings include:

- Trails should cross rail lines as close to a 90 degree angle as possible
- Proper rail warning signage and pavement markings shall be installed along the trail on both sides of the rail crossing
- Crossing materials should be skid resistant; concrete and rubber crossing materials should be used to provide longevity and less maintenance
- If trail crossing is not in conjunction with an existing vehicular crossing additional vegetative clearing should occur to increase visibility for both the trail user and the rail line
- Railroads should be included in planning and design discussions early in the trail process which in turn could help reduce time needed for approvals from railroads.

Rails with Trails

Some railroads will allow trails to be constructed within their ROWs or within an easement within the ROWs. Railroads should be included in planning and design discussions early in the trail process which in turn could help reduce time needed for approvals from railroads. Most railroads or regulators such as Public Utility

Commissions or the Federal Railroad Administration have guidelines and policies that trail designs must adhere to before approvals can be gained. Recommended guidelines for rails with trails* include:

- Trail width should be at least 12 feet with a two foot graded shoulder each side
- Setbacks will vary with train type, speed, frequency and separation technique; edge of trail should be no closer than 15 feet from centerline of nearest rail line for rails that see minimal use or commuter use; trails should be set back a minimum of 25 feet or more from the centerline of the nearest rail on more active lines
- Fencing at 5-6 feet high should be installed between the trail and the rail at least 3 feet off the trail shoulder
- The trail should be graded to drain away from the rail line
- *More information can be found at: www.railswithtrails.com and www.railstotrails.org





ACCESSIBLE TRAIL DESIGN

All attempts should be made to design trails for accessibility for all users. Guidelines have been created in response to the Americans with Disabilities Act (ADA) for trail accessibility. However, meeting ADA guidelines may be difficult in some outdoor situations. Meeting ADA guidelines might cause conflict with trail sites having significant cultural or natural resources such as tree canopies or stream channels causing a significant grade change in the intended purpose of the trail or steep topography/terrain characteristics may prevent compliance. The following standards are to be used in accessible trail design:

- Surface materials should be firm and stable through the use of asphalt, concrete, wood, or compacted gravel
- Trail gradient should be less than 5% without landings; trail gradient can be less than 8.33% with landings
- Trail cross slope should be 2% maximum to provide positive drainage
- Trail width should be 8 feet minimum to allow the variety of users and the passage of 2 wheelchairs
- Resting areas or widened areas should be provided about every 300 feet
- Detectable pavement changes should be placed at curb ramps and top of ramp locations before entering roadways
- Concrete pads should be provided adjacent to one side of each bench location for wheelchairs





BLUEWAY (PADDLE) TRAILS

Access Points

Blueway access points are trailheads for canoeing, kayaking, and other paddling activities. All access points should have some level of parking (3-6 spaces) and regulatory/wayfinding signage. Major access points should offer larger parking areas (20 spaces +), picnic tables, information kiosks, and restrooms. General recommendations for access points should include:

- Trail width should be 6 feet minimum
- Provide vertical clearance of 14 feet minimum; if using grass as the surfacing, maintain cover at no more than 5 inches height
- Provide a firm compacted surface for the access trail
- Space access points every 3-4 miles along larger water bodies; every 1-2 miles along smaller creeks
- Locate access points no more than 1,500 feet from the launch/take out point; if more than 1,500 feet position a permanent canoe/kayak stand every 1,000 feet
- Allow enough room for unloading and loading of canoes/kayaks from vehicles
- Trail gradient from parking area to launch point should not exceed 20%, flatter at the parking areas
- Erosion mats or blankets should be used for slope stabilization at heavily used access/launch points
- Do not locate access points on the inside curves of waterways due to frequency of sand/silt deposits in these locations

Portages

Portages are overland connectors for paddlers when an obstruction occurs in the blueway trail such as a dam, set of rapids, waterfall, etc. The need for portages should be minimized along blueways. If needed, landings should be placed above and below obstruction. Signage should be clearly visible upstream and downstream of the obstruction

and well in advance of the obstruction directing paddlers to landing sites. Recommended guidelines for portages include:

- Trail width should be six feet minimum
- Provide vertical clearance of 14 feet minimum
- Position a permanent canoe/kayak stand every 1,000 feet

Signage

Signage is critical for blueway trails. Directional signage is needed on roadways to direct paddlers to parking, access points, and to the river/stream. Signage is also needed on the river/stream to inform paddlers of landing sites, camping and picnicking facilities, portages, hazards, and level of experience for more difficult segments of the trail. It's also helpful to paddlers to incorporate mileage markers, road identification (on bridges), and points of interest, so that paddlers have reference markers along the blueway trail.





TRAIL STRUCTURES

Boardwalks

In general, trail routing should avoid wetlands if at all possible. If unavoidable, boardwalks should be used where trails need to be constructed through wetlands, areas where grading must be minimized or fill dirt is not an option (floodplain), or other environmentally sensitive areas. Recommended guidelines for boardwalks include:

- Clear width of boardwalks should be 10 feet minimum on main trails
- If the height of the boardwalk exceeds 30 inches, railings are required; toe rails should be used where rails are not required
- Pressure treated wood posts, concrete footers or auger piers should be used for foundation materials
- Decking should be pressure treated (non-toxic) wood or recycled plastic
- Thickness of deck planking should be 2 inches minimum
- Boardwalks with a length more than 300 feet should have a seating/resting area every 150 feet

Pedestrian/Bicycle Bridges

Bridges should be used where trails cross streams or rivers, steeper drainage channels or roadways. There are many good options available for prefabricated wood or steel bridges that can be manufactured off site, delivered to the site, and easily installed with a crane. There may be opportunities to re-use abandoned railroad bridges that are either existing on site or can be relocated to the trail crossing location. The structural integrity should be assessed before reusing these types of bridges. A trail bridge should support a minimum H-5 loading (10,000 Lbs./5 tons). Other recommended guidelines for pedestrian/bicycle bridges include:

- Clear width of bridges should be 10 feet minimum
- Provide a reinforced concrete abutment on each side of the bridge
- Top of bridge rail should be 54 inches with a rub rail set at 36 inches maximum
- Decking should be pressure treated (non-toxic) wood
- Thickness of deck planking should be 2 inches minimum





Railings

As mentioned in both the boardwalks and bridges sections, railings are needed when the deck height is over 30 inches from finished grade of trail to existing grade below. Local, state, and/or federal regulations and codes should be consulted for final rail design, but in general recommendations for railings include:

- Railings should consist of a horizontal top, bottom, and middle rail
- The top rail should be 54 inches from the bridge or boardwalk deck
- The middle rail should be set between 33 and 36 inches and serve as a rub rail for cyclists
- Pickets should be placed no further than 4 inches on center

Drainage and Erosion Control Measures

Erosion control measures need to be incorporated into drainage design along trail corridors to reduce erosion

problems, minimize maintenance (and costs), and extend the longevity of the trail. Overall, trails should be designed with rolling grades using a series of dips, crests, climbs, and drainage crossings to respond to the existing terrain. In flatter situations, grade reversals may need to be constructed to create drainage flow. Both design methods lead to a more sustainable trail. In addition, recommended guidelines for drainage and erosion control measures include:

- Provide a maximum 2% cross slope on paved trail surfaces and graded shoulders
- Provide a drainage pipe under the trail where uphill water is collected in swales and/or directed to inlets/basins, so concentrated flow is directed under the trail through a properly sized culvert
- Trail treads on natural surface or soft surface trails should be sloped away from high side of trail, so water sheets across the trail, not down the trail
- Refer to local and state sedimentation and erosion control regulations and practices when designing trails





TRAIL AMENITIES

Trailheads and Parking

Access points for the trails can occur in a variety of locations. Major trailheads should be developed where trails can be accessed from prominent heavily used nodes such as commercial developments, transportation nodes, or regional parks. Minor trailheads or neighborhood access points should be developed within parks and residential developments. Recommended amenities to be located at trailheads include:

Minor Trailhead

- Information kiosk/signage
- Benches
- Trash receptacles
- Pet waste stations
- Designated parking spaces, four to five minimum

Major Trailhead, all of the above, plus

- Picnic facilities
- Bicycle racks
- Shelters
- Restrooms with drinking fountain
- Landscape improvements
- Public art
- Informal gathering space
- Parking area for 25-35 cars

Seating

Benches/seating comes in a wide variety of styles and materials. Bench selection should be based on design theme and cost. Seating opportunities should be created at regular intervals along the trail ensuring there are places to rest. Ideally, these seating areas should be located in shade. Recommended guidelines for seating include:

- Benches should be 16-20 inches high; seating depth should be 18-20 inches
- Benches should have backrests
- Locate benches every quarter mile along the trail, at trail intersections, at trailheads, and at overlook opportunities
- Length of bench should not exceed 5 feet
- Provide wheelchair access (30 x 48 inch area) adjacent to benches
- When locating more than one bench in a seating area allow a minimum 4 feet separation between benches

Tables

As with seating, tables can vary from a standard wooden picnic table to a concrete or recycled plastic table. Tables should be located primarily at trailheads, but there may be opportunities to place tables in shaded settings along a trail, especially in areas that afford nice views. Tables should be located within view of a trail and be easily accessible for trail users or picnickers.





Trash Receptacles

Trash receptacles should be located in close proximity to seating and table areas both at the trailheads and along the trail. Receptacle materials should be durable and be able to withstand the exterior conditions and constant use.

It is important that the receptacles are secured or contained in such a manner that trash does not spill easily. All receptacles should have tight fitting lids to keep rain out. Lids with latching mechanisms are good in keeping wildlife out of the receptacles. Some communities have started installing recycling receptacles next to trash receptacles for cans and bottles. Trash receptacles are to be used for trash only. Pet waste should be disposed of at pet waste stations (see next section)

Pet Waste Stations

To keep pet waste out of trash receptacles it is recommended that separate pet waste stations be installed at trailheads and regular intervals along a trail. The best type of station should have 3 components installed on one steel post. Identification signage should be located at the top of the post. A bag dispenser should be located below the sign. A ventilated mesh aluminum can should be located at the

bottom of the post. The can should be 10 gallon and have a secure lid. Green is a uniformly recognized color.

Overlooks

There may be opportunities along a trail for users to enjoy a distant view or vista. These locations become favorable for the creation of an overlook. Overlooks can be designed as resting areas along a trail or as a destination point.

Overlooks should contain the following elements:

- Benches
- Picnic Table (at destination points only)
- Trash Receptacles
- Railings, if significant elevation change occurs at the overlook area
- Informational signage

Signage/Wayfinding

Signage is a very important element of any greenway trail system. It is important to locate signs along the roadways to direct trail users to trailheads and access points. Signage materials and lettering styles should be consistent. Carolina Thread Trail signage will be provided for some initial segments when trails are officially designated as a part of the Carolina Thread Trail network. The Carolina Thread Trail





logo can be displayed on all trail signage associated with the Carolina Thread Trail network. For the trail system, signage can be grouped as follows:

Trailhead/Vehicular Identification Signage

The trailhead/vehicular identification signage is designed to mark all major trailheads/access points or trail crossings along the Carolina Thread Trail. These signs are designed for easy recognition from a distance to aid trail users who drive to a major trailhead area. The signs are to be placed within the immediate vicinity of each major trailhead, preferably at the driveway or access road for the trailhead parking lot. These signs have a low, wide stance to the ground allowing easy identification with as little obtrusiveness as possible.

Secondary Entrance/Secondary Trail Identification Signage

Secondary Entrance/Secondary Trail Identification Signage serves to mark entrances from non-trailhead areas and other area trails. The signs identify other trails that can be accessed from the Carolina Thread Trail. The signage is similar to trailhead/vehicular identification signage, but smaller in scale.



Trail Information/Directional/Trail Rules Signage

Trail information/directional and trail rules signs will be frequently located at trailheads and along trail corridors. This particular signage serves three distinct purposes. First, the signage provides users with the rules and regulations of the trail. Second, the signage serves to provide trail users with any helpful information related to the trail. Lastly, this signage provides directional guidance. Directional signage can be placed at many roadway and trail intersections and will serve to direct trail users to areas and destinations away from the immediate trail corridor. These signs should stand tall for ease of visibility, but be thin in order to reduce intrusion of the surroundings.

Informational Kiosks

Kiosks will be located primarily at trailheads and/or parking areas to provide trail maps, mileage and other important information to trail users.

Interpretive Signage

Interpretive signage serves to locate specific sites or areas along the trail that warrant attention from a historic aspect. The signs may also describe environmental education features. Signage should stand tall and clearly mark a trail user's arrival to the specified destination.





Mileage/Boundary Markers

Mileage and boundary markers should be provided throughout the Carolina Thread Trail network in Cherokee County to aid the trail user in identifying destination points and allow users to track their mileage. These markers should be located a minimum of every mile along the trail. Quarter mile markers can be identified as a painted designation directly on the trail surface. Boundary markers enable trail users to remain on the trail and reduces the risk of a trail user getting lost or wandering onto private property. All boundary markers should display the Carolina Thread Trail logo. Due to the frequency of mileage and boundary markers, they should be visible while blending in with the surroundings.

Regulatory/Warning Signage

Regulatory or warning signage may be warranted along some areas where trails are in close proximity to roadways or populated areas. These types of signs may warn trail users of upcoming roadway crossings, changes in trail direction (if the trail is using a sidewalk system), speed limits, underpasses, or rail crossings. SCDOT, MUTCD, FHA, and AASHTO can provide more information on guidelines and standards for regulatory and warning signage.





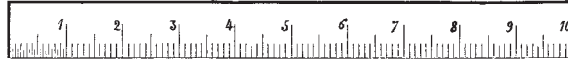
Opportunities for Public Art

Trails and trailheads provide good opportunities to add interest and character to the trail corridor through public art. Art can help to depict local history or unique events. Art can be functional or aesthetic. Public art can occur along the trail in the form of seating or other furnishings. There are many opportunities to involve artists or the local community in providing ways to reflect the flavor of Cherokee County into the Carolina Thread Trail corridors.

RESTROOM FACILITIES

Restrooms are nice amenities to provide if feasible. There are many types of facilities that can be constructed from pre-fabricated units that can be delivered to a site and connected to public utilities to small pump and haul or vault toilet systems. There are also a variety of composting toilet systems available. Restroom facilities should be located at major trailheads. This allows for easy maintenance and service of the restrooms. All restrooms should be visible from parking and access points, easily accessible and ADA compliant.





FOOTNOTES

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