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NORTHWEST GEORGIA

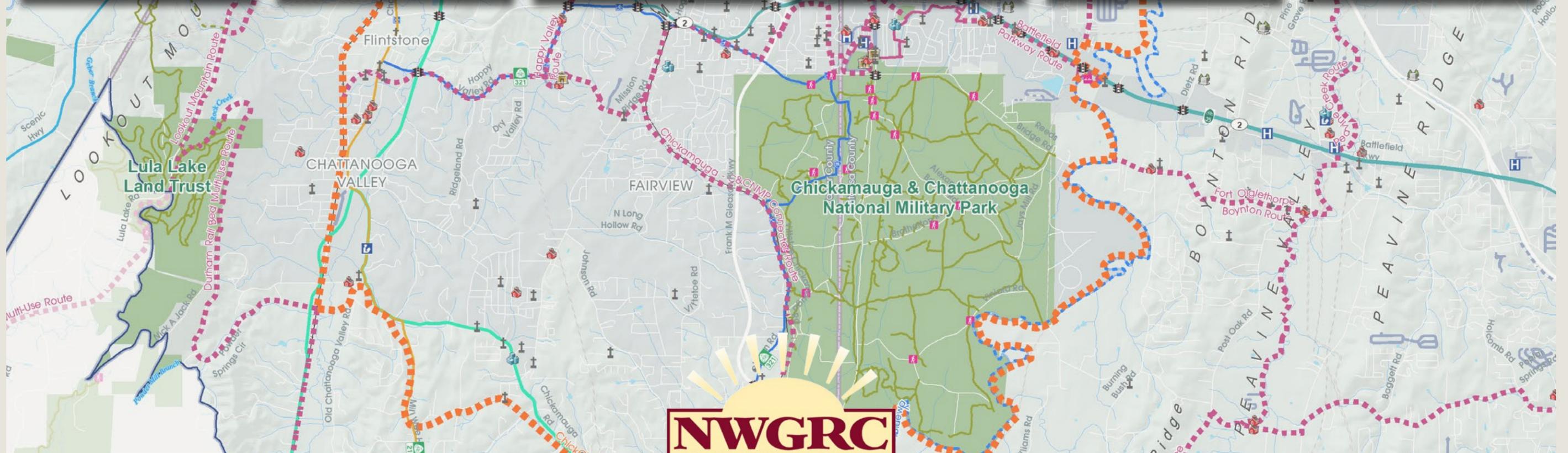
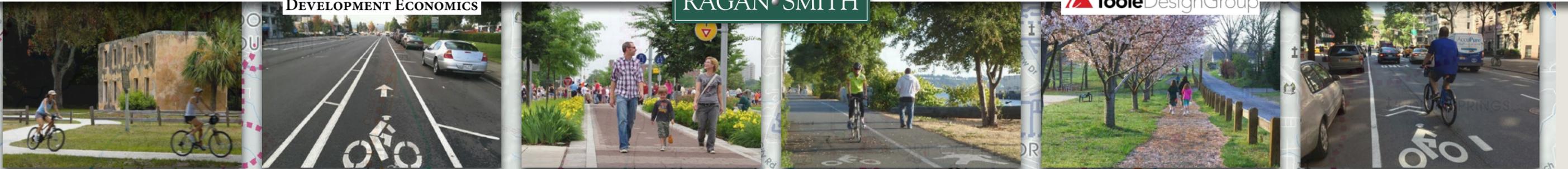
FEASIBILITY STUDY FOR BIKEWAY & PEDESTRIAN MULTI-USE ROUTES

JUNE 21, 2017

RANDALL GROSS
DEVELOPMENT ECONOMICS

RAGAN SMITH

Toole Design Group



NWGRC
NORTHWEST GEORGIA REGIONAL COMMISSION
A Region With A Bright Future

ACKNOWLEDGMENTS



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RANDALL GROSS
DEVELOPMENT ECONOMICS



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- Micheal Haney, Chickamauga Manager
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- Brad Haven, Lookout Mountain Manager
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Project Background



Several studies and plans have been completed in relation to regional planning as well as bicycle and pedestrian opportunities for the Chattanooga and Northwest Georgia region in the last 15 years. There is a strong culture of outdoor enthusiasm that includes hiking, biking, and walking in this region. It is the goal of this study to connect to the research and enthusiasm of the past and project it forward with current as well as future trends to create a plan that encapsulates the best economic opportunities for bicycle and pedestrian facilities within the study area.



Project Overview:

The purpose of the Northwest Georgia Feasibility Study for Bikeways & Pedestrian Multi-Use Routes is to establish a vision for bikeway and pedestrian multi-use routes and measure their benefits for local municipalities and the surrounding region. The proposed routes were established based on opportunities to connect communities, using key points of interest and commerce, natural and historic features and existing bike and pedestrian facilities. The opportunities and constraints of these routes were assessed through input from the project stakeholder committee, public input and consulting team. Existing economic opportunities and the potential economic benefits of the proposed routes was also evaluated.

Project Goals:

Based on the evaluation of existing background studies, site reconnaissance and input from the project stakeholder committee the following elements have been established as key focus areas for the study:

- Linking existing **places of commerce & stimulating more tourism** potential
- Connecting routes to the **natural resources & scenic beauty** of the study area
- Connecting routes to **places of historical and cultural value**
- Evaluating **improved transportation options & safety factors** for the multi-use routes
- Creating **recreational opportunities & health benefits**
- Measuring the **cost & maintenance considerations** of potential routes

An evaluation of these elements generates a good understanding of the potential this area holds for improved biking and walking opportunities and the economic value associated with these improvements.



Project Partners:

Collaboration between regional agencies, county governments and local municipalities was an integral part of producing the vision of this study. This same collaborative spirit will be required to carry this vision forward to the long term implementation, management and maintenance of bicycle and pedestrian facilities. Continuing this partnership in marketing efforts will also generate the best results in economic gains from bicycle and pedestrian routes.

Lead Agency:



Local Funding Agency:



County Partners:



City Partners:



Project Background:

The following documents have provided invaluable information and resources for the Northwest Georgia Feasibility Study for Bikeway and Pedestrian Multi-Use Routes:

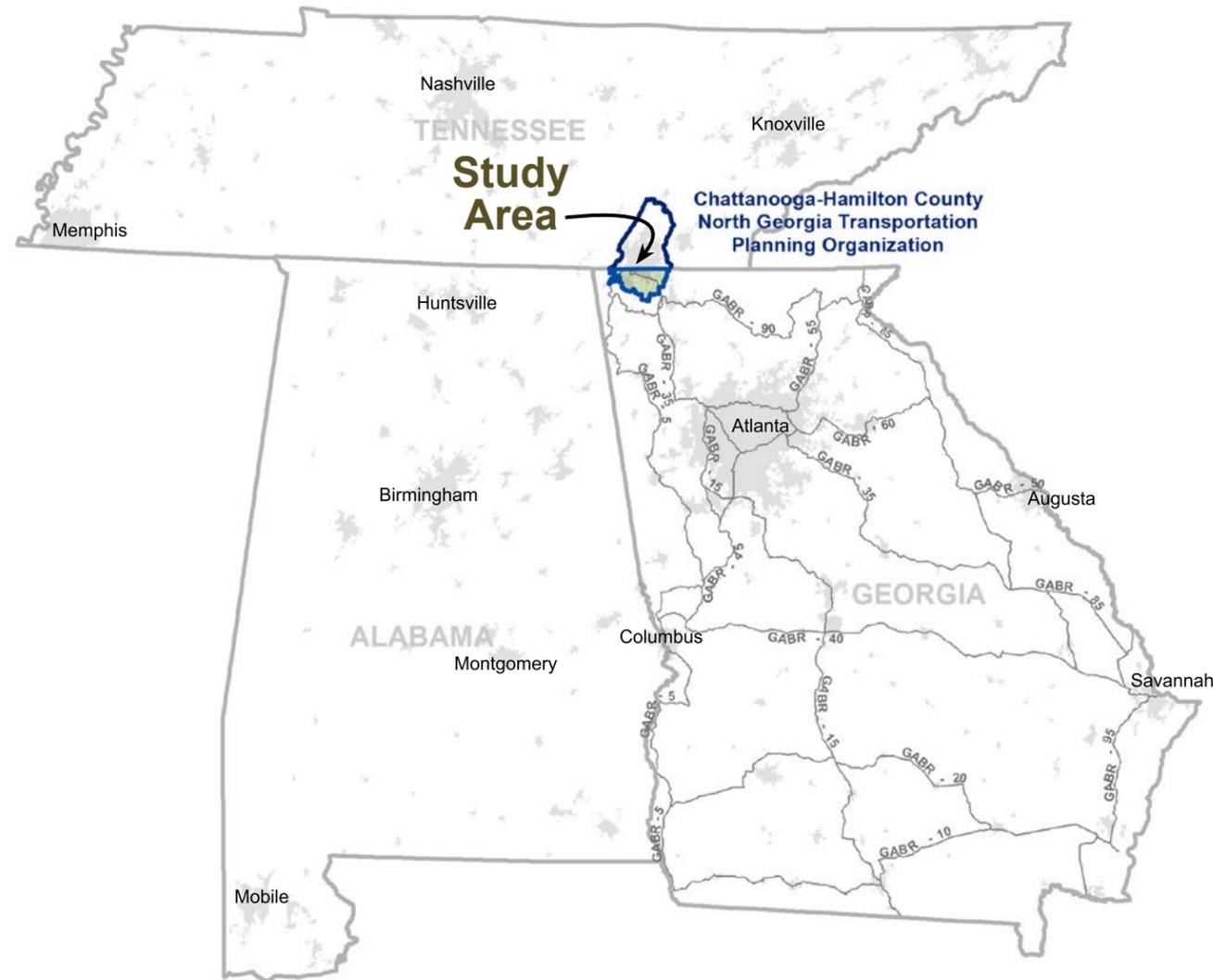
- Thrive 2055 Strategic Action Plan and Regional Maps
- Northwest Georgia Regional Commission / Georgia Dept. of Transportation Atlanta Regional Commission (July 2013) Silver Comet Trail Economic Impact Analysis and Planning Study
- The Chattanooga-Hamilton County / North Georgia Transportation Planning Organization (April 2010) Regional Bicycle & Pedestrian Plan: Executive Summary and Technical Memos
- Coosa Valley Regional Development Center (June 2005) Coosa Valley Regional Bicycle and Pedestrian Plan
- Chattanooga Urban Area Metropolitan Planning Organization / Chattanooga-Hamilton County (April 2002)
- Virginia Department of Conservation. (2004). The Virginia Creeper Trail: An Assessment of User Demographics, Preferences, and Economics
- U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (1996). Physical Activity and Health: A Report of the Surgeon General
- U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (2002). Guide to Community Preventive Services.
- Rails-to-Trails Conservancy. (2006) Health and Wellness Benefits.
- American Heart Association, Public Policy Agenda, 2010-2014
- Federal Highway Administration, (December 2016) Small Town and Rural Multimodal Networks



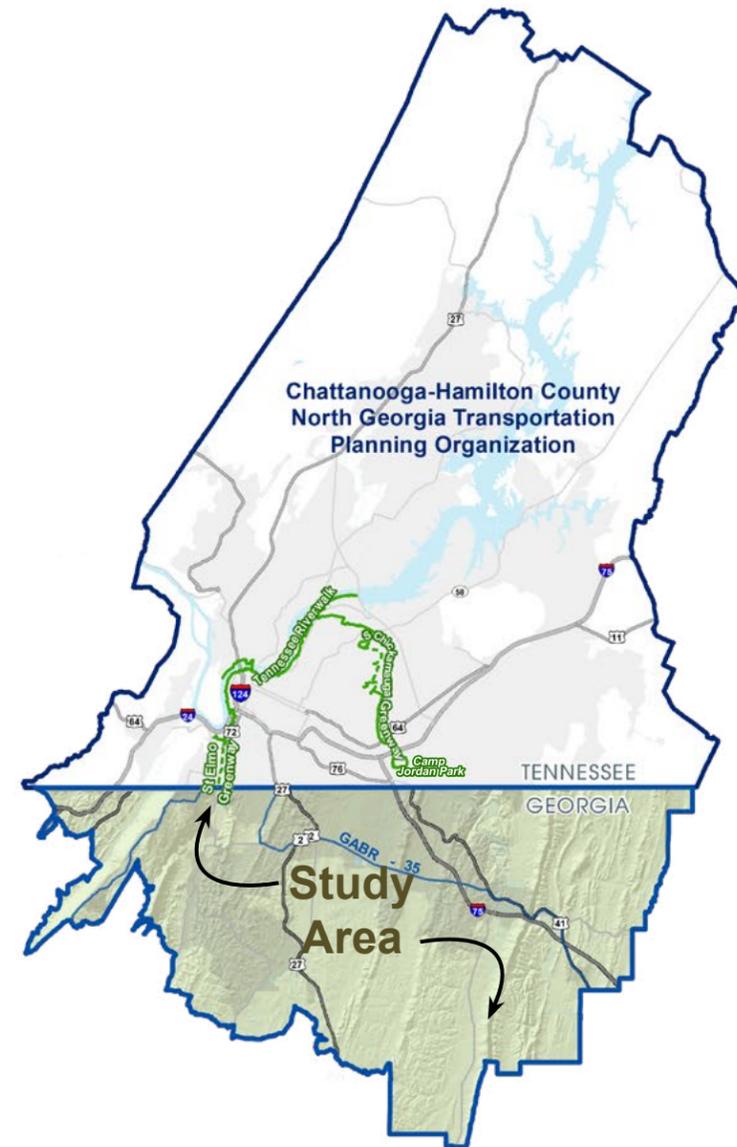
Project Overview:

The Northwest Georgia Feasibility Study for Bikeways & Pedestrian Multi-Use Routes is located in the Tri-State Region of Tennessee, Alabama, and Georgia. The study area is comprised of the North Georgia portion of the Chattanooga-Hamilton County / North Georgia Transportation Planning Organization (CHCNGA-TPO).

Regional Context:

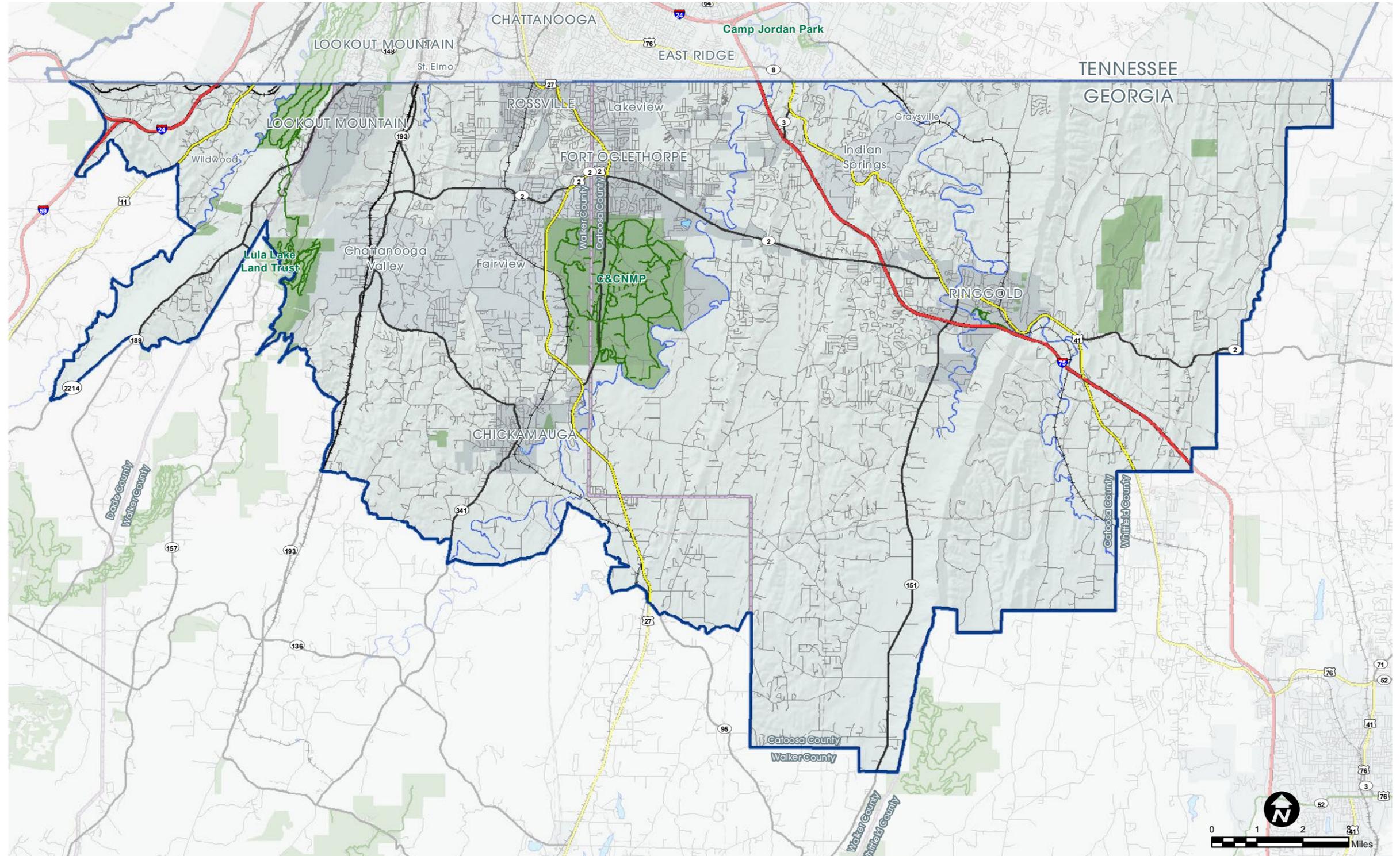


Local Context:



Study Area Overview:

The study area consist of approximately 250 square miles of Northwest Georgia including all of Catoosa County, the upper portion of Walker County and a small portion of Northeastern Dade County.





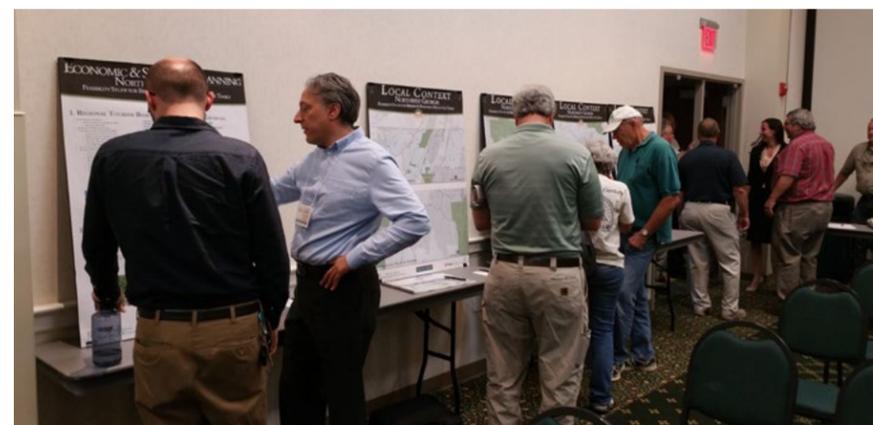
The Northwest Georgia Feasibility Study for Bikeway and Pedestrian Multi-Use Routes involved input from stakeholders in several different formats, some of them being qualitative and some quantitative. Evaluation and incorporation of stakeholder and community input has been key to shaping this study and evaluating the feasibility of proposed routes. The following input tools have been included in the process:

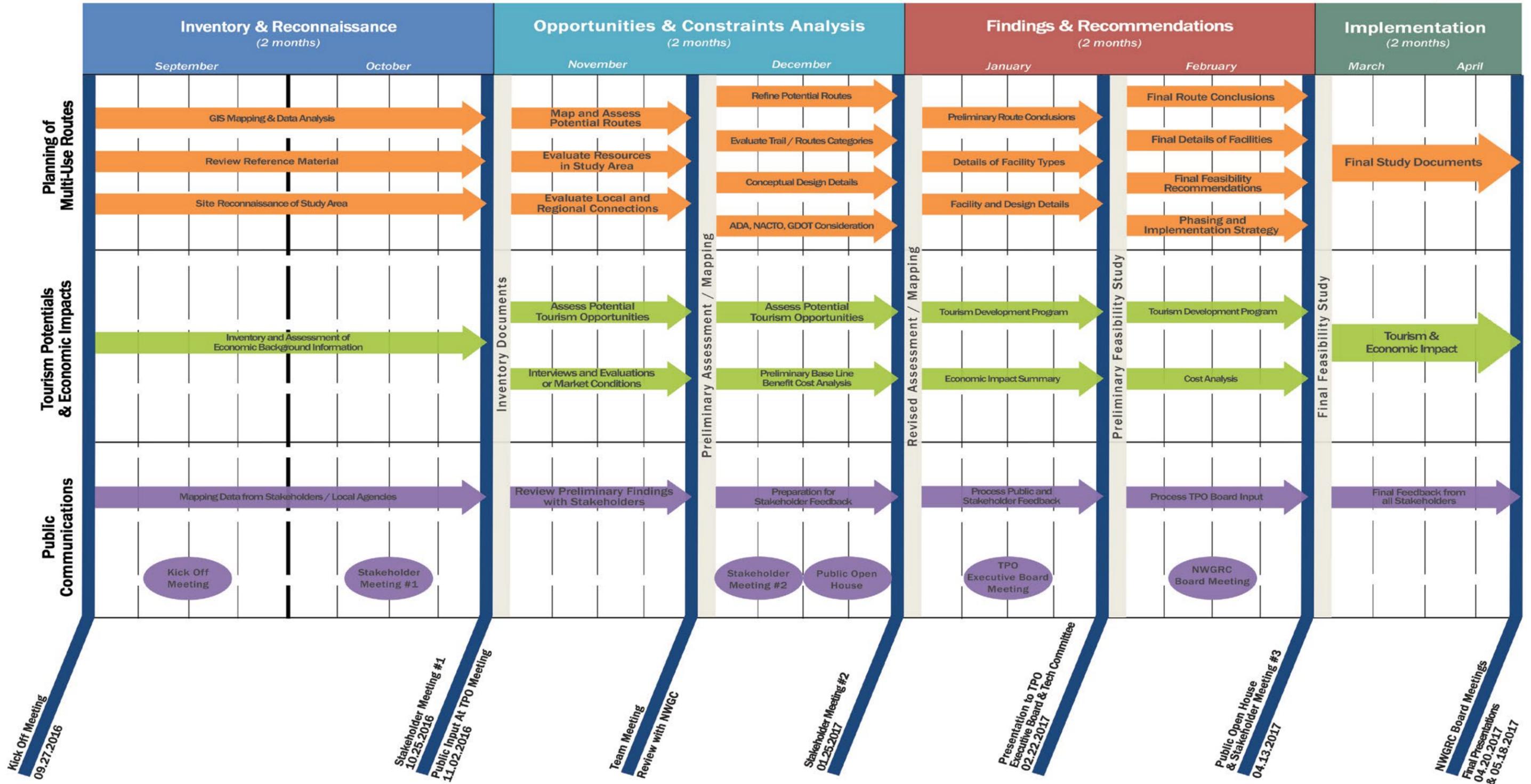
- Meetings and interviews with visitor attractions, hotels and services, retailers and other business, tourism agencies and park representatives
- Steering committee meetings to generate ideas and solicit input on existing conditions, opportunities and constraints, potential routes and economic impact
- A Public Open House to review the preliminary findings, solicit feedback and generate excitement regarding the potential routes and their impact
- Presentation of the preliminary study findings to the TPO Executive Board for review and feedback
- Presentation to the Northwest Georgia Regional Commission

Several topics or “Big Ideas” surfaced from the initial inventory research and the opportunities and constraints. The main ideas or topics that were prioritized related to existing and proposed multi-use routes include: Economic impact and tourism, recreation, transportation, health, preservation of the environment and scenic view shed, user safety, equity and education. All of these ideas were highlighted as important, and further prioritization was requested at community and stakeholder input sessions to establish which ideas where the highest priority.

Stakeholders, expressed economic impact and tourism potential as the most important prioritization. Conversely, input from the general public revealed a desire for more recreation opportunities in the study area as the top priority, with economic development and tourism coming in second place. Both groups gave preservation of the environment and transportation opportunities a high priority ranking. Furthermore, safety conditions would be an inherent requirement for all proposed routes.

Stakeholder & Public Input Summary:	Priority			
	1 st	2 nd	3 rd	Total
Economic Impact & Tourism	9	6	8	23
Recreation	16	9	4	29
Transportation	5	3	9	17
Health	2	5	2	9
Environmental & Visual Preservation	4	4	9	17
User Safety	-	3	-	3
Equity	1	1	-	2
Education	1	-	1	2





The specific economic benefits of the bicycle and pedestrian routes proposed for the study area were evaluated in detail under the economic development strategy section of this plan. A brief summary of general benefits associated with trails, pedestrian walkways, shared-use paths and bicycle routes are described here to provide a general understanding of the many values associated with them.

Increased Property Value:

There are numerous examples around the country that display the positive connection between greenways, shared-use paths and parks. The closer proximity a property is located to a park or greenway the greater the gain in value. Trails are quickly becoming the most popular and highest demand amenity a community can offer.

- In a recent survey conducted by the National Association of Home Builders, trails ranked the second highest choice out of eighteen options for community amenities.



Enhanced Cultural Awareness & Community Identity:

Shared-use paths, greenways and bicycle routes frequently link to cultural resources and historic places. This often provides access to historic places such as battlegrounds, bridges, historic sites and historic buildings that might otherwise be difficult to reach.



- Pedestrian and bicycle access to cultural and historical places provides educational opportunities not necessarily found through auto related access
- Interaction on bike and pedestrian routes makes visitors feel more welcome and improves social and cultural exchange within local communities

Job Opportunities, Economic Stimulation & Tourism:

Shared-use paths, greenways and bicycle routes help generate revenue in several ways such as construction and maintenance, recreational rentals, environmental and cultural tourism, restaurants and lodging.

- An example is the Virginia Creeper Trail in southwest Virginia which generates \$2.5 million annually related to recreational uses from its visitors
- A study done by the University of Massachusetts revealed that for every \$1million spent on shared-use paths there was a yield of 9 jobs
- A general principle used from economic evaluations of greenways and shared-use paths is that one dollar of investment will gain a rate of return of three dollars or more.



Environmental Benefits:

Connection to regional and local environmental assets improves an understanding of their value. Many bike and pedestrian routes allow unique access to areas of scenic beauty and high environmental quality. Greenways and shared-use paths are frequently part of open space easements that protect water sheds and preserve wildlife habitat. Furthermore, trails and greenways help improve air quality by providing transportation alternatives that do not require the burning of fossil fuels.



- According to the Rails to Trails Conservancy / Active Transportation for America it was estimated in 2009, in America, that the annual value of walking and biking saved \$4 billion in gasoline expenses and reduced 14 million tons of carbon dioxide emissions
- Connected open space has proven to be of much higher value for wildlife habitat and ecosystem preservation than isolated pockets of open space

Promoting Healthy Living:

Shared-use paths, greenways and bicycle routes provide great opportunities to help maintain healthy lifestyles, especially in their appeal to all stages of life and their accessibility to people of all social backgrounds, economic positions and physical conditions.

- The American Heart Association has estimated that every \$1 spent on walking paths and bike trails provides for approximately \$3 in saved medical expenses
- The Center for Disease Control and Prevention (CDC) noted that creating and improving public spaces in a community to account for good access to pedestrian and bicycle routes generally increases the number of people who exercise in that community by 25%
- The National Highway Traffic Safety Administration calculated in 2009 that the health benefits from active transportation results in the prevention of premature deaths and equates to a national value of \$235 billion per year



Improved Transportation Options:

The sprawling nature of modern day development often leads to limited transportation choices. According to the Federal Highway Administration, two-thirds of the trips made by average Americans are less than 5 miles. Most people surveyed have indicated they would be willing to walk for 5 to 10 minutes or up to a 1/2 mile and bike up to 5 miles to their destination points if safe and convenient facilities were available to them. A complete transportation network offers effective transportation alternatives that include walking and biking infrastructure to connect people to their homes, places of work and places of play.





Inventory & Analysis

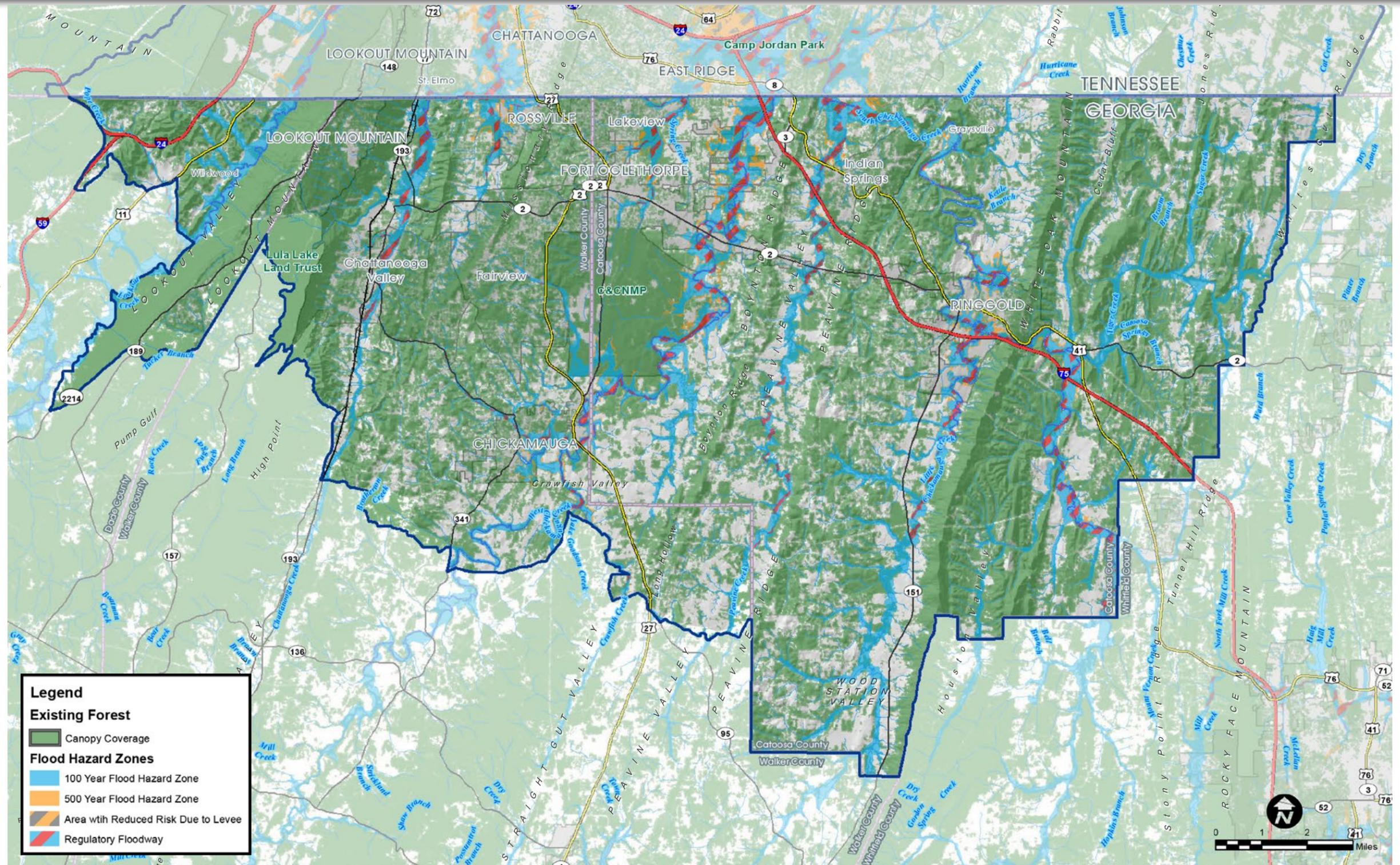


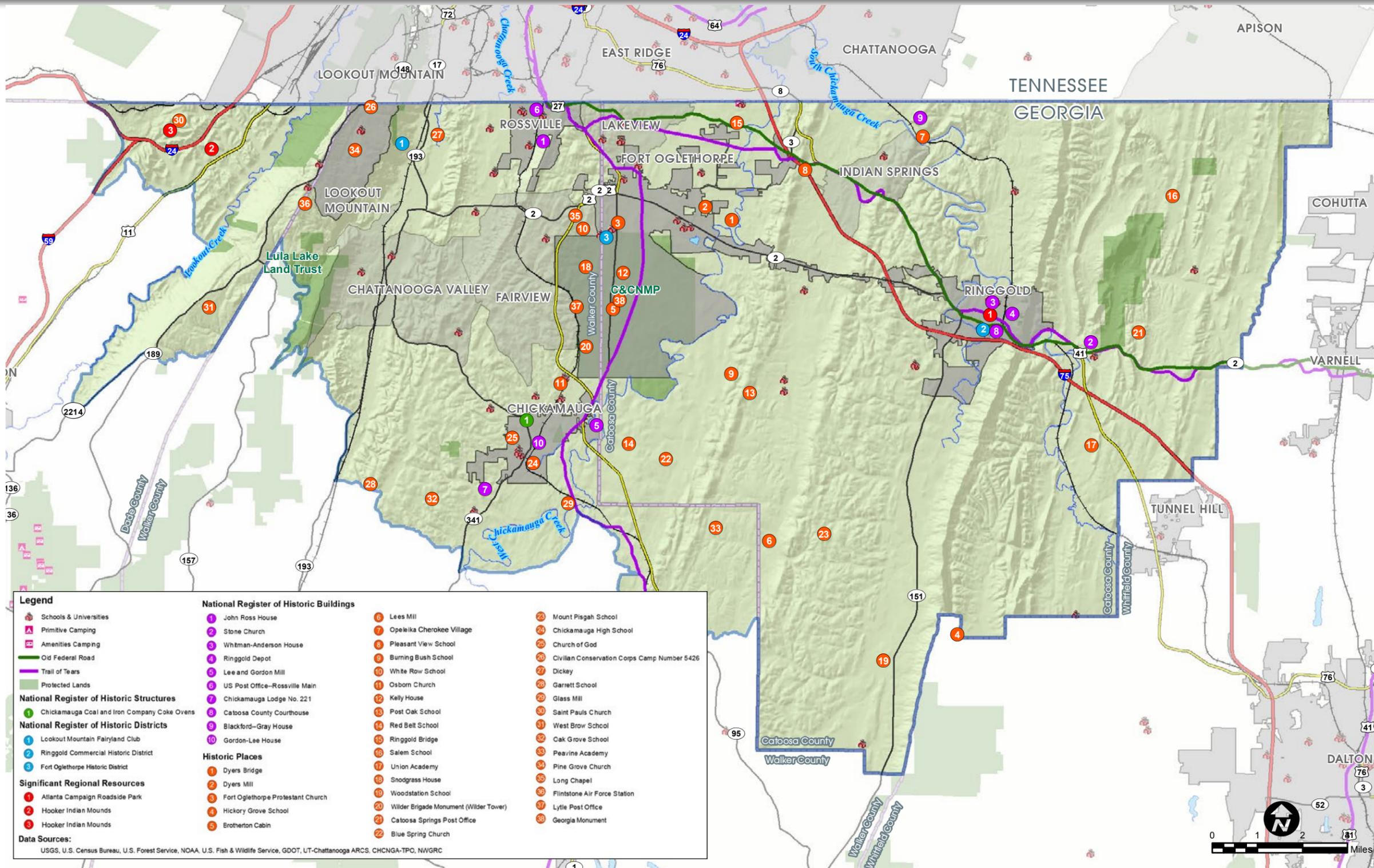
An important element of the Northwest Georgia Feasibility Study for Bikeway & Pedestrian Multi-Use Routes was a complete evaluation of the opportunities and constraints present in the study area.

Natural Resources Overview:

The natural resources map displays the percentage of canopy coverage and the flood hazard zones for the Northwest Georgia Feasibility Study for Bikeway & Pedestrian Multi-Use Routes Study Area.

The map displays the areas that have a 1-percent annual chance of flooding (100-year floodplain), areas that have a 0.2-percent annual chance of flooding (500-year floodplain), and the floodway or the area of land that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.





Cultural Resources Overview:

The Northwest Georgia and Tri-State Region has a rich history dating back hundreds of years. The Chickamauga & Chattanooga National Military Park is the historic driver in the region. The park is the oldest and largest military park in the United States and comprises of several separate elements. Several key historic sites in the study area include: the Chickamauga Battlefield, the Old Stone Church, the Ringgold Depot, the John Ross House, and the Chickamauga Coke Ovens.

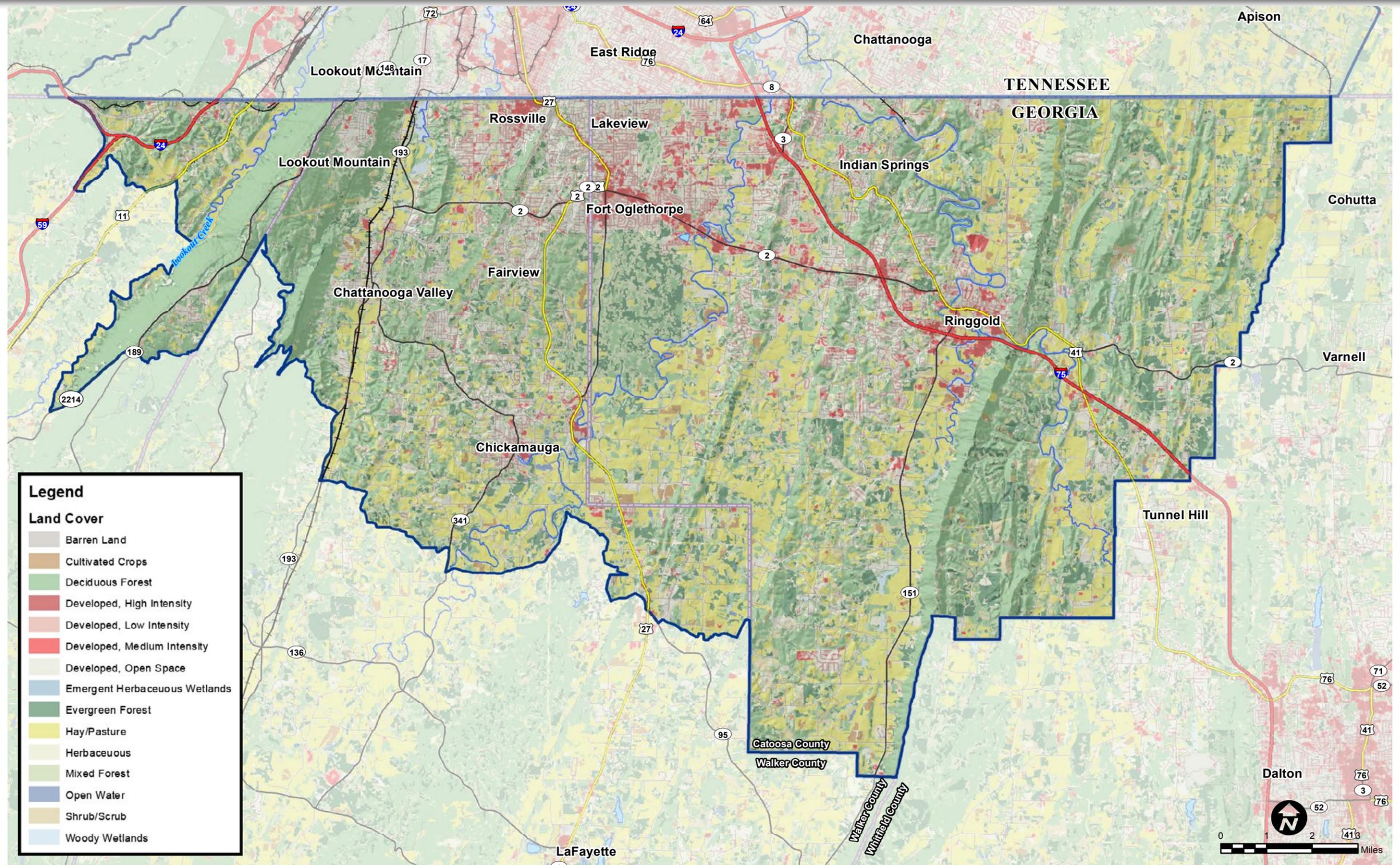
Legend	
	Schools & Universities
	Primitive Camping
	Amenities Camping
	Old Federal Road
	Trail of Tears
	Protected Lands
National Register of Historic Structures	
	Chickamauga Coal and Iron Company Coke Ovens
National Register of Historic Districts	
	Lookout Mountain Fairyland Club
	Ringgold Commercial Historic District
	Fort Oglethorpe Historic District
Significant Regional Resources	
	Atlanta Campaign Roadside Park
	Hooker Indian Mounds
	Hooker Indian Mounds
National Register of Historic Buildings	
	John Ross House
	Stone Church
	Whitman-Anderson House
	Ringgold Depot
	Lee and Gordon Mill
	US Post Office-Rossville Main
	Chickamauga Lodge No. 221
	Catoosa County Courthouse
	Blackford-Gray House
	Gordon-Lee House
Historic Places	
	Dyers Bridge
	Dyers Mill
	Fort Oglethorpe Protestant Church
	Hickory Grove School
	Brotherton Cabin
	Lees Mill
	Opeleika Cherokee Village
	Pleasant View School
	Burning Bush School
	White Row School
	Osborn Church
	Kelly House
	Post Oak School
	Red Belt School
	Ringgold Bridge
	Salem School
	Union Academy
	Snodgrass House
	Woodstation School
	Wilder Brigade Monument (Wilder Tower)
	Catoosa Springs Post Office
	Blue Spring Church
	Mount Pisgah School
	Chickamauga High School
	Church of God
	Civilian Conservation Corps Camp Number 5426
	Dickey
	Garrett School
	Glass Mill
	Saint Pauls Church
	West Brow School
	Oak Grove School
	Peavine Academy
	Pine Grove Church
	Long Chapel
	Flintstone Air Force Station
	Lytle Post Office
	Georgia Monument

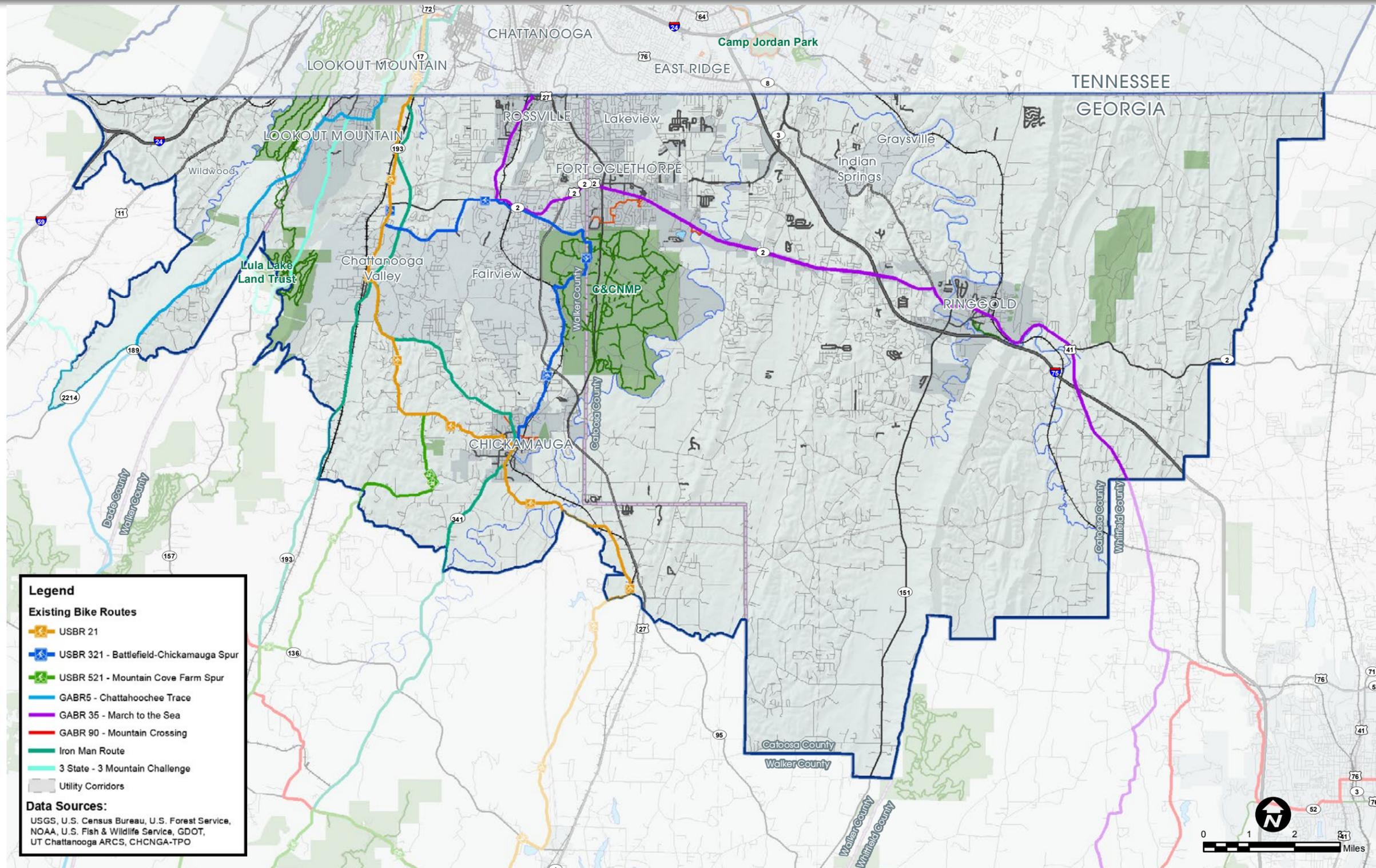


Land Cover Overview:

Land cover refers to the vegetation and artificial structures that cover the land's surface, such as, trees, grass, wetlands, along with buildings and pavement. Land cover is often a reflection of land use. For example, if crops cover an area of land, one can assume that the land's use is agricultural. However, the correlation between the land cover and land use is not always so clear. If an area of land is covered with trees, the land use could be recreation, conservation, commercial logging, or something else.

Land cover data can be used to assess environmental health, visualize the spatial patterns of biodiversity, predict and manage land development patterns of the Northwest Georgia Feasibility Study for Bikeway & Pedestrian Multi-Use Routes Study Area.





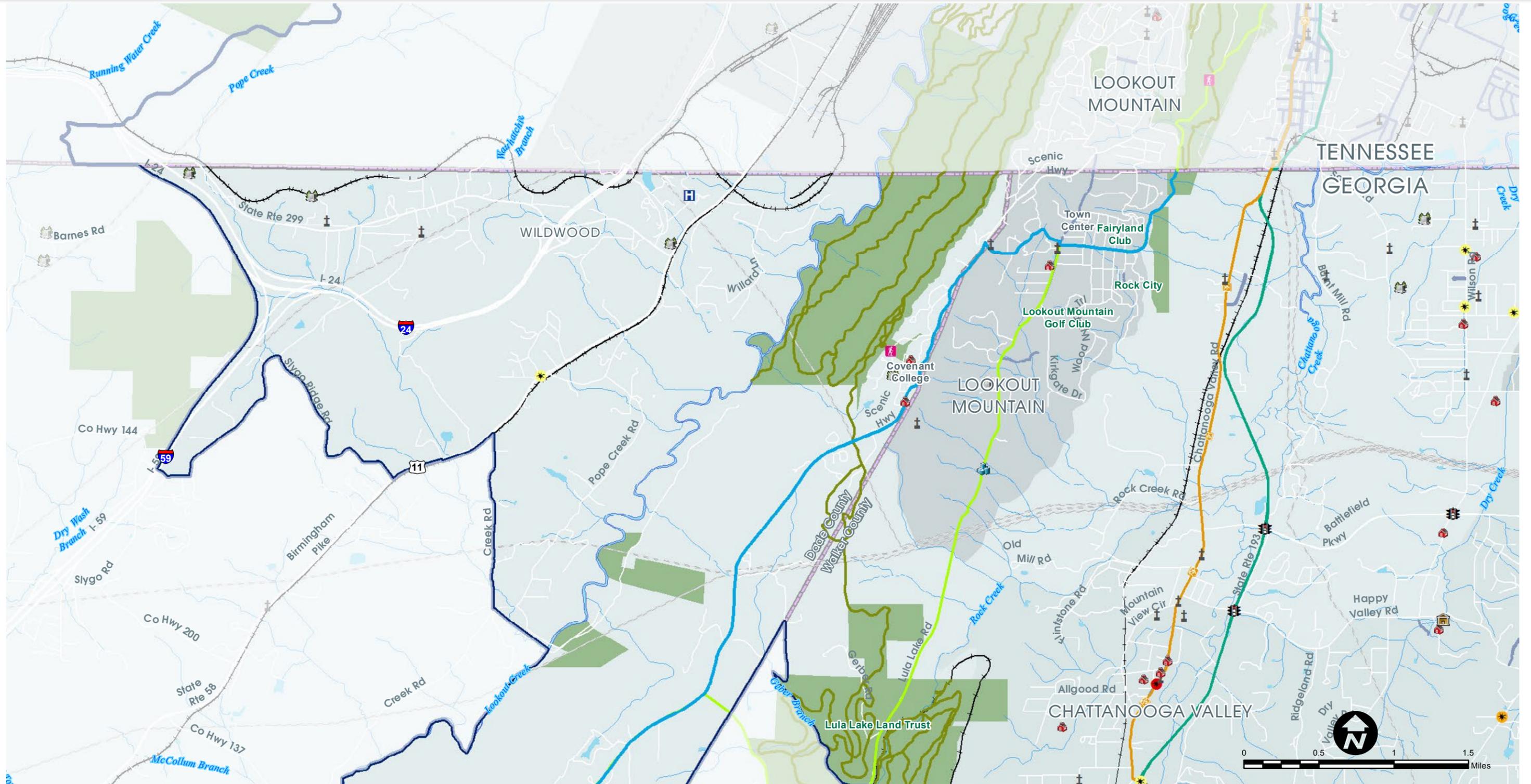
Existing Bike & Pedestrian Facilities Overview:

Northwest Georgia Feasibility Study for Bikeway & Pedestrian Multi-Use Routes Study Area currently has several bikeways and pedestrian facilities existing. There are several state bike routes, a U.S. Bicycle Route, shared-use paths, and numerous sidewalks and walking trails.

The U.S. Bicycle Route in the study area is U.S. Bicycle Route 21 (USBR 21) and is Georgia's first U.S. Bicycle Route designation that connects Atlanta to Chattanooga. It will eventually connect Atlanta to Cleveland, Ohio, when it is complete.

There are three State Bike Routes in the study area. One of which being, Georgia Bike Route 5 (GABR 5) - Chattahoochee Trace, which runs the western part of Georgia for 408 miles from the Tennessee border in Lookout Mountain to Lake Seminole in the south. Georgia Bike Route 35 (GABR 35) - March to the Sea, runs 428 miles from Rossville southwest to Savannah on the coast. Georgia Bike Route 90 (GABR 90) - Mountain Crossing, runs 210 miles from Cloudland Canyon east to Tallulah Falls across the northern part of the state.

At the time of this study it is understood that the State Bike Routes have not been utilized to a large degree. This limited use would appear to correlate with the routes that have heavy, automobile traffic and high speed.



Legend

Existing Pedestrian Facilities

- Existing Sidewalks
- Existing Trails

Existing Bike Routes

- USBR 21
- GABR5 - Chattahoochee Trace
- Iron Man Route
- 3 State - 3 Mountain Challenge

Institutions

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Museum
- Place of Worship

Points of Interest

- Signal
- Trailhead

Crash Data

- Pedestrian Accident, Fatality
- Pedestrian Accident
- Pedal-Cycle Accident
- Utility Corridors

Data Sources:

USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO

Wildwood & Lookout Mountain:

At the western edge of the study area, located just south of the TN-GA state line and lying along US Hwy 11 (Birmingham Pike) in Lookout Valley is the Dade County, GA community of Wildwood, with a US Post Office and a couple of small commercial areas, one just off I-24 Exit 169. There are no existing traffic signals on US 11 from the TN-GA state line to Trenton (which is outside the study area limits) and there do not appear to be any signed GA Bike Routes currently signed within the Lookout Mountain portion of the study area. Main line Norfolk Southern Railway tracks run parallel, adjacent to and east of US 11. Wildwood is a rural community comprised of the farms, fields and forests one would expect. There is also a scenic and historic segment of the Old Birmingham Highway, east of the Norfolk Southern Railway right-of-way (with access points to US 11 and Norfolk Southern Railway track grade separations at each end). There do not appear to be any bicycle or pedestrian facilities in the Wildwood area.

East of Wildwood, but over 1,000 feet higher in elevation is the City of Lookout Mountain, GA, in Walker County. Although many of the most popular Lookout Mountain visitor attractions may be located in TN (including the Incline Railway, Ruby Falls, the Battles for Chattanooga Museum) and Point Park as well as other units of the Chickamauga & Chattanooga National Military Park (C&CNMP), etc.; in adjacent Lookout Mountain, GA is family-owned and operated and world famous Rock City and Fairyland Caverns as well as other frequented sites. Collectively, these attractions bring an estimated 400,000 visitors to Lookout Mountain each year.

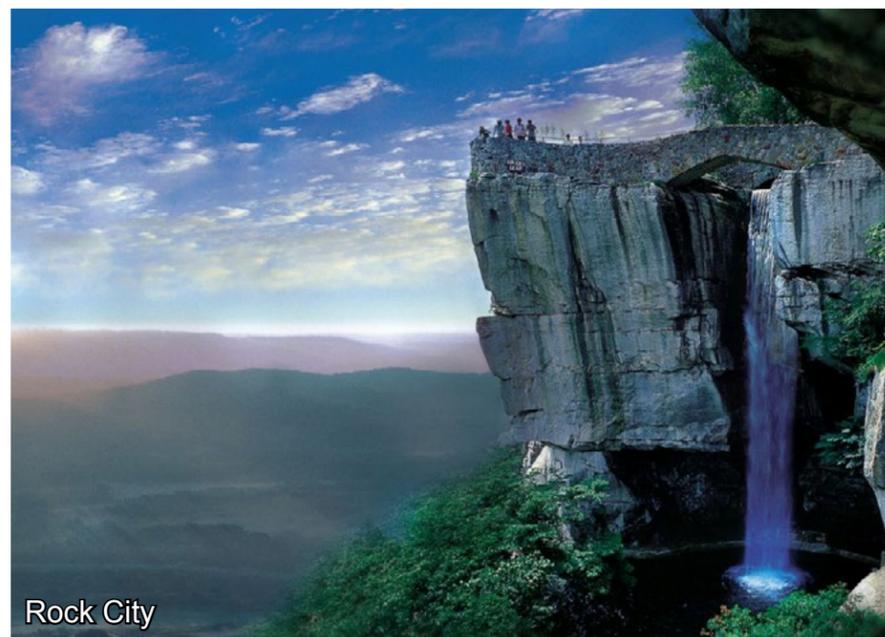
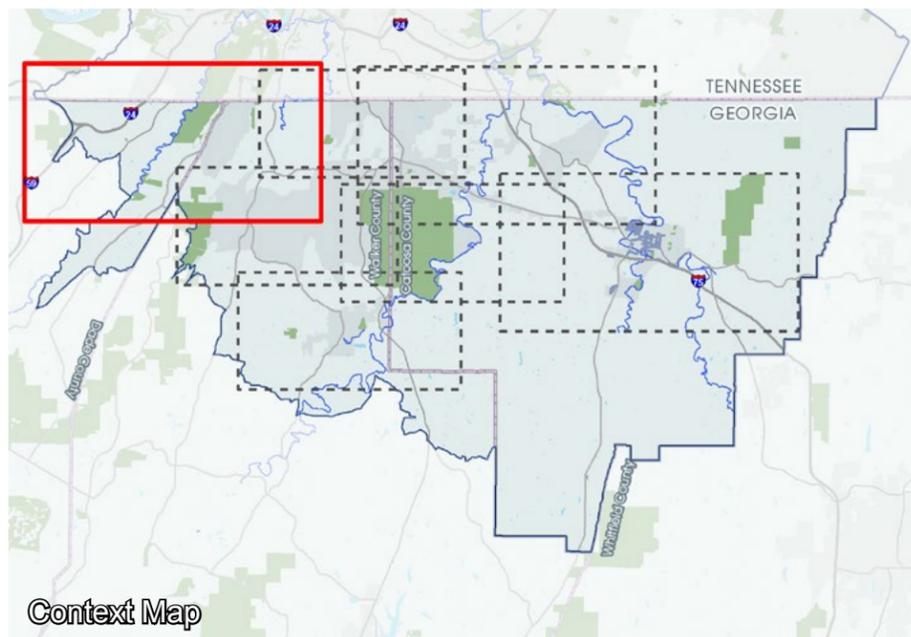
The Incline Railway alone ferries 160,000 passengers annually, including commuters. The Guild Trail in TN already facilitates hiking and biking along the moderately-sloping bed of an abandoned trolley track, enabling connections from other trails along the side slopes of Lookout Mountain around Point Park to the valley below via the east flank of the Mountain and into the Chattanooga community of St. Elmo.

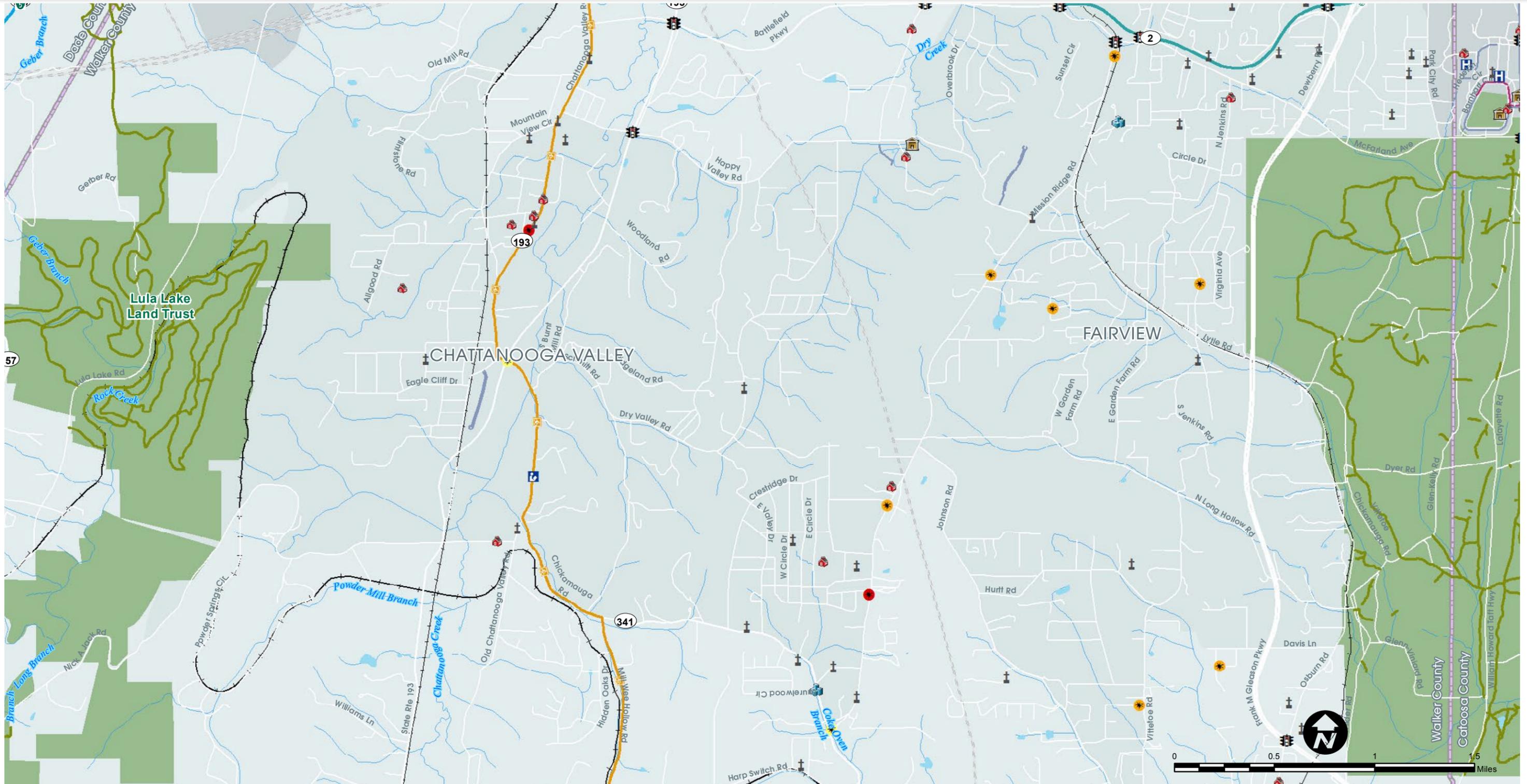
The City of Lookout Mountain, GA, has a population of a little less than 1,600 that has been in a modest decline for decades. The City is adjacent to the Dade County campus of Covenant

College with its current enrollment of over 1,000. Since most neighborhood street and rights-of-way are narrow, steep and often winding, there have been only very limited opportunities for bicycle or pedestrian facilities within the City, but there are several networks of natural-surface trails in the vicinity and a heavily-used concrete sidewalk along Lula Lake Road is in place which links Fairyland Elementary School in Lookout Mountain, GA with the state line at Lookout Mountain, TN. In addition, several neighborhood streets have also been striped and signed for one-way vehicular traffic to accommodate for pedestrians and bicyclists, primarily to facilitate access to this Elementary School.

Lookout Mountain, GA is also currently in the process of redeveloping its Town Center. Given the vintage Fairyland theme found in its street names, community design, Rock City and the Fairyland Club, the City has long been associated with tourism. Although overnight accommodations may be easier to find in Lookout Mountain, TN and Chattanooga, there are lodgings within Lookout Mountain, GA, such as the Chanticleer Inn and Garden Walk Bed & Breakfast. The City is currently exploring opportunities for hiking, sidewalks and shared-use path system connections to the points of interest within the City and to the surrounding communities. Just as in Wildwood, there do not appear to be any GA Bike Route alignments currently mapped or signed in the Lookout Mountain portion of the study area.

In addition to Covenant College, among other features south of the City of Lookout Mountain, GA, are properties of the Lula Lake Land Trust (LLLT) with its extensive trail network and plans for a shared-use path connection to Cloudland Canyon State Park, still further south (and outside of the study area). LLLT is comprised of hundreds of acres of natural and scenic land and with its own internal hiking / biking trails, network, including portions of the old abandoned Durham Coal rail bed which descends along the eastern flank of Lookout Mountain from the plateau down to the Chattanooga Valley floor at the old "Chenchat" intersection with the old TAG railroad, south of the Flintstone community. Other remaining traces of this old Durham Coal rail bed can also be found extending even further east into the City of Chickamauga.





Legend

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks
- Existing Trails

Existing Bike Routes

- USBR 21
- GABR5 - Chattahoochee Trace
- GABR 35 - March to the Sea

Institutions

- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Points of Interest

- Signal

Crash Data

- Pedestrian Accident, Fatality
- Pedestrian Accident
- Pedal-Cycle Accident

Utility Corridors

Data Sources:

USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO

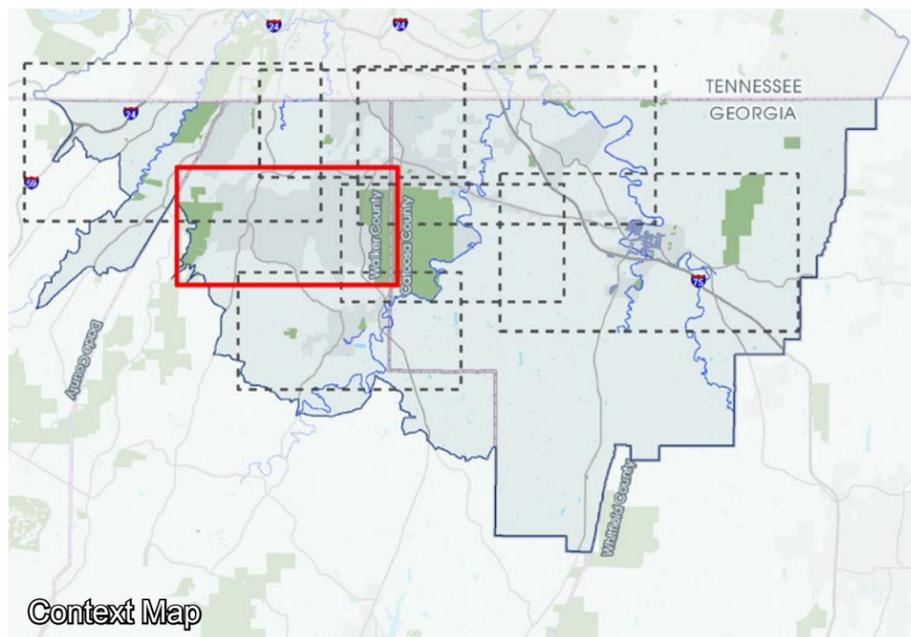
Chattanooga Valley & Fairview:

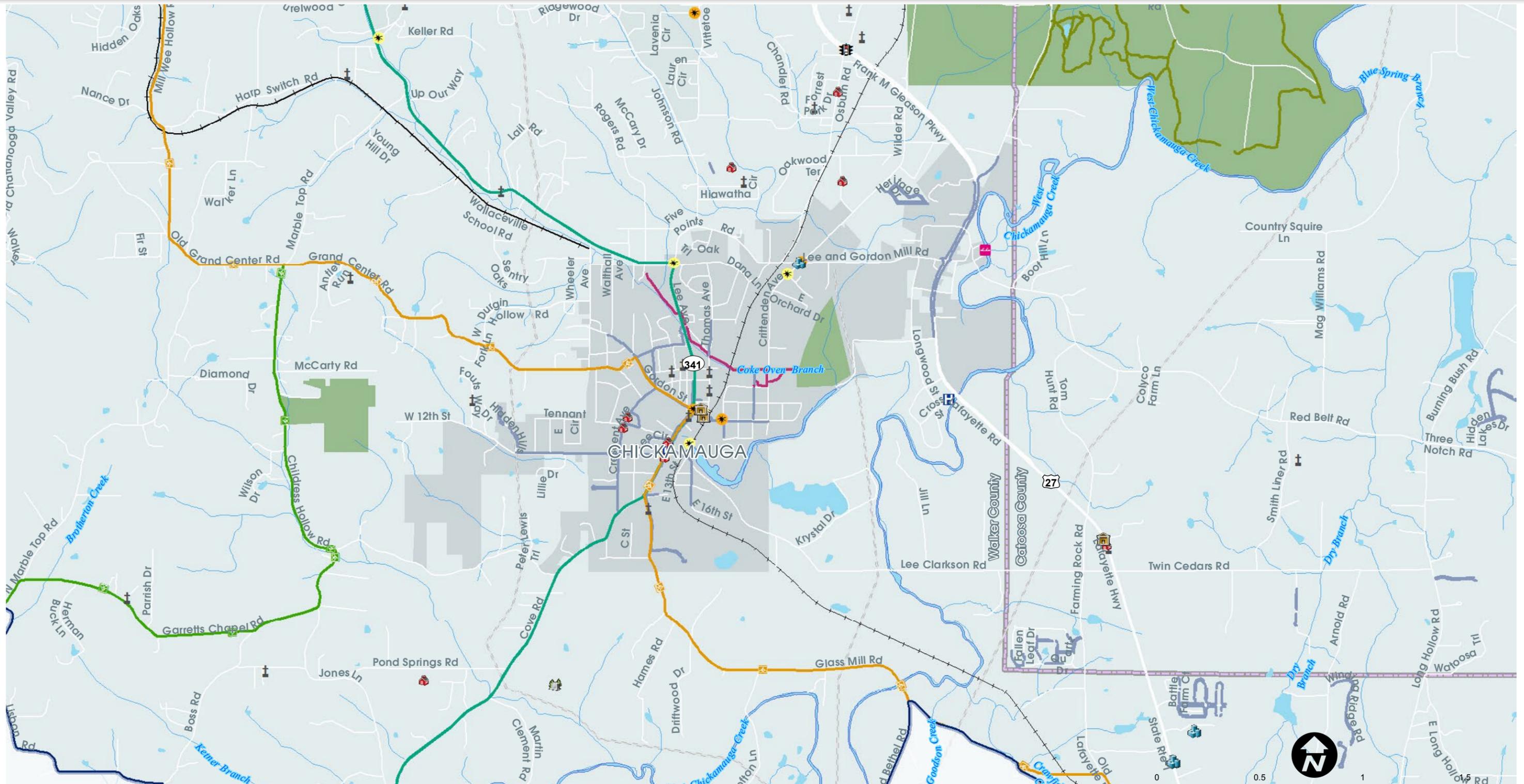
Further east and approximately the same 1,000 feet back down in elevation from the Lookout Mountain plateau is Chattanooga Valley. In addition to the community of Flintstone, Chattanooga Valley and Fairview are both also designated as “places”, used by the United States Census Bureau (USCB) for statistical and demographics monitoring. These communities are rural and / or low-density suburban in character and currently offer only very limited tourist appeal; however, located here is not only a portion of the long-abandoned bed of the east-west-running Durham Coal Company railroad but also the bed of the also long-unused and derelict north-south-running Tennessee-Alabama-Georgia (TAG) railroad line that runs from the Chattanooga community of St. Elmo south past Blowing Spring and on through Flintstone, Chenchat and High Point and as far south as McLemore Cove and Kensington (both well outside of the study area), offering the potential for unique shared-use path experiences along these former railroad beds.

Happy Valley Road connects Flintstone further east with Rossville Middle School and Ridgeland High School and provides a connection route north to the City of Rossville. Similarly, Turner Ridge Road and Cora Ann Drive connect the Middle School east to Mission Ridge Road, which intersects north to the McFarland Gap Road (the primary west-to-east Fairview corridor), which travels further east through the Chickamauga Battlefield and beyond. Branching off Mission Ridge Road to the southeast, Lytle Road parallels (and twice crosses) tracks of the Chattooga and Chickamauga Railway (C&CR) as it also runs southeast from Mission Ridge Road and along the western edge of the Battlefield on to Chickamauga, LaFayette, Trion and Summerville.

As currently mapped and signed, GA Bike Route 21 enters Chattanooga Valley into Flintstone on SR 341 (Chickamauga Road and Old Chattanooga Valley Road) from the southeast and exits to the north on Old Chattanooga Valley Road toward St. Elmo in Chattanooga. As also currently mapped and signed, GA Bike Route 321 enters Chattanooga Valley and Flintstone on Happy Valley Road from the northeast via SR 2 (Battlefield Parkway) and apparently unapproved alignments within the Chickamauga Battlefield and joins with GA Bike Route 21 in Flintstone.

Although not signed, GA “March to the Sea” Bike Route 35 is currently apparently still mapped to enter the study area from the south along US 41 and into Ringgold, where it then turns west onto SR 2 (Battlefield Parkway) and continues along that route through Fort Oglethorpe and then along the northern perimeter of Fairview to McFarland Gap Road / McFarland Avenue, where it travels north into Rossville, from which it follows US 27 (Rossville Boulevard) into Chattanooga. There do not appear to currently be any bicycle or pedestrian facilities within the Chattanooga Valley or Fairview portions of the study area.





Legend

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks
- Existing Trails

Existing Bike Routes

- USBR 21
- USBR 521 - Mountain Cove Farm Spur
- Iron Man Route

Institutions

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Crash Data

- Pedestrian Accident
- Pedal-Cycle Accident

Points of Interest

- Canoe Launch
- Signal
- Utility Corridors

Data Sources:

USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO, City of Ringgold

Chickamauga:

South of Chickamauga Battlefield and well off US 27 (LaFayette Road), the City of Chickamauga provides a step back in time to a very walk-able historic mill town core with cultural heritage sites that can provide an unexpected and very interesting visitor experience. As with Fort Oglethorpe, Chickamauga is located adjacent to the Battlefield and is therefore an important gateway to the military heritage of battles fought there during the Civil War.

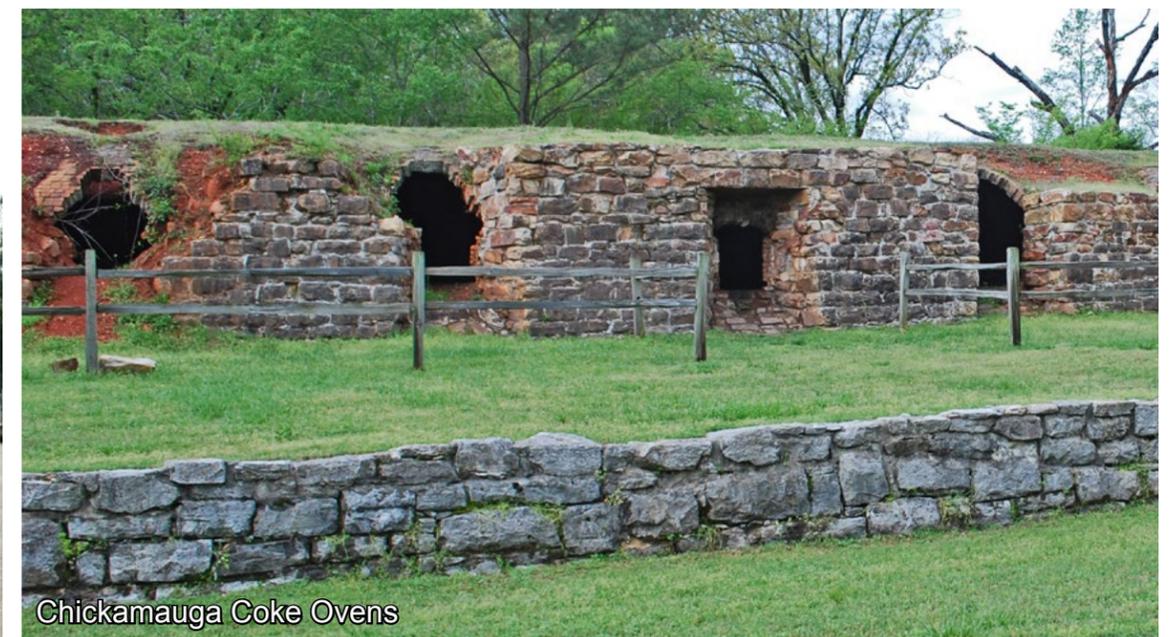
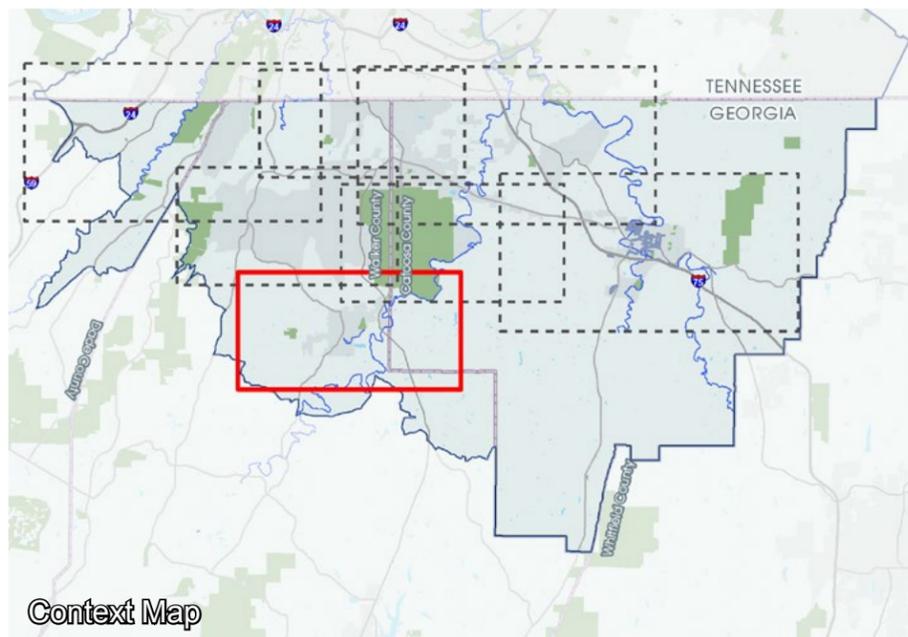
Chickamauga is also home to the Veterans of All Wars Museum and Crawfish Springs Park, both of which appeal to the historic and military heritage tourist. The streets and avenues of the City will also tell their own story of that military history, with names of such famous generals as Longstreet, Crittenden, Hood and Stewart. Holland-Watson Veterans Memorial Park is another important heritage site for both veterans and military buffs. Chickamauga also offers an understanding of its Cherokee Heritage and the Trail of Tears. Most prominent of these is the site of the Cherokee Courthouse, just across the road from Crawfish Springs, named for Chief Crayfish, who lived here before the Removal.

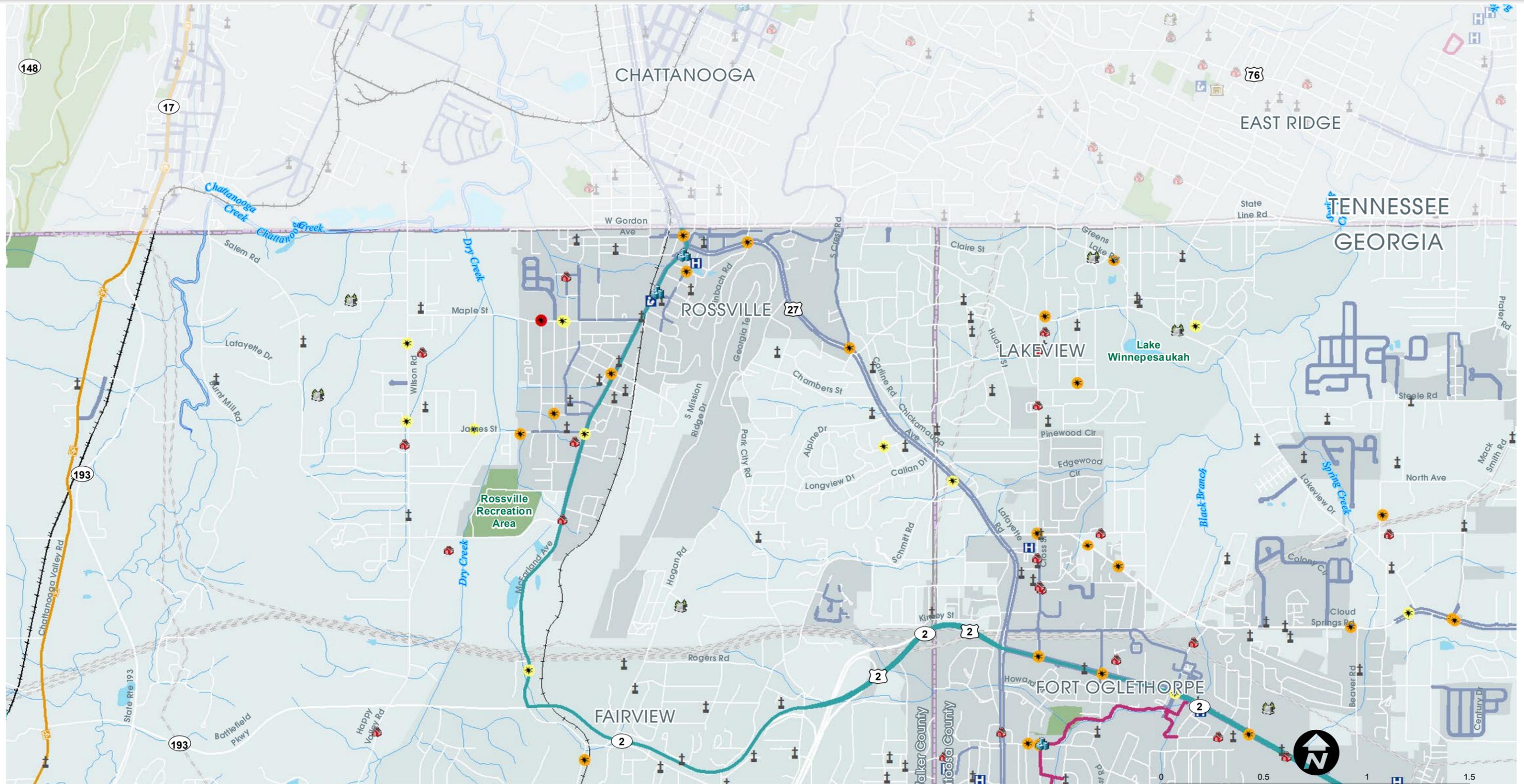
Lee & Gordon's Mills, the Gordon-Lee Mansion, and the Walker County Regional Heritage and Model Train Museum as well as the site of the Durham Iron and Coal Company and the old Chickamauga Coke Ovens (now Coke Oven Park) provide a look into the industrial heritage of Chickamauga. Open on weekends during summer months, the Gordon-Lee Mansion is a focal point of the old City and the Lee & Gordon's Mills accommodates weddings and other special events that bring even more visitors into this area as tourists. The Veterans of All Wars Museum alone receives over 4,000 visitors annually.

The Tennessee Valley Railroad Museum in Chattanooga also operates excursion trains to and through Chickamauga ("The Chickamauga Turn"), providing more direct tourism links from Chattanooga. Based on sample data provided by the Museum, the train hosts approximately 2,000 passengers per year on the 16 trips from Chattanooga to Chickamauga which also stop at the Wilder Tower Monument in the Chickamauga Battlefield. Even more Chickamauga stopover time may eventually be possible as dining options increase and become more available to rail passengers.

The existing West Chickamauga Creek Blueway begins on a canoe launching site just below the Lee & Gordon's Mills dam and enables canoeists and kayakers to paddle downstream (past a number of other canoe launch sites) to Camp Jordan Park in East Ridge, TN or, if ambitious enough, all the way down to the Tennessee River.

In addition to downtown streetscaping and plans to enhance and extend existing sidewalks and shared-use paths to connect its activity centers, GA Bike Route 21 has currently been mapped and signed to enter Chickamauga from the south via Glass Mill Road and exit north along SR 341 toward Flintstone in Chattanooga Valley. GA Bike Route 321 has similarly been mapped and signed to also exit north from Chickamauga but along Lee Avenue and Five Points Road to Osburn Road and then eventually entering Chickamauga Park on an alignment where bikes are apparently prohibited. Despite dramatic population growth between 2000 and 2010, Chickamauga population growth since then has been very sluggish and stands at approximately 3,100.





Legend

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks
- Existing Trails

Existing Bike Routes

- USBR 21
- GABR5 - Chattahoochee Trace
- GABR 35 - March to the Sea

Institutions

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Crash Data

- Pedestrian Accident, Fatality
- Pedestrian Accident
- Pedal-Cycle Accident
- Utility Corridors

Data Sources:

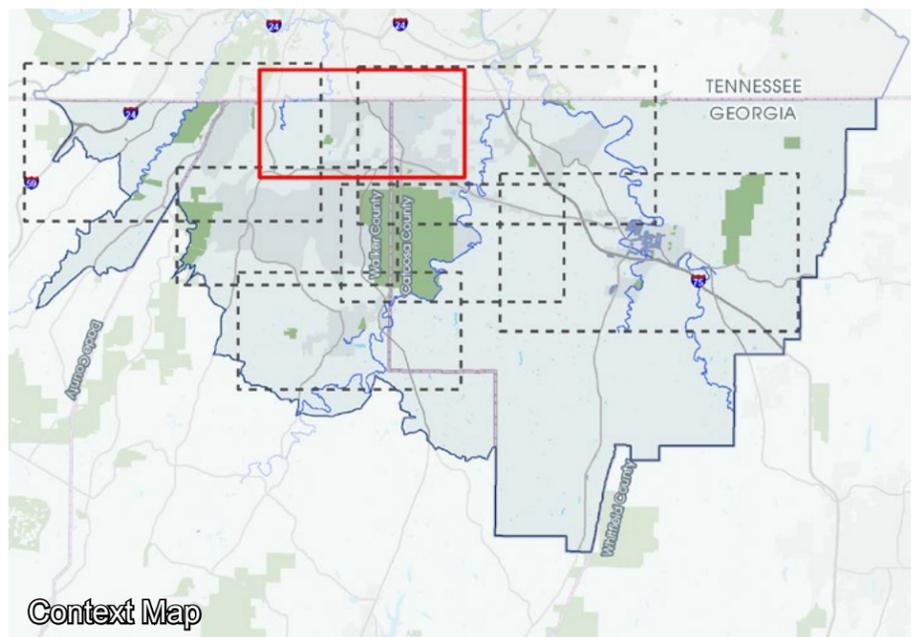
USGS, U.S. Census Bureau, U.S. Forest Service,
NOAA, U.S. Fish & Wildlife Service, GDOT,
UT Chattanooga ARCS, CHCNGA-TPO

Rossville & Lakeview:

The City of Rossville provides an important and primary gateway from Chattanooga into the study area, but at present offers few sites of significance that are marketed to visiting tourists. The Chief John Ross House (located at 200 East Lake Avenue) is a Cherokee Heritage site that was once home to the Principal Chief of the Cherokee Nation and who long negotiated extensively, but unsuccessfully against Removal until he and the rest of his tribesmen were forced west by the US Government on the infamous Trail of Tears. Two small spring-fed ponds and security fencing around the site may not be particularly conducive for tourism. Based on data supplied by the City, it is estimated that only about 1,000 people visit the Ross House each year, and that number is declining. After decades of a declining population, however, Rossville has risen to a population of approximately 4,000 and has remained somewhat steady at that level for several years.

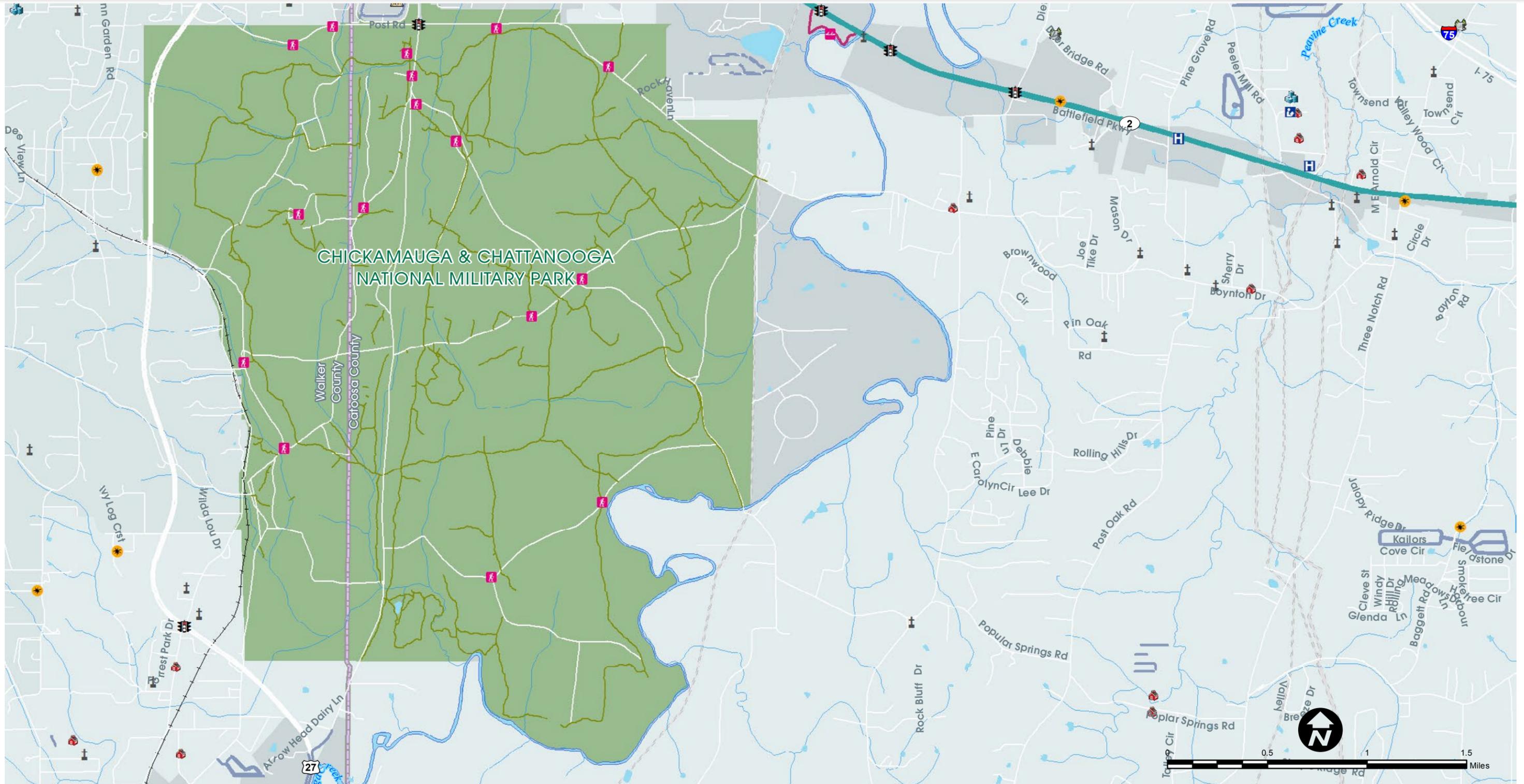
In addition to an existing network of concrete sidewalks throughout Rossville, which connects to both Fort Oglethorpe on the southeast and Chattanooga on the north, GA "March to the Sea" Bike Route 35 is apparently still mapped (but not signed) to enter Rossville from the south along McFarland Avenue and exit north along US 27 (Rossville Boulevard) into Chattanooga. Although its sidewalk network is old and in places needs repair, enhancement and improved internal inter-connections, a pedestrian can walk from Rossville to Fort Oglethorpe or into the Chattanooga suburbs of East Lake, Highland Park and East Chattanooga as well as downtown Chattanooga and points far beyond. The City has current plans for improving its sidewalk system and creating a shared-use path network to better inter-connect its activity centers and points of interest.

Like Chattanooga Valley and Fairview, Lakeview is an unincorporated community, but is also a USCB-designated "place". Currently, it does not appear to have any facilities specifically for pedestrians. In western Lakeview, near Rossville and Fort Oglethorpe, GA, and East Ridge, TN, is the family-owned and operated Lake Winnepesaukah amusement park, which has offered amusements, rides and family entertainment to visitors since 1925 and recently added a water park feature as well. The 280-acre Park features the traditional amusement park experience to guests and attracts an annual attendance in the hundreds of thousands, primarily from within a 250-mile radius of the tri-state (TN-AL-GA) area around Chattanooga. Despite this, there are currently no bike or pedestrian access facilities to Lake Winnie or elsewhere in western Lakeview.





Chickamauga & Chattanooga National Military Park



Legend

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks
- Existing Trails

Existing Bike Facilities

- GABR 35 - March to the Sea

Institutions

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Points of Interest

- Signal
- Canoe Launch

Crash Data

- Pedestrian Accident
- Utility Corridors

Data Sources:

USGS, U.S. Census Bureau, U.S. Forest Service,
NOAA, U.S. Fish & Wildlife Service, GDOT,
UT Chattanooga ARCS, CHCNGA-TPO.

Chickamauga & Chattanooga National Military Park:

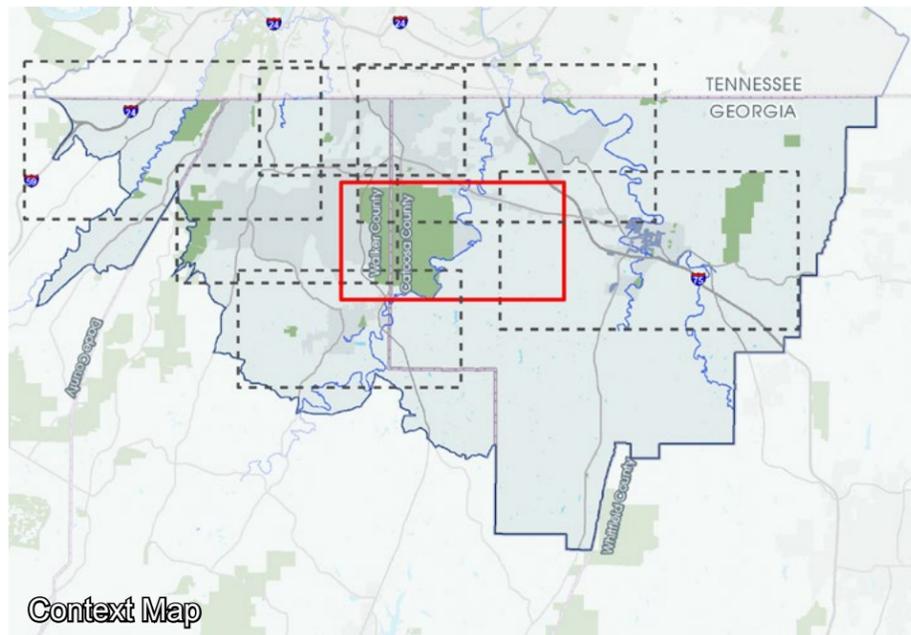
In the heart of the study area is the Chickamauga Battlefield of the Chickamauga & Chattanooga National Military Park (C&CNMP). The Battlefield is located adjacent to Fort Oglethorpe and just north of Chickamauga and is a primary driver for most of the military heritage tourism throughout the entire region, especially if focused on the Civil War. The Park is the oldest and largest National Military Park in the US and is comprised of over a dozen separate major sites (units) including the Chickamauga Battlefield and Point Park (at the northern "point" of Lookout Mountain) and a series of Missionary Ridge reservations, Orchard Knob and many more monument and plaque sites scattered throughout the area.

The Park experienced a rapid increase in annual visits following World War II, but has since been relatively stable at around a million visits per year in recent decades. Unexpectedly, attendance did not spike in 2013, during commemoration of the sesquicentennial of the Battle of Chickamauga and Battle of Chattanooga; however interest and attendance continues to remain strong year round.

The primary C&CNMP site within the study area is Chickamauga Battlefield and Visitors Center, including the Wilder Brigade Monument (Wilder Tower), and recreation fields. The other most significant sites (units) are primarily located in Tennessee, in and around Chattanooga. There is also a small Park Visitors Center located in Lookout Mountain, TN, which provides an indication of the heritage visitor count that might be interested in accessing trails into Lookout Mountain, GA. Recent surveys conducted by the National Park Service (NPS) provide an indication of participation levels for various activities within the Park, several of which are applicable to this study. Over 50% of Park visitors participated in hiking and walking or jogging within the Park. That percentage translates to over 500,000 visitors or over 300,000 on C&CNMP sites within the study area. The survey also indicated that about 5% of regular visitors already bike in the Park, a share which translates to about 50,000 bikers, over 32,000 of them within the study area.

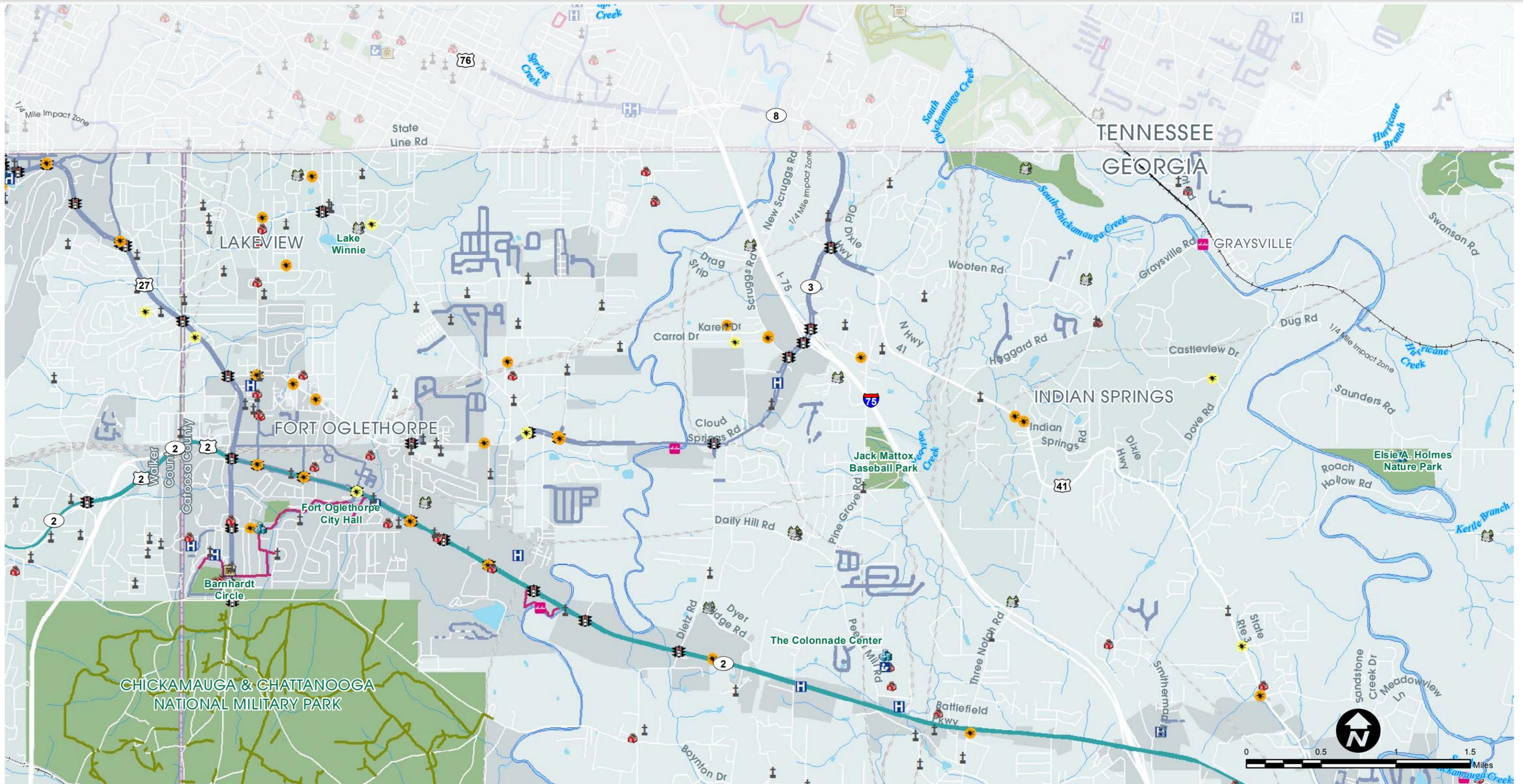
During 2013 National Park Service (NPS) rangers led Battlefield Bike Rides one Saturday each month, which started at the Visitors Center. It should be noted that the Park Service does not offer biking trails, per se, nor does it encourage bicycling through the Park for mere recreational or thru-transportation purposes. The Park is intended as a memorial, an educational experience, and a way to study the Battle and honor those whose lives were lost or altered in it. That being said, biking tours can and should be a way to learn about the Battlefields and these are encouraged. In addition to NPS-sponsored rides, the Park is also host to the annual Chickamauga Battlefield Marathon. Although limited to 1,500 participants, it attracts many runners and spectators from near and far away.

Chickamauga Battlefield is inter-laced with a network of natural surface and crushed stone hiking and horseback trails and the asphalt-paved road network is suitable for biking as well as vehicular use. GA Bike Route 321 has apparently been mapped and signed to enter the Park from Chickamauga on the south via Osburn Road, entering onto the internal roadway network and then use those internal Park trails (some of which are prohibited from bicycle use) to cross through the Park and exit it west on McFarland Gap Road and into Fairview and beyond.





Fort Oglethorpe, Indian Springs, & Graysville



Legend

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks
- Existing Trails

Existing Bike Facilities

- GABR 35 - March to the Sea

Institutions

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Points of Interest

- Signal
- Canoe Launch

Crash Data

- Pedestrian Accident
- Pedal-Cycle Accident

Utility Corridors

Data Sources:
USGS, U.S. Census Bureau, U.S. Forest Service,
NOAA, U.S. Fish & Wildlife Service, GDOT,
UT Chattanooga ARCS, CHCNGA-TPO.

Fort Oglethorpe, Indian Springs, & Graysville:

Strategically located just north of the Visitor Center for Chickamauga Battlefield, just south of the City of East Ridge, TN and mid-way between Lookout Mountain and Ringgold, the City of Fort Oglethorpe is also an important regional center of military heritage. Originally founded as a response to the Spanish-American War, it began operations in 1902 and for decades served as an elite US Army Cavalry Post and military base. Many historic components of the original old "Post" remain as testament to its legacy as the home of the 6th Cavalry, an induction center during WWI and WWII that housed German both POWs and enemy civilians. It also served as a major training post for the Women's Army Corps (WACs) during WWII. After the end of WWII, the Post was declared surplus and purchased to be redeveloped as a new municipality. Due to the combination of both annexation as well as internal growth, the population of Fort Oglethorpe has increased rather dramatically over its almost seven decades of existence such that it now stands near a population of 10,000.

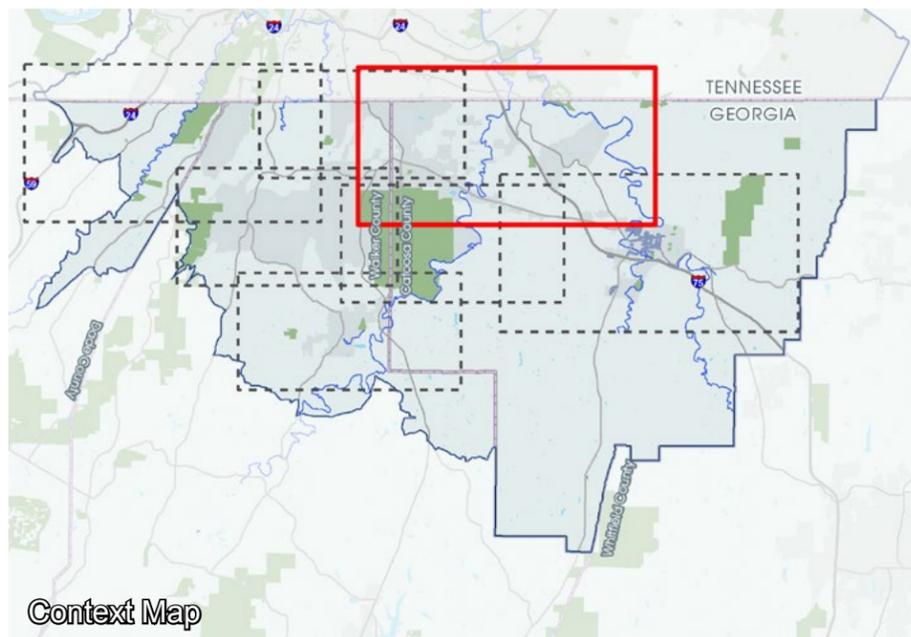
Fort Oglethorpe is an important gateway to the Battlefield. Post history is reflected in a number of specific sites as well as a National Register Historic District. In the center of the District is Barnhardt Circle, which surrounds the original Parade Ground and on which much of the original officer housing still stands from Old Post days. Although some of the older houses and other buildings have been demolished over time and replaced by sometimes incompatible buildings that may distract from the historic character of the Post, there remain a sufficient number of the old buildings around the Parade Ground to clearly evoke a picture of the historic past of the Fort Oglethorpe cavalry post. Additionally, just off of Barnhardt Circle there are many other old significant Post buildings. For example, Absolute Fit Inc is located in the old Post PX. Tootsie's Treasures consignment shop occupies the old Post Gym. Several old warehouses located between the Parade Ground and Battlefield Parkway once housed stables for Post horses and supplies. The 6th Cavalry Regiment Museum houses the artifacts, including weapons, photos, uniforms, vehicles and other collections commemorating the "Fighting Sixth" Cavalry stationed at the post from 1919 to 1942.

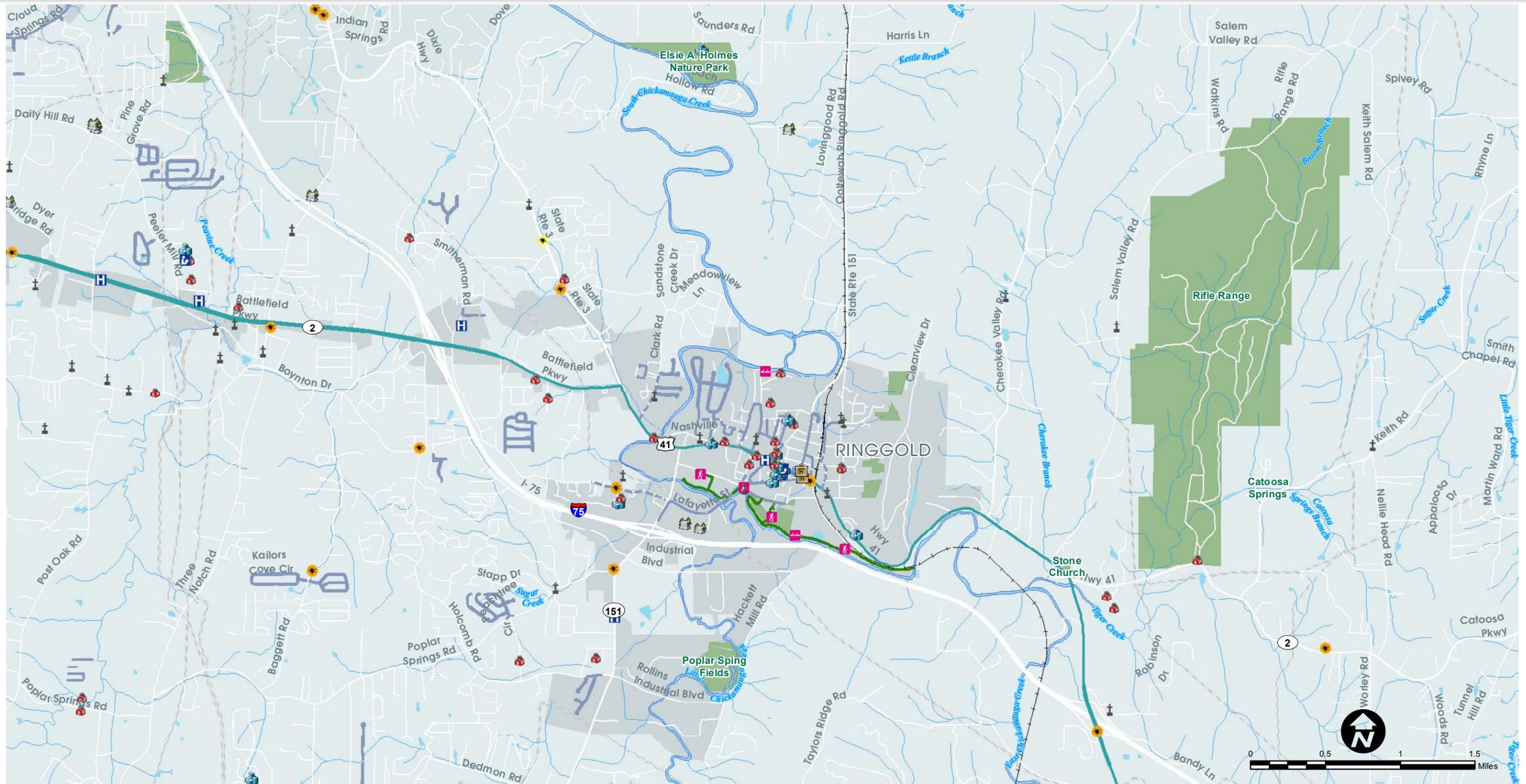
In addition to the extensive network of existing concrete sidewalks found throughout the City of Fort Oglethorpe which connects it, via US 27 (LaFayette Road), to Rossville as well as Chattanooga, the City has also provided the Black Branch Greenway which connects the Battlewood Drive neighborhood

to the City Hall campus, Gilbert-Stephenson Park, and other City recreational parks, including the Frank M. Gleason Nature Park to the Harker Road Shared-Use Path, which is connected to the Barnhardt Circle Shared-Use Path. The City has plans to connect the City Hall campus and Battlewood Drive neighborhood east to Lakeview-Fort Oglethorpe High School and an existing segment of the West Chickamauga Shared-Use Path on the eastern end of the City via the Battlefield Parkway Shared-Use Path. Other plans call for future connections north along Old LaFayette Road, Mack Smith Road and West Chickamauga Creek as well as southwest to the Chickamauga Park Visitor Center, west to the Cornerstone Medical Center Campus and Park City.

The existing West Chickamauga Creek Blueway flows north and across the eastern end of Fort Oglethorpe. The Blueway includes a canoe launch just south of SR 2 (Battlefield Parkway) where a short segment of the West Chickamauga Creek Greenway has been constructed. Although not signed, GA "March to the Sea" Bike Route 35 has been mapped to cross through the City along SR 2 (Battlefield Parkway). No other current GA Bikeway Route is mapped or signed to connect into Fort Oglethorpe.

Like Chattanooga Valley, Fairview and Lakeview, Indian Springs is an unincorporated community, but also a USCB-designated "place", which includes Graysville, where an old mill and dam were once a center of activity. Many new residential communities have been developed within the Indian Springs area of Catoosa County south to the Poplar Springs community and many of them feature concrete sidewalks, but none are inter-connected with one another. Peavine Valley has a number of school sites, including Graysville Elementary School, Boynton Elementary School, Heritage Middle School and Heritage High School. In addition, the Benton Place Campus, Jack Mattox Recreation Park and Boynton Recreation facilities are found along this Peavine Creek corridor. There is a walking course around Jack Mattox Park and plans have been made for a future Peavine Creek Greenway from the Middle School to Graysville. Although once a municipality, Graysville is now merely a busy crossroads community with an old historic core which serves as a center for the growing residential areas around it. Other than in some of these new residential subdivisions, there are also currently no pedestrian or bicycle facilities in Graysville.





Legend

Existing Pedestrian Facilities

- Existing Sidewalks
- Existing Trails

Existing Bike Facilities

- GABR 35 - March to the Sea

Institutions

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Points of Interest

- Trail Head
- Canoe Launch

Crash Data

- Pedestrian Accident, Fatality
- Pedestrian Accident
- Pedal-Cycle Accident
- Utility Corridors

Data Sources:

USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO, City of Ringgold

Ringgold:

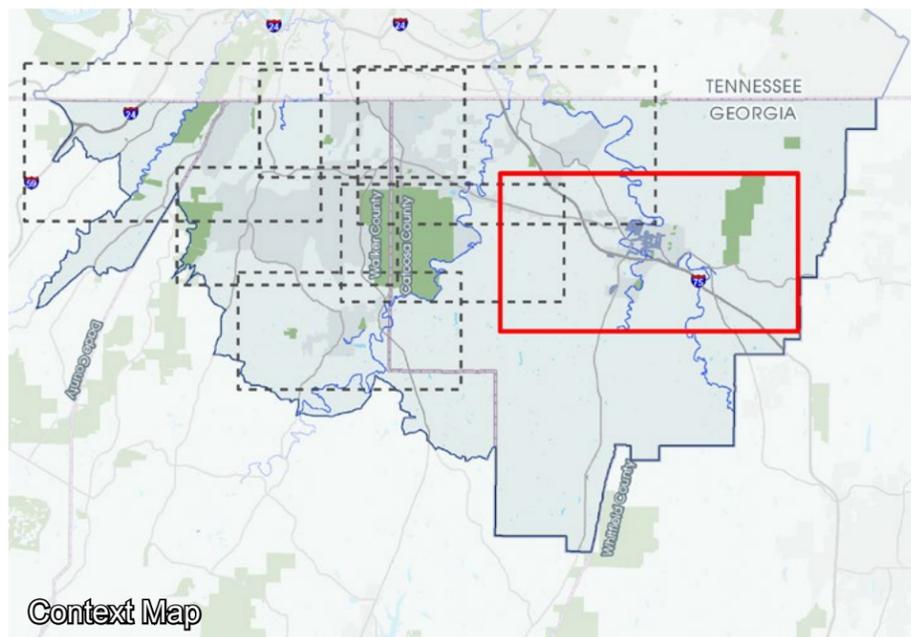
The City of Ringgold is the County Seat of Catoosa County and provides what may be the largest intact historic downtown area of any community in the study area, with a charming business district which includes sites of interest to visitors of all sorts. The old Ringgold Depot of the Western & Atlantic Railroad (W&ARR- now operated by CSX), is one of the most important of these heritage sites, offering historic context relating directly and specifically to the Civil War. According to the Main Street organization for Ringgold, this Depot hosts over 12,000 visitors each year for weddings, concerts, a Halloween Haunted House, and other special events. Most guests live within an approximately 100-mile radius. Other heritage sites nearby include the Old Stone Church, the “General” Monument, and the Atlanta Campaign Park in Ringgold Gap, where Confederate General Patrick Cleburne held off advancing Union troops during the Battle of Ringgold Gap.

Since 1990, the population of Ringgold has more than doubled and although it now has a current population of almost 3,800, its commercial business districts serve a much larger population from many of the surrounding areas. The Ringgold downtown area offers a charming and walk-able historic setting for tourists and locals alike, with a pleasant mix of businesses including restaurants, antique and specialty shops as well as grocery and convenience goods. History has been well-interpreted by the Main Street agency and the sites there are clearly marked with historical contexts explained. Among significant sites are Barger Bridge and the Ringgold Feed & Seed building which has been converted to tourist-oriented retail use. While the downtown mix includes businesses common in any County Seat, such as attorney and real estate offices, insurance agencies, newspaper, barber shop and hair salons, as well as the local government services facilities, etc., Ringgold also provides a large number of tourist-oriented businesses. Residents from all throughout the area come to walk their dogs, walk, bike or hike trails, or just to explore. In addition to the pedestrian and multi-use facilities already in place, Ringgold has plans for expansion and enhancement of its network throughout the City, including extending a shared-use path up Little Chickamauga Creek under I-75 to the Poplar Spring Fields located in the Rollins Industrial Park.

Like Fort Oglethorpe, Downtown Ringgold also hosts a business that is particularly well-suited to the expansion of the region’s trail system: Above the Ridge Outfitters, which supplies hiking, biking and camping gear; as well as golf apparel, footwear, and accessories for a number of other activities. Having just expanded to its current 3,000-square-foot facility in 2016, Above the Ridge Outfitters has served the Ringgold community since 2012. The owners estimate that about 85% of their business is generated from within the greater Chattanooga region, particularly in areas not already served by other outfitters. An estimated 60% are residents of surrounding areas of northwest GA - Ringgold, Dalton, and Tunnel Hill; another 30% reside in Chattanooga, East Ridge, Ooltewah, and other TN suburbs. Overall, about 25-35% of customers are hard-core recreation enthusiasts – hikers, walkers, bikers and others requiring apparel for their sports or other activities.

Although not signed, GA “March to the Sea” Bike Route 35 enters the study area from the south along US 41 and enters Ringgold, turning west on SR 2 (Battlefield Parkway) to Fort Oglethorpe, Fairview and Rossville, where it turns north on McFarland Gap Road to US 27 (Rossville Boulevard), where it enters Chattanooga. No other Bike Routes have been designated in Ringgold.

North of Ringgold is the Ooltewah-Ringgold Road (SR 151) corridor which, among other things, features a historic monument at the site where the locomotive “General”, rolled to a stop during the Great Locomotive Chase. The Elsie A. Holmes Nature Park is also along this corridor. Other communities that surround Ringgold within the study area are Cherokee Valley, Salem Valley and Keith Communities to the northeast, Dogwood Valley and Houston Valley on the southeast and Wood Station, south of Ringgold on Old Alabama Road / Alabama Highway (SR 151). Other than US 41 south to Tunnel Hill (outside of the study area), the Old Stone Church historic site and the 1,800-acre Catoosa Rifle Range (operated by the TN National Guard), these far eastern and southeastern reaches of the study area are very rural in nature and farther distant from any Chattanooga area activity centers.





Multi-Use Facility Types

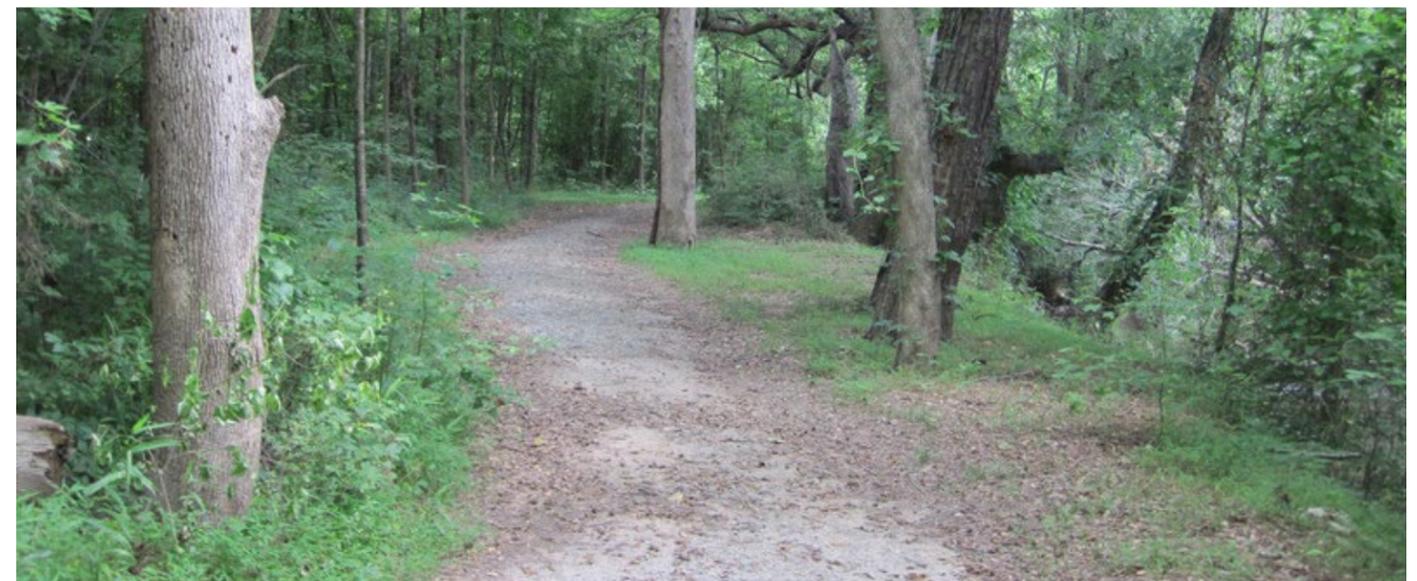
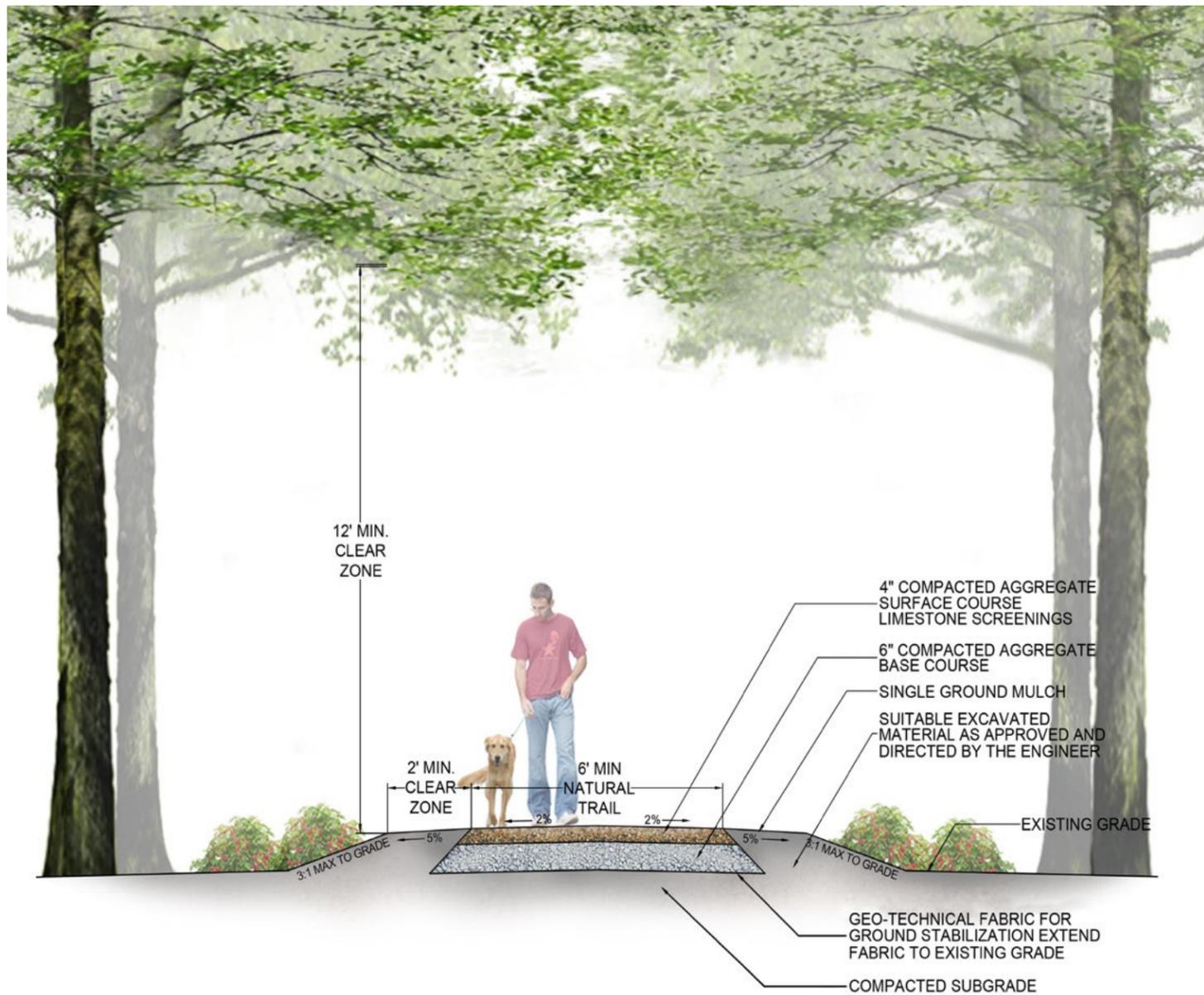


There are several methods for incorporating pedestrian, bicycle, and paddle connections into the transportation and recreation system. This part of the study establishes what types of facility options could apply to the study area and basic design guidelines for each facility type. Additionally, general rules of the road for pedestrians and bicyclist are explained as an educational background for facility operations and maintenance.

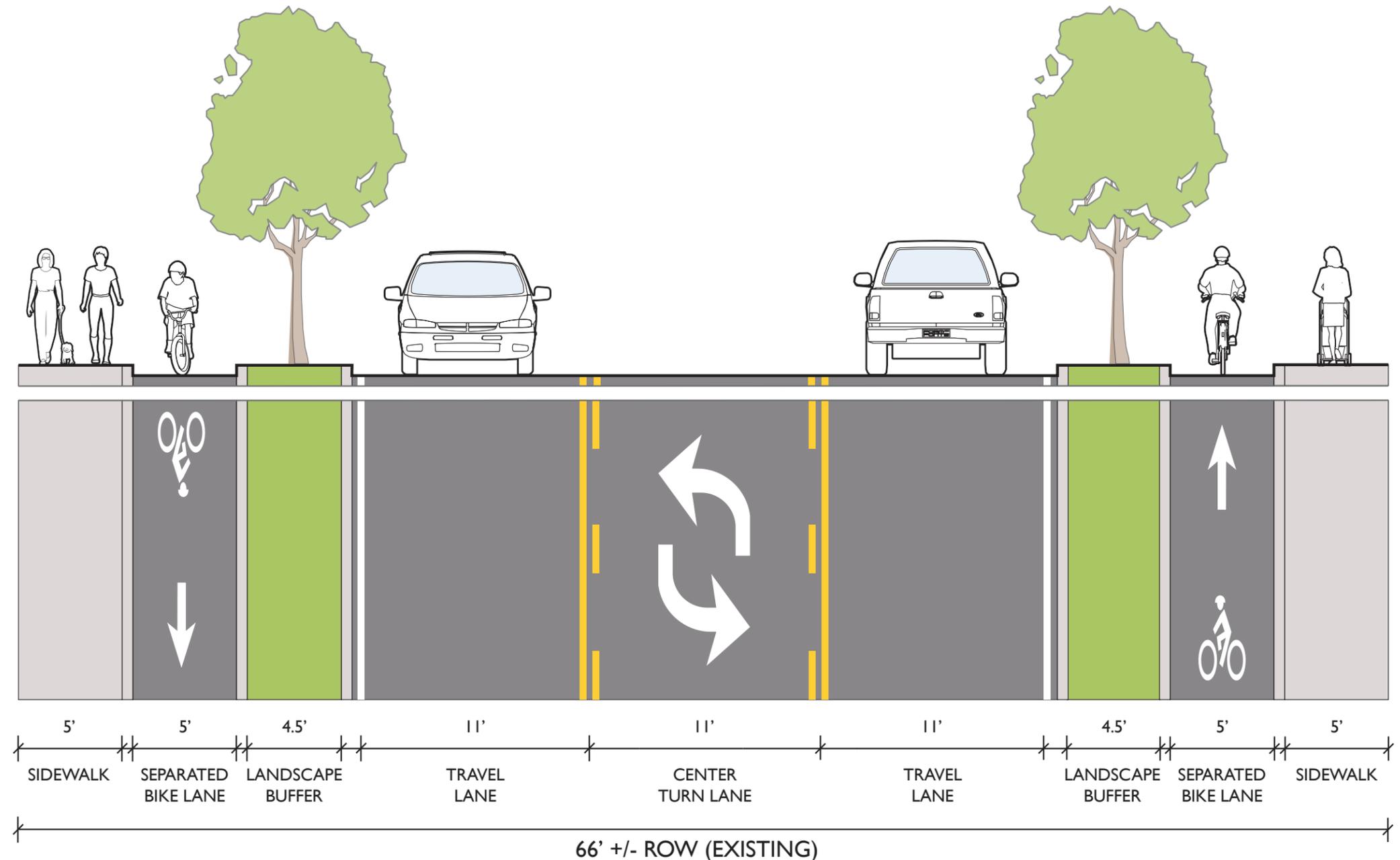
Sidewalks provide people with space to travel within the public right-of-way that is separated from vehicles on the road. They provide space to walk, wheelchair roll, run, and skate. Bicyclists are allowed, but not encouraged, to ride on the sidewalk in our area but must yield to pedestrians. Sidewalks should be required as part of typical street sections in all urban and medium or high density developments. All sidewalks and pedestrian crossings should be designed in compliance with ADA (Americans with Disabilities Act) and NACTO (National Association of City Transportation Officials).



Natural surface trails are typically used in areas that will see lighter pedestrian traffic, such as an access point from one area to a larger route. These trails can be made of several different types of materials that are compacted into a more solid surface. Due to the surface materials and terrain, most trails cannot be easily traveled by anything other than pedestrians or bikes specifically design for rough terrain. Some natural surface trails cannot be designed to meet ADA Design Standards due to slope and surface conditions.



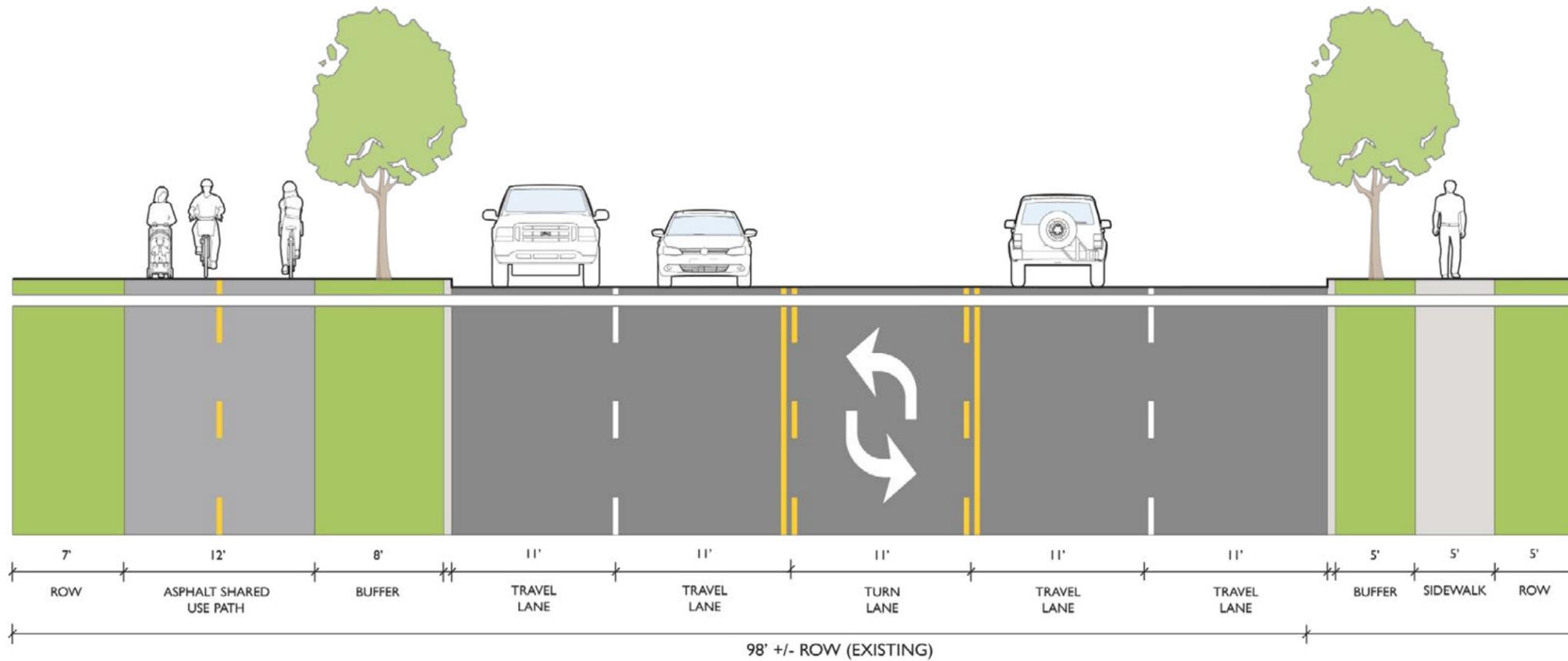
Protected bike lanes are on the roadway but are separated from automobile traffic. Buffered bike lanes are separated from traffic by a marked buffer space but are not physically separated from traffic. Separated bike lanes are separated from traffic by a physical barrier such as parked cars, bollards, a curb, a landscaped buffer, or by raising the lanes above street level.



The term “greenway”, is considered synonymous with shared-use path. This is the facility type for a majority of the proposed routes connecting the study area. The team has heard many leaders of the steering committee point in this direction. A Shared-Use Path lends itself well as the leader in low stress facilities throughout the study area. This facility can be extremely effective in all of our study area municipalities: Chickamauga, Ringgold, Rossville and Fort Oglethorpe, as well in connections between them; and conversion of existing abandoned rail beds to Shared-Use Path facilities would also enable Lookout Mountain to be connected with other communities in the valley below.

Shared-Use Path use greatly reduces conflict between users and motorists. An overwhelming majority of such conflicts are present at intersections and street crossings. It is imperative to provide safe, visible, and easily navigable crossings for all users. The challenge with this facility is going to be costly due to topographical issues and limited available right-of-way.

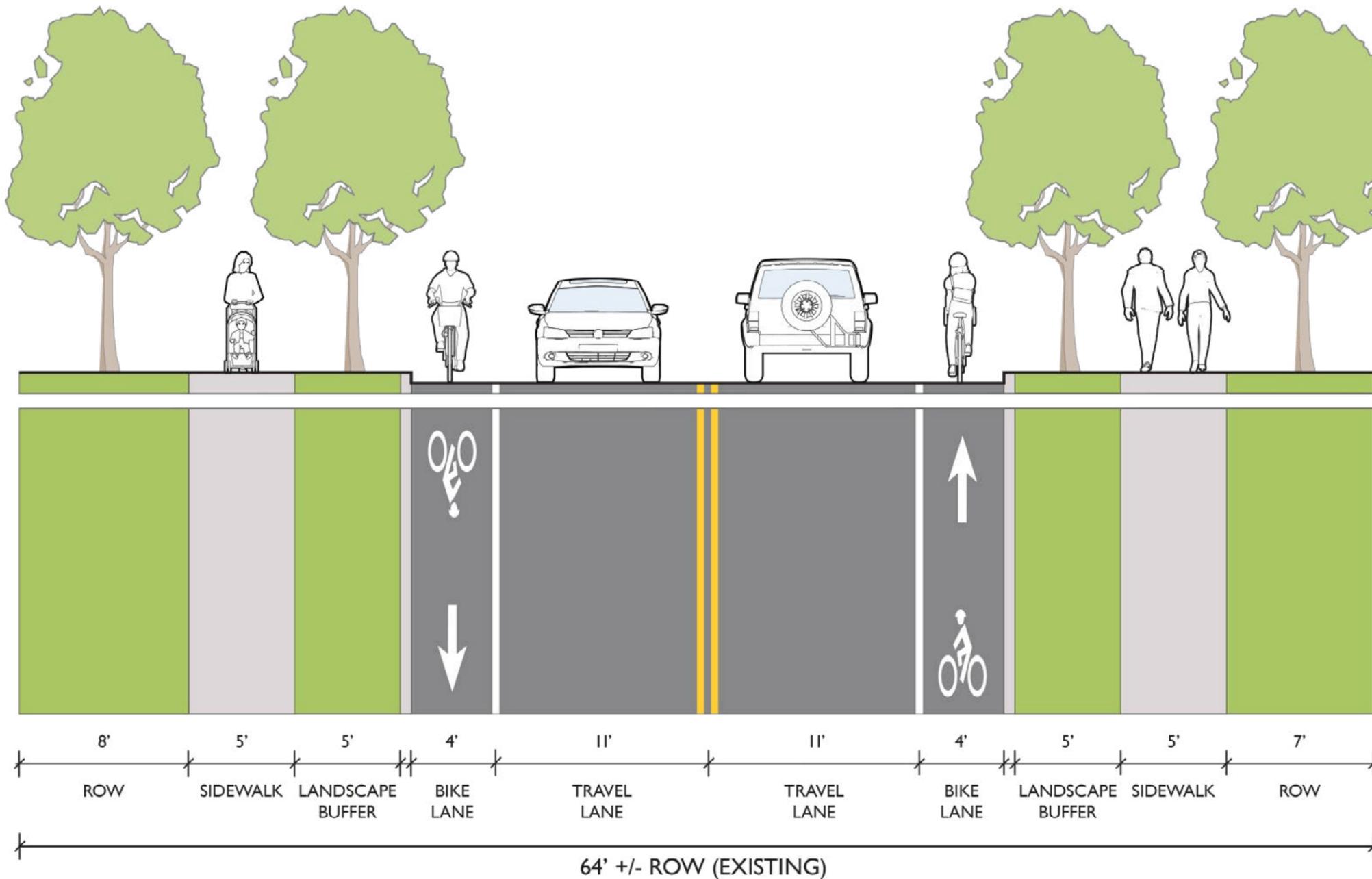
The Shared-Use Path would appear to be the leading facility for successful implementation in the study area. Shared-Use Path facilities could help to both further interconnect and build on the networks within individual communities as well as more effectively provide new connections to other communities.



Bike routes have directional and informational signage for bicyclists, signs that say “share the road” or “bike route”, and/or shared lane pavement markings. Signs and markings help alert drivers that bicyclists may be on the roadway. Except when prohibited by law, all roadways are to be shared by bicycles and motor vehicles, even when bicycle signs and markings are not present.

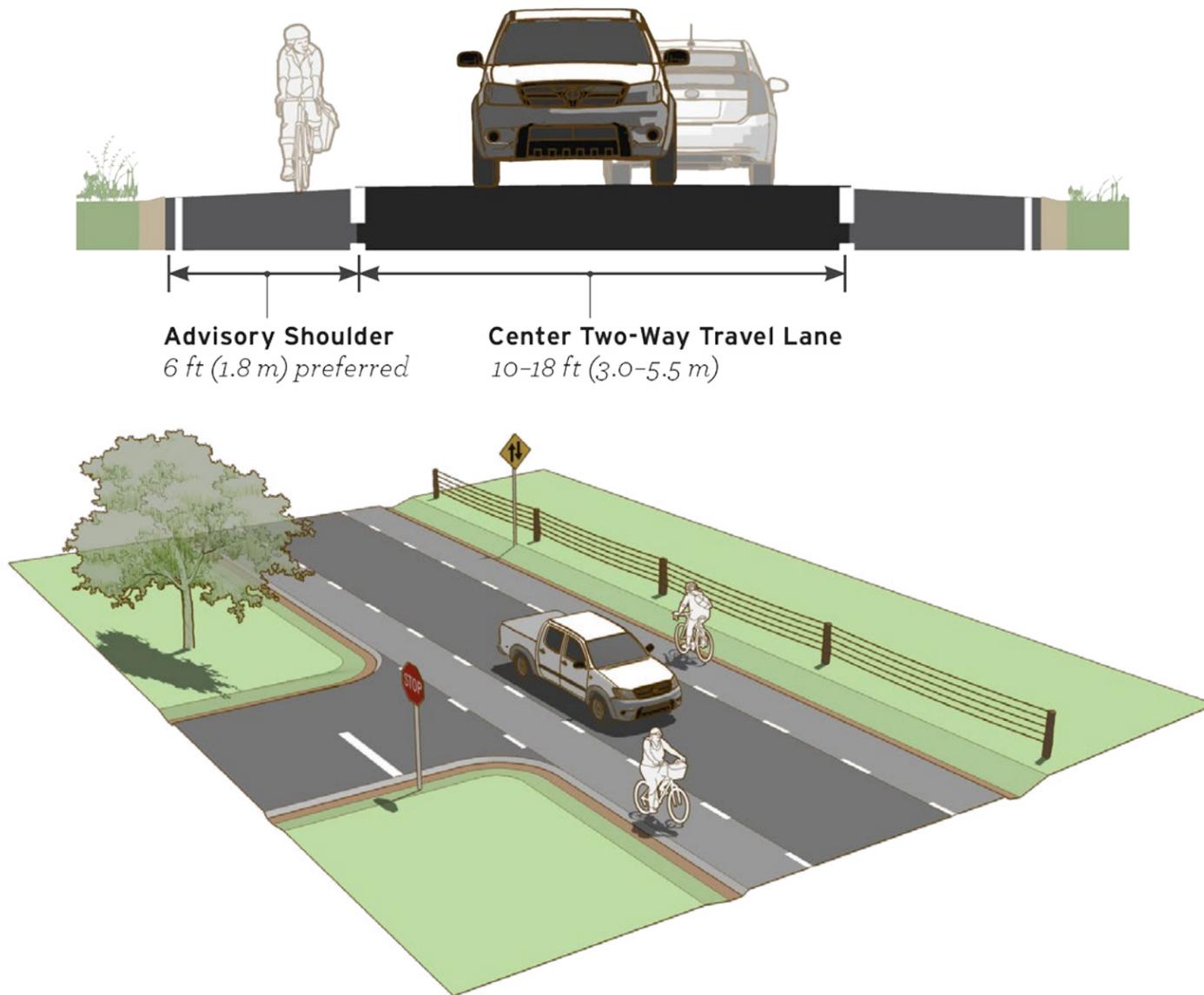


A Bike Lane lends itself well to both low volume and low speed local streets as well as longer distance and regional connectivity throughout rural areas. This facility could be extremely effective in all of the study area municipalities: Lookout Mountain, Chickamauga, Ringgold, Rossville and Fort Oglethorpe. A Bike Lanes can greatly reduce pedestrian and bicycle collisions, provided there is necessary room for users and a visual stripe separation for vehicles. The challenge with this facility again is that many of the roadways which could otherwise accommodate this facility based on traffic volume and speed are too narrow, have numerous topographical challenges, and poor sightlines (both to see potential users and oncoming vehicles to pass). Typically, this would be a simple restriping exercise; however, this treatment could be costly to construct as a regional connector due to these topographical challenges and limited available right-of-way.



The Advisory Shoulder lends itself well to more local streets throughout urban centers even in rural areas and has the potential to be used on larger collector roads. This facility could be extremely effective in all study area municipalities: Lookout Mountain, Chickamauga, Ringgold, Rossville and Fort Oglethorpe.

Again, Advisory Shoulder applications are not recommended for connections between communities within the study area. Many of the roadways that could otherwise accommodate this facility based on traffic volume and speed appear to be too narrow, have numerous topographical challenges, and poor sightlines (both to see potential users and oncoming vehicles to pass).

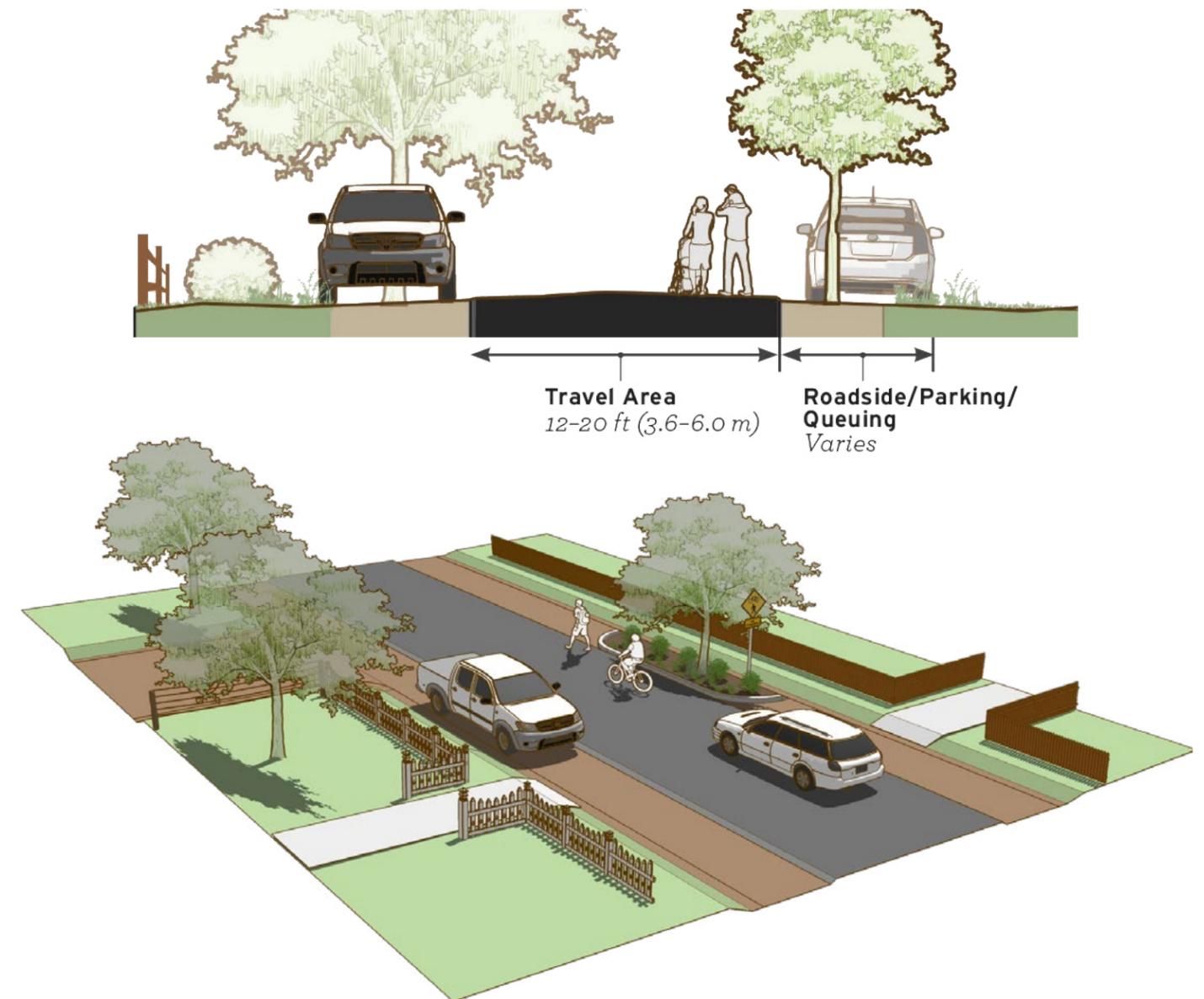
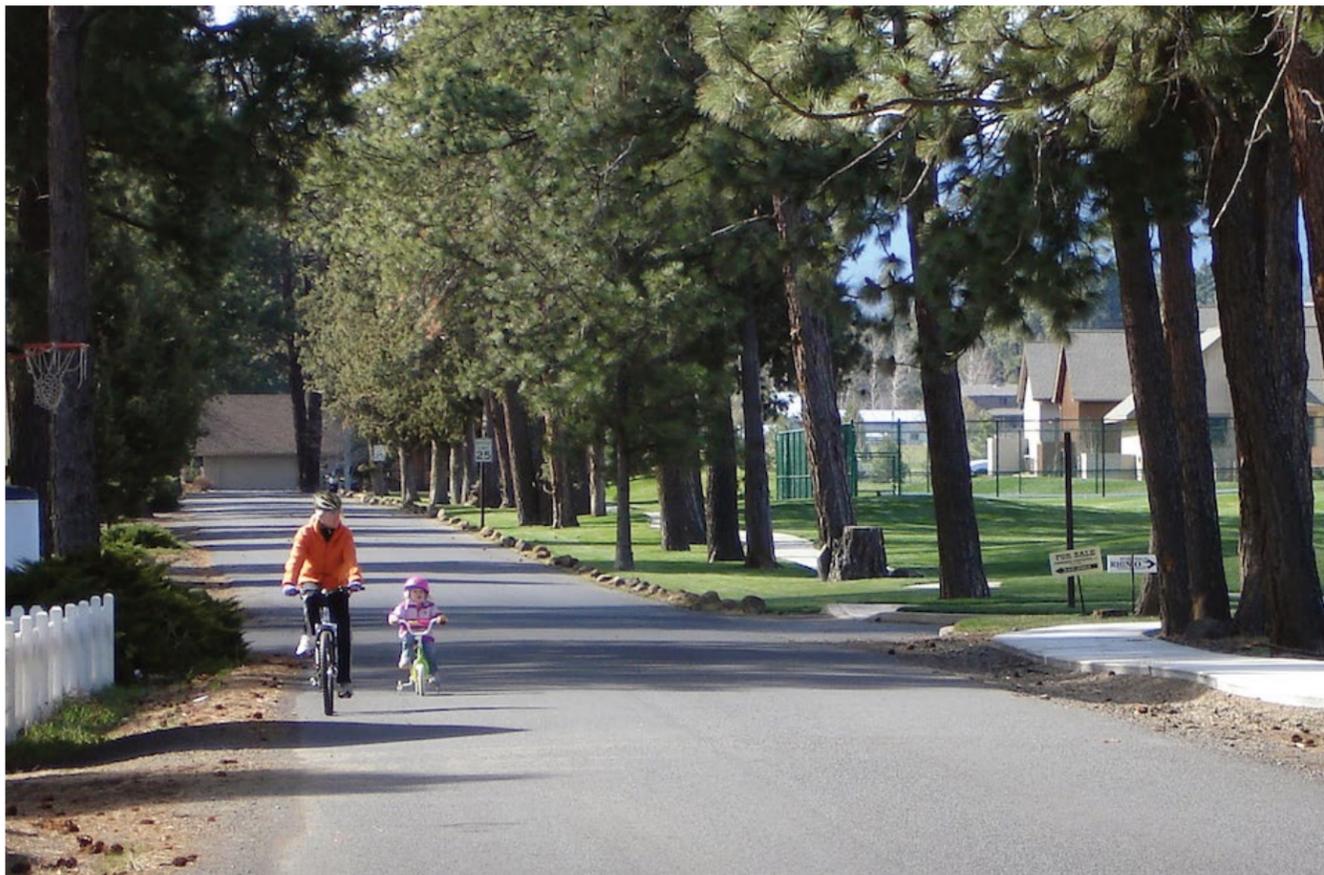


Images & Design Criteria courtesy of Small Town & Rural Design Guide

The Yield Roadway lends itself well to low volume and low speed (25 mph or less) local streets throughout the small town urban centers with a network of streets or in rural areas with more densely-developed residential neighborhoods. This facility could be extremely effective, particularly in Lookout Mountain, Chickamauga, and Ringgold, as well as in parts of Rossville and Fort Oglethorpe and scattered neighborhoods of the unincorporated parts of the study area.

Two important features of the Yield Roadway facility to embrace are narrow lanes and not marking a center line. These two treatments in tandem introduce traffic friction and help slow vehicle speeds.

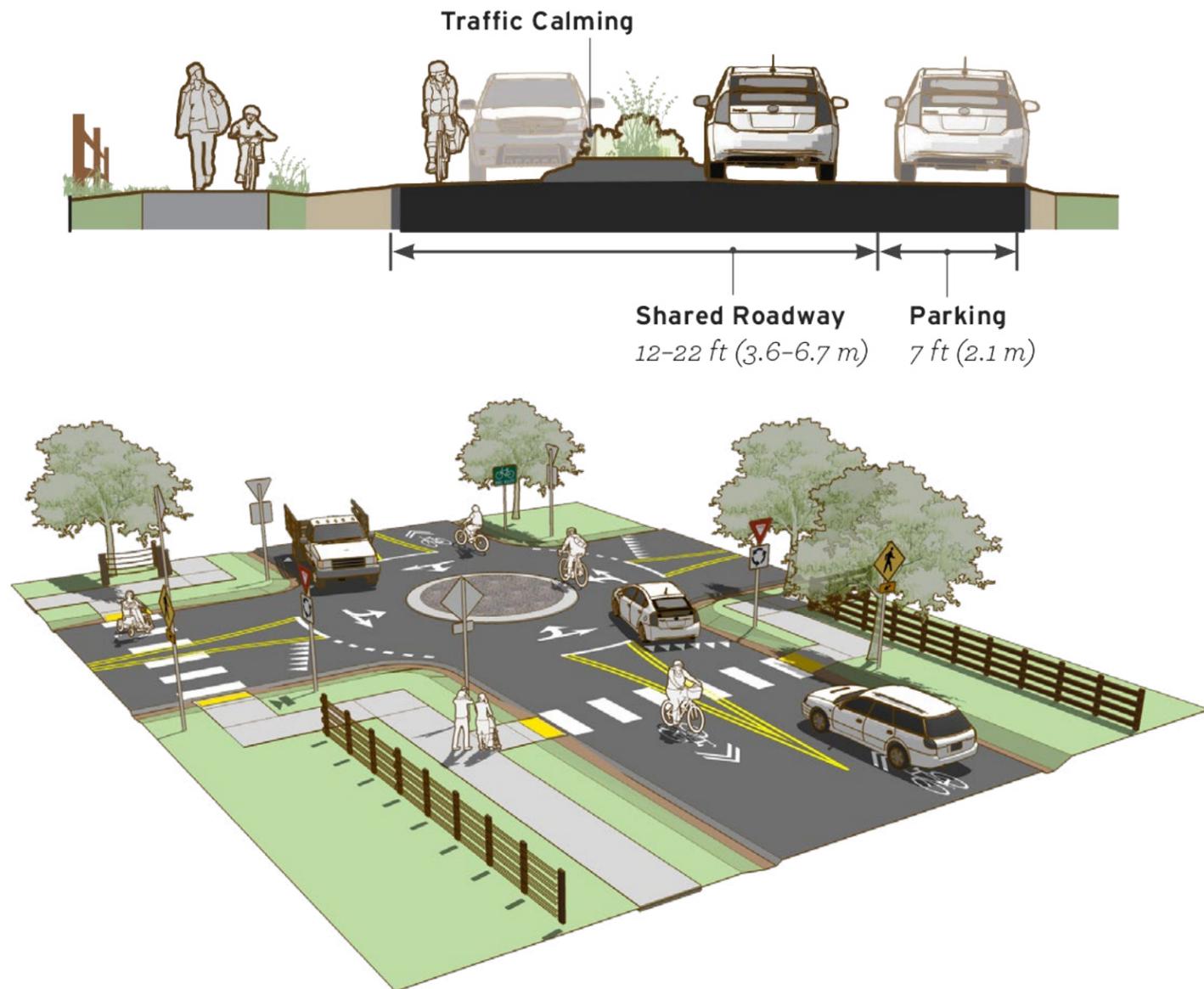
Yield Roadway applications will help further interconnect and build on the network in a single municipality, community or neighborhood network, but are not recommended for connections from community to community.



Images & Design Criteria courtesy of Small Town & Rural Design Guide

The Bicycle Boulevard also lends itself well to low volume and low speed (25 mph or less) local streets throughout the urban centers and in rural areas with a better-defined grid network of streets. This facility could also be extremely effective in Lookout Mountain, Chickamauga, and Ringgold. Similarly, selected areas within Rossville and Fort Oglethorpe could also have streets that would allow implementation of this facility type.

Like the Yield Roadway, Bicycle Boulevard applications are more useful within a community and not recommended for connections between communities.



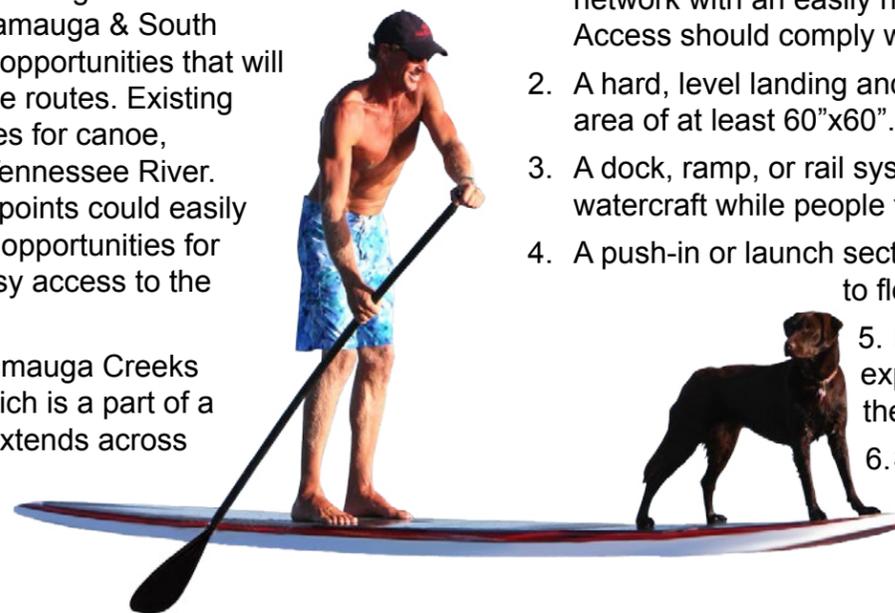
Images & Design Criteria courtesy of Small Town & Rural Design Guide



Heavy Duty Dock & Launch System, image provided by The Dock Doctors

Overview:

- Blueways are water-based networks designed for paddlers. They function much like greenways in that they provide a different mode of recreational travel. They also provide a unique view and experience for residents and visitors using the Northwest Georgia Region that could not be experienced from land-based transportation.
- The Northwest Georgia Region has strong connections to adjacent waterways. West Chickamauga & South Chickamauga Creeks have several opportunities that will interface with the proposed multi-use routes. Existing canoe launches provide opportunities for canoe, and kayak users to connect to the Tennessee River. Additional canoe and kayak launch points could easily be implemented to provide variable opportunities for comfortable blueway routes and easy access to the water as a recreational outlet.
- West Chickamauga & South Chickamauga Creeks connect to the Tennessee River, which is a part of a much larger blueway network that extends across the Southeast.

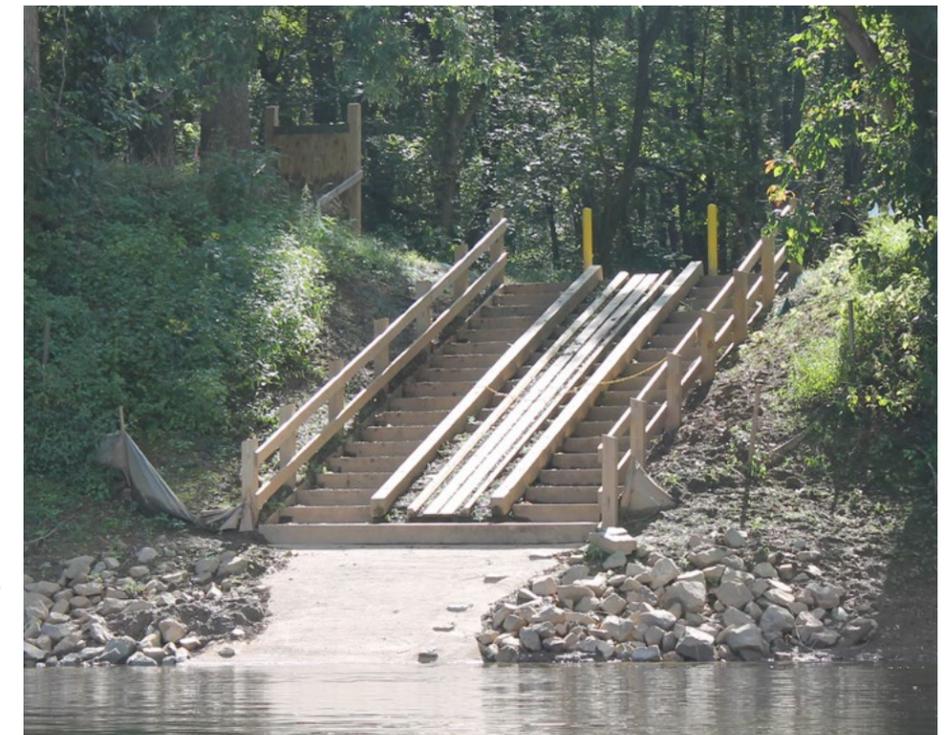


Key Elements of a Blueway Design:

- Multiple access (launch) points to the water at intervals ranging from three to six miles apart.
- Maps designating the blueway routes and estimated travel times for paddling between access points.
- Potential water hazards should be identified using the American Whitewater definitions. Classifications range from Class I - mostly little current or obstruction, to Class V - whitewater, large waves, large volumes, and the possibility of large drops requiring skilled maneuvering.
- Information regarding possible hazards should be provided to blueway users.
- West Chickamauga Creek, South Chickamauga Creek, and the Tennessee River perform at or below Class I waterways, with little to no challenge from current or waves.

Blueway launch points should consider the following design features:

1. Easy access to parking and/or pull-off areas from the nearby road network with an easily navigated pathway free from obstructions. Access should comply with ADA criteria.
2. A hard, level landing and loading area at the waters edge with an area of at least 60"x60".
3. A dock, ramp, or rail system that provides for stabilization of the watercraft while people transfer in and out of the water.
4. A push-in or launch section that provides for enough water depth to float a loaded craft.
5. Erosion control and bank protection for exposed stream or lakeside slopes next to the launch.
6. Safety signage identifying state requirements for life jackets, night time operation, fishing regulations, and other basic water safety considerations.



Facilities Based on Confidence Level of User

It is beneficial to expand routes of travel in conjunction with the type of facilities that match the comfort level of the most potential users. Inventory of the study area included both the mapping of high level elements and a physical site reconnaissance of existing roadway conditions to evaluate potential conflicts with high speed traffic. A general analysis of the different types of cyclist and pedestrians who use multi-use facilities establishes the following categories (on a national level):

- **Strong & Fearless** (1% of potential users)
- **Enthused & Confident** (7% of potential users)
- **Interested but Concerned** (60% of potential users)
- **Non Rider (Pedestrian)** (32% of potential users)

In order to capture most of the users (about 92%) who fall in the “Interested but Concerned” and “Non Bicycle Rider” categories, routes have been prioritized that have opportunities that can accommodate both pedestrians and cyclists.

The greatest tourism potential and economic benefit comes from facilities that can capture the highest number of potential users. Pedestrian walkways, shared-use paths, dedicated and protected bike lanes, as well as yield roadways in low speed settings are the type of facilities that capture the greatest number of potential tourist.

Dedicated bike lanes, bike routes, bicycle boulevards and advisory shoulders on low and moderate speed roads also hold potential to improve the local transportation network and capture a smaller number of bike tourists, and should be considered as part of the plan to develop facilities.

Some of the proposed long distance connection routes may be more appropriate for the “Strong and Fearless” and “Enthused and Confident” bicycle riders. These travel routes have been established along county roads that could initially fit expanded shoulders and / or dedicated bike lanes with the long term potential for the addition of shared-use paths if the demand and economic return can warrant the associated infrastructure costs.

Input at the Public Open House for the study area resulted in the following results for user types:

What Type of User Are You? <i>Public Open House Results</i>	Total
Strong & Fearless	3
Enthused & Confident	15
Interested but Concerned	5
Non-Rider (<i>Pedestrian</i>)	5

What Type of User Are You?

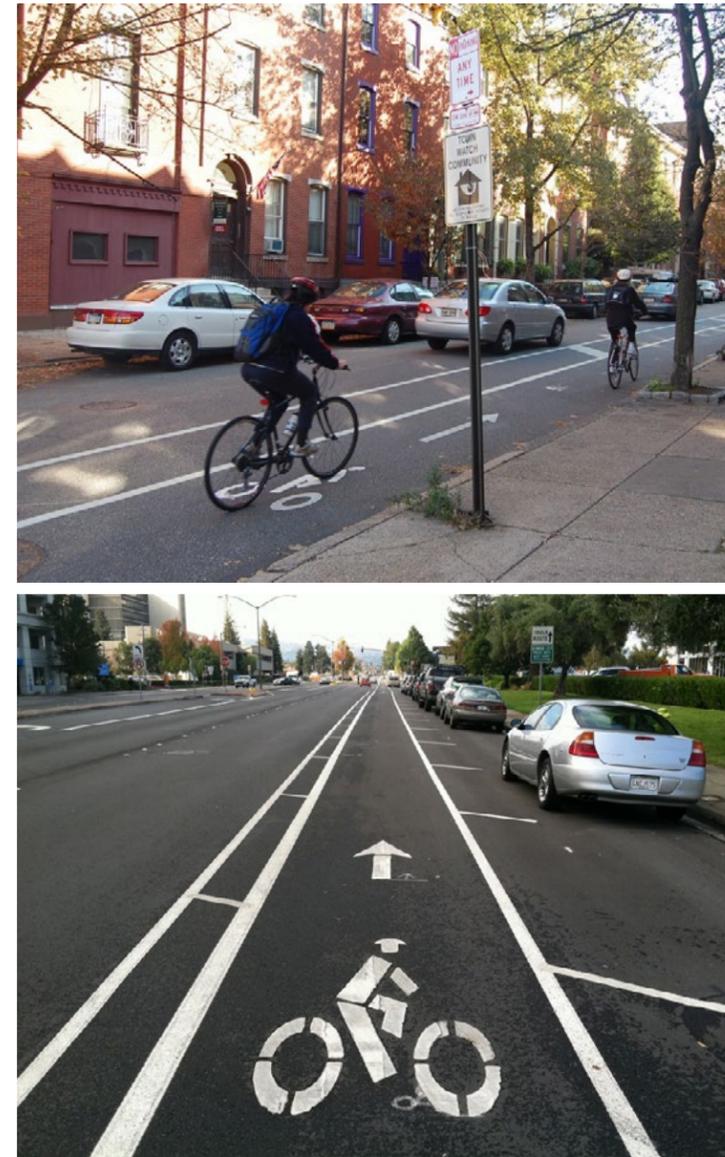
Strong & Fearless: (1% of potential users)

I will ride on almost any road, regardless of the conditions. I would feel comfortable biking on the roads pictured below.



Enthusied & Confident: (7% of potential users)

I feel comfortable sharing the road with cars, but I prefer to ride on roads with bike facilities. I would feel comfortable biking on the roads below.



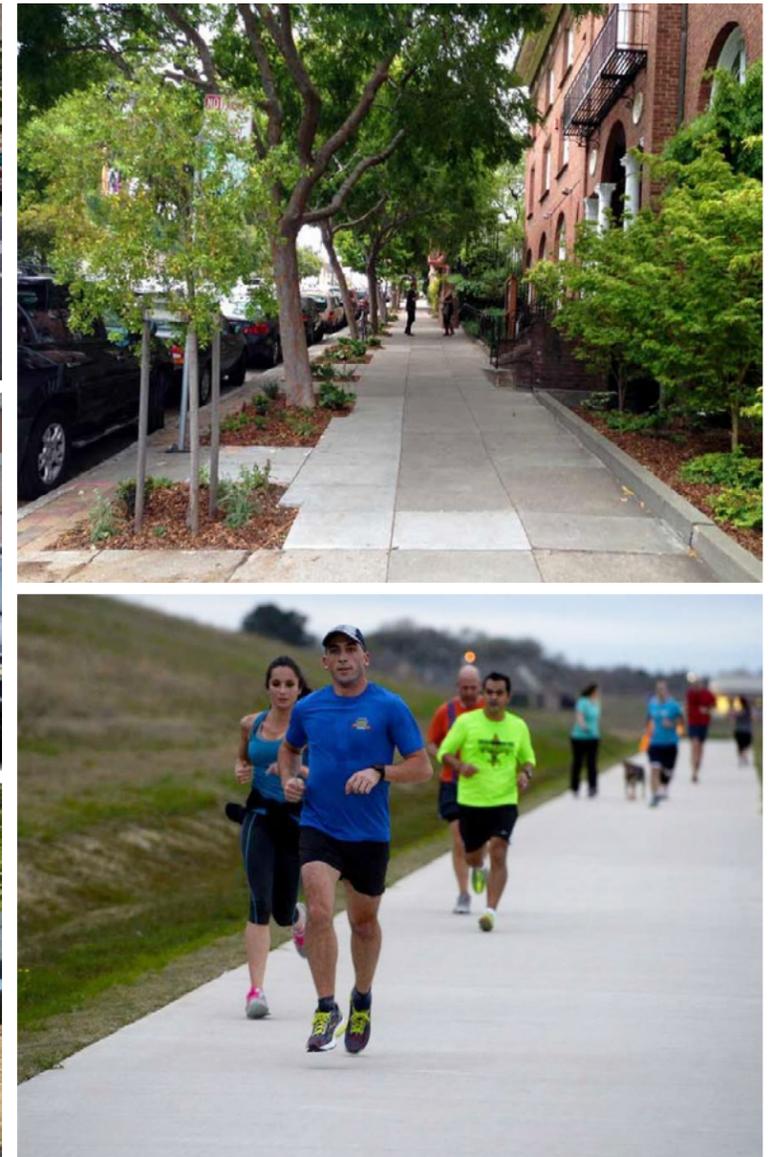
Interested but Concerned: (60% of potential users)

I would like to ride a bike for transportation, but traffic makes me nervous so I don't ride regularly. I would ride more if the roads felt safe. I would feel comfortable biking on the roads pictured below.



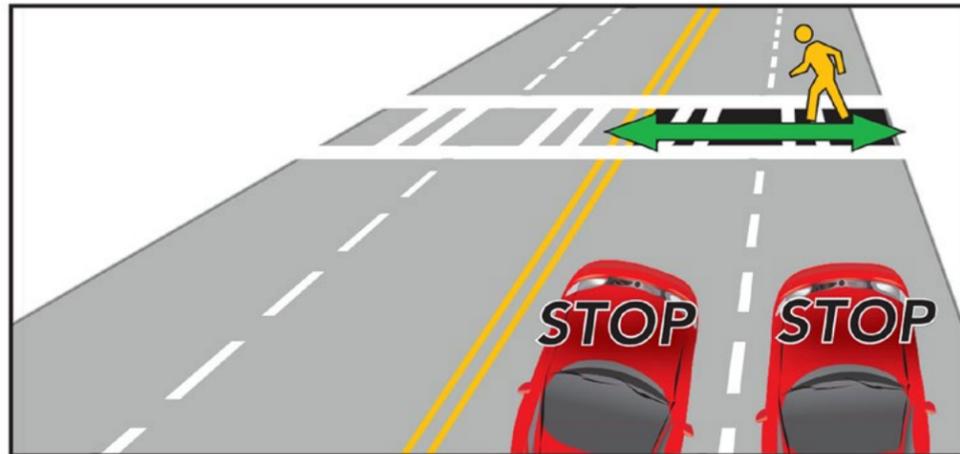
Non-Rider (Pedestrians): (32% of potential users)

I have no interest in biking for transportation, or may not be physically able to ride a bicycle. I would be more open to riding or walking completely separate from other forms of traffic. I would feel comfortable biking or walking on the paths pictured below.

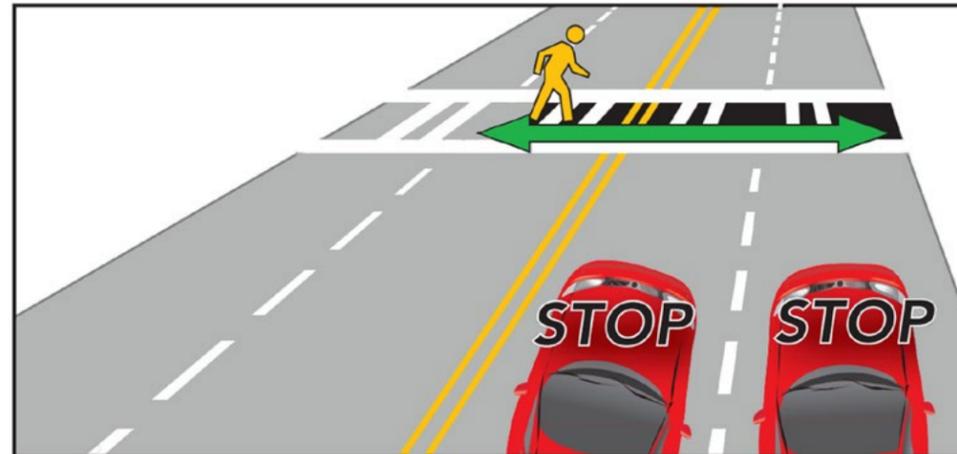


COMMON DRIVER VIOLATIONS:

PEDESTRIAN + CROSSWALK = STOP:

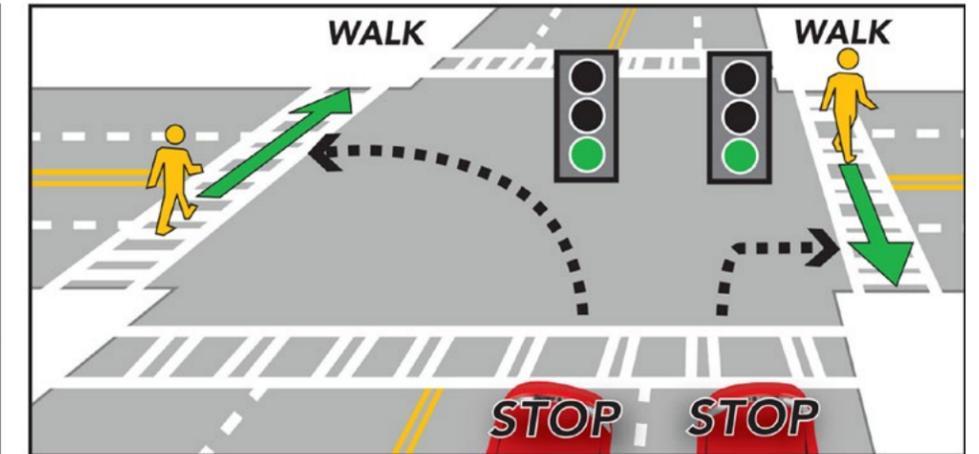


STOP for a pedestrian in a crosswalk when the pedestrian is anywhere on your side of the road. Side of the road means all lanes of traffic going in one direction.



STOP for a pedestrian in a crosswalk when the pedestrian is approaching and in the lane next to your side of the road.

TURNING DRIVERS STOP, EVEN ON GREEN:



Before turning right or left on a green light, STOP for pedestrians. They have the right-of-way.

COMMON DRIVER VIOLATIONS:

FAILING TO STOP FOR PEDESTRIANS:



Georgia law requires you to stop for a pedestrian in the crosswalk, even when the pedestrian isn't in your lane.

TURNING BEHIND OR IN FRONT OF PEDESTRIANS IN A CROSSWALK



You must stay stopped until the pedestrian has finished crossing the side of the road onto which you're turning. Don't bully pedestrians with your vehicle. They have the right of way. Never turn into a crosswalk when pedestrians are still using it.

BLOCKING THE CROSSWALK



Always stop behind the crosswalk, not in it. Blocking the crosswalk with your vehicle forces pedestrians into moving traffic.

GEORGIA BICYCLE LAWS:

HELMETS:



No person under the age of 16 years shall operate or be a passenger on a bicycle on a highway, bicycle path, bicycle lane, or sidewalk under the jurisdiction or control of this state or any local political subdivision thereof without wearing a bicycle helmet.

LIGHTS:



Every bicycle when in use at nighttime shall be equipped with a light on the front which shall emit a white light visible from a distance of 300 feet to the front and with a light on the back which shall emit a red light visible from a distance of 300 feet to the rear. Any bicycle equipped with a red reflector on the rear that is approved by the Department of Public Safety shall not be required to have a light on the rear of the bicycle.

RIDING ON SHOULDERS:



Any person operating a bicycle may ride upon a paved shoulder; provided, however, that such person shall not be required to ride upon a paved shoulder

RIDING ON SIDEWALKS:



Except as provided by resolution or ordinance of a local government authorizing the operation of bicycles on sidewalks, no person shall drive any vehicle upon a sidewalk or sidewalk area except upon a permanent or duly authorized driveway.

TAKING THE LANE:



Every person operating a bicycle upon a roadway shall ride as near to the right side of the roadway as practicable, except when:

- (1) Turning left.
- (2) Avoiding hazards to safe cycling.
- (3) The lane is too narrow to share safely with a vehicle.
- (4) Traveling at the same speed as traffic.
- (5) Exercising care when passing a standing vehicle.

3' PASSING



When feasible, the operator of a vehicle, when overtaking and passing a bicycle that is proceeding in the same direction on the roadway, shall leave a safe distance of 3' or greater between such vehicle and the bicycle, while maintaining such clearance until safely past the overtaken bicycle.

Project Overview:

Understanding the legal and practical relationship of pedestrians, bicycles and vehicles on the public roadway network is critical for enforcing safe travel habits for all type of transportation. The physical implementation of pedestrian and bicycle facilities will need to be accompanied by an educational effort to ensure that the rules of the road are understood by both residents living and working in the Northwest Georgia area and visitors traveling through the region. The rules of the road should be part of any promotional efforts that encourage use of the multi-use transportation in the region. This will help to encourage safe travel and it will help to create a culture that supports recreational opportunities for pedestrian and bicycle networks.

Rules of the road should be communicated in the following venues:

- *Schools and educational centers*
- *Chamber of commerce literature and marketing efforts*
- *Places of commerce and tourism destination points*
- *Parks and recreation centers*
- *Hotels and visitor centers*

Additionally, it should be noted that animal riders or animal-powered vehicles and pedestrians (if no sidewalks are adjacent) have as much right as automobiles to use public roadway facilities that are not limited access or specifically stated otherwise.

Establishing Multi-Use Routes



After evaluation of the inventory & analysis, economic conditions, opportunities & constraints along with input from stakeholders and local municipalities for the study area, the team was able to develop a strategy for proposed multi-use routes and facility types.



Strategy - The Big Picture:

Proposed multi-use facilities in the study area have been established based on several different perspectives. The first perspective utilizes a Demand Analysis Map. This map depicts the opportunities and constraints of physical infrastructure and resources in the study area based on transportation and recreational opportunities. The second perspective evaluates facilities based on the type of user with considerations of safety and comfort. The third perspective evaluates economic assessments, impacts and recommendations as presented in detail in the Economic Development Chapter. These perspectives have been used to prepare maps depicting physical routes. In addition to physical routes a plan has been generated to brand particular portions of these routes with the intent of initiating specific economic growth and tourism opportunities.

Physical Infrastructure:

The proposed multi-use routes shown for the study area incorporate a combination of demand and opportunity. Through analysis of transportation and recreational factors, the best physical locations for pedestrian and bicycle routes have been identified. These locations are plotted out on the Overall Proposed Routes Map as possible physical infrastructure improvements.

The Larger Vision:

Beyond the physical infrastructure there is a broader and deeper vision for multi-use routes in this region of Northwest Georgia. That vision is to create a wide network of prospects that potential users can tap into. The appeal of these prospects will come from the unique beauty of the landscape and the large contrast in cultural experiences that are accessible along proposed multi-use routes. Several levels of experience will be available to potential users, drawing people back to the region for more than one visit and for extended visits.

A Culture of Walking, Cycling, & Paddling to Prosperity:

There is an existing excitement in the region that connects to the outdoor activities of walking, hiking, biking and paddling. Much of this excitement has started north of the study area in the City of Chattanooga with a strong pedestrian, bicycle and paddle culture, but it has also established itself in some of the smaller cities of the study area like Ringgold, Fort Oglethorpe, Chickamauga, and Lookout Mountain in the form of well-loved local greenways and trail systems. The addition of a canoe and kayak launch site along the South Chickamauga Creek in Graysville has proven to be largely popular for recreational use. Lookout Mountain, Lula Lake and Cloudland Canyon State Park are already areas that draw large numbers of outdoor enthusiasts. Visitors to the Chickamauga & Chattanooga National Military Park also tap into this culture with 53% of its one million annual visitors participating in hiking, walking or jogging in the park and 5% participating in bicycling activities. All of this suggests an opportunity to embrace a “ped-paddle-pedal-prosper” philosophy for the study area.

Demand Analysis Heat Map Methodology:

Proposed trail system expansion and connections within the study area were mapped out in consideration of the opportunities and constraints identified from a comprehensive inventory of the study area using available high level GIS data from various sources. A “heat map” has been generated that highlights areas with the highest potential demand for pedestrian and bicycle facilities.

Bike and pedestrian facilities that connect communities within study area can serve the dual function of transportation and recreation to residents and visitors. In order to develop a comprehensive regional network, a clear understanding of the demand for biking and walking is essential. Demand refers to the number of potential users within a specific area if safe and comfortable bike and pedestrian facilities were provided. A demand analysis was conducted using input categories that may be attractors or indicate existing bike and pedestrian activity. Using the demand analysis for the region guided the development of the recommended network alignments and highlights several locations that may benefit from non-motorized infrastructure improvements.

Transportation Attractors:

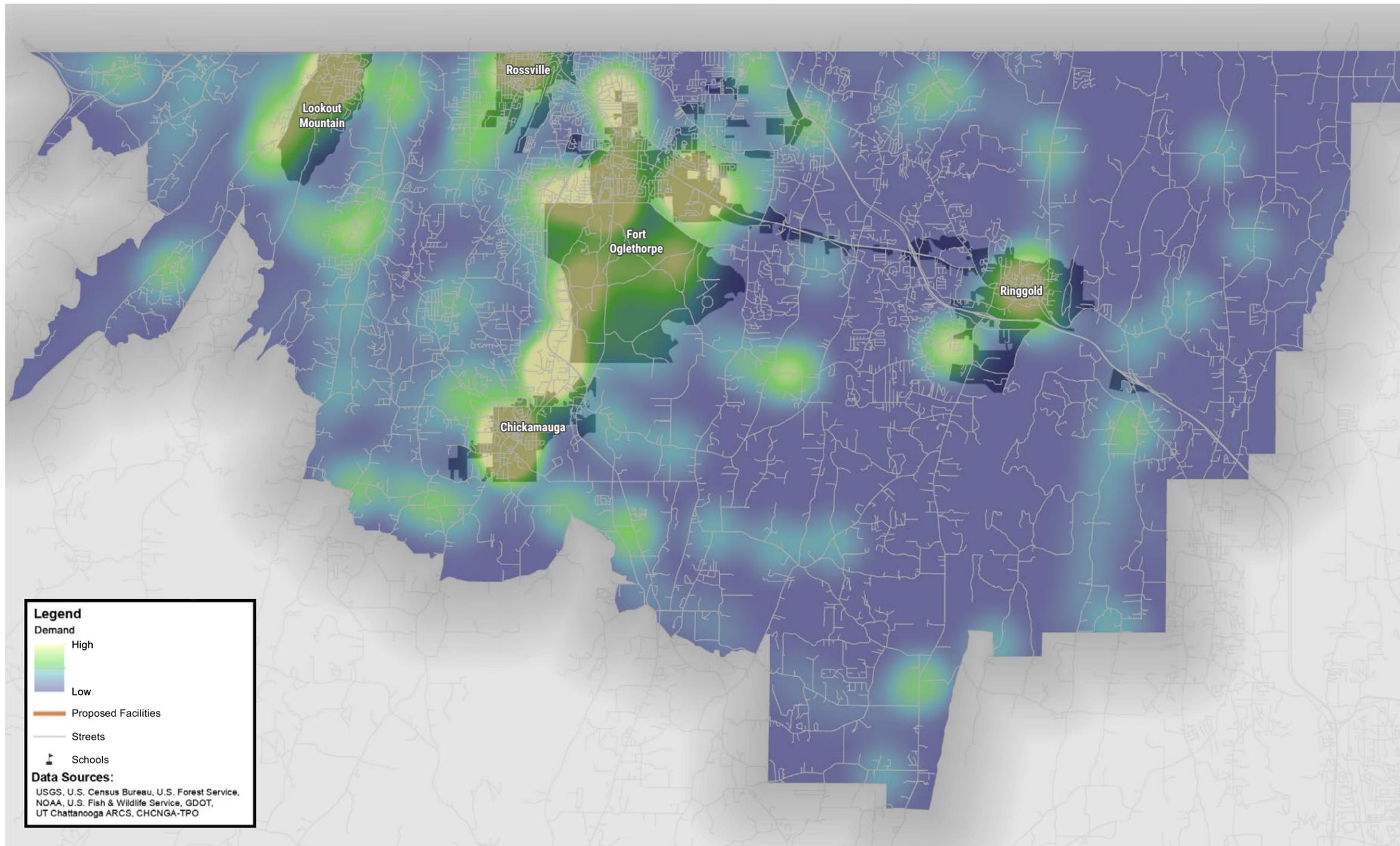
Input	Weight
Schools	25
Farmers Markets	10
Points of Interest	15
Parks / Battlegrounds	10
Grocery Stores	10
Existing Routes	10
Bike / Pedestrian Crashes	5
Historical Places	15

Attractors were used for a majority of the inputs for the demand analysis. Each input was weighted to reflect the opportunity for bike and pedestrian activity. Schools are locations that have high potential demand for biking and walking and can attract students if adequate infrastructure is implemented. Additionally, encouraging biking and walking to schools can reduce arrival and dismissal congestion and provides health benefits to students. Other inputs for the demand analysis include categories that depict existing bike and pedestrian activity. These categories include existing trails and bike and pedestrian crash locations. Crash data serves as an indicator of bike and pedestrian activity along with potential hazardous conditions and is a valuable input when conducting demand analysis. The table to the left includes all of the input factors along with the respective weights.

Recreational Nodes:

The Demand Analysis Heat Map highlights areas that are rich in natural, cultural and historic assets. These high demand areas identified on the “heat map” function as destination nodes for recreational riders as well as tourists. The Chickamauga & Chattanooga National Military Park has been identified as a primary destination for a high number of recreational riders. Cloudland Canyon Park is another key destination for hikers and outdoor enthusiasts. Existing greenways in Fort Oglethorpe and Ringgold are noted as having high recreational use and value. South and West Chickamauga Creeks are also key recreational assets.





Heat Map Results:

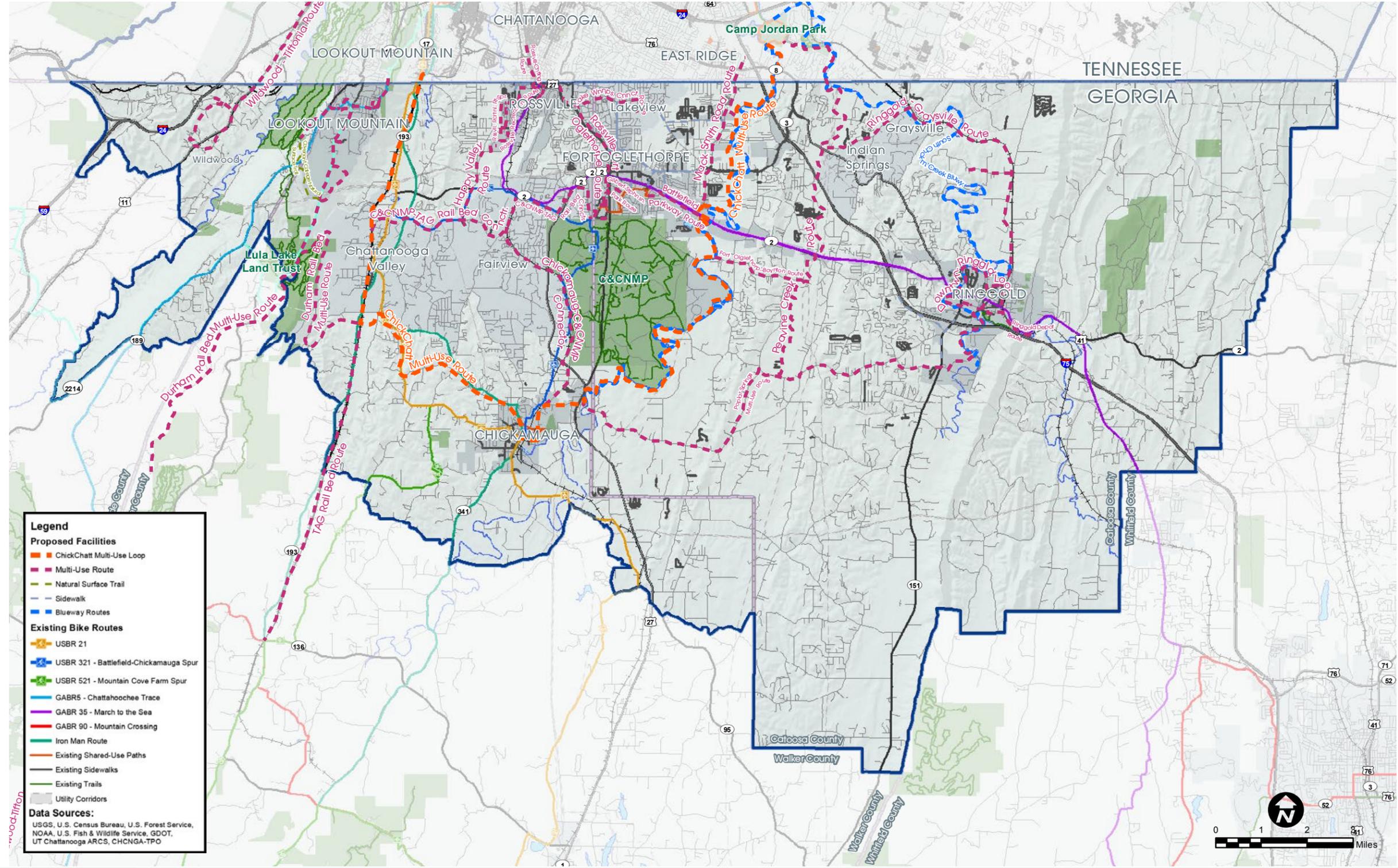
According to recent Federal Highway Administration surveys; most people will walk 5 to 10 minutes or up to 1/2 mile and bike up to 5 miles to reach important destination points. Important destination points are established by the factors mapped on the Demand Analysis Map. This map identifies areas of high demand based on weighted inputs for potential bike and pedestrian activity. The results of this map helped guide the location of multi-use routes in order to serve areas of high demand and to create a network that links high demand destination nodes together.

Community Input on Demand:

Stakeholder and community input has also been an important factor in evaluating demand. Stakeholders from each of the study area municipalities where asked to verify inventories of existing pedestrian and bicycle facilities and to identify potential routes considered prior to the study. In every one of these municipalities the feedback regarding the popularity of existing shared-use paths and greenways was always very positive. This confirmed that demand is high for facilities which are perceived to be safe and clearly separated from vehicular traffic. The recreational value of shared-use paths and greenways was also confirmed in feedback received elsewhere and from the local municipalities within the study area.



Overall Proposed Multi-Use Routes Map





Proposed Multi-Use Routes Overview:

Since all of the municipalities within the study area already have at least some limited network of pedestrian facilities (sidewalks) and a few even have a few shared-use paths, the primary challenge is one of connectivity. These existing sidewalk networks in Rossville and Fort Oglethorpe are already connected both to one another as well as to the vast network of Chattanooga sidewalks, such that it has long been possible for a pedestrian to walk from Lakeview-Fort Oglethorpe High School on Battlefield Parkway out in eastern Fort Oglethorpe through Rossville and East Lake or along Rossville Boulevard to downtown in Chattanooga or St. Elmo, the North Shore, East Lake, Highland Park, East Chattanooga and parts of the Brainerd. Eventually it will be possible to reach the East Brainerd and Hamilton Place communities and elsewhere, which is and will be an incredible accomplishment in connectivity. That said, however, none of the other municipalities within the study area are connected by pedestrian facilities to any of the others, much less to the larger community.

It is recommended that the existing sidewalk in each of the study area municipalities be repaired and regularly maintained, that wheelchair-accessible accommodations be provided where possible and that attempts be made to inter-connect the isolated segments of sidewalks that are scattered throughout study area communities as feasible in order to facilitate walking between individual neighborhoods and from residential neighborhoods to nearby local business areas.

This study area is rich in natural, aquatic, scenic, environmental, historic and cultural resources. The ridges, valleys and creeks of the study area which pose challenges to hiking and biking are among the features that give it the character that make it attractive as a place to live, work and play. Most in the study area are aware of the historic sites and resources from the era of the Cherokee Nation and early European settlement as well as the Civil War; but among examples of the many natural, aquatic and environmental resources in the study area is the abundance of springs here. Among them are Rock Spring, Crawfish Spring (in Chickamauga), Cloud Spring (in Fort Oglethorpe), Wildcat Springs on Burning Bush Road, Poplar Spring (in Rossville) and Poplar Spring (on Poplar Springs Road) and Ellis Spring on Boynton Drive as well as the springs at Edgewater Beach in Graysville. At some point it may make sense to attempt an inter-connection of some of these resources with multi-use routes.

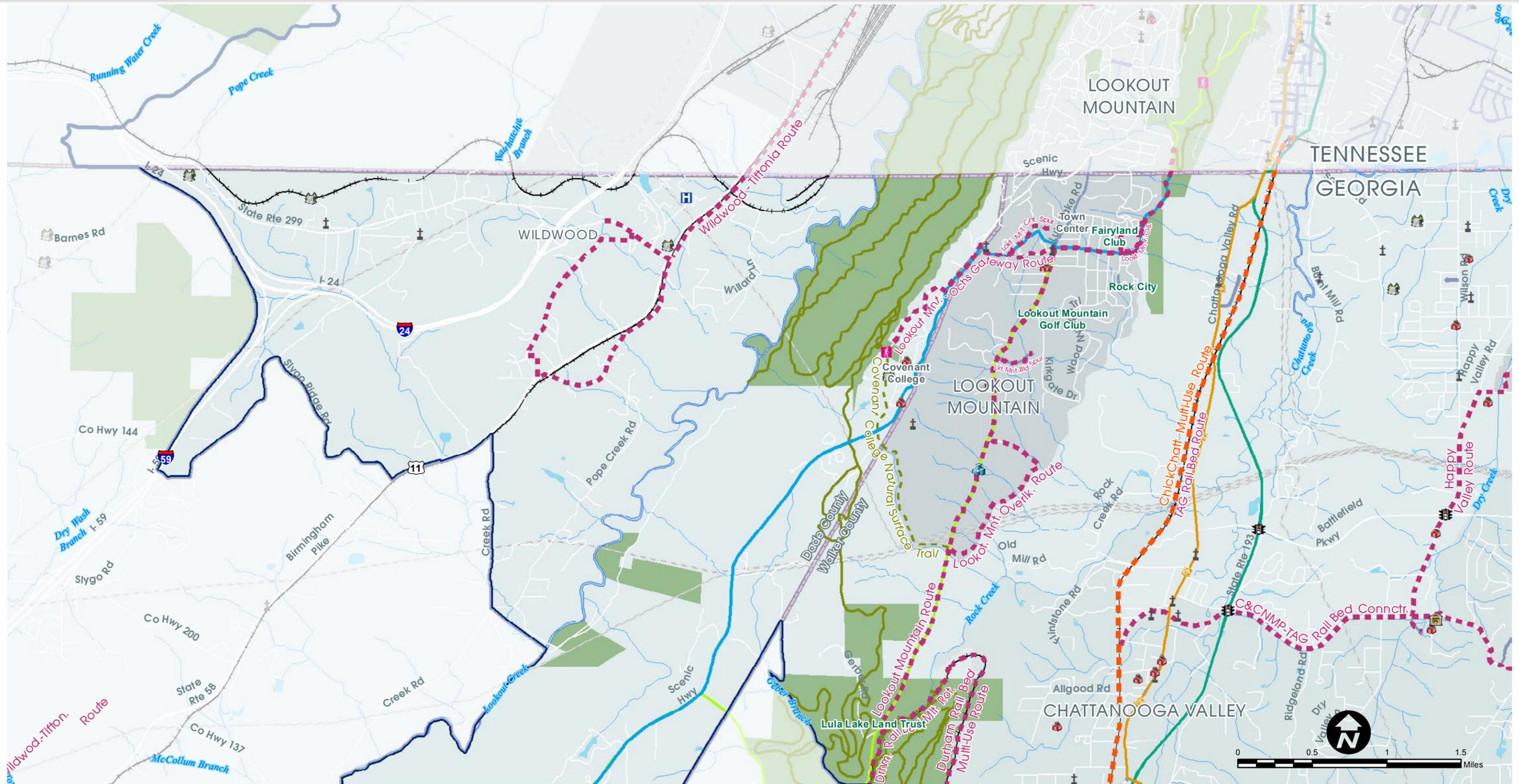
Similarly, despite study area municipalities having plans for future shared-use paths linking their residential areas with their commercial and recreational activity centers, none currently have plans to connect with one another or the resources in the greater Chattanooga area. Envisioning a “big picture” of shared-use path networks which interconnect the study area municipalities with one another may seem to be an insurmountable “grand vision”. But the vision may actually need to be even bigger.

A 53-mile-long ChickChatt Multi-Use Route Loop has been proposed which could eventually link and encircle much of the greater Chattanooga area via the now almost-completed Tennessee Riverwalk from Chickamauga Dam to St. Elmo, the St. Elmo Greenway from the Riverwalk to the proposed TAG Railroad Trail to the proposed Durham Rail Trail to Chickamauga and a proposed Shields Crossroads connection to Lee & Gordon’s Mill, the southern terminus of the proposed West Chickamauga Creek Blueway and Greenway and north to Camp Jordan Park in East Ridge and then, via the also almost-completed South Chickamauga Creek Greenway back to the Tennessee Riverwalk.

Lookout Mountain, GA could connect via Lookout Mountain, TN and the Guild Trail down to St. Elmo in Chattanooga, down the TAG Railroad Trail to Chenchat, back up the Durham Rail Trail to the Lula Lake Land Trust and then back into Lookout Mountain GA, creating a 19-mile long shared-use path loop. Additionally, Fort Oglethorpe and Chickamauga could create their own 22-mile long shared-use path loop that would encircle the Chickamauga Battlefield and Ringgold could create a 13-mile long shared-use path loop that connects it along Poplar Springs Road to Peavine Valley and Graysville and back around to Ringgold via an existing utility easement. There are abundant opportunities within every community.

This even “bigger picture” vision of a two-state, greater Chattanooga area shared-use path network, in which the study area constitutes the southern half of a 53-mile-long loop, as well as various community connections even beyond it, may seem to some to be “a bridge too far” at this point. When Chattanooga leaders envisioned the Tennessee Riverwalk 40 years ago, it may have similarly seemed to some at that time to have been an impossible dream, but now almost all of it is a reality. With that demonstration as a context, the communities in Dade County, Walker County and Catoosa County that lie within this study area will be challenged to think of a bigger vision than they may have previously imagined, even if it will take decades to achieve. To move forward with individual projects identified below, affected communities will need to become convinced that this will truly be economically feasible and, if so, to embrace a larger, regional vision of “Ped-Paddle-Pedal-Prosper”.

Although numerous Georgia Bike Routes (GABR 5 - “Chattahoochee Trace,” GABR 35 - “March to the Sea,” and GABR 90 - “Mountain 90,”) and US Bike Routes (USBR 21, USBR 321 - “Battlefield-Chickamauga Spur,” and USBR 521 - “Mountain Cove Farm Spur”) are currently mapped and signed through the study area for on-street / on-road bicycle travel, the parallel shared-use paths proposed in this study often deviate from those routes, suggesting that certain areas of the currently mapped and signed Routes could eventually be altered to follow some of these proposed shared-use path alignments as segments of them are developed.





Legend

Proposed Facilities

- ChickChatt Multi-Use Loop
- Multi-Use Route
- Natural Surface Trail
- Sidewalk

Existing Pedestrian Facilities

- Existing Sidewalks
- Existing Trails

Existing Bike Routes

- USBR 21
- GABRS - Chattahoochee Trace
- Iron Man Route
- 3 State - 3 Mountain Challenge

Institutions

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Museum
- Place of Worship

Points of Interest

- Signal
- Trailhead
- Utility Corridors

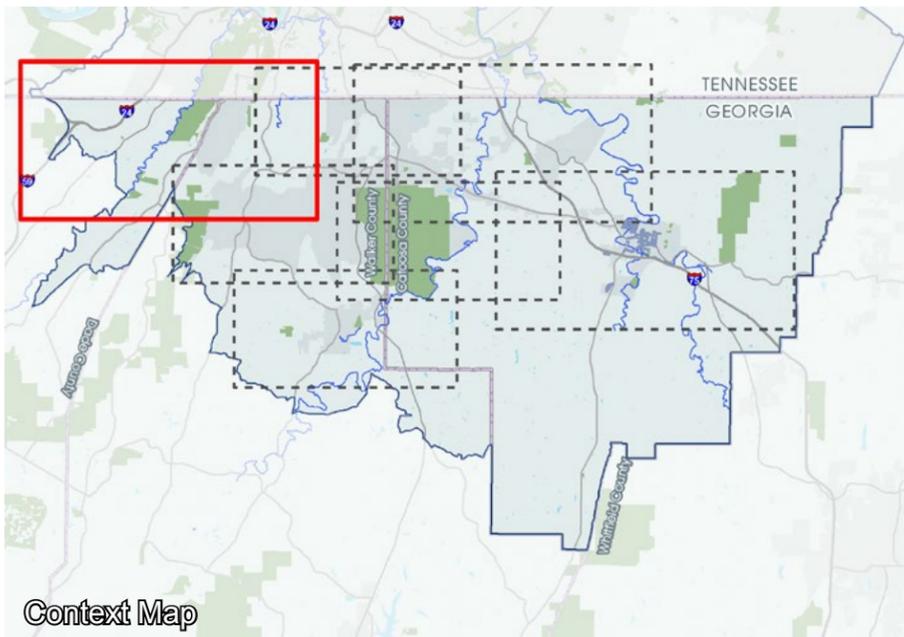
Data Sources:
USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO

Wildwood & Lookout Mountain:

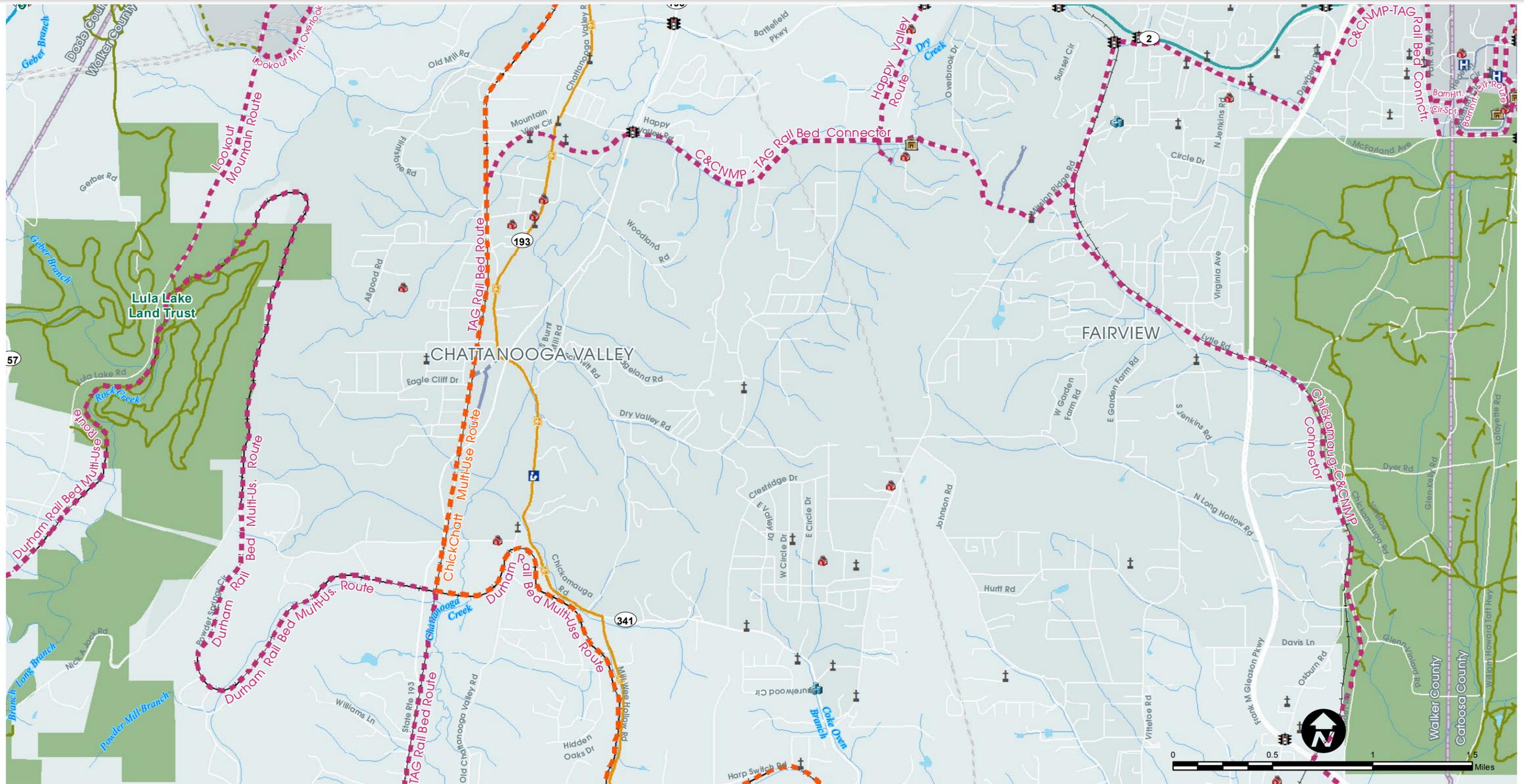
Since traffic on the short segment of Old Birmingham Highway east of Norfolk Southern Railway's main line is so light and lower speeds appear appropriate there, this route appears to be suitable to accommodate bikes and pedestrians on-street with minimal improvements, including striping and signage. A striped, signed and signalized US 11 crosswalk is proposed from the Wildwood Post Office and nearby commercial zone to the existing Old Birmingham Highway grade separation under the Norfolk Southern Railway tracks to provide a safe and convenient connection. Due to its light traffic volume and low speeds, this segment offers an excellent opportunity to provide an on-street bicycle and pedestrian route along Old Birmingham Highway with a series of over land multi-use routes connecting alignments east of the Norfolk Southern Railway right-of-way from the north end of Old Birmingham Highway north to the TN-GA state line. Two additional short parallel on-street Belk Road and Guinn Road segments would also be needed to connect Wildwood into the future Chattanooga companion multi-use route proposed to following the Wauhatchie Pike corridor into Tiftonia. Another potential scenic multi-use route loop is also proposed from the Wildwood Post Office business district northwest paralleling Wawona Drive (CR 109) and then overland to the business strip along SR 299 at I-24 Exit 169, which could then possibly re-connect with the Belk Road shared-use path segment if an adequate, safe and convenient way can be provided to cross both US 11 and the Norfolk Southern Railway main line tracks there.

Lookout Mountain already features numerous natural-surface trails clustered around the public natural areas and plans are underway to continue further expanding this trail network. An existing concrete sidewalk also connects Lookout Mountain, GA with Lookout Mountain, TN at the TN-GA state line. Several multi-use routes have been proposed from Lookout Mountain, TN to other sites on and off the mountain, including the Guild Trail which leads down into the Chattanooga community of St. Elmo, where its Greenway will soon be connected via the Tennessee Riverwalk to Chickamauga Dam as well as to Camp Jordan Park, via the South Chickamauga Creek Greenway. Opportunities also abound for Lookout Mountain, GA to link with both these proposed future TN multi-use routes as well as its own multi-use route to Covenant College and on to the network of Lula Lake Land Trust (LLLLT) trails. The City is investigating alignments from the proposed Town Center to other businesses and activity centers.

It is recommended that the City of Lookout Mountain, GA coordinate with Lookout Mountain, TN, Walker County, Covenant College, the LLLT and Cloudland Canyon State Park to create a more comprehensive and integrated master plan of proposed mountain-top facilities.



Routes	Mileage	User Safety Comfort			Recreational Experience			Transportation Needs			Short Term Facility Type	Short Term Cost	Long Term Facility Type	Long Term Cost	
		Strong & Fearless	Enthusied & Confident	Interested but Concerned	Pedestrian	Connects to Tourist	Connects to Nature	Historic	Important Local Transit	Connects to Local Businesses					Connects to Schools
C&NMP - TAG Rail Bed Connector Multi-Use Route	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Route	\$32,000	Shared-Use	\$6,321,000
Covenant College Connector Natural Surface Multi-Use Route	1.7				✓	✓	✓	✓			✓	Trail	\$961,000	Trail	\$961,000
Durham Rail Bed Multi-Use Route (ChickChatt Multi-Use Route)	10.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Trail	\$5,763,000	Shared-Use	\$9,160,000
Happy Valley Multi-Use Route	2.1	✓	✓	✓	✓				✓	✓	✓	Route	\$9,000	Shared-Use	\$2,462,000
Lookout Mountain - Fairyland Club Multi-Use Route Spur	.5		✓	✓	✓	✓			✓			Yield Roadway	\$45,000	Shared-Use	\$587,000
Lookout Mountain - Town Center Spur Multi-Use Route	.4	✓	✓	✓	✓				✓	✓	✓	Advisory Shoulder	\$30,000	Shared-Use	\$469,000
Lookout Mountain - Boulder Spur Multi-Use Route	.3				✓	✓	✓					Trail	\$226,000	Trail	\$226,000
Lookout Mountain - OCHS Gateway Connector Multi-Use Route	1.7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Advisory Shoulder	\$126,000	Shared-Use	\$1,993,000
Lookout Mountain - Overlook Multi-Use Route	1.3	✓	✓	✓	✓		✓				✓	Trail	\$734,000	Shared-Use	\$1,524,000
Lookout Mountain Multi-Use Route	4.8	✓	✓	✓	✓	✓	✓					Advisory Shoulder / Route	\$355,000	Shared-Use	\$5,627,000
TAG Rail Bed Multi-Use Route (ChickChatt Multi-Use Route)	8.8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Trail	\$4,972,000	Shared-Use	\$7,946,000
Wildwood - Tiftonia Multi-Use Route	4.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Route	\$19,000	Shared-Use	\$3,793,000





Legend

Proposed Facilities

- ChickChatt Multi-Use Loop
- Multi-Use Route
- Natural Surface Trail
- Sidewalk

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks
- Existing Trails

Existing Bike Routes

- USBR 21
- GABR5 - Chattahoochee Trace
- GABR 35 - March to the Sea

Institutions

- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Points of Interest

- Signal
- Utility Corridors

Data Sources:
USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO

Chattanooga Valley & Fairview:

There are four main multi-use routes proposed for the Chattanooga Valley area, those being the north-south TAG Railroad Multi-Use Route and the east-west Durham Rail Bed Multi-Use Route (portions of which are also part of the proposed ChickChatt Multi-Use Route mentioned above) as well as the Happy Valley Multi-Use Route from Flintstone to Rossville Middle School, paralleling Happy Valley Road, and on to Fairview, paralleling Turner Ridge Road and Cora Ann Drive to Mission Ridge Road and then on north by paralleling Mission Ridge Road to its signalized intersection with McFarland Gap Road. Another leg of the proposed multi-use route will extend southeast toward Chickamauga from the intersection of Lytle Road with Mission Ridge Road. If would follow a route south of, parallel / adjacent to Lytle Road and the Central of GA rail line that parallels it mostly on the north. From the Wilder Tower area, the multi-use route could then follow the railroad right-of-way. The western reaches of the Durham Rail Bed Multi-Use Route could enable connections to the LLLT as well as Cloudland Canyon State Park and other resources up on top of Lookout Mountain also outside of the study area.

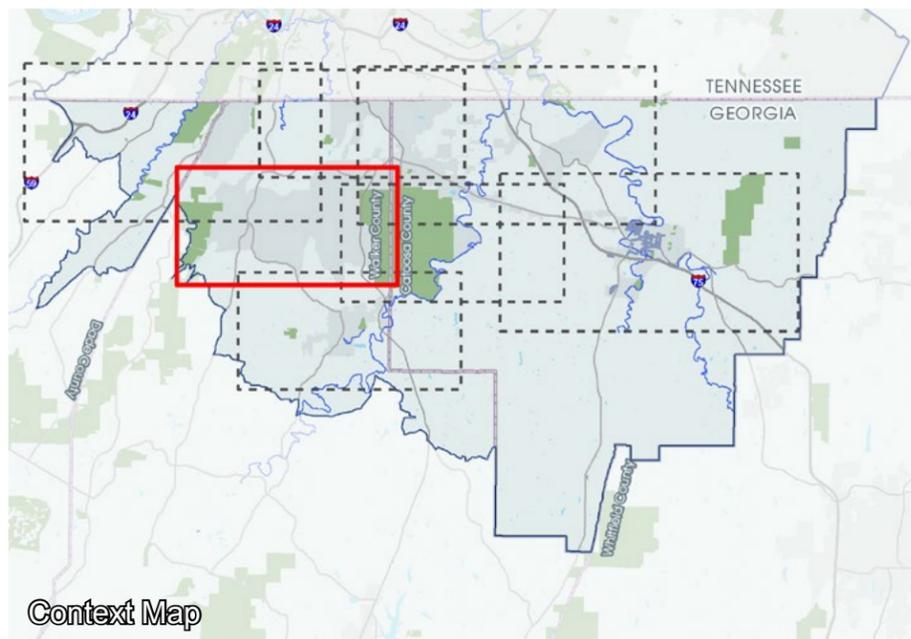
The two historic rail beds offer one major advantage over other routes, in that since they were originally designed with manageable railway slopes, they could be excellent routes for bike and pedestrian shared-use paths. A significant feature of the Chattanooga Valley portions of the proposed TAG Railroad and the Durham Rail segments is that they are also components of the larger 53-mile-long ChickChatt Multi-Use Route loop, as mentioned above.

In addition to the proposed Chattanooga Valley multi-use routes, another proposed

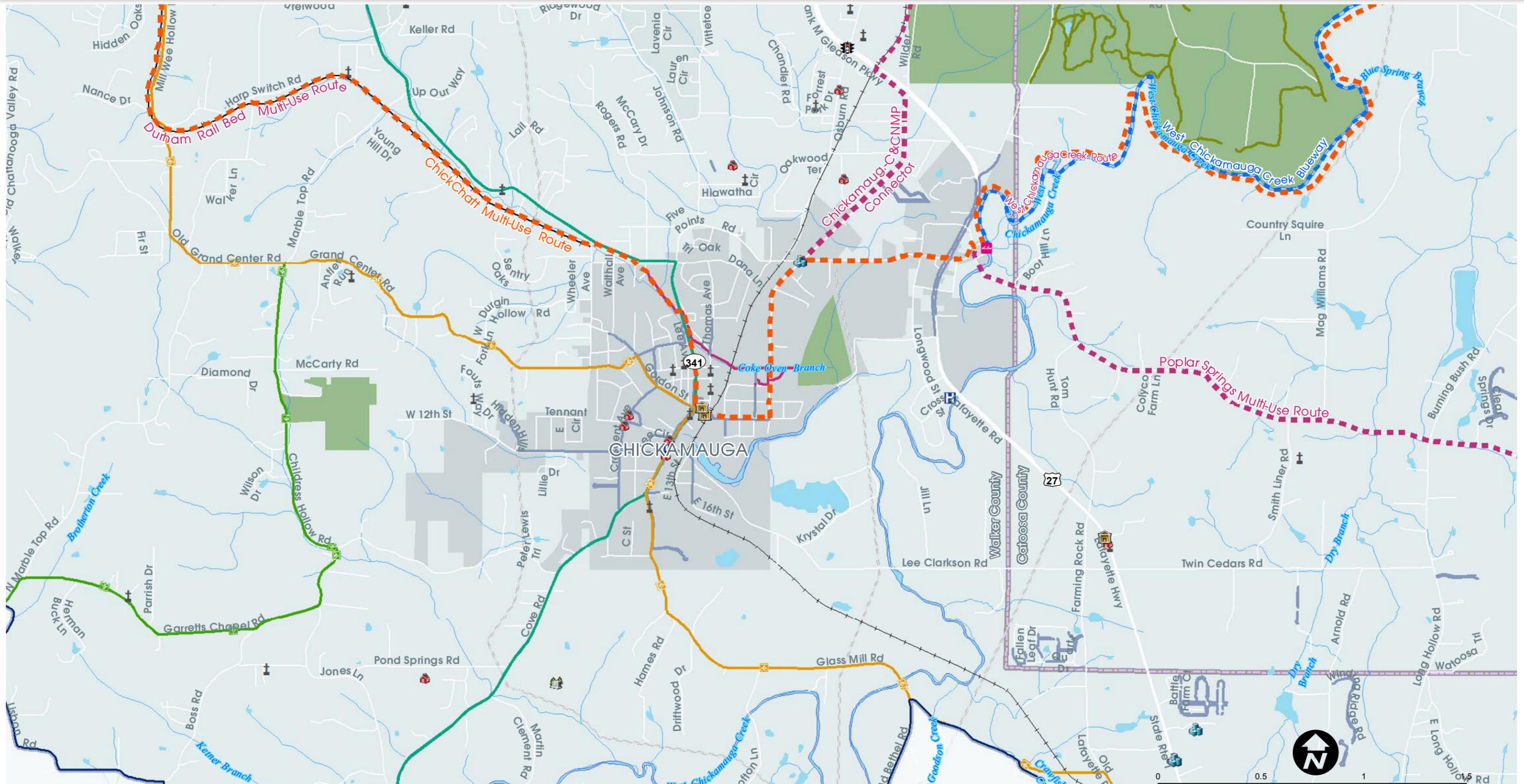
multi-use route would follow the McFarland Gap Road corridor through Fairview with a series of parallel alignments there. Beginning as a striped, signed and signalized crosswalk at the intersection of Mission Ridge Road with McFarland Gap Road, it could run parallel to and alongside McFarland Gap Road (with another signalized cross-walk at the already-signalized North Jenkins Road intersection) and would connect Mission Ridge Road with Dewberry Road and then parallel Dewberry Road north to cross under the US 27 by-pass of Chickamauga Battlefield parallel to Little Street at the grade separation there.

When complete, multi-use route connections are proposed which will connect Fairview with its four adjacent communities. The proposed multi-use route paralleling Mission Ridge Road, Cora Ann Drive, Turner Ridge Road, and Happy Valley Road alignment would connect Fairview with Flintstone in Chattanooga Valley. The Dewberry Road and Little Street parallel alignment could connect it to the City of Fort Oglethorpe. A proposed Happy Valley Road parallel alignment north from Rossville Middle School would connect it to Ridgeland High School, Stone Creek Elementary School and the City of Rossville and a proposed Lytle Road parallel multi-use route would connect Fairview with Wilder Tower and the City of Chickamauga.

If implemented in this way, Chattanooga Valley and Fairview would be connected to one another and other nearby study area communities by bike and pedestrian facilities that would also interconnect them to the Tennessee Riverwalk in Chattanooga via both the St. Elmo Greenway and from Rossville via connections along Rossville Boulevard to downtown Chattanooga.



Routes	Mileage	User Safety Comfort			Recreational Experience			Transportation Needs			Short Term Facility Type	Short Term Cost	Long Term Facility Type	Long Term Cost	
		Strong & Fearless	Enthusied & Confident	Interested but Concerned	Pedestrian	Connects to Tourist	Connects to Nature	Historic	Important Local Transit	Connects to Local Businesses					Connects to Schools
Barnhart Circle Multi-Use Route Spur	.2		✓	✓	✓	✓		✓		✓		Yield Roadway	\$18,000	Shared-Use	\$235,000
C&CNMP - TAG Rail Bed Connector Multi-Use Route	7	✓	✓	✓	✓	✓	✓	✓	✓		✓	Route	\$32,000	Shared-Use	\$6,321,000
Chickamauga - C&CNMP Connector Multi-Use Route	5.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Route	\$25,000	Shared-Use	\$4,966,000
Covenant College Connector Natural Surface Multi-Use Route	1.7				✓	✓	✓	✓			✓	Trail	\$961,000	Trail	\$961,000
Durham Rail Bed Multi-Use Route (ChickChatt Multi-Use Route)	10.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Trail	\$5,763,000	Shared-Use	\$9,160,000
Happy Valley Multi-Use Route	2.1	✓	✓	✓	✓				✓	✓	✓	Route	\$9,000	Shared-Use	\$2,462,000
Lookout Mountain - Overlook Multi-Use Route	1.3	✓	✓	✓	✓						✓	Trail	\$734,000	Shared-Use	\$1,524,000
Lookout Mountain Multi-Use Route	4.8	✓	✓	✓	✓	✓	✓					Advisory Shoulder / Route	\$355,000	Shared-Use	\$5,627,000
TAG Rail Bed Multi-Use Route (ChickChatt Multi-Use Route)	8.8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Trail	\$4,972,000	Shared-Use	\$7,946,000



Legend

Proposed Facilities

- ChickChatt Multi-Use Loop
- Multi-Use Route
- Blueway Routes

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks
- Existing Trails

Existing Bike Routes

- USBR 21
- USBR 521 - Mountain Cove Farm Spur
- Iron Man Route

Thrive Institutions

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Points of Interest

- Canoe Launch
- Signal
- Utility Corridors

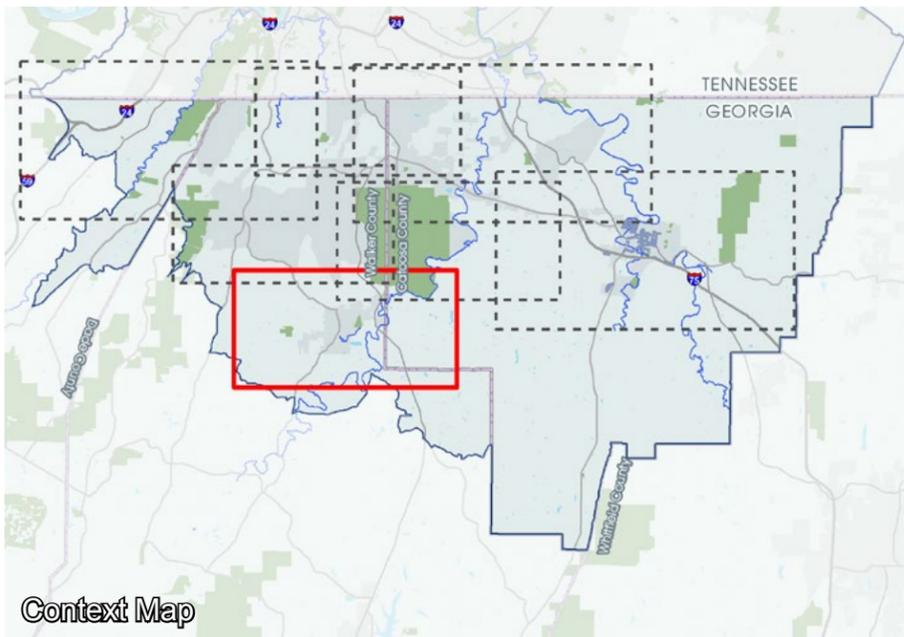
Data Sources:
USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO, City of Ringgold

Chickamauga:

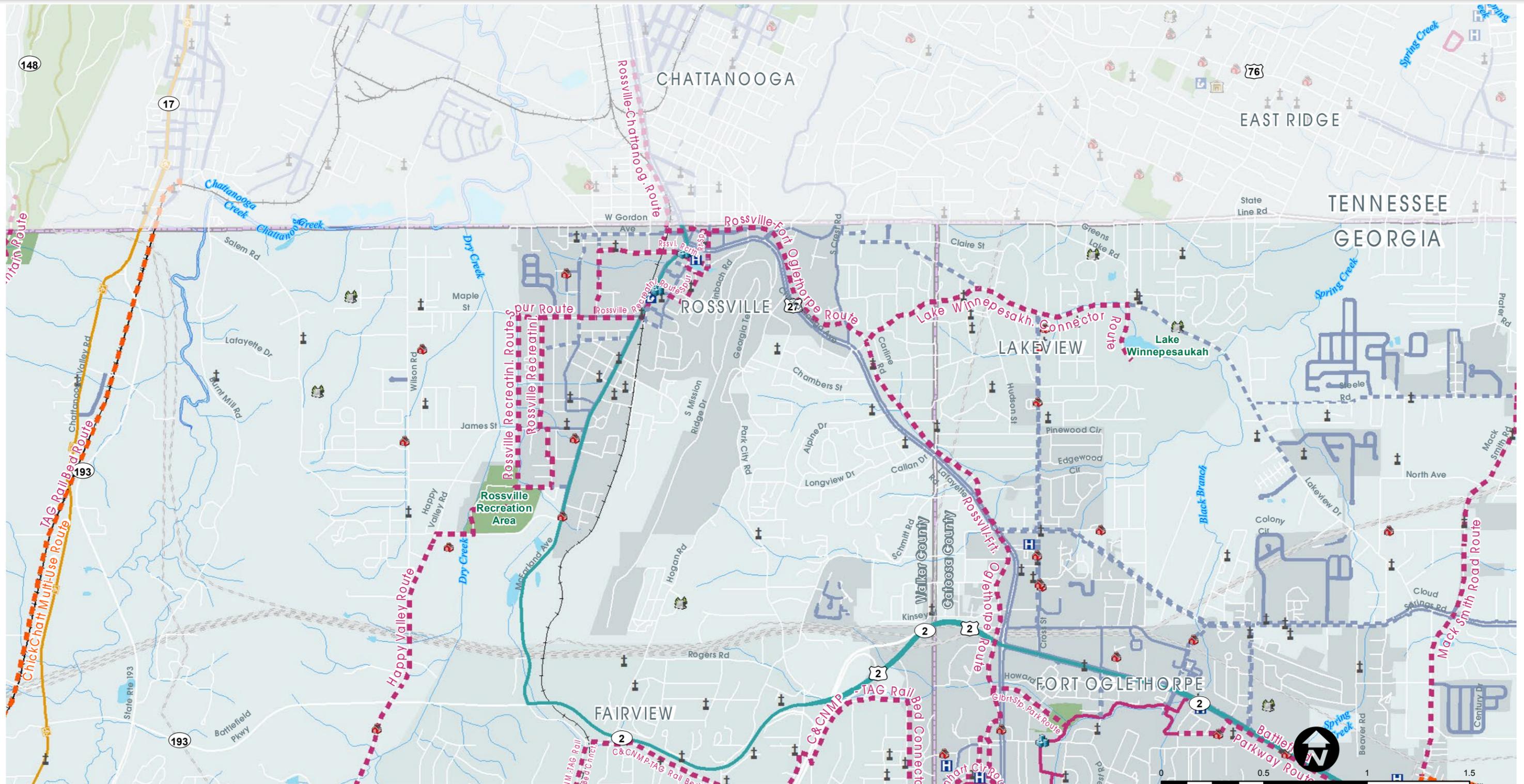
The City of Chickamauga already has several multi-use routes proposed to connect its downtown with the Coke Oven Park and other historical and recreational activity centers within the City. In addition to these, it also has opportunities to connect with additional resources and communities nearby outside its corporate limits. As a key component of the proposed 53-mile long ChickChatt Loop mentioned above, the proposed Durham Rail Bed Multi-Use Route, would connect Chickamauga, west to Chattanooga Valley and Lookout Mountain, as well as to Chattanooga via the proposed TAG Rail Multi-Use Route and St. Elmo Greenway. Continuing east through Chickamauga, the proposed ChickChatt Loop would parallel Crittenden Avenue to Lee Gordon Mill Road, paralleling it to Lee & Gordon's Mill as well as passing the Shields Crossroads commercial business district. From Lee & Gordon's Mill, the ChickChatt Loop would follow the proposed West Chickamauga Creek Greenway, paralleling the West Chickamauga Creek Blueway north from the Mill to Camp Jordan Park in East Ridge. Another multi-use route could also proceed east along Red Belt Road toward Napier Gap as a connection to Peavine Valley and the City of Ringgold.

An additional proposed multi-use route would lead north from the intersection of Lee Gordon Mill Road and Crittenden Avenue in Chickamauga and paralleling Wilder Road north to the US 27 By-pass, where it would connect to the C&CNMP - TAG Multi-Use Route from Rossville and Fairview and also provide a connection to Chickamauga Battlefield at Wilder Tower.

By use of the two routes that flank the Chickamauga Battlefield, Chickamauga could cooperate with Fort Oglethorpe to create their own 22-mile-long loop around the Park.



Routes	Mileage	User Safety Comfort			Recreational Experience			Transportation Needs				Short Term Facility Type	Short Term Cost	Long Term Facility Type	Long Term Cost
		Strong & Fearless	Enthusied & Confident	Interested but Concerned	Pedestrian	Connects to Tourist	Connects to Nature	Historic	Important Local Transit	Connects to Local Businesses	Connects to Schools				
Chickamauga - C&CNMP Connector Multi-Use Route	5.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Route	\$25,000	Shared-Use	\$4,966,000
Durham Rail Bed Multi-Use Route (ChickChatt Multi-Use Route)	10.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Trail	\$5,763,000	Shared-Use	\$9,160,000
Poplar Springs Multi-Use Route	12.8	✓	✓	✓	✓	✓	✓				✓	Route	\$58,000	Shared-Use	\$11,557,000





Legend

Proposed Facilities

- ChickChatt Multi-Use Loop
- Multi-Use Route
- Sidewalk

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks

Existing Bike Routes

- USBR 21
- GABR5 - Chattahoochee Trace
- GABR 35 - March to the Sea

FEATTYPE

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship
- Utility Corridors

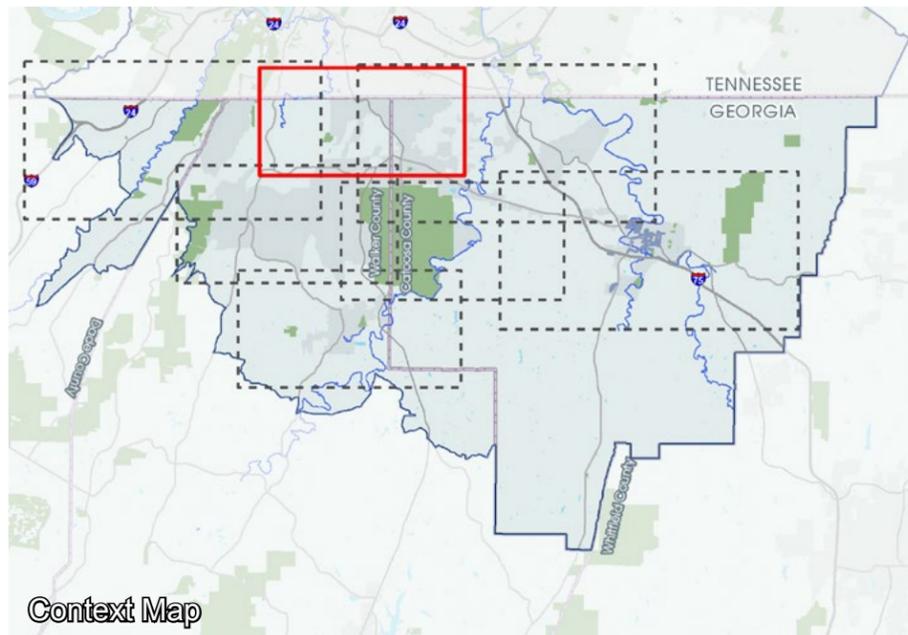
Data Sources:

USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO

Rossville & Lakeview:

In addition to upgrading, enhancing and expanding its existing network of concrete sidewalks and pedestrian facilities to and throughout more parts of the City of Rossville, multi-use routes are proposed in Rossville that will connect it with facilities in Chattanooga as well as other parts of the study area. Among these are the Rossville - Fort Oglethorpe Multi-use Route which would connect the two cities along what remains of a former trolley bed and another proposed multi-use route, which would branch off of it in order to parallel Lakeview Drive and connect to Lake Winnepesaukah via the community of Lakeview.

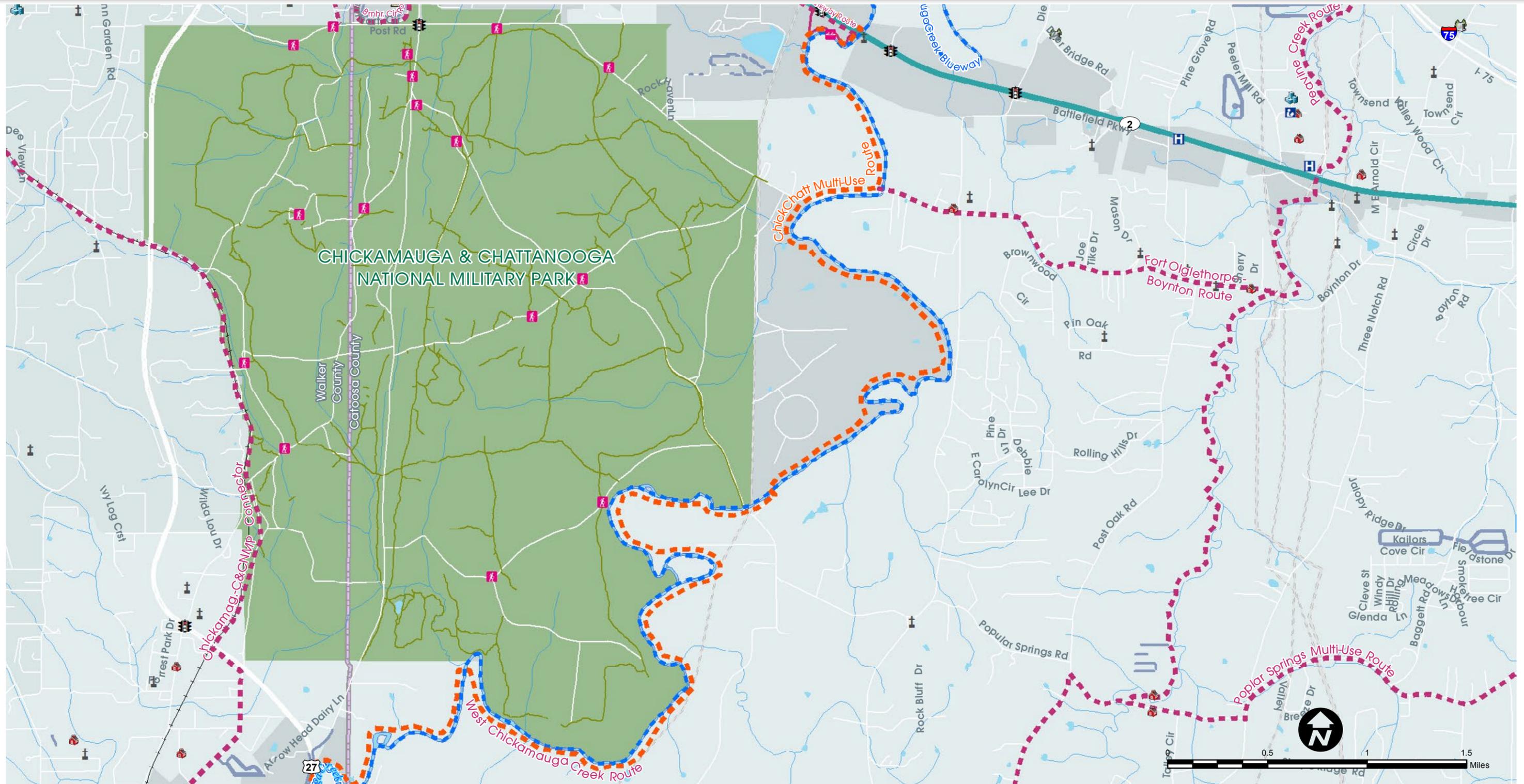
The proposed Rossville Recreational Multi-Use Route south would connect activity centers such as the John Ross House and Duck Pond with the Rossville Recreation Park and Stone Creek Elementary School, as well as Ridgeland High School, Rossville Middle and Flintstone via the proposed Happy Valley Multi-Use Route. In this way, Rossville would resume its once-crucial role as both a destination as well as a central hub with the spokes that reach out to surrounding communities.



Routes	Mileage	User Safety Comfort				Recreational Experience			Transportation Needs			Short Term Facility Type	Short Term Cost	Long Term Facility Type	Long Term Cost
		Strong & Fearless	Enthusied & Confident	Interested but Concerned	Pedestrian	Connects to Tourist	Connects to Nature	Historic	Important Local Transit	Connects to Local Businesses	Connects to Schools				
Battlefield Parkway Multi-Use Route	1.5	✓	✓	✓	✓				✓	✓	✓	Route	\$7,000	Shared-Use	\$1,759,000
C&CNMP - TAG Rail Bed Connector Multi-Use Route	7	✓	✓	✓	✓	✓	✓	✓	✓		✓	Route	\$32,000	Shared-Use	\$6,321,000
Gilbert - Stephenson Park Connector Multi-Use Route	.4		✓	✓	✓	✓					✓	Advisory Shoulder	\$30,000	Shared-Use	\$469,000
Happy Valley Multi-Use Route	2.1	✓	✓	✓	✓				✓	✓	✓	Route	\$9,000	Shared-Use	\$2,462,000
Lake Winnepesauka Connector Multi-Use Route	1.7	✓	✓	✓	✓	✓					✓	Advisory Shoulder	\$126,000	Shared-Use	\$1,993,000
Lookout Mountain - Fairyland Club Multi-Use Route Spur	.5		✓	✓	✓	✓			✓			Yield Roadway	\$45,000	Shared-Use	\$587,000
Lookout Mountain Multi-Use Route	4.8	✓	✓	✓	✓	✓	✓					Advisory Shoulder / Route	\$355,000	Shared-Use	\$5,627,000
Mack Smith Road Multi-Use Route	2.9	✓	✓	✓	✓				✓	✓		Route	\$13,000	Bike Lane	\$3,400,000
Rossville - Chattanooga Multi-Use Route	.9	✓	✓	✓	✓	✓		✓	✓	✓		Advisory Shoulder / Route	\$67,000	Shared-Use	\$1,055,000
Rossville - Fort Oglethorpe Multi-Use Route	3.7	✓	✓	✓	✓	✓		✓	✓	✓		Route	\$17,000	Shared-use	\$4,337,000
Rossville - Fort Oglethorpe Multi-Use Route Spur	.3		✓	✓	✓	✓		✓	✓	✓		Advisory Shoulder	\$22,000	Shared-Use	\$352,000
Rossville Recreational Multi-Use Route	2.3	✓	✓	✓	✓	✓			✓	✓	✓	Advisory Shoulder	\$170,000	Shared-Use	\$2,696,000
Rossville Recreational Multi-Use Route Spur	2.3		✓	✓	✓	✓	✓		✓	✓	✓	Route	\$10,350	Advisory Shoulder	\$2,696,000
TAG Rail Bed Multi-Use Route (ChickChatt Multi-Use Route)	8.8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Trail	\$4,972,000	Shared-Use	\$7,946,000



Chickamauga & Chattahoochee National Military Park



Chickamauga & Chattanooga National Military Park:

There are several proposed multi-use routes that would lead users to / from the Chickamauga & Chattanooga National Military Park, however, none in this study are proposed to pass through the park in order to acknowledge the intention that this Park be considered as a more passive environment for study, reflection and to honor soldiers fallen in the battle, not as a thru-way or for more active recreation per se. Understanding that, routes shown are only proposed to go around the park or to the gates of the park. As an example, the West Chickamauga Creek Multi-Use Route, a part of the larger ChickChatt Multi-Use Route Loop, is proposed to run outside the east perimeter of the Park and as it inter-connects Fort Oglethorpe with Chickamauga. Similarly, both the existing Barnhardt Circle Trail and the proposed Hedekin Circle Contra-Flow Bikeway provide for future connections to the Park Visitor Center but, as proposed, do not encroach upon the Park as a thru-way. Similarly, the Fort Oglethorpe connection to Fairview also avoids encroaching upon Park property as it passes north and west of it. In this way, a series of multi-use routes could literally encircle Chickamauga Park without adversely impacting it.

Legend

Proposed Facilities

- ChickChatt Multi-Use Loop
- Multi-Use Route
- Blueway Routes

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks
- Existing Trails

Existing Bike Facilities

- GABR 35 - March to the Sea

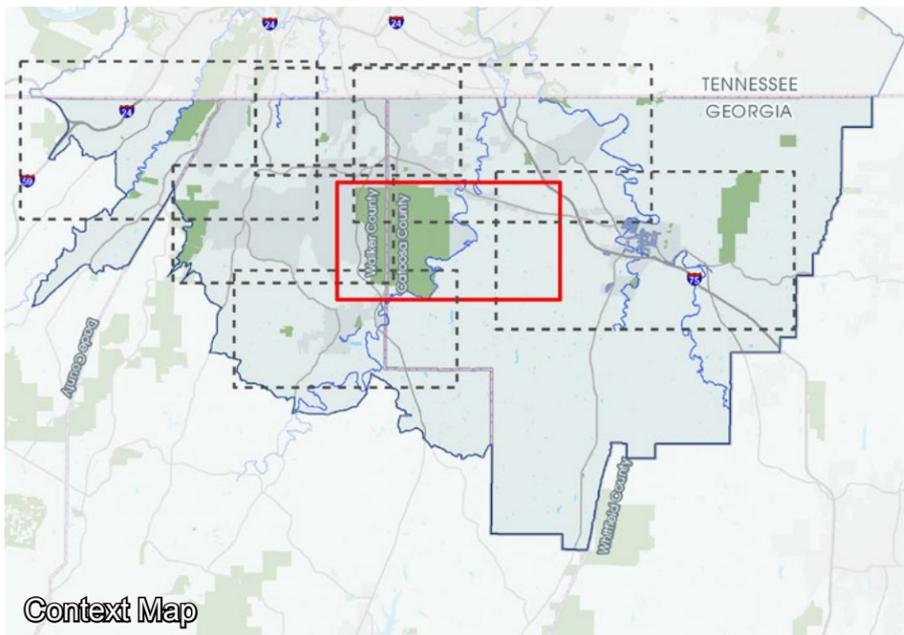
Institutions

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Points of Interest

- Signal
- Canoe Launch
- Utility Corridors

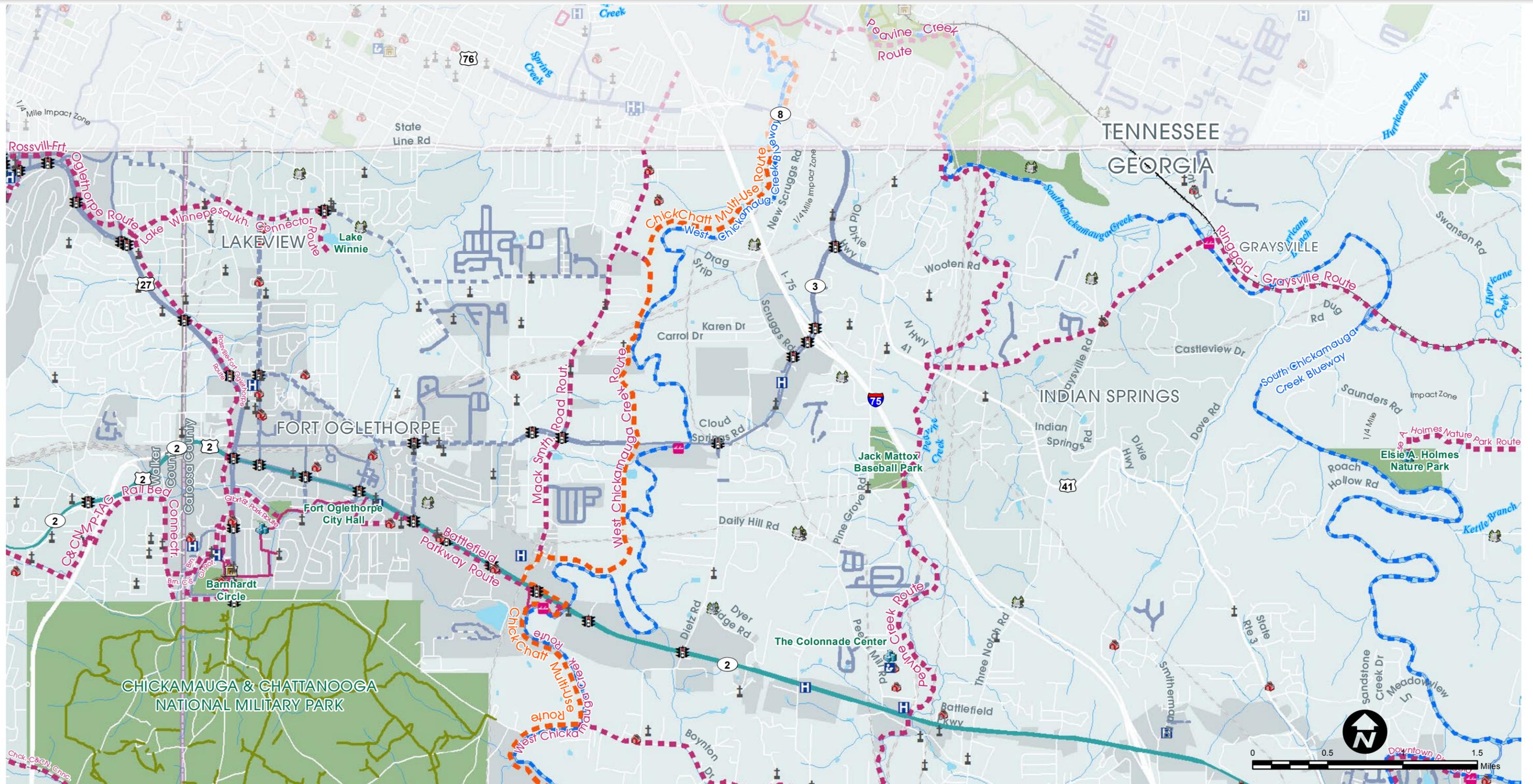
Data Sources:
USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO.



Routes	Mileage	User Safety Comfort			Recreational Experience			Transportation Needs			Short Term Facility Type	Short Term Cost	Long Term Facility Type	Long Term Cost	
		Strong & Fearless	Enthusied & Confident	Interested but Concerned	Pedestrian	Connects to Tourist	Connects to Nature	Historic	Important Local Transit	Connects to Local Businesses					Connects to Schools
Barnhart Circle Multi-Use Route	1		✓	✓	✓	✓		✓			✓	Yield Roadway	\$90,000	Shared-Use	\$1,173,000
Barnhart Circle Multi-Use Route Spur	.2		✓	✓	✓	✓		✓		✓		Yield Roadway	\$18,000	Shared-Use	\$235,000
Battlefield Parkway Multi-Use Route	1.5	✓	✓	✓	✓				✓	✓	✓	Route	\$7,000	Shared-Use	\$1,759,000
C&CNMP - TAG Rail Bed Connector Multi-Use Route	7	✓	✓	✓	✓	✓	✓	✓	✓		✓	Route	\$32,000	Shared-Use	\$6,321,000
Chickamauga - C&CNMP Connector Multi-Use Route	5.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Route	\$25,000	Shared-Use	\$4,966,000
Fort Oglethorpe - Boynton Multi-Use Route	2.2	✓	✓	✓	✓	✓	✓	✓	✓		✓	Route	\$10,000	Shared-Use	\$1,987,000
Peavine Creek Multi-Use Route	8.9	✓	✓	✓	✓	✓	✓		✓		✓	Trail	\$5,028,000	Shared-Use	\$8,036,000
Poplar Springs Multi-Use Route	12.8	✓	✓	✓	✓	✓	✓				✓	Route	\$58,000	Shared-Use	\$11,557,000
West Chickamauga Multi-Use Route (ChickChatt Multi-Use Route)	16.3		✓	✓	✓	✓	✓	✓	✓		✓	Trail	\$9,209,000	Shared-Use	\$14,717,000



Fort Oglethorpe, Indian Springs, & Graysville





Fort Oglethorpe, Indian Springs, & Graysville:

The existing Black Branch Greenway and Harker Road Shared-Use Path already connect City Hall with Gilbert Stephenson Park and other City recreation facilities including the Frank N. Gleason Park as well as Barnhardt Circle and the Historic District. Plans are underway for a Battlefield Parkway Shared-Use Path which will connect Lakeview Fort Oglethorpe High School with the short existing segment of West Chickamauga Creek Greenway, which includes a canoe launch connection to the West Chickamauga Creek Blueway.

Proposed for the City of Fort Oglethorpe are numerous multi-use routes throughout this portion of the study area connecting to places both within the City and to places in every direction. The proposed West Chickamauga Creek Multi-Use Route (a part of the proposed ChickChatt Loop) would lead to places north in East Ridge and Chattanooga. The West Chickamauga Creek Multi-Use Route would connect south along the eastern perimeter of Chickamauga Park to Lee & Gordons Mill and the City of Chickamauga as well as east to the proposed Peavine Creek Multi-Use Route. Fort Oglethorpe and Ringgold would then be connected by the shared-use route along the West Chickamauga Creek Greenway / ChickChatt Shared-Use Trail at Reeds Bridge and east along Reeds Bridge Road / Boynton Drive to Boynton, down the Peavine Creek Greenway to Poplar Springs Road and east along Poplar Springs Road to Holcomb Road to the Rollins Industrial Park and the Poplar Spring Fields. Furthermore, the Georgia portion of the ChickChatt Multi-Use Loop incorporates the West Chickamauga Creek Multi-Use Route as a crucial segment of it. Among other

enhancements are proposed multi-use routes along Mack Smith Road and Mineral Avenue which will inter-connect the Battlefield Parkway business district with the Ringgold Road business district in East Ridge. It is suggested that as this north-south corridor is widened and enhanced, that a parallel shared-use path be incorporated to connect with similar improvements proposed by East Ridge to connect its primary east-west corridor with Camp Jordan Park.

Likewise, segments of Old LaFayette Road and available segments of the abandoned trolley bed provide opportunities to connect the Old Post street grid near Barnhardt Circle with nearby Rossville (and on to Chattanooga) with the proposed Rossville-Fort Oglethorpe Multi-Use Route.

In conjunction with the City of Chickamauga, Catoosa County and Walker County, the City of Fort Oglethorpe could help create a 22-mile long multi-use route loop from the Battlefield Parkway Route, south along the West Chickamauga Creek Multi-Use Route to Chickamauga, then north along the Chickamauga - C&CNMP Connector Multi-Use Route and east paralleling McFarland Gap Road through Fairview on the C&CNMP - TAG Rail Bed Connector Multi-Use Route paralleling back to the Cornerstone Medical Center campus and into the Fort Oglethorpe Historic District. From there the existing Harker Road Shared-Use Path and Black Branch Greenway extend east and back to Battlefield Parkway.

Legend

Proposed Facilities

- ChickChatt Multi-Use Loop
- Multi-Use Route
- Sidewalk
- Blueway Routes

Existing Pedestrian Facilities

- Multi-Use Path
- Existing Sidewalks
- Existing Trails

Existing Bike Facilities

- GABR 35 - March to the Sea

Institutions

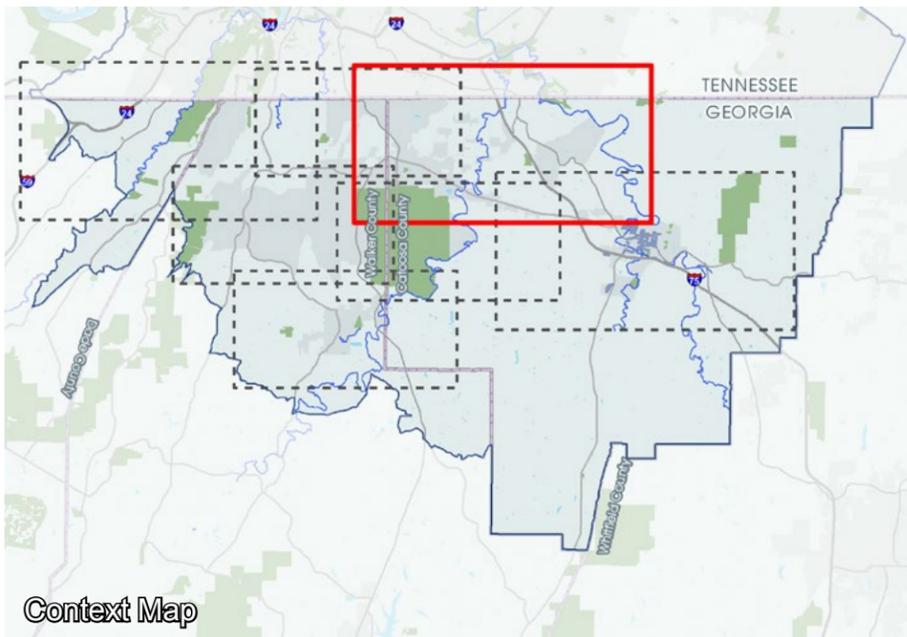
- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Points of Interest

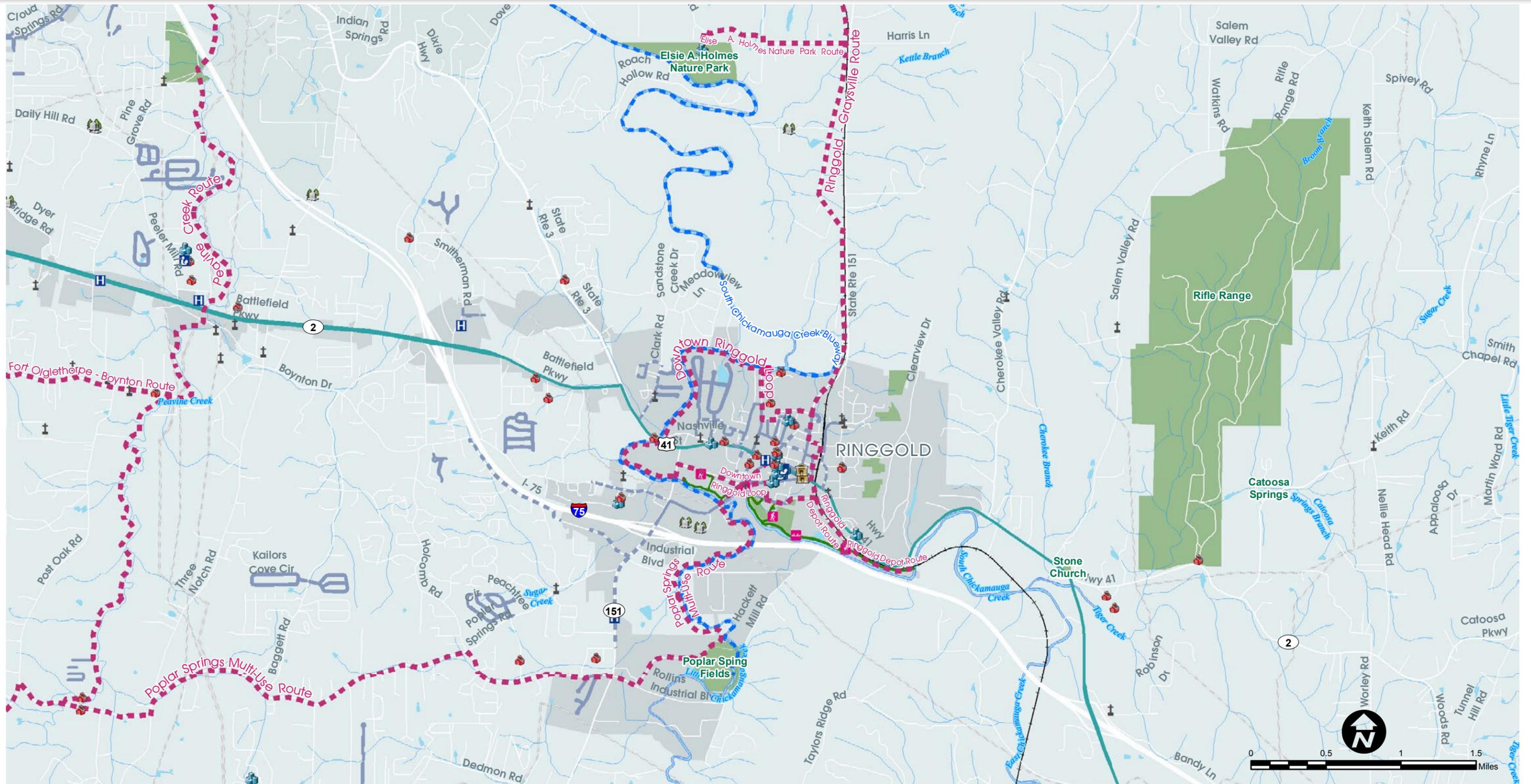
- Signal
- Canoe Launch
- Utility Corridors

Data Sources:

USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO.



Routes	Mileage	User Safety Comfort			Recreational Experience			Transportation Needs			Short Term Facility Type	Short Term Cost	Long Term Facility Type	Long Term Cost	
		Strong & Fearless	Enthusied & Confident	Interested but Concerned	Pedestrian	Connects to Tourist	Connects to Nature	Historic	Important Local Transit	Connects to Local Businesses					Connects to Schools
Barnhart Circle Multi-Use Route	1		✓	✓	✓	✓		✓			✓	Yield Roadway	\$90,000	Shared-Use	\$1,173,000
Barnhart Circle Multi-Use Route Spur	.2		✓	✓	✓	✓		✓		✓		Yield Roadway	\$18,000	Shared-Use	\$235,000
Battlefield Parkway Multi-Use Route	1.5	✓	✓	✓	✓				✓	✓	✓	Route	\$7,000	Shared-Use	\$1,759,000
C&CNMP - TAG Rail Bed Connector Multi-Use Route	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Route	\$32,000	Shared-Use	\$6,321,000
Chickamauga - C&CNMP Connector Multi-Use Route	5.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Route	\$25,000	Shared-Use	\$4,966,000
Elise A. Holmes Multi-Use Route	1.1	✓	✓	✓	✓	✓	✓					Route	\$5,000	Shared-Use	\$988,000
Fort Oglethorpe - Boynton Multi-Use Route	2.2	✓	✓	✓	✓	✓	✓	✓	✓		✓	Route	\$10,000	Shared-Use	\$1,987,000
Gilbert - Stephenson Park Connector Multi-Use Route	.4		✓	✓	✓	✓				✓	✓	Advisory Shoulder	\$30,000	Shared-Use	\$469,000
Lake Winnepesauka Connector Multi-Use Route	1.7	✓	✓	✓	✓	✓				✓		Advisory Shoulder	\$126,000	Shared-Use	\$1,993,000
Mack Smith Road Multi-Use Route	2.9	✓	✓	✓	✓				✓	✓		Route	\$13,000	Bike Lane	\$3,400,000
Peavine Creek Multi-Use Route	8.9	✓	✓	✓	✓	✓	✓		✓		✓	Trail	\$5,028,000	Shared-Use	\$8,036,000
Ringgold - Graysville Multi-Use Route	7.9	✓	✓	✓	✓	✓	✓	✓		✓	✓	Route	\$36,000	Shared-Use	\$7,133,000
Rossville - Fort Oglethorpe Multi-Use Route	3.7	✓	✓	✓	✓	✓		✓	✓	✓		Route	\$17,000	Shared-use	\$4,337,000
Rossville - Fort Oglethorpe Multi-Use Route Spur	.3		✓	✓	✓	✓		✓	✓	✓		Advisory Shoulder	\$22,000	Shared-Use	\$352,000
West Chickamauga Multi-Use Route (ChickChatt Multi-Use Route)	16.3		✓	✓	✓	✓	✓	✓	✓		✓	Trail	\$9,209,000	Shared-Use	\$14,717,000



Legend

Proposed Facilities

- Multi-Use Route
- Sidewalk
- Blueway Routes

Existing Pedestrian Facilities

- Existing Sidewalks
- Existing Trails

Existing Bike Facilities

- GABR 35 - March to the Sea

Points of Interest

- Cemetery
- School
- Government Office
- Hospital/Polyclinic
- Library
- Museum
- Place of Worship

Points of Interest

- Canoe Launch
- Trail Head
- Utility Corridors

Data Sources:
USGS, U.S. Census Bureau, U.S. Forest Service, NOAA, U.S. Fish & Wildlife Service, GDOT, UT Chattanooga ARCS, CHCNGA-TPO, City of Ringgold

Ringgold:

Ringgold has several existing shared-use paths, particularly along South Chickamauga Creek with plans to extend this into a loop trail around the city that connects to canoe launch points for the proposed South Chickamauga Creek Blueway. As proposed, this loop will connect to Ringgold High School and its recreation facilities. Ringgold also plans to connect its downtown business district to the Poplar Springs Fields in the Rollins Industrial Park with a proposed multi-use route along Little Chickamauga Creek.

Rather than attempting to parallel Boynton Drive to Boynton as once thought, since the proposed Poplar Springs Multi-Use Route will have already crossed under I-75, it is proposed to extend this multi-use route west past Ringgold Elementary School to the campuses of Heritage High School and Heritage Middle School, where it could inter-connect with the proposed north-south Peavine Creek Multi-Use Route. It would then connect the campuses of Heritage High School / Heritage Middle School with the Boynton community, Boynton Community Building, Boynton Elementary School and Boynton Recreation fields as well as the Benton Place Campus and Jack Mattox Recreation Park. It is proposed to extend further north to both Graysville and Camp Jordan Park.

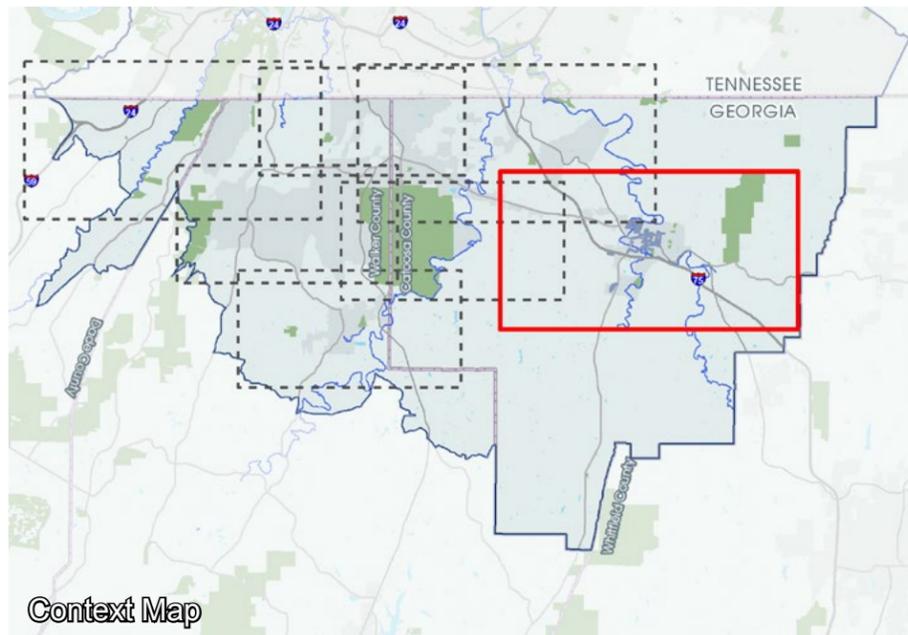
Another internal multi-use route is also proposed south along SR 151 (Old Alabama Road) from its intersection with Robin Road to the commercial hotel / motel / restaurant district on the north / east side of I-75 GA Exit 348. Another companion multi-use route could also extend north from Holcomb Road along SR 151 (Old Alabama Road) to the commercial retail district on the south / west side of I-75 GA Exit 348.

In addition to reaching south and west, it is proposed to extend the downtown

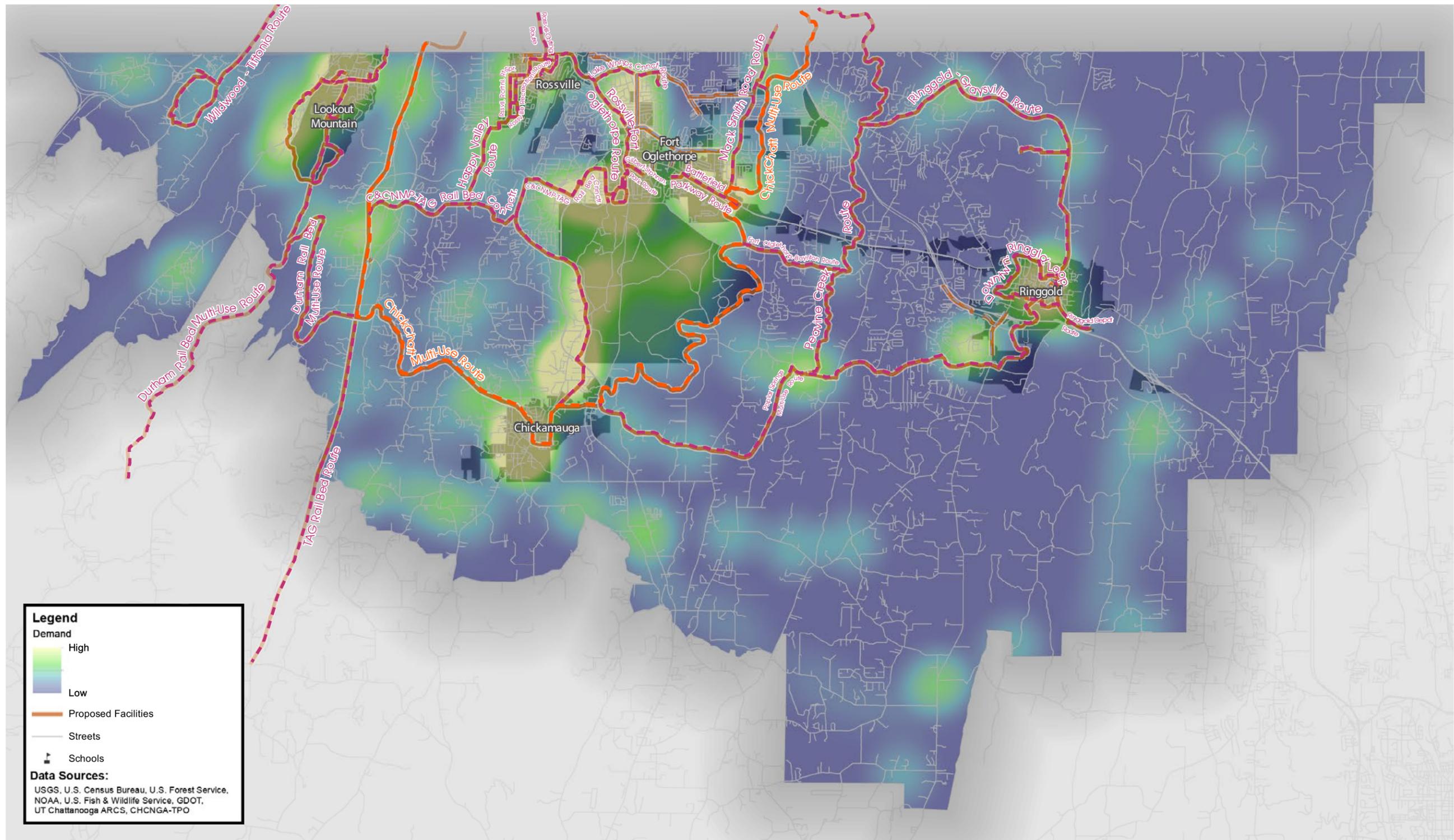
Ringgold network of multi-use routes north on an existing sanitary sewer force main which runs parallel to and west of the CSX railroad right-of-way all the way to Graysville, where it would then interconnect with the Peavine Creek Multi-Use Route on its way to Camp Jordan Park. A branch of this proposed multi-use route is also proposed to parallel Saunders Road in order to connect with Elsie A. Holmes Nature Park and the natural surface trails and other resources available there.

Ringgold and Catoosa County could use the proposed Ringgold-Graysville Multi-Use Route and the Peavine Creek Multi-Use Route to connect the proposed Poplar Springs Multi-Use Route to create a 23-mile long loop around Ringgold.

Although areas northeast, east, southeast and south of Ringgold lie within the subject study area, for purposes of these investigations, it was determined that at this time no specific pedestrian or bicycle facilities be proposed northeast of Ringgold Gap into Cherokee Valley, Salem Valley or Keith, etc., east of Ringgold toward the Old Stone Church or Tunnel Hill, etc., southeast toward Dogwood Valley or Houston Valley or further south of Ringgold toward Wood Station.



Routes	Mileage	User Safety Comfort			Recreational Experience			Transportation Needs			Short Term Facility Type	Short Term Cost	Long Term Facility Type	Long Term Cost	
		Strong & Fearless	Enthusied & Confident	Interested but Concerned	Pedestrian	Connects to Tourist	Connects to Nature	Historic	Important Local Transit	Connects to Local Businesses					Connects to Schools
Downtown Ringgold Loop	4.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Trail	\$2,542,000	Shared-Use	\$4,063,000
Elise A. Holmes Multi-Use Route	1.1	✓	✓	✓	✓	✓	✓					Route	\$5,000	Shared-Use	\$988,000
Peavine Creek Multi-Use Route	8.9	✓	✓	✓	✓	✓	✓		✓		✓	Trail	\$5,028,000	Shared-Use	\$8,036,000
Poplar Springs Multi-Use Route	12.8	✓	✓	✓	✓	✓	✓				✓	Route	\$58,000	Shared-Use	\$11,557,000
Ringgold - Graysville Multi-Use Route	7.9	✓	✓	✓	✓	✓	✓	✓		✓	✓	Route	\$36,000	Shared-Use	\$7,133,000
Ringgold Depot Multi-Use Route	1	✓	✓	✓	✓	✓	✓	✓	✓	✓		Trail	\$565,000	Shared-Use	\$1,173,000





Routes	Mileage	User Safety Comfort			Recreational Experience			Transportation Needs				Short Term Facility Type	Short Term Cost	Long Term Facility Type	Long Term Cost	
		Strong & Fearless	Enthused & Confident	Interested but Concerned	Pedestrian	Connects to Tourist	Connects to Nature	Historic	Important Local Transit	Connects to Local Businesses	Connects to Schools					
Barnhart Circle Multi-Use Route	1		✓	✓	✓	✓		✓				✓	Yield Roadway	\$90,000	Shared-Use	\$1,173,000
Barnhart Circle Multi-Use Route Spur	.2		✓	✓	✓	✓		✓					Yield Roadway	\$18,000	Shared-Use	\$235,000
Battlefield Parkway Multi-Use Route	1.5	✓	✓	✓	✓				✓	✓	✓		Route	\$7,000	Shared-Use	\$1,759,000
C&CNMP - TAG Rail Bed Connector Multi-Use Route	7	✓	✓	✓	✓	✓	✓	✓	✓		✓		Route	\$32,000	Shared-Use	\$6,321,000
Chickamauga - C&CNMP Connector Multi-Use Route	5.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Route	\$25,000	Shared-Use	\$4,966,000
Covenant College Connector Natural Surface Multi-Use Route	1.7				✓	✓	✓	✓			✓		Trail	\$961,000	Trail	\$961,000
Downtown Ringgold Loop	4.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Trail	\$2,542,000	Shared-Use	\$4,063,000
Durham Rail Bed Multi-Use Route (ChickChatt Multi-Use Route)	10.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Trail	\$5,763,000	Shared-Use	\$9,160,000
Elise A. Holmes Multi-Use Route	1.1	✓	✓	✓	✓	✓	✓						Route	\$5,000	Shared-Use	\$988,000
Fort Oglethorpe - Boynton Multi-Use Route	2.2	✓	✓	✓	✓	✓	✓	✓	✓		✓		Route	\$10,000	Shared-Use	\$1,987,000
Gilbert - Stephenson Park Connector Multi-Use Route	.4		✓	✓	✓	✓					✓	✓	Advisory Shoulder	\$30,000	Shared-Use	\$469,000
Happy Valley Multi-Use Route	2.1	✓	✓	✓	✓				✓	✓	✓		Route	\$9,000	Shared-Use	\$2,462,000
Lake Winnepesauka Connector Multi-Use Route	1.7	✓	✓	✓	✓	✓					✓		Advisory Shoulder	\$126,000	Shared-Use	\$1,993,000
Lookout Mountain - Fairyland Club Multi-Use Route Spur	.5		✓	✓	✓	✓			✓				Yield Roadway	\$45,000	Shared-Use	\$587,000
Lookout Mountain - Town Center Spur Multi-Use Route	.4	✓	✓	✓	✓				✓	✓	✓		Advisory Shoulder	\$30,000	Shared-Use	\$469,000
Lookout Mountain - Boulder Spur Multi-Use Route	.3				✓	✓	✓						Trail	\$226,000	Trail	\$226,000
Lookout Mountain - OCHS Gateway Connector Multi-Use Route	1.7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Advisory Shoulder	\$126,000	Shared-Use	\$1,993,000
Lookout Mountain - Overlook Multi-Use Route	1.3	✓	✓	✓	✓		✓				✓		Trail	\$734,000	Shared-Use	\$1,524,000
Lookout Mountain Multi-Use Route	4.8	✓	✓	✓	✓	✓	✓						Advisory Shoulder / Route	\$355,000	Shared-Use	\$5,627,000
Mack Smith Road Multi-Use Route	2.9	✓	✓	✓	✓				✓	✓			Route	\$13,000	Bike Lane	\$3,400,000
Peavine Creek Multi-Use Route	8.9	✓	✓	✓	✓	✓	✓		✓		✓		Trail	\$5,028,000	Shared-Use	\$8,036,000
Poplar Springs Multi-Use Route	12.8	✓	✓	✓	✓	✓	✓				✓		Route	\$58,000	Shared-Use	\$11,557,000
Ringgold - Graysville Multi-Use Route	7.9	✓	✓	✓	✓	✓	✓	✓		✓	✓		Route	\$36,000	Shared-Use	\$7,133,000
Ringgold Depot Multi-Use Route	1	✓	✓	✓	✓	✓	✓	✓	✓	✓			Trail	\$565,000	Shared-Use	\$1,173,000
Rossville - Chatanooga Multi-Use Route	.9	✓	✓	✓	✓	✓		✓	✓	✓			Advisory Shoulder / Route	\$67,000	Shared-Use	\$1,055,000
Rossville - Fort Oglethorpe Multi-Use Route	3.7	✓	✓	✓	✓	✓		✓	✓	✓			Route	\$17,000	Shared-use	\$4,337,000
Rossville - Fort Oglethorpe Multi-Use Route Spur	.3		✓	✓	✓	✓		✓	✓	✓	✓		Advisory Shoulder	\$22,000	Shared-Use	\$352,000
Rossville Recreational Multi-Use Route	2.3	✓	✓	✓	✓	✓			✓	✓	✓		Advisory Shoulder	\$170,000	Shared-Use	\$2,696,000
Rossville Recreational Multi-Use Route Spur	2.3		✓	✓	✓	✓		✓	✓	✓	✓		Route	\$10,350	Advisory Shoulder	\$2,696,000
TAG Rail Bed Multi-Use Route (ChickChatt Multi-Use Route)	8.8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Trail	\$4,972,000	Shared-Use	\$7,946,000
West Chickamauga Multi-Use Route (ChickChatt Multi-Use Route)	16.3		✓	✓	✓	✓	✓	✓	✓		✓		Trail	\$9,209,000	Shared-Use	\$14,717,000
Wildwood - Tiftonia Multi-Use Route	4.2	✓	✓	✓	✓	✓	✓	✓	✓	✓			Route	\$19,000	Shared-Use	\$3,793,000

Total: 120 Miles

Total: \$115,854,000

Low Speed Networks:

Along with the proposed regional bike and pedestrian facilities, there are several opportunities to enhance the non-motorized environments within individual communities using existing low speed street networks. New facilities for biking and walking along low speed streets can attract users of all ages and abilities and can link local users to the regional trail system along with regional trail users to key destinations within each local community. Most the streets within these communities have speed limits of 35 MPH or less within the city limits and could be prioritized for bike and pedestrian improvements such as:

- **Shared streets (Bike Routes)**
- **Bike boulevards**
- **Dedicated Bike lanes**
- **Advisory shoulders**
- **Yield roadways**

Implementation of bike and pedestrian facilities along the low speed streets within each community should be considered on a case-by-case basis to determine the best facility type. Many of the recommended facility types below can be implemented quickly and at a lower cost than new trails and shared-use paths. In many cases, enhancements may be as simple as new striping on existing streets to identify new bike facilities or indicate a new traffic pattern. Key factors to consider for new facility types include but are not limited to:

- **Width of existing roadway**
- **Width of existing right-of-way**
- **Destinations along or connected by each roadway**
- **Number of driveways**
- **Presence of street parking**

Connecting new facilities within each community to the proposed regional trail system should be prioritized to develop a more robust bike and pedestrian network. Linking the regional trail system in Northwest Georgia to local bike and pedestrian networks may benefit health and mobility locally, but also may produce economic benefits by attracting regional users and tourists.

Small Town & Rural Multi-Use Networks:

The Federal Highway Administration has now adopted Small Town and Rural Multi-Use Network Guidelines, which can be of benefit to planning facilities within the study area. While these guidelines speak more specifically toward connectivity within a community, they also echo the direction of the current Study: both regional as well as community connectivity. Terminology used in this Study references that of Guidelines regarding facility type.

Key Network Opportunities

Speed Management

Speed management through facility type, infrastructure improvements, and enforcement are key to the success of any multi-use project.

School Connections

School connections should be carefully considered. If more children walked or biked to school on a safe facility, traffic congestion would significantly decrease, especially in the am peak hour. Physical separation from a roadway is key to success in a school connection.

Multi-Use Main Streets

Chickamauga and Ringgold have the best potential to take this approach.

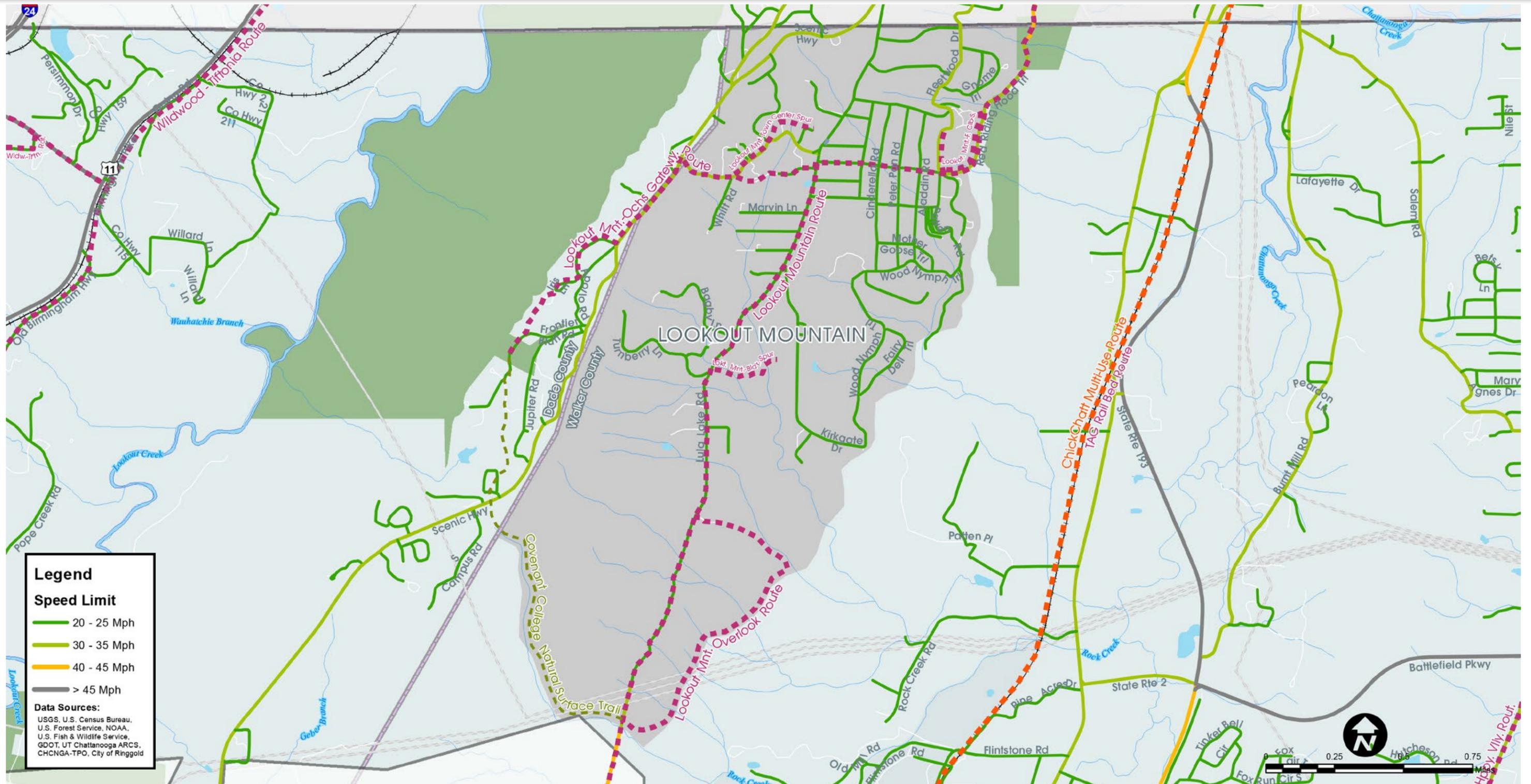
Chickamauga has two main streets, Lee Avenue and Gordon Street / 10th Street. Both streets can easily accommodate bicycle lanes or redesign to share the road with the current width of right-of-way. Bulb outs should be redesigned to provide shorter pedestrian crossings.

Ringgold has three main streets, Nashville Street, Tennessee Street, and Lafayette Street and has done a wonderful job creating a vibrant downtown atmosphere for the pedestrian; however, it lacks bicycle accommodations on all three corridors. Through the interdiction of a bicycle boulevard, yield roadway, or simply a shared street, Ringgold could have a multi-use downtown.

The local network maps provided in the study show connection opportunities between proposed multi-use routes and municipal street grids. Streets are mapped based on speed limits to convey possible locations for low speed networks, Each municipality should evaluate how to provide stronger transportation networks by utilizing the Small Town and Rural Multimodal Network Guidelines to implement local bike and pedestrian facilities.

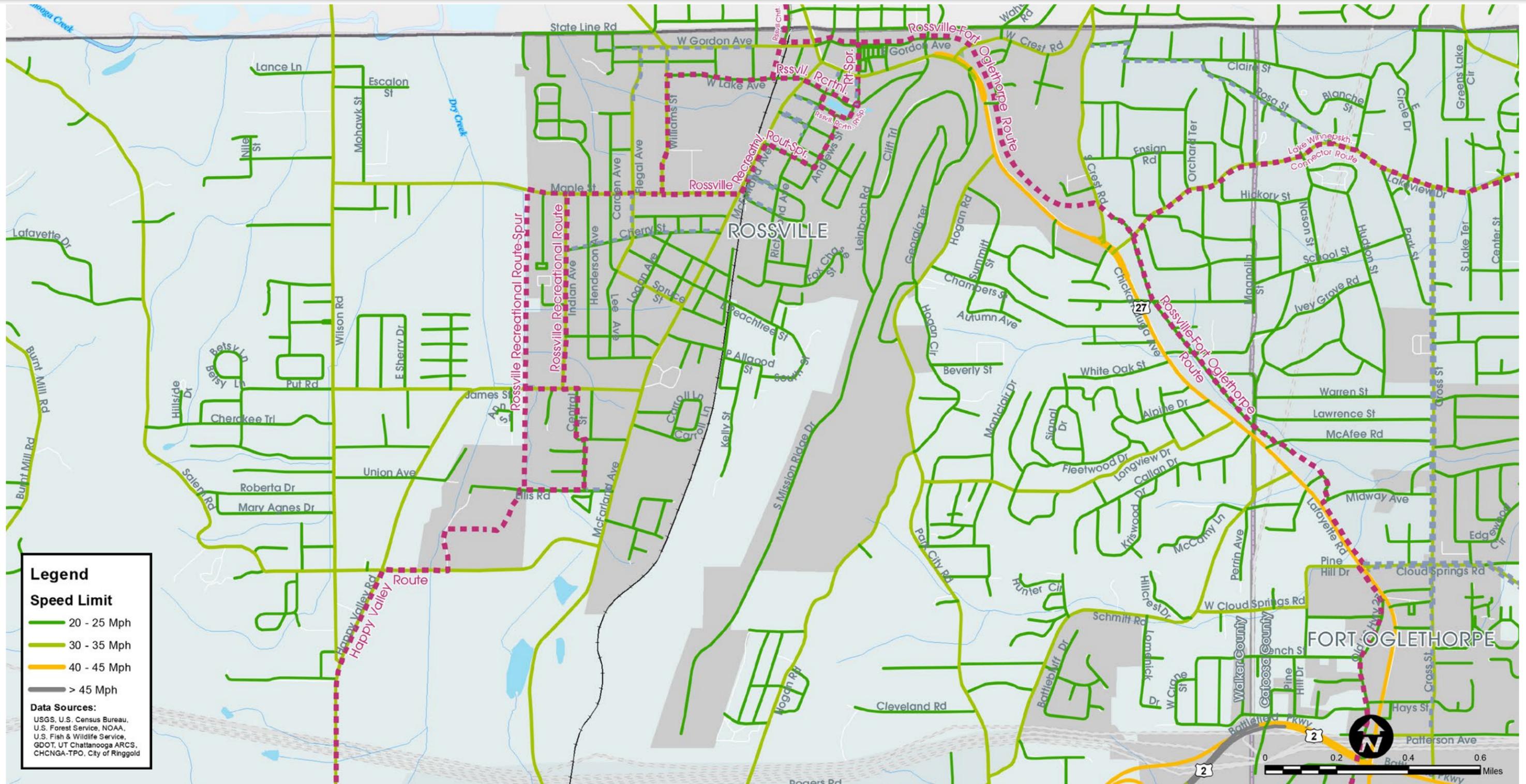


Lookout Mountain - Local Network Map



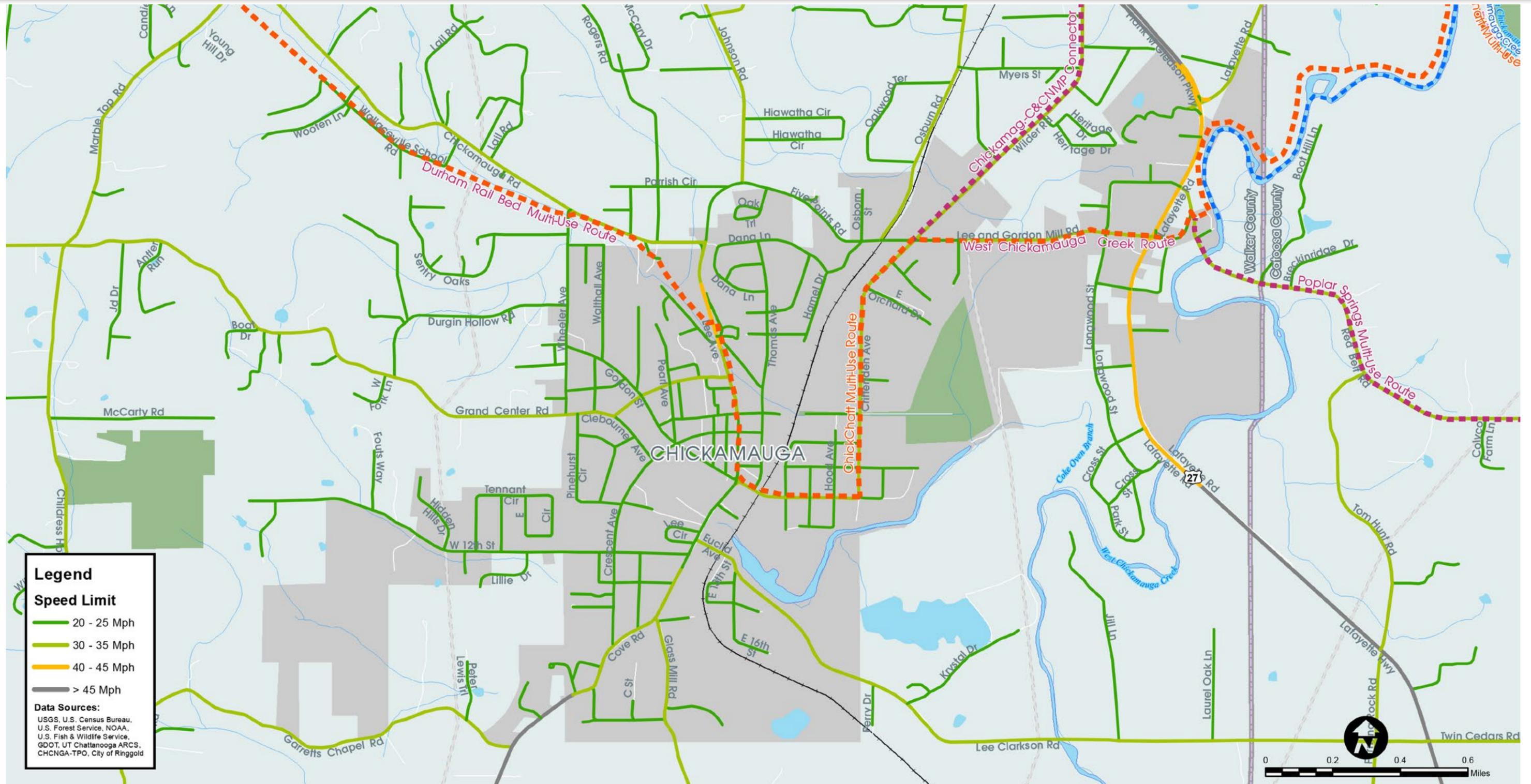


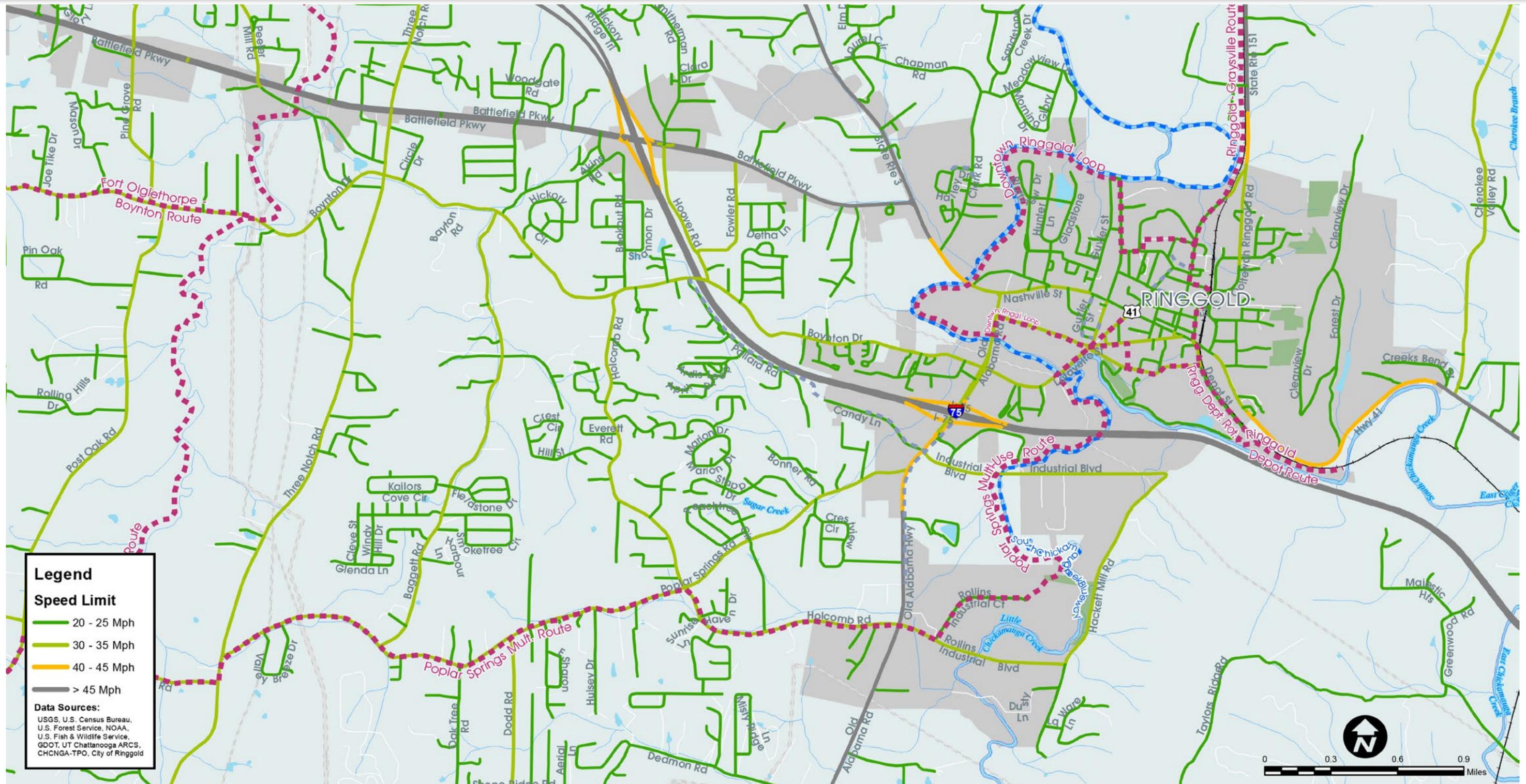
Rossville - Local Network Map





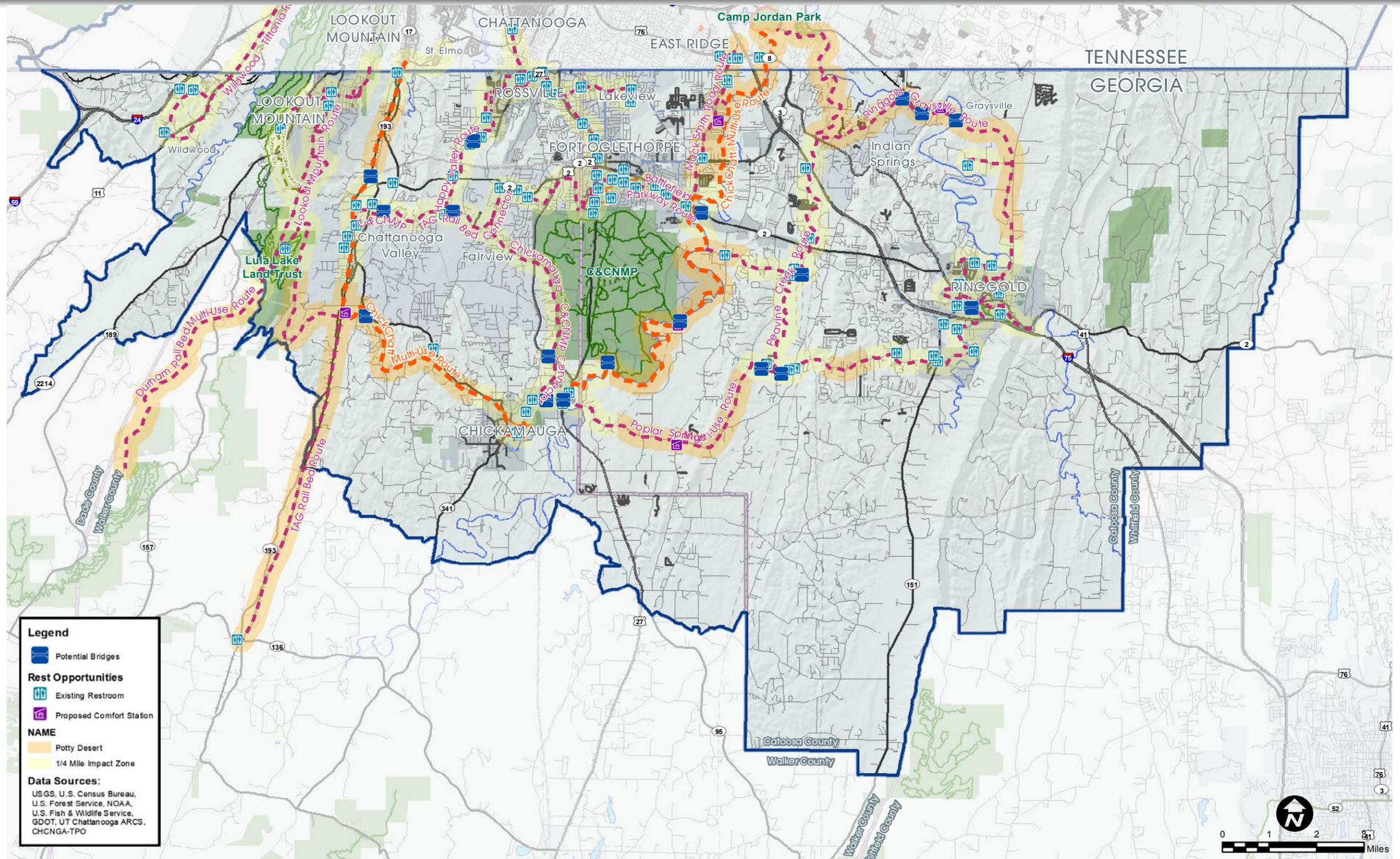
Chickamauga - Local Network Map





Rest Opportunities Overview:

This map displays an inventory of existing restrooms available to users along the proposed multi-use routes. Additionally, the map shows areas along the routes lacking such opportunities or “potty deserts.” An important component for implementing a successful multi-use route will be to provide adequate restroom facilities or comfort stations for users. This map identifies where there is a need for these facilities and where they could potentially be implemented along the proposed routes.



Economic Assessments Strategy



This section provides an inventory and analysis of the existing tourism base within the study area extending across Dade, Walker, and Catoosa counties. This analysis provides a baseline for assessing opportunities to enhance tourism activities and maximize spin-off impacts in the local economy. The following discussion identifies some of the larger, relevant visitor attractions, tourism hubs, and “drivers” in the region. Along with projected fiscal and economic impacts. Estimated costs for construction and maintenance of bike and pedestrian facilities is summarized.



OVERVIEW OF CHATTANOOGA-AREA TOURISM:

Chattanooga has long driven the tourism market in this region. As early as the 1930s, family-owned attractions have advertised along the region's highways ("See Rock City") and encouraged those traveling from the Midwest to the Southeast to stop and enjoy the area's "scenic wonders" and historic sites. The study area forms a part of the Chattanooga Metropolitan Statistical Area (MSA) and is therefore part of the resident and business base for Chattanooga. The Chattanooga Area Convention and Visitors Bureau (CVB) estimates that there are about 3,000,000 visitors per year to Chattanooga, of which 70% (2.1 million) originate from outside of the MSA. The city generated over 2.2 million room-nights last year, an indication of the strength of the overnight market. Room-nights sold have been increasing by about 1.0% per year since 2010.

Chattanooga offers a wealth of visitor attractions, including not only Lookout Mountain (Incline Railway, Ruby Falls, Rock City), but also the Tennessee Aquarium, which itself attracts over 700,000 visitors per year. The Chattanooga Choo-Choo Hotel, Chattanooga Zoo, International Towing Museum, Creative Discovery Museum, Southern Belle Riverboat, Hunter Museum of American Art, and various other attractions also help bring visitors to the area. Chattanooga's Riverwalk helps tie many of these attractions together in a walk-able environment. Several of the region's most visited attractions are located in the northwest Georgia study area, including Chickamauga & Chattanooga National Military Park and Lake Winnesaukah. Also located in the Chattanooga region are sites and attractions like Raccoon Mountain Cave, Tennessee Valley Railroad Museum, and the Chattanooga Arboretum & Nature Center. Growing convention business also generates visitors to the region.

A majority of the region's destination visitors originate in the tri-state area of Tennessee, Georgia and Alabama, and it is within these three states that Chattanooga's CVB concentrates its marketing resources. In particular, the CVB targets Nashville, Atlanta, Knoxville, Birmingham, and Huntsville. The Chattanooga area is very successful at attracting family visitors, since there are so many family-oriented attractions on offer. The area is also successful in attracting those interested in outdoor activities, although participation by these visitors has been difficult to measure. The region is particularly appealing to those engaged in rock climbing, kayaking, mountain biking, trail running and other adventure sports. Certainly the concentration of mountains and other exciting topographical features, waterways, and natural settings contribute to the area's appeal to outdoor adventurers.

Georgia Visitors Center:

The Georgia Visitors Center located in Interstate 75 provides an important gateway for long-distance travelers passing through northwest Georgia. Many of these visitors are not necessarily targeted or captured by the Chattanooga CVB, which is more focused on destination visitors. The visitor center is more likely to capture and inform "snow-birds" or "sun-birds" (seasonal visitors traveling between the cold northern states or Canada and sunny Florida) who are not necessarily planning a stop in north Georgia or Chattanooga. Based on data supplied by the Visitors Center, it is estimated that about 1.7 million visitors stop at the center each year, on average. The ultimate destinations for many I-75 visitors are in Atlanta or Florida.

The center indicates that many of their visitors do stop en route at Chickamauga & Chattanooga National Military Park (C&CNMP) or at the Georgia Winery (located near Ringgold, adjacent the interstate). Many are looking for places to eat, or purchase gas. An estimated 30 to 35% of their visitors are looking for outdoor recreation or adventure destinations such as hiking, walking, biking, or kayaking trails. About 25% of visitors are looking for a place to take a walk, and the center currently directs them to C&CNMP or to trails one hour south of the center at Cartersville or in the Pine Mountain Recreation Area. These trails are well-marked and maintained, located near the interstate, and have lighted parking lots.

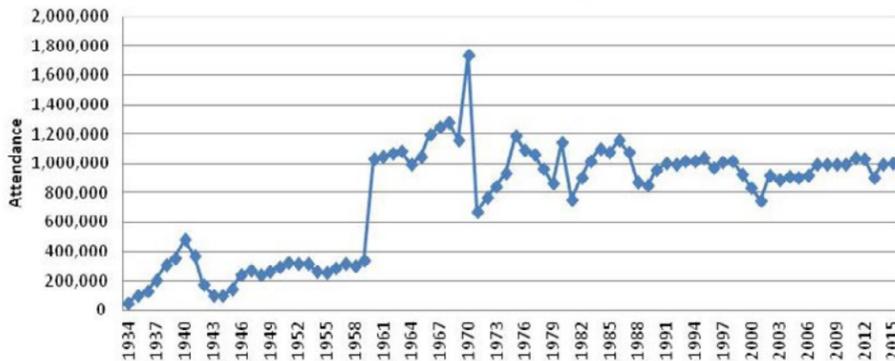
However, less than 2-4% might be considered "hard-core" recreation enthusiasts (and about 10% of these are specifically looking for biking or hiking trails). Most of those enthusiasts tend to be young males headed to a specific trail or other recreation destination in the state. Hiking destinations include Cloudland State Park or Fort Mountain. Biking destinations include Woodstock (Cherokee County) and the Silver Comet Trail. Kayaking destinations include landings along Chickamauga Creek. A handful of center visitors are participating in specific events, such as the Iron Man contest recently hosted by Chattanooga. To sum, visitors looking for some low-impact recreation outlet are an important component of the center's clientele, but hard-core recreation enthusiasts comprise a very small share of visitors.

Chickamauga & Chattanooga National Military Park:

The Chickamauga & Chattanooga National Military Park (C&CNMP), located adjacent to Ft. Oglethorpe, is the driver for military heritage and Civil War tourism in the region. The park is the oldest and largest military park in the United States and comprises of several separate elements including Chickamauga Battlefield and Lookout Mountain.

CCNMP Visitor Trend, 1934-2015

Sources: U.S. National Park Service and Randall Gross / Development Economics



Attendance Trends:

The park experienced rapid growth in attendance during the 1950s, but has remained relatively stable at around 1.0 million since about 1990. Between 2010 and 2015, attendance has averaged 994,416, which is fairly typical of trends since 1990. Surprisingly, attendance did not spike upwards during the recent commemorations for the sesquicentennial of the Civil War.

Activity	Participatn	All CCNMP	Chickamauga
Visited Center	75%	745,812	477,320
Hiking/Walking/Jogging	53%	527,040	337,306
Self-Guided Tour	44%	437,543	280,027
Wildlife	22%	218,771	140,014
Cell Phone Tour	15%	149,162	95,464
Audio Tape Tour	12%	119,330	76,371
Creative Arts	12%	119,330	76,371
Picnic	11%	109,386	70,007
Genealogy/Historic Rsch	7%	69,609	44,550
Bicycling	5%	49,721	31,821
Jr Ranger Program	3%	29,832	19,093
Dog Walking	2%	19,888	12,729
Rock Climbing	2%	19,888	12,729
Horseback	1%	9,944	6,364
Other	13%	129,274	82,735
Kayaking/Blueways	1%	9,944	
Sources:	U.S. National Park Service and Randall Gross / Development Economics.		

The four primary C&CNMP sites located within the study area include the Chickamauga Battlefield and Visitors Center, the Wilder Brigade Monument, and the park's recreation fields. The park's other sites are situated primarily within Tennessee. While the C&CNMP Lookout Mountain Visitors Center is located in Tennessee, it nevertheless provides an indication of heritage visitor volumes that might source trails through Lookout Mountain, Georgia.

Attendance at each of the C&CNMP sites has been estimated based on surveys conducted by the National Park Service (NPS). Based on those surveys, it is estimated that about 636,000 people visit the Chickamauga Visitors Center and about 250,000 visit the Chickamauga Battlefield. Around 520,000 visit the recreation fields and 428,000 visit the Wilder Brigade Monument. Interestingly, the surveys indicate that the park is the primary destination for 51% of visitors, while about 39% consider the park just one of several destinations on their itinerary.

Participation in Bicycling and Other Activities:

National Park Service surveys have also provided some indication of participation in various activities within the park. Several of these activities are pertinent to this study. For example about 53% of park visitors participated in hiking, walking or jogging in the park. That percentage translates into about 528,000 people overall, or 337,000 within the Chickamauga sites in the study area. The survey also indicated that about 5% of visitors participated in bicycling activities in the park. This share translates into about 50,000 bikers overall, and 32,000 within the study area.

National Park Service rangers have led a Chickamauga Battlefield Bicycle Ride, one Saturday each month, which starts at the Visitors Center. It should be noted that the Park Service does not offer biking trails, per se, nor does it encourage bicycling through the park for recreation or transportation purposes. The park is intended as a memorial, an educational experience, and a way to honor to those who lost their lives in battle. That being said, biking tours as a way to learn about Civil War heritage can be encouraged. Aside from the monthly NPS-sponsored rides, the park also accommodates the annual Chickamauga Battlefield Marathon, which attracts runners from a broad geographic region. The marathon is limited to 1,500 participants.

Interviews conducted with staff at the park provided more detailed insight into overall biking participants. Those staff members suggest that only a handful of these biking participants are bicycling enthusiasts (as indicated by the numbers who have brought their own bikes to the park to use the trails as a destination activity. Based on the interviews, it is estimated that one group of bicyclists per day, on average, are enthusiasts. Given that the average group size is 3.24, it is estimated that about 2.3-4.0% of the park's bicyclists (about 1,200 to 2,000 per year) are enthusiasts or "hard-core" bikers. The majority of bicycling visitors come from Chattanooga and surrounding areas on weekends or before/after work for recreational purposes including walking and biking.

In addition to these biking and pedestrian users, the park also attracts other types of users that are relevant to this study. About 2% of visitors (nearly 20,000 people) participate in rock climbing activities. Rock climbing is a popular activity for residents and visitors to Chattanooga and surrounding areas because of the topography which provides a preponderance of climbing opportunities as well as spectacular views. Among the comments generated by the surveys were a number relating to the need for more designated rock climbing routes in the area. Another 1% of visitors (10,000) participate in horseback riding in the park. Finally, 1% (10,000) of visitors also participates in kayaking and other "blueway" activities in the park.



Table 1. ESTIMATED CCNMP ATTENDANCE BY SITE, FT. OGLETHORPE

Site	% Attend	Estimated #
Bragg Reservation	44%	437,543
Chickamauga VC	64%	636,426
Cravens House	10%	99,442
Lookout Mtn VC	25%	248,604
Signal Point	11%	109,386
Wilder Brigade Mnt	43%	427,599
Chickamauga Battlefield	25%	248,604
Point Park	46%	457,431
Recreation Field	52%	517,096
Moccasin Bend	10%	99,442
Orchard Knob	8%	79,553
Sherman	5%	49,721
Sources:	US National Park Service & Randall Gross / Development Economics.	

Chickamauga & Chattanooga National Military Park:

Origin of Visitors:

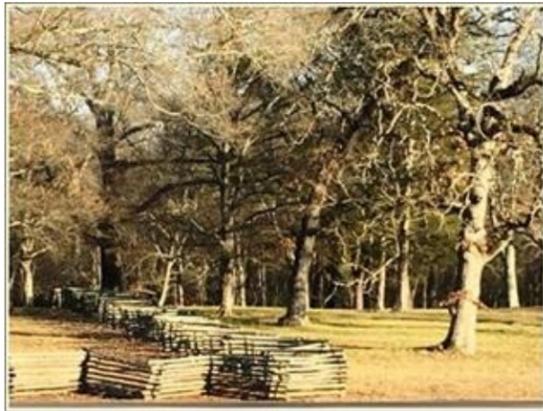
Slightly over one-third of visitors live within 50 miles of the park. Another 12% live within 100 miles. The plurality of visitors (43%) is from Tennessee or Georgia, with a significant share from the Chattanooga metro area. More than 10% of visitors live in Hamilton County (Chattanooga). Another 4% live in Walker County (GA), 2% in Catoosa (GA), and 2% in Bradley (TN). An estimated 22% of visitors live in Metro Chattanooga.

About 54% or 537,000 visitors (344,000 study-area visitors) live outside of a 100-mile radius of the park and are more likely to require an overnight stay. These overnight visitors are key to understanding the existing and potential impacts of tourism on the local economies. Visitors primarily take I-75, I-24, and US 27 to reach the park, although some also use Georgia Route 2, Route 148, and Ochs Highway. About 64% of visitors also see other attractions, including the Chattanooga Riverwalk (52% of those), Rock City (48%), Ruby Falls (44%), and Tennessee Aquarium (38%).

Key existing overnight markets for the park include Nashville, Atlanta, and visitors to the Great Smoky Mountains and Central Florida (e.g., "Snowbirds"), based on the counties recorded through survey data. Among the top non-local counties are Gwinnett (Atlanta MSA), Rutherford (Nashville MSA), Seminole (Orlando MSA), Floyd (Atlanta MSA), and Williamson (Nashville MSA). Each of these counties accounts for at least 1% of total park visitors.

Military / Civil War Heritage Tourists:

About 13% of the 64% who visit other sites visit Kennesaw Mountain National Military Park. This number thus provides some indication of the share of total visitors (8-10%) who are military heritage enthusiasts. About 14% of park visitors spend at least two days at the park. Those spending two or more days tend to be the military and Civil War heritage tourists. Based on this information and on interviews with park staff, it is estimated that core heritage visitors represent about 8 to 10% of total attendance at the park, or 89,500 visitors (57,300 within the study area). As is typical of heritage sites, the demographics point to a more affluent, well-educated, and older visitor (nearly 50% are over the age of 50).



Fort Oglethorpe:

Fort Oglethorpe is an important hub for Civil War and military heritage. Once an active United States Cavalry post and military base, historic components of the original Fort Oglethorpe remain as testament to the base's legacy as the home of the 6th Cavalry, an induction center in WWI that housed German POWs and served as a major training post for the Women's Army Corps (WACs) during WWII.

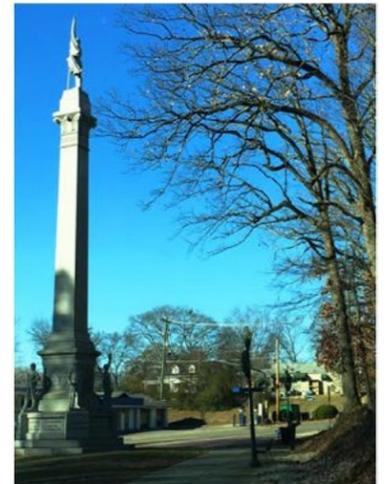
The post's history is also captured through several interpretive sites and a National Register Historic District. Fort Oglethorpe is also an important gateway to the adjacent Chickamauga & Chattanooga National Military Park (C&CNMP), located just south of the city.

Fort Oglethorpe Historic District (Barnhardt Circle & Parade Ground):



The original parade ground and many of the original officers' homes still stand on Barnhardt Circle, part of the original post. This area has been designated on the National Register of Historic Places. While some of the houses have been demolished over time and replaced by non-contributing buildings that distract from the historic character of the post, there is a sufficient number of remaining buildings around the Parade Ground to evoke Fort Oglethorpe's historic past.

Just off of Barnhardt Circle are other buildings that were once utilized for post activities. For example, Tootsie's Treasures consignment shop (2978 Lafayette Road) occupies the old Post Gym (ca 1904). Several old warehouses located between the Parade Ground and Lafayette Road once housed stables supporting the post's mission.



Fort Oglethorpe:

6th Cavalry Regiment Museum:

The 6th Cavalry Regiment Museum (at Fort Oglethorpe) houses artifacts, including weapons, photos, uniforms, vehicles and other collections commemorating the “Fighting Sixth” Cavalry that was stationed at the post from 1919 to 1942.



Battle View B&B and Overnight Visitor Base:

Based on information collected from the various attractions and from the Battle View B&B (located on Barnardt Circle), an overall profile of the Fort Oglethorpe overnight visitor emerges. A relatively high proportion of overnight visitors to the Fort Oglethorpe Historic District tend to be heritage tourists, accounting for an estimated 50% of all visitors. However, only about 30-40% of those heritage tourists (or about 15-20% overall) are classified as military heritage enthusiasts (or “Battlefield Buffs”). About 60-70% (30-35% overall) are passing through (on I-75) but are interested in visiting heritage sites along the way. The heritage travelers generally stay in the area about two days, one of which they spend at the Chickamauga National Battlefield and the other in Chattanooga.

Another 20% overall are “Snowbirds” from Chicago, Michigan and Canada passing through but with little interest in military heritage. Another 20% are visiting for a specific event (anniversary, honeymoon, etc) as a getaway from Nashville, Atlanta, and other locations in the surrounding region.

About 10% of the visitors are adventure tourists interested in hiking, biking and other outdoor recreational activities. Most of these originate in the Southeast region (TN, GA, TX, etc). About half of these visitors (4-5% overall) bring their own bikes, indicating some level of enthusiasm for the sport of biking. This share is fairly consistent with the information generated by C&CNMP surveys. Another 5% are coming to Fort Oglethorpe and surrounding areas to hike or for other outdoor activities such as kayaking on the Ocoee River in Tennessee. These visitors generally stay about 2 days in the region.

Chickamauga:

The small city of Chickamauga provides a walk-able historic core and heritage sites providing an interesting visitor experience. Like Fort Oglethorpe, the city is located proximate to Chickamauga National Battlefield and is therefore an important gateway to the region’s Civil War and military heritage.

Military Heritage:

Chickamauga offers the Veterans of All Wars Museum and Crayfish Springs Park, which appeal to the region’s military heritage tourist. The city’s avenues also tell a story of the region’s battles, with names of famous generals - Longstreet, Hood, Crittenden, Stewart, etc. Holland-Watson Veterans Memorial Park is also an important heritage site for veterans and military buffs.

American Indian Heritage:

Chickamauga also offers an understanding of American Indian Heritage and the Trail of Tears. Most prominent of these sites is the Cherokee Courthouse. Crayfish Springs is named for Chief Crayfish.

Rail & Industrial Heritage:

Lee & Gordon’s Mills, the Gordon Lee Mansion, and the Walker County Regional Heritage & Model Train Museum and the Durham Iron and Coal Company (Chickamauga Coke Ovens) and Coke Oven Park provides an important focus for the region’s industrial heritage. Gordon Lee Mansion is only open on weekends in the summer. Lee & Gordon Mills accommodates weddings and special events that bring people to Chickamauga.

The museum generates an estimated 4,380 visitors per year, although about 40-45% of visitors are residents of Walker County and another 33% are from elsewhere in the Chattanooga area. Still, about one-third of visitors arrive from other parts of Georgia, Tennessee, Florida, Alabama, and the eastern U.S. Most of the museum’s visitors attend in spring and fall.



The Tennessee Valley Railroad Museum also operates excursion trains to Chickamauga (“The Chickamauga Turn”), providing a direct tourism link from Chattanooga. Based on a sample of data provided by the Museum, the train generates a total of about 1,920 to 2,240 passengers per year on 16-17 trips from Chattanooga to Chickamauga and the Wilder Tower Monument at C&CNMP. Previously, 35 trips per year included Chickamauga, but the new schedule has cut Chickamauga stops in half, favoring more time in Summerville. Part of the reason for the shift was that Chickamauga did not offer the dining options that rail passengers sought during their stopover.

About 20% of the train passengers live in the Chattanooga area, with another 20% from Nashville, 15% from Huntsville, 12% from Birmingham, and others from Atlanta, Knoxville, Winston-Salem, Greenville-Spartanburg, and surrounding areas generally within a 250-mile radius of Chattanooga. The train appeals primarily to tourists visiting Chattanooga and looking for an all-day excursion. Heritage tourists and military history enthusiasts only comprise a small share of the riders, even though the train now incorporates a Civil War re-enactor to describe the history of the area and a stop at C&CNMP. The train does not currently accommodate or offer a bicycle excursion (such as a bike-ride-down / train-ride back trip), but management is open to the concept.



Rossville:

Rossville provides an important gateway from Chattanooga into the study area, but at present offers few visitor sites of significance that are marketed to tourists. The Chief John Ross House (200 E. Lake Avenue) is an American Indian heritage site, as home to one of the more infamous characters in the tense relationship between the United States Government and northwest Georgia's American Indians. The small pond and chain-link fenced area around the site is not particularly conducive or attractive for tourism. Based on information supplied by the City, it is estimated that about 1,100 people visit the Ross House each year, although the numbers have been declining.

Rossville's Lake Winnepesaukah amusement park has offered rides and family entertainment to visitors since 1925. The venue more recently added a water park feature. The 280-acre family-owned park offers the traditional amusement park visitor experience and attracts hundreds of thousands of visitors primarily from a 250-mile radius within the tri-state area (TN-AL-GA) around Chattanooga.



Ringgold:



Ringgold provides perhaps the largest intact historic downtown area of any community in the study area, with a charming business district and interesting sites for the visitor. The Ringgold (Western & Atlantic Railroad) Depot is perhaps the most important of the city's heritage sites, offering historic context relating directly to the Civil War. According to the City's Main Street organization, the depot accommodates about 12,500 visitors each year for weddings, Halloween Haunted House, and other special events. Most guests are visiting from within +/-100 miles or so.

Other heritage sites in Ringgold include the Old Stone Church, the "General" Monument, and the Atlanta Campaign Pavilion.

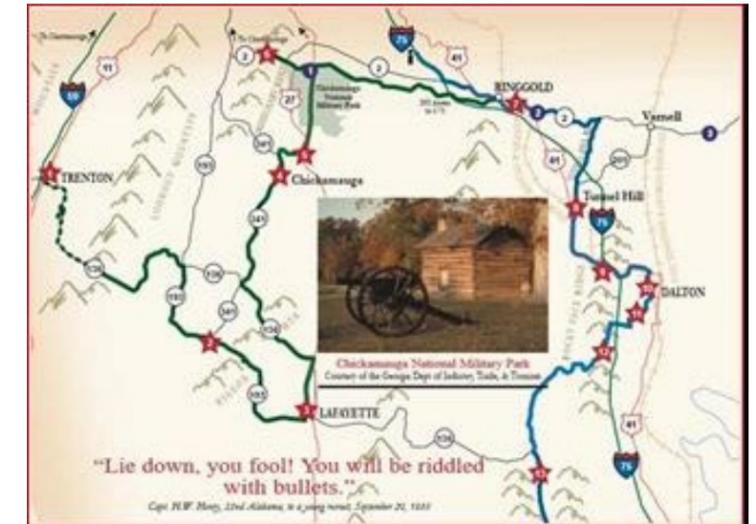
Regional Driving Routes:

There are several regional driving routes promoted by the State of Georgia and other entities. Perhaps the most heavily marketed of these is the Civil War Heritage Trail, which promotes Civil War battles and other sites in the region.

Georgia Civil War Heritage Trail (Atlanta Campaign):

The Georgia Civil War Heritage Trails are a set of driving routes throughout the state commemorating various campaigns and activities relating to the war. The Atlanta Campaign trail winds through northwest Georgia.

Within the study area, the Georgia Civil War Heritage Trail extends from Trenton south along routes 136 and 193 to Lafayette, then north along 136/341 to Chickamauga to C&CNMP, east along Route 2 to Ringgold and south along Tunnel Hill Road through Tunnel Hill and towards Dalton and beyond. Key sites located in or near the study area include John Gordon Hall, Crayfish Spring, Lee & Gordon Mills, McFarland Gap, Ringgold Depot, and Tunnel Hill.



Other Driving Trails:

In addition to the State's designated Atlanta Campaign driving route, there are also other driving "trails" marketed throughout the region and the state, including the "**Blue & Gray Trail**," which incorporates battlefields and other Civil War sites in Chattanooga, Trenton, Fort Oglethorpe, Chickamauga, Ringgold, and many other locations between Atlanta and Chattanooga. The **Georgia Antique Trail** promotes antique retailers along various driving routes throughout the state and including several businesses in Ringgold (Antiques by the Fountain and Trestle Side Antiques). **Agri-tourism** is promoted throughout the state through a network of farms and agricultural sites. Northwest Georgia study area farms marketed as part of this tourism initiative include Sims Family Farm (Ringgold), Cove Christmas Tree Farm (Chickamauga), Georgia Winery (Ringgold), Kittle Christmas Tree Farm (Ringgold), and Wheeler's Christmas Tree Farm (Tunnel Hill), among others.

U.S. Route 41, the old **Dixie Highway**, is another important driving route. A highway that once carried long-distance travelers from Michigan to Florida, U.S. 41 remains an interesting relic of America's traveling past and some tourists prefer the route for its slower pace over traveling on I-75. U.S. 41 passes through Ringgold and other parts of Catoosa County, connecting Nashville to Atlanta.

Regional Bike Routes & Events:

The State also promotes several regional bicycle routes through northwest Georgia and the study area. These routes are discussed in detail elsewhere in the body of the full report, but generally include Route 139 (Rossville south to Polk County), Route 103 (Cloudland Connector Trail), Route 117 (Lookout Mountain south to Haralson County), Route 108 (Fort Oglethorpe east/south to Ringgold and Fairmount), and Route 112 (Chickamauga east to Blue Ridge, with a spur north to Rossville).

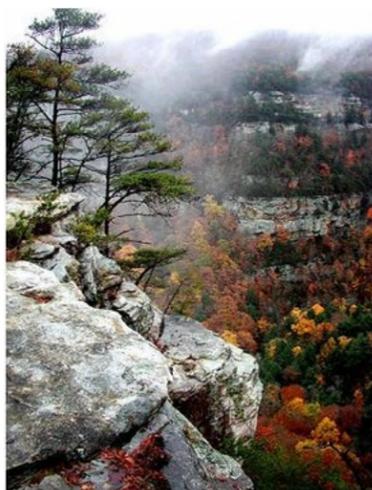
There are several cycling events held regularly in the area, including the 3-State 3-Mountain Challenge (sponsored by the Chattanooga Bicycle Club), which attracted 1,100 riders to its three routes in 2016. Only the longest route (100 miles) extends far into northwest Georgia. There are also walking/running events, such as the American Cancer Society Relay for Life (Catoosa/Walker Counties) and the Chickamauga Chase (Chickamauga).



Cloudland Canyon State Park:

The spectacular, 3,485-acre Cloudland Canyon State Park is located along the western edge of the study area on Lookout Mountain, offering significant opportunities for outdoor recreation. C&CNMP is located at the nexus of this route between Trenton and Ringgold. A new bike-packing trail is slated to link Chattanooga's Riverwalk to Cloudland Canyon and its myriad internal hiking and biking trails.

Cloudland Canyon attracts about 250,000 visitors per year. The park's primary service areas include Chattanooga, Fort Oglethorpe, Fort Payne (AL), and the northern portions of Metropolitan Atlanta. Visitors are primarily attracted for the park's "rugged" natural features and outdoor recreation opportunities, according to the park's Business and Management Plan.



Summary:

The study area benefits from Chattanooga's tri-state draw for three million destination tourists, associated with family-friendly venues, the Civil War and military heritage, and outdoor adventure recreation. The latter category is most likely to drive direct demand for trails in northwest Georgia, but it is inherently difficult to measure participation in such activities. Based on available information, destination recreation visitors may account for about 30-35% of all tourists in the study area, although more than 50% of all visitors may walk or bike on a trail or path as part of their visit. The largest share of recreation visitors in the study area, including bicyclists and walkers, originate in the Chattanooga MSA. Chattanooga-area residents often visit northwest Georgia for walks or biking activities on the weekends, or before and after work. "Hard-core" destination biking/hiking enthusiasts are estimated to account for about 2-4% of the recreation visitor base or about 1.0% of all study area visitors.

In addition to destination tourism, the region also benefits from exposure to "Snowbirds" and other visitors passing through en route to Nashville, Atlanta, Florida and other locations. Within the study area, Chickamauga & Chattanooga National Military Park (C&CNMP) is by far the largest tourism generator, yielding nearly one million visitors per year. Nearby Fort Oglethorpe is a shadow of its former glory as a military post, but offers opportunities to enhance tourism for this unique glimpse into history.

Other venues generate only a small fraction of the number at C&CNMP and are typically geared to very specific target markets, like military heritage tourists. Several of the area's scenic towns like Lookout Mountain, Chickamauga, and Ringgold are attractions in themselves. Rugged sections of Cloudland Canyon as well as more tame agricultural flatlands offer scenic vistas and opportunities for both active and passive recreation including biking, hiking, and other trail use.

ECONOMIC BASE ANALYSIS OVERVIEW:

The Study Area includes portions of Dade, Walker, and Catoosa counties in northwest Georgia. These counties form part of the Chattanooga Metropolitan Statistical Area (MSA) and are dependent on a large regional economy centered at Chattanooga. Many residents of the study area work in Chattanooga or surrounding suburbs. However, very few MSA residents commute to northwest Georgia for work. The Census estimates that 2,460 workers commute to Fort Oglethorpe (the largest employment hub within the study area), accounting for just 1.1% of all commutation in the MSA. More Chattanooga residents commute to Nashville each day (1.5%) than they do to Ft. Oglethorpe.

Employment Trends:

Sector	2002	2010	2014	2002-2014 Change Number	2002-2014 Change Percent
Ag/Mining	409	255	312	(97)	-23.7%
Utilities	1,233	1,078	1,284	51	4.1%
Construction	9,620	9,661	9,327	(293)	-3.0%
Manufacturing	39,922	29,202	30,940	(8,982)	-22.5%
Wholesale	9,519	8,657	8,950	(569)	-6.0%
Retail	28,941	23,666	24,930	(4,011)	-13.9%
Transport	20,909	15,756	20,247	(662)	-3.2%
Information	2,887	3,722	3,261	374	13.0%
Finance	13,588	13,840	10,900	(2,688)	-19.8%
Real Estate	3,056	2,656	2,794	(262)	-8.6%
Prof/Tech	8,142	9,706	9,137	995	12.2%
Management	3,933	1,069	3,579	(354)	-9.0%
Administrative	13,337	11,357	14,486	1,149	8.6%
Education	15,395	16,643	16,686	1,291	8.4%
Health Care	23,423	33,214	33,679	10,256	43.8%
Arts/Entertainment	2,218	2,362	2,856	638	28.8%
Accom/FS	18,010	21,228	22,173	4,163	23.1%
Other Services	6,327	7,222	7,421	1,094	17.3%
Public Admin	6,272	7,267	7,163	891	14.2%
TOTAL	227,141	218,561	230,125	2,984	1.3%
Note:	All Private and Public Sector Jobs.				
Sources:	U.S. Bureau of the Census and Randall Gross / Development Economics.				

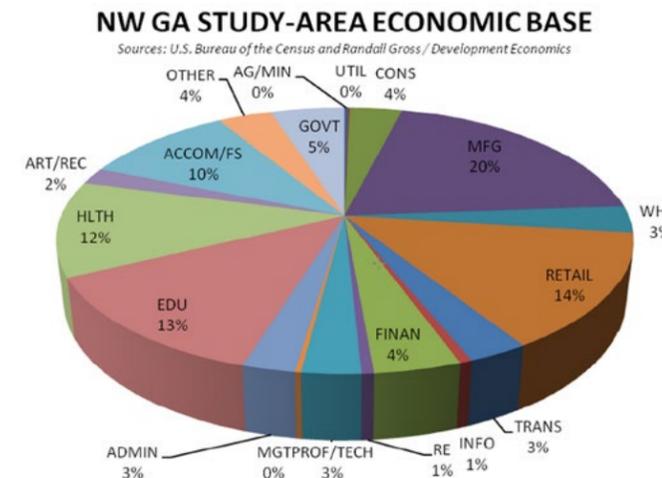
accommodation & foodservice sector, an important indicator of tourism activity. This number is up from 21,200 in 2010, an increase of 1,000 or 4.7%. Accommodation is the 4th-largest economic sector in the region, behind health care, manufacturing, and retail trade. Chattanooga has long been marketed as a tourist destination, thanks to its many natural amenities (mountains, vistas, rivers, caves), family-friendly attractions (Rock City, Aquarium, Winnesepesaukah, etc), and Civil War heritage (battles of Chattanooga and Chickamauga).

The Chattanooga MSA has over 230,000 jobs, up by about 11,500 or 5.3% since 2010. Overall employment trends are summarized by sector, below.

Chattanooga has long benefited from a large and vibrant manufacturing base, which drove the regional economy until relatively recently, when health care (14.6% of MSA jobs) overtook manufacturing (13.4%) to become the area's largest employer. Manufacturing, along with the retail trade and financial services sectors, lost the largest number of jobs since 2002. Still, the importance of manufacturing to the regional economy has been reinforced by recent developments such as the establishment of America's first Volkswagen assembly plant in Chattanooga.

About 9.6% of Chattanooga MSA employment (22,200 jobs) is in the

Study Area:



The three counties that include the master plan study area have a total employment base of about 29,000, representing 12.6% of the metro area's economy. Manufacturing is still the largest employer in this area, comprising of about 5,800 jobs or 20% of the employment base. Retail trade is also an important sector, representing 14% of area jobs, followed by education at 13% and health care at 12%. Accommodation & foodservice, again an indicator of tourism activity in the area, accounts for about 10% of the area's jobs, roughly equivalent to the role of tourism in the regional economy. Accommodation & foodservice is the 5th-largest sector in this study area. The overall employment base in the study area is summarized below.

Employment fell in the study area between 2002 and 2010 (a period including the national recession), but has recovered slightly since then. Still, study-area employment was still down in 2014 by nearly 2,700 or 8.4% since 2002. Many of the jobs lost between 2002 and 2014 were in manufacturing, which declined by almost 4,000 jobs or 40.5%. Jobs were also lost in related industries including transportation, construction, and wholesale trade. However, the study area gained jobs in most other sectors, including finance, professional & technical services, health care, government, education, retail, administrative, and other services.

Tourism, as indicated by employment in accommodation & foodservice, expanded the fastest of any sector in the study area between 2002 and 2014. Tourism-related employment expanded by 37.1%, or nearly 800 jobs. Thus, the sector was not only the fastest-growing but also experienced the largest absolute gain in jobs over the 12-year period. This gain has been consistent and is a positive indication of the area's overall competitive strengths as a center for tourism activities, including recreation-related and other visitor activities. Overall employment trends from 2002 to 2010 and 2014 are summarized above.

According to the Census, there were 144 foodservice establishments with about 2,800 employees (versus 16 accommodation facilities with 130 employees) in the 3-county study area in 2014. Average annual foodservice wages ranged from \$11,500 to \$13,400, while annual accommodation wages ranged from \$12,500 to \$17,800.

Sector	2002	2010	2014	2002-2014 Change Number	2002-2014 Change Percent
Ag/Mining	55	63	65	10	18.2%
Utilities	42	42	38	(4)	-9.5%
Construction	1,272	982	1,022	(250)	-19.7%
Manufacturing	9,719	5,629	5,779	(3,940)	-40.5%
Wholesale	1,075	986	934	(141)	-13.1%
Retail	3,979	4,070	4,081	102	2.6%
Transport	1,784	1,123	829	(955)	-53.5%
Information	194	165	168	(26)	-13.4%
Finance	926	803	1,190	264	28.5%
Real Estate	195	243	168	(27)	-13.8%
Prof/Tech	529	741	807	278	52.6%
Management	86	91	77	(9)	-10.5%
Administrative	583	527	726	143	24.5%
Education	3,575	3,938	3,752	177	5.0%
Health Care	3,088	3,488	3,364	276	8.9%
Arts/Entertainment	406	361	588	182	44.8%
Accom/FS	2,133	2,649	2,925	792	37.1%
Other Services	837	945	1,043	206	24.6%
Public Admin	1,189	1,699	1,446	257	21.6%
TOTAL	31,667	28,545	29,002	(2,665)	-8.4%
Note:	All Private and Public Sector Jobs.				
Sources:	U.S. Bureau of the Census and Randall Gross / Development Economics.				



Employment by Place:

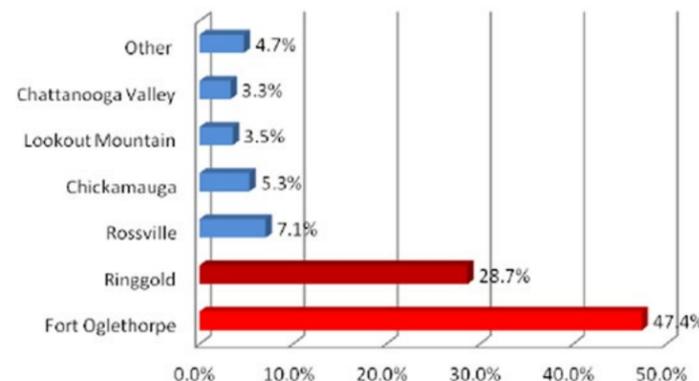
Employment information and trends were collected and analyzed for each of the designated Census places located within the study area (which is somewhat smaller than the full 3-county area). Overall, there were about 13,580 jobs in study area places in 2014. Study area jobs and economic base are highly concentrated in Fort Oglethorpe, which spans two highway corridors and includes industrial parks and other business locations. Fort Oglethorpe had more than 6,400 jobs in 2014, accounting for nearly one-half of the study area's employment base.

Ringgold is the other significant economic hub in this study area, with about 3,900 jobs or nearly 30% of the area's employment base. Other municipalities like Rossville (7%), Chickamauga (5%), Lookout Mountain (4%), Chattanooga Valley (3%), Fairview, Indian Springs, and Lakeview have relatively small shares of the study area's existing jobs base. Ultimately, any economic impacts from bike/ped trails would need to be felt at least in Fort Oglethorpe and Ringgold in order to generate significant benefits to the broader study area.

This area lost about 1,080 jobs or 7.4% of its employment base since 2002, mostly in manufacturing. Three places experienced the greatest job losses – Fort Oglethorpe (1,070 jobs or 14%), Chattanooga Valley (250, 36%), and Rossville (100, 10%). At the same time, several municipalities have seen their economies grow over this same period. Lookout Mountain added more than 150 jobs, yielding a 47% increase in employment. Ringgold added 170 jobs (an increase of nearly 5%). Chickamauga also saw a small increase in employment since 2002. Several smaller communities like Lakeview saw declining employment while others (Fairview, Indian Springs) added a few jobs since 2002. To sum, the area has seen an overall decrease in employment but there are small pockets of growth.

Share of Study Area Employment

Sources: U.S. Bureau of the Census and Randall Gross / Development Economics



Tourism-Related Sales:

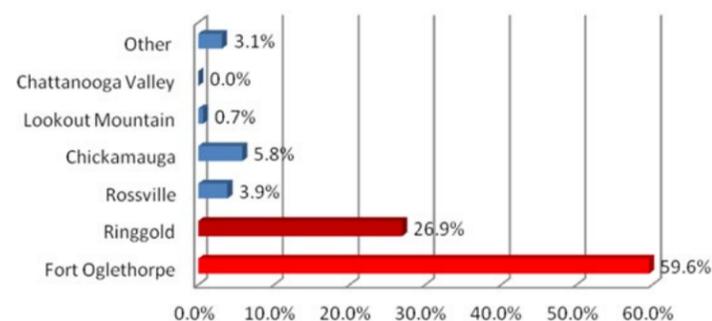
Sales trends in the accommodation & foodservice (A&FS) sector were analyzed for the region, study area, and individual municipalities. The Chattanooga MSA had \$1.1 billion in accommodation & foodservice sector sales in 2012, including \$182.9 million in accommodation services and \$906.8 million in restaurants, drinking places, and other foodservices. A&FS sector sales were not available for Walker or Dade counties since businesses withheld information from the Census. However, information was available for Catoosa County, which saw A&FS sales of \$87.5 million in 2014, up 14.4% from \$76.5 million in 2002. Of the total, \$5.7 million was in accommodation and \$81.85 million in foodservice. Interestingly, accommodation sales fell by 23.2% between 2002 and 2014, while foodservice sales increased by 18.5% during that same period in Catoosa County.

Sales & Wages by Place:

Sales data are spotty, depending on whether businesses opted to supply the information as part of the Economic Census. However, 2014 data does exist for the two largest business hubs, Fort Oglethorpe and Ringgold. Fort Oglethorpe had total A&FS sales of \$54.2 million in 2014, including \$53.1 million in foodservice and \$1.1 million in accommodation sales. The Census indicated 1,052 foodservice jobs and only 7 accommodation jobs in Fort Oglethorpe. Annual wages averaged \$13,200. Ringgold had \$19.1 million in A&FS sales, including \$16.8 million in foodservice and \$2.3 million in accommodation sales. Wages in the accommodation industry averaged \$17,200 for 29 workers, while wages for the city's 400 foodservice workers averaged \$13,400.

Study Area Tourism Jobs by Place

Sources: U.S. Bureau of the Census and Randall Gross / Development Economics



Accommodation & foodservice sector employment, an indicator of tourism activity, totaled about 1,810 in 2014, accounting for 13.3% of all jobs in study area places. By far the largest share of these jobs was concentrated in Fort Oglethorpe, with 1,080 or nearly 60% of all accommodation & foodservice jobs in the study area. Ringgold had about 490 jobs or 27%. Tourism in most of the other places was negligible, although tourism does play an important role in Chickamauga's economy. While Chickamauga had only about 6% of the study area's tourism employment, accommodation and foodservice accounted for about 15% of all jobs in that community.

Business Inventory:

Field reconnaissance and business inventories, coupled with business interviews and Census data help provide information on the scale, location and operation of the business base within the study area. In general, study area businesses and economic base are highly concentrated in several important commercial corridors, including Rossville Boulevard / U.S. Route 27 (Chattanooga-Rossville-Fort Oglethorpe) and Georgia Route 2 (Battlefield Parkway from Fairview to Ringgold). Key observations are provided below on the character and business mix for each of the business nodes and corridors.



Rossville Boulevard / Rossville:

The Rossville Boulevard commercial corridor extends south through Chattanooga's urban neighborhoods into Rossville. Within Chattanooga, Rossville Boulevard offers a mix of pawn shops, auto repair businesses, used car lots, hair supply enterprises, wrecking services, bars, liquor stores, and fast food joints. An estimated 5 to 10% of the commercial space in this corridor is vacant or otherwise unoccupied.

There is little if any demarcation or change in character between Chattanooga and its neighbor Rossville to the south, which offers a similar business mix and urban highway orientation. There are several jewelers, groceries, cleaners,

pharmacies, and banks; but an equal mix of tobacco suppliers (5), pawn shops and payday loan businesses (9), dollar stores (2), gas stations & auto repair shops (18), used car lots (11), and other highway-oriented businesses.

Rossville, with a population of about 4,100, offers some tourism appeal including gateway monuments, an urban core with "good bones," and the John Ross House. Businesses catering to the Hispanic community add some international flavor. But there is little interpretation and few design elements to direct and appeal to visitors. Other than the John Ross House, which is surrounded by a chain-link fence and located in a somewhat hidden back way, there are few anchor attractions or tourism services to draw visitors. Bicycle and pedestrian accessibility is also de-emphasized except in the urban core.

Tourist-oriented businesses and sites include the John Ross House, Roxy's Restaurant (pictured), the Iowa Monument, the Big Biscuit Barn, and a handful of others. The Super 8 Motel and EconoLodge serve a low-budget clientele.

Fort Oglethorpe / Lafayette Road - US 27:

With about 9,300 residents, Fort Oglethorpe is the largest city in the study area. Lafayette Road provides a gateway into the heart of Fort Oglethorpe's Historic District and the Chickamauga & Chattanooga National Military Park (C&CNMP). As such, it is an important opportunity for leveraging the economic benefits of heritage and recreation tourism. Lafayette Road has several "big box" stores (Big K Mart, Sav-A-Lot) and smaller businesses. While the corridor has a highway orientation like in Rossville, the business mix is somewhat less dependent on discount merchandising, auto repair, used car sales, and related payday financing.

There are a number of tourist-related and specialty businesses in this node (aside from fast food restaurants, convenience stores, and gas stations) that may appeal to heritage, recreation and other visitors. Among these are Susie's Antiques & Collectibles, Classic Blades (replica weaponry & collectibles), Park Place Restaurant, Karen's Gifts, Tootie's Treasures, Lilly's Produce, Somewhere in Time Souvenirs, Welcome Home, and a few others. According to business operators, tourists visit the battlefield, stay at the local B&B and account for not more than 2-3% of normal business (except at a couple of antique businesses near the entrance to C&CNMP). A business called "The History Company," which offered antique military equipment and supplies (along with tours and a "Southeast Veterans Museum"), appears to have closed. Local motels in this area include Royal Inn (weekly/hourly), Super 8, EconoLodge, and Days Inn.

Perhaps most pertinent to this study is the recent opening of a new bicycle shop, Battlefield Bicycles, located at 2862 Lafayette Road. The owner of this 1,500 square-foot shop intends to market his products and services (bicycles for sale or rent, equipment, repairs, and tour packages) to the nearly 1.0 million visitors to Chickamauga & Chattanooga National Military Park (C&CNMP), noting that the Visitors Center is located just blocks away from his front door.

The owner of Battlefield Bicycles sees Lafayette Road as "Oceanfront" property in terms of its potential value from tourism exposure. Among the attributes of the location, as enumerated by the shop owner, is proximity to 5,600 acres of C&CNMP parkland available for bike riding, the sheer scale and heritage tourism value of C&CNMP, proximity to the Fort Oglethorpe Historic District, and a deep recreation tourism market in the Chattanooga area. He also cited Cloudland Canyon, the Amazon/VW Bikeway, Lookout Mountain and other assets in the region. As part of the Trail of Tears, Lafayette Road also offers potential for more interpretation of American Indian heritage through bicycle and walking tours.

During its first day and prior to official opening, the shop had already been visited by a couple who was biking from Chicago to Savannah, along with others from Chattanooga and elsewhere who purchased bicycles. The recent closure of Bear Creek Cycles (Dalton) has created a vacuum in the market that this shop can help fill. The shop has also already established tour packages with the nearby Battleview B&B, which includes a 1-day excursion in C&CNMP and Fort Oglethorpe. Ultimately, by offering bicycle rentals, the shop is filling a gap in the market for long-distance park and recreation visitors. Certainly Battlefield Bicycles would be the type of business to directly benefit from the enhancement and expansion of bike/ped trails in this region.

While the location may provide "oceanfront" value for tourism-oriented businesses, the physical environment, marketing, management, and business mix does not generally promote the capture of potential tourist-generated sales. According to businesses, the City of Fort Oglethorpe has apparently received a \$3.0 million grant from Georgia DOT for "beautification" of the corridor. But business people in the area are not convinced that the proposed plan will address their concerns and interests in under-grounding utilities, slowing traffic, creating wider bicycle and pedestrian lanes, landscaping & beautification, improved pedestrian crossings, enhanced "park city" road design, and directional signage.



Fort Oglethorpe / Lafayette Road - US 27:

Battlefield Parkway (formerly Route 2A) is a sprawling commercial corridor connecting the study area's two largest cities, Fort Oglethorpe and Ringgold. Much of the study area's economic (and fiscal) base is concentrated along this corridor and the road becomes a four-lane divided highway en route to I-75 at the Ringgold exit. Since I-75 is the major interstate in the study area, the intersection of I-75 and Highway 2 is extremely important as a tourism and visitor gateway. The importance of I-75 exposure to tourism is evidenced by the location of major destination retailers along I-75, just south of Chattanooga: Cabela's, Costco, and Bass Pro Shop.

The more than six-mile corridor from U.S. Route 27 to I-75 offers a dizzying array of chain commercial activity, including a significant number of fast food restaurants (20+), dollar stores, big box retailers (Big K Mart, Home Depot, Lowe's, Wal Mart, Hobby Lobby), auto-related businesses, groceries and drugstores, among others. There are few tourist-oriented businesses in this corridor, per se, although many visitors no doubt patronize the fast food restaurants, full-service chain restaurants (Golden Corral, Applebee's, O'Charley's) and convenience businesses in this corridor. There are also industrial parks and new housing developments appealing to relocating retirees.

Georgia Winery is the only major anchor tourist attraction in this corridor. The winery opened in 1989. Adjacent to the winery is a campground and Subway sandwich shop. Most visitors are snowbirds or sunbirds traveling on I-75 between the Midwest and Florida. According to sales managers, the winery does not see many recreational tourists, such as bicyclists, except when there is a race in the area.

The **Hampton Inn** at I-75 and Battlefield Parkway is among the few Class 3+ hotels in the study area. The hotel opened in 2008 and offers 78 rooms. Occupancy is extremely high for this type of property (at close to 90%), although the number of keys is relatively small. Perhaps 80% of business generated for this hotel is pass-through, with about 60% leisure and 40% corporate stays. Destination leisure travelers are there to visit Chattanooga attractions (Ruby Falls, Rock City, Aquarium), and stay in Ringgold because it's less expensive to stay outside of the city. There is a substantial share of business generated by team sports and recreation activities like softball, basketball, and volleyball tournaments.



There are few bicycling or hiking enthusiasts who stay at this hotel, except during major events like the Iron Man competition or the Battlefield Marathon (at C&CNMP). Some visitors do ask about trails such as Ringgold's walking trails, and management estimate that about two or three guests per month bring bicycles (accounting for 0.12% of total occupancy). Most bicyclists are passing through or headed to specific mountain trails, and none are arriving in Fort Oglethorpe or Ringgold as a destination. One of the challenges for marketing the hotel has been the lack of dining options in the area (other than fast food in Battlefield Parkway or a handful of full-service restaurants including Farm-to-Fork, Home Plate, and Raphael's). That situation may be changing slightly, with the construction of a steak house underway next door.

Downtown Ringgold:

Downtown Ringgold, the center of a town of 3,580 people, is one of the few substantial historic business districts in the study area. The downtown area offers a charming, walk-able historic environment for tourists and visitors, with a pleasant mix of businesses including a few restaurants, antique shops, and other specialty venues as well as convenience goods. History has been well-interpreted through Ringgold's Main Street organization, with sites clearly marked and the historical context explained. Several sites of special significance include the Ringgold Depot (a Civil War site) and Barger Bridge. There are also the Ringgold Feed & Seed buildings that have been converted to tourist-oriented retail use. Ringgold was also famous for its wedding chapels (which catered to destination visitors attracted by the County's relatively lax wedding requirements). Among the famous couples who tied the knot in town were George Jones & Tammy Wynette and Dolly Parton & Carl Dean. The courthouse issues 2,000 to 2,400 marriage licenses per year (in a town of 3,500 residents).

While the downtown mix includes businesses common in any County Seat (e.g., attorneys and real estate offices, newspaper, hair salons, insurance agencies, grocery store), Ringgold also has a large number of tourist-oriented businesses including North Georgia Relics & Metal Detectors, Keeping Treasures Alive (antiques & collectibles), Unik Tings!, Jay's Antiques, Kudzu (wedding/home furnishings), Shabby Chic Boutique, It's Sew Time, Ringgold Art & Furniture Gallery, Trustee Sale Antiques, Vintage Gathering Antiques, and the Feed & Seed Antiques, among others.

Areas just outside of downtown (Cleburne Shopping Center, Lafayette Street, etc) generally offer more typical resident-serving convenience businesses, fast food, auto-related, and discount merchandise. However, there are a few interesting local businesses that potentially appeal to visitors: Rock Bottom Gypsy Boutique, Lope Mountain Music, and a few others. Closer to I-75 are gas stations, fast food restaurants, and motels including Holiday Inn Express, Super 8, Home Town Inn, and the Villa Motel.

Downtown Ringgold, like Fort Oglethorpe, also hosts a business that is particularly well-suited to the expansion of the region's trail system: **Above the Ridge Outfitters**, which supplies hiking, camping, golf, and bicycling gear, apparel, footwear, and accessories. This business relocated to Ringgold in 2012 and expanded to its current 3,000 square-foot store in 2016. The owners estimate that about 85% of their business is generated from within the Chattanooga region, particularly those areas not already served by outfitters including Rock Creek (Chattanooga) and Rock Outfitters (Dalton). Residents from throughout the area come to walk their dogs, walk/bike/hike trails, or explore. An estimated 60% are residents of surrounding areas of northwest Georgia - Ringgold, Dalton, and Tunnel Hill. Another 30% reside in Chattanooga, East Ridge, Ooltewah, and other suburbs in Tennessee. Overall, about 25 to 35% of the store's customers are recreation enthusiasts – hikers, walkers, bikers and others requiring apparel for their sport.

Of those 10-15% of customers originating from outside of the area, the majority are mountain biking and exploring, while about one-third of visitors are tourists passing through en route to Florida who stop to visit antique shops or grab a bite to eat at Home Plate. Many take Exit 348 off I-75 and follow signs to Ringgold's Historic (downtown) District. Many of the tourists are seniors passing through or visiting family in the area. Some live near Atlanta. Only a "handful" of out-of-town visitors are bicycling – often mountain bikers, estimated at 2 per week (about 1.6% of all customers). Mountain bike destinations include White Oak, Enterprise South, Dry Creek / Snake Creek Gap, and Buzzard's Roost (which is being expanded). Like other businesses, Above the Ridge sees some bicyclists during larger regional events like Iron Man, 3 State 3 Mountain, and Battlefield Marathon. The owners would like to see more events in north Georgia.

Chickamauga:

Chickamauga is an historic town of 3,100 people located not far from the Chickamauga Battlefield. The town is accessible primarily via U.S. Route 27 and Lafayette Road, with direct access to C&CNMP. Chickamauga offers groceries (Food Lion), convenience goods, personal services, banks, and other necessities for its residents.



But the town also offers tourism-oriented businesses like restaurants (Souther Style Café, The Grind) and antique & gift shops (Sophie's Fine Gifts & Collectibles, Memories & More, Where the Heart Is, Galleries on Gordon, Oh Fiddle Dee, etc) along with visitor assets including the Walker County Regional Heritage Museum, Tennessee Valley Railroad (Chickamauga

Turn, restored Depot), Gordon Lee Mansion, Coke Ovens, Crawfish Spring, Lee & Gordon Mills, Veterans of All Foreign Wars Museum, and others. Unfortunately, historic Crystal Spring mill buildings are being demolished, reducing the inventory of heritage buildings and sites. The Walker County Regional Visitor Information Center is located near Chickamauga in Rock Spring. The Chickamauga area offers several lodging establishments, including the General Bragg Inn & Suites, Hidden Hollow, and Mountain Cove Farms Resort.

Lookout Mountain:

Lookout Mountain offers a myriad of visitor attractions, centered around the family-run enterprises associated with Rock City, including Ruby Falls, Fairyland Caverns, and Incline Railway, but also including Point Park. The town of 1,600 is also home to Covenant College. Collectively, the Rock City attractions bring an estimated 400,000 visitors to Lookout Mountain each year. Incline Railway alone ferries 160,000 passengers including commuters. The tiny Town Center of Lookout Mountain burned in a fire several years ago and the city is in the process of encouraging its redevelopment. The city itself is worthy of tourism, given the vintage fairyland theme played out in street names and design throughout the community. The only lodging on the mountain itself are the Chanticleer Inn and Garden Walk B&B.

Other Areas:

There are a number of smaller communities and rural areas with a small business base including tourist-oriented establishments. Several of these communities are relatively suburban, like Chattanooga Valley, and businesses there (like Valu City) offer limited tourist appeal. Boynton/East Boynton has the Choo-Choo BBQ, the Catoosa County Saddle Club, an antique shop, the Georgia Winery (and campground), a few restaurants, churches, gas stations and schools. Burning Bush has a gas station and a handful of auto-related and convenience businesses.



ECONOMIC TRAIL USER GROUPS OVERVIEW:

Based on the field reconnaissance, interviews, tourism trends, economic base, and other inputs, the potential bike/ped trail “user groups” and market base were identified for the study area. The existing market generated by these user groups was estimated and quantified as a baseline for identifying market opportunities and defining economic impacts of proposed new or improved trail routes. This existing user group market base is summarized below.

Military Heritage Tourists & Civil War Enthusiasts:

One of the existing and potential target markets for bicycle, pedestrian and other trail use within the study area is the heritage tourist. The region is saturated with Civil War and military history, serving as the home of the Chickamauga & Chattanooga National Military Park (C&CNMP) as well as Fort Oglethorpe. Chickamauga Battlefield is one of the most-visited Civil War memorial sites in the country. Northwest Georgia was also home to the Chickamauga and Cherokee nations, forcibly removed through the Trail of Tears, whose various “Roundup Routes” originated in areas located just south of the study area (Rome, Fort Newman, Fort Wool, Fort Cumming, etc). This heritage of national significance, coupled with local history relating to coal furnaces, agriculture, and other aspects of 18th and 19th century life, provide a concentrated snapshot of American history.

Existing Market Base:

The existing market base is driven largely by the approximately 1.0 million visitors to C&CNMP, including an estimated 57,300 “core” heritage tourists (e.g., military and Civil War history enthusiasts) at Chickamauga Battlefield. While there are also tourist visits recorded for other area sites including Fort Oglethorpe’s Historic District, there is significant overlap between these attractions. As noted earlier, the demographics of heritage tourists point to a more affluent, well-educated, and older visitor (nearly 50% are over the age of 50).

Casual Trail Participants. About 53% of C&CNMP visitors participate in hiking, walking or jogging in the park. That percentage translates into about 337,000 people at the Chickamauga sites in the study area. More specifically, surveys indicated that about 5% of visitors participate in bicycling activities in the park. This share translates into about 32,000 bikers within the study area.

Day Trippers:

The study area comprises a portion of the Chattanooga Metropolitan Statistical Area (MSA). As such, some people commute and travel throughout the area on a regular basis for work, recreation and entertainment.

Existing Market Base:

The Chattanooga MSA market has 548,000 residents, or about 415,000 outside of the study area. Chattanooga-area residents who visit the study area to drive/tour, bike or walk on weekends, or before and after work, are an important target market for the region’s trail system. At present, many of these day trippers visit C&CNMP or several of the small business districts (Chickamauga, Ringgold) in the area. Occasionally they visit the Georgia Winery, Fort Oglethorpe, and other local attractions. A few ride as passengers on the Tennessee Valley Railroad to Chickamauga and through to Summerville. Based on C&CNMP surveys, interviews, and area attendance data, it is estimated that about 149,000 Chattanooga residents visit C&CNMP and other locations in the study area each year.

“Hard-Core” Bicycling Enthusiasts:

Clearly, an important target market for bike/ped trails will be hiking and bicycling enthusiasts, including those competition-level bikers who participate in large events. The study area provides limited existing opportunities for trail use by experienced bikers, who prefer dedicated lanes and accommodation. Bicycling is generally limited to the C&CNMP road system, local Ringgold trails, and mountain biking areas in more topographically-challenging terrain.

Existing Market Base:

It is estimated that about 2.3-4.0% of C&CNMP’s bicyclists (about 1,200 to 2,000 per year) are enthusiasts or “hard-core” bikers. The majority of bicycling visitors come from Chattanooga and surrounding areas on weekends or before/after work for recreational purposes including walking and biking. As such, there is some overlap between this group and the “day-trippers” discussed above. The Battlefield Marathon attracts up to 1,500 riders (capacity is limited), largely from within the tri-state area (Tennessee, Georgia, and Alabama). The 3 State 3 Mountain Challenge also attracts bicyclists to the study area. Lookout Mountain is incorporated into that event.



Chattanooga Destination Visitors:

Chattanooga has attracted tourists in large numbers for decades, thanks in part to the convergence of the Dixie Highway (U.S. Route 41) and now, I-75, with spectacular natural scenery and Civil War heritage of national significance. Family-operated attractions on Lookout Mountain also played an important role in growing Chattanooga's reputation as a family-friendly visitor hub. The Tennessee Aquarium and a host of other attractions continue to build on this asset base. The result is a large destination market for overnight family visits and convention business.

Existing Market Base:

The Chattanooga area attracts an estimated 3.0 million visitors per year. While many of Chattanooga's sites have national and international appeal, the city is marketed primarily to target markets within a 250-mile radius in Tennessee, Georgia, and Alabama. This core destination market is evident in attendance trends, sales, and survey output for C&CNMP, Fort Oglethorpe, and other visitor attractions and tourist-oriented businesses. That being said, there is also an "inflow" factor oriented to "Snowbirds."

"Snowbirds":

As in the early days of automobile travel along U.S. 41, Chattanooga and northwest Georgia continue to benefit from "inflow" tourism from pass-through long-distance travelers headed from cold, Midwestern states and Canada to sunny Florida and other southeastern destinations. The typical snowbird is older and more affluent than the general population. The snowbirds are not headed to Chattanooga as a destination. Nor are they arriving as heritage tourists or recreation enthusiasts. They typically do not stay longer than one night in the area, if at all. However, their volumes are significant, so there are opportunities to leverage even a small portion of this market through extended and marketed trail use.

Existing Market Base:

The I-75 Georgia Visitors Center indicates that many of their 1.7 million visitors do stop en route at Chickamauga & Chattanooga National Military Park (C&CNMP) or at the Georgia Winery (located near Ringgold, adjacent the interstate). Many are looking for places to eat, or purchase gas. An estimated 30 to 35% of their visitors (560,000) are looking for outdoor recreation or adventure destinations such as hiking, walking, biking, or kayaking trails. About 25% of visitors (425,000) are looking for a place to take a walk, and the center currently directs them to C&CNMP or to trails one hour south of the center at Cartersville or in the Pine Mountain Recreation Area. These trails are well-marked and maintained, located near the interstate, and have lighted parking lots. It is estimated that about 135,000 are looking for more active recreation beyond walking, such as on hiking, biking, or kayaking trails.

As noted earlier in this report, less than 2-4% (51,000) might be considered "hard-core" recreation enthusiasts (and about 10% of these (5,000 – 6,000) are specifically looking for biking or hiking trails). Most of those enthusiasts tend to be young males headed to a specific trail or other recreation destination in the state. Hiking destinations include Cloudland State Park or Fort Mountain. Biking destinations include Woodstock (Cherokee County) and the Silver Comet Trail. Kayaking destinations include landings along Chickamauga Creek. A handful of center visitors are participating in specific events, such as the Iron Man competition. To sum, visitors looking for some low-impact recreation outlet are an important component of the snowbird profile, but hard-core recreation enthusiasts comprise a very small share of these visitors.

Nature Enthusiasts:

The Chattanooga area and Tennessee Valley are attractive locations for nature enthusiasts, such as bird watchers, campers, and other passive recreation users. This group is differentiated from other outdoor recreation enthusiasts, such as active recreation participants in competitive bicycling, running, skiing, canoeing, rock climbing, or kayaking. Cloudland Canyon is certainly a prime anchor opportunity for attracting these visitors, due to its relatively unspoiled beauty, nature-watching, and spectacular vistas.

Existing Market Base:

This is among the most difficult groups to quantify, since one can enjoy nature without purchasing a ticket to do so. There is also significant overlap with other outdoor recreation groups and family tourists, many of whom participate in a variety of activities. Most often, nature enthusiasts use trails for walking and nature viewing. Certainly the Cloudland Canyon visitor base is the best indicator of this existing market in the study area. That park attracts about 250,000 visitors per year. A large share of visitors are engaged in passive outdoor recreation activities.



TRAIL-RELATED TOURISM OPPORTUNITIES OVERVIEW:

While the trails themselves will generate added visitation to the region, it would be important to use the trail system to leverage broader tourism development opportunities. Development of new anchor visitor attractions, service nodes, trail head facilities, and events can help maximize the use of the trails and strengthen the overall tourism product. The trail system helps link the various tourism assets in the region together while also generating new opportunities for tourism development. Concepts for trail-related tourism development, sometimes in concert with a broader tourism development program, are identified below.

Fort Oglethorpe Gateway:

Fort Oglethorpe Gateway is a concept proposed for the stretch of Lafayette Road from Route 2 to the entrance of Chickamauga National Battlefield, and incorporating the Fort Oglethorpe Historic District. Currently, this area provides a traffic pass-through for hundreds of thousands of visitors, but does not offer an environment or destination that captures visitor traffic, extends the visitor stay, and generates significant economic spin-off in the local community. In order to achieve those objectives, it is important to establish the visitor environment as a “gateway” to the park and the historic district, and to “package” this district as a destination in itself.

Elements of this concept include extensive investment in the streetscape, pedestrian infrastructure, and bicycle facilities along this corridor. Some physical improvements are already funded by the State DOT and are entering the implementation phase for this area. But there is a need to re-examine the overall concept and brand for the corridor, along with trail improvements recommended in this plan, to ensure that current improvements leverage tourism potential.

The concept would obviously incorporate marketing for the Battlefield, the 6th Calvary Museum and other elements of the Historic District, along with associated retail, lodging, restaurants, and entertainment relating thematically to military heritage and recreation within this corridor. Regular events and other programming along with branded marketing is recommended to help establish a destination. For the purposes of this analysis, it is assumed that there would also be investment in additional heritage-related anchor venues or attractions (e.g., expanded 6th Calvary Museum with more exposure on or near Lafayette), along with refurbished historic buildings associated with Fort O. (such as the old recreation hall, which is positioned with maximum exposure right on Lafayette). These additions would help strengthen the overall visitor appeal and brand.



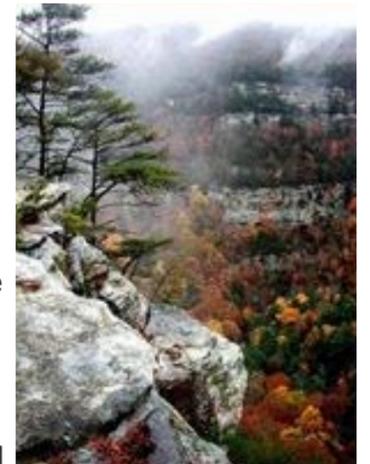
Destination Recreation Resort:

There is an opportunity identified to attract visitors to a destination resort oriented to nature and outdoor recreation. Such a facility would be most suitable within the western part of the study area, between Lookout Mountain and Cloudland Canyon State Park. The facility would build on the existing base of visitors to both Cloudland Canyon and Lookout Mountain to establish a hub for exploring the area through nature trails, cycling trails, walking/hiking trails, and climbing trails. The resort would offer packages including guided bicycling and other tours and recreation programming geared to the nature and recreation enthusiast but welcoming of all. Such a facility would anchor the proposed trails on the western fringe of the study area and provide high-quality lodging facilities where few currently exist.

Civil War Heritage Cycling Tour & Shuttle:

Given the importance of Civil War and military heritage sites within the study area and nearby Chattanooga, there is the opportunity to build on the substantial heritage tourism base and create a themed trail that links the various sites together. The majority of heritage tourists do not necessarily share a preference for cycling between sites, but a guided cycling tour could attract a share of casual or recreational cyclists to participate on short routes. The tour operator would supply the bikes and equipment.

Certain sites are concentrated to the extent that they could be linked by the trails that are designated in the plan around Fort Oglethorpe, Chickamauga, and the Chickamauga Battlefield. But heritage tourists would be less apt to cycle to sites located further afield (such as Lookout Mountain and Ringgold). As such, a motorized shuttle is recommended as part of an overall tour package that would carry tourists on the east-west axis between clusters sites and bike routes. The tour could also be packaged with the existing Tennessee Valley Railroad, which already brings tourists to Chickamauga and other locations in the study area. The railroad operator is open to the concept of bike/train packages, and to the idea of accommodating bicycles (which does not occur at present). Overall, several packages could be developed of varying lengths and modes (e.g., bike tours, bike/shuttle tours, bike/rail/shuttle tours, etc).



American Indian (Cherokee) Heritage Center & Trails:



North Georgia was home to American Indian nations including primarily the Cherokee, whose leader John Ross opposed the Treaty of New Echota that led to the relocation of his people (The “Trail of Tears”) to Oklahoma. The “Roundup Routes” used to relocate the Cherokee nation originate in north Georgia and converge in Chattanooga. The ancestral home of John Ross is located in Rossville and thus provides an anchor for retelling the story of Cherokee heritage in the region as well as the Trail of Tears. North Georgia and Chattanooga played an important role in Cherokee history, and there are a number of designated heritage sites that convey and memorialize this history (such as the Passage at Ross’s Landing). However, few of these sites are located on the Georgia

side and there is an opportunity to strengthen the interpretation element surrounding the Ross home and the Trail of Tears in Rossville. The concept would be to develop an interactive interpretive center or complex at Rossville that was also linked to other existing Chattanooga/North Georgia American Indian sites through bicycle and pedestrian trails.

Ringgold Downtown Recreation Event:

Ringgold is an important business and economic anchor for the study area and its continued success is dependent to some degree on the development of new destination attractions, entertainment, and events. Ringgold is also an important recreational hub, with its own extensive trail network with potential for linkages to broader regional trail systems. As such, a concept has been developed to build on Ringgold’s success as a destination downtown and establish a new multi-day event that would anchor north Georgia as a cycling destination. The event, which could include competitions of national or regional significance, would also provide entertainment and recreational outlets for the families and friends of riders as well as other visitors. The event would help brand Ringgold and “put it on the map” as a cycling destination in the foothills of north Georgia.



ChickChatt Crossroads:

The final concept builds on the proposal for a regional bike route connecting Chattanooga, Chickamauga and other key locales into a branded “ChickChatt” cycling route. The overall brand and route would certainly increase local ridership and create opportunities for new events, it would also create a destination for cycling enthusiast across the country. But, to maximize the opportunities presented by the route, it would be helpful to establish strong trail head nodes where cyclists and others can congregate and spend more time in the area. One such concept is to designate a “ChickChatt Crossroads” at a key route intersection (such as between Fort Oglethorpe and Ringgold where several designated trails intersect with Route 2).



Photo Courtesy of Rootsrated.com



Photo Courtesy of Phoenix New Times

At this intersection, infrastructure investments (such as streetscaping and pedestrian/bicycle crossings) might be made to help establish identity and sense of place. Retail activity (e.g., coffee shops, restaurants, sporting goods stores, health clubs, etc) would be attracted or expanded at this location to help strengthen the node as a regional destination.



PROJECT & PROGRAM POTENTIALS OVERVIEW:

This section summarizes findings from an “Opportunities Assessment” to help define a possible market base and program for each of the trail-based anchor projects. The existing visitor base is defined and the project tourism potentials forecasted based on an analysis of the project concepts within the regional context.

Fort Oglethorpe Gateway:

Establishment of Fort Oglethorpe Gateway involves the development of a brand around public infrastructure improvements including bike trails as well as a more “walk-able” destination visitor environment along Lafayette Road from Route 2 to the entrance for Chickamauga National Battlefield. Recruitment, marketing and development of new retail, restaurants/outdoor dining, recreational facilities, heritage sites, and live entertainment venues would also be branded as part of this gateway project.

Visitor Base:

The visitor base for this area would draw from existing tourism sources including visitors to Chickamauga National Battlefield (Visitors Center), Fort Oglethorpe (6th Calvary Museum and Polo Field), as well as recreational day trippers from around the Chattanooga area and beyond. This base includes

Existing Tourism Source	Capture	Extended
Chickamauga Visitors Center	19,246	29,556
Heritage	10,826	6,186
Hiking/Walking/Jogging	-	11,661
Bicycling	962	11,709
Enthusiasts	90	1,090
Fort Oglethorpe	666	2,294
6th Calvary Museum	90	470
Polo Field/Events	576	1,824
Day Trippers		29,800
Untapped Base		
Chattanooga Destination		
Active Recreation Enthusiasts		3,150
I-75 Visitors Center/Snowbirds		20,400
Walking		8,160
Active Recreation		9,180
Enthusiasts		5,202
Bicycling		1,248
TN Valley Railroad		768

Source: Randall Gross / Development Economics.

about 344,000 visitors to the battlefield, 7,000 visitors to the Fort Oglethorpe Historic District, and nearly 150,000 day trippers per year.

In addition to this existing base from which to draw, there would also be opportunities to tap into other tourism sources that are not already drawn to the area and its attractions. These groups include the estimated 63,000 active recreation enthusiasts who are visiting the Chattanooga area, another 51,000 active recreation enthusiasts who travel I-75 (including 7,700 bicyclists), and about 2,000 current and potential new excursion train participants on the Tennessee Valley Railroad.

Ultimately, this wide range of visitors would be drawn to the Gateway area for different reasons, but the availability of walking and biking facilities will certainly help draw visitors if there are “things to do” including dining, heritage sites, festivals, and entertainment. These various visitor groups and their potential capture estimates are summarized below.

Existing Tourism Source	Existing Base
Chickamauga Visitors Center	343,670
Heritage	30,930
Hiking/Walking/Jogging	140,905
Bicycling	17,184
Enthusiasts	1,600
Fort Oglethorpe	7,040
6th Calvary Museum	2,240
Polo Field/Events	4,800
Day Trippers	149,000
Untapped Base	
Chattanooga Destination	2,100,000
Active Recreation Enthusiasts	63,000
I-75 Visitors Center/Snowbirds	1,700,000
Walking	425,000
Active Recreation	135,000
Enthusiasts	51,000
Bicycling	7,650
TN Valley Railroad	1,920

Sources: U.S. National Park Service, 6th Calvary Museum, Chattanooga CVB, State of Georgia, Tennessee Valley Railroad, & R.. Gross / Dev. Economics.

Destination Recreation Resort:

The concept of a destination recreation resort is more specific to a lodging and recreation-centered facility. Here, the actual attraction would be oriented to the use of proposed trails and the lodge would offer a high-quality base for touring. The concept has not been placed at a specific location at this stage, but is envisioned somewhere in the western portion of the study area, between Lookout Mountain and Cloudland Canyon, in order to take advantage of both features as well as trails in-between. The resort itself would offer personal trail guides, hiking and biking tours, and other recreation activities (e.g., rock climbing excursions). On-site sales would include recreation equipment such as cycling gear.

Visitor Base:

The visitor base for this type of facility is oriented to many of the 250,000 existing and potential nature-based visitors to Cloudland Canyon. There are limited on-site lodging opportunities at the park itself, although enhancements to the park’s lodge have been recommended. Another target niche for this experience is 63,000 destination recreation tourists in the Chattanooga region (those visiting other recreation sites as well as other active recreation enthusiasts) and about 6,200 I-75 travelers who are also bicycling and outdoor recreation enthusiasts. Finally, the market would include nearly 40,000 destination visitors to Lookout Mountain who are also recreation / cycling and nature enthusiasts.

Visitor Potential:

An assessment of visitor potential for this concept was determined.

Of the 42,000 likely overnight visitors to the Cloudland Canyon park, it is assumed that the concept (depending on location and offering) could attract about 17,000 overnights without competing too aggressively for on-site business.

The concept could also capture about 5,000 I-75 travelers who are cycling enthusiasts and would stay over for the experience, along with about 8,000 destination recreation tourists in the Chattanooga market. Finally, the site would have a good opportunity to capture up to about 13,000 to 14,000 recreation-based tourists in the Lookout Mountain area.

Existing Tourism Source	Visitor Base
Nature-Based Visitors	250,000
Cottages	16
Group Lodge	31
RV Campsites	72
Walk-in Campsites	30
Back country Campsites	11
Pioneer Campsites	4
Shelter	31
Bicyclists-Ckickauga/I-75	6,231
Destination Tourists-Recreation	63,000
Climbing-Visit Other Rec Sites	16,565
Active Rec Enthusiasts-Other	46,435
Destination-LM/Other/Nature	39,706

Sources: Georgia State Parks, Lookout Mountain Recreation Orgs, and RGDE.

Existing Tourism Source	Overnight	Capture
Nature-Based Visitors	41,854	16,741
Cottages	5,299	
Group Lodge	9,598	
RV Campsites	16,589	
Walk-in Campsites	6,912	
Back country Campsites	2,534	
Pioneer Campsites	922	
Shelter		
Bicyclists-Ckickauga/I-75	12,461	4,985
Destination Tourists-Recreation	97,541	7,902
Climbing-Visit Other Rec Sites	4,671	1,401
Active Rec Enthusiasts-Other	92,870	6,501
Destination-LM/Other/Nature	79,412	13,500

Source: Randall Gross / Development Economics.

Civil War Heritage Cycling Tour & Shuttle:

The Cycling Tour and Shuttle would be leveraged by the enhancement and development of bicycle and pedestrian trails as envisioned in the master plan. As noted earlier, several tour packages would be developed to include a mix of sites and modes (bicycling, rail, and shuttle buses). The tours would be largely targeted to the heritage tourist and centered around Chickamauga, Fort Oglethorpe, and the battlefield; but with shuttle stops along an east-west axis.

Existing Tourism Source	Existing Base
CVC Heritage Tourists	30,930
FO Heritage Tourists	7,040
Rail Travelers	1,920
CVC Bicyclists	17,184
I-75 Bicyclists	7,650
Destination-Active Rec Enthusiasts	46,435

Sources: U.S. National Park Service, 6th Calvary Museum, Chattanooga CVB, State of Georgia, Tennessee Valley Railroad, & Randall Gross / Dev. Economics.

Visitor Base:

The existing visitor base from which such an attraction would draw includes a mix of heritage tourists (about 38,000), rail tourists (2,000), Battlefield bicyclists (about 17,000), I-75 snowbird bicyclists (8,000), and Chattanooga tourists who are active recreation enthusiasts (estimated at more than 46,000). In general, the target markets for this tour package opportunity are heritage tourists and bicycle/recreation enthusiasts.

Visitor Potential:

The tour package would capture an estimated 10,800 battlefield visitors and extend the stay of another 6,200. The tour would also capture or

extend the stay of another 3,000 Fort Oglethorpe heritage tourists (above and beyond those visiting the battlefield). The tour would capture or extend the stay of about 1,400 rail travelers, 13,000 battlefield bicyclists, 2,000 I-75 cyclists, and nearly 14,000 destination recreation tourists. Thus, while heritage tourism is the theme of the trip, it is recreational cycling enthusiasts who would likely represent the largest group of participants.

Existing Tourism Source	Capture	Extended
CVC Heritage Tourists	10,826	6,186
FO Heritage Tourists	666	2,294
Rail Travelers	-	1,382
CVC Bicyclists	962	11,709
I-75 Bicyclists	-	1,873
Destination-Active Rec Enthusiasts	14,294	13,931

Source: Randall Gross / Development Economics.

American Indian (Cherokee) Heritage Center & Trails:

The American Indian (or Cherokee) heritage center would focus attention and interpretation on north Georgia's remarkable Cherokee heritage and on the Trail of Tears. The center would conceptually be located in Rossville and would draw on existing resources like the John Ross home but would also establish new bicycle and pedestrian tour routes along the proposed trails linking Rossville with Chattanooga and American Indian sites in north Georgia.

Visitor Base:

The potential visitor base for this attraction and associated trails would include destination and other heritage tourists, particularly those interested in American Indian heritage or who have a connection to their Cherokee ancestry. The visitor base would also include recreation enthusiasts who might be interested in biking to see American Indian heritage sites.

The share of destination heritage tourists in the Chattanooga region who might be interested in visiting the site was determined based on comparable facilities in similar tourist regions. Among these are the Cherokee village sites in the mountains of North Carolina, which is also home to other heritage sites like Biltmore as a comparison. Data on visitor trends to the Cherokee sites within the broader framework of tourism in the Asheville region and western North Carolina was used as a basis along with data on recreation users. Overall, there is likely to be about 130,000 overnight visitors in the region who may have an interest in the Cherokee sites and in visiting a heritage center. Of those, about 4,000 would also consider a recreational heritage bicycle and/or walking tour. Another 9,500 bicyclists in the region would similarly consider a tour that included Cherokee heritage sites.

Existing Tourism Source	Overnight	Capture
Overnight Heritage Tourists	130,147	19,522
Bicyclists/Recreation	3,904	1,757
Other Bicyclists	9,450	1,134

Source: Randall Gross / Development Economics.

Rossville, with about 3,000 engaged in bicycling tours and related activities. These numbers do not include local visitors or those from within the study area (such as school children).

These potentials are subject to a number of factors, not the least of which is an actual clear definition of the concept in terms of what a visitor would see or do at this heritage complex or on the various related bicycle tours. Clearly, only a more thorough needs assessment of market analysis would define this tourism product and determine the economic potentials for it. Nevertheless, this "high-level" assessment provides some indication of the basic level of interest that could be generated.

Existing Tourism Source	Existing Base
Destination-Heritage Tourists	
Cherokee/Biltmore	6.2%
Regional Draw (Overnight)	130,147
Bicyclists/Recreation	3,904
Other Bicyclists	9,450

Sources: Economic Development Partnership of N.C., North Carolina Department of Commerce, State of Georgia, U.S. National Park Service, Chattanooga CVB, and Randall Gross / Dev Econ.

Visitor Potential:

The current attendance at the John Ross House is only about 1,190 per year. However, a more expansive interpretation facility along with guided tours could establish a broader regional destination. Based on an assessment of the existing heritage sites and the competition for visitor's time and resources, it was determined that about 20,000 overnight heritage tourists could be attracted per year to the heritage center in



Ringgold Downtown Destination Event:

The multi-day destination event for Downtown Ringgold would involve competitive cycling and/or racing, other (non-competition) recreation events, and dining and entertainment. The capacity for Ringgold to host such an event has not been determined. Nor have the specific qualification for events, schedule, or even the types of competitive events that might be included. Nevertheless, this is an attempt to introduce the concept and to provide some indication of the possible scale of participation and attendance.

Visitor Base:

To estimate a visitor base for this event, comparable competitive cycling and other recreation events in the region were examined to assess typical participation rates and associated attendance. Among the events examined were the 3 State 3 Mountain Challenge, River Gorge Omnium, Chattanooga Tour de Cure, Battlefield Marathon, Old Gray Barn, Iron Man Competition and others. In general, these events are attracting an average of about 1,500 to 1,750 participants, plus 3 to 6 additional attendees per participant, for an average attendance of at least 5,280 per event. Battlefield Marathon, which attracts 1,500 attendees, is among the most comparable since it is located within the study area. Participation rates are averaging 0.3% metro-wide. At the high end, globally-recognized brands like Iron Man are attracting somewhat higher numbers but ultimately, the economic benefits of these events is maximized not just by increasing participation but also by extending the length of stay and expanding opportunities for broader appeal (such as by integrating entertainment and broader-themed festivals).

Existing Tourism Source	Total	Overnight
Total Attendance (Event+Festival)	7,338	3,460
Participants	1,760	830
Spectators	5,578	2,630
Source:	Randall Gross / Development Economics.	

Visitor Potential:

Based on the comparables analysis, penetration rates, and other inputs, the Ringgold event visitor potential was estimated at around 7,300, including an estimated 3,500 overnight guests. This number includes 1,760 participants (830 overnight) and 5,580 spectators (2,630 overnight).

Underlying this analysis is an assumption that the event would be marketed pro-actively throughout the region and would include other recreation activities and entertainment over at least a 2-3 day period. All competitions would originate and terminate in downtown Ringgold so as

to maximize economic spin-offs. The competitive races would extend north along several of the routes as designated in the master plan. All entertainment and non-competition recreation activities would be based in downtown Ringgold.

ChickChatt Crossroads:

The ChickChatt Crossroads would provide a destination trail head and service node for those cycling the regional trail(s) that intersect along Highway 2, between Fort Oglethorpe and Ringgold. The visitor base and potential for commercial spin-off are described below.

Existing Tourism Source	Existing Base
CMP Bicycling Enthusiasts	1,600
Chattanooga Destination Bicyclists	9,777
I-75 Cycling Enthusiasts	7,650
Daytrippers	415,000
Cyclists/Trail Enthusiasts	1,932
Other Visitors	4,150
Sources: U.S. National Park Service, 6th Calvary Museum, Chattanooga CVB, State of Georgia, Tennessee Valley Railroad, & Randall Gross / Dev. Economics.	

Visitor Base:

The market base for this concept would draw from a variety of cyclists as well as from local traffic. Among the potential user and visitor base are Chickamauga Military Park bicycling enthusiasts (totaling 1,600), Chattanooga destination visitors who are also bicycling enthusiasts (about 10,000). I-75 cycling enthusiasts (about 7,700) and day trippers from other parts of the Chattanooga region or beyond who are cycling enthusiasts (2,000) or other visitors (4,200).

Visitor Potential:

From among these various groups, the ChickChatt Crossroads could capture a portion of riders who would support commercial businesses and activities at the trailhead/node. Cyclists are a relatively small share of overall visitors, but they can be a captured market for businesses and activities targeted to them. Overall visitor capture by primary type of existing tourism source market is summarized in Table 11.

A large group of visitors would be generated from day-trippers whose purpose is not only for cycling the trail but for other activities as well. These Chattanooga-area residents visiting other sites would be drawn to the node because of a mix of retail, walk-able environments, and unique characteristics.

Existing Tourism Source	Base	Capture
CMP Bicycling Enthusiasts	1,600	1,120
Chattanooga Destination Bicyclists	9,777	2,933
I-75 Cycling Enthusiasts	7,650	3,060
Day-trippers	415,000	
Cyclists/Trail Enthusiasts	1,932	580
Other Visitors	4,150	4,150
Source:	Randall Gross / Development Economics.	



ECONOMIC IMPACTS OVERVIEW:

This section provides a summary of findings from an analysis of economic and fiscal benefits generated by the various development concepts associated with the Bike/Ped master plan improvements. The overall concept opportunities are quantified in terms of the hotel demand and sales volumes (business impacts) that could be generated at full implementation. This information was then used as the basis for calculating economic impacts (in terms of jobs, income and output) as well as fiscal benefits (tax revenues) from each of the concepts and associated infrastructure improvements envisioned in the plan.

Fort Oglethorpe Gateway:

Based on the visitor base and site capture of overnight visitors, gross room-night demand and sales volumes were calculated and forecasted for the Fort Oglethorpe Gateway concept.

Factor	Gross Amount	Attributable
Roomnights	82,677	34,836
Rooms	308	130
Gross Sales	\$ 17,086,227	\$ 7,199,272
Retail Sales	\$ 5,988,145	\$ 2,523,102
Lodging Sales	\$ 7,988,311	\$ 3,365,871
Transport Spend	\$ 3,109,770	\$ 1,310,300
Source:	Randall Gross / Development Economics.	

Generalized Demand & Annual Business Impacts:

This analysis forecasted about 83,000 room-nights, or demand for about 300 rooms, if the Gateway concept is fully implemented and marketed by 2022. About 130 of these rooms would be directly or indirectly attributable to bicycle and pedestrian improvements as part of the overall concept.

The concept would also generate about \$6.0 million in retail sales, \$8.0 million in lodging revenues, and \$3.1 million in transportation spending, totaling \$17.1 million. Of this amount, about \$7.2 million would be directly or indirectly attributable to the implementation of planned infrastructure improvements in the Gateway area and nearby.

Annual Fiscal Benefits:

The proposed Gateway concept would generate about \$180,000 in annual retail sales tax revenue to the area. In addition, about \$436,000 in hotel/motel tax revenues would be generated to the City of Fort Oglethorpe, with smaller amounts to both Chickamauga and Ringgold, which would benefit from increased overnight traffic in the area.

Direct investment in new retail/commercial and hotel uses would generate added property tax revenues, especially to Catoosa County, which would gain about \$460,000 per year in property tax revenues based on the demand for retail goods, services and accommodation facilities coupled with the cost of construction (as a proxy for value).

This increase in revenues does not include any spin-off effects that could occur on existing or adjoining properties. It would be important to ensure that residential property owners, in particular, are protected from any sudden and rapid increase in the property tax burden.

Factor/Type	Direct	Indirect	TOTAL
Jobs	488	87	576
Retail	189	19	209
Lodging	168	19	187
Transport	131	49	180
Earnings	\$ 4,014,240	\$ 757,155	\$ 4,771,395
Retail	\$ 898,222	\$ 130,422	\$ 1,028,644
Lodging	\$ 2,556,260	\$ 423,317	\$ 2,979,576
Transport	\$ 559,759	\$ 203,416	\$ 763,175
Output	\$ 17,086,227	\$ 2,667,210	\$19,753,437
Retail	\$ 5,988,145	\$ 926,366	\$ 6,914,511
Lodging	\$ 7,988,311	\$ 1,039,279	\$ 9,027,591
Transport	\$ 3,109,770	\$ 701,564	\$ 3,811,335
Sources:	U.S. Bureau of Economic Analysis (BEA) & Randall Gross / Development Economics.		

Type	Base	Tax Rate	Revenue
Retail Sales	\$ 5,988,145	3.0%	\$ 179,644
Hotel/Motel			
Chickamauga	\$ 479,299	5.0%	\$ 23,965
Fort Oglethorpe	\$ 7,269,363	6.0%	\$ 436,162
Lookout Mountain	-	3.0%	-
Ringgold	\$ 239,649	6.0%	\$ 14,379
Property-Direct			
Catoosa County	\$44,084,325	25.987	\$ 458,248
Walker County	\$ 4,898,258	24.469	\$ 47,942
Dade County	-	23.900	-
Sources:	State of Georgia, Catoosa County, Walker County, Dade County, HVS, RS Means, and Randall Gross / Development Economics.		

That being said, an increase in the commercial tax base would also help to reduce the long-term burden on residential property owners in recovering the cost of services.

Annual Economic Benefits:

Implementation of the Gateway concept would prospectively result in the creation of nearly 490 annual direct jobs, plus spin-off in the study area economy, for a total of about 580 jobs in the region.

These jobs would generate income and earnings of more than \$4.0 million per year, plus indirect effects of nearly \$760,000, for a total of about \$4.8 million. Much of that impact would be felt in lodging, which is heavier in the number of jobs. Overall, the concept would generate direct output to the regional economy of almost \$18.0 million, plus indirect effects of \$2.7 million, for a total of nearly \$20.0 million.



Destination Recreation Resort:

Gross demand for the resort concept was generally assessed in a high-level review, and annual business impacts forecasted. Annual fiscal and economic benefits were then determined based on the demand numbers.

Factor	Gross Amount	Attributable
Roomnights	43,128	21,564
Rooms	120	60
Gross Sales	\$ 7,525,887	\$ 3,371,296
Retail Sales	\$ 560,668	\$ 251,157
Lodging Sales	\$ 6,361,423	\$ 2,849,663
Transport Spend	\$ 603,796	\$ 270,476
Source:	Randall Gross / Development Economics.	

Generalized Demand & Annual Business Impacts:

The concept would generate about 43,100 room-nights, or demand for about 120 rooms, based on capture of the various market segments within this context. About one-half of this demand would be attributable in some way to the proposed bike/ped trail system, which would be co-branded and programmed with the recreation-themed resort.

Visitors to the facility would generate about \$7.5 million in gross sales, including about \$560,000 in retail sales, \$6.4 million in lodging sales, and \$604,000 on transport. The amount attributable to the master planned trail system is estimated at about \$3.4 million.

Annual Fiscal Benefits:

The estimated annual fiscal benefits that would accrue based on gross receipts were also calculated. Overall, the concept would generate about \$6,500 to \$17,000 in sales taxes. If the facility were located within Lookout Mountain, it would also generate about \$191,000 in hotel/motel tax revenues to that municipality. However, a more likely location would be further south, between Lookout Mountain and Cloudland Canyon in Walker County or otherwise close to Cloudland Canyon State Park.

The facility would also generate property tax revenues to Walker and/or Dade County. Under the assumption that the facility is located in Walker County but close to Cloudland Canyon, it would generate property tax revenues of about \$135,000 per year to Walker County (based on retail and hotel development), plus some residual commercial property tax to Dade County. However, the facility could also be located in Dade County.

Type	Base	Tax Rate	Revenue
Retail Sales	\$ 560,668	3.0%	\$ 16,820
Hotel/Motel			
Chickamauga	-	5.0%	-
Fort Oglethorpe	-	6.0%	-
Lookout Mtn	\$ 6,361,423	3.0%	\$ 190,843
Ringgold	-	6.0%	-
Property-Direct			
Catoosa County	-	25.987	-
Walker County	\$ 13,803,127	24.469	\$ 135,099
Dade County	\$ 265,580	23.900	\$ 2,539
Sources:	State of Georgia, Catoosa County, Walker County, Dade County, HVS, RS Means, and Randall Gross / Development Economics.		

Type	Direct	Indirect	TOTAL
Jobs	243	33	276
Retail	83	9	92
Lodging	134	15	149
Transport	25	10	35
Earnings	\$ 2,228,439	\$ 388,811	\$ 2,617,250
Retail	\$ 84,100	\$ 12,211	\$ 96,312
Lodging	\$ 2,035,655	\$ 337,105	\$ 2,372,760
Transport	\$ 108,683	\$ 39,496	\$ 148,179
Output	\$ 7,525,887	\$ 1,050,573	\$ 8,576,460
Retail	\$ 560,668	\$ 86,735	\$ 647,403
Lodging	\$ 6,361,423	\$ 827,621	\$ 7,189,044
Transport	\$ 603,796	\$ 136,216	\$ 740,012
Sources:	U.S. Bureau of Economic Analysis (BEA) & Randall Gross / Development Economics.		

Annual Economic Benefits:

The expected annual economic impacts generated by the destination resort concept were estimated for 2022. The concept would result in creation of about 270 to 280 jobs (243 direct and 33 indirect), in lodging, retail and transport. Regional output would total \$8.6 million per year, including \$7.5 million in direct output and \$1.1 million in indirect output. Earnings would total \$2.6 million per year, of which \$2.2 million would be direct income generated to area workers. These benefits are summarized in Table 17.

Civil War Heritage Cycling Tour & Shuttle:

Defining the impacts of a cycling tour is more challenging than determining the impacts of a specific site, because tour packaging is more fluid and literally, more mobile. Nevertheless, the high-level demand and impacts of the concept are forecasted to the best extent possible.

Generalized Demand & Annual Business Impacts:

The concept, if executed comprehensively and to a high standard, could generate demand for about 74,000 room-nights or 293 lodging rooms. About 168 rooms would be attributable to the implementation of plan elements relating to the bike/pedestrian trails in Chickamauga, Fort Oglethorpe (historic district), the battlefield, and Ringgold.

The concept would also generate gross sales of up to \$14.33 million, of which about \$8.2 million would be attributable to planned improvements. About \$2.6 million in retail sales, \$4.2 million in lodging revenues, and \$1.4 million in transport revenues (including operation of a shuttle) would be attributed to the implementation of recommended improvements.

Factor	Gross Amount	Attributable
Roomnights	73,813	42,402
Rooms	293	168
Gross Sales	\$ 14,325,443	\$ 8,229,139
Retail Sales	\$ 4,542,214	\$ 2,609,239
Lodging Sales	\$ 7,337,422	\$ 4,214,925
Transport Spend	\$ 2,445,807	\$ 1,404,975
Source:	Randall Gross / Development Economics.	

Annual Fiscal Benefits:

Annual fiscal benefits were also estimated, based on the sales and conceptual program generated for the concept. Here, the concept will potentially generate retail sales of about \$4.5 million, yielding tax revenues of about \$140,000 per year. Lodging sales would total about \$2.5 million in Chickamauga, yielding about \$125,000 in annual revenue to the city. Lodging sales in Fort Oglethorpe would total \$2.6 million, yielding \$160,000 per year. In Lookout Mountain, the concept is less likely to generate substantial lodging sales, perhaps totaling \$730,000 per year, yielding tax revenues of \$22,000. Finally, Ringgold would possibly capture \$1.5 million in lodging sales, generating about \$88,000 in gross tax revenues. Since there is no direct investment proposed in this concept for physical development (other than the trail infrastructure itself), there would be no direct property tax benefit from the concept.

Type	Base	Tax Rate	Revenue
Retail Sales	\$ 4,542,214	3.0%	\$ 136,266
Hotel/Motel			
Chickamauga	\$ 2,494,724	5.0%	\$ 124,736
Fort Oglethorpe	\$ 2,641,472	6.0%	\$ 158,488
Lookout Mountain	\$ 733,742	3.0%	\$ 22,012
Ringgold	\$ 1,467,484	6.0%	\$ 88,049
Property-Direct			
Catoosa County	-	25.987	-
Walker County	-	24.469	-
Dade County	-	23.900	-
Sources:	State of Georgia, Catoosa County, Walker County, Dade County, HVS, RS Means, and Randall Gross / Development Economics.		

Type	Direct	Indirect	TOTAL
Jobs	416	72	488
Retail	159	16	175
Lodging	155	17	172
Transport	103	39	142
Earnings	\$ 3,469,552	\$ 647,739	\$ 4,117,292
Retail	\$ 681,332	\$ 98,929	\$ 780,261
Lodging	\$ 2,347,975	\$ 388,825	\$ 2,736,800
Transport	\$ 440,245	\$ 159,985	\$ 600,230
Output	\$ 14,325,443	\$ 2,209,053	\$16,534,496
Retail	\$ 4,542,214	\$ 702,680	\$ 5,244,894
Lodging	\$ 7,337,422	\$ 954,599	\$ 8,292,021
Transport	\$ 2,445,807	\$ 551,774	\$ 2,997,582
Sources:	U.S. Bureau of Economic Analysis (BEA) & Randall Gross / Development Economics.		

However, if lodging sales and demand were translated into hotel development, then there would be an direct increase in property tax revenues, for example.

Annual Economic Benefits:

Annual economic benefits were measured in terms of jobs, output, and earnings (personal income). The heritage tour concept would generate up to about 490 annual direct and indirect jobs, including 175 in retail, 172 in lodging, and 142 in transportation. The shuttle and rail services will contribute significantly to the transportation impacts. The concept would yield about \$14.3 million in direct output plus \$2.2 million through the "multiplier effect" generated throughout the regional economy. This activity will generate \$3.5 million in direct income and another \$650,000 in indirect income to residents in the study area. The largest share of earnings would be generated to lodging. Overall economic impacts are summarized in Table 20.



American Indian Heritage Center & Trails:

The American Indian (or Cherokee) Heritage Center and associated trails would generate economic and fiscal benefits to the community by attracting out-of-town visitors (in addition to regular local visitors), who will extend their stay or visit North Georgia where they had not otherwise planned to do so.

Factor	Gross Amount	Attributable
Roomnights	3,237	2,583
Rooms	9	7
Gross Sales	\$ 592,651	\$ 472,974
Retail Sales	\$ 187,914	\$ 149,967
Lodging Sales	\$ 303,553	\$ 242,255
Transport Spend	\$ 101,184	\$ 80,752
Source:	Randall Gross / Development Economics.	

Generalized Demand & Annual Business Impacts:

Based on the generalized assessment of potential, the site and associated trails could generate some overnight lodging demand, estimated at about 3,300 room-nights, of which 2,600 would be attributable to the trail investments. This number translates into a total of about 7 to 9 rooms and would mainly help boost sales at existing lodging facilities in the region. There would be substantial visitor spending, since not only overnight but also day-trip visitors would spend on retail and transportation. Overall, the site and associated trails could generate up to about \$600,000 in business sales, of which an estimated \$472,000 would be attributable to the infrastructure investments.

Type	Base	Tax Rate	Revenue
Retail Sales	\$ 187,914	3.0%	\$ 5,637
Hotel/Motel			
Chickamauga	-	5.0%	-
Fort Oglethorpe	\$ 60,711	6.0%	\$ 3,643
Lookout Mtn	\$ 15,178	3.0%	\$ 455
Ringgold	\$ 45,533	6.0%	\$ 2,732
Property-Direct			
Catoosa County	-	25.987	-
Walker County	\$ 170,831	24.469	\$ 1,672
Dade County	-	23.900	-
Sources:	State of Georgia, Catoosa County, Walker County, Dade County, HVS, RS Means, and Randall Gross / Development Economics.		

Annual Fiscal Benefits:

The annual fiscal benefits were determined in terms of retail sales tax receipts, hotel/motel taxes, and property tax revenues. The retail sales generated as a result of this concept would yield tax revenues of just about \$6,000 per year. Fort Oglethorpe, Lookout Mountain, and Ringgold would each generate some nominal hotel/motel tax revenues, mainly because Rossville does not have significant lodging facilities to accommodate overnight visitors or a hotel/motel tax to generate revenue. If the site were likely to yield significant overnight attendance, then it would be logical to suggest that lodging facilities be considered as an option for development in Rossville. But these numbers do not support such development. The concept would also generate some nominal (about \$2,000) property tax revenue to Walker County, mainly from an increase in value associated with retail sales.

Type	Direct	Indirect	TOTAL
Jobs	25	5	31
Retail	4	0	5
Lodging	13	1	14
Transport	8	3	12
Earnings	\$ 143,537	\$ 26,797	\$ 170,335
Retail	\$ 28,187	\$ 4,093	\$ 32,280
Lodging	\$ 97,137	\$ 16,086	\$ 113,223
Transport	\$ 18,213	\$ 6,619	\$ 24,832
Output	\$ 592,651	\$ 91,390	\$ 684,041
Retail	\$ 187,914	\$ 29,070	\$ 216,984
Lodging	\$ 303,553	\$ 39,492	\$ 343,045
Transport	\$ 101,184	\$ 22,827	\$ 124,012
Sources:	U.S. Bureau of Economic Analysis (BEA) & Randall Gross / Development Economics.		

Annual Economic Benefits:

The annual economic impacts were determined for the American Indian (Cherokee) Heritage Center at build-out. This analysis determined that there could be up to about 30 jobs created, primarily to service those 7 to 9 hotel rooms, provide transport services (e.g., rental car, gas stations, tour operators, etc) and to support retail operations.

Output would total about \$684,000 per year, with about \$593,000 generated through direct sources. Workers would earn about \$170,000 per year, including about \$113,000 from wage and salary employment in the lodging industry. Much of the benefit generated for lodging would not come to the study area because of the lack of hotel and motel facilities in Rossville. Again, given the nominal level of lodging demand generated by this concept, its implementation does not warrant or leverage hotel development.

Ringgold Downtown Destination Event:

The downtown Ringgold event would be designed to maximize economic spin-off by extending the length of stay of the visitor beyond competition events to include entertainment and non-competition recreation activities. Some of these activities could be concurrent with competitive races, but ultimately the event schedule would be designed so as to maximize economic impacts.

Factor	Participants	Spectators	Total
Roomnights	1,440	2,567	4,007
Rooms (Annual)	4	7	11
Gross Sales	\$ 497,539	\$ 1,500,618	\$ 1,998,157
Retail Sales	\$ 244,722	\$ 724,573	\$ 969,295
Lodging Sales	\$ 215,455	\$ 629,547	\$ 845,002
Transport Spend	\$ 37,362	\$ 146,498	\$ 183,860
Source:	Randall Gross / Development Economics.		

Generalized Demand & Annual Business Impacts:

Attendance at the event would generate about 4,000 room-nights per year. While this number would yield demand for 11 hotel rooms per year if it were spread throughout the year, it actually translates into a need for about 1,650 hotel rooms during the event. Whether or not such concentrated demand could be accommodated in the study area is not clear, but the numbers would certainly boost occupancy and hotel performance, on average. The event would also generate an estimated \$2.0 million in gross retail, lodging, and transportation spending in the study area. This

number includes about \$500,000 generated by participants and another \$1.5 million generated by spectators. That number could increase, depending on the scale of entertainment and other activities that help to keep people downtown throughout the event.

Type	Base	Tax Rate	Revenue
Retail Sales	\$ 969,295	3.0%	\$ 29,079
Hotel/Motel			
Chickamauga	-	5.0%	-
Fort Oglethorpe	\$ 84,500	6.0%	\$ 5,070
Lookout Mtn	-	3.0%	-
Ringgold	\$ 760,502	6.0%	\$ 45,630
Property-Direct			
Catoosa County	-	25.987	-
Walker County	-	24.469	-
Dade County	-	23.900	-
Sources:	State of Georgia, Catoosa County, Walker County, Dade County, HVS, RS Means, and Randall Gross / Development Economics.		

Annual Fiscal Benefits:

Because events are a once-off activity each year, the fiscal benefits are limited primarily to sales and lodging taxes generated during the event itself. Retail activity would generate an estimated \$29,000 in tax revenue each year. There would also be about \$46,000 in hotel/motel taxes generated to Ringgold. It is assumed that Ringgold would not have capacity to accommodate all spectators and participants, and that some would stay in Fort Oglethorpe or in other places in the region. If so, Fort Oglethorpe could generate some additional hotel/motel tax revenue even though the event is not located there.

It would be important to try to accommodate as many event participants and spectators in the study area as possible, so as to maximize local economic and fiscal benefits. If attendees must drive to Chattanooga, then many of these local benefits would evaporate. As with all of the concepts, the benefits would not accrue if no one takes the initiative to leverage

or implement the concept. So, it is assumed that local governments would examine opportunities to implement the concepts or recruit investors and operators to do so.

Annual Economic Benefits:

As noted before, the "annual" economic benefits are actually concentrated to the period during the event, so they do not accrue equally throughout the year. For example, the event would generate up to 42 jobs during the event, but these jobs would cease to exist throughout much of the rest of the year except for planning, fundraising, logistics, management and other direct functions.

Similarly, the event might generate output in the area's economy totaling \$2.3 million, including \$2.0 million in direct expenditures. But again, these expenditures would be mostly limited to the period during or just before the event. Earnings of up to \$530,000 would accrue during this same period.

Type	Direct	Indirect	TOTAL
Jobs	36	6	42
Retail	11	1	12
Lodging	18	2	20
Transport	8	3	11
Earnings	\$ 448,890	\$ 77,916	\$ 526,806
Retail	\$ 145,394	\$ 21,111	\$ 166,505
Lodging	\$ 270,401	\$ 44,778	\$ 315,179
Transport	\$ 33,095	\$ 12,027	\$ 45,122
Output	\$ 1,998,157	\$ 301,364	\$ 2,299,521
Retail	\$ 969,295	\$ 149,950	\$ 1,119,245
Lodging	\$ 845,002	\$ 109,935	\$ 954,937
Transport	\$ 183,860	\$ 41,479	\$ 225,339
Sources:	U.S. Bureau of Economic Analysis (BEA) & Randall Gross / Development Economics.		



ChickChatt Crossroads:

Economic and fiscal benefits generated by the Crossroads are dependent on the utilization and popularity of the ChickChatt Trail. Should that trail be pro-actively branded and marketed in such a way that it attracts destination cyclists from other parts of the region or beyond, then the impacts may be greater. The assumption is that regular use would primarily be generated by residents who live within a short ride or drive of the trail. Data and information gathered from other trails, such as the Silver Comet, indicate that local households within a short distance of the trail are by far the largest source of utilization. Still, because the concept for the ChickChatt Trail extends throughout Chattanooga and north Georgia, it can be assumed that a portion of users will originate in Tennessee and follow the trails into Georgia, where they can be attracted to spend some time or even originate/conclude their trip at the ChickChatt Crossroads trailhead.

Generalized Demand & Annual Business Impacts:

The ChickChatt Crossroads concept would potentially generate up to about 10,700 room-nights or demand for nearly 30 hotel rooms on an annual basis. Unlike the Ringgold Destination Event, the Crossroads would generate nearly year-round business impacts. A total of about \$2.4 million in sales volumes would be generated by the concept, including about \$770,000 in retail sales, \$1.2 million in lodging sales, and \$415,000 in transport sales. Nearly 100% of these sales would be attributable to investments in the trail infrastructure (and associated design improvements at the Crossroads intersection), since there would otherwise be no reason for cyclists and other destination tourists to visit this location.

Factor	Gross Amount	Attributable
Room-nights	10,670	10,670
Rooms	29	29
Gross Sales	\$ 2,427,748	\$ 2,427,748
Retail Sales	\$ 769,774	\$ 769,774
Lodging Sales	\$ 1,243,480	\$ 1,243,480
Transport Spend	\$ 414,493	\$ 414,493
Source:	Randall Gross / Development Economics.	

Annual Fiscal Benefits:

The Crossroads node would potentially generate demand for retail sales, yielding retail sales tax revenues estimated at about \$23,000 per year. Hotel demand would be distributed throughout the ChickChatt trail but with certain concentrations in Fort Oglethorpe and Ringgold. About \$37,000 in hotel/motel tax would be generated to Fort Oglethorpe and \$26,000 to Ringgold, plus smaller amounts to other municipalities in the region. Because of increased sales, property values would potentially increase slightly around the Crossroads node, yielding an increase in property taxes of about \$3,600 per year to Catoosa County.

Type	Base	Tax Rate	Revenue
Retail Sales	\$ 769,774	3.0%	\$ 23,093
Hotel/Motel			
Chickamauga	\$ 124,348	5.0%	\$ 6,217
Fort Oglethorpe	\$ 621,740	6.0%	\$ 37,304
Lookout Mtn	\$ 62,174	3.0%	\$ 1,865
Ringgold	\$ 435,218	6.0%	\$ 26,113
Property-Direct			
Catoosa County	\$ 349,897	25.987	\$ 3,637
Walker County	-	24.469	-
Dade County	-	23.900	-
Sources:	State of Georgia, Catoosa County, Walker County, Dade County, HVS, RS Means, and Randall Gross / Development Economics.		

Type	Direct	Indirect	TOTAL
Jobs	52	10	63
Retail	9	1	9
Lodging	26	3	29
Transport	17	7	24
Earnings	\$ 587,989	\$ 109,773	\$ 697,762
Retail	\$ 115,466	\$ 16,766	\$ 132,232
Lodging	\$ 397,914	\$ 65,895	\$ 463,808
Transport	\$ 74,609	\$ 27,113	\$ 101,722
Output	\$ 2,427,748	\$ 374,371	\$ 2,802,118
Retail	\$ 769,774	\$ 119,084	\$ 888,858
Lodging	\$ 1,243,480	\$ 161,777	\$ 1,405,257
Transport	\$ 414,493	\$ 93,510	\$ 508,003
Sources:	U.S. Bureau of Economic Analysis (BEA) & Randall Gross / Development Economics.		

Annual Economic Benefits:

Increased sales volumes will result in a small expansion in the workforce, estimated at about 60 jobs (50 direct and 10 indirect), primarily in lodging and transport. There would be output of \$2.8 million (\$2.4 million direct and \$400,000 generated through the multiplier effect on the regional economy). Expenditures would in turn translate into wage and salary income or earnings in the local economy, totaling about \$700,000 (\$590,000 direct). These economic benefits are summarized in the following table.

Overall Infrastructure Benefits:

Aside from the annual impacts of trail-related concepts, the infrastructure improvements themselves will generate construction-period benefits to the local and regional economy. These impacts are calculated based on the high-level cost estimates produced by the planning team, which would total approximately \$111,098,000, if all the facilities within the study area were to be implemented.

Based on this level of investment, the infrastructure would generate about 630 construction-period (temporary) jobs in the regional economy, with \$44.3 million in wage and salary income (earnings) and total output of \$126.6 million during the course of construction. These impacts are summarized in Table 30. These impacts are determined based on U.S. Bureau of Economic Analysis regional multipliers generated through the RIMS model. The multipliers are specific to the study area. The infrastructure impacts are temporary, since they accrue only during the construction period.

Type	Direct	Indirect	TOTAL
Investment	\$ 111,098,000		
Jobs	126	397	634
Earnings	\$ 30,574,170	\$ 13,753,932	\$ 44,328,102
Output	\$ 111,098,000	\$ 15,453,732	\$126,551,732
Sources:	U.S. Bureau of Economic Analysis (BEA) & Randall Gross / Development Economics.		

Summary:

A summary of fiscal and economic impacts was prepared based on the findings of the individual analyses described above. The summary is discussed below.

Annual Economic Benefits:

Overall fiscal benefits would total approximately \$2.27 million per year. These benefits are fairly well-distributed throughout the study area, with concentrations in more heavily commercialized and populated areas. Retail sales taxes would total nearly \$400,000 per year. Chickamauga would gain about \$155,000 in hotel/motel taxes, while Fort Oglethorpe would gain about \$640,000, Lookout Mountain \$215,000 and Ringgold \$176,000.

Catoosa County would also gain up to about \$500,000 per year in new property taxes, while Walker County would gain about \$185,000 per year in new property tax revenues. The impacts on Dade County would be smaller, due in large measure to the small portion of the county included in the study area. If a project like the destination resort were located in Dade County, it would add significant value to the County's revenue base.

Type of Impact	PROJECT/CONCEPT: ANNUAL IMPACTS						TOTAL
	Gateway	Resort	Bike Tour	Cherokee	CBD Event	ChickChatt	
Retail Sales Taxes	\$ 179,644	\$ 16,820	\$ 136,266	\$ 5,637	\$ 29,079	\$ 23,093	\$ 390,540
Hotel/Motel Taxes							
Chickamauga	\$ 23,965	\$ -	\$ 124,736	\$ -	\$ -	\$ 6,217	\$ 154,919
Fort Oglethorpe	\$ 436,162	\$ -	\$ 158,488	\$ 3,643	\$ 5,070	\$ 37,304	\$ 640,667
Lookout Mountain	\$ -	\$ 190,843	\$ 22,012	\$ 455	\$ -	\$ 1,865	\$ 215,176
Ringgold	\$ 14,379	\$ -	\$ 88,049	\$ 2,732	\$ 45,630	\$ 26,113	\$ 176,903
Property Taxes							
Catoosa County	\$ 458,248	\$ -	\$ -	\$ -	\$ -	\$ 3,637	\$ 461,885
Walker County	\$ 47,942	\$ 135,099	\$ -	\$ 1,672	\$ -	\$ -	\$ 184,714
Dade County	\$ -	\$ 2,539	\$ -	\$ -	\$ -	\$ -	\$ 2,539
TOTAL	\$1,160,340	\$ 345,301	\$ 529,552	\$ 14,139	\$ 79,779	\$ 98,230	\$ 2,227,342
Source:	Randall Gross / Development Economics.						



Total Annual Economic Benefits:

The various investments will also generate various types of economic benefits. For example, nearly 1,500 permanent (annual) direct and indirect jobs could be created if fully implemented. Residents in these jobs would benefit from more than \$12.9 million in annual wage and salary income. The region would benefit from nearly \$50.7 million in annual output. Existing and new retail, restaurant, entertainment, and personal services businesses would benefit from more than \$13.0 million in additional retail sales.

The currently under-served lodging market would generate more than 116,000 room-nights and \$24.0 million in sales, yielding demand for more hotel rooms in the study area. With more hotel rooms, the area will be better equipped to capture more returns from other, un-related tourism activities, attractions, and events. Transportation service providers and other companies would benefit from another \$6.9 million in sales for tour operations, fuel, gas stations, shuttle bus services, rental car companies, etc.

Aside from these quantifiable impacts, the study area would also benefit from an enhanced tourism brand and increased recreational opportunities and venues. The Fort Oglethorpe Gateway concept (if combined with streetscape, pro-active marketing, and business recruitment efforts) would help create more amenity value and revitalize this highway corridor. The destination resort would help create a lodging resource for this under-served market and provide a destination at the same time. This recreation-oriented facility would build on the region's existing and potential recreation assets. Similarly, the Civil War Heritage Bicycle Tour would help extend the stay of both recreational as well as heritage tourists.

The Cherokee Heritage Center would help strengthen the community's awareness of American Indian heritage and create a venue to celebrate that heritage. The center would also help establish an interpretive facility that could become a destination and a part of the broader regional heritage tourism circuit. A destination event in Ringgold could help enliven and strengthen downtown, and maximize exposure and opportunities for business development. Finally, the ChickChatt Crossroads would create an opportunity to "monetize" the benefits of this potential recreation resource to benefit businesses and surrounding communities.

Table 32. SUMMARY OF ANNUAL ECONOMIC IMPACTS, NORTHWEST GEORGIA BIKE/PED PLAN AT FULL BUILD-OUT

Type of Impact	PROJECT/CONCEPT: ANNUAL IMPACTS						TOTAL
	Gateway	Resort	Bike Tour	Cherokee	CBD Event	ChickChatt	
Jobs	576	276	488	31	42	63	1,475
Earnings	\$ 4,771,395	\$ 2,617,250	\$ 4,117,292	\$ 170,335	\$ 526,806	\$ 697,762	\$12,900,839
Output	\$19,753,437	\$ 8,576,460	\$ 16,534,496	\$ 684,041	\$2,299,521	\$2,802,118	\$50,650,073
Retail Sales	\$ 5,988,145	\$ 560,668	\$ 4,542,214	\$ 187,914	\$ 969,295	\$ 769,774	\$13,018,009
Lodging Sales	\$ 7,988,311	\$ 6,361,423	\$ 7,337,422	\$ 303,553	\$ 845,002	\$1,243,480	\$24,079,192
Roomnights	34,836	21,564	42,402	2,583	4,007	10,670	116,061
Transport Sales	\$ 3,109,770	\$ 603,796	\$ 2,445,807	\$ 101,184	\$ 183,860	\$ 414,493	\$ 6,858,912
Other	Revitalization	Recreation	Recreation	Heritage	Downtown	Recreation	
Source:	Randall Gross / Development Economics.						

Estimated Unit Cost of Facilities

	Name	Unit	Unit Cost	Notes
	Advisory Shoulder	Linear Foot	\$14	Assumes removal of center striping from roadway and installing new striping and signage.
	Yield Roadway	Linear Foot	\$17	Assumes removal of center striping from roadway, asphalt removal, and installation of stone or mulch in parking areas.
	Bike Boulevard	Linear Foot	\$16	Assumes installation of sharrows, signage, and intersection treatments on neighborhood streets or allies.
	Bike Lane	Linear Foot	\$10	Assumes removing travel lane stripe, bike lane restripe, pavement markings, and signage on one side of street. No intersection improvements.
	Separated Bike Lane	Linear Foot	\$360	Assumes use of existing curb and drainage, install new curb, landscape buffer, signage, and pedestrian improvements on one side of the road.
	Greenway/ Multi-use Path (Paved)	Linear Foot	\$168	10' Path constructed in open space w/o need for moving curbs or installing utilities. Does not include R/W acquisition or signal upgrades.
	Natural Surface Trail	Linear Foot	\$107	10' Hard Packed Earth unpaved trail constructed in open space. Does not include R/W acquisition.



Name	Unit	Unit Cost	Notes
Sign	Each	\$500	Includes post
Striping (Painted)	Linear Foot	\$2	
Remove Striping	Linear Foot	\$4	

Estimated Unit Cost of Amenities

	Name	Unit	Unit Cost	Notes		Name	Unit	Unit Cost	Notes
	Curb Extension	Each	\$16,800	40 feet x 8 feet		Standard Crosswalk	Each	\$1,000	Assumes 40 feet x 8 feet
	Pedestrian Refuge	Each	\$14,200	40 feet x 8 feet median w/ detectable warnings in crossing area		Enhanced Crosswalk	Each	\$2,800	Assumes 40 feet x 8 feet
	Raised Crossing	Each	\$16,000	40 feet long		Crosswalk - pattern/texture	Each	\$7,200	Assumes 40 feet x 8 feet Street Print with two colors.
	ADA Ramp	Each	\$3,000			Sidewalk w/o curb and gutter	Linear Foot	\$45	Assumes a 5-foot sidewalk along one side of road
	Fence/Barrier	Linear Foot	\$130			Sidewalk with Curb & Gutter	Linear Foot	\$90	Assumes a 5-foot sidewalk along one side of road
	Lighting	Each	\$8,500	Assumes minimum of 8 lights		Street Tree	Each	\$1,000	Includes tree pit
	Pedestrian Signal	Each	\$2,000	At previously signalized intersection; no cabinet upgrades required		Bench	Each	\$2,500	Includes installation
	Rectangular Rapid Flashing Beacon	Each	\$19,800	Assumes a pair of two RRFB's installed at one crossing; solar powered		Bus Shelter	Each	\$20,000	
	Pedestrian Hybrid Beacon	Each	\$69,500	At location where electricity already exists; no utility location/ relocation		Trash/Recycling Receptacle	Each	\$1,800	Includes installation
						Wayfinding Sign	Each	\$5,000- \$15,000	Does not include graphic design. Materials play role in cost.

Overview:

Estimating trail maintenance costs for Northwest Georgia Multi-Use Trails is challenging. Ultimately, exact facility design and community desires will dictate the level of maintenance required. Design elements such as surface material, landscape, proximity to bodies of water, and proximity to town centers should all be evaluated during maintenance cost estimating. Additional questions must be answered, such as, “Can economies of scale be realized by scheduling trail maintenance as part of parks and recreation, transportation, or public works routine maintenance schedules?” Additionally, a local government’s capacity to self-perform maintenance also has a direct impact on maintenance costs. Trails that are used for transportation purposes, rather than exclusively serving recreational users, will need to be maintained more regularly and held to a higher standard, as they provide essential connectivity and accessibility throughout the community.

Average Costs:

Based on a literature review, trail maintenance costs between \$2,500 and \$7,000 per mile annually. This is supported by the Rails-to-Trails Conservancy’s report Maintenance Practices and Costs of Rail-Trails; American Trails’ Trail Maintenance & Management library; US Forest Service Trails Unlimited Enterprise Unit; and Greenville, South Carolina Trails and Greenways Master Plan. During the first year of maintenance it is suggested to use a budget of \$7,000 per mile annually. After the first year of maintenance, actual expenses per mile should be evaluated and the annual budget per mile should be adjusted accordingly.

Maintenance Task Frequency:

Annual Maintenance Frequency	
Description	Frequency
Sweeping/Blowing Trail	20x/year
Trash Removal	20x/year
Application of Herbicides or Pesticides	10x/year
Mowing (3' minimum on each side of trail)	20x/year
Vegetation Management (leaf clearing, pruning of trees, etc.)	2x/year
Drainage Maintenance	4x/year
Minor Repairs	1x/year
Maintenance & Supplies	1x/year
Equipment Fuel & Repairs	1x/year

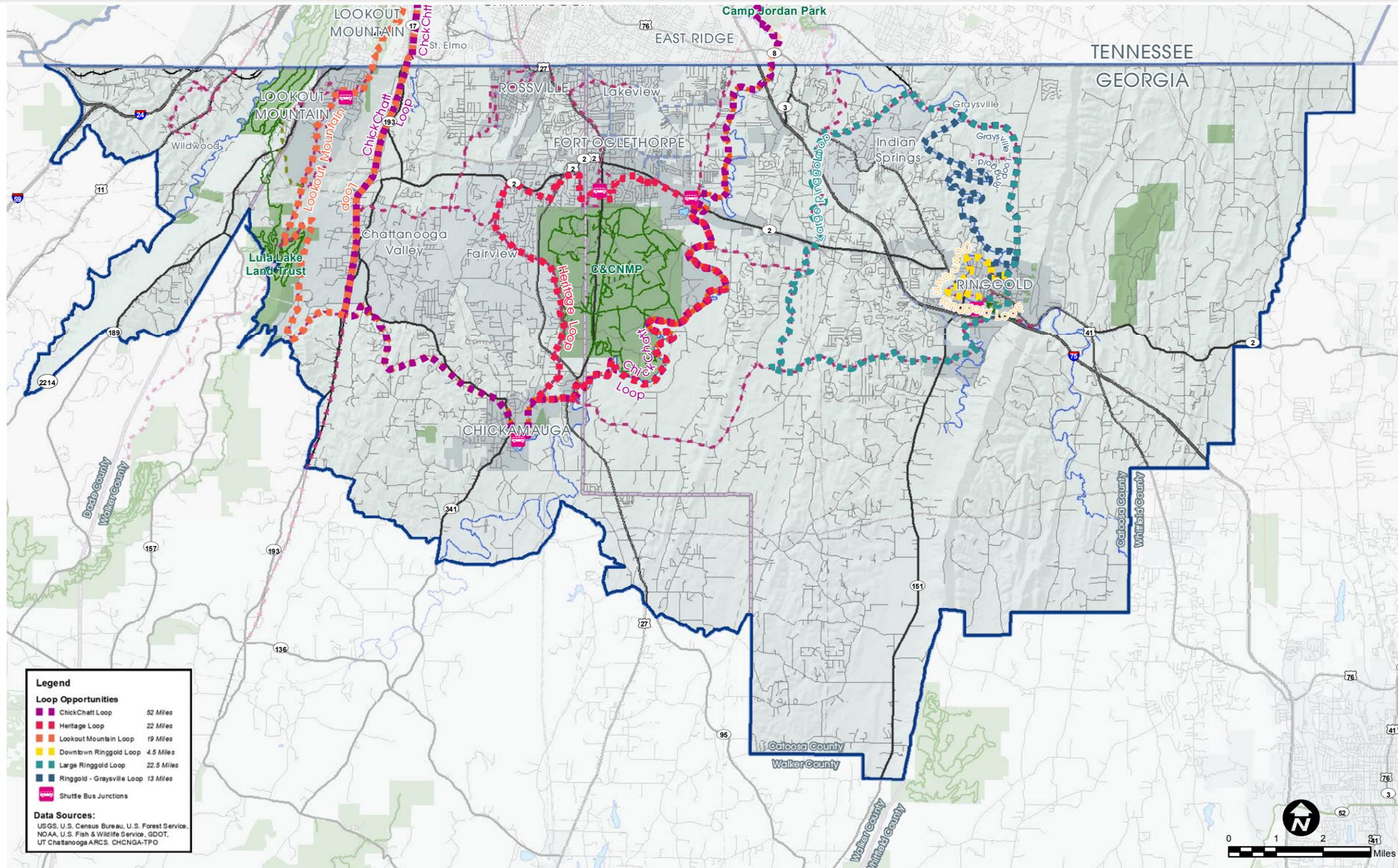
Each trail’s maintenance needs will differ in Northwest Georgia and will be dependent on ultimate design, topography, weather, surface material, and geographic location. The table to the left shows the typical frequency of routine trail maintenance activities.

The frequency each item is performed can fluctuate and will be based on a community’s needs and/or desires.

Funding:

Trail maintenance must be planned for as it is a vital part of a vibrant trail network. Several options for accomplishing trail maintenance include:

- *Local government funding and/or in-kind labor and use of equipment*
- *Creation of a not-for-profit trail foundation*
- *Private donations of labor, equipment, and/or funding for maintenance in exchange for sponsorship or naming rights*
- *Volunteer labor*



Potential Loop / Branding Opportunities Overview:

The proposed network of routes for the study area has numerous opportunities for creating unique user experiences through specific loop routes.

ChickChatt Loop: This loop route could potentially be a major regional draw bringing people from all over country to experience. The route would connect to the St. Elmo greenway in Tennessee go south to Chickamauga, then back north along West Chickamauga Creek to Camp Jordan Park, where it would connect with the South Chickamauga Creek Greenway in East Ridge creating a 52 mile loop around Chattanooga and Northwest Georgia.

Heritage Loop: This potential loop route could also be a major regional draw bring people from all over country to experience. This 22 mile loop route would encircle the C&NMP, providing opportunities for users to interact with the park without ever entering. This route would be more for active recreation and would be distinctly different from the passive/reflective experience of the park.

Lookout Mountain Loop: This 19 mile loop would unique from the other potential loops in the study area due to the unprecedented experience of being located on top of a mountain.

Ringgold-Graysville Loop: This potential loop would be unique due to the fact half of this loop would be along the South Chickamauga Blueway from Ringgold to Graysville, then along a multi-use route back to Ringgold.

Large Ringgold Loop: This 22 mile loop would connect Ringgold and Graysville with Heritage High and Middle schools along a multi-use route.

Downtown Ringgold Loop: This 4.5 mile loop route would encircle Downtown Ringgold along South Chickamauga Creek.



Implementation & Funding



This section outlines sources of funding for the implementation of bicycle and pedestrian facilities. When considering possible funding sources, it is important to understand that not all construction activities will be accomplished with a single funding source. Funding is administered at all levels of government, federal, state, local and through private sources. The following section identifies potential matching and major funding sources, as well as the criteria for certain projects and programs. Websites are provided for further information and should be consulted prior to applying for funds as each source of funding can be modified at any time.

Implementation steps for each affected municipality and county government in the study area:

1. Engage more fully in the TPO process of stating goals and needs and identifying, budgeting and prioritizing projects to address those goals and needs
2. Perform a detailed assessment of all existing study area (or beyond) bicycle and pedestrian facilities as well as any previous improvement plans and re-visit plans based upon this fs:
 - Identify the individual streets, neighborhoods or street networks which may be suitable for designation as a “yield roadway” or “bicycle boulevard”, requiring little investment (mostly striping and signage) in order to safely accommodate pedestrian and bicycle traffic (reference the section on the Local Transportation Networks and the Network maps on p. 66 – p. 71)
 - Identify appropriate population and activity centers to be inter-connected and prioritize short segments of sidewalk that could have substantial affect, etc.
 - Inventory existing sidewalk system in order to prioritize deficiencies corrections (including repair of broken pavements and widening sections with inadequate clearances, etc.) and provide appropriate wheelchair accommodations, etc.
 - Identify locations where wider, shared-use trails would be a more appropriate solution than narrower pedestrian-only sidewalks
3. Prepare and update a bicycle and pedestrian facilities master plan which addresses not only internal origins and destinations but also potential for inter-connection with activity centers adjacent and outside jurisdictional limits as opportunities for collaboration
4. Meet with affected county governments and all internal study area municipalities in order to better coordinate potential SPLOST referenda project lists and priorities
5. Identify potential row / easement needs to facilitate implementation of proposed improvement plans and, if federal funds will be used for construction, address UA acquisition procedures and strategies, etc.

Among the stakeholders for this feasibility study (see the list under acknowledgments), those willing and able should organize themselves into a Task Force for purposes of collaborating to promote implementation, seek funding and otherwise facilitate an orderly implementation of the proposed improvements:

1. Identify other specific potential organizational / management structures for ongoing implementation efforts
2. Identify and tap potentially available funding sources for both capital and OOMM expenses (public [federal, state and local], private [for profit, non-profit, in-kind, volunteer], public-private partnership, developer impact, user fees and other)



SPECIAL PURPOSE LOCAL OPTION SALES TAX (SPLOST) FUNDING

1. Unlike Tennessee agencies within this TPO, Georgia counties, in collaboration with their municipalities have an additional potential funding source, the Special Purpose Local Option Sales Tax (SPLOST), which can be used for capital projects, such as bike and pedestrian facilities <https://www.accg.org/library/legal/SPLOST%202016.pdf>
2. Similarly, a T-SPLOST (Transportation-only) SPLOST, could be used to generate funds specifically for transportation projects, which could include bike and pedestrian facilities and additionally, E-SPLOST (Education) SPLOST funds could be used for projects that benefit affected educational institutions
3. The local share of some individual study area projects could conceivably be funded with a combination of SPLOST, T-SPLOST and E-SPLOST funds as well as general fund revenues, any or all used exclusively or leveraging state and federal funds up to several times the local share

FEDERAL FUNDING SOURCES

Federal funding is typically directed through state agencies to local governments either in the form of grants or direct appropriations, independent from state budgets. Federal funding typically requires a local match of 20%, although there are sometimes exceptions, such as the recent American Recovery and Reinvestment Act stimulus funds, which did not require a match.

The following is a list of possible Federal funding sources that could be used to support construction of many pedestrian and bicycle improvements. Most of these are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. It should be noted that the FHWA encourages the construction of pedestrian and bicycle facilities as an incidental element of larger ongoing projects. Examples include providing paved shoulders on new and reconstructed roads, or building sidewalks, on-street bikeways, trails and marked crosswalks as part of new highways.

FIXING AMERICA'S SURFACE TRANSPORTATION (FAST) ACT

The "Fixing America's Surface Transportation Act," or FAST Act, released December 1, 2015 by the conference committee appointed to reconcile the different surface transportation reauthorization bills passed by the House and Senate, will reauthorize the federal highway and public transportation programs for fiscal years (FY) 2016-2020 and stabilize the Highway Trust Fund (HTF) during that five-year period. The bill includes \$225.2 billion from the HTF for highway investment, a \$20.2 billion increase over five years compared to maintaining FY 2015 funding. About half of the increase, or \$10.7 billion, will support two new proposed initiatives—a National Freight Program and a program of Nationally Significant Freight and Highway Projects. The remainder will provide small annual increases in core highway program funding.

More information: www.artba.org/newsline/wp-content/uploads/2015/12/ANALYSIS-FINAL.pdf

TRANSPORTATION ALTERNATIVES (TA) SET-ASIDE

The FAST Act eliminates the MAP-21 Transportation Alternatives Program (TAP) and replaces it with a set-aside of Surface Transportation Block Grant (STBG) program funding for transportation alternatives. These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity.

Complete eligibilities for Transportation Alternatives include:

1. **Transportation Alternatives** as defined by Section 101 [former 23 U.S.C. (a)(29)]:
The term "transportation alternatives" means any of the following activities when carried out as part of any program or project authorized or funded under this title, or as an independent program or project related to surface transportation:
 - Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other active forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990."
 - Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.
 - Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.
 - Construction of turnouts, overlooks, and viewing areas.
 - Community improvement activities, including-
 - Inventory, control, or removal of outdoor advertising;
 - Historic preservation and rehabilitation of historic transportation facilities;
 - Vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control; and
 - Archaeological activities relating to impacts from implementation of a transportation project eligible under this title.
 - Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to:
 - Address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff, including activities described in sections and reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats.

More information: <https://www.fhwa.dot.gov/fastact/>
2. **Recreational Trails Program (RTP)** is a federal funded, state administered grant program. The RTP provides grant funding for land acquisition for trails, trail construction, trail maintenance, trail rehabilitation and for trail head support facilities. These funds are distributed in the form of an 80% grant with a 20% match. Local, state and federal land managing agencies are eligible to apply as well as state chartered, non-profit organizations with IRS 501 (c) (3) status that have a written agreement for trail management with an agency. All grants must be on publicly owned land.
More information: https://www.fhwa.dot.gov/environment/recreational_trails/
3. **Safe Routes to School.** To enable and encourage children, including those with disabilities, to walk and bicycle to school. To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and to facilitate the planning, development, implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, air pollution in the vicinity of schools. Eligible activities for funding under Safe Routes to School included both infrastructure projects and non-infrastructure related activities and must be within a two mile radius of school. Eligible projects may include:
 - Infrastructure: Funds may be used for the planning, design and construction of projects that will substantially improve the ability of students to walk and bicycle to school, including sidewalks improvement, traffic calming, speed reduction improvements, street crossings, on-street bicycle



facilities, off-street bicycle and pedestrian facilities, secure bicycle parking, and traffic diversion improvements in the vicinity of schools.

- Non-infrastructure: Funds may be used to encourage walking and bicycling to school, including public awareness campaigns, outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health, and environment, as well as funding for trainings, volunteers, and managers of Safe Routes to School programs. From 10 to 30% of the amount apportioned to each state will be used on non-infrastructure related activities.

More information: https://www.fhwa.dot.gov/environment/safe_routes_to_school/

4. **Planning, Designing, or Constructing Boulevards** and other roadways largely in the right-of-way of former Interstate System routes or other divided highways. At the time of writing, detailed guidance from the Federal Highway Administration on this new eligible activity was not available.

More information: https://www.fhwa.dot.gov/environment/transportation_alternatives/guidance/boulevards.cfm

Average annual funds available through TA over the life of the FAST Act equal \$844 million nationally, which is based on a 2% set-aside of total FAST authorizations. (<https://www.fhwa.dot.gov/fastact/funding.cfm>). Similar to MAP-21, after the set-aside for the Recreational Trails Program, the FAST Act requires FHWA to distribute 50 percent of TA funds to areas based on population (suballocated), with the remainder available for use anywhere in the State. The amount listed above represents the maximum potential funding. TA funds are typically allocated through the planning districts.

SURFACE TRANSPORTATION PROGRAM (GUIDESHARE)

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of bicycle and pedestrian improvements are eligible, including on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded bicycle and pedestrian facilities may be located on local and collector roads which are not part of the Federal-aid Highway System. Fifty percent of each state's STP funds are suballocated geographically by population. These funds are funneled through TDOT to the MPOs in the state. The remaining 50% may be spent in any area of the state.

HIGHWAY SAFETY IMPROVEMENT PROGRAM

MAP-21 doubles the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides \$2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural roads set-aside unless safety statistics demonstrate that fatalities are increasing on these roads. HSIP is a data-driven funding program and eligible projects must be identified through analysis of crash experience, crash potential, crash rate, or other similar metrics. Infrastructure and non-infrastructure projects are eligible for HSIP funds. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state's Strategic Highway Safety Plan.

CONGESTION MITIGATION/AIR QUALITY PROGRAM

The Congestion Mitigation/Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. States with no nonattainment areas may use their CMAQ funds for any CMAQ or STP eligible project. These federal dollars can be used to build bicycle and pedestrian facilities that reduce travel by automobile. Purely recreational facilities generally are not eligible.

NEW FREEDOM INITIATIVE

MAP-21 continues a formula grant program that provides capital and operating costs to provide transportation services and facility improvements that exceed those required by the Americans with Disabilities Act. Examples of pedestrian/accessibility projects funded in other communities through the New Freedom Initiative include installing Accessible Pedestrian Signals (APS), enhancing transit stops to improve accessibility, and establishing a mobility coordinator position. More information: <http://www.hhs.gov/newfreedom/>

PILOT TRANSIT-ORIENTED DEVELOPMENT PLANNING

MAP-21 establishes a new pilot program to promote planning for Transit-Oriented Development. At the time of writing the details of this program are not fully clear, although the bill text states that the Secretary of Transportation may make grants available for the planning of projects that seek to "facilitate multimodal connectivity and accessibility," and "increase access to transit hubs for pedestrian and bicycle traffic."

PARTNERSHIP FOR SUSTAINABLE COMMUNITIES

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to "improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure ("Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health").

COMMUNITY DEVELOPMENT BLOCK GRANTS

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may "use Community Development Block Grants funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grants funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs."

Trails and greenway projects that enhance accessibility are the best fit for this funding source. CDBG funds could also be used to write an ADA Transition Plans.

More information: www.hud.gov/cdbg



COMMUNITY TRANSFORMATION GRANTS

Community Transformation Grants administered through the Center for Disease Control support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure and programs that promote healthy lifestyles are a good fit for this program, particularly if the benefits of such improvements accrue to population groups experiencing the greatest burden of chronic disease.

More info: <http://www.cdc.gov/communitytransformation/>

ADDITIONAL FEDERAL FUNDING

The landscape of federal funding opportunities for bicycle and pedestrian programs and projects is always changing. A number of Federal agencies, including the Bureau of Land Management, the Department of Health and Human Services, the Department of Energy, and the Environmental Protection Agency have offered grant programs amenable to bicycle and pedestrian planning and implementation, and may do so again in the future.

For up-to-date information about grant programs through all federal agencies, see: <http://www.grants.gov>

STATE FUNDING SOURCES

The following is a list of possible State funding sources that could be used to support construction of many pedestrian and bicycle improvements...

LOCAL GOVERNMENT FUNDING SOURCES

Local funding sources that would support bike facility project construction will most likely be limited but should be explored to support active transportation projects.

METROPOLITAN PLANNING ORGANIZATION

Metropolitan Planning Organizations (MPOs) are federally required regional transportation planning organizations. MPOs are responsible for planning and prioritizing all federally funded transportation improvements within an urbanized area.

MPOs are a partnership between local and state government that makes decisions about transportation planning in urbanized areas and meets planning requirements established by federally authorizing legislation for transportation funding. MPOs work cooperatively with TDOT to develop transportation plans, travel models, transit plans, and bicycle and pedestrian plans. MPOs work with the state on funding issues for transportation improvements, project planning issues, and other issues such as environmental and air quality concerns. MPOs also work with local governments to coordinate land use and transportation planning.

MPOs maintain a long-range transportation plan (LRTP) and develop a transportation improvement program (TIP) to develop a fiscally constrained program based on the long-range transportation plan and designed to serve the region's goals while using spending, regulating, operating, management, and financial tools.

GENERAL FUND

The General Fund is often used to pay for maintenance expenses and limited capital improvement projects. Projects identified for reconstruction or re-pavement as part of the Capital Improvements list should also implement recommendations for bicycle or pedestrian improvements in order to reduce additional costs.

LOCAL BOND MEASURES

Local bond measures, or levies, are usually general obligation bonds for specific projects. Bond measures are typically limited by time based on the debt load of the local government or the project under focus. Funding from bond measures can be used for engineering, design and construction of trails, greenways, and pedestrian and bicycle facilities. A bond issued in Denver, Colorado funded \$5 million for trail development and also funded the City's bike planner for several years. In 2012, voters in Austin, Texas approved a \$143 million bond to fund a variety of mobility and active transportation projects.

STORMWATER UTILITY FEES

Stormwater charges are typically based on an estimate of the amount of impervious surface on a user's property. Impervious surfaces (such as rooftops and paved areas) increase both the amount and rate of stormwater runoff compared to natural conditions. Such surfaces cause runoff that directly or indirectly discharges into public storm drainage facilities and creates a need for stormwater management services. Thus, users with more impervious surface are charged more for stormwater service than users with less impervious surface.

The rates, fees, and charges collected for stormwater management services may not exceed the costs incurred to provide these services. The costs that may be recovered through the stormwater rates, fees, and charges includes any costs necessary to assure that all aspects of stormwater quality and quantity are managed in accordance with federal and state laws, regulations, and rules. Open space may be purchased with stormwater fees, if the property in question is used to mitigate floodwater or filter pollutants.

SYSTEM DEVELOPMENT CHARGES/DEVELOPER IMPACT FEES

System Development Charges (SDCs), also known as Developer Impact Fees, represent another potential local funding source. SDCs are typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may reduce the number of trips (and hence impacts and cost) by paying for on- or off-site pedestrian improvements that will encourage residents to walk (or use transit, if available) rather than drive. In-lieu parking fees may be used to help construct new or improved pedestrian facilities. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical in avoiding a potential lawsuit.

UTILITY LEASE REVENUE

A method to generate revenues from land leased to utilities for locating utility infrastructure on municipally owned parcels. This can improve capital budgets and support financial interest in property that would not otherwise create revenue for the government.



LOCAL IMPROVEMENT DISTRICTS (LIDS)

Local Improvement Districts (LIDs) are most often used by cities to construct localized projects such as streets, sidewalks or bikeways. Through the LID process, the costs of local improvements are generally spread out among a group of property owners within a specified area. The cost can be allocated based on property frontage or other methods such as traffic trip generation.

Several cities have successfully used LID funds to make improvements on residential streets and for large scale arterial projects. LIDs formed to finance commercial street development can be “full cost,” in which the property assessments are entirely borne by the property owners.

BUSINESS IMPROVEMENT AREA OR DISTRICT (BIA OR BID)

Trail development and pedestrian and bicycle improvements can often be included as part of larger efforts aimed at business improvement and retail district beautification. Business Improvement Areas collect levies on businesses in order to fund area wide improvements that benefit businesses and improve access for customers. These districts may include provisions for pedestrian and bicycle improvements, including as wider sidewalks, landscaping and ADA compliance.

SALES TAX

Local governments that choose to exercise a local option sales tax use the tax revenues to provide funding for a wide variety of projects and activities. The multi-use routes proposed in this study could be funded by a portion of local sales tax revenue or from a voter approved sales tax increase. The City of Colorado Springs implemented a TOPS tax (Trails, Open Space and Parks) to administer the ordinance passed by voters in April of 1997. The sales tax, 1/10th of one percent, generates about \$6 million annually for trails, open space and parks. Any increase in the sales tax, even if applying to a single county, must gain approval of the state legislature. In 2004, Charleston County, South Carolina voters approved a ½ cent sales tax for the purpose of financing transportation and greenbelt projects. Voters approved a second referendum in 2006.

PROPERTY TAX

Property taxes generally support a significant portion of a local government’s activities. However, the revenues from property taxes can also be used to pay debt service on general obligation bonds issued to finance open space system acquisitions. Because of limits imposed on tax rates, use of property taxes to fund open space could limit the county’s or a municipality’s ability to raise funds for other activities. Property taxes can provide a steady stream of financing while broadly distributing the tax burden. In other parts of the country, this mechanism has been popular with voters as long as the increase is restricted to parks and open space. Note, other public agencies compete vigorously for these funds, and taxpayers are generally concerned about high property tax rates.

TAX INCREMENT FINANCING (TIF)

Tax Increment Financing is a tool to use future gains in taxes to finance the current improvements that will create those gains. When a public project (e.g., shared-use trail) is constructed, surrounding property values generally increase and encourage surrounding development or redevelopment. The increased tax revenues are then dedicated to support the debt created by the original public improvement project.

PRIVATE SECTOR FUNDING SOURCES

Many communities have solicited greenway funding assistance from private foundations and other conservation-minded benefactors. Below are several examples of private funding opportunities available.

BIKES BELONG GRANT PROGRAM

The Bikes Belong Coalition of bicycle suppliers and retailers has awarded \$1.2 million and leveraged an additional \$470 million since its inception in 1999. The program funds corridor improvements, mountain bike trails, BMX parks, trails, and park access. It is funded by the Bikes Belong Employee Pro Purchase Program.

More information: <http://www.peopleforbikes.org/pages/community-grants>

NATIONAL TRAILS FUND

American Hiking Society created the National Trails Fund in 1998, the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting and maintaining foot trails in America. 73 million people enjoy foot trails annually, yet many of our favorite trails need major repairs due to a \$200 million backlog of badly needed maintenance. National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools and materials to protect America’s cherished public trails. To date, American Hiking has granted more than \$240,000 to 56 different trail projects across the U.S. for land acquisition, constituency building campaigns, and traditional trail work projects. Awards range from \$500 to \$10,000 per project.

Projects the American Hiking Society will consider include:

Securing trail lands, including acquisition of trails and trail corridors, and the costs associated with acquiring conservation easements.

Building and maintaining trails which will result in visible and substantial ease of access, improved hiker safety, and/or avoidance of environmental damage.

Constituency building surrounding specific trail projects - including volunteer recruitment and support.

More information: <http://www.americanhiking.org/alliance/fund.html>

Executive Summary



Several big ideas surfaced from the efforts of extensive team collaboration, stakeholder input and analysis of opportunities and constraints for the study area. These key concepts paint a picture of how bikeway, pedestrian and blueway routes and facilities can best achieve the study goals and continue to generate excitement and economic benefit for residents and visitors to the region of Northwest Georgia.

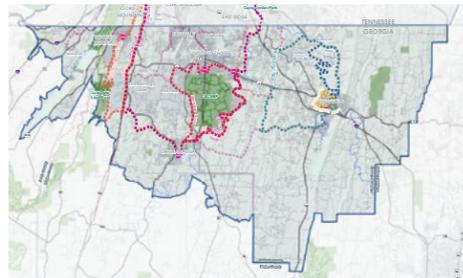
Economic Impact / Tourism:



1 Create Bike-Ped Routes that connect to key destination points and enhance them through infrastructure improvements, branding and marketing.

Key Destination Points Include:

- Fort Oglethorpe Gateway
- Lookout Mountain Nature and Recreation (Potential Resort)
- Chickamauga Battlefield and surrounding civil war heritage sites
- Downtown Ringgold and surrounding blueways
- American Indian heritage center and trails (Rossville)



2 Develop a large multi-use route that loops Chattanooga to the key destination nodes developed throughout the study area.

Market a “ChickChatt” multi-use trail that:

- Maximizes connections and opportunities throughout the region
- Provides at least 50 plus miles of clearly marked, high quality facilities
- Draws interest from regional and national bike enthusiasts that are looking for facilities that provide a planned, multi day experience



3 Tap into the 3 million visitors that come to Chattanooga and the surrounding area.

- Generate revenue by capturing new tourism dollars with bike, pedestrian and blueway facilities
- Benefit from the strong existing culture in the region that draws visitors with a specific interest in walking, hiking, biking and paddling
- Promote the philosophy of “Ped-Paddle-Pedal-Prosper” throughout the 3 county study area
- Promote collaboration between communities in the study area to strengthen regional economic opportunities

Transportation / Safety:



1 Focus potential routes in areas with the highest demand as established from the analysis heat map, site reconnaissance and community input

Key Transportation Attractors Include:

- Schools
- Farmers Markets
- Points of Interest
- Parks / Battlefields
- Grocery Stores
- Existing multi-use routes
- Areas with existing crash data
- Historical / Cultural places of interest



2 Enhance the non-motorized environments within municipalities using the existing low to moderate speed street networks.

Streets with 35 mph or less can utilize facilities from The Federal Highway Administration Small Town and Rural Use Network Guidelines:

- Improved Sidewalk Networks, Shared Streets, Bike Boulevards, Dedicated Bike Lanes, Advisory Shoulders and Yield Roadways are all facility types that can utilize the existing local street grid
- Connect local low speed street facilities to the proposed longer multi-use routes between communities
- Encourage municipalities and rural communities to create connectivity master plans



3 Implement the first phases of multi-use routes to capture the greatest opportunity for future facilities and include pedestrians as well as bicycles in the design parameters.

- Building on previously successful routes will generate more enthusiasm
- Where possible, utilize the abandoned rail lines to easily establish routes
- Most people will only utilize the facilities that feel safe for daily transportation needs. This equates to shared-use paths and sidewalks as a primary routes of choice
- 92% of users consider themselves Interested but concerned or pedestrians users only
- Create clearly separated travel lanes between cars, bicycles and pedestrians as much as possible

Recreation / Health:



1 Shared-use paths & Natural Surface Trails provide the greatest recreational opportunity for most users.

Tourists and visitors will utilize routes that feel safe and capture views and experiences of surrounding cultural and historic places.

- Shared-use paths are very popular for users who desire a comfortable place to exercise
- Improve opportunities for daily walking and bike riding in the local transportation grid



2 Utilize the analysis heat map and site reconnaissance conclusions to evaluate routes that will capture the best recreational opportunities in the study area.

Routes should connect to:

- Places of commerce
- Restaurants
- Historic & Cultural sites
- Scenic rivers & streams
- Scenic viewsheds



3 The study area has great potential for creating shared-use paths / blueway loops along South & West Chickamauga Creeks.

- Greenway / blueway loops creating an opportunity for a full day of recreation experience with travel by both watercraft and bicycle
- Watercraft launches and trailheads for shared-use paths provide good locations for the rental of recreational equipment and commercial establishments that offer food and entertainment

Cultural / Environmental:



1 Utilization of natural waterway zones for multi-use routes stacks multiple functions into environmental corridors.

Transportation that connect to environmental assets in the study area greatly improves educational opportunities for NW Georgia.

- Bike & pedestrian routes allow unique access to areas of scenic beauty and cultural significance
- The connection to West & South Chickamauga Creeks along with Peavine Creek will be important to preserve and enhance green space as well as help protect water quality
- Multi-use routes in the study area provide opportunities to preserve open space for wildlife habitat.



2 Multi-use routes provide opportunities to link greenspace and preserve key historical, cultural & environmental assets in easements and open space dedication.

Multi-use routes amplify opportunities for preservation of important historical and cultural elements

- Proposed Routes have utilized the Analysis Heat Map and Cultural Resources Inventory Map to connect to multiple destination points in the study area
- C&CNMP is a major cultural and historical asset
- Multi-use routes need to connect to C&CNMP in a way that preserves and promotes its historical value as a reflective place of honor for fallen soldiers



3 The provision of a shuttle bus service to connect heritage tours and key destination points would strengthen transportation and economic opportunities in the study area

A shuttle bus service could help overcome some of the distance and topographical challenges between key destination points in the corridor

- A shuttle service would take visitors from a junction point at lower elevations within the study area to the top of Lookout Mountain allowing for an exciting downhill experience without the demanding uphill climb
- Tourists and "day-trippers" could experience one leg of the shuttle and connect with an organized plan for return trips
- A shuttle service would fill the transportation gap between existing destination points and the first stages of bike and pedestrian infrastructure before long distance routes are completed
- Shuttle buses would be fitted to accommodate the transport of bikes, strollers and wheelchairs
- Shuttle bus junctures provide key distribution places for mapping of multi-use routes, rest stations, places of commerce and "Rules of the Road" educational material



Facility Investment & Maintenance Requirements Summary:

Implementation of the proposed multi-use, bike, pedestrian and blueway infrastructure in the study area is a large undertaking. The plan calls for a total of approximately 118 miles of facilities. It will take many years of focused effort and strategically planned phases. The best way to achieve financing of this infrastructure will be to leverage matching local funds with state and federal monies and public / private collaborative efforts.

- *The plan calls for a total of approximately 120 miles of facilities*
- *Based on current estimated costs per mile, the total investment required to build out all proposed routes is approximately \$115,854,000*
- *Current estimated annual maintenance costs per mile for multi-use routes ranges from \$2,500 to \$7,000*
- *Assuming an average annual cost of \$5,000 per mile with a total of 120 miles this equates to a total annual maintenance cost of \$600,000*

Return on Infrastructure Investment:

Establishing multi-use transportation facilities will require significant investments of time, money and political will. At the same time the return on these investments has the potential to be significant. Much of the multi-use transportation infrastructure cost can be pursued with state and federal transportation grant money. Most of these grants will require local county or municipal matching funds of 20%.

- *Assuming a total cost of \$115,854,000 for implementation and using a 20% matching fund requirement equates to a \$23,170,800 commitment from counties and / or municipalities within the study area.*
- *An annual fiscal return of \$2,270,000 less an annual maintenance cost of \$600,000 creates an annual net gain of \$1,670,000. This is based on governmental fiscal gain only and does not consider the additional economic benefits generated in the private sector*
- *A infrastructure investment of \$23,170,800 would be recaptured by an annual net fiscal gain of \$1,670,000 in the course of 13.23 years*

In addition to direct monetary return on investments, there are substantial quality of life benefits that come from bike, pedestrian and blueway facilities. Although these may be harder to measure they are certainly very important aspects for residents and visitors to Northwest Georgia. Some of these quality of life benefits include:

- *Improved transportation options that increase the functionality of the roadway and street network and reduce carbon dioxide emissions*
- *Improved opportunities for healthy lifestyles and recreational experiences in the community*
- *Better access to historic and cultural destination points and increased educational opportunities*
- *Preservation of green space and environmentally sensitive areas in multi-use easements*