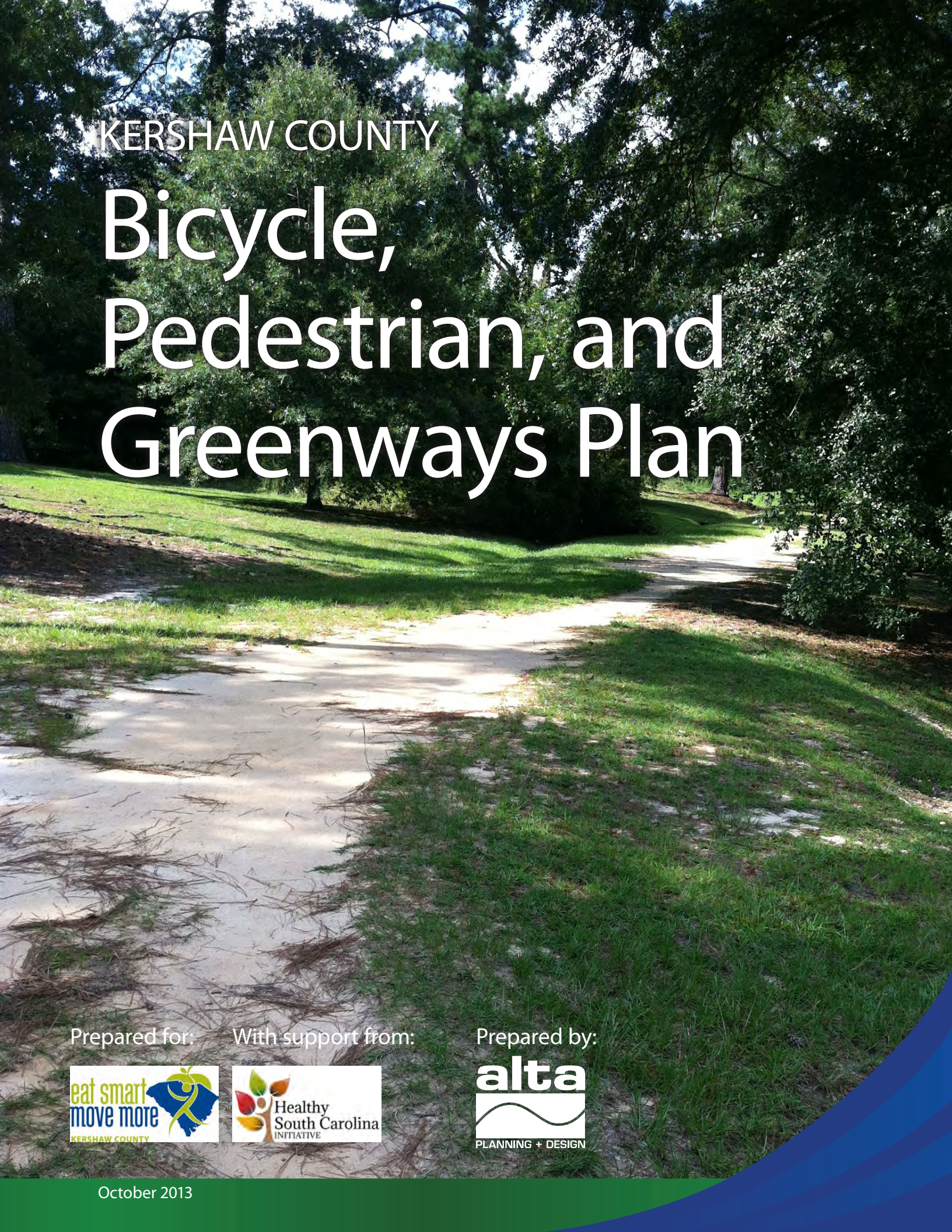

KERSHAW COUNTY

Bicycle, Pedestrian, and Greenways Plan

Prepared for:

eat smart move more KERSHAW COUNTY

With support from:

Healthy South Carolina INITIATIVE

Prepared by:

alta PLANNING + DESIGN

October 2013

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Acknowledgements

Public Participants

Thank you to the many Kershaw County leaders and citizens who participated in this planning process through comment forms, interviews, and public meetings. Thanks also to the many individuals of the press and those engaged in social media throughout the process.

Project Partners

Project Steering Committee

The Eat Smart Move More Kershaw County advisory committee served as the Project Steering Committee for development of the Kershaw County Bicycle, Pedestrian, and Greenways Plan. This committee includes representatives of Kershaw County, the City of Camden, United Way of Kershaw County, South Carolina Department of Health and Environmental Control, LiveWell Kershaw, Safe Routes to School, the Kershaw County Farmers Market, citizen volunteers, and many others.

Project Consultants

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Kershaw County is poised to be one of the premier destination communities in the state and region for active transportation and outdoor recreation.

1: Introduction & Vision

1.1 Plan Overview

In 2012, Eat Smart Move More Kershaw County (ESMMKC) received a grant from the Healthy South Carolina Initiative to develop a bicycle, pedestrian, and greenways master plan for Kershaw County. The purpose of the HSCI grant program is to support community implementation efforts that work to eliminate health disparities and achieve health equity to improve the health of all South Carolinians[1]. ESMMKC's vision for Kershaw County is "to have a community in which there are mixed use neighborhoods focused on health, wellness, and sustainable living." This nonprofit coalition has a mission "to coordinate collaborative and sustainable efforts to support healthy eating and active living where Kershaw County residents live, learn, work, and play."[2] The group is working to reduce pedestrian and cyclist fatality rates, and is managing the development of the Kershaw County Bicycle, Pedestrian, and Greenways Plan.

The Kershaw County Bicycle, Pedestrian, and Greenways Plan combines past planning efforts with new research and analysis, and includes a full public input process. A proposed on- and off-street bikeway, walkway, and trail network is included in this Plan, as well as recommended policies and programs to encourage usage of the bikeway, walkway, and trail network and to promote safe bicycling, walking, and driving practices. These combined elements establish a complete, up-to-date framework for moving forward with improvements to Kershaw County's active transportation and recreation environment.

1.2 Setting

Located in the Midlands of South Carolina, Kershaw County has a population of 61,197[3] and includes the incorporated municipalities of Bethune, Camden, and Elgin. With a population near 7,000, the City of Camden serves as the county seat and is home to the well-known Carolina Cup steeplechase horse race, which attracts more than 60,000 fans each year.[4] Both Interstate 20 and U.S. Highway 1 provide a direct transportation link to Columbia, SC, that state's capital and a metropolitan hub for the region.

In addition to a strong equestrian heritage, Kershaw County boasts many cultural resources. The Battle of Camden Revolutionary War battlefield is an historic landmark of national significance located just north of the City of Camden. Historic Camden Revolutionary War Site is a 106-acre outdoor museum complex and includes: the original town site of Camden, five historic buildings, reconstructions of Revolutionary War military fortifications, and the Kershaw-Cornwallis House, which served as the British headquarters during the 1780-81 Southern Campaign. The City of Camden is the oldest existing inland town in South Carolina and was part of a township plan ordered by King George II in 1730.[5]

Occupying a total of 740 square miles, Kershaw County is comprised of primarily rural, wooded countryside. The Wateree River serves as a dramatic natural landmark along the county's western edge. The scenic Wateree Lake encompasses the county's northwestern-most corner. Steep slopes and valleys dominate the terrain of the eastern shoreline of the lake, however the remainder of the county's topography is flat with occasional gentle slopes.

In 2012, Kershaw County set a goal of becoming the healthiest county in South Carolina, if not the entire country. In pursuit of this goal, the county developed a new campaign called "LiveWell Kershaw."[6] This effort, ESMMKC's community-based coalition, and the many local private and public sector partners of these initiatives are impacting the cultural and political landscape of the community in support of healthy lifestyles and access to healthy choices. With this political support for increased

1. Source: http://healthysci.org/

2. Source: http://eatsmartmovemoresc.org/kershawcounty/

3. Source: U.S. Census 2010

4. Source: http://www.carolina-cup.org/

5. Source: Historic Camden www.historic-camden.net

6. Source: LiveWell Kershaw http://www.livewellkershaw.org/

physical activity, well-promoted tourist destinations and opportunities for heritage tourism, recreational bicycling community, and scenic natural landmarks, Kershaw County is poised to be one of the premier destination communities in the state and region for active transportation and outdoor recreation.

The Kershaw County Bicycle, Pedestrian, and Greenways Plan builds upon these strengths of the existing community. Chapter 3 of the Plan provides more information about Kershaw County and its municipalities, including the principal opportunities and constraints for bicycling, walking, and trail activity throughout the study area.

1.3 Planning Process

The ESMMKC citizen committee, along with Kershaw County and City of Camden staff, guided the development of the Kershaw County Bicycle, Pedestrian, and Greenways Plan. The committee is made up of citizen advocates and representatives from multiple stakeholder organizations and local groups. The committee met several times throughout the process and provided guidance on the overall vision, facility recommendations, programs, policies, and draft plan development.

1.3.1 Data Collection and Analysis

The ESMMKC citizen committee, staff of the County, municipalities, and regional planning organizations, and stakeholders provided baseline information about the existing conditions of Kershaw County. Through aerial photography, geographic information systems (GIS) data, and on-the-ground field investigation, the project consultants identified opportunities and constraints for bicycle, pedestrian, and greenway facility development. Field research also included examining potential trail corridors, verifying certain road widths, studying lane configurations, and preparing a photographic inventory. A review of planning documents, polices, bicycle and pedestrian access to outlets for healthy foods, and existing cultural and recreational programs supplemented the analysis of the physical environment.

Residents and visitors gave feedback at public workshops

1.3.2 Public Involvement

Outreach to the citizens and visitors of Kershaw County included two public workshops, an online and hard-copy citizen comment form, and progress updates provided through the ESMMKC and Kershaw County websites. For development of this Plan, the ESMMKC citizen committee served as the Project Steering Committee and provided a key source of public input. Four Project Steering Committee meetings provided useful information about public concerns and preferences. Throughout the planning process, the project team shared information about key events and activities related to the Plan with local media.

1.3.3 Plan Development

The recommendations of the draft Plan reflects input from the public, the Project Steering Committee, County and municipality staff, past planning efforts, and the existing conditions analysis. The Project Steering Committee reviewed and commented on the initial draft, which was also made available for public review via the ESMMKC website and the final public workshop. The project consultants revised the Plan based on feedback received and presented its analysis and recommendations to local elected officials of Kershaw County and its municipalities.

1.4 Vision and Goals

The Project Steering Committee discussed overarching goals and described desired outcomes of the Plan. Input from the committee as well as public comments were combined into the following overall vision statement for this Plan:

"The Kershaw County Bicycle, Pedestrian, and Greenways Plan envisions a connected network of on- and off-street bikeways, walkways, and trails that provide safe and family-friendly access between neighborhoods and community destinations for all ages and abilities. The Plan supports Kershaw County's vision for becoming the healthiest county in South Carolina and a destination for bicycling, walking, and trail activity for both transportation and recreation."

Specific goals for the outcome of this Plan include:

- Create a community network of on- and off-street walkways, bikeways, and trails designed for all ages, abilities, and user groups;
- Capitalize on existing scenic natural resources, including the Wateree River, recreation and historical amenities, and the attractiveness of downtown Camden;
- Improve the safety and comfort of bicycling and walking routes to destinations such as schools, parks, and libraries;
- Ensure that bikeways, walkways, and trails are clean, inviting, and family-friendly;
- Establish a connected network of primary bicycling and walking routes and spur trails that link to community destinations;
- Promote bicycling, walking, and trail usage for both recreation and transportation;
- Improve bicycle and pedestrian access between neighborhoods and outlets for healthy food.

1.5 The Six E's Approach

Research has shown that a comprehensive approach to bicycle- and walk-friendliness is more effective than a singular approach that would address infrastructure issues only.[7] Recognizing this, the national Bicycle Friendly Community program, administered by the League of American Bicyclists, and the Walk Friendly Community program, administered by the National Center for Walking and Bicycling, recommend a multi-faceted approach based on the following five 'E's: Engineering, Education, Encouragement, Enforcement, and Evaluation. For the purposes of this Plan, a sixth 'E', Equity, is included in order to fulfill the goals and vision of this Plan. This Plan has been developed using the "6 Es" approach as a guiding framework.

1.5.1 Engineering

Designing, engineering, operating, and maintaining quality roadways and pedestrian and bicycle facilities is a critical element in producing a pedestrian-friendly and bicycle-friendly environment. Safe and connected infrastructure for bicyclists and pedestrians is one crucial piece of a comprehensive approach to increasing bicycling and walking activity. This category may include adding new bicycle and pedestrian specific infrastructure, improvements to street crossings, traffic calming, trail design, traffic management, school zones, or other related strategies.

[7] Pucher, J. Dill, J. and Handy, S. (2010). Infrastructure, programs, and policies to increase bicycling: An international review. Preventative Medicine, 50. S106-S125; Krizek, K., Forsyth, A., and Baum, L. (2009). Walking and cycling international literature review. Melbourne, Victoria: Department of Transport.

Education courses encourage more people to bicycle and to do so in a safe manner

1.5.2 Education

Providing bicycle and pedestrian educational opportunities is critical for bicycle and pedestrian safety. Education should span all age groups and include motorists as well as cyclists and pedestrians. The focus of an educational campaign can range from information about the rights and responsibilities of road users to tips for safe behavior; from awareness of the communitywide benefits of bicycling and walking to technical trainings for municipality staff.

1.5.3 Encouragement

Encouragement programs are critical for promoting and increasing walking and bicycling. These programs should address all ages and user groups from school children, to working adults, to the elderly and also address recreation and transportation users. The goal of encouragement programs is to increase the amount of bicycling and walking that occurs in a community. Programs can range from work-place commuter incentives to a "walking school bus" at an elementary school; and from bicycle- and walk-friendly route maps to a bicycle co-op.

1.5.4 Enforcement

Enforcement is critical to ensure that motorists, bicyclists, and pedestrians are obeying common laws. It serves as a means to educate and protect all users. The goal of enforcement is for bicyclists, pedestrians, and motorists to recognize and respect each other's rights on the roadway. In many cases, officers and citizens do not fully understand state and local laws for motorists, bicyclists, and pedestrians, making targeted education an important component of every enforcement effort.

1.5.5 Evaluation

Evaluation methods can include quarterly meetings, the development of an annual performance report, update of bicycle and pedestrian infrastructure databases, pedestrian and bicycle counts, assessment of new facilities, and plan updates. Monitoring implementation of this Plan on a regular basis and establishing policies that ensure long-term investment in the bikeway and walkway network are critical to effective evaluation. Monitoring progress of implementation will facilitate continued momentum and provide opportunities for updates and changes to process if necessary.

1.5.6 Equity

Equity in transportation planning refers to the distribution of impacts (benefits and costs) and whether that distribution is considered appropriate. Transportation planning decisions have significant and diverse equity impacts. Equity in bicycle and pedestrian planning decisions should reflect community needs and values. Communities may choose to give special attention to variances in age, income, ability, gender, or other characteristics.

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Increased rates of bicycling and walking in Kershaw County will help to improve the health and fitness of residents, transportation options, the local economy, and environmental conditions, while also contributing to a greater sense of community.

2: Benefits of Bicycle, Pedestrian, and Greenway Investments

2.1 The Value of Trails and Walkable, Bikeable Communities

Given the commitment of time and resources needed to fulfill the goals of this Plan, it is important to keep in mind the immense value of bicycle and pedestrian transportation and recreation. Increased rates of bicycling and walking in Kershaw County will help to improve the health and fitness of residents, transportation options, the local economy, and environmental conditions, while also contributing to a greater sense of community.

Scores of studies from experts in the fields of public health, urban planning, urban ecology, real estate, transportation, sociology, and economics have supported such claims and affirm the substantial value of supporting bicycling and walking as they relate to active living and transportation choices. Communities across the United States and throughout the world are implementing strategies for serving the bicycling and walking needs of their residents, and have been doing so for many years. They do this because of their obligations to promote health, safety and welfare, and also because of the growing awareness of the many benefits outlined in this section.

2.1.1 Economic Development

In a 2011 Community Preference Survey conducted by the National Association of Realtors (NAR), 66 percent of respondents selected being within walking distance of stores and other community amenities as being important. Additionally, the 2011 NAR survey reflected changes in priorities compared to 2004, the last time the survey was conducted. Interest in walkability increased, with 46 percent saying their community had too few shops and restaurants within easy walking distance, compared to 42 percent in 2004. In the 2011 survey, 40 percent said their community needed more sidewalks, compared to 36 percent in the 2004 survey. A 2010 study by CEOs for Cities looked at data for more than 90,000 recent home sales in 15 different markets around the Nation. While controlling for key characteristics that are known to influence housing value, the study showed a positive correlation between walkability and housing prices in 13 of the 15 housing markets studied.[1]

Trails play a central part in making communities more walkable. In a survey of homebuyers by the National Association of Realtors and the National Association of Home Builders, trails ranked as the second most important community amenity out of a list of 18 choices.[2] Additionally, the study found that 'trail availability' outranked 16 other options including security, ball fields, golf courses, parks, and access to shopping or business centers.

From a tourism perspective, cyclists can add real value to a community's local economy. For example, in the Outer Banks, NC, bicycling is estimated to have a positive annual economic impact of $60 million; 1,407 jobs are supported by the 40,800 visitors for whom bicycling was an important reason for choosing to vacation in the area. The annual return on bicycle facility development in the Outer Banks is approximately nine times higher than the initial investment.

Greenville, SC's Swamp Rabbit Trail, a roughly 17-mile trail corridor created largely through a rail to trail conversion, has documented economic gains. The portion of the trail within Greenville County (outside of the City of Greenville jurisdiction) saw more than 350,000 users in its first year open. This level of bicycle and pedestrian traffic has been a boon for the small city of Travelers Rest. The Mayor described the Swamp Rabbit Trail as "the single most important thing that has happened to Travelers Rest in years." Since development of the trail, property values along the corridor have increased more than threefold, 21 new businesses have opened, and several more have

[1.] CEOs for Cities. (2010) Walking the Walk: How Walkability Raises Home Values in U.S. Cities.)

[2.] National Association of Realtors and National Association of Home Builders. (2002). Consumer's Survey on Smart Choices for Home Buyers.

plans to do so. Overall, the businesses near the County segments of the trail have reported revenue or sales increases of 30 to 85 percent since the trail's arrival.[3]

The Augusta, GA region has seen positive economic gains through major physical activity events. The economic impact of cycling-related sporting events in just the last three years (2009-2011) totals $15.5 million. The Ironman 70.3 event, which Augusta has hosted since 2009 and will continue to host through 2014, brings $4.5million in economic impact each year. The USA Cycling championship events (Juniors, U23, Elite & Paralympic Road National Championships) totaled $1.5 million in economic benefits in 2011 and is expected to have a similar or greater impact in 2012. The region was also fortunate to host the 2010 International Mountain Bike Association (IMBA) Summit in 2010, which brought nearly $0.5 million in local economic gains.[4]

Kershaw County already capitalizes on cultural, heritage, and historical tourism to the area, including short hiking trails at historic sites and signed bicycling routes to key destinations. As Kershaw County and its municipalities develop a comprehensive bicycle, pedestrian, and greenway network, its tourism and visitorship will only grow.

2.1.2 Household Savings

Walking is an affordable form of transportation. A walkable community directly benefits a citizen's transportation costs. The Pedestrian and Bicycle Information Center (PBIC), explains "When safe facilities are provided for pedestrians and bicyclists, more people are able to be productive, active members of society. Car ownership is expensive, and consumes a major portion of many Americans' income." A study cited by the Victoria Transport Policy Institute's 2011 "Transportation Affordability" found that households in automobile-dependent communities devote 50% more to transportation (more than $8,500 annually) than households in communities with more accessible land use and more multi-modal transportation systems (less than $5,500 annually).

Bicycling is also an affordable form of transportation. According to the PBIC, the cost of operating a bicycle for a year is approximately $120, compared to $7,800 for operating a car over the same time period.[5] Bicycling becomes an even more attractive transportation option when the unstable price of gas is factored into the equation.[6] Replacing automobile trips with bicycle trips, even if it is for only one trip a week will reduce overall gas consumption and save money. Transportation is second to housing as a percentage of household budgets, and it is a top expense for many low income families.

2.1.3 Transportation Choices

A National Household Travel Survey found that roughly 40% of all trips taken by car are less than two miles.[7] By replacing short car trips with bicycle trips, residents have a significant positive impact on local traffic and congestion. Traffic congestion reduces mobility, increases auto-operating costs, adds to air pollution, and causes stress in drivers. Substituting bicycling for some of these trips relieves the congestion, benefiting all road users. In addition, an improved bicycle network provides greater and safer mobility for residents who do not have access to a motor vehicle.

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3. GSA Business. (October 18, 2012). Upstate cities investing in business growth. Retrieved from http://www.gsabusiness.com/news/45596-upstate-cities-investing-in-business-growth?rss=0 and Reed, Julian. (2012). Greenville Hospital System Swamp Rabbit Trail: Year one findings.

4. Augusta Sports Council, phone interview (December 8, 2011)

5. Pedestrian and Bicycle Information Center. (2010). Economic Benefits: Money Facts. Retrieved 1/20/2010 from: www.bicyclinginfo.org/why/benefits_economic.cfm

6. King, Neil. (2/27/08). The Wall Street Journal: Another Peek at the Plateau

7. U.S. Department of Transportation (DOT), Bureau of Transportation Statistics (BTS) and the Federal Highway Administration (FHWA). (2002). National Household Travel Survey.

Over six percent of Kershaw County households do not have access to a vehicle and nearly 30 percent have access to only one.[8] American demographics show that typically around 30% of a community's population do not or cannot drive or own a car due to age (under 16), physical or mental disabilities or old age, and/or income. Bicycling and walking for transportation is an important option for these populations, especially those with more than one working family member.

2.1.4 Health benefits

A growing number of studies show that the design of our communities—including neighborhoods, towns, transportation systems, parks, trails and other public recreational facilities—affects people's ability to reach the recommended daily 30 minutes of moderately intense physical activity (60 minutes for youth). The increased rate of disease associated with inactivity reduces quality of life for individuals and increases medical costs for families, companies, and local governments. The Centers for Disease Control has determined that creating and improving places to be active could result in a 25 percent increase in the number of people who exercise at least three times a week.[9] This is significant considering that for people who are inactive, even small increases in physical activity can bring measurable health benefits. The establishment of a safe and reliable transportation network that offers opportunities for bicycling will have a positive impact on the health of nearby residents. The Rails-to-Trails Conservancy puts it simply: "Individuals must choose to exercise, but communities can make that choice easier".[10]

Today, nearly 36 percent of American adults are obese, and 67 percent are overweight or obese. America's weight problem doesn't spare our youth either: 17 percent of children and youth are obese.[11] The childhood obesity rate has almost tripled since 1980 and the adolescent rate has more than quadrupled.[12]

In Kershaw County, an estimated 28 percent of adults are physically inactive and 32 percent of adults are obese. The county ranks 10th out of 46 counties in South Carolina for overall health, however, when it comes to health behaviors, such as physical activity and obesity, it ranks 19th and when considering physical environment as it relates to health, the rank drops to 36th in the state.[13] Offering more opportunities for children, adolescents and adults to safely and conveniently bicycle and walk in their community will encourage citizens to exercise more frequently, increasing their levels of physical activity and impacting the obesity epidemic.

2.1.5 Environmental benefits

As demonstrated by the Southern Resource Center of the Federal Highway Administration, when people get out of their cars and walk, or ride their bicycles, they reduce measurable volumes of pollutants.[14] Bicycles and foot traffic produce absolutely no pollution and to make a bicycle requires only a fraction of the materials and energy needed to make a car.

A bicycle commuter who rides five miles to work, four days a week, avoids 2,000 miles of driving a year—the equivalent of 100 gallons of gasoline saved and 2,000 pounds of CO2 emissions avoided. CO2 savings of this magnitude reduce the average American's carbon footprint by about 5 percent. To achieve equivalent CO2

8. American Community Survey 5-Year Estimates 2007-2011. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_5YR_DP04

9. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. (2002). Guide to Community Preventive Services

10. Rails-to-Trails Conservancy. (2006) Health and Wellness Benefits

11. Centers for Disease Control. (January 2012). Prevalence of obesity in the United States, 2009-2010. Retrieved from http://www.cdc.gov/nchs/data/databriefs/db82.pdf

12. National Center for Health Statistics, Prevalence of Overweight Among Children and Adolescents: United States, 2003-2004. 2007

13. County Health Rankings & Roadmap. (2013). Retrieved from http://www.countyhealthrankings.org/app/south-carolina/2013/kershaw/county/outcomes/overall/snapshot/by-rank

14. Federal Highway Administration, Southern Resource Center. (1999)

reductions by public transportation one would have to shift approximately 30 miles of daily commuting from car to transit. A citizen who lives in a community that allows him or her to run most errands by bicycling or walking can save about 500 gallons of fuel, or 10,000 pounds of CO2 each year.

Trails and greenways also convey unique environmental benefits. Greenways protect and link fragmented habitat and provide opportunities for protecting plant and animal species. Trails and greenways connect places without the use of emission-producing vehicles, while also reducing air pollution by protecting large areas of plants that create oxygen and filter pollutants such as ozone, sulfur dioxide, carbon monoxide and airborne particles of heavy metal. Finally, greenway corridors can improve water quality by creating a natural buffer zone that protects streams, rivers and lakes, preventing soil erosion and filtering pollution caused by agricultural and road runoff.

2.1.6 Safety Benefits

Conflicts between bicyclists and motorists and pedestrians and motorists result from poor riding, walking and/or driving behavior as well as insufficient or ineffective facility design. Encouraging development and redevelopment in which bicycle and foot travel are fostered improves the overall safety of the roadway environment for all users. Well-designed bicycle facilities improve safety and security for current cyclists and also encourage more people to bike, which in turn, can further improve bicycling safety. Studies have shown that the frequency of bicycle collisions has an inverse relationship to bicycling rates – more people on bicycles equates to fewer crashes.[15] Likewise, well-designed walkway facilities improve safety and security for pedestrians. Providing information and educational opportunities about safe and lawful interactions between bicyclists, pedestrians and other roadway users also improves safety.

[15.] Jacobsen, P. "Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling". Injury Prevention, 9: 205-209. 2003.

Bicycling and walking activities promote socially active communities

2.1.7 Community/Quality of Life Benefits

Fostering conditions where bicycling and walking are accepted and encouraged increases a city's livability from a number of different perspectives, that are often difficult to measure but nevertheless important. The design, land use patterns, and transportation systems that comprise the built environment have a profound impact on quality of life issues. Studies have found that people living in communities with built environments that promote bicycling and walking tend to be more socially active, civically engaged, and are more likely to know their neighbors.[16, 17] Settings where walking and riding bicycles are viable also offer greater independence to the elderly, the disabled, and people of limited economic means who are unable to drive automobiles for physical or economic reasons. The aesthetic quality of a community also improves when visual and noise pollution caused by automobiles is reduced and when green space is reserved for facilities that enable people of all ages to recreate and commute in pleasant settings.

[16.] Frumkin, H. 2002. Urban Sprawl and Public Health. Public Health Reports 117: 201–17.

[17.] Leyden, K. 2003. "Social Capital and the Built Environment: The Importance of Walkable Neighborhoods." American Journal of Public Health 93: 1546–51.

2.2 Bicycling and Walking Demand and Benefits

Walking and bicycling are gaining new interest from communities across the United States after decades of neglect when most attention focused on motor vehicle transportation. As fuel prices rise, making short trips by bicycling and walking instead of by car makes sense. However, due to low existing levels of use and funding, walking and bicycling face an uphill battle to prove their utility as viable, efficient modes of transportation. Many of walking and bicycling's greatest strengths – such as creating attractive, livable streetscapes and increasing community health through exercise – are not accounted for when evaluating transportation projects. Similarly, many of the external social costs of driving, such as traffic congestion, crashes, and climate change from greenhouse gas emissions, are not sufficiently weighted. Quantifying these factors demonstrates the importance of walking and bicycling transportation and helps to compare benefits with costs.

The benefits created by walking and bicycling increase with use. For each additional mile traveled by walking or bicycling instead of driving, about one pound of greenhouse gas emissions are prevented, a few less cents are spent on gas, and a person gets a few minutes closer to reaching their recommended healthy levels of physical activity for the week. When walking and bicycling become part of people's daily activity, these benefits add up to create a healthier, more affordable community. To calculate the current benefits of walking and bicycling transportation in Kershaw County, the first step is to estimate existing levels of use.

2.2.1 Estimating Walking and Bicycling Demand

User counts and user surveys are the two most commonly used tools for measuring walking and bicycling activity. The following section describes the strengths and weaknesses of each of these tools, and presents a methodology for estimating activity across an entire community.

User Counts

User counts, typically conducted at points across the street network during peak travel hours, capture levels of walking and bicycling activity on street or paths during a short period of time. While user counts can be instructive in comparing relative levels of use between one street and another, they do not fully capture the spectrum of walking and bicycling activity happening across the community over the length of the year. Counts are well suited to studying where people walk and bike, but do not provide answers to other important questions, such as:

- What destinations are people walking and bicycling to, and where are they coming from?
- How far are they traveling?
- What is the purpose of their trip?
- How often do they make similar walking or bicycling trips?
- How often do they make other kinds of walking or bicycling trips?
- Do other residents also make similar types of trips by walking and bicycling, or do they typically travel by another mode?

Therefore, while user counts are a good tool for measuring walking and bicycling at a certain location, user surveys are needed to estimate the overall role of bicycling and walking in the transportation patterns of residents across the region.

User Surveys

Transportation user surveys often ask respondents about their perceptions – e.g., their feeling of safety on a street – and about their usual travel behavior. The American Community Survey (ACS), an ongoing survey conducted by the US Census Bureau, collects social, economic and demographic information from respondents, and includes a question on respondents' commute to work. Sampling over 250,000 households per month, the ACS is the largest survey that asks Americans about their transportation habits, and the most widely available source of walking and bicycling data in communities. According to the 2007-2011 ACS[18], 0.2% of workers in Kershaw County bicycle to work, while 0.9% walk to work. These percentages are known as commute mode share; the percentage of a community's population making their journey to work by a certain mode of transportation compared to all modes.

Although commute mode share data is able to capture wider information about walking and bicycling than user counts alone, work commutes are just one type of trip. Kershaw County residents make many other types of trips (to school, college, go shopping, etc.) by a variety of modes. Detailed household travel surveys can provide more information on travel patterns and help measure the full spectrum of walking and bicycling trips happening in the community.

Household travel surveys are usually conducted by phone and include a travel diary in which respondents are asked to record all their trips during a 24-hour period. Information on the qualities of each trip is collected, including the trip purpose, time of day, duration, length, mode, and more. By collecting this data from a large sample of people across the population, household travel surveys can provide information on where, why, and how far people are walking and bicycling for transportation. Though a local household travel survey is not available, national data from the 2009 National Household Travel Survey (NHTS 2009) can be used to estimate the number of other types of bicycling and walking trips being made in addition to work trips.

[18] For communities of the size of Kershaw County, the Census Bureau recommends using 5-Year sample data sets for increased reliability. This report references 2007-2011 5-Year ACS data unless otherwise noted.

Estimating Overall Activity

Overall bicycling and walking activity can be estimated by combining available local data such as ACS commute mode share with national trip purpose information from NHTS 2009. On average, 1.6 utilitarian bicycle trips are made for every bicycle-to-work trip in the United States, and 4.3 utilitarian walk trips are made for every walk-to-work trip (Figure 2-1 below and Figure 2-2). A utilitarian trip is one that serves a purpose, as opposed to for recreation or exercise.

Student commute trips to school and college are estimated independently of ACS data, because the populations making those trips are substantially different from the employed workforce surveyed by ACS. National data on walking and bicycling college trip mode share was used to represent trips to local schools like Central Carolina Technical College. National baseline K-8 school trip data from Safe Routes to School (SRTS) is used to estimate mode share for K-12 school trips.

For each type of trip, average trip distance and vehicle trip replacement multipliers are applied to estimate the total distance traveled by walking and bicycling and resulting

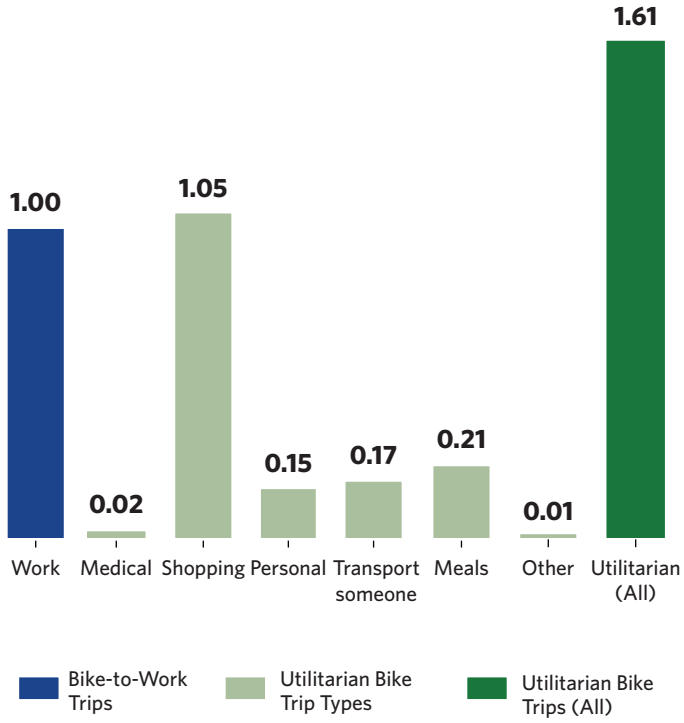


Figure 2-1: Ratio of Bicycle-To-Work Trips to Utilitarian Bicycle Trips (Source: NHTS 2009)

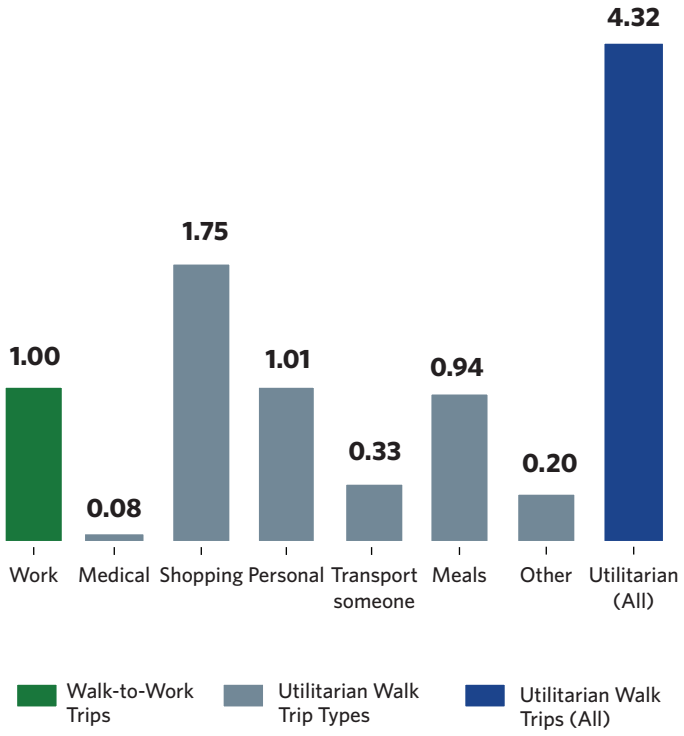


Figure 2-2: Ratio of Walk-To-Work Trips to Utilitarian Walk Trips (Source: NHTS 2009)

vehicle miles traveled (VMT) reduced. National average trip distance multipliers are sourced from NHTS and SRTS, ranging from 0.36 miles for the K-12 walk to school to 3.54 miles per adult bike commute trip. Vehicle trip replacement multipliers assume that for each walking or bicycling trip, the chance of walking or bicycling replacing another mode for that trip is equal to the mode share of that other mode. Vehicle trip replacement multipliers are calculated independently using the mode split for each trip purpose available. For example, commute trip mode split is used for commute vehicle trip replacement, and college trip mode split is used for college vehicle trip replacement. Single-occupancy vehicle trip equivalents are used to estimate VMT reduction; replaced carpool trips are weighted at 50% of a replaced single-occupancy vehicle trips.

Figure 2-3 provides a visual depiction of the steps used to translate local and national transportation data into an annual estimate of bicycling and walking activity currently happening in Kershaw County.

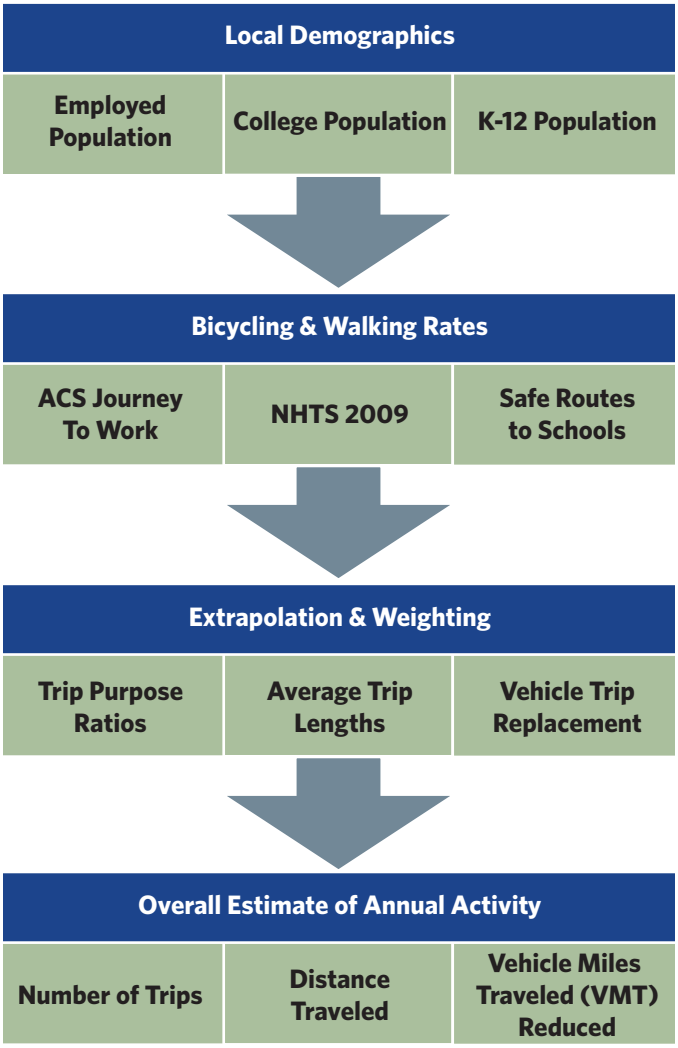


Figure 2-3: Kershaw County Existing Walking and Bicycling Overall Activity Estimate Methodology

Key Findings Related to Existing Demand

ACS data was the primary source for estimating existing levels of bicycling and walking activity in Kershaw County. Mapping these inputs at the census tract level shows how bicycling and walking rates vary locally by neighborhood. Using ACS, NHTS, and Safe Routes to School data sources, it is estimated that nearly 700,000 miles of trips in Kershaw County that could be made by car are now being made by bicycling and walking annually.

2.2.2 Estimating Bicyling and Walking Benefits

Benefits of bicycling and walking are based on the number of regular walk/bicycle transportation users and miles traveled developed in the overall demand estimate. Numerous studies have estimated the dollar value of the benefits of bicycling and walking such as reduced pollution from the reduction of vehicle travel, improved health from increased physical activity, and other benefits (see Table 2-2). Using figures from these studies, overall levels of bicycling and walking transportation activity can be expressed in terms of their dollar value to local residents and the community at large.

Key Findings Related to Existing Benefits

Current levels of walking and bicycling in Kershaw County are below national averages, but still return significant benefits to the region and local residents in the form of improved air quality, reduced transportation costs, and improved health. Using the VMT reduction estimated in the previous section, and the multipliers described in Table 2-1 and Table 2-2, existing rates of bicycling and walking transportation are estimated to generate over $800,000 in annual benefits.

Potential Future Benefits

Kershaw County is taking steps to improve the accessibility, safety and quality of the bicycling environment, and the implementation of this plan will lay the groundwork for higher levels of active transportation in the future. Analysis of current walking and bicycling benefits show how active transportation is a boon to local health and to the economy. Investing in improvements to bicycling and walking transportation networks could return even greater annual benefits.

Cities and counties awarded by the League of American Bicyclists Bicycle Friendly Communities (BFC) program provide a valuable reference point for setting goals and creating a vision for what role bicycling could play in local transportation in future. Many bicycle friendly communities have reputations for their livability and the quality of their walking environment, in addition to bicycling. The League of American Bicyclists reports that BFC-awarded cities have seen 80% growth in bicycling between 2000 and 2011.

In addition to Bicycle Friendly Communities, other counties in nearby states with similar land use and demographic patterns and an interest in bicycling and walking can be useful comparisons for visioning future growth. Table 2-4 shows existing walking and bicycling rates in several comparison counties as well as the Unites States national average.

Future growth in Kershaw County bicycling rates would generate economic, environmental and health benefits greater than the current estimate of $235,000 in annual benefits to the region. In a scenario where bicycling rates increase to national average levels, local benefits from bicycling could reach $600,000 per year. Table 2-5 provides example monetized annual benefits of bicycling in Kershaw County at increased rates.

Table 2-6 explores the potential annual benefits of increased walking rates in Kershaw County. Bicycling rates are typically more responsive to changes in transportation infrastructure than walking. While national bicycling rates have trended upward for the last decade – growing nearly 50% over that time –walking rates are still declining slowly. Because walking rates are more dependent on factors like land use that can be slow to change, bicycling rates in Kershaw County are more likely to increase at a faster relative rate. It may be challenging to increase walking rates to levels shown in Table 2-6.

The potential benefits of increased walking and bicycling rates in Kershaw County make a strong case for increased investment in active transportation infrastructure. For example, if Kershaw County were to reach the national average bicycling and walking rates of 0.5% and 2.8% respectively, the community could enjoy health, and economic benefits valued at approximately $2.5 million per year, or more than four times current levels. The new bicycling and walking facilities proposed in this plan will become valuable assets that will increase the health, affordability and livability of the region.

Table 2-1: Bicycling and Walking Demand Estimation and VMT References

REFERENCES - DEMAND/ACTIVITY MULTIPLIERS					
TRIP PURPOSE EXTRAPOLATION					
Commute Trip Mode Share		College Trip Mode Share		K-12 Trip Mode Share	
Bike: 0.2% ACS 2006-10	Walk: 0.9%	Bike: 1.7% NHTS 2009	Walk: 6.8%	Bike: 1.0% SRTS 2009	Walk: 13.4%
Utilitarian Trip Multiplier					
Bike: 1.6 NHTS 2009	Walk: 4.3				
ANNUAL TRIP EXTRAPOLATION					
Annual Work Days		Annual College Class Days		Annual K-12 School Days	
251 261 weekdays - 10 Federal holidays		150 Assumes three 10-week quarters		180 South Carolina statewide minimum	
ANNUAL VEHICLE TRIPS REPLACED (SOV EQUIVALENT)					
Commute Vehicle Trip Replacement		College Vehicle Trip Replacement		K-12 Vehicle Trip Replacement	
Bike: 88.0% ACS 2007-11	Walk: 88.6%	Bike: 81.5% NHTS 2009	Walk: 86.0%	Bike: 42.6% SRTS 2009	Walk: 48.7%
ANNUAL VEHICLE MILES TRAVELED REDUCED					
Commute Trip Distance		College Trip Distance		K-12 Trip Distance	
Bike: 0.2% ACS 2006-10	Walk: 0.9%	Bike: 2.09 NHTS 2009	Walk: 0.48	Bike: 0.77 SRTS 2009	Walk: 0.36
Commute Trip Distance					
Bike: 1.89 NHTS 2009	Walk: 0.67				

Table 2-2: Bicycling and Walking Transportation Benefits References

REFERENCES - BENEFITS MULTIPLIERS					
Reduced Emissions	Lb/VMT	Reduced Emissions Costs	$/ton	Reduced Externalities	$/VMT
Hydrocarbons	0.00300	Volatile Organic Compounds	$1,700	Traffic Congestion	$0.05
Particulate Matter	0.00002	Particulate Matter	$168,000	Vehicle Crashes AAA, 2008	$0.36
Nitrous Oxides	0.00209	Nitrous Oxides	$4,000		
Carbon Monoxide	0.02734	Carbon Monoxide	n/a		
Carbon Dioxide EPA, 2007	0.81351	Carbon Dioxide EPA, 2007	$36.03	Road Maintenance Costs Kitamura, Zhao & Gubby, 1989	$0.15
Physically Inactivity Rate	%	Reduced Healthcare Costs	$/Year	Vehicle Operating Costs	$/VMT
South Carolina 2010 BRFSS (CDC)	26.9%	Savings/Newly Active Person Wang, McDonald et al, 2012	$585.97	Operational Std. Mileage Rate IRS, 2013	$0.57

Table 2-3: Estimated Annual Benefits of Walking and Bicycling Transportation

KERSHAW COUNTY ANNUAL WALKING AND BICYCLING BENEFITS	
Annual VMT Reduced	689,000
Air Quality	
CO2 Emissions Reduced (pounds)	561,000
Other Vehicle Emissions Reduced (pounds)	22,000
Total Vehicle Emissions Costs Reduced	$16,000
Social Benefits	
Reduced Traffic Congestion Costs	$34,000
Reduced Vehicle Crash Costs	$248,000
Reduced Road Maintenance Costs	$103,000
Individual Benefits	
Household Vehicle Operation Cost Savings	$383,000
Health Care Cost Savings from Physical Activity	$60,000
Total Monetized Benefits:	$845,000

Table 2-4: Comparison Walking and Bicycling Rates

KERSHAW COUNTY ANNUAL WALKING AND BICYCLING BENEFITS				
Geography	Population	Employed Population	Bicycle Mode Share	Walk Mode Share
United States	306,603,772	139,488,206	0.53%	2.83%
Chatham County, Georgia	261,322	117,122	0.60%	2.14%
Floyd County, Georgia	95,978	39,771	0.48%	3.69%
Forsyth County, Georgia	170,815	78,734	0.10%	0.82%
Kershaw County, South Carolina	61,010	26,184	0.21%	0.92%
Roanoke County, Virginia (Bronze BFC)	92,023	45,826	0.20%	1.28%

Table 2-5: Potential Annual Benefits of Increased Bicycling in Kershaw County

KERSHAW COUNTY POTENTIAL ANNUAL BICYCLING BENEFITS			
Bicycle Commute Mode Share	Current 0.2%	US Average 0.5%	Highest Comparison County 0.6%
Annual VMT Reduced	193,000	500,000	560,000
Air Quality			
CO2 Emissions Reduced (pounds)	157,000	400,000	460,000
Other Vehicle Emissions Reduced (pounds)	6,000	20,000	20,000
Total Vehicle Emissions Costs Reduced	$4,000	$10,000	$10,000
Social Benefits			
Reduced Traffic Congestion Costs	$10,000	$30,000	$30,000
Reduced Vehicle Crash Costs	$70,000	$180,000	$200,000
Reduced Road Maintenance Costs	$29,000	$70,000	$80,000
Individual Benefits			
Household Vehicle Operation Cost Savings	$107,000	$270,000	$310,000
Health Care Cost Savings from Physical Activity	$16,000	$40,000	$50,000
Total Benefits:	$236,000	$600,000	$680,000

Note: Estimates reflect conceptual benefits that would be generated at given mode shares as if they existed in Kershaw County today. Values are rounded and do not reflect future demographic growth, cost changes or other multiplier changes.

Table 2-6: Potential Annual Benefits of Increased Walking in Kershaw County

KERSHAW COUNTY POTENTIAL ANNUAL BICYCLING BENEFITS			
Bicycle Commute Mode Share	Current 0.2%	US Average 0.5%	Highest Comparison County 0.6%
Annual VMT Reduced	496,000	1,530,000	2,000,000
Air Quality			
CO2 Emissions Reduced (pounds)	404,000	1,250,000	1,630,000
Other Vehicle Emissions Reduced (pounds)	16,000	50,000	60,000
Total Vehicle Emissions Costs Reduced	$12,000	$40,000	$50,000
Social Benefits			
Reduced Traffic Congestion Costs	$25,000	$80,000	$100,000
Reduced Vehicle Crash Costs	$179,000	$550,000	$720,000
Reduced Road Maintenance Costs	$74,000	$230,000	$300,000
Individual Benefits			
Household Vehicle Operation Cost Savings	$275,000	$850,000	$1,110,000
Health Care Cost Savings from Physical Activity	$45,000	$140,000	$180,000
Total Benefits:	$609,000	$1,890,000	$2,460,000

Note: Estimates reflect conceptual benefits that would be generated at given mode shares as if they existed in Kershaw County today. Values are rounded and do not reflect future demographic growth, cost changes or other multiplier changes.

Most of the existing planning efforts for Kershaw County have been developed in recent years and set ambitious goals for improving the safety of bicyclists and pedestrians and improving connectivity of the active transportation and recreation systems.

3: Existing Conditions

3.1 Introduction

This chapter provides an overview of the major components of the existing environment for bicycling, walking, and trail usage in Kershaw County. The assessment of existing conditions is based on information collected primarily from previous planning efforts, existing regional geographic information systems (GIS) data, field work, aerial imagery, and input from the Project Steering Committee and stakeholders.

The existing conditions analysis includes the following three elements: Data collection and base map; Planning and policy review; and Community identified needs. The chapter concludes with an overview of strengths and challenges of the existing environment for bicycling, walking, and trail activity in Kershaw County.

3.2 Data Collection and Base Map

The project team gathered information about existing and proposed greenways, bikeways, walkways, and equestrian trails within the county and its incorporated jurisdictions. The team also collected geographic data related to existing and proposed recreation facilities, capital improvement projects, community destinations, such as schools and employment centers, and tourism destinations, such as the Battle of Camden and Historic Camden Revolutionary War Sites. The project team sought transportation-related data, such as transit routes, and an inventory of natural resources like the Wateree River. The culmination of this effort is a base map of existing conditions in Kershaw County, shown in Figures 3-1 and 3-2.

The base maps illustrate the existing opportunities for bicycling and walking for transportation and recreation, as well as the spatial relationship of residential areas to local destinations. The maps serve as a useful tool for examining key opportunities and constraints for creating safe, connected, and convenient network of bikeways, walkways, and trails.

A bicyclist in Kershaw County

3.3 Planning and Policy Review

The bicycling and walking environment in Kershaw County is impacted by existing codes, ordinances, and long-range planning efforts. This section provides a summary of planning efforts relevant to the bicycle, pedestrian and trail network, as well as the key findings of a policy code review. Where quotations are used, the code is referenced verbatim.

3.3.1 Planning Documents

This section provides a summary of bicycle, pedestrian, and greenways planning-related efforts in Kershaw County. Nine relevant plans currently exist. Plans for two regional trail routing efforts in adjacent counties - the Carolina Thread Trail in Lancaster County and the Palmetto Trail in Richland County – are reflected in the base map. The nine plans reviewed for this Plan are listed in Table 3-1. A full summary of the plans is provided in Appendix A.

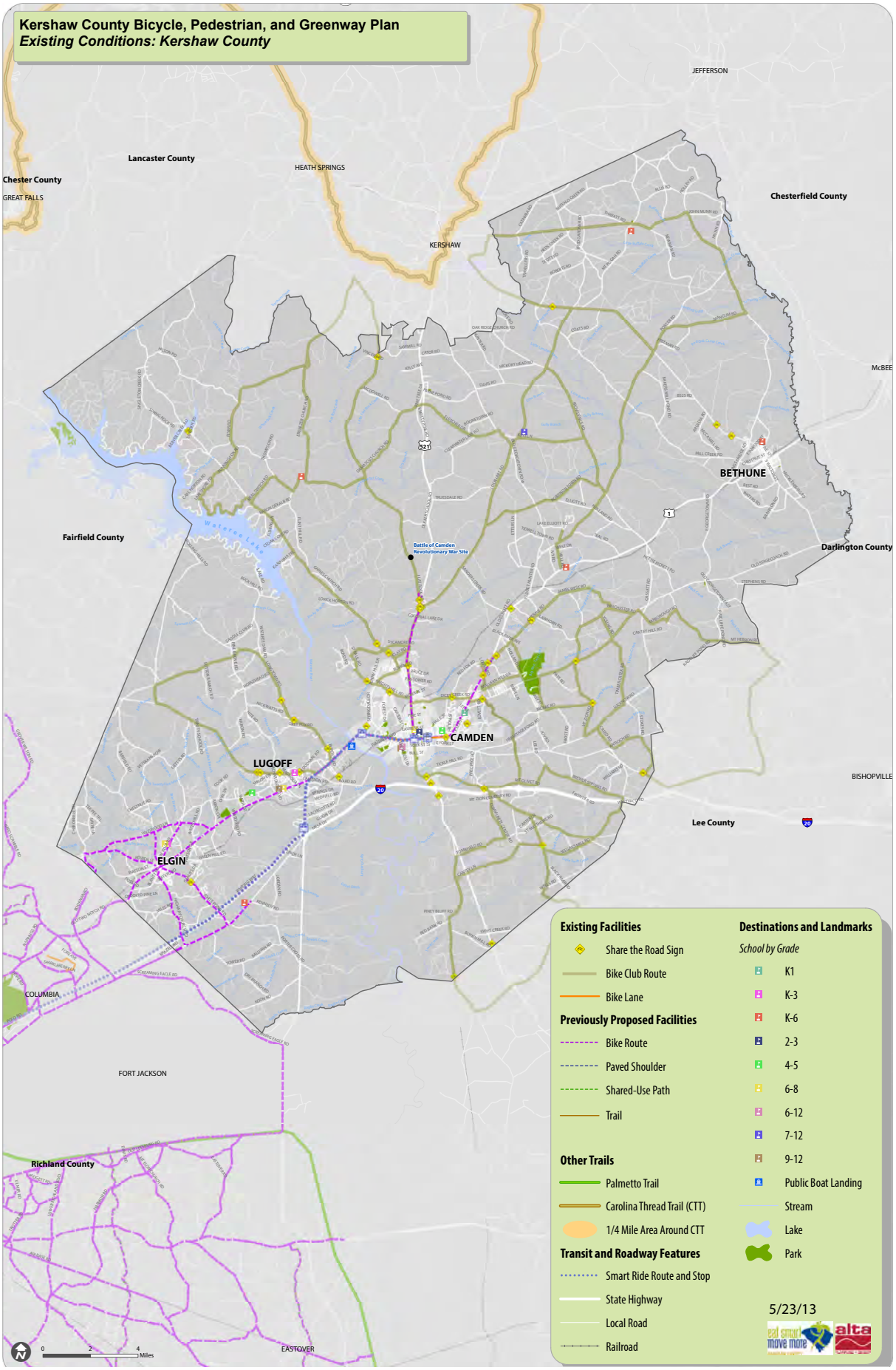


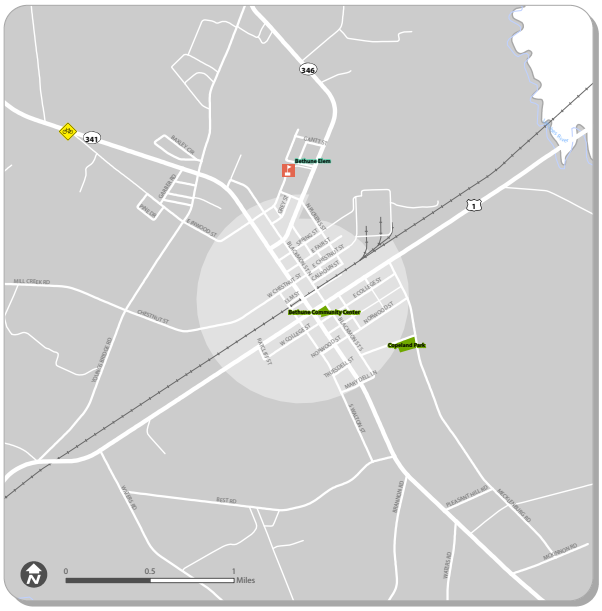
Figure 3-1: Existing Conditions - Kershaw County

Kershaw County Bicycle, Pedestrian, and Greenway Plan
Existing Conditions: Camden, Lugoff, Bethune and Elgin

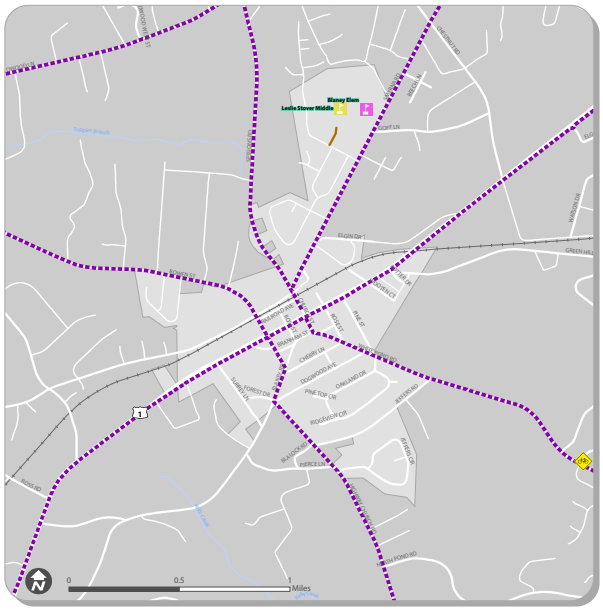
Camden

Lugoff

Bethune



Elgin



Bicycle and Transit Facilities

- Share the Road Sign
- Smart Ride Route and Stop
- Bike Club Route
- State Highway
- Proposed Bike Route
- Local Road
- Existing Bike Lane
- Railroad

Destinations and Landmarks

School by Grade

- K1
- 2-3
- 6-12
- K-3
- 4-5
- 7-12
- K-6
- 6-8
- 9-12
- Stream
- Lake
- Park

6/6/13

Figure 3-2: Existing Conditions - Camden, Lugoff, Bethune and Elgin

Table 3-1: Planning and policy review assessment of bicycle, pedestrian, and greenway-related planning documents

Plan	Agency	Year
Santee-Lynches Regional COG (SLRCOG) Transportation Improvement Program	SLRCOG	2012
Kershaw County Comprehensive Plan: Transportation Element	Kershaw County	2012
Recreational Master Plan for Kershaw County	Kershaw County Recreation District	2012
Land Development Design Standards and Required Improvements	Kershaw County	2012
Bicycle & Pedestrian Regional Pathways Plan	Central Midlands Council of Governments (CMCOG)	2010
Columbia Area Transportation StudyTransportationImprovement Program	CMCOG	2009
Midlands Tomorrow – 2035 Long Range Transportation Plan	CMCOG	2008
Santee-LynchesLongRangeRural Transportation Plan	SLRCOG	2007
South Carolina State Trails Plan	South Carolina Department of Parks, Recreation & Tourism, Palmetto Conservation Foundation	2002

Key Findings

Based on the community feedback from each of the plans listed above, there is community wide interest in improving bicycling, pedestrian, and greenway facilities throughout Kershaw County. Most of the existing planning efforts have been developed in recent years and set ambitious goals for improving the safety of bicyclists and pedestrians and improving connectivity of the active transportation and recreation systems. Key themes from previous planning efforts include:

- Improved quality of life by providing multi-model travel choices and access to recreation.
- Increased connectivity to destinations by providing route options for all transportation modes including biking and walking.
- Complete streets design for new and existing roadways.

3.3.2 Policy Documents

As part of the Kershaw County Bicycle, Pedestrian, Greenways Plan the consultant team reviewed existing development policy and regulatory documents for Kershaw County and the City of Camden. The review focused on the Kershaw County Unified Code of Zoning and Land Development Regulations (ZLDR) and City of Camden, South Carolina Code of Ordinances (CO), but also included a review of the following additional resources:

- Comprehensive Plan for Kershaw County South Carolina 2006-2016
- Recreational Master Plan for Kershaw County
- City of Camden, South Carolina Comprehensive Plan 2007-2017
- Commercial and Residential District Design Guidelines – A guide to the preservation and restoration of the historic structures of Camden, South Carolina.
- City of Camden Complete Streets Resolution 2012

The full policy review is provided in Appendix B.

Planning and development regulations provide guidelines and requirements for most of what is developed in the County and its municipalities and as such are fundamental to the local walk- and bike-friendliness. Since most new development is provided through private investment, the provision of walk- and bike-friendly development policies and ordinances are one of the most cost-effective means that local governments have to establish walkable and bikeable infrastructure for their communities.

Key Findings

Kershaw County and the City of Camden have a number of very positive policies that support a walkable and bikeable environments. However, it is also evident that Kershaw County and the City of Camden could significantly

strengthen many areas of policy regarding complete streets, bicycle parking, and bicycle and pedestrian facility requirements and enhancements within the context of development ordinances. Policies geared toward retrofit of existing facilities are also recommended and discussed within the attached policy matrix. Table 3-2 describes key strengths identified within the existing policies of Kershaw County and the City of Camden, as well as priority areas for improvement.

Table 3-2: strengths and areas for improvement in Kershaw County and City of Camden policies.

Kershaw County

Strengths	Areas for Improvement
Good intent to require sidewalks and trails for certain subdivision types and promotion of connectivity	Need holistic approach to developing walkable and bikeable developments and overall development patterns
Language to allow sidewalks, trails and greenways in utility corridors	Include pedestrian and bicycle infrastructure (e.g. sidewalks, bike parking) for all new development in urbanized areas, not just certain land use or development types.
Required street trees new development	Need bicycle parking requirements, especially for non-residential land uses in urbanized areas
Maximum parking requirements	Consider bike parking requirements

City of Camden

Strengths	Areas for Improvement
Complete Streets Resolution	Permitted block sizes and cul-de-sac lengths are too long
Required pedestrian and bicycle easements for long blocks	Bicycle parking requirements
Street tree requirements	
Maximum parking requirements	
Commercial Building Form requirements in downtown Camden	Consider extending requirements throughout community

What is evident for both jurisdictions is that a more holistic approach to facilitating walkable and bikeable new development is required. Both jurisdictions have development standards and policies that are very much oriented towards automobile access first and foremost. Walkability begins with access to destinations and to the extent politically feasible, the City and the County should promote development that is proximate to existing infrastructure, residential development, and existing destinations for education, employment, commerce, and civic activities. This begins with allowing and promoting a mixture of land uses and density of land uses that support walking and bicycle access in the built up areas of the County. (For current residents who don't drive or have access to a car and for future residents and visitors who are looking to visit or invest in a place where walking and biking are part of the transportation options, walkable land use patterns are critical to quality of life.)

Second, promoting "complete" infrastructure and transportation linkages between land uses is what is required to make sure that places that are proximate in distance are indeed comfortable and safe to walk or bike to and from. The City of Camden recently adopted a Complete Streets resolution and is to be commended for that step. Kershaw County should follow suit and both jurisdictions should ensure that these policies become codified in development regulations so that all new development includes provisions for safe and comfortable pedestrian and bicycle access. This will require a thorough review and refinement of existing development standards to ensure that pedestrian and bicycle access is considered in every requirement from the development of sidewalks to provision of bicycle parking and street trees and pedestrian-scaled lighting, but also including considerations about whether or not building and lots are oriented for pedestrian and bicycle access.

The comments in the tables below outline many opportunities for making local development standards more pedestrian and bicycle friendly. This plan suggests that the City and County staff and appropriate appointed committees develop proposed text amendments for

any "low hanging fruit" amendments noted below. For more holistic changes, staff, committees, and the Plan committee members should consider a comprehensive audit and rewrite of development standards over the next 12-18 months. The outcome of such an effort would be development standards that are predictable and sustainable for investors and developers, but that also promote active living, aging in place, quality of life, and transportation and recreation choices; and respect the local character of Kershaw County and Camden.

3.4 Community Identified Needs

Kershaw County's bicycling and pedestrian needs are diverse and depend on many factors including one's age, trip purpose, physical ability, and level of cycling experience and confidence. Public outreach is an essential tool for identifying local community needs and desires and for developing a countywide plan that addresses those priorities.

This section provides an analysis of public input acquired through stakeholder interviews, public workshops, and a citizen comment form. Stakeholder interviews provide targeted information from local advocates and community leaders familiar with existing infrastructure, activities, and opportunities related to bicycling, walking, and greenways. The interviewees represent the private business and government sector, health and wellness industry, city and county administrators, school district, parks, political leaders and tourism, agricultural and equine industries. The public workshops and citizen comment form allowed all residents and visitors of the area to share their vision for the future of bicycling, walking, and trail activity in Kershaw County.

3.4.1 Stakeholder Interviews

Stakeholder interviews serve as a tool for understanding existing opportunities and constraints, as defined by the local residents and leaders who know the Kershaw County community and efforts related to bicycle, pedestrian, and trail activity the best. The goal of the interview process is to provide a measurable assessment of the viability and feasibility of successfully implanting a bicycle, pedestrian, and greenway plan for the community. Stakeholders identified opportunities, barriers, and partnerships in regards to creating a connected system of both on- and off-street bicycling and walking facilities. The interviewees reflected 11 different agencies, organizations, and citizen advocates.

The complete summary of the stakeholder interviews is presented in Appendix C. Key findings from the interviews are categorized below as either infrastructure-related or non-infrastructure-related.

Key Findings: Infrastructure

- Highway 1 is a major obstacle to a safe, viable, connected bicycle and pedestrian system.
- Existing sidewalk infrastructure is inadequate.
- Safe intersection crossings for bicyclists are needed.
- Extend and connect the existing bicycle network.
- There are important opportunities for greenway development throughout the county along existing abandoned railroads, publicly- and privately-owned land, roadway right-of-way, and conservation easements, among others.
- Developing a greenway along the Wateree River and creating access to the property behind Wal-Mart will create an important multi-use connection.
- Need to improve connectivity to existing neighborhoods, schools, and neighboring parks.

Key Findings: Non-infrastructure

- There is strong support from political leadership, the business community, and private citizens.
- Camden's Complete Street Resolution is an important policy success
- Improving communication between the county and city governments is a clear need.

3.4.2 Public Workshops

The first of two public workshops was held in November of 2012 to collect feedback from county residents on the development of the Kershaw County Bicycle, Pedestrian,

and Greenways Plan. The second workshop was held in May 2013 and included a presentation of the draft recommendations of the Plan.

Approximately 30 residents attended the first workshop, which followed an open house format. Workshop attendees visited "stations" that offered information about various aspects of Kershaw County's bicycling, walking, and trail environment. Maps illustrated existing and proposed bicycle, pedestrian, and trail facilities. Information boards described related amenities and programs that could be implemented as part of the countywide network. Participants provided input related to gaps in the existing system and other opportunities and constraints that should be considered in the Plan. Additionally, a focus meeting was hosted prior to the public meeting with representatives from Bethune and Elgin communities. This meeting provided insight into the specific needs of these communities for the purpose of informing the Plan's recommendations.

The public comments received during the first workshop are summarized below.

Public Input Summary

- Create a connected network (current facilities are disconnected)
- Develop consistent wayfinding signage
- Design for the needs and preferences of senior citizens
- Design for the needs and preferences of children
- Engage Kershaw Health as a partner in implementation
- Maintain existing shoulders and bikeways
- Connect residents to downtown Camden (especially Black River Road residential areas)
- Advance Safe Routes to School efforts

3.4.3 Citizen Comment Form

The Kershaw County Bicycle, Pedestrian, and Greenways Plan comment form was available online from October 2012 through January 2013. The comment form was advertised through various outreach methods and was available at the public workshop. A total of 232 responses were received. The full comment form is provided in Appendix D of this Plan and a summary of the results are discussed below.

Respondent Characteristics

Of the 232 survey respondents, 71 percent were females and 29 percent of respondents were male. This high ratio of female to male participation is unusual for communitywide bicycle, pedestrian, trails comment form, but is a positive sign of the strong interest women have in the bicycling and walking environment. Nationally, men's bicycling trips surpass women's by more than two to one. For that reason, women are often considered an "indicator species" for the bikeability of a community.[1] The high level of interest among women suggests that there is latent demand for bicycling and walking in Kershaw County and, in particular, that improvements to the bicycle friendliness of the local environment will yield a significant increase in bicycling activity.

All respondents either live or work in Kershaw County and nearly three-fourths of them (71 percent) both live and work in the county. As shown in Figure 3-3, respondents aged 40 and over made up the largest percentage, while a relatively low percentage of respondents were below the age of 20. The breakdown of ages among respondents were reflective of the age demographics of Kershaw County as a whole, as reported in the 2010 U.S. Census.

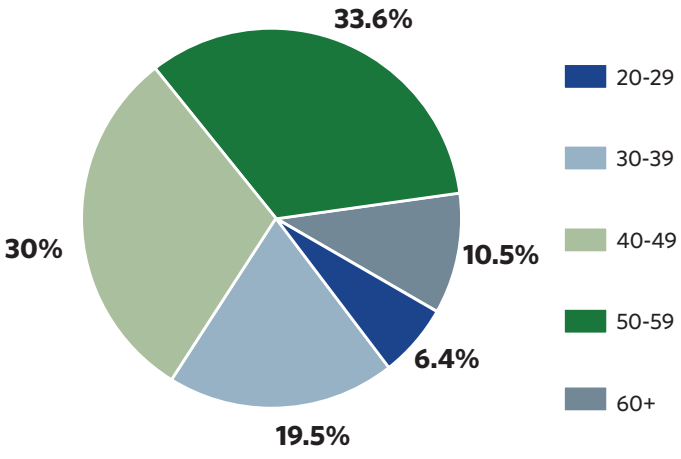


Figure 3-3: Age of Survey Respondents

[1] Source: http://www.scientificamerican.com/article.cfm?id=getting-more-bicyclists-on-the-road

Bicycling, Walking, and Greenway Preferences

Figure 3-2 reveals that, among survey respondents, recreation is the number one reason that residents of Kershaw County walk or bike while about 13 percent bike or walk for transportation purposes. Even with only 13 percent of respondents biking or walking for transportation currently, approximately 30 percent identified transportation as a primary benefit of developing Kershaw County's bikeway, walkway, and trail network. These figures again show evidence of latent demand for more bicycling and walking. Fostering conditions where bicycling and walking are accepted and encouraged increases the community livability, allowing people to make decisions over their choice for transportation purposes.

The graphs shown in Figures 3-4 to 3-7 identify existing issues related to bicycling and walking infrastructure in the County, as well as user preferences for targeted improvements. Respondents identified a lack of connected greenway, sidewalk, and bicycle facilities and deficient or unmaintained greenway, sidewalk, and bicycle facilities as the top two reasons for not walking or bicycling more often. The following three reasons also received high rankings as commonly cited reasons for not biking and walking more often: lack of information about existing greenway, sidewalk, and bicycle facilities; motor vehicle traffic; and unsafe street crossings. Notably, the following reasons for not walking or biking more often ranked very low in Kershaw County, yet usually rank much higher in other communities: aggressive motorist behavior, lack of time and lack of nearby destinations. The citizen comment form reveals an opportunity to increase bicycling and walking activity through investment in infrastructure without interference from deterrents commonly found in other communities.

Among survey respondents, development of sidepaths and greenways is the most popular approach to improving the bicycling and walking environment. Also, respondents indicated that they preferred walking on trails and greenways twice as much as bicycling. Residents of Kershaw County are interested in accessing many local destinations by bike or foot with parks, places of work, schools, and restaurants ranking highest (Figure 3-8). The interest in biking or walking to places of work and schools, in particular, suggest a potential for increased bicycling and walking commuting.

Roadways Most in Need of Improvement:

Figure 3-9 displays the most popular roadway suggestions for bike and pedestrian improvements based on survey responses. The size of the font reflects the number of times the respondents of the survey mentioned each roadway facility. The most popular roadways in need of improvement according to the respondents are:

- Highway 1/Dekalb Street
- Broad Street
- Highway 521
- Wildwood Lane

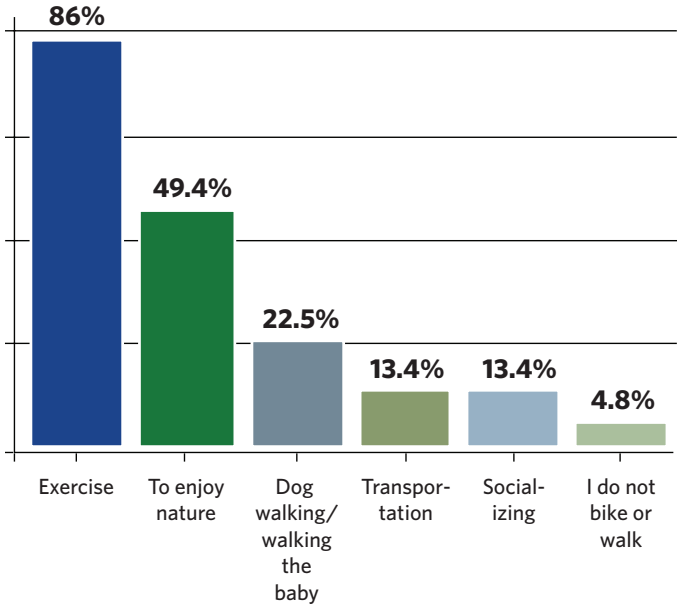


Figure 3-4: Respondent's reasons for walking and biking

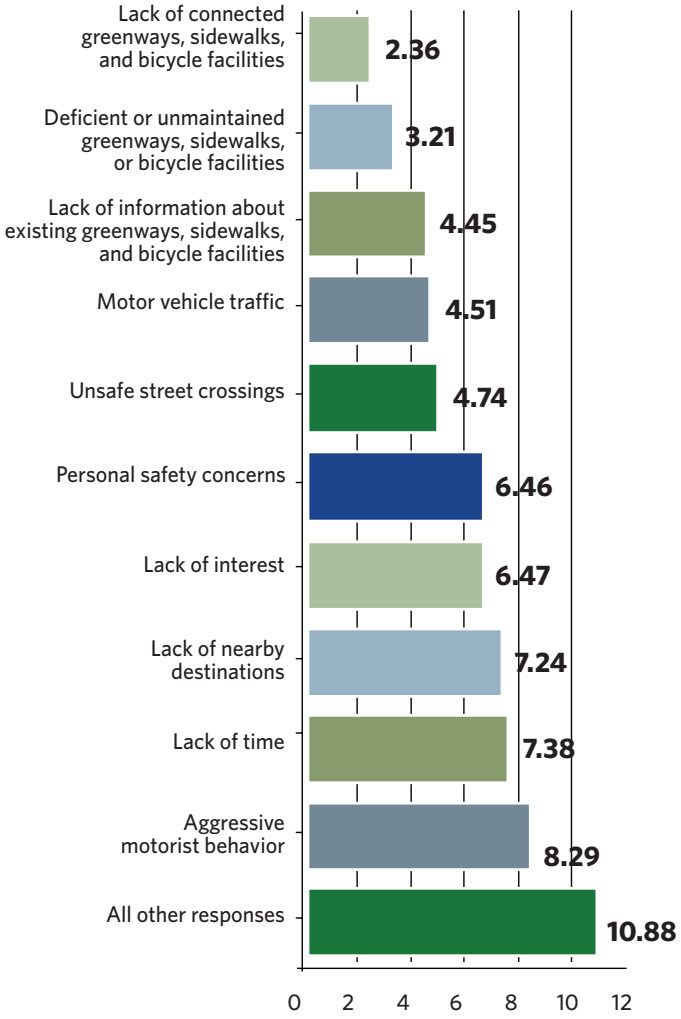
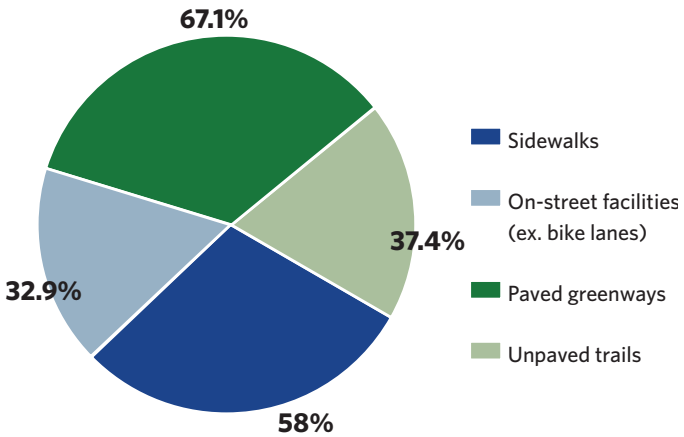


Figure 3-5: Reasons that discourage biking and walking (lower numbers, shown at the top of the graph, indicate a higher ranking)



ıure 3-6: Respondent's preferred walking and bicycling
ies

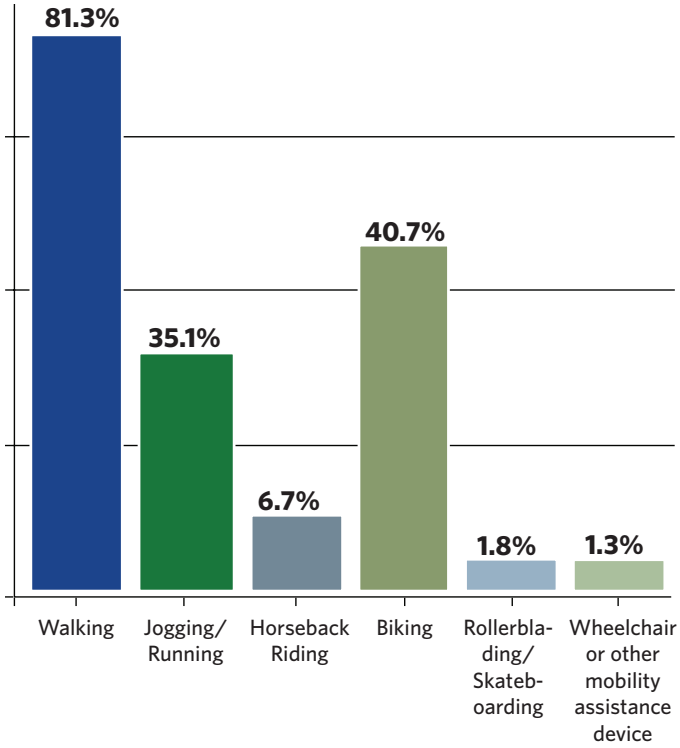


Figure 3-7: Respondent's preferred transportation mode when using a trail

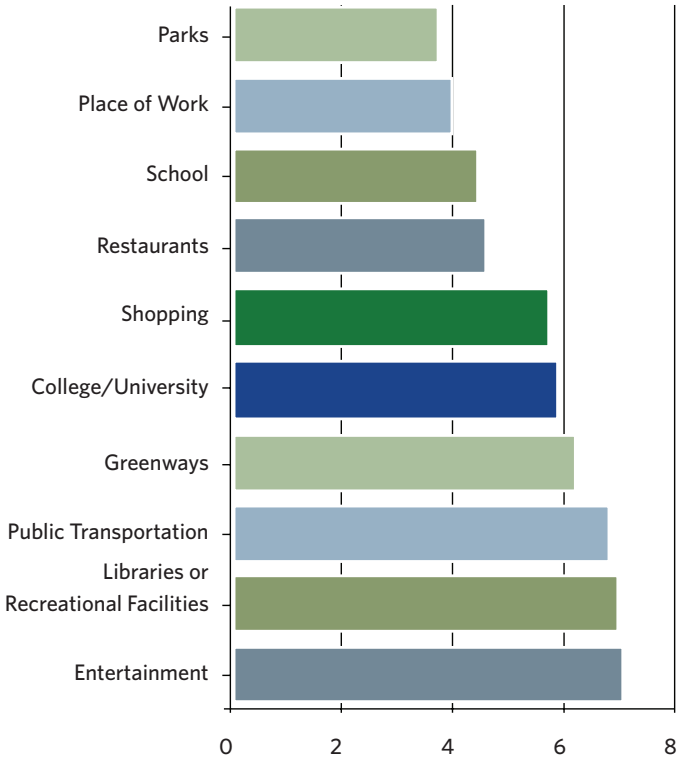


Figure 3-8: Respondents' preferred destinations for biking and walking (lower numbers, shown at the top of the graph, indicate a higher ranking)

Figure 3-9: County roads in most need of biking and walking improvements (larger fonts indicate a higher frequency of mentions)

3.5 Opportunities and Constraints

3.5.1 Overview

A variety of agencies, organizations, and partners have begun the work of improving Kershaw County's bicycle, pedestrian, and greenway environment. Community-driven political support for such improvements is evidenced through the county's commitment to becoming the healthiest county in South Carolina, the education and encouragement work of ESMMKC, the City of Camden's Complete Street policy, and the establishment of new partner organizations like LiveWell Kershaw.

In terms of infrastructure, the area's geographic characteristics, existing roadway configurations, and density of land uses significantly affect active transportation and recreation and the everyday decisions by bicyclists, pedestrians, and motorists. Steps taken to improve Kershaw County's infrastructure include:

- SCDOT installed bicycle lanes on portions of Hwy 1
- the Safe Routes to School South Carolina program implemented improvements at the campus of the Stover Middle and Blaney Elementary Schools and proposed improvements for Jackson Elementary School
- the City of Camden is pursuing bicycle and pedestrian improvements along Highway 521 at the city's center.

Overall, however, there is a lack of connectivity between the County's existing bikeway, walkway, and greenway facilities. The bicycle lanes on Highway 1 are not continuous and do not connect to other bicycle facilities. The existing sidewalk network is inconsistent and has significant gaps, as well as challenging intersections, in need of safety improvements. Existing trail facilities at the popular Battle of Camden site and Historic Camden site function as loop trails but do not connect to on-street facilities or other off-street trails. Additionally, beyond the street grid of Camden's city center, neighborhoods have limited connectivity to one another.

Key infrastructure-related opportunities and constraints for the development of bicycle, pedestrian, and greenway facilities in Kershaw County are outlined below.

3.5.2 Opportunities

Railroad corridors: Railroad tracks provide a continuous linear corridor of undeveloped land. Abandoned rail lines offer a right of way suitable for developing rails-to-trail greenways, while active rail lines may present an opportunity for a rail-with-trail greenway.

Utility corridors: Utility easement corridors, such as those afforded by gas lines, power lines, and sewer or water lines, provide a linear right of way suitable for developing greenways. Utility companies may require adherence to their own unique design guidelines for a trail within their easement corridor.

Railroad and utility corridors offer preserved and continous routes of land that might be utilized for pedestrian and bicycle use

Roadway/lane widths: Some roadways in the County are wide enough to offer bicycle lanes or other bicycle facilities without the need to add additional pavement width.

Low-volume roads: Kershaw County has numerous residential areas with low traffic volumes and low traffic speeds. This includes traditional neighborhoods near downtown Camden as well as less dense residential areas in Elgin, Lugoff, and Bethune.

Roadways with adequate widths and low-volume roads can be easily treated for bicycle use

Cultural/Recreational facilities: Existing loop trails at destinations such as Historic Camden, the Battle of Camden Revolutionary War Site, and county parks can be leveraged through linking to a broader countywide bicycle, pedestrian, and greenway network.

Linking cultural and recreational facilities to a bicycle and pedestrian network can bolster social and physical health

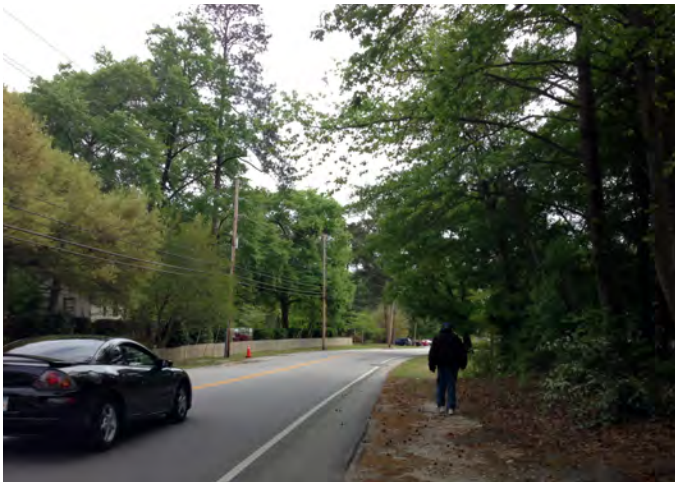
3.5.3 Constraints

Lack of sidewalks: Numerous gaps in the sidewalk system exist, leaving some neighborhoods and destinations disconnected from other areas. In many cases, worn foot paths may be observed where there is no sidewalk, indicating use and need.

Narrow sidewalks: A majority of existing sidewalks meet only minimum width requirements. Sidewalks measuring five feet in width that do not offer a buffer provide minimal comfort for pedestrians along corridors with moderate to high traffic volumes or traffic speeds.

Lack of crossing facilities: Incomplete crossing facilities are commonplace lacking high-visibility crosswalks, adequate curb ramps, and countdown signals.

Multi-lane roads: There are several commercial corridors with four or more travel lanes. The roadways provide access to commercial, retail, and office destinations that attract bicycle and pedestrian trips. The current roadway configuration does not provide a safe place for bicyclists traveling on it or crossing it. Pedestrians face extended crossing distances and multiple conflict points at each intersection. Examples of this can be seen along sections of Highway 521 and Highway 1.



Roadways with lacking or narrow sidewalks can disconnect the pedestrian network

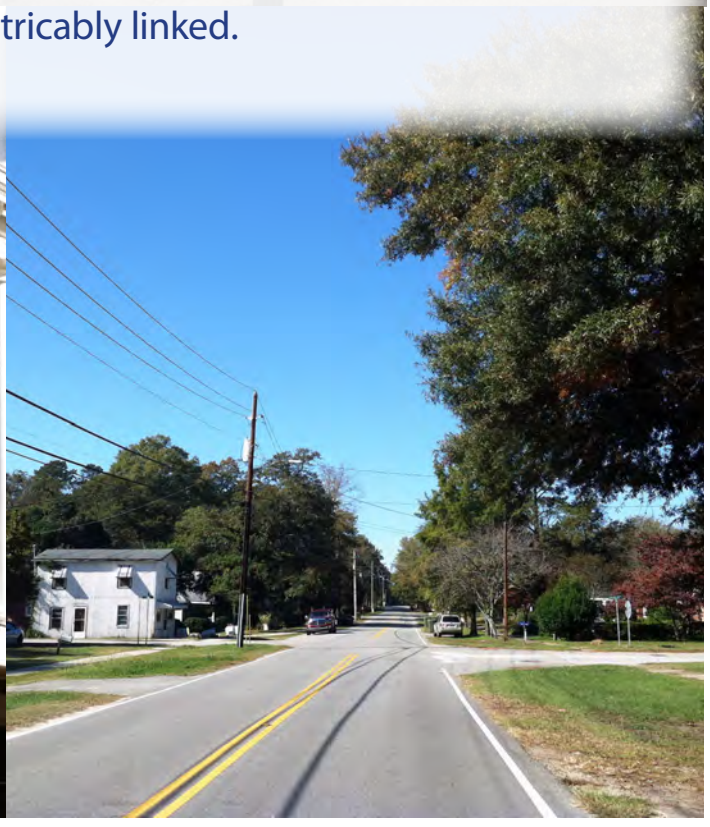
A lack of crossing facilities and wide multi-lane roads are barriers to pedestrians and bicyclists

Lack of paved shoulders: Many roadways throughout the county are too narrow for bicyclists to travel safely on them. These roads have little or no shoulder and have relatively high vehicle travel speeds which pose multiple hazards for bicyclists.

Limited railroad crossings: In Kershaw County, the best opportunities for bicyclists, pedestrians, or other trail users to cross railroad tracks are through existing at-grade crossings. However, the number of at-grade crossings are limited, which, in turn, limits the connectivity of safe bicycling, walking, and trail routes. Limited access between Scott Park and nearby residential areas provides one example of this.

Roads with no shoulder and railroad crossings can be hazards to bicyclists and pedestrians

Bicycle and pedestrian infrastructure and access to outlets for healthy foods are inextricably linked.



4: Healthy Food Access Analysis

The mission of Eat Smart Move More Kershaw County is "to coordinate collaborative and sustainable efforts to support healthy eating and active living where Kershaw County residents live, learn, work and play." Recognizing that bicycle and pedestrian infrastructure and access to outlets for healthy foods are inextricably linked, this chapter provides an analysis of the existing conditions for accessing healthy food by way of active transportation. As noted in Chapter 2, more than six percent of Kershaw County households do not have access to a vehicle and nearly 30 percent have access to only one.[1] These statistics highlight the importance of providing active transportation choices for Kershaw County's most vulnerable community members to access healthy foods.

4.1 Methods

Alta prepared a spatial analysis to assess where residents in the County currently have access to fresh fruits and vegetables via active modes of transportation. The locations of full service grocery stores, farmers markets and farm stands were mapped. Using these food sources as the destination points, walk and bike "sheds" were mapped. The walk and bike sheds encompass the area from which residents could likely access the fresh food source via walking or cycling. The analysis uses the actual road network distance from the fresh food source, which results in an irregular shape as they align with the actual distance walked, not the linear (crow flies) distance from the fresh food source. This analysis was based on average trip distances identified the 2009 National Household Travel Survey. Average distances used in this analysis are:

- Walk: 0.5 mile distance from food source
- Bike: 1.5 mile distance from food source

Once the Walk/Bike sheds were mapped, we considered the proximity of vulnerable populations in Kershaw County to fresh food sources and their relationship to active transportation. Analysis is limited in that demographic data was only available at the Census Tract level. Population data is available at the block level and is shown to provide context.

For the purposes of this analysis the demographic categories include:

- Youth under 18 years old
- Aging Population over 60
- Households with zero vehicles available
- Households at or below the federal poverty level

Note that fresh food sources in the adjacent counties were reviewed to determine if they could reasonably serve residents of Kershaw County. There are no full service groceries, farmers markets or farm stands within 3 miles of the Kershaw County border – precluding reasonable access by bicycling or walking.

4.1.1 Summary Tables

On average about ten percent of the County population lives within the walk/bike shed from fresh food sources. Tables 4-1 and 4-2 provide a snapshot of total population and percentages by demographic category. The percentage of population or households that are within the walk/bike sheds ranges from 11.5 percent to 14.5 percent.

4.1.2 Map Summaries

Figures 4-1 through 4-6 geographically illustrate the existing conditions for local residents accessing healthy food outlets through bicycling and walking. The maps graphically depict the data shown in Tables 4-1 and 4-2. Figures 4-1 through 4-5 are based on specific, target population groups. Figure 6 provides a large scale view of the population that resides within the walk/bike shed of healthy food outlets in Bethune, Camden, and Elgin. A summary of the key findings of each map analysis is provided below.

[1] American Community Survey 5-Year Estimates 2007-2011. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_5YR_DP04

Table 4-1: Total population or households in Walk/Bike sheds by demographic category

Mode	Distance ("Mode Shed")	Population per Mode Shed	Households per Mode Shed	Population in Poverty per Mode Shed	Households Without Cars per Mode Shed	Population Under 18 per Mode Shed	Population Over 60 per Mode Shed
Walk	0.56 miles	1041	426	178	33	249	213
Bike	1.48 miles	6192	2538	1007	193	1472	1304
County Total		61010	23992	9573	1566	15033	12373
Walk and bike shed distances used in this analysis were derived from the 2009 National Household Travel Survey.	Demographic profiles per Model Shed are determined by calculating the Mode Shed acreage by Census Tract acreage. This ratio is multiplied by the County total.						

Table 4-2: Percentage of county population by demographic category within Walk/Bike Shed

Mode (Shed)	% total population	% total households	% of population in poverty	% of population over 60	% of population under 18	% of carless households
Walk	1.71	1.78	1.86	1.72	1.66	2.13
Bike	10.15	10.58	10.52	10.54	9.79	12.33

Figure 4-1: Youth Population

- Largest percentage in the tract both north and south of Elgin.
- Less that 10% of the under 18 population live within the Walk/Bike Sheds

Figure 4-2: Aging Population

- Largest populations around clustered around Camden, Lugoff and northwest corner.
- The aging population may have different needs for active transportation options. Review opportunities for transit connection and multimodal trips.

Figure 4-3: Population in Poverty

- The highest concentration of households in poverty are located south of Camden and northwest of Lugoff
- Much of the population in poverty is likely located outside of the direct walk/bike shed.
- Clusters of population just outside of the walk/bike sheds and Camden city limits should reviewed for possible connections.

Figure 4-4: Zero Car Households

- Highest percentage of zero car households are found northwest of the community of Lugoff, southeast of Camden and in the northeastern corner of the county.

Figure 4-5: Equity Analysis

- The census tract that includes the community of Lugoff has the highest percentages of potentially vulnerable populations. Access along or parallel to Jefferson Highway/Main Street is critical for access to fresh food.
- Census Tracts surrounding Camden also show the highest percentages of vulnerable populations. There are population clusters just outside of the mapped walk/bike sheds. These clusters would likely benefit from improved bicycle access. While 1.5 miles is the average trip length from the NHTS, access from areas a 2 – 3 mile distance from fresh food sources should be considered in areas with a population clusters.
- Transit access should also be reviewed to look at opportunities to combine modes and expand access to fresh foods.

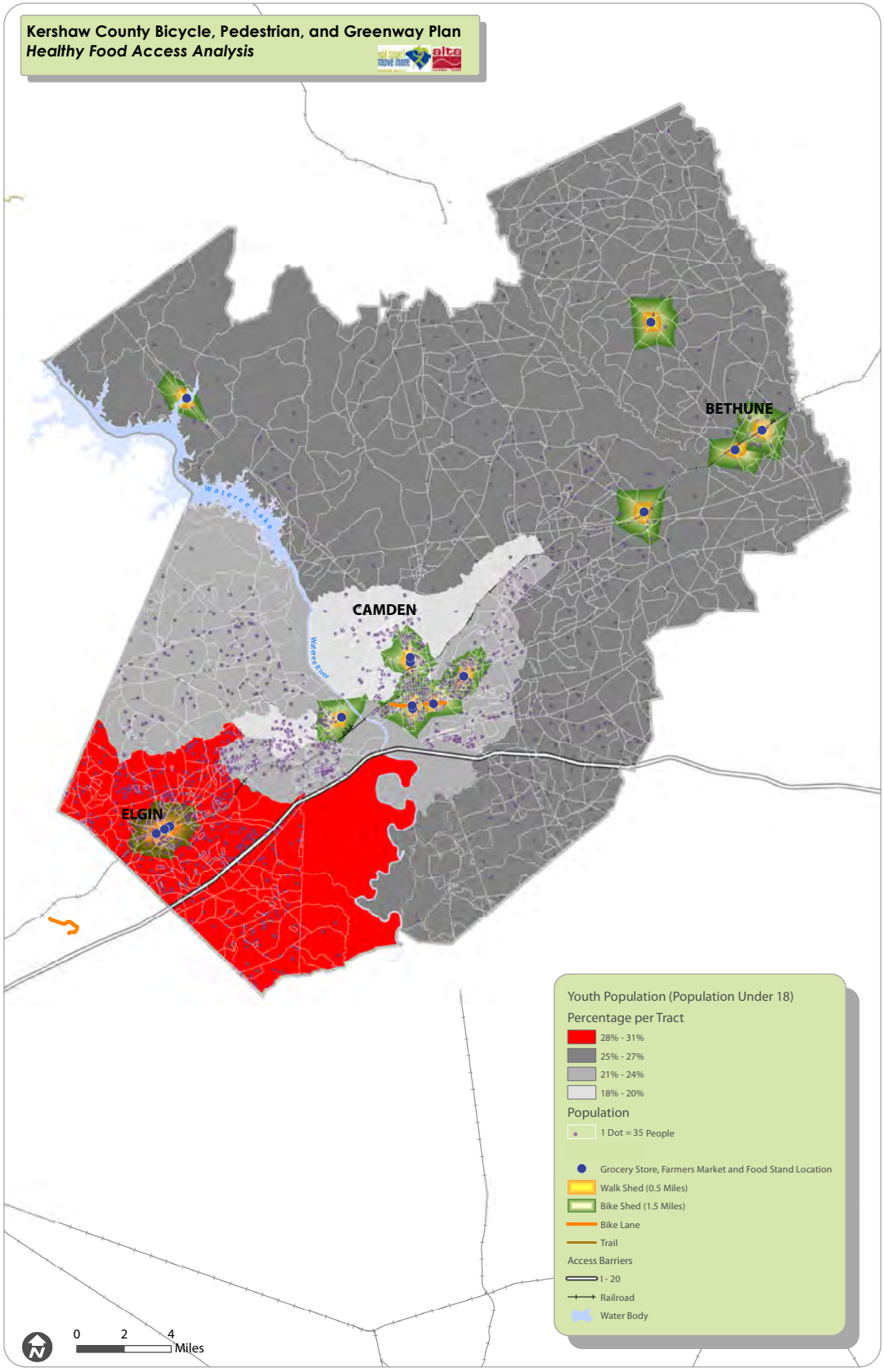


Figure 4-1: Youth Population

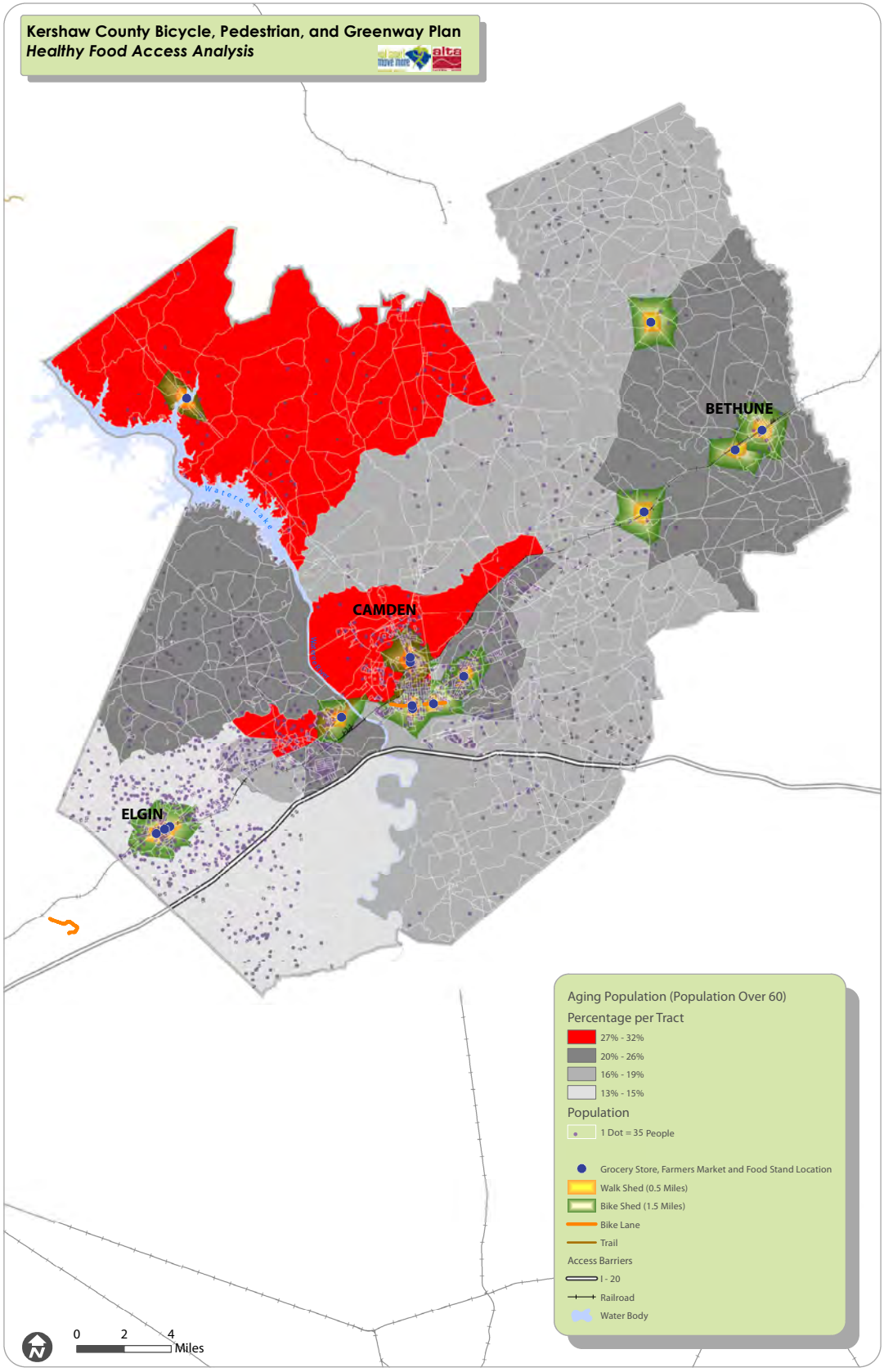


Figure 4-2: Aging Population

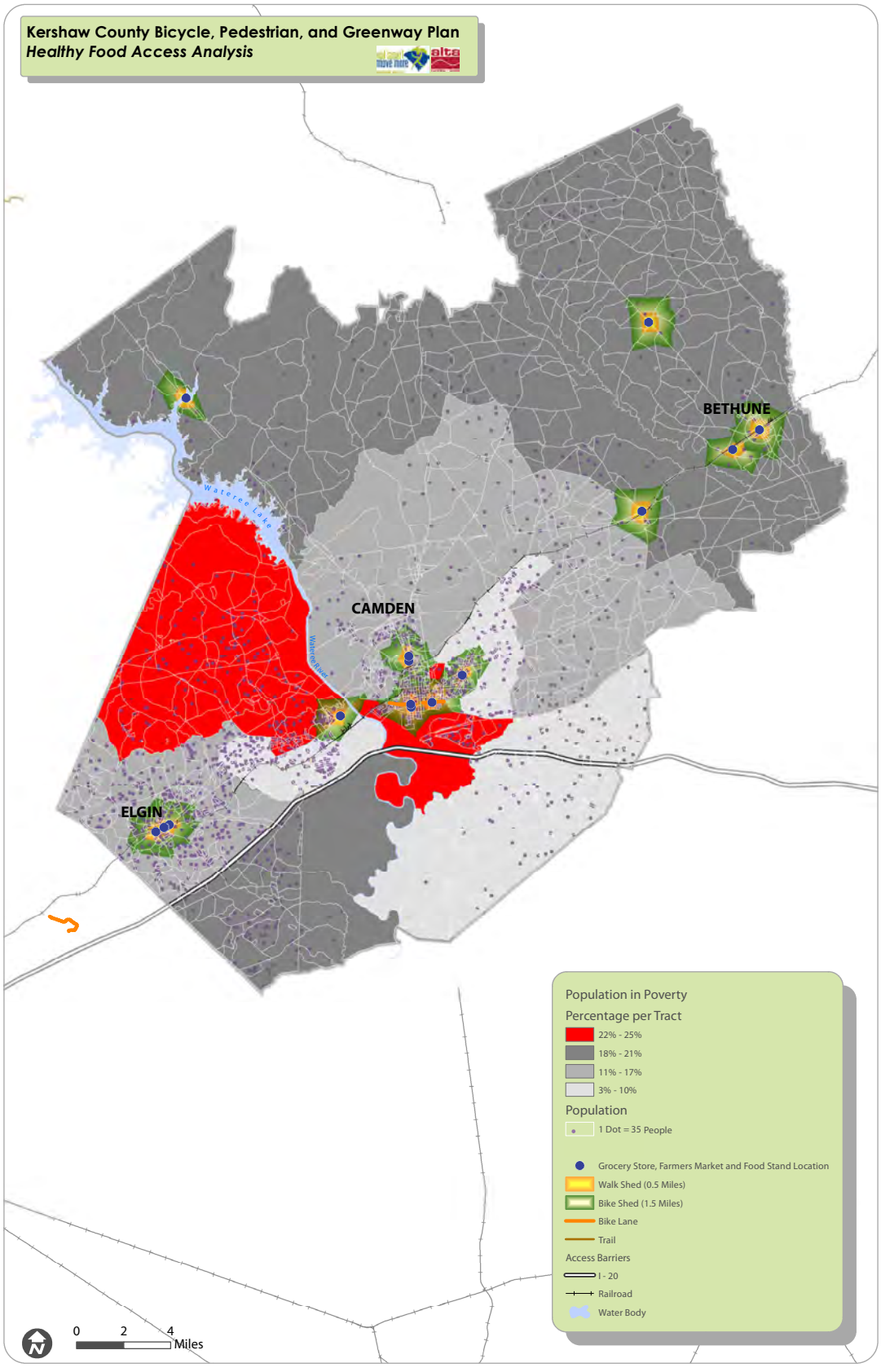


Figure 4-3: Population in Poverty

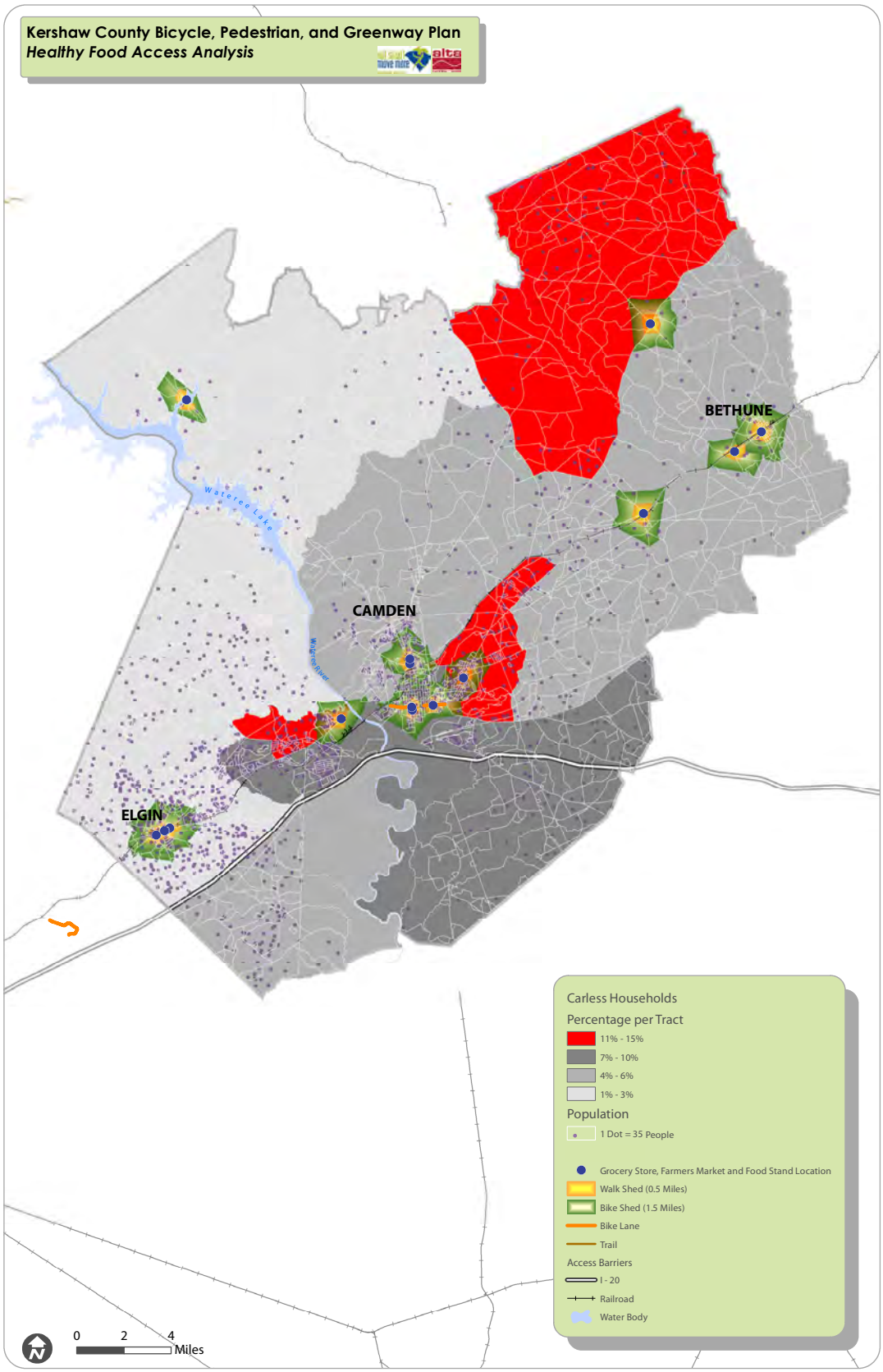


Figure 4-4: Carless Housholds

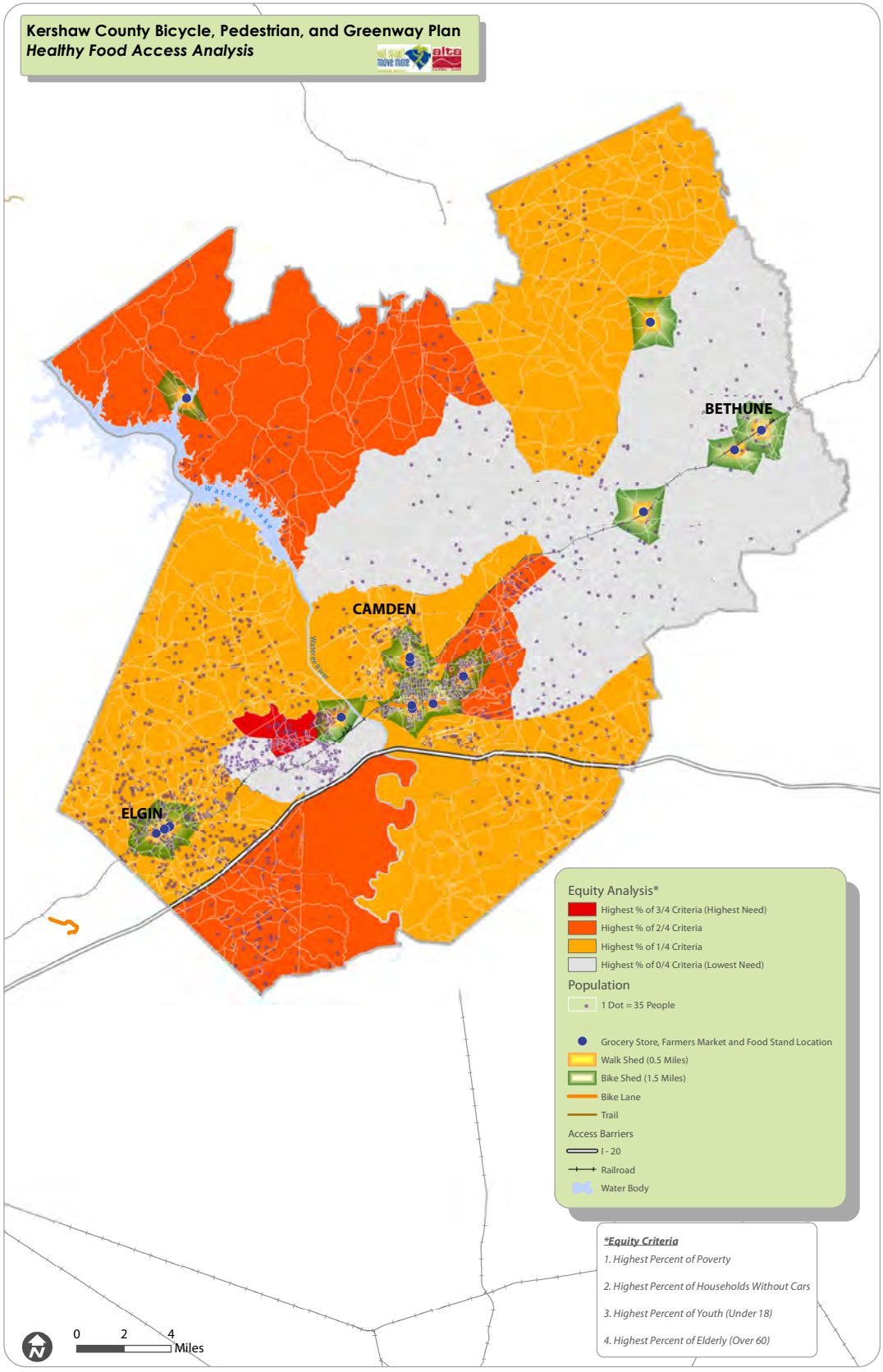


Figure 4-5: Equity Analysis

Figure 4-6: City Bike/Walk Sheds

The City focus maps provide clear opportunities for improving access to the fresh food stores for residents within the walk/bike sheds or just outside. Consider complete streets for main streets and arterials with direct access to food source and/or develop alternate routes with comparable access. The following summarizes key routes that should have both pedestrian and bicycle access.

Bethune:

- Bicycle access on Bethune Road/Main Street and parallel routes such as Walton and Inwood would bring residents directly to the Discount Grocery
- Jefferson Davis Highway and King Street
- Timrod Road

Camden:

- Bicycle access on Bishopville Hwy and Sumter Highway
- Kershaw Highway
- East Dekalb
- Jefferson Davis Highway
- Broad Street

Elgin:

- Highway 1-S/Main Street
- Highway Church Road/Blaney Rd
- Bowen Street
- Sessions Road
- Greenhill Road
- Watson Street

4.2 Conclusion

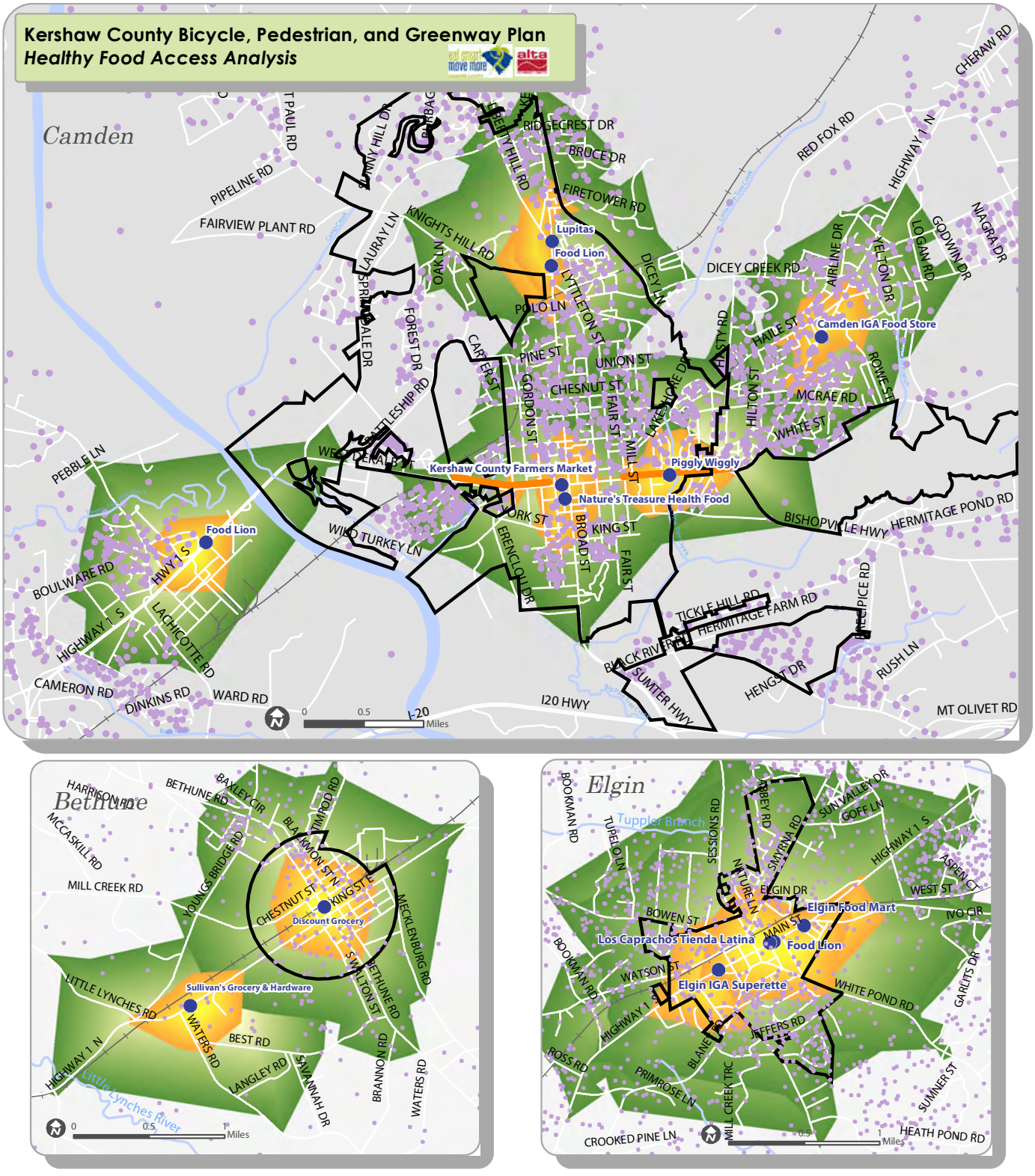
The food access analysis identifies areas where concentrations of target populations, which may have limited access to a vehicle, overlap with the walk/bike shed of healthy food outlets. The analysis of Kershaw County revealed two priority areas for improving bicycle and pedestrian access to healthy foods.

- Due west of Lugoff: creating safe and inviting bikeways and walkways from the residential areas along Ridgeway Road to the Food Lion on U.S. 1.
- East and south of Camden: creating safe and inviting bikeways and walkways from the residential areas east of Hasty Road and on either side of U.S. 1 to the Camden I.G.A.

The analysis also revealed opportunities to connect relatively high density residential clusters with local food outlets (regardless of demographics). Residential clusters exist within close proximity to healthy food sources along Broad Street within the city limits of Camden. With improved bicycling and walking environments, these residents will have safer and more convenient active transportation route choices.

Several rural areas of Kershaw County evidence a need for improved access to healthy food outlets through means other than a personal vehicle. The northwestern and southwestern portions of Kershaw County, in particular, are identified as priority areas for increased access (Figure 4-6). In these areas, very few residents live within the walk/bike shed of healthy food sources, which limits the role bicycle and pedestrian facilities play in improving access to those locations. Eat Smart Move More Kershaw County can consider other avenues for increasing healthy food availability among these populations. The following are examples of alternate strategies, which are beyond the scope of this master planning effort, but may warrant further exploration:

- Develop local, community garden plots
- Support for farm stands
- Establish mobile fresh produce vending and remote community-supported-agriculture (CSA) drop locations.
- Create incentives for locating small scale markets within these areas.



re 4-6: Kershaw City Views

Each mileage of new facility will increase Kershaw County's bicycle and pedestrian network connectivity and help to create a comprehensive, safe, and logical network.

5: Recommendations

5.1 Overview

This chapter lays out the recommended pedestrian and bicycle network with a countywide system of walkways, greenways and bikeways connecting key destinations and surrounding areas. The network recommendations build upon current and past planning efforts and were identified through input from the community, the Project Steering Committee, and the needs analysis. Reflecting the vision and goals of this Plan (see Chapter 1), the proposed improvements will make bicycling more comfortable and accessible for bicyclists of all skill levels and trip purposes and create walkable communities throughout the County.

Network improvements include infilling deficient or nonexistent sidewalks, establishing a formalized bikeway system, and creating signature off-street trails and greenways. This chapter is organized as follows:

- Recommended facility types: a description of each type of facility included within the proposed network
- Countywide bikeway, walkway, and greenway system: an overview of the countywide network for bicyclists and trail users, as well as the proposed sidewalk, bikeway, and greenway recommendations within each of the four major community centers of Kershaw County
- Project prioritization: a description of criteria used to determine near-term priority projects and a detailed description of each of the highest priority projects

5.2 Recommended Facility Types

5.2.1 Bikeway and Walkway Network

The network recommendations of this Plan include approximately 420.5 miles of new on-street bikeways and walkways (including sidewalks, bike lanes, etc) and 165.5 miles of new off-street greenways. Each mileage of new facility will increase Kershaw County's bicycle and pedestrian network connectivity and help to create a comprehensive, safe, and logical network.

Sidewalks are the recommended facility type for the proposed walkway network. Shared-use Paths/Greenways will serve pedestrians, as well as other user groups. The proposed on-street bikeways were developed with consideration for roadway widths, traffic volumes and speeds, and connections to destinations. Brief descriptions of each facility type recommended for Kershaw County are provided below. For a comprehensive guide to design and implementation of these facilities, see Appendix F: Design Guidelines.

Sidewalk Located within the roadway right of way, sidewalks serve pedestrian users and are a critical component of creating a walkable community. For the safety of pedestrians, as well as bicyclists, it is not recommended that adult bicyclists ride on a sidewalk. In many cases, it is not legal for sidewalk bicycle riding to occur, such as in the central business district of Camden (per city ordinance).

Neighborhood Bicycle Routes Rather than a specific bicycle facility type, these routes contain combinations of facilities, if any. This Plan recommends several signed routes that connect destinations in areas where no special bicycle facilities are needed (due to lower traffic speeds and volumes).

Shared-Lane Markings (Sharrows) Shared lane markings, or "sharrows," are placed in a linear pattern along a corridor, typically every 100-250 feet and after intersections. They make motorists more aware of the potential presence of cyclists; direct cyclists to ride in the proper direction; and remind cyclists to ride further from parked cars to avoid 'dooring' collisions.

Paved Shoulders Paved shoulders are the part of a roadway which is contiguous and on the same level as the regularly traveled portion of the roadway. There is no minimum width for paved shoulders; however a width of at least four feet is preferred. The paved shoulder recommendations of this Plan reflect the need to improve the space available for bicyclists along the signed ESMMKC bicycle touring routes and along other key corridors connecting less dense areas of the county. The most effective and cost-efficient way to pursue implementation of these paved shoulder recommendations

is to capitalize on regularly scheduled resurfacing, reconstruction, and road widening projects.

Bicycle Lanes A bicycle lane is a portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential and exclusive use of bicyclists. The minimum width for a bicycle lane is four feet; five- and six-foot bicycle lanes are typical for collector and arterial roads. Bicycle lanes can be striped on existing roadways, sometimes with modifications to travel lane widths and configuration. As a general practice, any local arterial or collector that is widened should incorporate bicycle lanes with speed limit reduction considerations.

Shared-Use Path/Greenways Shared-use paths are completely separated from motorized vehicular traffic. They are generally constructed within undeveloped corridors, such as within parks, open spaces, waterways, or utility corridors, though they may be located within a roadway right-of-way. Shared-use paths include bicycle paths, rail-trails or other facilities built for bicycle and pedestrian traffic.

Table 5-1 Lists the types of bikeway and walkway facilities and the mileage of those facility types within the recommended bikeway, walkway, and greenway network for Kershaw County.

Table 5-1: Proposed mileage of recommended bicycle facility types for Kershaw County.

Bikeway, Walkway, and Greenway Facility Type	Recommended Mileage
Paved Shoulders	316.5
Shared Lane Marking	5.9
Bicycle Lanes	50.0
Bicycle Routes	21.1
Greenway Trails	165.5
Sidewalks	27.0
Total Recommended Network Mileage	586.0

5.2.2 Bicycle Parking

Beyond the proposed bicycle network, increasing bicycle parking is an area-wide priority for Kershaw County and its municipalities. Bicycle parking should be expanded as the bikeway network is expanded. This Plan recommends three action steps to achieve this and to ensure a wide network of bicycling parking locations that will serve the broad population of bicyclists.

- Ensure that bicycle parking is provided at all publicly owned buildings and facilities. This includes all public schools, civic buildings (such as libraries), government offices, recreation facilities, and others.
- Partner with local landowners to prioritize bicycle parking at destinations for bicyclists. Priority destinations would include downtown restaurants and retail and farmers market and grocery store locations.
- Adopt local policies to ensure long-term investment in bicycle parking. This action step is discussed further below.

As identified in the review of policy documents in Chapter 3 (and Appendix B), Kershaw County and its municipalities would benefit from establishing bicycle parking requirements and standards within local codes and ordinances. The new APBP Guidelines recommend decoupling bike parking supply from car parking supply. The reason for this is that a percentage of car parking supply is not necessarily a good measure of the number of cyclists who would be expected to travel to a particular destination, especially in densely urbanized areas or where multiple travel options exist. This Plan recommends that Kershaw County consider a land use-based approach with location-specific measures of supply such as parking spaces per square footage of retail. The APBP Bicycle Parking Guide provides two groups of recommendations, one standard set and a higher level for "Urbanized or High Mode Share Areas." Because of the characteristics of Kershaw County, Table 5-2 does not reflect the higher bicycle parking rates from the Bicycle Parking Guide.

Table 5-2: Typical Bike Parking Recommendations by Use

Use	Short-Term Bicycle Parking	Long-Term Bicycle Parking
Recreational/Civic		
Non-assembly cultural (library, government buildings, etc.)	1 sp./10K sq. ft. (2 min)	1 sp./10 employees (2 min)
Assembly cultural (church, theater, park, etc.)	Spaces for 2% maximum daily attendance	1 sp./20 employees (2 min)
Hospital	1 sp./20K sq. ft., (2 min.)	1 sp./20 employees or 1 sp./70K sq. ft., whichever is greater (2 min.)
Schools		
Kindergarten/Elementary Schools	1 sp./20 students (2 min)	1 sp./10 employees (2 min)
Jr. High/High School	1 sp./20 students (2 min)	1 sp./10 employees + 1 sp./20 students (2 min)
Colleges/Universities	1 sp./10 students (2 min)	1 sp./10 employees + 1 sp./10 students; or 1 sp./20K sq. ft., whichever is greater
Residential		
Single Family	No spaces required	No spaces required
Multifamily Residential		
With private garage for each unit	.05 sp./bedroom (2 min)	No spaces required
Without private garage for each unit	.05 sp./bedroom (2 min.)	.5 sp./bedroom (2 min)
Senior Housing	.05 sp./bedroom (2 min.)	.5 sp./bedroom (2 min)
Commercial/Other		
Offices	1 sp./20K sq. ft. (2 min)	1 sp./10K sq. ft. (2 min)
Retail (furniture, appliances, hardware, etc.)	1 sp./5K sq. ft. (2 min)	1 sp./12K sq. ft. (2 min)
Retail (grocery, convenience, personal)	1 sp./2K sq. ft. (2 min)	1 sp./12K sq. ft. (2 min.)
Industrial/Manufacturing	Determined at discretion of Planning Director (Suggested 2 min)	1 sp./15K sq. ft. (2 min)
Bus terminals/stations	Spaces for 1.5% of a.m. peak period ridership	Spaces for 5% projected a.m. peak period daily ridership

5.3 Recommended Countywide Bikeway, Walkway, & Greenway System

This Plan recommends both a countywide network of bikeways and greenways, as well as improved bicycle and pedestrian connectivity within each community of Kershaw County.

The recommended countywide bikeway and greenway network is illustrated in Figure 5-1. The network represents a connected system that will allow transportation and recreation-based bicycle travel throughout Kershaw County. The proposed network serves users traveling from community to community within the county (such as the Lugoff-Elgin Connector) and from within Kershaw County to adjacent counties, including linkages to the Carolina Thread Trail in Lancaster County and the Palmetto Trail in Richland County. Recognizing Kershaw County's cultural and natural resources, which are discussed in Chapter 6, the proposed network also serves bicyclists and trail users seeking to connect to tourism and visitor destinations.

The recommended local bikeway, walkway, and greenway networks for the City of Camden, the community of Lugoff, the Town of Elgin, and the Town of Bethune are illustrated in Figure 5-2. The proposed facilities include sidewalks, shared-use paths/greenways, and several of on-street bicycle facilities that serve to connect people and neighborhoods to local destinations. The local networks give special attention the bicycling and walking destinations identified as priorities through this planning process, such as schools, parks, outlets for healthy food, and downtown centers of activity.

5.4 Project Prioritization

The first step towards implementing a bicycle, pedestrian, and greenways network is identifying near-term projects. This chapter identifies 16 high priority projects recommended in the Plan. As discussed in the Chapter 7 of the Plan, the list of high priority projects provides a focus for moving forward with critical steps in network development. With key projects identified, those working to implement the Plan's recommendations (including the Kershaw County Bicycle, Pedestrian, and Greenways Advisory Committee discussed in Chapter 7) can pursue land acquisition or easement negotiations, communicate with key partners along the proposed alignments (such as large tract property owners, utility companies, or impacted neighborhoods), pursue project-specific funding, and develop design and construction documents for project implementation.

5.4.1 Prioritization Criteria

The high priority projects are identified based on evaluation criteria cited in Table 5-3 below. The criteria are based on input provided by the Project Steering Committee, community members (via the public involvement process), and the project team's understanding of what it takes to implement a countywide bicycle, pedestrian, and greenway network. A relative weight is assigned to each criterion.

Table 5-3: Evaluation criteria for project prioritization

Strengths	Areas for Improvement
Near-term feasibility ■ Design feasibility ■ Large tract property owners ■ Community support (as evidenced through the Plan's public involvement process)	5
Proximity to key destinations, including cultural and recreational sites	4
Connections to existing bicycle, pedestrian, and trail facilities	3
Links between target residential populations and healthy food outlets	2
Geographic equity	1

5.4.2 Priority Project Types

The different facility types included within the proposed network require different strategies for implementation and different partners for implementation. This section "packages" the priority projects of the proposed network based on their unique characteristics of implementation and the existing opportunities and partnerships within Kershaw County.

Bicycle Route Network

Bicycle routes are uniquely suited for short-term implementation due to the fact that no construction is required and that facility development and maintenance costs are minimal. The routes require little more than bicycle route signage applied to roads that are already bicycle-friendly, and, once implemented, serve as a powerful tool for encouraging bicycling activity among a broad range of ages and abilities. For this reason, bicycle routes are not prioritized using the evaluation criteria described in the previous section, but rather, all bike routes proposed within this Plan are considered priority projects for short-term implementation.

Key Partners: County and municipality public works department; SCDOT

Paved Shoulder Network

ESMMKC has already invested in a bicycle route network for recreational, long-distance cyclists, including a custom website and QR code system for route directions and mapping. The paved shoulder recommendations of this Plan reflect the need to improve the space available for bicyclists along these ESMMKC bicycle route corridors and along other key corridors connecting to adjacent counties. Because the overwhelming majority of these roadways are owned by SCDOT, the most effective and cost-efficient way to pursue implementation of these paved shoulder recommendations is to capitalize on regularly scheduled SCDOT resurfacing, reconstruction, and road widening projects. For this reason, paved shoulders are not prioritized using the evaluation criteria described in the previous section, but should be implemented opportunistically in conjunction with regularly scheduled road maintenance, in partnership with SCDOT.

Key Partner: SCDOT, County Transportation Committee (CTC), and regional planning organizations

Utility corridors may provide opportunites for shared-use path projects

Regional Trails & Heritage Tourism

As discussed in Chapter 6: Recreational, Cultural, and Educational Elements, Kershaw County has the opportunity to strategically invest in the recommended bicycle, pedestrian, and greenway network in a manner that capitalizes on the community's signature natural and cultural resources. Priority projects within this category will leverage Kershaw County's landmark destinations - the Wateree River, The Battle of Camden Revolutionary War Site, and Historic Camden – and the regional trail systems of adjacent counties – the Palmetto Trail to the south and the Carolina Thread Trail to the north.

Key Partners: Palmetto Conservation Foundation, Carolina Thread Trail, Richland and Lancaster Counties, Historic Camden

Community Connectors

Priority projects that connect residents to local destinations such as downtowns and employment centers, as well as to one another, are categorized as community connectors. Such projects will serve as crucial infrastructure linkages for improving bicycle and pedestrian mobility and increasing levels of active transportation.

Key Partners: County and municipality public works departments; SCDOT

Kershaw County Bicycle, Pedestrian, and Greenway Plan
Proposed Greenways and Biking Improvements: Kershaw County

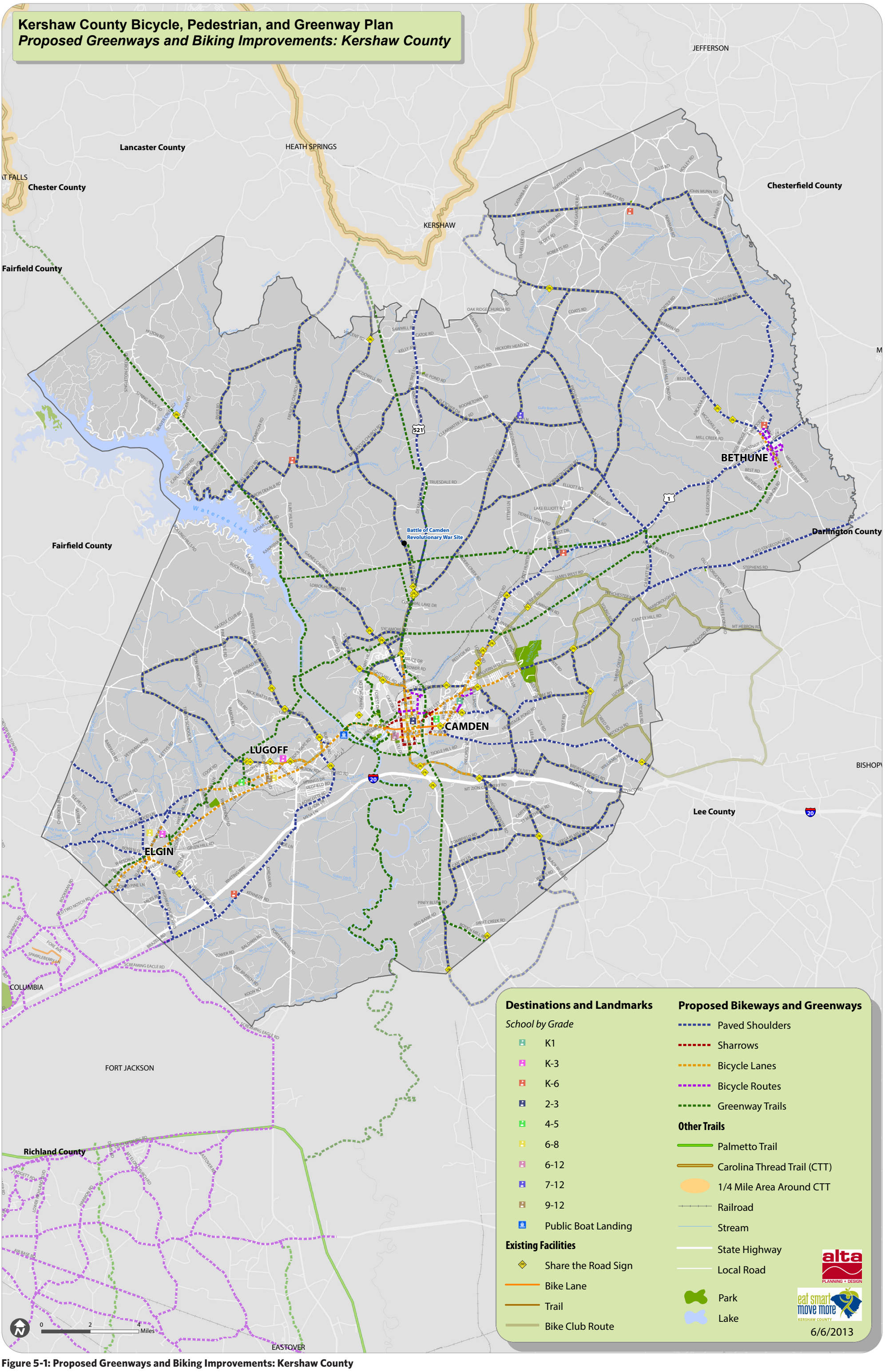
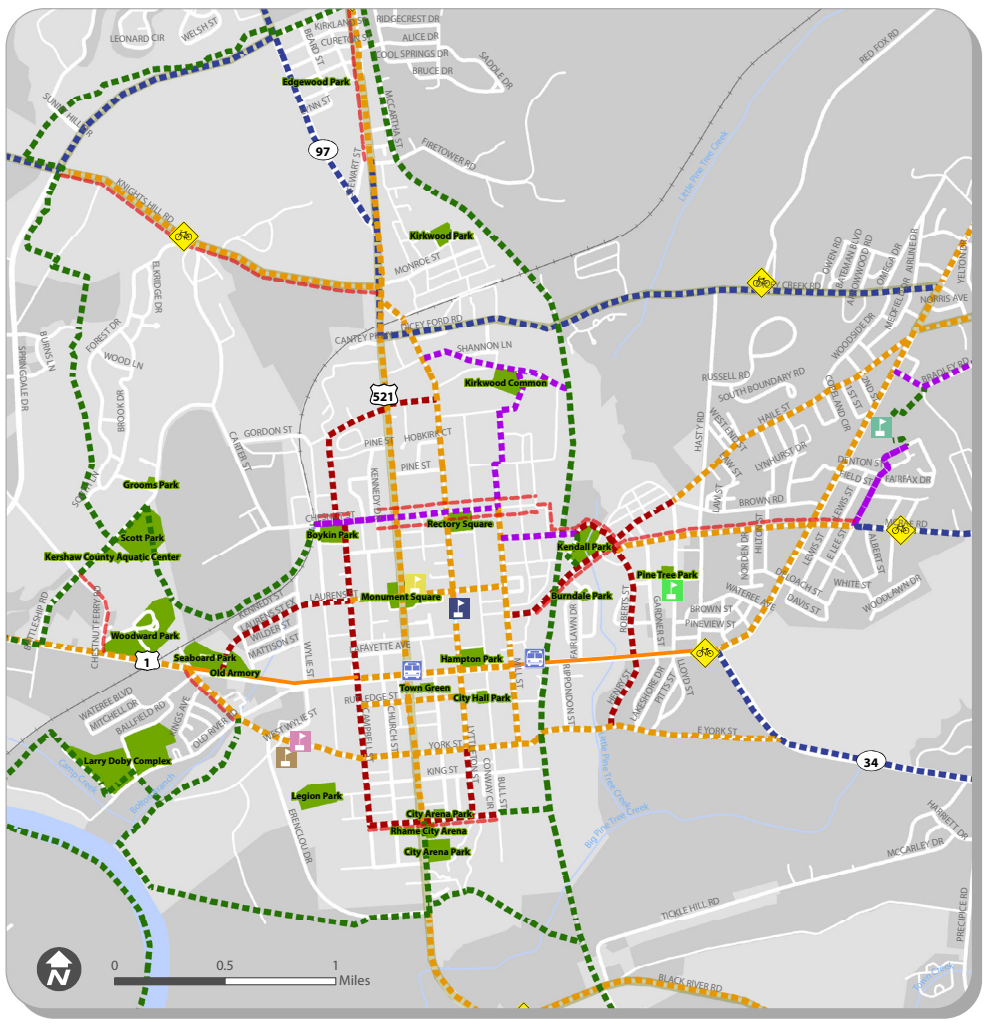


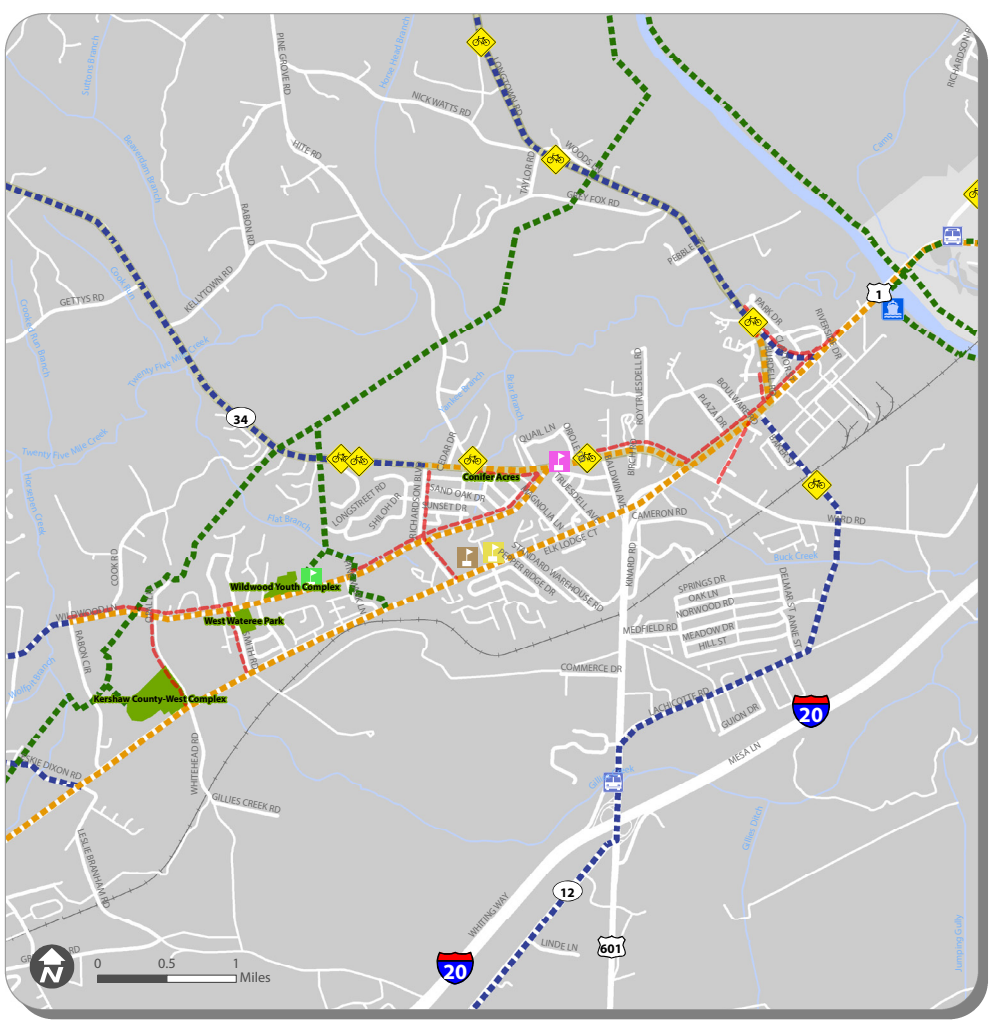
Figure 5-1: Proposed Greenways and Biking Improvements: Kershaw County

Kershaw County Bicycle, Pedestrian, and Greenway Plan
Proposed Walking and Biking Improvements: Camden, Lugoff, Bethune and Elgin

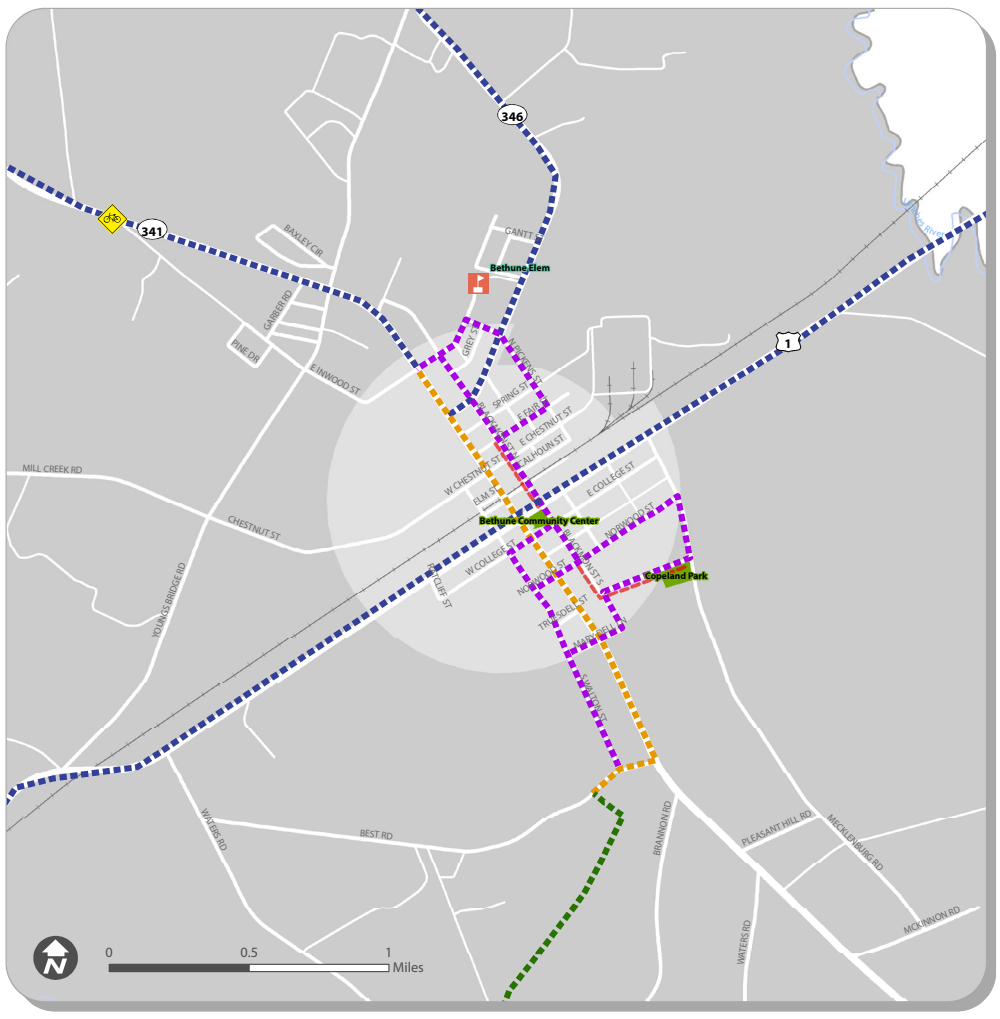
Camden



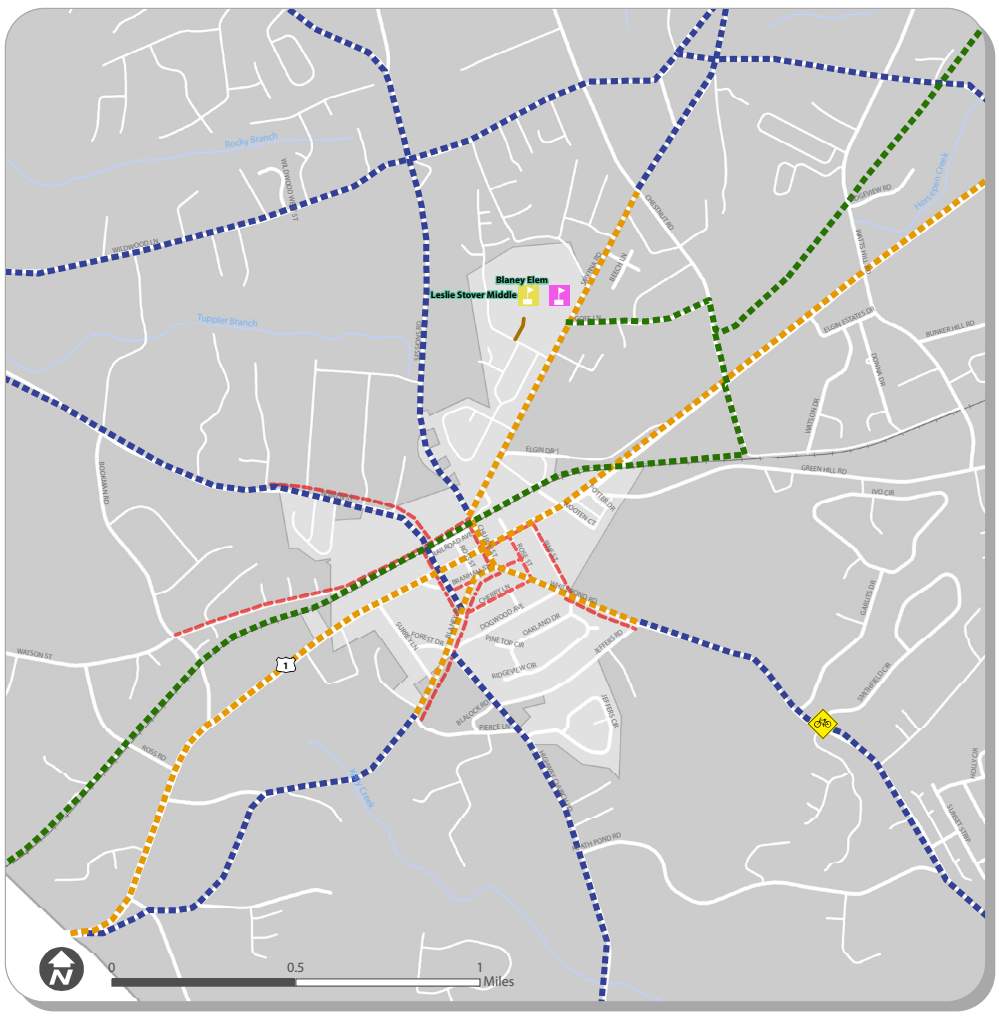
Lugoff



Bethune



Elgin



Trail Planning Points of Interest
- Public Boat Landing
- Existing Bike Lanes
- Existing Trails
- Share the Road Signs
- Bike Club Routes
- SmartRideStops

Proposed Bikeways and Sidewalks
- Paved Shoulders
- Sharrows
- Bicycle Lanes
- Bicycle Routes
- Greenway Trails
- Sidewalk Improvements

Schools by Grade
- K1
- K-3
- K-6
- 2-3
- 4-5
- 6-8
- 6-12
- 7-12
- 9-12

- State Highway
- Local Road
- Railroad
- Streams
- Park
- Lakes

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Figure 5-2: Proposed Greenways and Biking Improvements: Camden, Lugoff and Elgin

Safe Routes to Schools & Parks

Creating safe and convenient opportunities for active transportation to and from schools and recreation areas is an important strategy for increasing levels of bicycling and walking activity among a broad range of ages and abilities. Kershaw County already has a strong partnership with Safe Routes to School South Carolina and bicycling and walking access to park facilities ranked as a high priority within the public involvement process of this Plan. ESMMKC is a partner and supporter of ongoing Safe Routes to School (SRTS) programs and recognizes increased access to physical activity as a central part of its mission. A SRTS representative serves on the ESMMKC Committee. In light of this, the Plan identifies priority projects that will directly improve bicycling and walking access to schools and parks.

Key Partners: Safe Routes to School South Carolina; Kershaw County School District; Kershaw County Recreation Department; health-oriented groups such as LiveWell Kershaw; SCDOT

Safe Routes to Healthy Foods

The Kershaw County Bicycle, Pedestrian, and Greenways Plan recognizes the community's interest in not only increasing levels of physical activity, but also improving access to healthy foods. In Chapter 4: Food Access Analysis, the Plan identified priority areas for improving bicycle and pedestrian access to outlets for healthy food. ESMMKC is a partner and, in many cases, leader in healthy eating programs and recognizes increased access to healthy foods as a central part of its mission. In light of this, the Plan identifies priority projects that will directly improve bicycling and walking access to outlets for healthy food.

Key Partners: health-oriented groups such as LiveWell Kershaw; SCDOT

5.4.3 Priority Projects

In Table 5-4, the 16 highest priority projects of the Plan are categorized based on the priority project types described above. The projects all evidence equal merit as high priority projects that achieve a variety of objectives. The Map ID number noted in the table serves to identify the project on the map of network recommendations (Figures 5-3 and 5-4), and does not indicate rank.

It is important to note that, based on the research, analysis, and public input documented of this Plan, the entire proposed network has evidenced merit. All remaining proposed projects not listed below play an important role in completing the vision of the bicycle, pedestrian, and greenway network. These projects should be considered mid- to long-term projects and should be considered for implementation whenever a time-sensitive opportunity arises (such as a planned road widening, road resurfacing, new development, or land easement/acquisition opportunity).

Of the 16 priority projects, six are described in further detail on project cut sheets and illustrated with custom photo renderings.

Table 5-4: High priority projects for near-term implementation

Project	Start	End	Facility Type	Implementation Strategy	Jurisdiction	Length (mi)	Map ID
Regional Trails & Heritage Tourism							
Wateree River Greenway	U.S. 1	Hwy 97 near Flint Rock Drive	Multi-use Trail	New construction along eastern shore	Unincorporated Kershaw County	9.1	1
Battle of Camden Connector	Wateree River Greenway (proposed trail at Lake Wateree Dam)	Battle of Camden Revolutionary War Site at Flat Rock Road	Multi-use Trail	New construction within electric utility easement, road ROW on Flat Rock Road, and Battle of Camden National Historic Landmark property	Unincorporated Kershaw County	5.3	2
Historic Camden – Wateree Connector	Chestnut Ferry Road	Black River Road Connector (proposed trail near Tickle Hill Road)	Multi-use Trail	New construction within gas utility easement, Historic Camden property, road ROW on Ehrenclou Drive, electric utility easement, and decommissioned wastewater treatment facility property	City of Camden and Unincorporated Kershaw County	1.6	3
					Total Length	16	
Community Connectors							
Bowen Street	Pine Valley Drive	Walnut Street	Sidewalk	New construction within road ROW	Town of Elgin	0.7	4
Walnut Street	Bowen Street	Sessions Road	Sidewalk	New construction within road ROW	Town of Elgin	0.2	5
Lugoff-Elgin Connector	Ridgeway Road	Chestnut Road	Multi-use Trail	New construction within electric utility easement	Unincorporated Kershaw County	4.4	6
Black River Road Connector	Black River Road	U.S. 1	Multi-use Trail	New construction within Progress Energy easement	City of Camden	1.5	7
					Total Length	6.8	

Table 5-4: High priority projects for near-term implementation (cont'd)

Project	Start	End	Facility Type	Implementation Strategy	Jurisdiction	Length (mi)	Map ID
Safe Routes to Schools & Parks							
Smyrna Road	Chestnut Road	Sessions Road	Bike Lane	Add pavement	Town of Elgin and Unincorporated Kershaw County	1.4	8
Park Connector	Battleship Road	Chestnut Street	Multi-use Trail	New construction along Battleship Road ROW, public park property, racing stable property and/or railroad ROW	City of Camden and Unincorporated Kershaw County	1.3	9
Haile Street	Roberts Street	U.S. 1	Sidewalks with Shared-lane Markings/ Bike Lane	New construction within road ROW; Add pavement markings/ signage from Roberts Street to Brown Road; Add pavement from Brown Road to U.S. 1	City of Camden and Unincorporated Kershaw County	1.6	10
Blackmon Street N/Brown Street	Norwood Street E	Copeland Park	Sidewalk	New construction within road ROW and/ or school and park property	Town of Bethune	0.5	11
					Total Length	4.8	

Table 5-4: High priority projects for near-term implementation (cont'd)

Project	Start	End	Facility Type	Implementation Strategy	Jurisdiction	Length (mi)	Map ID
Safe Routes to Healthy Foods							
Ridgeway Road	Existing Sidewalk (west of Baldwin Ave)	U.S. 1	Sidewalk	New construction within road ROW	Unincorporated Kershaw County	1.1	12
U.S. 1	Ridgeway Road	Food Lion	Sidewalk	New construction within road ROW	Unincorporated Kershaw County	1.4	13
Highway 521 (Broad Street)	Chestnut Street	York Street	Bike Lane	Lane reconfiguration within road ROW	City of Camden	1.4	14
York Street	U.S. 1 (W Dekalb Street)	Mill Street	Sidewalks with Bike Lane	New construction within road ROW; Lane narrowing within existing pavement width from Mill Street to Campbell Street; Add pavement from Campbell Street to U.S. 1	City of Camden and Unincorporated Kershaw County	1.7	15
Highway 341 (Main Street N)	E Inwood Street	Best Road	Bike Lane	Stripe/sign existing shoulder from E Inwood Street to Spring Street; Lane narrowing/ reconfigure parking from Spring Street to Norwood Street; Add pavement from Norwood Street to Best Street	Town of Bethune and Unincorporated Kershaw County	1.2	16
					Total Length	6.8	

Kershaw County Bicycle, Pedestrian, and Greenway Plan
Priority Greenway and Biking Improvements: Kershaw County

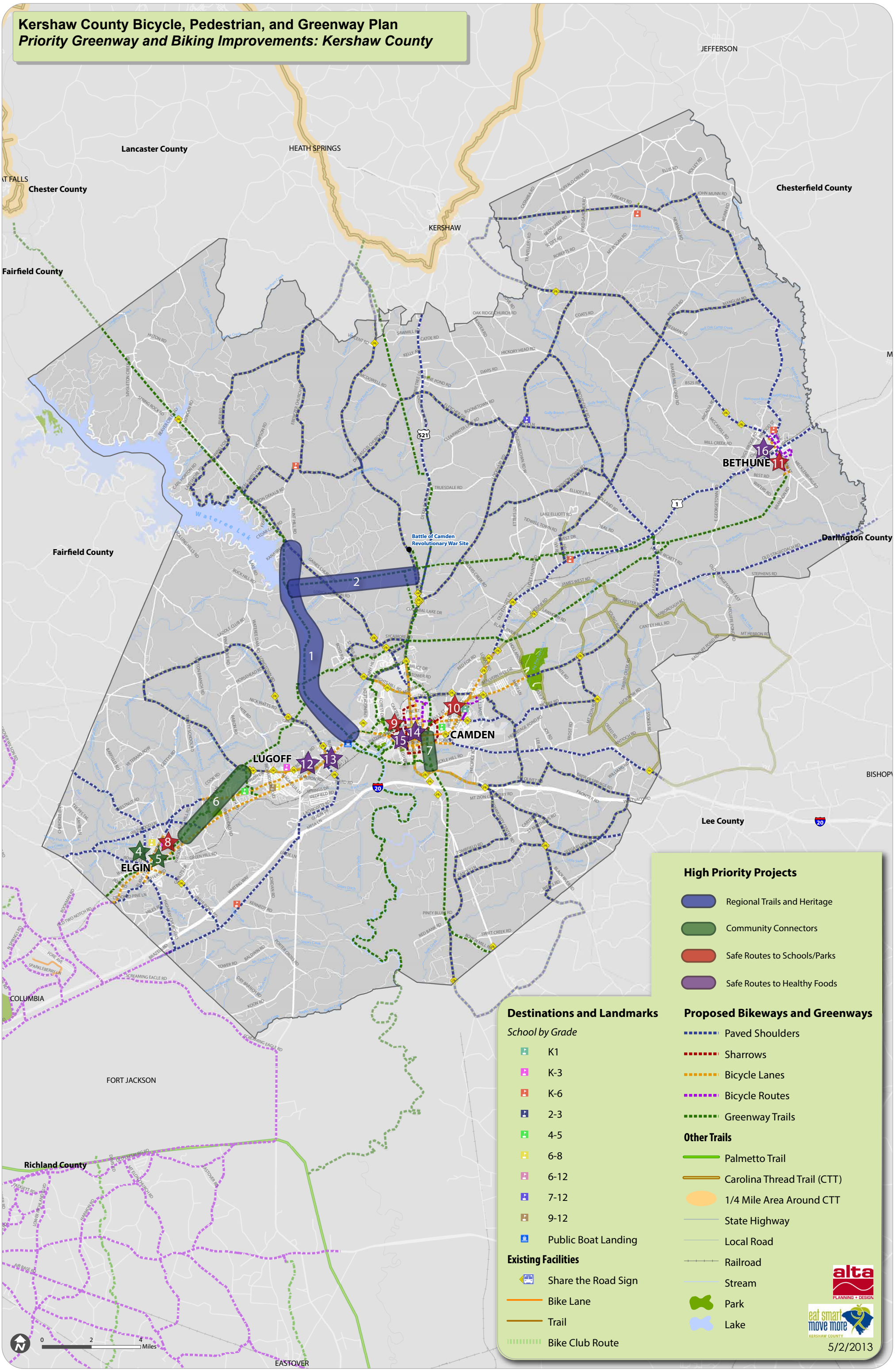
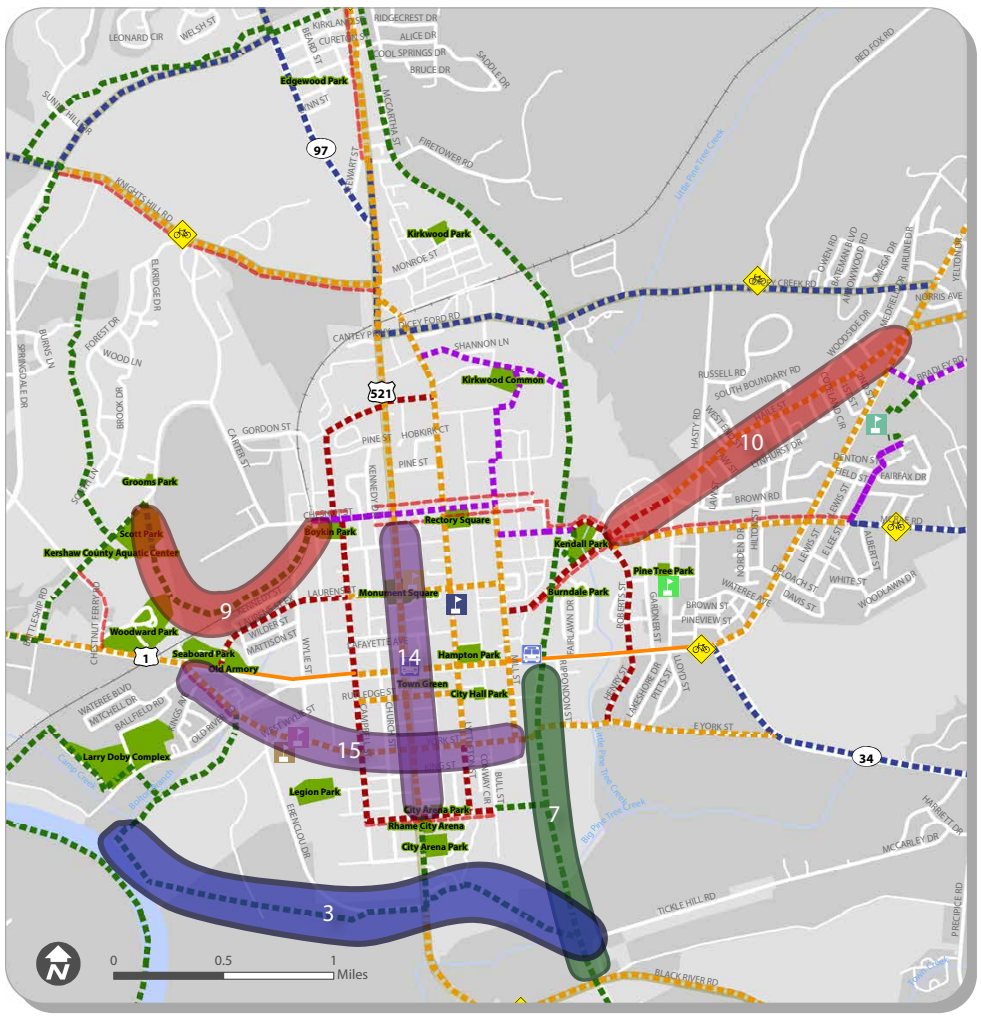


Figure 5-3: Priority Greenway and Biking Improvements: Kershaw County

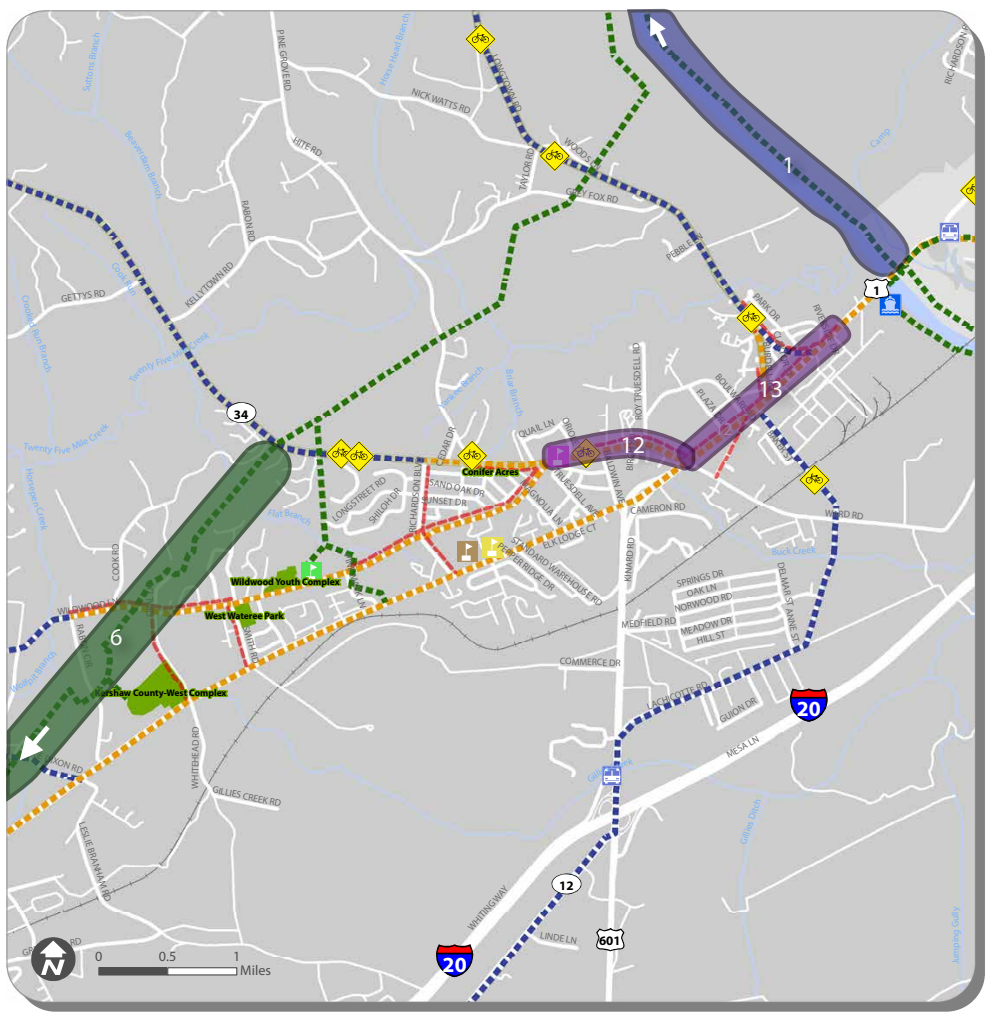
Kershaw County Bicycle, Pedestrian, and Greenway Plan

Priority Biking and Walking Improvements: Camden, Lugoff, Bethune and Elgin

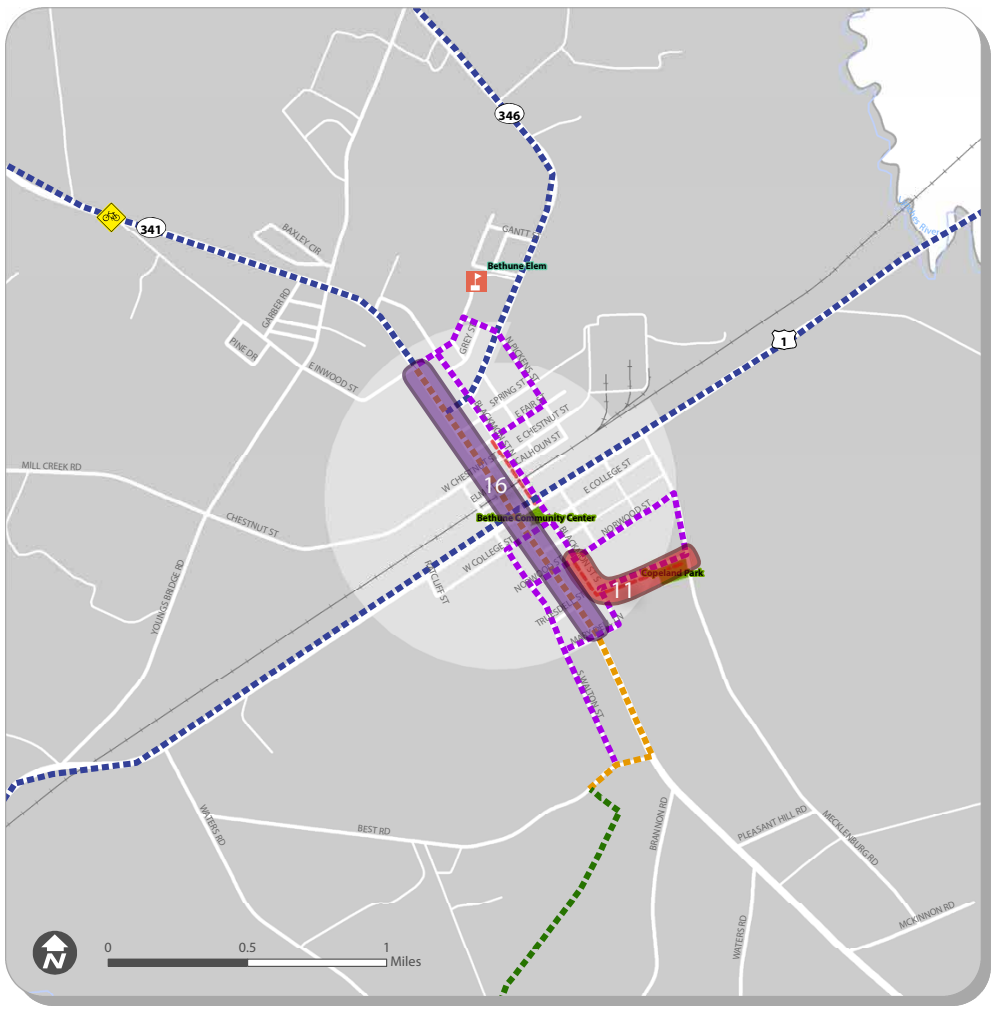
Camden



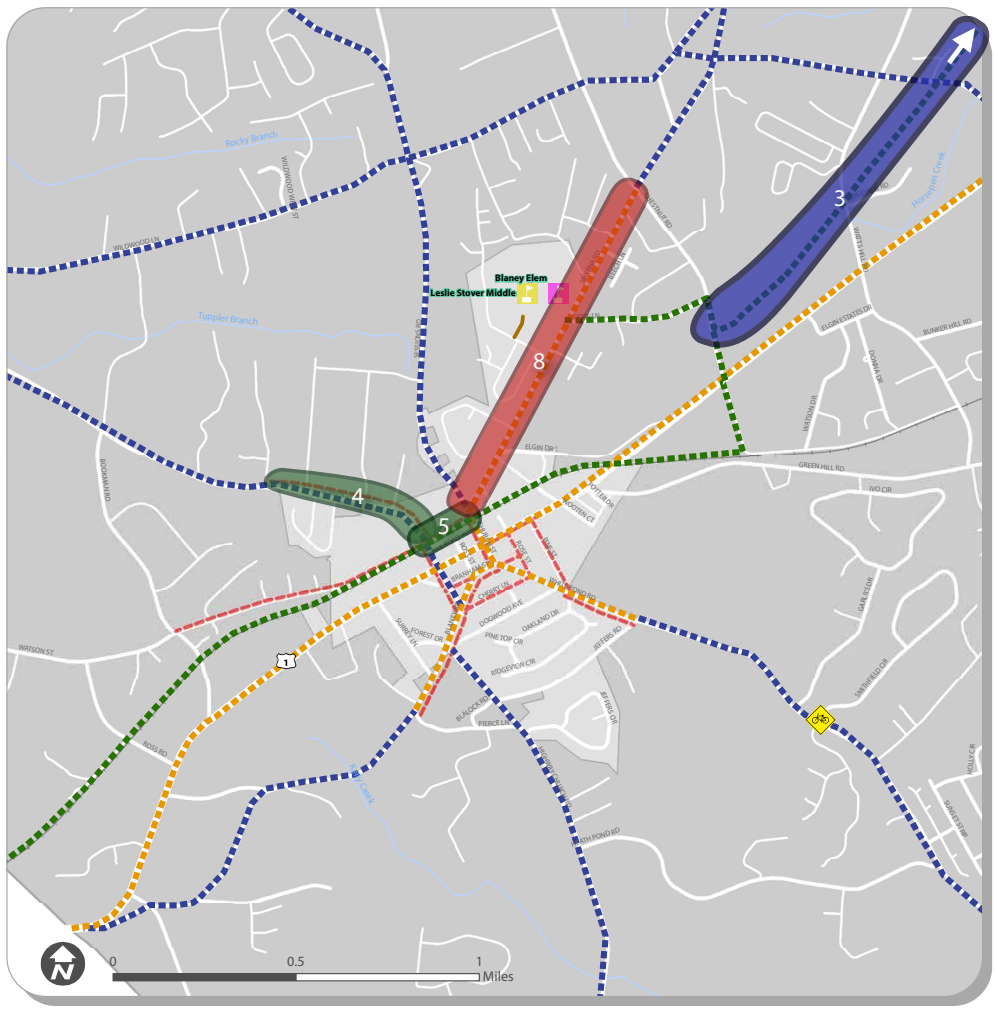
Lugoff



Bethune



Elgin



Trail Planning Points of Interest
- Public Boat Landing
- Existing Bike Lanes
- Existing Trails
- Share the Road Signs
- Bike Club Routes
- SmartRideStops

Proposed Bikeways and Sidewalks
- Paved Shoulders
- Sharrows
- Bicycle Lanes
- Bicycle Routes
- Greenway Trails
- Sidewalk Improvements

High Priority Projects
- Regional Trails and Heritage
- Community Connectors
- Safe Routes to Schools/Parks
- Safe Routes to Healthy Foods

Schools by Grade
- K1
- K-3
- K-6
- 2-3
- 4-5
- 6-8
- 6-12
- 7-12
- 9-12

- State Highway
- Local Road
- Railroad
- Streams
- Park
- Lakes

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Figure 5-4: Priority Greenway and Biking Improvements: Camden, Lugoff Bethune and Elgin

5.4.4 Priority Project Cut Sheets

Bowen Street (#4)

Start: Pine Valley Drive

End: Walnut Street

Facility Type: Sidewalk

Length: 0.7 miles

Jurisdiction: Town of Elgin

Implementation Strategy: New construction within road right of way

Challenges: Cost of new construction.

Opportunities: The corridor creates an important pedestrian connection from residential neighborhoods to downtown Elgin. It also links to existing sidewalks that connect to the Leslie Stover Middle & Blaney Elementary Schools.

Cost Estimate: $591, 360

Lugoff-Elgin Connector (#6)

Start: Ridgeway Road

End: Chestnut Road

Facility Type: Shared-use Path

Length: 4.4 miles

Jurisdiction: Unincorporated Kershaw County

Implementation Strategy: New construction within electric utility easement

Challenges: A recreational use easement must be secured in addition to the existing utility easement. The utility company may request that the trail follow specific design standards. Cost of new construction.

Opportunities: The trail connects Elgin and Lugoff to one another. Additionally, residents within Elgin will have improved access to the campus of Leslie Stover Middle and Blaney Elementary Schools and to downtown.

Cost Estimate: $2,640,000

Black River Road Connector (#7)

Start: Black River Road

End: U.S. 1

Facility Type: Shared-use Path

Length: 1.5 miles

Jurisdiction: City of Camden

Implementation Strategy: New construction within Progress Energy easement

Challenges: A recreational use easement must be secured in addition to the existing utility easement. Progressive Energy may request that the trail follow specific design standards. Cost of new construction.

Opportunities: Residential communities in the area surrounding Black River Road expressed a strong desire for connectivity to downtown Camden and community parks. This facility will provide that important connection while also creating linkages to two other high priority facilities (Historic Camden-Wateree Connector and York Street).

Cost Estimate: $900,000

Park Connector (#9)

Start: Battleship Road

End: Chestnut Street

Facility Type: Shared-use Path

Length: 1.3 miles

Jurisdiction: City of Camden and Unincorporated Kershaw County

Implementation Strategy: New construction along Battleship Road right of way, public park property, racing stable property and/or CSX railroad right of way

Challenges: Near Chestnut Street, development of the trail segment will require easements with either the CSX railroad or a private racing stable. Further study is needed of the low-lying area between Woodward Park and Scott Park to determine the most appropriate trail facility design (such as the use of a boardwalk).

Opportunities: Connecting these two popular parks to one another and connecting residents to these parks was among the most commonly cited needs of Kershaw County residents.

Cost Estimate: $780,000

Haile Street (#10)

Start: Mill Street

End: U.S. 1

Facility Type: Sidewalks with Shared-lane Markings/Bike Lane

Length: 2.2 miles

Jurisdiction: City of Camden and Unincorporated Kershaw County

Implementation Strategy: New construction within road right of way from Lakeshore Road to approximately 0.3 miles west of Lakeshore Road; Add pavement markings/signage from Roberts Street to Brown Road (0.9 miles); Add pavement from Brown Road to U.S. 1 (1.3 miles)

Challenges: The road right of way is constrained along some segments of this corridor. Cost of new construction.

Opportunities: Haile Street is an important connection for gaining access to Camden Middle and Jackson Elementary Schools. The route also links to a grocery store along U.S. 1, KershawHealth and other health care offices, the Kendall Park at the Kendall Mill Historic District, and many residential areas.

Cost Estimate: $597,480

York Street (#15)

Start: U.S. 1 (W Dekalb Street)

End: Mill Street

Facility Type: Sidewalks with Bike Lane (minimum 6 feet; could be buffered bike lane for additional separation and cyclist comfort)

Length: 1.7 miles

Jurisdiction: City of Camden and Unincorporated Kershaw County

Implementation Strategy: New construction within road ROW where no sidewalk currently exists; Lane narrowing within existing pavement width from Mill Street to Campbell Street (0.6 miles); Add pavement from Campbell Street to U.S. 1 (0.9 miles)

Challenges: Cost of new construction.

Opportunities: Streetscape improvements are already planned for York Street. Incorporating bicycle and pedestrian improvements into a larger road reconstruction project creates cost efficiencies.

Cost Estimate: $1,077,360

Kershaw County residents identify the area's historical resources and the Wateree River as important assets to the community.

6: Recreational, Cultural, Educational Resources

6.1 Overview

Kershaw County residents identify the area's historical resources and the Wateree River as important assets to the community. Though the river is a barrier to community connectivity, it serves as a landmark and destination for the county and a linear natural resources corridor. The proximity of the river, Historic Camden, and other key historic sites to downtown Camden presents an opportunity for improving bicycle, pedestrian, and trail access between these destinations and centers of activity further encouraging heritage tourism.

As the bicycle, pedestrian, and greenways network is developed, ESMMKC and its partners can develop recreational, cultural, and educational programs to leverage the investment. These activities help to raise the profile and public understanding of facilities investments, increase walking and bicycling mode share and public support, and help to create a local culture that values walking and bicycling. Additionally, these programs will capitalize on Kershaw County's existing cultural, historical, and natural resources to magnify the benefits of bikeways, walkways, and trails (see Chapter 2: Benefits of Bicycle, Pedestrian, and Greenways Investments).

The purpose of this chapter is to provide a set of programmatic recommendations that will effectively leverage the unique qualities of the recommended bicycle, pedestrian, and greenways network and the existing cultural and recreational assets of Kershaw County. These initiatives can be undertaken by local agencies and community organizations, as discussed in Section 6.2. For each program, we have provided information about the program purpose, a description of the basic approach and, wherever possible, links to model programs and useful resources.

6.2 Existing and Potential Partners

6.2.1 Statewide Programs

Eat Smart Move More South Carolina

Eat Smart Move More South Carolina (ESMM SC) is a statewide coalition that offers resources about healthy lifestyles and advocacy for active living to local groups. In particular, the "Options for Action" toolkit offered by the organization is a best practices guide for community campaigns that promote bicycling, walking, and access to healthy foods. Kershaw County has established a local chapter ESMM of SC.

Palmetto Conservation Foundation

Palmetto Conservation Foundation is a 501c3 nonprofit organization with a mission to conserve South Carolina's natural and cultural resources, preserve historic landmarks, and promote outdoor recreation through trails and greenways. The Palmetto Trail is South Carolina's Mountains-to-the-Sea Trail and a signature project of the statewide nonprofit. Once complete, the trail will extend roughly 425 miles from Awendaw, South Carolina at the Intracoastal Waterway to Oconee State Park at the trail's northern terminus, and will pass through Sumter and Richland Counties adjacent to Kershaw. Additionally, the Palmetto Conservation Foundation leads outdoor recreation and active transportation programs across the state and is a resource for trail development.

Palmetto Cycling Coalition (PCC)

The Palmetto Cycling Coalition (PCC) is a non-profit organization dedicated to making South Carolina more bicycle friendly for everyone. PCC offers a number of education and training workshops, including adult bicycle driving classes, league certified bicycle instructor courses and law officer training education. Previously, PCC also initiated a bike lights program, whereby they are able to partner with organizations and local governments to provide bicycle lights and safety informational brochures to cyclists in need.

PCC has also initiated a statewide advisory group called 'Communities for Cycling' and a campaign named 'Safe Streets Save Lives.' The latter is a public private partnership program to promote bicycle safety and reduce the number of bicycle crashes across the state. Recently, a DVD was developed for the campaign, which has been shown within the state at local community facilities to enhance safety awareness.

South Carolina Department of Transportation

The South Carolina Department of Transportation (SCDOT) Bicycle and Pedestrian Program provides a guide of safety tips for bicyclists and pedestrians as well as state route maps on their website. Links to a number of programs within the state related to bicycle and pedestrian awareness are also provided, including statewide public safety crash data and health related education awareness programs. SCDOT additionally houses the state's Safe Routes to School program. Regional Safe Routes to School offices serve the role of "resource center" and collaborator for communities advancing Safe Routes to School initiatives.

6.2.2 Regional and Local Programs

Eat Smart Move More Kershaw County

Eat Smart Move More Kershaw County (ESMMKC) is the local chapter of Eat Smart Move More South Carolina. The group operates as a coalition of many groups, interested citizens, and public and private sector partners. ESMMKC is not a 501c3 and has no dedicated staff.

LiveWell Kershaw

LiveWell Kershaw is a nonprofit organization formed in response to Kershaw County's stated commitment to becoming the healthiest county in South Carolina. The group's mission is to make Kershaw County the healthiest county in South Carolina based on the County Health Rankings compiled annually by the Robert Wood Johnson Foundation and the Population Health Institute at the University of Wisconsin. LiveWell Kershaw has partnered with the Arnold School of Public Health at the University of South Carolina to conduct a county-wide health assessment with plans to develop a comprehensive, long-term improvement plan. Initial funding was provided by Eat Smart/Move More Kershaw County and KershawHealth.

Safe Kids Programs

Safe Kids Kershaw County is housed at KershawHealth and serves the local community. The program promotes legislation geared at child safety, and provides varying information and classes on safety, including the distribution of safety equipment such as bike helmets at little or no cost. Safe Kids programs are often valuable partners in youth bicycle safety rodeos.

Safe Routes to School Programs

Safe Routes to School Programs (SRTS) provide funding for school based programs which encourage bicycling and walking to school. This typically involves examining conditions around public schools and providing programs to improve bicycle/pedestrian safety, accessibility and use. Schools in Kershaw County that have participated in the program include Leslie Stover Middle/Blaney Elementary Schools and Jackson Elementary School. SCDOT offer Safe Routes to School Resource Centers to specific regions throughout the state. Kershaw County is within the South Carolina Midlands Region.

SRTS programs help children be active and may save parents driving-related time and money

Children learning how to ride safely and responsibly

6.2.3 Other Potential Partners

Local non-profit organizations, coalitions, and major institutions should play a leading role in developing, implementing and sponsoring bicycling and walking programs. Kershaw County already has a network of entities that could partner with local governments to generate community awareness and broad participation in bicycling and walking programs. LiveWell Kershaw, SafeKids Kershaw, Safe Routes to School, Kershaw County, City of Camden, and many other similar groups are already active participants in the ESMMKC committee and are crucial partners in implementation of this Plan. Other potential partners include:

- Carolina Cyclers
- KershawHealth
- Local active-wear and outfitter retailers
- Universities and colleges
- Historic Camden
- Goodall State Park
- Kershaw County Chamber of Commerce & Visitors Center

6.3 Recommended Programs

6.3.1 Bike Month Activities

Cities and towns across the country participate in National Bike Month annually, during May. The League of American Bicyclists (LAB) hosts a website for event organizers. The website contains information on nationwide and local events, an organizing handbook, and promotional materials.

It is recommended that Kershaw County and municipalities host National Bike Month events and activities annually, with the support of local groups and businesses, such as ESMMKC, LiveWell Kershaw, SafeKids Kershaw County, and others. Bike Month activities may include:

- Bike to Work Day events: morning-commute energizer stations with food, encouragement, information, and sponsored goodies for participants; discounts at local businesses for bicycle commuters.
- "Pedal with Your Politician" group ride (3 miles or less) with County Council members, City Council members, and Mayors
- Short, themed community bicycle rides (6 miles or less), such as a tour of historic sites or restaurants
- Participation in the national Ride of Silence bike ride to bring awareness to cyclist safety
- Mountain biking skills clinic for youth
- Bicycle Commuter Course taught by nationally certified League Cycling Instructors
- A contest for artists to create public art pieces using bicycle materials
- A bicycling-themed photography contest
- Youth bike safety rodeos
- Schedule a "ground-breaking" or "ribbon-cutting" for a new section of bikeway or trail

Action Steps: In the first year that Kershaw County and its municipalities celebrate Bike Month, ensure that elected bodies endorse the month (through a proclamation or resolution) and host multiple events within May. Geographically disperse the events and involve as many partners as possible to assist in developing and leading the activities. Offer at least one activity that does not involve biking (such as a movie night that features a biking movie or an exhibit of bike-themed art). Collaborate with local and regional Safe Routes to School efforts to incorporate Bike to School Day into Bike Month.

Program Resources:

- National Bike Month: http://www.bikeleague.org/programs/bikemonth/
- Greenville, SC Bike Month events: http://www.greenvillesc.gov/ParksRec/trails/bikemonth.aspx
- Atlanta, GA Bike Month events: http://www.atlantabike.org/May

6.3.2 Guided Nature Walks and Rides

Naturalists are a significant user group of a trail and greenway network. Unique natural resources, such as the Wateree River, can attract significant eco-tourism opportunities. Guided nature walks and bicycle rides could be led by trained volunteers or interested partners, such as a college extension service. The walks and rides should occur on established trails or along bikeway facilities or sidewalks that contribute to the county's overall bicycle and pedestrian network. While the events serve to educate the community and visitors about the natural resources of Kershaw County, they also create awareness of and familiarity with the developing bicycle and pedestrian network and encourage trail use.

The walking routes should highlight safe and inviting places to walk in the public realm (rather than private or enclosed facilities). Events targeted to families or seniors should be 3 miles or less in length. Bicycling routes should highlight safe and inviting bicycle routes, including trail rides. Rides targeted to families, seniors, or newcomers to bicycling should be 6 miles or less in length.

Action Steps: Identify partners interested in supporting, promoting, and/or guiding educational nature walks and rides. Determine appropriate target markets for guided nature walks and rides and develop specific events geared toward each target group. This could include a series of events, such as child/youth nature walks with storytelling, adult nature walks with regional experts, seasonally-themed nature education (spring, summer, fall, and winter), or creative nature walks that involve amateur photography, drawing, painting, or crafts and seek inspiration from nature. Increase attendance by promoting specific events to groups already established, such as local garden clubs, equine clubs, or afterschool programs.

Program Resources:

- Friends of Tryon Creek (Portland, OR): http://www.tryonfriends.org/learn/oregon-state-parks/

6.3.3 Happy Trails to Healthy Foods

Many communities are recognizing the role that both physical activity and healthy eating play in improving overall public health and wellness. This important link can be highlighted in a fun and interactive manner through promoting healthy food outlets along the bicycle, pedestrian, and greenway network and partnering with health food providers to identify safe routes for active transportation to their locations. Establishing a program to promote 'happy trails to healthy foods' will advance Kershaw County's goal to become the healthiest county in South Carolina and also support the mission of ESMMKC.

The basic component of the program is the development of a map and guide describing sources for healthy foods along the bicycle, pedestrian, and greenway network. This list can include conventional grocery stores, as well as roadside farm stands, u-pick farms, farmers markets, community gardens, or restaurants and cafes that offer healthy options (depending on the goals of the program this may highlight establishments that offer nutritious meal options, source their ingredients from local growers, or provide organic or specialty food options). Consider seeking financial support from the food outlets that will be listed in the guide. Offer safety tips for traveling safely by bike or foot.

Action Steps: Identify key outlets for healthy food along the existing bicycle, pedestrian, and trail network (including routes along roads that are already bicycle friendly and existing sidewalks). Seek funding from partners in nutrition and healthy food outlets. Develop a graphically-appealing and user-friendly guide to healthy food outlets with a map showing how residents can access the outlets on foot or bike. Ensure that the guide is available online as well as in print and distribute widely.

Program Resource:

- The Carrot Swamp Rabbit Trail Food Guide (Greenville, SC): http://www.ediblecommunities.com/upcountry/thecarrot/files/assets/downloads/publication.pdf

6.3.4 Heritage Tourism Walking/ Bicycling Maps & Guides

More and more rural communities are looking to tourism as a priority within their economic development plans, and heritage tourism is a popular and growing niche. For touring bicyclists, rural communities often have unique assets to offer to visitors, such as open spaces, lightly traveled roads, and the intimate experience that only small towns can provide. Efficiently identifying opportunities and creating targeted marketing plans can help Kershaw County and its municipalities become a bicycling destinations and reap the benefits of this low-impact, sustainable tourism segment. The recently installed ESMMKC Bicycle Route signage is one step towards developing this niche market.

A series of strategically developed walking and biking guides to heritage tourism can capitalize on and promote Kershaw County's rich history. One or more maps should be developed for Kershaw County showing safe and enjoyable biking and walking routes to visit cultural and historic sites. The series of maps and guides should recognize the variety of market segments and user groups interested in heritage tourism, such as families seeking a half-day visit with a leisurely educational walk or bike ride, organized groups traveling from town to town by chartered bus, and touring bicyclists who travel 20 or more miles a day by bike making their way across a region.

User maps help to promote walking and bicycling among visitors and residents

Maps should be posted online (and linked from multiple websites) and printed as needed. Printed guides should be actively distributed to residents and visitors. The information should be updated on a regular basis as new facilities are implemented (every three years or less).

Action Steps: Partner with local and regional organizations focused on historical resources and tourism, such as Historic Camden, the Camden Battlefield Site, the Kershaw County Chamber of Commerce and Visitors Center, and others. Inventory cultural and historic resources along the existing and proposed recommended bikeway, walkway, and greenway network and identify safe and enjoyable walking and bicycling routes that connect them. The ESMMKC committee, Carolina Cyclers Club, and others may provide volunteers to map the routes. The Chamber of Commerce and Visitors Center should assist in promoting the routes as part of a broader effort for heritage tourism and assist in connecting this program with larger marketing campaigns (such as the South Carolina Parks, Recreation, & Tourism's DiscoverSouthCarolina.com program).

Program Resources:

- Charleston (SC) Route Book: http://coastalcyclists.org/maps/routebooksample.pdf (sample route)
- Austin Historic Walking Tours (Austin, TX): http://www.austintexas.org/visitors/plan_your_trip/historic_walking_tours
- Bike/Run Central Texas: http://copperascove.com/bike-run/

6.3.5 Interpretive Signage

Interpretive signage along a trail and greenway network serves as an education tool for residents and visitors alike. Information related to the history of an area, its cultural significance, or natural features is provided on a graphically appealing sign. Topics for interpretive signage can range from native species of plants to river currents to famous historical figures.

Given the historical significance of many sites within Kershaw County and the unique natural resource of the Wateree River, interpretive signage will provide a useful tool for highlighting these assets and raising the profile of the bicycle, pedestrian, and trail network. In particular, interpretive signage will complement the development of guided nature walks and rides and heritage tourism marketing.

Action Steps: Establish a task force of stakeholders interested in educating the community about natural and historical resources and increasing usage of the trail network. If possible, engage professionals and experts who have experience in developing interpretive signage or historical markers. Focus the first installation of interpretive signage along a single corridor (or route), such as a newly developed greenway segment along the Wateree River or near Historic Camden. Create an inventory of noteworthy cultural, historical, and natural features along the corridor and begin the process of developing a signage design, potential signage locations, and content to be used on each sign. Once the first phase of signage is installed, complementary programs to highlight and promote the new amenity should be considered.

Program Resources:

- National Bike Month: http://www.bikeleague.org/programs/bikemonth/
- Greenville, SC Bike Month events: http://www.greenvillesc.gov/ParksRec/trails/bikemonth.aspx
- Atlanta, GA Bike Month events: http://www.atlantabike.org/May

6.3.6 Outdoor Public Art

Public art along a bicycle, pedestrian, and greenway network can bring attention to the network, encourage usage of it, and attract newcomers to bicycling and walking. By combining art and greenway facilities, the community is creating a unique interactive amenity for both residents and visitors. Such programs also attract new partners, promoters, and sponsors of the active transportation network.

Once a series of outdoor public art pieces are installed along the network, programs that capitalize on these features can be developed, as well. Local groups may choose to host family-friendly walk or rides that "tour" the art or schools may choose to develop scavenger hunts or similar youth activities involving the art.

Action Steps: Identify any appropriate partners for this effort, such as a local visual arts group, a college or university arts program, a local art patron, or others. Establish a committee of community members to develop and oversee the program. Consider art sponsorship or art auctions as potential sources of funding.

Public art along a bicycle, pedestrian, and greenway network can bring attention to the network, encourage usage of it

Program Resources:

- Indianapolis Cultural Trail: http://www.indyculturaltrail.org/publicart.html
- KC Riverfront Heritage Trail: http://kcrivertrails.org/art/
- Spartanburg, SC: http://www.active-living.org/Art-Cycle.html and http://www.active-living.org/Trains-on-the-Trail.html

6.3.7 Safety Campaign for Bicyclists & Pedestrians

A high-profile marketing campaign is an effective strategy for highlighting the importance of respect and shared responsibility on the road between bicyclists, motorists, and pedestrians. This type of campaign is particularly effective when launched in conjunction with other events such as Walk to School Day or National Bike Month.

A well-produced safety campaign will be memorable and effective. One good example is the Sonoma County Transit "You've got a friend who bikes!" campaign. It combines compelling ads with an easy-to-use website focused at motorists and bicyclists. The safety and awareness messages should be displayed near high-traffic corridors (e.g., on billboards), printed in local publications, and broadcast as radio and/or television ads.

Action Steps: As the bicycle and pedestrian network is developed and bicycle and pedestrian activity increases, create a safety campaign to encourage safe practices in sharing the road. Develop a series of safety tips and safety messages that can be incorporated into printed brochures, postcards, TV and radio ads, and billboards. Seek a media sponsor who can provide local coverage of the campaign and provide air time for public service announcements. The campaign should last one month. Consider giving away safety items at community events during that month, such as bike lights, reflective materials, or helmets.

Program Resource:

- Sonoma County (CA) Transit: http://www.sctransit.com/bikesafe/bikes.htm
- PCC Safety Awareness Progam: http://safestreetssavelives.org/about.php

Safety and awareness campaigns can help educate pedestrians, cyclists, and motorists

- Greenville (SC) Lights for Life: http://bikegreenville.blogspot.com/2011/10/lights-for-life.html
- Spartanburg (SC) Pedestrian Safety Campaign: http://www.active-living.org/Pedestrian-Safety-2.html

6.3.8 School-based Trail Activities

In partnership with existing Safe Routes to School efforts, local schools can capitalize on segments of the proposed bicycle, pedestrian, and greenway network that intersect their campus. Activities along the greenway network could include Bike and Walk to School Day routes, outdoor classrooms for science curriculum, educational afterschool walks and bike rides, and programs for physical education curriculum. The Midlands Safe Routes to School Resource Center, local PTAs, boys & girls clubs and similar afterschool programs, and physical education teachers are key partners for this programming effort.

Action Steps: Establish a partnership with a school that is already engaged in Safe Routes to School and that already has leadership and volunteers (from the principal, PTA, PE teacher, and/or others) supportive of increasing physical activity among children and capitalizing on the bicycle and pedestrian network. Use this school as a "pilot project" for creating a variety of programs that directly engage children with existing bicycle facilities, sidewalks, and trails. Broaden this effort to include one or two additional schools in the following year.

Program Resources:

- SC Safe Routes to School Resource Center: http://scsaferoutes.org/
- Spartanburg (SC) SRTS Events on Bikeway/Walkway Facilities: http://active-living.org/Walking--Wheeling-Wednesday.html and http://active-living.org/Bicycle-to-School-Day.html
- Haw Creek Elementary Nature Trail (Buncombe County, NC): https://www.buncombe.k12.nc.us/domain/587

6.3.9 Senior Walk and Ride Programs

Interested agencies, nonprofits, health departments and senior centers can partner to develop an active lifestyles program for senior citizens utilizing the bicycle, pedestrian, and greenways network. Activities could include adult tricycle or bicycle rides, nature walks, walks to lunch, and safety education.

Senior bicycle education programs help older adults either re-learn bicycling or learn how to bicycle with less agility. Seniors who are no longer able to drive may still be able to bicycle shorter distances on either a regular two wheeled bicycle or an adult tricycle. As one example, the Portland Parks and Recreation Department hosts a free senior tricycle program that provides tricycles to senior centers and takes folks on guided rides.

Action Steps: Collaborate with interested agencies, health departments and senior centers to evaluate interest in and resources available for implementing senior walk and ride programs. Consider a partnership with existing seniors programs such as the Palmetto Conservation Foundation's Senior Explorers program or senior exercising classes at KershawHealth.

Program Resources:

- Portland Senior Tricycle Program:
- http://www.portlandonline.com/transportation/index.cfm?c=34772&a=155167
- Palmetto Conservation Foundation Senior Explorers: http://www.palmettoconservation.org/senior.asp

6.3.10 Wayfinding Signage

The connectivity of a bikeway, walkway, and trail network is contingent upon physically linking bicycle and pedestrian infrastructure, as well as communicating to network users the connections available. Wayfinding signs direct users along the network and to community destinations. These signs can also include mileage, estimated travel time, and even calories burned. The signs also provide an opportunity for recognition of trail partners and sponsors, where applicable. A "sponsor-a-sign" program may be one avenue for funding the program. Further guidance for development and implementation of wayfinding signage is provided in Appendix F: Design Guidelines.

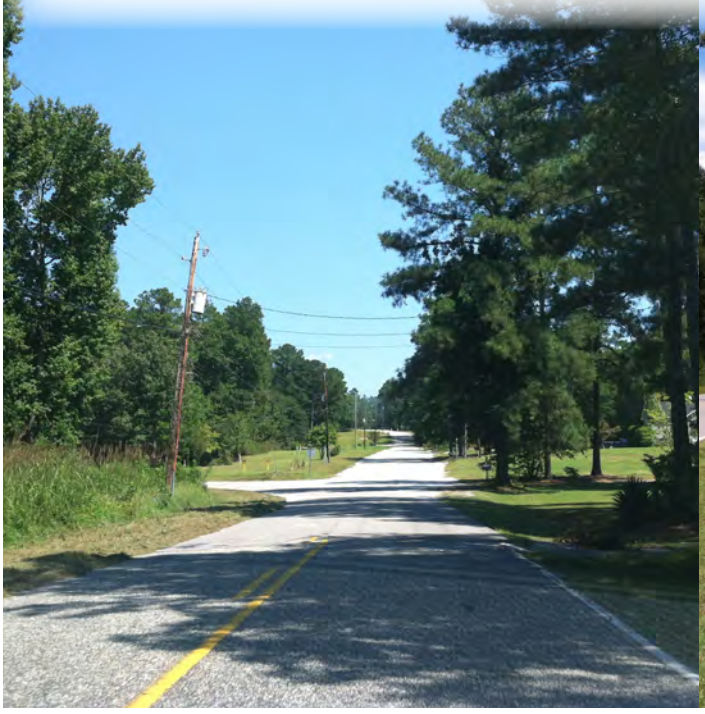
Wayfinding signage helps bicyclists navigate easily to popular destinations

Action Step: Determine an appropriate strategy for branding the bikeway, walkway, and trail network signage so that the signs contribute towards a consistent, community-wide user experience unique to Kershaw County. This may involve creating alternative iterations of the ESMMKC Bicycle Route signage. Start by implementing the signage along established, connected bicycle routes through neighborhoods and bicycle friendly areas and along Safe Routes to School preferred routes. Expand the signage application as new segments of bikeways, sidewalks, and trails are built.

Program Resources:

- City of Alexandria, VA Wayfinding Program: http://alexandriava.gov/Wayfinding
- Arlington County, VA Wayfinding Program: http://www.arlingtonva.us/departments/EnvironmentalServices/ProjectsAndPlanning/capprojects/page83327.aspx
- Louisville Loop Signage and Wayfinding Master Plan (Louisville, KY): http://www.louisvilleky.gov/MetroParks/planninganddesign/signage_wayfinding.htm
- Mecklenburg County Parks & Recreation Greenway Signage: http://charmeck.org/mecklenburg/county/ParkandRec/News/Archive/2009/Jan/Pages/Signs-01022009.aspx

Implementing the recommendations of this plan will require leadership and dedication to bikeway, walkway, and trail development on the part of a variety of agencies.



7: Implementation

7.1 Overview

This chapter defines a structure for managing the implementation of the Kershaw County Bicycle, Pedestrian, and Greenways Plan. Implementing the recommendations of this plan will require leadership and dedication to bikeway, walkway, and trail development on the part of a variety of agencies. Equally critical, and perhaps more challenging, will be meeting the need for a recurring source of revenue. Even small amounts of local funding could be very useful and beneficial when matched with outside sources. Most importantly, the partners who have led this planning effort, Eat Smart Move More Kershaw County (ESMMKC), Kershaw County, and the City of Camden, need not accomplish the recommendations of this Plan by acting alone; success will be realized through collaboration with state and federal agencies, the private sector, and other non-profit organizations.

Given the present day economic challenges faced by local governments (as well as their state, federal, and private sector partners), it is difficult to know what financial resources will be available to implement this plan. However, there are still important actions to take in advance of major investments, including key organizational steps and the development of strategic lower-cost bikeway and walkway projects. Following through on the actions steps described in this Chapter will allow the key stakeholders to be prepared for community-wide network development over time while taking advantage of strategic opportunities, both now and as new, unexpected opportunities arise.

7.2 Actions Steps for Implementation

The following is a recommended organizational framework for managing implementation of the bikeway, walkway, and trails network. The structure is based on input from the Project Steering Committee, the public, targeted stakeholder interviews, and evidence of successful implementation strategies from around the southeast and the country. Suggested roles for the core types of stakeholders involved in implementation are described below. Actual roles may vary depending on how this Plan is implemented over time and the ongoing level of interest and involvement by specific stakeholders.

7.2.1 Form a Bicycle, Pedestrian, and Greenways Advisory Committee

Leadership from individuals representing key stakeholders is essential to move the recommended network from concept to reality. These individuals will help advocate for the network, and in their professional and personal capacity, they will seek out opportunities to utilize synergies with other projects, individuals, and organizations to keep the trail system a priority in the ever-present competition for resources.

Bicycle, Pedestrian, & Greenways Advisory Committee (BPGAC) members should be chosen based on representation of key partner groups, key allies in the trail development process, and community leaders who

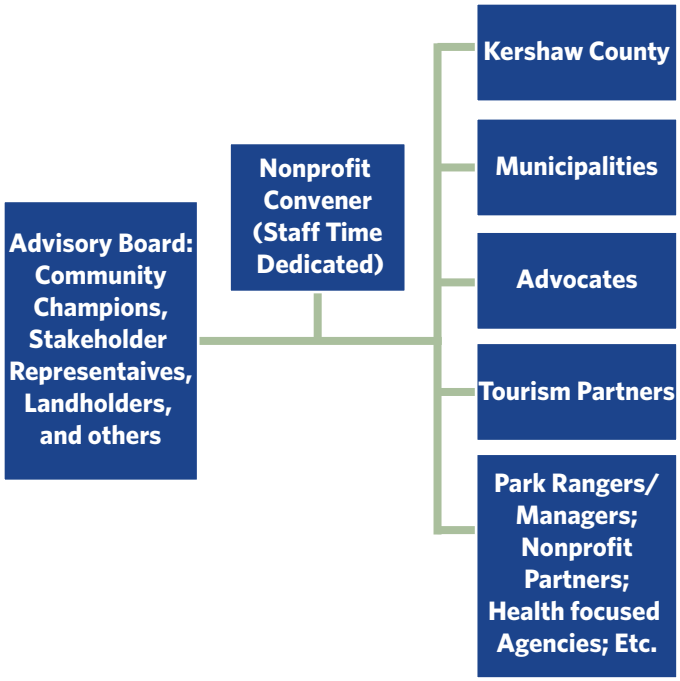


Figure 7-1: Bicycle, Pedestrian, & Greenways Advisory Committee structure

value biking, walking, and trail facilities. Members should expect to contribute time, expertise, and resources towards accomplishing the tasks that lie ahead. Board members or key staff of partner non-profits, members of the Project Steering Committee, and representatives of large landowners may be likely candidates to serve on the BPGAC. The BPGAC should be a forum for leaders to convene periodically to discuss progress, share resources and tools, and otherwise coordinate planning and development activities for the recommended network.

7.2.2 Advance Communication Efforts

A subgroup of the BPGAC should focus on the communications element of network development. This involves celebrating successes in new construction and otherwise raising awareness of the biking, walking, and trail system and its benefits. A key first task of this group is to work with local partners to implement the recommendations found in Chapter 6. These recommendations focus on recreational, cultural, and educational strategies for increasing awareness of the network and its benefits, and increasing overall usage. The recommendation for implementing a consistent and coordinated wayfinding system will be an important task for this committee subgroup as the network is developed.

7.2.3 Develop a Monitoring Program

From the beginning, and continuously through the life of the BPGAC, it should brainstorm specific benchmarks to track through a monitoring program and honor their completion with public events and media coverage. Monitoring should be supported by programmatic efforts, where possible, such as conducting annual or bi-annual bicyclist, pedestrian, and trail counts or creating an annual Bicycle, Pedestrian, & Greenways Report Card. Benchmarks should be revisited and revised periodically as network development efforts evolve.

7.2.4 Establish Stakeholders Roles

The organizational framework described in this section is presented visually in the chart below, as discussed by the Project Steering Committee. The BPGAC, already discussed in this chapter, plays a leading role in this process with a 'convener' serving the function of staff support. Other stakeholders, such as the County, municipalities within Kershaw County, and nonprofit organizations, are identified as partners. The 'convener' facilitates the work of the BPGAC while also coordinating among the many vested partners in this effort. The partners also contribute to the make-up of the BPGAC.

This Plan does not provide a recommendation for the convening agent for Kershaw County's BPGAC. However, given the strength of the nonprofit sector of Kershaw County, it is recommended that the 'convener' be a nonprofit organization rather than a government agency. There are many partners to ESMMKC with relevant missions and resources that could effectively fill this role. The Plan recommends that ESMMKC identify the most appropriate local partner for serving as the 'convener.'

In identifying the 'convener,' ESMMKC should consider the following:

- Nexus of bikeway, walkway, and trail development with the organization's existing mission and goals
- Limitations related to the organization's jurisdictional boundaries (such as city limits)
- Capacity for working collaboratively and engaging necessary partners in implementation
- Current (or potential for expanded) staff capacity to take on this additional role
- Capacity to serve as a fundraising agent and/or fiduciary agent for funds raised by the BPGAC

If additional staff capacity is needed at the agency, the BPGAC and the partners it represents will have a role in assisting the 'convener' in the process of identifying resources for added staff capacity. As an example, Spartanburg, SC established a Trails & Greenways Advisory Committee following the completion of their Trails & Greenways Master Plan. The group chose to establish a Trails Coordinator staff position, housed at

Partners for Active Living (the convening organization) and funded the position for three years with one-third of the funding committed by Spartanburg County, one-third committed by the City of Spartanburg, and one-third committed by Partners for Active Living (to be raised from the private sector).

Role of the Convener

As the lead organization for implementation of the recommended trails network, the 'convener' will have multiple roles, including the following:

- Appoint a Bicycle, Pedestrian, and Greenways Coordinator staff position. This coordinator would be responsible for implementing this Plan and would work with local government departments and partner nonprofits to seek funding. This coordinator will also manage and facilitate meetings for the BPGAC.
- Facilitate the implementation of this Plan by fostering ongoing communication among partners. Encourage network development as a priority for public infrastructure investment among all stakeholders.
- Work with network development partners to ensure a coordinated approach to operations and maintenance. Operations and maintenance tasks need to be supported by adequate funding and staff levels.
- Remain up-to-date on opportunities for facility development that coincide with other capital or maintenance projects, such as road resurfacing, new commercial or residential developments, new road construction, etc.
- In coordination with the BPGAC communications committee, manage public relations for bicycling and walking and trail usage in Kershaw County by generating positive and addressing negative media coverage.
- Manage contracts for facility development on an as needed basis; while construction of on-street bikeways and walkways are expected to fall within the purview of Kershaw County, municipality agencies, and/or SCDOT, certain off-street greenway facilities that do not fall within the jurisdiction of the local parks and recreation department may require that the 'convener' serve as the primary point of contact and project manager.

Role of the Advisory Committee

As mentioned previously, this committee will play a major role in championing the implementation of this Plan. Specifically this group should:

- Advocate for implementing the bicycle, pedestrian, and greenways program.
- Facilitate cooperation among government agencies and nonprofit partners for network development.
- Define and recommend sources of funding for network development.
- Meet quarterly with an agenda that includes: A) Implementation progress updates from each of the member organizations, B) Confirmation of specific tasks to be completed by specific members before the next meeting, and C) Discussion of new opportunities and constraints and identification of ways to address them.
- Pursue funding including the solicitation of major donors and corporate sponsors
- Build partnerships with land owners for trail development, with special attention given to owners of large or contiguous tracts of land.
- Keep local leaders informed about bicycle, pedestrian, and trail-related issues and developments through direct dialogue and personal e-mail; promote facility development among local leaders through creative approaches, such as organized tours of existing trails or proposed trail corridors.
- Rally public support for key public hearings and coordinate mass e-mail campaigns for special votes.
- Continue communication and build positive relationships with organizations such as utility companies (Progressive Energy, South Carolina Electric & Gas, and others), public and private schools, and others that can assist with issues related to potential bicycle and pedestrian facility right of way and trail development.

Role of Non-Profits

Non-profit organizations can serve a variety of purposes and are already leading many trail development related activities across the Kershaw County community. Specific tasks for non-profits related to the implementation of this Plan include:

- Participate in the activities of the BPGAC and, as needed, provide representation on the committee.
- Maintain open dialogue with the BPGAC and the 'convener' to promote resource- and information-sharing and reduce duplications of effort.
- Advocate, promote, and encourage the development of the bicycle, pedestrian, and trails network throughout the community.
- Educate citizens as to the benefits of biking and walking and trails and greenways.
- Play an active role in raising funds for network development in concert with the BPGAC.
- Assist in securing right of way for implementation.
- Help to organize volunteers to assist with implementation and management.
- Sponsor or co-sponsor biking and walking and trail events.

Role of the County and Municipalities

While the Kershaw County community benefits from a strong network of nonprofit partners for network development, the Kershaw County and local municipality governments play key roles in facilitating implementation of this Plan.. The role of these entities includes the following municipal and county tasks:

- Participate in the activities of the BPGAC and, as needed, provide representation on the committee.
- Maintain open dialogue with the BPGAC and the 'convener' to promote resource- and information-sharing and reduce duplications of effort.
- Contribute staff time and expertise to the network development process.
- Whenever possible, accept ownership of trails developed by other partners and, at minimum, accept responsibility for facility maintenance and operations (see Chapter 8 of this Plan)
- Where appropriate, assist in securing right of way for implementation.
- Manage on-street bikeway and walkway construction projects and, whenever, possible, manage off-street greenway construction.
- Coordinate among county and municipal planners to ensure network connectivity between jurisdiction borders.
- Ensure that the design guidelines of this plan are used in the design of network facilities and aim for uniform standards in trail facilities, such as with signage and wayfinding.

Most importantly, prior to the beginning of each fiscal year, the county and local municipalities should adopt a budget for expenditures of funding that supports the bicycle, pedestrian, and greenways program. Local municipal and county staff should be prepared to provide supporting materials for the budget process, including any bicycling, walking, and trail-related reports, user estimates, and benchmarking statistics.

Role of Transportation Agencies (SCDOT, COATS, SLCOG)

SCDOT, the Columbia Area Transportation Study (COATS), and the Santee-Lynches Council of Governments (SLCOG) have a key role in implementation of this Plan, including participation in the following tasks:

- The SCDOT District One should be prepared to provide guidance and technical support to for implementing on-street bikeway and walkway facilities, as well as related trail facilities such as shared-use paths in roadway corridors, trail-roadway crossings, and improvements that increase safety for bicyclists and pedestrians crossing bridges on state roadways.

- SCDOT should also continue to work with local planners on coordination of upcoming and future roadway projects that involve bikeway and walkway recommendations. Communication with COATS, Kershaw County, municipalities, and the BPGAC regarding scheduled road maintenance and road construction projects is crucial to network development.
- COATS and SLCOG should continue its ongoing inventory of trail, bikeway, and walkway facilities and incorporate the recommendations of this Plan into its long-range planning for such facilities. Maintaining open dialogue and information-sharing with the BPGAC and local partners is essential.
- Identify funding sources for network development.

7.3 Infrastructure Action Steps

While establishing the administrative structure described, stakeholders should move forward with infrastructure development by proceeding with the design and construction of priority projects. They should also work to identify funding for longer-term, higher-cost projects.

7.3.1 Estimate Costs

Cost estimates for six priority projects of the Plan are provided in Chapter 5. Costs for developing additional network segments can be estimated using unit-level cost estimates listed below. Table 7-1 offers a summary of the fully burdened costs of the facility types recommended in this Plan. The paved greenway estimates assume a 10 foot wide asphalt path. All costs are total installed costs that include: planning and engineering, environmental, and contingency. Land acquisition costs are not included.

Table 7-1: Cost Estimates for priority projects (land acquisition costs not included)

Facility Type	Per Mile Cost
Greenway Paved	$600,000-$1,000,000
Paved Shoulder	$400,000-$600,000
Greenway Natural	$100,000-$275,000
Bicycle Route/Bicycle Boulevard	$10,000-$114,000
Bicycle Lane	$16,000-$60,000
Shared-lane Marking	$8,000-$14,000
Sidewalk with curb and gutter (one-side)	$844,800 ($160/LF)

7.3.2 Identify Funding

Achieving the vision that is defined within this Plan requires, among other things, a stable and recurring source of funding. Communities across the country that have successfully engaged in bicycle, pedestrian, and trail development programs have relied on multiple funding sources to achieve their goals. No single source of funding will meet the recommendations identified in this plan. Instead, stakeholders will need to work cooperatively a wide range of private sector, municipality, state, and federal partners to generate funds sufficient to implement the program.

A stable and recurring source of revenue is needed to generate funding that can then be used to leverage grant dollars from state, federal, and private sources. The ability of the local agencies to generate a source of funding for trails depends on a variety of factors, such as taxing capacity, budgetary resources, voter preferences, and political will. It is very important that these local agencies explore the ability to establish a stable and recurring source of revenue for trails.

Donations from individuals or companies are another potential source of local funding. Recommended funding sources are included in Appendix E: Potential Funding Sources.

7.3.3 Leverage Opportunities

In the course of seeking funding opportunities, consider partnerships with developers and non-traditional trail development partners. Implementing a community-wide bicycle, pedestrian, and trails system is an iterative process often well served by opportunistic chances. For example, the parcel along the Wateree River that houses the sewage treatment plant slated for decommissioning will be repurposed and redeveloped. By involving the landowner or developer early in the trail development process, they have the opportunity to share in the discussions of the specific trail alignment and trail features, ultimately creating a transportation and recreation corridor that directly contributes to the economic potential of the developed property.

Proposed trail segments that connect to other regional trails also present opportunities to leverage investments. As Palmetto Conservation Foundation moves forward with development of trail segments in Richland and Sumter Counties and the Carolina Thread Trail advances trail development in Lancaster County, Kershaw County can work collaboratively – leveraging funding investments and generating awareness for a potential regional trail network that links each of these corridors to one another.

7.3.4 Complete Priority Trail Projects

By moving forward quickly on priority trail projects, stakeholders of this Plan will demonstrate their commitment to carrying out the Plan and will better sustain enthusiasm generated during the public outreach stages of the planning process. Chapter 5: Recommendations identifies priority bicycle, pedestrian, and trail projects.

7.3.5 Design, Construct, and Maintain Network Facilities

Once a network segment is selected and, if necessary, land or easements are acquired, facility design typically follows. For this Plan, some facilities, such as bicycle routes or shared-lane markings, will require signage and limited construction activities. Other segments will require varying degrees of clearing and natural surface grading, but still may be able to be implemented without design or construction documents. Preliminary design plans should be reviewed by multiple stakeholders, including emergency service personnel and the local police department, so they can offer suggestions and have their voices heard from the very beginning. There is sometimes a disconnect between the designer and operating staff. Designs that are pleasing to the eye are not always conducive to good and inexpensive maintenance. Therefore, it is imperative that cost saving should be a part of any design, with a thorough review of the plans while they are still in a preliminary stage.

Annual operations and maintenance costs vary, depending upon the facility to be maintained, level of use, location, and standard of maintenance. Operations and maintenance budgets should take into account routine and remedial maintenance over the life cycle of the improvements and on-going administrative costs for the operations and maintenance program.

The analysis also revealed opportunities to connect relatively high density residential clusters with local food outlets (regardless of demographics). Residential clusters exist within close proximity to healthy food sources along Broad Street within the city limits of Camden. With improved bicycling and walking environments, these residents will have safer and more convenient active transportation route choices.

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Creating an effective administrative/jurisdictional structure will foster the successful development and implementation of an efficient system with stable support, leading to a highly connected network of trails and pathways that will become part of everyday life and utility in Kershaw County.

8: Management & Maintenance Best Practices

8.1 Introduction

The Kershaw County bicycle, pedestrian, and greenway network should be viewed and maintained as a public resource. This network will become infrastructure similar to street systems or utility networks, serving the community for generations. The following guiding principles will help ensure the preservation of a first class system:

- Good maintenance begins with sound planning and design
- Foremost, protect life, property, and the environment
- Promote and maintain a quality outdoor recreation and transportation experience
- Maintain quality control and conduct regular inspections
- Include field crews, police and fire/rescue personnel in both the design review and ongoing management process
- Maintain an effective, responsive public feedback system, and promote public participation
- Be a good neighbor to adjacent properties
- Operate a cost-effective program with sustainable funding sources

Maintenance schedules and standards help keep trail systems attractive and as safe recreational destinations and transportation facilities, and are critical to the safety and enjoyment of trail users. Managing risk, safety, and security are important components woven into the management and maintenance scheme. Creating an effective administrative/jurisdictional structure will foster the successful development and implementation of an efficient system with stable support, leading to a highly connected network of trails and pathways that will become part of everyday life and utility in Kershaw County. The following sections provide detail on how this will be achieved.

8.2 Management and Maintenance Program

There are many forms of trail management and maintenance assessments, checklists, plans, standards, and guidelines currently in use by counties, towns, and park systems throughout the United States. Trail-related organizations such as American Trails, the Rails-to-Trails Conservancy, the Federal Highway Administration, and the U.S. Forest Service provide excellent examples of management and maintenance best practices from across the country. This section was developed based on our previous experience and resources from the aforementioned organizations.

8.2.1 Systematic Approach

In developing an efficient and effective management and maintenance system, Kershaw County should consider a detailed and systematic way of inventorying, planning, executing, and monitoring maintenance. A maintenance inventory and maintenance training for staff are first steps towards achieving this:

Maintain a Trail and Facilities Inventory

This Plan provides a baseline inventory and database of existing and proposed trail facilities and their features. Maintaining this information, whether through database software or other means, is an essential tool for efficient trail management. The inventory can be a simple Excel spreadsheet or a GIS map populated with data collected during the development of this Plan and through subsequent updates.

Consider Professional Maintenance Training

Another option in management and maintenance efficiency is training. Training opportunities should be carefully reviewed for relevance and cost-effectiveness. One example of a relevant program is the Park and Recreation Maintenance Management School sponsored by The National Recreation and Park Association (NRPA). For over 30 years the North Carolina State University Department of Parks, Recreation and Tourism

Management and Continuing and Professional Education, in conjunction with NRPA, has conducted this two-year professional development program for park and recreation personnel. Another option is to hire an expert trail system manager to conduct a customized training or provide assistance on a consulting basis.

8.2.2 Maintenance Activities and Costs

The following are typical duties and activities often performed by management and maintenance staff.

- Vegetation Management: mowing, litter clean-up, manure removal, pruning, trimming, weeding, invasive species management, tree removal, planting
- Drainage Cleaning and Maintenance: flushing, raking, slough and berm removal, cleaning drain dips
- Trailhead, Amenity, and Signage Maintenance: parking, toilet facilities, informational kiosks, picnic tables, benches, maps, trail rules and regulations, traffic control for trail users, mile markers, directional signs, fencing
- Trail Inspection/Patrolling: greet users, encourage proper etiquette, make minor repairs, report vandalism[1]

General annual management and maintenance costs vary depending on the facility to be maintained, level of use, location, and standard of maintenance. Budgets should take into account routine and remedial maintenance over the life cycle of the improvements and on-going administrative costs for the program. The section below provides an overview of approximate costs for basic greenway, bicycle, pedestrian, and equestrian trail management and maintenance services. The estimates include field labor, materials, equipment, and administrative costs.

Table 8-1: Maintenance Tasks and Suggested Frequency

Maintenance Task	Suggested Frequency
Inspections	Seasonal - at both beginning and end of summer
Sign repair/replacement	4-6 years
Site furnishings; replace damaged components	As needed
Fencing repair	Inspect monthly for holes and damage, repair immediately
Pavement markings replacement	1-3 years
Pavement sweeping/blowing	As needed; before high use season
Pavement sealing; pothole repair	5-15 years
Lighting repair	Annually
Introduced tree and shrub plantings, trimming	1-3 years
Shrub/tree irrigation for introduced planting areas	Weekly during summer months until plants are established
Shoulder plant trimming (weeds, trees, branches)	Bi-annual (Fall or Spring)
Major damage response (fallen trees, washouts, floodings)	As needed
Culvert inspection	Before rainy season; after major storms
Maintaining culvert inlets	Inspect before onset of wet season
Waterbar maintenance (earthen trails)	Annually
Trash disposal	Weekly during high use; twice monthly during low use
Litter pick-up	Weekly during high use; twice monthly during low use
Graffiti removal	Weekly; as needed

[1] The frequency of the above activities will certainly vary across trail systems and even within trail systems. For a best practices model outlining specific activity frequencies and costs, please see Fairfax County, Virginia's Guide to Trail Management; Appendix A & B http://www.fairfaxcounty.gov/parks/trailmgmt.htm.

Routine Management and Maintenance Costs

Routine management and maintenance refers to the day-to-day regimen of litter pick-up, trash and debris removal, weed and dust control, trail sweeping, sign replacement, tree and shrub trimming, and other regularly scheduled activities. It also includes minor repairs and replacements, such as fixing cracks and potholes or repairing a broken hand railing. The following are typical annual costs for different trail types.

Greenway Trails

Many factors influence greenway trail costs, such as amount of use, maintenance crew-size needed, proximity to urban centers, and number of interfaces with geographical and man-made features. Annual routine maintenance costs range from nominal to as high as $7,000 per mile. Research conducted by the Rails-to-Trails Conservancy (RTC) indicates costs are often on the lower end for managing and maintaining rail trails at approximately $1,500 as shown in Table 8- 2[2].

On-Road Bicycle Facilities

Maintenance of the on-roadway bicycle facility system is handled by the local Public Works Departments and SCDOT Maintenance Division. Some provision should be made however for up to fifteen regular inspections per year, to include minor repair or replacement of signs, vegetation grooming and other items that an inspector could remedy in the field. Additional attention should be paid to any potholes or other pavement damage. Additional sweeping may be required where bicycle lanes and wider shoulders are provided along roads. Staff costs can be reduced by training local volunteers or bicycle advocates to conduct inspections and providing a means for citizens to report bicycle facilities needing repairs (see Implementation Strategies below).

Pedestrian Facilities (On Road Sidewalk/Sidepath)

SCDOT maintains all sidewalks on SCDOT rights-of-way. Maintaining pedestrian facilities is an important part of maintaining the complete right-of-way for all users. When cracks, surface defects, tree root damage, and other problems are identified, SCDOT fixes the area to ensure sidewalks remain accessible to all pedestrians. Repairs are generally completed on an as-needed basis rather than through regularly scheduled evaluation of the sidewalk condition.

Table 8-2: Trail Overall Maintenance and Operations Annual Costs

Item	Overall	Asphalt	Non-Asphalt
Number of Trails Reporting Financials	39	18	19
Average Annual M&O Cost	$24,239	$19,584	$25,237
Average Length (miles)	23	20	24
M&O Cost per Mile		$1,458	$1,478
Average Years Open	12	15	11
Average Annual Users	136,986	139,304	129,492
Re-grade/Re-surface Frequency		17	9

On locally-owned streets, local property owners are responsible for routine maintenance of sidewalks (such as clearing vegetation), and the Kershaw County Public Works Department and/or City of Camden Public Works and Utilities Department are responsible for more significant repairs. Crosswalks, pedestrian signals, curb ramps, median crossing islands, and other pedestrian facilities should be maintained by the respective Public Works departments and SCDOT, depending on right-of-way ownership.

Remedial Management and Maintenance Costs

Remedial Management and Maintenance refers to correcting significant defects in the network, as well as repairing, replacing, or restoring major components that have been destroyed, damaged, or significantly deteriorated from normal usage and old age. Some items ("minor repairs") may occur on a five- to ten-year cycle, such as repainting, seal coating asphalt pavement, or replacing signage. Major reconstruction items will occur

[2] Poole, T. Rail-Trail Maintenance and Operation. Rails-To-Trails Conservancy Northeast Regional Office. July 2005.

over a longer period or after an event such as a flood. Examples of major reconstruction include stabilization of a severely eroded hillside, repaving a trail surface or a roadway that is part of the bicycle network, or replacing a footbridge. Remedial maintenance should be part of a long-term capital improvement plan.

The following estimates provide a general idea of potential remedial management and maintenance obligations:

Greenway Trails

A 7- to 15-year life is assumed for asphalt and crushed fine trails after which an overlay may be required. A complete resurfacing after 20 to 25 years is anticipated. Concrete is assumed to last twice as long. Bridges, tunnels, retaining walls and other heavy infrastructure are assumed to have a 100-year life or longer.

Nature Trails and Equestrian Facilities

It should be noted that regular equestrian use on a trail will likely have more significant erosional effects on trail surfaces than trails open to hikers only due to the small surface area to weight ratio of horses combined with the flicking action of hooves. Over time, this will lead to costs associated with keeping the tread shape and surface in good form. Major surface and trail repairs are addressed as needed.

On-road Bicycle Facilities

Remedial work for on-road bicycle facilities includes asphalt repaving (five feet on either side of the street), curb and gutter, sewer-grate, and manhole repair. Pothole and crack repair are considered routine. Pavement markings, such as bicycle lane lines, bicycle stencil markings, and fog lines should be re-installed when other roadway pavement markings are improved. Since this work is done as part of the current street maintenance regime the cost is assumed to be covered.

Pedestrian Facilities

Sidewalks should be constructed with concrete, which requires replacement in 50 to 75 years. A rough cost estimate for on-linear-mile of concrete sidewalk could be provided by the City of Camden and/or Kershaw County Public Works Department; this would include base material, concrete, and construction work. Costs for design and right-of-way easement purchases should also be considered.

Setting Priorities

A detailed and systematic management and maintenance system will help set priorities. Sound overall advice on setting trail maintenance priorities is provided in the U.S. Forest Service, Trail Construction and Maintenance Notebook, 2004 Edition (this edition is more specific on this topic than the updated 2007 edition. Though directed at backcountry trails, it is valid for all trail settings):

> "High-quality and timely maintenance will greatly extend the useful life of a trail. The trail crew's task is to direct water and debris off the tread, and keep the users on it. The best trail maintainers are those with "trail eye," the ability to anticipate physical and social threats to trail integrity and to head off problems. Even though you know the proper maintenance specifications, sometimes there is too much work for the time you have to spend. How do you decide what to do? Since it is a given that there will always be more work to do than people to do it, it's important to:
>
> - Monitor your trail conditions closely.
> - Decide what can be accomplished as basic maintenance.
> - Determine what can be deferred.
> - Identify what area will need major work.
>
> This 'trail triage' is critically important if your maintenance dollars are going to be spent keeping most of the tread in the best possible condition.
>
> - The first priority for trail work is to correct truly unsafe situations. This could mean repairing impassable washouts along a cliff, or removing blow down from a steep section of a pack stock trail.
> - The second priority is to correct things causing significant trail damage--erosion, sedimentation, and off-site trampling, for instance.

- The third priority is to restore the trail to the planned design standard. This means that the ease of finding and traveling the trail matches the design specifications for the recreational setting and target user. Actions range from simply adding "reassurance markers" to full-blown reconstruction of eroded tread or failed structures.

Whatever the priority, doing maintenance when the need is first noticed will help prevent more severe and costly damage later."

8.3 Risk Management, Safety and Security

Safety is central to all management and maintenance operations, and is the single most important greenway/bicycle/pedestrian facility management and maintenance concern. Context-sensitive trail design, clear and implementable safety and security policies, comprehensive programs, and maintenance commitments affect the measurable, as well as the perceived, safety and security of a trail facility.

When considering risk management, it is important to keep in mind that:

- State law of South Carolina, removes much of the liability from landowners who open their property for public recreation except in cases of gross negligence. Specifically, South Carolina Code of Laws Title 27, Chapter 3. Additionally, in April 2012, the South Carolina Governor signed amendments to Code of Laws 47-9-710 and 47-9-730 to improve liability protections for landowners allowing equestrian trail riding activity on their property (see Bill H4775).
- Trails and trail users are inherently safe. In a Rails-To-Trails Conservancy survey, most reported suits were the result of one individual being reckless, then trying to shift blame onto the trail. In 150 million trail visits surveyed by the Rails-To-Trails Conservancy, only eleven resulted in lawsuits.[3]

Sound trail management and maintenance planning combined with attention to physical safety hazards, environmental design opportunities, and appropriate insurance policies will provide a safety structure that encourages trail use and enhances the trail experiences in Kershaw County. Building trust with the community will serve to highlight and reinforce the value added by the trail system to the community, allowing the network to grow in a way that fits the needs of the community and improves overall quality of life.

Safety programs should include the following preventative measures:

- As part of regular trail inspections, evaluate and remove any obstacles or objects that could impede facility usage such as debris, overgrown vegetation, etc. and, when needed, provide alternative routing.
- Partner with local police to ensure that any incidents, such as vandalism, are tracked, including the specific location, and, if problems develop, create a safety follow-up task force to develop preventative measures for avoiding future incidents.
- Implement an emergency response protocol working with law enforcement, EMS agencies, and the fire department that includes mapping of access points, design of trails and access roads (to accommodate up to 6.5 tons), and an "address system" such as mile markers to identify locations for all off-road greenway facilities, trails, and equestrian facilities. Greenville, SC installed numbered pavement markings every one tenth of a mile on asphalt trails as a way to provide trail users with an "address" for their trail location in the event of an emergency. On-road facilities should make use of the existing street names and adjacent property addresses. Each local emergency response office/unit should have an up-to-date map of all greenway and trail facilities within the local jurisdiction.

8.3.1 Managing Trail User Conflicts

Though most shared-use path experiences are pleasing and enjoyable, conflicts between trail users may occur that can have serious consequences. In these cases, the

[3] Poole, T. Rail-Trail Maintenance and Operation. Rails-To-Trails Conservancy Northeast Regional Office. July 2005.

challenges usually relate to a trail user's style of activity (mode of travel, level of experience, etc.), trip focus, expectations, attitudes toward and perceptions of the environment, and level of tolerance for other activities.

In order to manage multiple user groups with potential conflicts, Kershaw County should address user conflicts as they arise (if they arise), based on patterns of usage and recorded incidents. Kershaw County should also review complaints and accident reports on an on-going basis to determine if there is a pattern of user conflicts that needs to be enforced. Trail managers can take additional measures to address the challenges of shared use, such as:

- User involvement and outreach - Build understanding and good will by finding mutually agreeable solutions, and then inform the community (through signs, maps, brochures, Internet, media campaigns, sponsorship of "user swap" activity days, joint trail building days, etc.) to actively and aggressively promote responsible behavior.
- Uniformed presence on the trail - This can be in the form of police, maintenance staff, volunteer trail patrols, etc.
- Maintenance program - An efficient and appropriate maintenance program that addresses signs, sight distances, vertical and lateral clearances and surface maintenance.
- Regulations and enforcement – If user conflicts persist, for those not influenced by outreach and education, employees and volunteers must have the authority to enforce safe and courteous behavior, with regulations posted prominently at trailheads and other appropriate locations. Four broad areas of regulations include:
  - » Acceptable uses and right-of-way (ROW) (who must yield to whom) (ex: Motor vehicles, other than power assisted wheelchairs, are prohibited; Stay on the trail; No loitering; no vandalism; no dumping; Keep to the right except when passing; Yield to on-coming traffic when passing; Bicycles always yield to pedestrians; Pedestrians always yield to equestrians; Give a vocal warning when passing; Pets must always be on short leashes; Travel no more than two abreast; Alcoholic beverages are not permitted on the trail; Bicyclists and pedestrians yield to maintenance vehicles)
  - » Speed limits (ex: 15 mph speed limit)
  - » Hours of use
  - » Objectives of resource protection (e.g., enhance native vegetation by preventing the spread of invasive species and minimizing disturbances to vegetation)
- Monitoring progress - The ongoing effectiveness of decisions made and programs implemented – in the context of clearly understood and agreed-upon objectives – must be monitored for each trail area, with flexibility and willingness to adapt strategies for individual situations.

Signs like this encourage pedestrians and slower users to stay to the right, allowing faster users to pass safely on the left. Source: www.tfhrc.gov

Managing Trail Use Through Design

The Kershaw County network of trails will be available to a variety of uses and managers should expect that the public will practice proper etiquette to control speed, direction, and position. Trail design can positively affect trail user experiences and a trail users understanding of proper etiquette within various contexts.

In areas with high user volumes, physical elements to separate users by direction or mode of travel may be desirable. For instance, a center stripe painted on the trail can separate users by direction, or an adjacent trail with a different surface material may be created for runners. In other cases, signs may suffice. Following recommended best practices for shared-use path design (see Appendix F: Design Guidelines of this Plan) is important for minimizing potential trail user conflicts.

Signs can help to enforce desired uses and behaviors

Signs like this can reduce trail user conflict by clarifying universal trail etiquette.

Trail Etiquette Awareness

Kershaw County should include public awareness as an integral component to any effort to manage trail user conflicts. Ensuring that the public is aware of trail policies and etiquette is essential to addressing trail user behavior. Providing this information in a clear and conspicuous manner allows users to understand both their responsibilities and their rights. Trail signage, pavement markings, and media campaigns are effective strategies for educating the public about appropriate trail use. For example, simple signs reminding hikers and cyclists to yield the right-of-way to equestrians should be posted at trail access points where use is permitted for all three groups, as shown with the trail etiquette sign to the right.

Dog Use Management

Dog handlers and their pets enjoy trails for a number of reasons – mobility assistance, personal security for handlers, and for the pleasure and fitness of animals. However, adding unleashed or unruly dogs to the mix of walkers, cyclists, and equestrians may create conflicts. Techniques to help manage dog use on the trail can include signage pertaining to regulations and etiquette such as: staying within the trail corridor; leash usage; greet-before-you-meet etiquette with people and other dogs; and picking up waste. With appropriate management policies in place, dogs can be a welcome addition to the Kershaw County trail system.

8.4 Administrative Responsibilities

8.4.1 Inter-agency design review

Coordination between and commitment of agencies responsible for greenway, bicycle, and pedestrian trail facilities is crucial in completing routine and remedial maintenance tasks. In addition to department managers, planners, designers, and engineers, police, fire/rescue, and field maintenance personnel should be consulted in the design and review process. Coordination should occur at a local level through carrying out the following tasks.

- Establish a coordinating committee with representatives from each of the participating agencies and stakeholders.
- Identify an entity to provide on-going oversight, coordination, and leadership for the overall network.
- Review critical public and private sector projects that might impact greenway, bicycle, and pedestrian projects as they come online.
- Pursue grants and cooperative agreements.
- Monitor management and maintenance and other advocacy functions now and over the years to come.
- Review accident and crime reports, and take the necessary upfront actions on a case-by-case basis, to ensure that greenway, bicycle, and pedestrian facilities do not deteriorate due to safety concerns, crime, or from fear of criminal activity.

8.4.2 Management Responsibilities by Department

Kershaw County

Kershaw County and local jurisdictions should identify existing staff who can dedicate 25 percent of their time to the responsibilities of "Pedestrian Coordinator" and "Bicycle Coordinator." These duties would include carrying out recommendations from this plan, applying for funding, overseeing planning, design, and construction of the pedestrian and bicycle systems, and coordinating with the local and regional jurisdictions and SCDOT. These coordinators should work with other county and municipal staff to conduct tasks such as updating and publishing new local bicycle maps, creating and updating GIS layers of all related facilities, coordinating education, enforcement, and encouragement programs, monitoring the use and safety of pedestrian and bicycle facilities, proposing future alternative routes, and working with adjacent communities and regional organizations to coordinate pedestrian and bikeway linkages.

Kershaw County Recreation Department

Duties for the Kershaw County Recreation Department and relevant departments of local jurisdictions (such as the City of Camden's Parks Department) would include carrying out the recommendations from this Plan, applying for funding, maintaining natural surface trails, and conducting routine maintenance of paved trails, trail planning and design, trail construction, and overseeing the safety and operations of all trail facilities. Staff should also conduct tasks such as updating and publishing new maps, creating and updating GIS layers of all bicycle, pedestrian, and equestrian facilities proposing future alternative routes, working with adjacent communities/ counties to coordinate linkages, and playing a key role in education and encouragement programs.

Kershaw County Public Works and Engineering Departments

The Public Works and/or Engineering Director of Kershaw County and the relevant departments of local jurisdictions (such as the City of Camden's Public Works and Utilities Department) should oversee the construction and remedial maintenance of all bicycle, pedestrian, and equestrian facilities. One member of the local staff should handle facility development and construction (including posting wayfinding signs) among his/her other responsibilities. Staff should work with SCDOT to develop a schedule for routine maintenance and a means of identifying locations for spot maintenance improvements.

A police force that is trained on existing bicycle laws and common crash types can help improve safety through enforcement and education

Sheriff's Office (or Local Police Department)

All local police officers should go through training courses so that they are up to date with the most current laws governing bicyclists and pedestrians in South Carolina. Specific laws can be found here:

- Bicycle related - http://www.bikelaw.com/blog/south-carolina-bicycle-laws/
- Pedestrian related - http://www.leekelaw.com/library/south-carolina-pedestrian-laws-sc-pedestrian-accident-attorney.cfm
- Bikelaw.com (www.bikelaw.com) provides assistance for conducting bicycle-specific legal training for police officers.

South Carolina Department of Transportation (SCDOT)

SCDOT should continue to design and build on-road facilities along with maintaining all pedestrian and bicycle facilities within the roadway rights-of-way that are owned by the state (with the exception of sidewalks on local streets). This includes paved shoulders, bicycle lanes, crosswalks, pedestrian signals, and sidewalks on main roadways. SCDOT should work with local jurisdictions to develop a schedule for routine maintenance and a means of identifying locations for spot maintenance improvements. Through coordination with Kershaw County and municipality staff, SCDOT can develop recommended on-street bikeway facilities that involve striping or restriping the existing pavement as part of the routine repaving schedule.

Volunteers

Services from volunteers or donations of material and equipment may be provided in-kind, to offset construction and maintenance costs. Formalized maintenance agreements, such as adopt-a-trail can be used to provide a regulated service agreement with volunteers. Other efforts and projects can be coordinated as-needed with senior class projects, scout projects, interested organizations, clubs, or a neighborhood's community service to provide for the basic needs of proposed networks. Utilizing volunteers reduces planning and construction costs and enhances community pride and personal connections to the local greenway, bicycle, and pedestrian networks. In particular, volunteer groups associated with a trail user group, such as the Southeast Off-road Bicycle Association (SORBA), an equestrian association, a walking or hiking club, or a non-profit or school that will use the trail for nature education or other purposes are primary targets for ongoing assistance. Volunteers should be trained or supervised in the topic area in which they are working.

8.5 Implementation for Management/ Maintenance

Trail management and maintenance can be regular, stable, and thorough with support from and partnerships with a variety of public, private, non-profit, and community organizations at the local, regional, and national levels (see Appendix E: Potential Funding Sources of this Plan for more information). Through the combined resources of existing staff, new funding sources, and new community

partners and volunteers, the following are implementation strategies for advancing best practices in management and maintenance within Kershaw County:

8.5.1 Establish a Public Comment System

As discussed previously, a common factor that often influences public support for trail funding is the visual condition of the trails. Regular trail users are often the first to notice trail deficiencies or safety issues. Therefore, it is recommended that Kershaw County establish a user feedback system that will give trail users an opportunity to provide comments related to trail conditions directly to the agency responsible for maintenance of that particular trail. This can be done by posting a sign or kiosk at each trailhead with the necessary contact information. Some communities, such as Greenville, SC, encourage citizens to provide bicycle, pedestrian, or trail related feedback through the City's existing "311" communication service, which allows submissions through a mobile application for smart phones, e-mail, or a phone call

8.5.2 Implement a Management and Maintenance System

Based on Kershaw County staff and department resources, carry-out and monitor regular management and maintenance activities tailored to each section of trail. As the inventory of existing trail conditions and amenities is continuously updated, records of trail maintenance activities over time can be used for determining required budget adjustments on an annual basis. To achieve this, this Plan recommends that Kershaw County:

- Integrate the trail inventory into the City and County GIS system, so trail maintenance maps can easily be developed for planning purposes;
- Identify the staff member charged with maintaining the inventory of existing and proposed trail facilities and amenities;
- Identify the staff member charged with fielding public comments and complaints related to trails, monitoring incidents along trail, and working with other agencies and partners to develop a response;
- Ensure that staff members handling various aspects of management and maintenance are in regular communication with one another.

8.5.3 Further Define Agency Roles and Responsibilities

As the trail system in Kershaw County continues to expand, it will become even more critical that the roles and responsibilities of each agency are clearly defined. It is recommended that a point person be identified as the individual responsible for coordination between agencies and continually updating the recommended management and maintenance system. As roles and responsibilities are determined, Kershaw County should coordinate with the Bicycle, Pedestrian, and Greenways Advisory Committee recommended and discussed in Chapter 7: Implementation.

8.6 Conclusion

While day-to-day management and maintenance activities may seem ordinary and routine, their proper execution will add years and value to Kershaw County's bicycle, pedestrian, and greenway system. Thoughtful and thorough structure for trail management and maintenance activities should be established now. Establishing responsible team member roles and routinely working with community members will ensure Kershaw County's network of bicycle, pedestrian, and trail facilities continues to grow and foster economic, social, and environmental benefits.

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Appendix A: Summary of Existing Planning Efforts

Santee-Lynches Regional Council of Governments Transportation Improvement Program

- Year: 2012

Description: The SLRCOG TIP is a list of prioritized projects within the Santee-Lynches region that are scheduled to receive federal funding within the next six years. This list includes pedestrian and bicycle infrastructure projects. Projects are prioritized within the SLRCOG Long Range Rural Transportation Plan. A three tier committee process is used to determine which projects will be recommended for inclusion into the TIP. No pedestrian and bicycle infrastructure projects are currently listed in the TIP.

Kershaw County Comprehensive Plan: Transportation Element

- Year: 2012

Description: The Transportation Element was developed in response to the Priority Investment Act passed in 2007 which required issues impacting the local transportation network must be inventoried and analyzed separate from other comprehensive plan elements and must be multi-modal in nature. Complete streets design elements and sample cross sections illustrate options for retrofitting existing roadways and designing new roadways. The Transportation Element is further evaluated in accordance with the land use element and introduces opportunities for Transit Oriented Development (TOD) districts. TG-3 establishes the goal of developing a comprehensive, interconnected system of bike and pedestrian facilities.

Recommendations:

- Existing and Proposed Bicycle Facilities (p. E-25)
- Complete streets (p. E-26-E-28)
- Potential TOD Districts (p. E-38)
- TG-3 Bike and Pedestrian Improvements (p. E-44-E-46)

Recreation Plan for Kershaw County

- Year: 2012

Description: The Recreation Plan for Kershaw County describes the capital improvement recommendations for the recreational program in Kershaw County to be implemented between 2012 and 2022. The Plan recommends hard-surface trail at least fifteen miles long be established; phase one should be implemented within the next five years and identifies several parks within the County that should add trails.

Recommendations:

- Capital Improvement Recommendations (p. 31-34)

Land Development Design Standards and Required Improvements

- Year: 2012

Description: Kershaw County's Land Development Regulations Article 5, Division 3 requires all major residential subdivisions to provide accommodations for pedestrians, bicycles, and non-automotive traffic on sidewalks, path, trails, and/or greenways. Further, it requires that each lot in the development has access to the trail system and that the trail system shall provide connectivity to nearby amenities.

Recommendations:

- Sidewalks and Paths (p. 77)

Bicycle & Pedestrian Regional Pathways Plan

- Year: 2010

Description: The Regional Pathways Plan highlights twenty-eight existing and proposed greenway, bikeway, and sidewalk locations that connect major employment centers and regional and local attractions totaling over 272 miles and serving the region's urbanized population. Phase I summarizes the existing conditions and recommendations from various recent transportation, bicycle, and pedestrian studies.

Recommendations:

- Regional Pathway Index (p. 8)

Columbia Area Transportation Study (COATS) Transportation Improvement Program

- Year: 2009

Description: The Transportation Improvement Program (TIP) establishes a list of agreed-upon transportation capital projects that are anticipated to receive federal funds for the next 7 years (2009-2015). The majority of projects are aimed at increasing the safety and efficiency of the existing transportation systems.

Midlands Tomorrow – 2035 Long Range Transportation Plan

- Year: 2008

Description: The Midlands Tomorrow: 2035 Long Range Transportation Plan is the regional transportation plan for the Columbia metropolitan area prepared by the Central Midlands Council of Governments (CMCOG). CMCOG is the MPO for the urbanized area around Columbia, the Columbia Area Transportation Study (COATS), and is responsible for developing, maintaining, and administering the region's LRTP. The LRTP includes Transportation Network Design Principles the recommend developing a variety of auto, pedestrian, and bike access routes to any destination, context sensitive design tenants, and complete streets design standards. Chapter 5 of the LRTP, "Quality of Life," recommends a multimodal system that improves the quality of life for residents by providing travel choices that include bike and walking facilities, greenway trails, and walkable downtowns. Twenty-six "early action projects" are outlined to fill critical gaps that exist in the current network and to build momentum for other bicycle and pedestrian initiatives.

Recommendations:

- Goals for the 2035 LRTP (p. 5)
- 900 people responded to the LRTP Transportation Survey. The issues the survey responders would like to see addressed in the future include, "more sidewalks in subdivisions," "more bike/walking facilities," and "more travel choices in Lexington (bus, bike, etc).
- Objectives and Strategies (Objective 3, p. 68)
- Chapter 5: Quality of Life (p. 69-87)
- CMCOG Regional Pathways Plan (Appendix A)
- Mitigation Strategies for Congested Corridors (p. 142-143) establishes five major mitigation strategies including, "shifting trips from automobiles to other modes"

Santee-Lynches Long Range Rural Transportation Plan

- Year: 2007

Description: The purpose of the Plan is to outline an overview of the regional, population, and environmental factors that may impact the region's transportation planning efforts and to make regional transportation recommendations. Each factor is investigated over eight specific areas including issues that deal with pedestrian and bicycle travel. There were no specific pedestrian or bicycle infrastructure projects listed in the Plan.

Recommendations:

- Pedestrian and Bicycle Travel, pages 39 to 44

South Carolina State Trails Plan

- Year: 2002

Description: The South Carolina State Trails Plan establishes the vision of trails in every region, for all users, and with great experiences for residents and visitors alike. The Program provides technical assistance, awards, and manages grants and serves as a clearinghouse for the variety of trail related activity across the State. An inventory of existing and planned hiking, water, interpretive, and biking trails is provided in the appendix and is organized by District and trail type. The inventory identifies just over 13 miles of trails existing in Kershaw County and 96 miles are planned.

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Appendix B: Policy Review Matrix

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Kershaw County Bicycle Pedestrian Greenway Plan

Topic	Jurisdiction	
	Kershaw County	Comments/Suggestions
1. DEFINITIONS		
1.1 Does "Street" definition include pedestrian and cyclist reference?	No. Needs improvement From ZLDR Article 2 Definitions – Street - Any publicly or privately maintained thoroughfare (street, road, drive, avenue, circle, way, lane, boulevard, etc.) or space which has been dedicated, deeded, designed, or used for vehicular traffic that provides access to more than three (3) parcels of land. Access within multiple parcel group developments is excluded from this definition. The words street and road shall be used interchangeably.	The specific reason for this definition pertains to access of property. Kershaw County does not allow the creation of a parcel that could not be accessed by a motor vehicle (mail, ambulance, fire, school bus, etc). This definition could be altered to include/reference bicycle and pedestrian considerations without nullifying the requirement of motor vehicle access. Consider adding the following language: "Regardless of classification, the design and construction of streets and intersections in Kershaw County should aim to serve all types of users, including pedestrians, bicyclists, and motorists, and should be inclusive of all levels of ability, such as those in wheelchairs, the elderly and the young."
1.2 Vehicle	No definition listed	Some states' definition of 'vehicle' includes the bicycle. However, the State of South Carolina's definition of 'vehicle' does not include bicycles. See SC 56-3-20 Definitions – (1) "Vehicle" means every device in, upon, or by which a person or property is or may be transported or drawn upon a highway, except devices moved by human power or used exclusively upon stationary rails or tracks.
1.3 Definition of Sidewalk	No definition of sidewalk listed	MUTCD Definition – That portion of a street between the curb line, or the lateral line of a roadway, and the adjacent property line or on easements of private property that is paved or improved and intended for use by pedestrians.
1.4 Definition of Bicycle	No definition of bicycle listed	MUTCD Definition – A pedal-powered vehicle upon which the human operator sits.
1.5 Definition of Greenway	No definition greenway listed	A linear open space established along a natural corridor, such as a river, stream, ridgeline, rail-trail, canal, or other route for conservation, recreation, and shared-use alternative transportation purposes such as for pedestrians and bicyclists.
STREET ELEMENTS AND CONFIGURATION		
2.1 Pedestrian accommodations (sidewalks, crosswalks, etc) required during new development or redevelopment	Needs Improvement From ZLDR Article 5:3.14 – Sidewalks and Paths Sidewalks, paths, trails, and/or greenways designed to accommodate pedestrian, bicycle, and other non-automotive traffic shall be provided in all major residential subdivisions, major group developments, and Planned Development Districts. The system of sidewalks, paths, trails, greenways, or combination thereof shall be designed such that every lot in the development or building in a group development has access to the system. Connectivity of the system to nearby schools, businesses, institutions, and other facilities shall be provided as applicable and practicable. The proposed system design shall be approved by the Planning and Zoning Commission at the plan review per the provisions of this Ordinance.	This requirement should be broadened to expand non-motorized traffic accommodations to not only major residential subdivisions, major group developments, and Planned Development Districts, but other land use/zoning districts as well. Appropriate land use/zoning districts include residential, office-institutional, business, and industrial districts. These recommendations may be excluded from rural residential and resource districts. Furthermore, this section could be divided into two parts – one specifying needs and accommodations of pedestrians and the other for bicyclists. Similar to 2.1 and 2.2 of this matrix; with respect to 2.3 broaden section 5:3.14 to require connectivity beyond major residential subdivisions, major group developments, and Planned Development Districts.
2.2 Bike accommodations (greenways, bike lanes, shoulders, racks, etc) required during new or redevelopment	Needs Improvement From ZLDR Article 5:3.14 – Sidewalks and Paths Sidewalks, paths, trails, and/or greenways designed to accommodate pedestrian, bicycle, and other non-automotive traffic shall be provided in all major residential subdivisions, major group developments, and Planned Development Districts. The system of sidewalks, paths, trails, greenways, or combination thereof shall be designed such that every lot in the development or building in a group development has access to the system. Connectivity of the system to nearby schools, businesses, institutions, and other facilities shall be provided as applicable and practicable. The proposed system design shall be approved by the Planning and Zoning Commission at the plan review per the provisions of this Ordinance.	

Topic	Jurisdiction	
	Kershaw County	Comments/Suggestions
2.3 New sidewalks, bike lanes, greenways, etc - connect to existing facilities, general connectivity requirements	Needs Improvement From ZLDR Article 5:3.14 – Sidewalks and Paths Sidewalks, paths, trails, and/or greenways designed to accommodate pedestrian, bicycle, and other non-automotive traffic shall be provided in all major residential subdivisions, major group developments, and Planned Development Districts. The system of sidewalks, paths, trails, greenways, or combination thereof shall be designed such that every lot in the development or building in a group development has access to the system. Connectivity of the system to nearby schools, businesses, institutions, and other facilities shall be provided as applicable and practicable. The proposed system design shall be approved by the Planning and Zoning Commission at the plan review per the provisions of this Ordinance. From ZLDR Article 3:5.4-4 Types of Common Open Space and Required Maintenance – The types of common open space which may be provided to satisfy the requirements of this Ordinance together with the maintenance required for each are as follows: C. Greenways - Greenways are linear green belts linking residential areas with other open space areas. These greenways may contain bicycle paths, footpaths, and bridle paths. Connecting greenways between residences and recreational areas are encouraged. Maintenance is limited to a minimum of removal and avoidance of hazards, nuisances, or unhealthy conditions. Recreation Master Plan also cites connectivity at various points	
2.4 Use of Right of Way	From ZLDR Article 5:1.8 – Utility Easements and Rights-of-Way b) - The Planning and Zoning Commission or Planning Official, as applicable, may approve the installation of sidewalks, trails, and greenways as required in this Article within the Kershaw County public sewer rights-of-way. All proposed sidewalks, trails, and greenways including any proposed hardscaping shall have approval from the Utilities Director prior to sketch plan or site plan submittal to the Planning Official or Planning and Zoning Commission, as applicable.	This provision does well in recognizing the applicability of sewer rights-of-way to sidewalk, trail, and greenway development. Expanding this to include other utility corridors such as water and power would strengthen this provision.
2.5 Sidewalks or bike accommodations required by roadway type	Relevant sections listed below: From ZLDR Article 5:3.8-7 Road Design Standards F. Additional Design Criteria 1. Circulation System Design – The street system shall be designed to permit the safe, efficient, and orderly movement of traffic; to facilitate pedestrian, bicycle, and other non-automotive transportation modes; to have a simple and logical pattern; to respect natural features and topography; to present an attractive streetscape; and to permit linkage of major collector streets and subdivisions. 3. Residential Local Streets - Residential local streets shall be laid out so that their use by through traffic will be discouraged, but shall encourage use by local vehicular, pedestrian, and bicycle traffic.	ZLDR Article 5:3.8-7 does well in supporting bicycle and pedestrian considerations. Improvements to these provisions would include bicycle and pedestrian considerations into each street classification listed in ZLDR 5:3.8-2. These are: A. Residential Local (RL) Streets (provision already included) B. Residential Collector (RC) Streets C. Light commercial and Industrial (LC/I) D. Arterial Streets
2.6 Cross-Access between adjacent land parcels	Limited. Related Article listed below: From ZLDR Article 5:1.2-3 - Accessibility Notwithstanding the exemptions from the definition of a subdivision, no lot may be created without vehicular and pedestrian access. Unless specifically allowed by these regulations, all lots must have direct access to a publicly dedicated street or an approved private street as provided for in this Ordinance. All publicly dedicated and approved private streets must be constructed to the Kershaw County street standards of this Article.	Add section under ZLDR Article 5:1.2-3 - Accessibility to include cross-access between adjacent parcels to facilitate non-motorized and pedestrian mobility. Requiring cross-access between adjacent parcels of land is a great tool for reducing the amount of traffic on major roads while increasing connectivity for pedestrians, bicycles, and cars. Consider including the following language: *A pedestrian/bicycle accessway shall be required near the center and entirely across any block in excess of 800 feet in length where deemed essential by the Administrator to provide adequate access to any school, shopping center, church, park or transportation facility (such as a greenway, transit stop or bike lane). Such connections shall be owned and maintained by an approved homeowner's association.* Example language from the City of Wilson, NC, Unified Development Ordinance - http://www.wilsonnc.org/departments/developmentservices/unifieddevelopmentordinance/.

Topic	Jurisdiction	
	Kershaw County	Comments/Suggestions
2.7 Block size	Yes From ZDLR Article 5:3.8-14 Blocks A. Residential 1. Block lengths shall be appropriate to topographic conditions and density to be served, but shall not exceed 1,000 feet in length, or be less than 300 feet in length. 2. Blocks should be of sufficient width to allow for two tiers or lots of appropriate depth, except where reverse frontage lots are required along a major street, or where prevented by size, topographical conditions, or other inherent conditions of the property. B. Commercial and Industrial 1. Blocks intended for commercial or industrial development may vary from the standards of design detailed above in favor of dimensions more suitable to their prospective use; provided such blocks permit adequate traffic circulation.	This section appropriately applies limits to block size. Small block size is important in intersection density and interconnectivity. Incorporating these considerations will enhance walking and bicycling opportunities.[1]
2.8 Dead end streets	Needs Improvement: From ZLDR Article - 5:3.8-7 Road Design Standards F. Additional Design Criteria 6. Dead End Streets – All dead end streets shall end in a cul-de-sac. Any dead end street which exceeds 1500 feet in length shall have an intermediate turnaround.	Street interconnectivity is critical to successful bicycle/pedestrian networks. Consider replacing this section with the following: *Cul-de-sacs may be permitted only where topographic conditions and/or exterior lot line configurations offer no practical alternatives for connection or through traffic. Cul-de-sacs, if permitted, shall not exceed 250 ft in length from the nearest intersection with a street providing through access (not a cul-de-sac). A close is preferred over a cul-de-sac. Cul-de-sacs shall have pedestrian and bicycle neighborhood access trails at the ends to connect to adjacent streets. (For similar language from an award-winning planning ordinance, see the Town of Davidson, NC, Planning Ordinance* - http://www.ci.davidson.nc.us/index.aspx?nid=598)
PEDESTRIAN FRIENDLY BUILDINGS AND SITE DESIGN STANDARDS		
3.1 Off-street motorized vehicle parking is behind or to side of buildings	Needs Improvement Screening required. From ZLDR 3:5.3-4B Screening for Parking Areas Located Adjacent to a Public Street B. Screening for Parking Areas Located Adjacent to a Public Street - Parking area screening is required in conjunction with street buffer landscaping. Screening shall be no less than five (5) feet in width and no more than four (4) feet in height. Screening can be composed of: 1. Masonry Walls - Plain concrete block must be rendered with decorative facing such as stucco, brick veneer, etc. 2. Wood Fences - Stockade fences and unpainted or unstained fences are not allowed. 3. Landscaped Berms - Berms may incorporate the plantings required for Type "A" or Type "B" street buffers. 4. Landscape Islands - Landscape islands shall be at least five (5) feet in width, and shall contain the required street buffer trees, and be planted with shrubbery with no openings between shrub plantings. Shrubs shall be evergreen species locally adapted to the area. Landscape islands and berms shall be designed in consideration of automobile overhang so as to avoid damage to plantings. Note that landscape islands which contain large maturing trees must provide for a minimum of 200 square feet of rooting space. 5. Alternate Combinations - Alternate combinations that effectively screen the parking area from the public street and that are in character with neighboring development may be approved by the Planning Official.	Consider requiring motorized vehicle parking that is behind or to the side of buildings in the following zoning districts: Medium-High Density Residential Districts Office-Institutional District General and Limited Business Districts General Development District Planned Development District Historic "Overlay" District

[1] Cervero, R. and Ewing, R. 2010. Travel and the Built Environment: A Meta-Analysis. Journal of the American Planning Association. Vol. 76 Issue 3; pg 265-294.

Topic	Jurisdiction	
	Kershaw County	Comments/Suggestions
3.2 Maximum automobile parking requirements defined	Yes From ZLDR Article 3:6.1-1 Off-Street Parking F. Maximum Parking Standards 1. Parking lots of twenty-one (21) to fifty (50) spaces may not have more than 150% of the number of spaces required in Table 3-3. 2. Parking lots of fifty-one (51) spaces or more may not have more than 125% of the number of parking spaces required in Table 3-3.	This is adequately addressed in Kershaw County ZLDR. Limiting off-street parking allows for more dynamic use of space which will enhance bicycle and pedestrian opportunities.
3.3 Bicycle parking requirements	No requirements found	Incorporate bicycle parking requirements in ZLDR Article 3:6. References for best practices in bicycle parking requirements: *Guide for the Development of Bicycle Facilities* – by the American Association of State Highway and Transportation Officials (AASHTO) *Bicycle Parking Guidelines, 2nd Edition – by the Association of Pedestrian and Bicycle Professionals (APBP)*
3.4 Other place-supportive parking regulations (On-street parking, shared parking, pricing, employer incentives/programs, etc)	Yes From ZLDR 3:6.1-1 Off-Street Parking E. Shared Parking Plan – The applicant shall submit sufficient data to indicate the principal operating hours of the uses. If the data supports that the peak parking demands of the various uses will not overlap such that sufficient parking can be available during all hours of operation, the Planning Official shall determine the shared parking requirement, if any. The total minimum number of required parking spaces as determined by the Planning Official shall be documented on the approved zoning and land development site plan for the facility.	Shared parking enhances the bicycle and pedestrian environment by reducing curb cuts that create conflict points for bicyclists and pedestrians.
3.5 Form-based or design-based codes are used	Limited to the Historic Overlay District (HOD) - ZLDR Article 3:7.2-7 General Design Standards and Appropriateness	Incorporating form-based codes can be another way to enhance bicycle and pedestrian opportunities in Kershaw County. These types of codes offer flexibility in allowing mixed use while unifying streetscape design; they are generally designed with non-motorized transportation opportunities built into the system. Arlington County, VA, Columbia Pike Neighborhoods Plan provides an example - http://www.columbiapikeva.us/wp-content/uploads/2012/06/Final-for-web.pdf.
3.6 Pedestrian entrances required on street frontage (regardless of parking location)	Yes From ZLDR Article 5:1.2-3 - Accessibility Notwithstanding the exemptions from the definition of a subdivision, no lot may be created without vehicular and pedestrian access. Unless specifically allowed by these regulations, all lots must have direct access to a publicly dedicated street or an approved private street as provided for in this Ordinance. All publicly dedicated and approved private streets must be constructed to the Kershaw County street standards of this Article.	While this section does well to ensure pedestrians can access a given property, building entrance design requirements can facilitate pedestrian friendly environments. In denser commercial and residential areas, building entrances oriented toward a public street/sidewalk can help create such an environment.
3.7 Setback or build-to requirements	See table 3-4 – generally 25'-35' in the front section of property	In general, bufferyard and street buffer requirements are a characteristic of auto-oriented development – the presence of buffers severely reduces access for pedestrians and bicyclists. Alternatives such as minimizing street and land-use buffer size, allowing commercial buildings with 0 ft. setbacks, and allowing development without buffers between compatible land uses promotes pedestrian and bicycle connectivity.
3.8 Buffer requirement between adjacent buildings or uses	See table 3-12 – generally 5'-30' for non-identical adjacent uses	

Topic	Jurisdiction	
	Kershaw County	Comments/Suggestions
3.9 Mixed use buildings and blocks	From ZLDR 3:1.1-3 Primary Districts B. Institutional and Commercial Districts 2. GD, General Development District - This is a multiple use district, the intent of which is to promote the "highest and best use" of land without negatively impacting surrounding land uses or environmental resources. The GD zoning district has the widest range of permitted residential uses - from single-family, to apartments, to manufactured home parks. The GD district also allows for the widest range of non-residential uses - from retail to agricultural to light industrial. The GD zoning district affords the applications of bicycle and pedestrian friendly design as well as the Comprehensive Plan's mixed use principals. From Comp Plan – Land Use and Development Policies Component in Land Use Element 3. Commercial Policies b. Encourage the clustering of commercial establishments in nodes which are convenient to population concentrations. Where opportunities are present along major roadways and intersections, zoning regulations allowing for mixed use development should be encouraged. These centers should create bicycle and pedestrian friendly public environments with connections to transit facilities. Such commercial development will focus on neighborhood-oriented services such as groceries, pharmacies, offices, dry cleaners, restaurants, etc. Neighborhood centers are also excellent locations for public facilities such as post offices, libraries, and health clinics. These c. Promote mixed use planned developments that encourage live/work proximity and provide appropriate neighborhood commercial and service establishments at convenient proximity to residences while maintaining adequate buffering and transitions between mixed uses.	Insert language specifically incorporating bicycle and pedestrian considerations where appropriate - suggestions highlighted in green.
3.10 Active ground floor uses with engaging architecture	No guidelines found	Consider including similar flexibility in use requirements as form-based codes.
3.11 Site Amenities for Cyclists and others (Showers, Changing areas, etc)	No guidelines found	Consider designing incentives to encourage the installation of site amenities for bicyclists and others for employment and educational uses. Please see the Seattle Department of Transportation's *Commute Seattle Bicycle Program Strategic Plan* for examples - http://www.commerce.wa.gov/Documents/commute-seattle-bike-prog-strategy.pdf.
3.12 Human-scale lighting (< 15' tall) required along paths and in parking areas	No. Related street lighting considerations outlined below. From ZLDR Article 5:1.6 Street Lighting Street lighting shall be required in all major residential subdivisions. Street lighting shall be properly shielded so as not to create a hazard to drivers or a nuisance to residents. The residential lighting plans shall demonstrate that the proposed street lighting is adequate to provide for safe motorist, cyclist, and pedestrian street usage. Light spacing shall take into consideration the diameter and intensity of the light projection, lot size, road curves, hills, and other visibility restrictions. Flood lighting shall not be allowed for street light fixtures. Lighting must be provided for dead-end alleys.	Incorporate human-scale lighting (<15' tall) considerations for bicyclists and pedestrians where appropriate.
PEDESTRIAN FACILITY DESIGN		
4.1 ADA Standards	No guidelines found	Incorporate ADA Standards into ZLDR Article 5:3-8 Street Standards
4.2 Minimum sidewalk width by context	No guidelines found	Need 5' sidewalk to meet ADA requirements
4.3 Street Trees	Yes From ZDLR Article 3:5.1-5 Design Standards - trees required in various amounts for each buffer category – including buffers between use and street	

Topic	Jurisdiction	
	Kershaw County	Comments/Suggestions
4.4 Mid-Block Crossings	No guidelines found	Consider adding to ZLDR Article 5:3.8 Street Standards: *1. When traffic-control signals are not in place or not in operation the driver of a vehicle shall yield the right-of-way, slowing down or stopping if need be to so yield, to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger, but no pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle, which is so close that it is impossible for the driver to yield. A pedestrian's right-of-way in a crosswalk is modified under the condition. 2. Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle.*
BICYCLE FACILITY DESIGN		
5.1 Types of Facilities Specified or Allowed	Limited From ZLDR Article 5:3.14 – Sidewalks and Paths Sidewalks, paths, trails, and/or greenways designed to accommodate pedestrian, bicycle, and other non-automotive traffic shall be provided in all major residential subdivisions, major group developments, and Planned Development Districts. The system of sidewalks, paths, trails, greenways, or combination thereof shall be designed such that every lot in the development or building in a group development has access to the system. Connectivity of the system to nearby schools, businesses, institutions, and other facilities shall be provided as applicable and practicable. The proposed system design shall be approved by the Planning and Zoning Commission at the plan review per the provisions of this Ordinance.	Incorporate bicycle facility design best practices into ZLDR 5:3.8 Street Standards and other appropriate sections. The Design Guidelines developed for this Plan, as well as the following resources, will provide specific design guidelines: *Guide for the Development of Bicycle Facilities* – by the American Association of State Highway and Transportation Officials (AASHTO) *NACTO Urban Bikeway Design Guide* – by the National Association of City Transportation Officials (NACTO) *Manual on Uniform Traffic Control Devices* – by the Federal Highway Administration (FHWA) – Chapter 9
5.2 Minimum Shoulder Width	No guidelines found	
5.3 Bicycle accommodations at intersections	No guidelines found	
SUPPORTING POLICIES AND MANUELS		
6.1 Complete Streets Policy	No	Adopt Complete Streets Resolution. Richland County and Spartanburg County, SC have adopted complete streets resolutions. Richland County's policy can be found here - http://www.richlandonline.com/Departments/countycouncil/agendas/20090901.pdf.
6.2 Design Manual for Pedestrian and/or Bicycle Facilities	No	The following resources may be used in referencing best practices guidelines and policy specific to each point in the far left column: *Guide for the Development of Bicycle Facilities* – by the American Association of State Highway and Transportation Officials (AASHTO) *NACTO Urban Bikeway Design Guide* – by the National Association of City Transportation Officials (NACTO) *Manual on Uniform Traffic Control Devices* – by the Federal Highway Administration (FHWA) – Chapter 9 *Complete Streets Local Policy Workbook* – by the National Complete Streets Coalition and Smart Growth America
6.3 Complete Street Design Guidelines for a variety of contexts	No	
6.4 Existence of street hierarchy plan by context	No plan found	
6.5 Traffic Calming programs, policies, and/or manuals	Not found	
6.6 Existence of bicycle and pedestrian plan(s)	No plan found	
6.7 Consideration of pedestrian and bicycle concerns in Site Planning	Not found. Incorporate pedestrian and bicycle concerns in Site Planning.	

Topic	Jurisdiction	
	Kershaw County	Comments/Suggestions
6.8 Consideration of pedestrian and bicycle concerns and Level of Service (LOS) in Traffic Impact Analyses and other engineering studies	Not found. Incorporate pedestrian and bicycle LOS considerations in Traffic Impact Analyses and engineering studies.	
6.9 Access management program or policy	Needs improvement From ZLDR 5:3.9-5 Driveway Separation All driveway approaches shall be allocated and spaced per SCDOT minimum spacing standards as outlined below. A. Driveway Spacing Requirements for County Roads Access separation between driveways shall be measured from near edge to near edge of adjacent drives. Speed limits are as determined by SCDOT. Refer to the following table (Table 5-19 specifies requirements): B. Exceptions 1. Internal residential access streets (residential local) in subdivision developments are exempt from these standards. 2. For individually developed single-family lots, the Planning Official or Planning and Zoning Commission, as applicable, may reduce the spacing requirements of this section if it can be demonstrated that a hardship exists and there is no opportunity to design a conforming access point. 3. Minimum spacing may be increased if right-turn deceleration lanes are provided. 4. A pair of one-way drives may be substituted only if the internal circulation on the site is compatible with the one-way driveways. Nowhere shall a distance of less than forty (40) feet between edges of one-way drives be permitted. 5. A replacement of a driveway not meeting the minimum spacing requirements is allowed if lost or disrupted due to a County road project. From ZLDR Article 5:1.2-3 - Accessibility Notwithstanding the exemptions from the definition of a subdivision, no lot may be created without vehicular and pedestrian access. Unless specifically allowed by these regulations, all lots must have direct access to a publicly dedicated street or an approved private street as provided for in this Ordinance. All publicly dedicated and approved private streets must be constructed to the Kershaw County street standards of this Article.	Consider adding language across all types of development pertaining to non-motorized vehicle and pedestrian access management; this could broadly be incorporated into zoning districts in ZLDR Article 3:1 and street standards of ZLDR Article 5:3-8.
6.10 Sidewalk retrofit program or policy	No guidelines found	See City of Charlotte sidewalk retrofit policy for an example - http://charmeck.org/city/charlotte/Transportation/PedBike/Documents/Sidewalk%20Retrofit%20Policy%20Amendments%20FINAL.pdf
ITEMS REVIEWED		

Topic	Jurisdiction	
	Kershaw County	Comments/Suggestions
7.1 Names of Resources	GUIDELINES AND REGULATIONS 1. Kershaw County Unified Code of Zoning and Land Development Regulations (ZLDR) ADDITIONAL PLANS AND RESOURCES 1. Comprehensive Plan for Kershaw County South Carolina 2006-2016 2. Recreational Master Plan for Kershaw County	REFERENCES AND HELPFUL RESOURCES 1. *Bicycle Parking Guidelines, 2nd Edition* – by the Association of Pedestrian and Bicycle Professionals (APBP) 2. *Complete Streets Local Policy Workbook* – by the National Complete Streets Coalition and Smart Growth America 3. *Guide for the Development of Bicycle Facilities* – by the American Association of State Highway and Transportation Officials (AASHTO) 4. *Manual on Uniform Traffic Control Devices* – by the Federal Highway Administration (FHWA) – Chapter 9 5. *NACTO Urban Bikeway Design Guide* – by the National Association of City Transportation Officials (NACTO) 6. *Safe Routes to School Local Policy Guide* – by the Safe Routes to School National Partnership 7. *Commute Seattle Bicycle Program Strategic Plan* – by the Seattle Department of Transportation - http://www.commerce.wa.gov/Documents/commute-seattle-bike-prog-strategy.pdf 8. Arlington County, VA, Columbia Pike Neighborhoods Plan - http://www.columbiapikeva.us/wp-content/uploads/2012/06/Final-for-web.pdf 9. City of Charlotte Sidewalk Retrofit Policy - http://charmeck.org/city/charlotte/Transportation/PedBike/Documents/Sidewalk%20Retrofit%20Policy%20Amendments%20FINAL.pdf 10. Town of Davidson, NC, Planning Ordinance - http://www.ci.davidson.nc.us/index.aspx?nid=598 11. City of Wilson, NC, Unified Development Ordinance provides - http://www.wilsonnc.org/departments/developmentservices/unifieddevelopmentordinance/ 12. Richland County, SC, Complete Streets Resolution - http://www.richlandonline.com/Departments/countycouncil/agendas/20090901.pdf 13. Form-Based Codes Institute (FBCI) - http://www.formbasedcodes.org/ 14. 2010 ADA Standards for Accessible Design - http://www.ada.gov/2010ADAstandards_index.htm

Topic	Jurisdiction	
	City of Camden	Comments/Suggestions
1. DEFINITIONS		
1.1 Does "Street" definition include pedestrian and cyclist reference?	No. Needs Improvement From CO Chapter 10.04 Definitions – Street – Any public way, road, highway, avenue, boulevard, parkway, alley, lane, viaduct, bridge, and the approaches thereto within the city. Also from CO in Chapter 156.01 – Street - Any vehicular way which: (1) is an existing state, county or municipal roadway; or (2) is shown upon a plat approved pursuant to law; or (3) is approved by other official action; or (4) is shown on a plat duly filed and recorded in the office of the Clerk of Court prior to the appointment of a Planning Commission and the grant to said Commission of the power to review plats; and includes the land between the street lines, whether improved or unimproved.	Consider adding the following language: "Regardless of classification, the design and construction of streets and intersections in the City of Camden should aim to serve all types of users, including pedestrians, bicyclists, and motorists, and should be inclusive of all levels of ability, such as those in wheelchairs, the elderly and the young."
1.2 Vehicle	No definition listed	Some states' definition of 'vehicle' includes the bicycle. However, the State of South Carolina's definition of 'vehicle' does not include bicycles. See SC 56-3-20 Definitions – (1) "Vehicle" means every device in, upon, or by which a person or property is or may be transported or drawn upon a highway, except devices moved by human power or used exclusively upon stationary rails or tracks.
1.3 Definition of Sidewalk	Yes. Includes pedestrian reference From Code Chapter 10.04 Definitions – Sidewalk – Any portion of a street between the curb line and the adjacent property line, intended for the use of pedestrians, excluding parkways.	MUTCD definition is slightly broader, but current definition of 'sidewalk' includes pedestrian reference. MUTCD Definition – That portion of a street between the curb line, or the lateral line of a roadway, and the adjacent property line or on easements of private property that is paved or improved and intended for use by pedestrians.
1.4 Definition of Bicycle	No definition of bicycle, although Chapter 73 does outline 4 specific laws pertaining to bicycles, also referencing SC Code 56-5-3410	MUTCD Definition – A pedal-powered vehicle upon which the human operator sits.
1.5 Definition of Greenway	No definition of greenway listed	A linear open space established along a natural corridor, such as a river, stream, ridgeline, rail-trail, canal, or other route for conservation, recreation, and shared-use alternative transportation purposes such as pedestrians and cyclists.
STREET ELEMENTS AND CONFIGURATION		
2.1 Pedestrian accommodations (sidewalks, crosswalks, etc) required during new development or redevelopment	Yes From CO Chapter 156.04 Purpose (C) To assure the adequate provision of safe and convenient traffic access and circulation, vehicular, bicycle and pedestrian in and through new land developments;	These sections of the CO do well to include pedestrian considerations. Similarly, bicycle connectivity and bicycle considerations are also addressed in CO sections 156.42 and 157.089. Adding the words highlighted in green are minor changes recommended to enhance these components: Consider changes to specifically acknowledge bicycle usage, highlighted in green in CO Chapter 156.04 and 156.26
2.2 Bike accommodations (bike lanes, shoulders, racks, etc) required during new or redevelopment	From CO Chapter 156.26 Land Development Projects Other Than A Residential Subdivision (a) Ingress and egress to the project site shall be designed to maximize automotive, bicycle, and pedestrian safety and facilitate traffic flow. (e) Where the project will create a need for off-site improvements, including improvements to streets,	Consider changes to more broadly encourage connectivity, highlighted in green in CO Chapters 156.42 and 157.089

Topic	Jurisdiction	
	City of Camden	Comments/Suggestions
2.3 New sidewalks, bike lanes, greenways, etc - connect to existing facilities, general connectivity requirements	drainage systems, sidewalks, and curbs, the Planning Commission may require the installation of such improvements as a condition of approval. From CO Chapter 156.42. Streets (1) The street system shall be designed to permit the safe, efficient and orderly movement of traffic; to facilitate pedestrian, bicycle and other non-automotive modes of transportation; to meet, but not exceed, the needs of the present and future population served: to have a simple and logical pattern; connect to existing facilities such as residential, educational, and commercial areas; to respect natural features and topography; and to present an attractive streetscape. From CO Chapter 156.48. Sidewalks (A) Where required. A pedestrian system shall be provided where required by the Planning Commission for safety or access to recreational, educational or other facilities. Design specifications. Sidewalks shall be placed parallel to streets, with exceptions permitted to preserve natural features or to provide visual interest where required for pedestrian safety. Necessary provisions for handicapped accessibility shall be provided by the developer. From CO Chapter 157.089 Common Open Space (E) Types of Common Open Space and Required Maintenance. Any combination of the following types of common open space may be provided to satisfy the requirements of this section so long as no one type exceeds 50% of the total area required. (3) Greenways are linear green belts linking residential areas with other open space areas. These greenways may contain bicycle paths, footpaths, and bridle paths. Connecting greenways between residences, educational facilities, commercial areas, and recreational areas are encouraged. Maintenance is limited to a minimum of removal and avoidance of hazards, nuisances, or unhealthy conditions.	
2.4 Use of Right of Way	No guidelines found	Kershaw County's ZLDR Article 5:1-8 Utility Easements and Rights-of-Way contains a good example with respect to sewer rights-of-way. See below. *b) - The Planning and Zoning Commission or Planning Official, as applicable, may approve the installation of sidewalks, trails, and greenways as required in this Article within the Kershaw County public sewer rights-of-way. All proposed sidewalks, trails, and greenways including any proposed hardscaping shall have approval from the Utilities Director prior to sketch plan or site plan submittal to the Planning Official or Planning and Zoning Commission, as applicable.* This provision could be further improved/expanded to allow sidewalks, trails, and greenways in other utility rights-of-way such as water, power, etc.
2.5 Sidewalks or bike accommodations required by roadway type	Relevant sections listed below: From Chapter 156.42. Streets (1) The street system shall be designed to permit the safe, efficient and orderly movement of traffic; to facilitate pedestrian, bicycle and other non-automotive modes of transportation; to meet, but not exceed, the needs of the present and future population served: to have a simple and logical pattern; to respect natural features and topography; and to present an attractive streetscape. (G) Right-of-way, lane and pavement widths. Minimum street right-of-way, lane and pavement widths shall be as follows: (see table in code)	Consider adding bicycle and pedestrian facility specifications by roadway type outlined in the table under subsection G in Chapter 156.42 Streets; recommend sidewalks with a 5' minimum width and bicycle lanes with a 5' minimum width.

Topic	Jurisdiction	
	City of Camden	Comments/Suggestions
2.6 Cross-Access between adjacent land parcels	No specific guidelines found	Add section under CO Chapter 156.40 Design Standards and Required Improvements to include cross-access between adjacent parcels to facilitate non-motorized (pedestrian and bicycle) access, at least. Requiring cross-access between adjacent parcels of land is a great tool for reducing the amount of traffic on major roads while increasing connectivity for pedestrians, bicycles, and cars. Consider including the following language: *A pedestrian/bicycle accessway shall be required near the center and entirely across any block in excess of 800 feet in length where deemed essential by the Administrator to provide adequate access to any school, shopping center, church, park or transportation facility (such as a greenway, transit stop or bike lane). Such connections shall be owned and maintained by an approved homeowner's association.* Example language from the City of Wilson, NC, Unified Development Ordinance - http://www.wilsonnc.org/departments/developmentservices/unifieddevelopmentordinance/.
2.7 Block size	Needs some improvement From CO Chapter 156.46 Blocks. (A) Residential. (1) Block lengths shall be appropriate to topographic conditions and density to be served, but shall not exceed 1,800 feet in length. Maximum block length in a multi-family area shall not exceed 1,000 feet. (2) Blocks shall be not less than 300 feet in length. (3) Where blocks are greater than 800 feet in length, a crosswalk easement may be required by the Planning Commission if necessary to provide proper access to schools, playgrounds, or other public facilities. Where provided, such easement shall be at least ten feet in width and have a paved walk of at least four feet in width. (4) Blocks should be of sufficient width to allow for two tiers of lots of appropriate depth, except where reverse frontage lots are required along a major street, or where prevented by the size, topographical conditions, or other inherent conditions of property.	Small block size is important to intersection density and interconnectivity which serve to enhance walking and bicycling opportunities.[1] Ideally, block size should not exceed 1000'-1200' feet for low density residential development and where blocks exceed this length, a crosswalk easement (as suggested in current text) should be required and not made an optional provision. Block length should be tied to density of development. The City of Wilson, NC, Unified Development Ordinance also provides an example - http://www.wilsonnc.org/departments/developmentservices/unifieddevelopmentordinance/.
2.8 Dead end streets	Needs Improvement From CO Chapter 156.42. Streets (E) Cul-de-sacs (1) Dead-end streets designed to be permanently closed at one end shall not exceed 1,800 feet in length in single-family residential areas, and 1,000 feet in multi-family or commercial areas. Length shall be measured from the right-of-way of the intersecting street to the center point of the turnaround.	Street interconnectivity is critical to successful bicycle/pedestrian networks. Consider replacing this section with the following: *Cul-de-sacs may be permitted only where topographic conditions and/or exterior lot line configurations offer no practical alternatives for connection or through traffic. Cul-de-sacs, if permitted, shall not exceed 250 ft in length from the nearest intersection with a street providing through access (not a cul-de-sac). A close is preferred over a cul-de-sac. Cul-de-sacs shall have pedestrian and bicycle neighborhood access trails at the ends to connect to adjacent streets.* (For similar language from an award-winning planning ordinance, see the Town of Davidson, NC, Planning Ordinance - http://www.ci.davidson.nc.us/index.aspx?nid=598)
PEDESTRIAN FRIENDLY BUILDINGS AND SITE DESIGN STANDARDS		
3.1 Off-street motorized vehicle parking is behind or to side of buildings	Needs improvement From CO Chapter 156.26 Land Development Projects Other Than A Residential Subdivision (b) Off-street parking, off street loading, refuse, and service areas shall be designed to minimize their visual and physical impact on neighboring property.	Consider requiring motorized vehicle parking that is behind or to the side of buildings in the following zoning districts to improve the pedestrian-orientation of buildings and to minimize the need for pedestrians to walk through parking lots to access buildings: Medium-High Density Residential Districts Office-Institutional District Central, General, and Limited Business Districts General Development District Planned Development District Historic "Overlay" District
3.2 Maximum automobile parking requirements defined	Yes From CO Tables I and II under Primary District Regulations detail off-street parking requirements by use	This is adequately addressed in City of Camden Code of Ordinances. Limiting off-street parking allows for more dynamic use of space which will enhance bicycle and pedestrian opportunities.

[1] Cervero, R. and Ewing, R. 2010. Travel and the Built Environment: A Meta-Analysis. Journal of the American Planning Association. Vol. 76 Issue 3; pg 265-294.

Topic	Jurisdiction	
	City of Camden	Comments/Suggestions
3.3 Bicycle parking requirements	No guidelines found	Incorporate bicycle parking requirements into CO Chapter 157.096 Off-Street Parking References for best practices in bicycle parking requirements: *Guide for the Development of Bicycle Facilities* – by the American Association of State Highway and Transportation Officials (AASHTO) *Bicycle Parking Guidelines, 2nd Edition – by the Association of Pedestrian and Bicycle Professionals (APBP)*
3.4 Other place-supportive parking regulations (On-street parking, shared parking, pricing, employer incentives/programs, etc)	No guidelines found	Require or incentivize shared parking and parking reductions in pedestrian-oriented districts, especially downtown.
3.5 Form-based or design-based codes are used	Limited to the Historic "Overlay" District and the Corridor Overlay District outlined in CO Chapter 157.003 Also, related information in the following section of the New Camden Design Guidelines: REHABILITATION GUIDELINES COMMERCIAL Streetscape and Building Form in Downtown Camden	Incorporating form-based codes can be another way to enhance bicycle and pedestrian opportunities in the City of Camden. These types of codes offer flexibility in allowing mixed use while unifying streetscape design; they are generally designed with non-motorized transportation opportunities built into the system. The Germantown, TN, Code of Ordinances provides an example - http://www.germantowntn.gov/redirect.aspx?url=http%3a%2f%2fwww.municode.com%2fresources%2fgateway.aspx%3fproductid%3d12249. Another example can be found in the Beaufort, SC, Unified Development Ordinance; specific to their Boundary Street and Bladen Street Redevelopment Districts - http://www.cityofbeaufort.org/Data/Sites/1/media/City_Ordinances/udo-revised-september-2012-web.pdf.
3.6 Pedestrian entrances required on street frontage (regardless of parking location)	Yes From CO Chapter 157.111 Street Access. Each principal building shall be located on a lot or parcel which is adjacent to and which has direct deeded vehicular and pedestrian access to a publicly dedicated or publicly maintained street or an approved private street.	While this section does well to ensure pedestrians can access a given property, building entrance design requirements can and should facilitate pedestrian friendly environments. In denser commercial and residential areas, building entrances oriented toward a public street/sidewalk can help create such an environment and should be required through building and site design standards.
3.7 Setback or build-to requirements	Yes See Table III under Primary District Regulations in CO Chapter 157 – generally 25'-35' in front section of property is required	Shorter setback and buffer requirements, where appropriate, can enhance walking and bicycling opportunities by creating a more defined streetscape with higher human-level interactivity between buildings and streetscapes.
3.8 Buffer requirement between adjacent buildings or uses	Yes From CO Chapter 157.086 Buffer Areas - See Table VIII - Generally 5'-40' for non-identical adjacent uses	In general, bufferyard and street buffer requirements are a characteristic of auto-oriented development – the presence of buffers severely reduces access for pedestrians and bicyclists. Alternatives such as minimizing street and land-use buffer size, allowing commercial buildings with 0 ft. setbacks, and allowing development without buffers between compatible land uses promotes pedestrian and bicycle connectivity.

Topic	Jurisdiction	
	City of Camden	Comments/Suggestions
3.9 Mixed use buildings and blocks	Yes From CO Chapter 157.003 Purpose of Districts GD, General Development District. This is a multiple-use district, the intent of which is to promote the "highest and best use" of land, without negatively impacting surrounding land uses or environmental resources. This includes bicycle and pedestrian friendly design as well as the Comprehensive Plan's mixed-use principals. From Comp Plan: EG-5: Strengthen the core commercial district of Camden "Amend zoning regulations to permit mixed-use development in downtown, helping create a live/work environment utilizing upper floors for residential use." From LU Goal 6: Revitalize Buildings and Areas Vacated by Commerce "Encourage mixed use development in the downtown to consist of converting upper floor space for residential use." Also, see Table 32 in comp plan for further Mixed-Use Area detail	Insert language specifically incorporating bicycle and pedestrian considerations where appropriate - suggestions highlighted in green.
3.10 Active ground floor uses with engaging architecture	No guidelines found	Consider including similar flexibility in use requirements as form-based codes.
3.11 Site Amenities for Cyclists and others (Showers, Changing areas, etc)	No guidelines found	Consider designing incentives to encourage the installation of site amenities for bicyclists and others for employment and educational uses. Please see the Seattle Department of Transportation's *Commute Seattle Bicycle Program Strategic Plan* for examples - http://www.commerce.wa.gov/Documents/commute-seattle-bike-prog-strategy.pdf.
3.12 Human-scale lighting (< 15' tall) required along paths and in parking areas	None listed, but could likely add language here in CO Chapter 156.50 Street Lights The developer shall provide adequate street and area lighting for the development. The locations, type and specifications must receive prior approval by the Public Works Director of the city. Electrical service to development must comply with the policies, requirements and inspections with the City of Camden Public Works Department.	Incorporate human-scale lighting (<15' tall) considerations for bicyclists and pedestrians where appropriate.
PEDESTRIAN FACILITY DESIGN		
4.1 ADA Standards	Yes From CO Chapter 156.48 Sidewalks (B) Design specifications. Sidewalks shall be placed parallel to streets, with exceptions permitted to preserve natural features or to provide visual interest where required for pedestrian safety. Necessary provisions for handicapped accessibility shall be provided by the developer.	Incorporate ADA Standards into CO Chapter 156.42 Streets.
4.2 Minimum sidewalk width by context	No guidelines found	Need 5' sidewalk to meet ADA requirements
4.3 Street Trees	Yes From CO Chapter 100.03 Spacing; Distance from curb and sidewalk (B) The distance trees may be planted from curbs or curblines and sidewalks will be in accordance with the two species-size classes listed in § 100.02, and no trees may be planted closer to any curb or sidewalk than the following: (1) Small trees - two feet. (2) Large trees - four feet.	

Topic	Jurisdiction	
	City of Camden	Comments/Suggestions
4.4 Mid-Block Crossings	No guidelines found	Consider adding to CO Chapter 156.42 Streets: *1. When traffic-control signals are not in place or not in operation the driver of a vehicle shall yield the right-of-way, slowing down or stopping if need be to so yield, to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger, but no pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle, which is so close that it is impossible for the driver to yield. A pedestrian's right-of-way in a crosswalk is modified under the condition. 2. Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle.*
BICYCLE FACILITY DESIGN		
5.1 Types of Facilities Specified or Allowed	No guidelines found	Incorporate bicycle facility design best practices into CO Chapter 156.42 Streets and other appropriate sections. The Design Guidelines developed for this Plan, as well as the following resources, will provide specific design guidelines and reference to national design guidelines, such as: *Guide for the Development of Bicycle Facilities* – by the American Association of State Highway and Transportation Officials (AASHTO) *NACTO Urban Bikeway Design Guide* – by the National Association of City Transportation Officials (NACTO) *Manual on Uniform Traffic Control Devices* – by the Federal Highway Administration (FHWA) – Chapter 9
5.2 Minimum Shoulder Width	No guidelines found	
5.3 Bicycle accommodations at intersections	No guidelines found	
SUPPORTING POLICIES AND MANUELS		
6.1 Complete Streets Policy	Yes. Complete Streets Resolution adopted in 2012	
6.2 Design Manual for Pedestrian and/or Bicycle Facilities	No	The following resources may be used in referencing best practices guidelines and policy specific to each point in the far left column: *Guide for the Development of Bicycle Facilities* – by the American Association of State Highway and Transportation Officials (AASHTO) *NACTO Urban Bikeway Design Guide* – by the National Association of City Transportation Officials (NACTO) *Manual on Uniform Traffic Control Device* – by the Federal Highway Administration (FHWA) – Chapter 9 *Complete Streets Local Policy Workbook* – by the National Complete Streets Coalition and Smart Growth America
6.3 Complete Street Design Guidelines for a variety of contexts	No	
6.4 Existence of street hierarchy plan by context	No plan found	
6.5 Traffic Calming programs, policies, and/or manuals	Not found	
6.6 Existence of bicycle and pedestrian plan(s)	No plan found	
6.7 Consideration of pedestrian and bicycle concerns in Site Planning	No plan found	
6.8 Consideration of pedestrian and bicycle concerns and Level of Service (LOS) in Traffic Impact Analyses and other engineering studies	Not found	
6.9 Access management program or policy	Not found	Consider adding language across all types of development pertaining to non-motorized vehicle and pedestrian access management; this could broadly be incorporated into zoning districts in CO Chapter 157.003 and CO Chapter 156.42 Streets.

Topic	Jurisdiction	
	City of Camden	Comments/Suggestions
6.10 Sidewalk retrofit program or policy	No guidelines found	See City of Charlotte sidewalk retrofit policy for an example - http://charmeck.org/city/charlotte/Transportation/PedBike/Documents/Sidewalk%20Retrofit%20Policy%20Amendments%20FINAL.pdf
ITEMS REVIEWED		
7.1 Names of Resources	GUIDELINES AND REGULATIONS 1. City of Camden, South Carolina Code of Ordinances (CO) ADDITIONAL PLANS AND RESOURCES 1. City of Camden, South Carolina Comprehensive Plan 2007-2017 2. Commercial and Residential District Design Guidelines – A guide to the preservation and restoration of the historic structures of Camden, South Carolina. 3. City of Camden Complete Streets Resolution 2012	REFERENCES AND HELPFUL RESOURCES 1. *Bicycle Parking Guidelines, 2nd Edition* – by the Association of Pedestrian and Bicycle Professionals (APBP) 2. *Complete Streets Local Policy Workbook* – by the National Complete Streets Coalition and Smart Growth America 3. *Guide for the Development of Bicycle Facilities* – by the American Association of State Highway and Transportation Officials (AASHTO) 4. *Manual on Uniform Traffic Control Devices* – by the Federal Highway Administration (FHWA) – Chapter 9 5. *NACTO Urban Bikeway Design Guide* – by the National Association of City Transportation Officials (NACTO) 6. *Safe Routes to School Local Policy Guide* – by the Safe Routes to School National Partnership 7. *Commute Seattle Bicycle Program Strategic Plan* – by the Seattle Department of Transportation - http://www.commerce.wa.gov/Documents/commute-seattle-bike-prog-strategy.pdf 8. City of Beaufort, SC, Unified Development Code - http://www.cityofbeaufort.org/Data/Sites/1/media/City_Ordinances/udo-revised-september-2012-web.pdf 9. City of Charlotte Sidewalk Retrofit Policy - http://charmeck.org/city/charlotte/Transportation/PedBike/Documents/Sidewalk%20Retrofit%20Policy%20Amendments%20FINAL.pdf 10. Town of Davidson, NC, Planning Ordinance - http://www.ci.davidson.nc.us/index.aspx?nid=598 11. City of Germantown, TN, Code of Ordinances - http://www.germantown-tn.gov/redirect.aspx?url=http%3a%2f%2fwww.municode.com%2fresources%2fgateway.aspx%3fproductid%3d12249 12. City of Wilson, NC, Unified Development Ordinance provides - http://www.wilsonnc.org/departments/developmentservices/unifieddevelopmentordinance/ 13. Form-Based Codes Institute (FBCI) - http://www.formbasedcodes.org/ 14. 2010 ADA Standards for Accessible Design - http://www.ada.gov/2010ADAstandards_index.htm

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Appendix C: Summary of Stakeholder Interviews

Overview

Palmetto Conservation Foundation (PCF) facilitated interviews for the Kershaw County Bicycle, Pedestrians and Greenways Plan. The goal of the interview process was to provide a measurable assessment of the viability and feasibility of successfully implanting a bicycle, pedestrian and greenway plan for Kershaw County. Stakeholders identified opportunities, barriers and partnerships in regards to creating a connected system of both on and off road biking and walking facilities. With input from the Project Steering Committee, PCF and Alta Planning developed a list of key stakeholders to interview over the course of one month. The majority of individuals interviewed have been associated with or are very familiar with the ESMM Kershaw County initiative. The interview pool included individuals representing the private business and government sector, health and wellness industry, city and county administrators, school districts, parks, political leaders and tourism, agricultural and equine industries.

Interviews were conducted both in person and by telephone. A total of 11 individuals were interviewed. Eight interviews were conducted in person and three via phone. Interview times ranged from 45 minutes to one hour and stakeholders were all asked the same set of questions. These questions were designed to provide a comprehensive overview to identifying potential opportunities, barriers, funding, prospects and partnerships. The process included one interpretive question which allowed individuals to share personal perspectives. All participants perceived a master bicycle, pedestrian and greenway plan for Kershaw County to be a favorable initiative that would improve the quality of life, provide a connected, equitable transportation system, and provide new economic growth. There were, however, decisive differences in regards to optimal infrastructure options, project leadership, partners and funding sources. The diverse pool of candidates interviewed provided a strong baseline to understanding the successful implementation of a bicycle, pedestrian and greenway master plan for Kershaw County.

Summary of Comments

Potential Partnerships

Those interviewed identified the following groups to be potential partners:

- Eat Smart Move More Kershaw County
- Kershaw Health
- Live Well Kershaw
- United Way
- City and county administrators/planners
- Private land owners
- Department of Transportation
- Schools
- Target Distribution Center
- Parks & Recreation
- Equine Community
- Private business

(Note that only one individual interviewed mentioned local businesses.)

Infrastructure Challenges

Highway 1 was identified as the stand-out obstacle to providing a safe, viable connected bicycle pedestrian system. Throughout the county, and in downtown Camden, existing sidewalk infrastructure is inadequate. Although a limited number of bicycle lanes and bike/pedestrian-friendly intersections currently exist, they are unsafe and disconnected. The City and County leadership are generally perceived as having conflicting view points and project priorities. There is lack of funding sources and too many organizations competing for limited dollars. Kershaw County's infrastructure project needs differ between rural and suburban areas, and urban areas receive very little attention. Elgin has a noticeably stronger infrastructure. In Camden, there is cultural mindset that is not favorable to bike in the community. In fact, that mindset is often against biking and walking in general.

Infrastructure Opportunities

The County has an abundance of natural resources it can draw upon. For example, there is an existing abandoned railroad bed that, if converted, would offer an urban trail system. The County is land rich and there are countless opportunities for trail systems on both public and private tracts of land. For example, south of the interstate, there is a large parcel of private land estimated to measure approximately 6,000 acres. Additionally, hunting and equine conservation easements have not been explored as possible opportunities. The Wateree River was perceived as a very favorable asset for a potential greenway system. There are also several large, private land parcels along the river that could be converted into a multi-faceted recreational trail system. All that were interviewed agreed upon the importance of working with developers to ensure that new housing in the County would provide connectivity to neighboring communities and existing developments.

Priority Opportunities

There are two particularly feasible possibilities for bicycle/pedestrian improvements in Kershaw County. One is the opportunity for a developed greenway along the Wateree River. Another is access to property behind Wal-Mart to create a multi-use recreation system. With the growing young family demographic in the County, the demand for more connectivity to developed neighborhoods, schools and nearby parks is part of a broader demand for improved "quality of life". The County has a large park system that would see an increase in activity from a broader spectrum of the community if its connectivity were increased. The enriched culture and historic component of downtown Camden could see a growth in visitors with improved bike and pedestrian access to the downtown area.

Resources

An adapted Complete Streets Resolution is the most evident resource in place at this time. There have also been discussions at the City planning level for improved infrastructure, including sidewalks and bike lanes. There is limited funding available for these projects.

Funding

Local funding sources are limited. Other possible funding sources include:

- Map 21 (federal transportation funding)
- Camden H –Tax
- United Way
- LiveWell Kershaw
- SCDOT
- County line item budget
- Penny sales tax
- Target
- NBSC
- First Citizens
- Recreational Trails program administered by South Carolina Parks, Recreation and Tourism

Key Findings

The Kershaw County community is fully committed to improving bicycle and pedestrian infrastructure in the county. There is strong support from political leadership, the business community and private citizens. One of the consistent messages from all of the interviewees was the need for a comprehensive master bicycle, pedestrian and greenway plan. Improving communication between the county and city governments is a clear need, as are improved and more diversified partnerships. Based on the interviews, the area around the Wateree River and several private parcels of land has the most support for developing a greenway system. Highway 1 poses major obstacles in regards to safely connecting neighborhoods, schools and recreational amenities. There is a willingness for groups to work together to identify funding sources for the implementation of a master pan. However, the organizations that are in favor of a master plan compete for the same funding. All stakeholders agreed that there should be clear leadership and unified partnerships in order for the master bicycle, pedestrian and greenway plan to be successful.

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Appendix D: Citizen Comment Form

Kershaw County, South Carolina
Bicycle, Pedestrian and Greenway Plan
Public Survey and Comment Form

Introduction:

Thank you for your interest in the Kershaw County Bicycle, Pedestrian and Greenways Plan. The purpose of this plan is to guide the development of the bikeway, walkway and greenway network in Kershaw County so that it may better serve residents and visitors in the future. This includes trails, shared-use paths, bike lanes, bike routes, and other similar facilities.

Please take a few moments to fill out this short questionnaire. Your response will help to build a better understanding of area needs and priorities. Even if you do not bike or walk regularly, your feedback will be helpful. All responses will remain anonymous. Thank you for your time!

1.) When you bike or walk in Kershaw County, what is the primary purpose of your trip? (check all that apply)

- ◯ Transportation
- ◯ Exercise
- ◯ To enjoy nature
- ◯ Dog walking/walking the baby
- ◯ Socializing
- ◯ I do not bike or walk

2.) What is (are) your preferred transportation mode(s) when using a trail? (check all that apply)

- ◯ Walking
- ◯ Jogging/Running
- ◯ Horseback Riding
- ◯ Biking
- ◯ Rollerblading or Skateboarding
- ◯ Wheelchair or other mobility assistance device

3.) What would be the most important benefits and uses of a bikeway, walkway and greenway system in Kershaw County? (check all the apply)

- ◯ Transportation
- ◯ Recreation
- ◯ Exercise
- ◯ Community-building and events
- ◯ Connectivity to surrounding area
- ◯ Habitat and environment improvements
- ◯ Economic stimulation
- ◯ Education and interpretation
- ◯ None

4.) What destinations would you most like to get to by biking or walking? Rank your top 3 choices 1,2 and 3.

- _ Place of Work
- _ School
- _ College/University
- _ Restaurants
- _ Public Transportation
- _ Shopping
- _ Parks
- _ Entertainment
- _ Greenways
- _ Libraries or Recreation Centers

5.) What do you think are the biggest factors that discourage biking or walking in Kershaw County? Rank your top 3 choices 1,2 and 3.

- _ Lack of connected greenways, sidewalks and bicycle facilities
- _ Deficient or unmaintained greenway, sidewalk or bicycle facilities
- _ Lack of information about existing greenway, sidewalk and bicycle facilities
- _ Unsafe street crossings
- _ Motor vehicle traffic
- _ Lack of interest
- _ Lack of time
- _ Lack of nearby destinations
- _ Personal safety concerns
- _ Aggressive motorist behavior
- _ Existing facilities are crowded

6.) What are the top three roadways most in need of bicycling and walking improvements in Kershaw County. (please be specific with location)

1.) _____

2.) _____

3.) _____

7.) What type of biking and walking facilities do you prefer? Please select all that apply.

- ◯ Sidewalks
- ◯ Paved Greenways
- ◯ On-street bike facilities (ex. bike lanes)
- ◯ Unpaved trails

8.) Have you ever used a walking path or trail in Kershaw County , such as the Battle of Camden Hiking Trail?

- ◯ Yes
- ◯ No

9.) Do you visit nearby destinations outside of Kershaw County to use a trail or greenway?

- ◯ Yes
- ◯ No

10.) Would you use trails more often if they were closer to you?

- ◯ Yes
- ◯ No

11.) What amenities are most important for greenways in Kershaw County? (check all that apply)

- ◯ Adequate lighting
- ◯ Drinking fountains
- ◯ Trash cans
- ◯ Shelters
- ◯ Restrooms
- ◯ Bicycle racks
- ◯ Benches
- ◯ Greenway maps
- ◯ Directional signage
- ◯ Equestrian amenities
- ◯ Interpretive signage
- ◯ Other (list below):
- ◯ 911 call boxes

_____

12.) What is your residential zip code?

_____

13.) Do you live or work in Kershaw County?

- ◯ Live
- ◯ Both
- ◯ Work
- ◯ None of the above

14.) What is your gender?

- ◯ Male
- ◯ Female

15.) What is your age?

- ◯ 0-9
- ◯ 40-49
- ◯ 10-19
- ◯ 50-59
- ◯ 20-29
- ◯ 60+
- ◯ 30-39

Thank you again for your time! If you would like to receive updates on the Plan's progress, please write your email here (survey results are anonymous) :

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Appendix E: Potential Funding Sources

This Appendix outlines sources of funding for bicycle and pedestrian projects in Kershaw County. When considering possible funding sources for Kershaw bicycle and pedestrian network, it is important to consider that not all construction activities will be accomplished with a single funding source. Bicycle and pedestrian funding is administered at all levels of government, federal, state, local and through private sources. The following sections identify potential matching and major funding sources, and the criteria for bicycle and pedestrian projects and programs.

Chapter 7: Implementation of this Plan provides further guidance regarding the recommended structure for Kershaw County's community-driven efforts to generate volunteer investment and secure local private and public sector funds for implementation.

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.

Moving Ahead for Progress in the Twenty-First Century (MAP-21)

The largest source of federal funding for bicyclists and pedestrians is the US DOT's Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141. The Act replaces the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012.

MAP-21 authorizes funding for federal surface transportation programs including highways and transit for the 27 month period between July 2012 and September 2014. It is not possible to guarantee the continued availability of any listed MAP-21 programs, or to predict their future funding levels or policy guidance. Nevertheless, many of these programs have been included in some form since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, and thus may continue to provide capital for active transportation projects and programs.

In South Carolina, federal monies are administered through the South Carolina Department of Transportation (SCDOT) and Metropolitan Planning Organizations (MPOs). Most, but not all, of these programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system.

There are a number of programs identified within MAP-21 that are applicable to bicycle and pedestrian projects. These programs are discussed below.

More information: http://www.fhwa.dot.gov/map21/summaryinfo.cfm

Transportation Alternatives

Transportation Alternatives (TA) is a new funding source under MAP-21 that consolidates three formerly separate programs under SAFETEA-LU: Transportation Enhancements (TE), Safe Routes to School (SR2S), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and streetscape projects including sidewalks, bikeways, shared-use paths, and rail-trails. TA funds may also be used for selected education and encouragement programming such as Safe Routes to School, despite the fact that TA does not provide a guaranteed set-aside for this activity as SAFETEA-LU did. South Carolina's Governor Nikki Haley did not opt–out of the Recreational Trails Program funds, ensuring that dedicated funds for recreational trails continue to be provided as a subset of TA. MAP-21 provides $85 million nationally for the RTP.

Complete eligibilities for TA include:

1.Transportation Alternatives as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and pedestrian infrastructure including "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." Infrastructure projects and systems that provide "Safe Routes for Non-Drivers" is a new eligible activity.

For the complete list of eligible activities, visit: http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

2.Recreational Trails. TA funds may be used to develop and maintain recreational trails and trail-related facilities for both active and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other active and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.

Recreational Trails Program funds may be used for:

- Maintenance and restoration of existing trails
- Purchase and lease of trail construction and maintenance equipment
- Construction of new trails, including unpaved trails
- Acquisition or easements of property for trails
- State administrative costs related to this program (limited to seven percent of a state's funds)
- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a state's funds)

Under MAP-21, dedicated funding for the RTP continues at FY 2009 levels – roughly $85 million annually. South Carolina will receive $1,211,220 in RTP funds per year through FY2014 (http://www.fhwa.dot.gov/environment/recreational_trails/funding/apportionments_obligations/recfunds_2009.cfm).

3. Safe Routes to School. The purpose of the Safe Routes to Schools eligibility is to promote safe, healthy alternatives to riding the bus or being driven to school. All projects must be within two miles of primary or middle schools (K-8).

Eligible projects may include:

- Engineering improvements. These physical improvements are designed to reduce potential bicycle and pedestrian conflicts with motor vehicles. Physical improvements may also reduce motor vehicle traffic volumes around schools, establish safer and more accessible crossings, or construct walkways, trails or bikeways. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, and secure bicycle parking facilities.
- Education and Encouragement Efforts. These programs are designed to teach children safe bicycling and walking skills while educating them about the health benefits, and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based

field trips; interactive bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, walking school buses).

- Enforcement Efforts. These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program, enforcement equipment, photo enforcement, and pedestrian sting operations.

4.Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways. At the time of writing, detailed guidance from the Federal Highway Administration on this new eligible activity was not available.

Average annual funds available through TA over the life of MAP-21 equal $814 million nationally, which is based on a 2% set-aside of total MAP-21 authorizations. Projected apportionments for South Carolina total $606,647,974 for FY 2013 and $611,847,012 for FY 2014 (http://www.fhwa.dot.gov/MAP21/funding.cfm). State DOTs may elect to transfer up to 50% of TA funds to other highway programs, so the amount listed above represents the maximum potential funding.

TA funds are typically allocated through the planning districts. Kershaw County's proximity to the Columbia metropolitan area means that it is impacted by both the MPO and RPO planning process, and therefore TA funding for the county may come from both of these agencies. The Town of Elgin is part of the Columbia Area Transportation Study (COATS), the designated MPO for the Columbia metropolitan area. The remainder of the County has historically fallen under the RPO planning responsibilities of Santee Lynches Regional Council of Governments (SLCOG). TA funds require a 20 percent local match and must be administered by either SCDOT or a qualified Local Public Agency (LPA).

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 SCDOT to the MPOs in the state. The remaining 50% may be spent in any area of the state. In South Carolina, STP is known as Guideshare.

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.

Last updated in 2007, the SCDOT SHSP is located here: http://www.scdot.org/inside/pdfs/Multimodal/Road_Map.pdf

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").

The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants). Kershaw should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

More information: http://www.epa.gov/smartgrowth/partnership/

Rivers, Trails, and Conservation Assistance Program

The Rivers, Trails, and Conservation Assistance Program (RTCA) is a National Parks Service (NPS) program providing technical assistance via direct NPS staff involvement to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance—there are no implementation monies available. Projects are prioritized for assistance based on criteria including conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation, and focusing on lasting accomplishments. This program may benefit trail development in Kershaw County indirectly through technical assistance, particularly for community organizations, but should not be considered a future capital funding source.

More information: http://www.nps.gov/pwro/rtca/who-we-are.htm

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. As an entitlement communities in Kershaw County could receive CDBG funds annually for local disbursement.

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/

Land and Water Conservation Fund (LWCF)

The Land and Water Conservation Fund (LWCF) provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. Funds can be used for right–of–way acquisition and construction. The program is administered by the South Carolina Department of Parks, Recreation & Tourism as a grant program. Any Trails and Greenways Plan projects located in future parks could benefit from planning and land acquisition funding through the LWCF. Trail corridor acquisition can be funded with LWCF grants as well.

More information: http://www.tn.gov/environment/recreation/grants.shtml

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More info: http://www.nps.gov/pwro/rtca/who-we-are.htm

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 in Kershaw County.

South Carolina Transportation Infrastructure Bank

The South Carolina Transportation Infrastructure Bank (SCTIB) is a statewide revolving loan fund designed in 1997 to assist major transportation projects in excess of $100 million in value. The SCTIB has since approved more than $4.5 billion in financial assistance and is arguably the largest and most active State Infrastructure Bank in the country. SCTIB funded development of the Palmetto Parkway in Aiken County, which included development of a roughly five mile shared-use path within the parkway's right of way.

More information: http://www.scdot.org/inside/SIB_board.aspx

South Carolina Department of Transportation – Capital Projects

Kershaw County should work closely with SCDOT to include bicycle and pedestrian improvements as part of major projects. The two groups should cooperate on a regular basis to identify opportunities for implementation of the Kershaw Bicycle Pedestrian and Greenways Plan.

South Carolina Department of Transportation – Maintenance Program

The South Carolina Department of Transportation carries out a number of road resurfacing maintenance projects annually. There may be opportunities for road restriping to be completed as part of regular roadway maintenance. This will require coordination between Kershaw, the SCDOT District Traffic Engineer and the local maintenance office to ensure that the pavement marking design is appropriate and safe for cyclists and drivers.

South Carolina Parks and Recreation Development Fund

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

- Monthly grant cycle
- Non–competitive program available to eligible local governmental entities within each county area for development of new public recreation facilities or enhancement/renovations to existing facilities.
- Projects need endorsement of majority weighted vote factor of County Legislative Delegation Members.
- This is an 80-20 match program
- Application Deadline is the 10th of each month

More information: http://www.scprt.com/our-partners/grants/pard.aspx.

Statewide Transportation Improvement Program

The Statewide Transportation Improvement Program (STIP) is SCDOT's short-term capital improvement program, providing project funding and scheduling information for the department and South Carolina's metropolitan planning organizations. The program provides guidance for the next six years and is updated every three years. The South Carolina Department of Transportation Commission, as well as the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) approve the STIP.

In developing this funding program, SCDOT must verify that the identified projects comply with existing transportation and comprehensive plans. The STIP must fulfill federal planning requirements for a staged, multi-year, statewide, intermodal program of transportation projects. Specific transportation projects are prioritized based on Federal planning requirements and the specific State plans.

More information: http://www.scdot.org/inside/stip.aspx

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 Kershaw County 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.

The Columbia Area Transportation Study (COATS) is the Metropolitan Planning Organization (MPO) for the Town of Elgin and surrounding urban areas (http://www.centralmidlands.org). 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. COAST works cooperatively with SCDOT to develop transportation plans, travel models, transit plans, and bicycle and pedestrian plans. COATS works with the state on funding issues for transportation improvements, project planning issues, and other issues such as environmental and air quality concerns. COATS also works 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. This Plan recommends that Kershaw County and its partners work closely with COATS to ensure trails and greenways projects are listed in the TIP. Typically, projects on this list require a 20% local match.

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

More information: http://www.scdot.org/inside/SIB_board.aspx.

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.

Street User Fees

Many cities administer street user fees through residents' monthly water or other utility bills. The revenue generated by the fee can be used for operations and maintenance of the street system, and priorities would be established by the Public Works Department. Revenue from this fund can be used to maintain on-street bicycle and pedestrian facilities, including routine sweeping of bicycle lanes and other designated bicycle routes.

In Lieu of Fees

Developers often dedicate open space or greenways in exchange for waiving fees associated with park and open space allocation requirements in respect to proposed development. These types of requirements are presented within local municipal codes and ordinances.

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. Based on South Carolina's Municipal Improvements Act of 1999, LIDs can include a Municipal Improvement District (MID), a County Public Works Improvement District (CPWID) or a Residential Improvement District (RID).

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. Kershaw bicycle and pedestrian projects can 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 voters approved a ½ cent sales tax for the purpose of financing transportation and greenbelt projects. Voters approved a second referendum in 2006.

More Information: http://roads.charlestoncounty.org/about.php

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.

Excise Taxes

Excise taxes are taxes on specific goods and services. These taxes require special legislation and the use of the funds generated through the tax are limited to specific uses. Examples include lodging, food, and beverage taxes that generate funds for promotion of tourism, and the gas tax that generates revenues for transportation-related activities.

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.bikesbelong.org/grants/

The Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation was established as a national philanthropy in 1972 and today it is the largest U.S. foundation devoted to improving the health and health care of all Americans. Grant making is concentrated in four areas:

- To assure that all Americans have access to basic health care at a reasonable cost
- To improve care and support for people with chronic health conditions
- To promote healthy communities and lifestyles
- To reduce the personal, social and economic harm caused by substance abuse: tobacco, alcohol, and illicit drugs

More information: http://www.rwjf.org/applications/

Bank of America Charitable Foundation, Inc.

The Bank of America Charitable Foundation is one of the largest in the nation. The primary grants program is called Neighborhood Excellence, which seeks to identify critical issues in local communities. Another program that applies to greenways is the Community Development Programs, and specifically the Program Related Investments. This program targets low and moderate income communities and serves to encourage entrepreneurial business development.

More information: http://www.bankofamerica.com/foundation

The Walmart Foundation

The Walmart Foundation offers a Local, State, and National Giving Program. The Local Giving Program awards grants of $250 to $5,000 through local Walmart and Sam's Club Stores. Application opportunities are announced annually in February with a final deadline for applications in December. The State Giving Program provides grants of $25,000 to $250,000 to 501c3 nonprofits working within one of five focus areas: Hunger Relief & Nutrition, Education, Environ-mental Sustainability, Women's Economic Empowerment, or Workforce Development. The program has two application cycles per year: January through March and June through August. The Walmart Foundation's National Giving Program awards grants of $250,000 and more, but does not accept unsolicited applications.

More information: http://foundation.walmart.com/apply-for-grants

Duke Energy Foundation

Funded by Duke Energy shareholders, this non-profit organization makes charitable grants to selected non-profits or governmental subdivisions. Each annual grant must have:

- An internal Duke Energy business "sponsor"
- A clear business reason for making the contribution

The grant program has three focus areas: Environment and Energy Efficiency, Economic Development, and Community Vitality. Related to this project, the Foundation would support programs that support conservation, training and research around environmental and energy efficiency initiatives.

More information: http://www.duke-energy.com/community/foundation.asp

The Kodak American Greenways Program

The Conservation Fund's American Greenways Program has teamed with the Eastman Kodak Corporation and the National Geographic Society to award small grants ($250 to $2,000) to stimulate the planning, design and development of greenways. These grants can be used for activities such as mapping, conducting ecological assessments, surveying land, holding conferences, developing brochures, producing interpretive displays, incorporating land trusts, and building trails. Grants cannot be used for academic research, institutional support, lobbying or political activities.

More information: http://www.conservationfund.org

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

The Conservation Alliance

The Conservation Alliance is a non-profit organization of outdoor businesses whose collective annual membership dues support grassroots citizen-action groups and their efforts to protect wild and natural areas. One hundred percent of its member companies' dues go directly to diverse, local community groups across the nation–groups like Southern Utah Wilderness Alliance, Alliance for the Wild Rockies, The Greater Yellowstone Coalition, the South Yuba River Citizens' League, RESTORE: The North Woods and the Sinkyone Wilderness Council (a Native American-owned/operated wilderness park). For these groups, who seek to protect the last great wild lands and waterways from resource extraction and commercial development, the Alliance's grants are substantial in size (about $35,000 each), and have often made the difference between success and defeat. Since its inception in 1989, The Conservation Alliance has contributed $4,775,059 to grassroots environmental groups across the nation, and its member companies are proud of the results: To date the groups funded have saved over 34 million acres of wild lands and 14 dams have been either prevented or removed-all through grassroots community efforts.

The Conservation Alliance is a unique funding source for grassroots environmental groups. It is the only environmental grant maker whose funds come from a potent yet largely untapped constituency for protection of ecosystems – the active transportation outdoor recreation industry and its customers. This industry has great incentive to protect the places in which people use the clothing, hiking boots, tents and backpacks it sells. The industry is also uniquely positioned to educate outdoor enthusiasts about threats to wild places, and engage them to take action. Finally, when it comes to decision–makers, especially those in the Forest Service, National Park Service, and Bureau of Land Management, this industry has clout - an important tool that small advocacy groups can wield.

The Conservation Alliance Funding Criteria: The Project should be focused primarily on direct citizen action to protect and enhance our natural resources for recreation. The Alliance does not look for mainstream education or scientific research projects, but rather for active campaigns. All projects should be quantifiable, with specific goals, objectives and action plans and should include a measure for evaluating success. The project should have a good chance for closure or significant measurable results over a fairly short term (one to two years). Funding emphasis may not be on general operating expenses or staff payroll.

More information: http://www.conservationalliance.com/index.m

National Fish and Wildlife Foundation (NFWF)

The National Fish and Wildlife Foundation (NFWF) is a private, nonprofit, tax-exempt organization chartered by Congress in 1984. The National Fish and Wildlife Foundation sustains, restores, and enhances the Nation's fish, wildlife, plants and habitats. Through leadership conservation investments with public and private partners, the Foundation is dedicated to achieving maximum conservation impact by developing and applying best practices and innovative methods for measurable outcomes.

The Foundation awards matching grants under its Keystone Initiatives to achieve measurable outcomes in the conservation of fish, wildlife, plants and the habitats on which they depend. Awards are made on a competitive basis to eligible grant recipients, including federal, tribal, state, and local governments, educational institutions, and

non-profit conservation organizations. Project proposals are received on a year-round, revolving basis with two decision cycles per year. Grants generally range from $50,000-$300,000 and typically require a minimum 2:1 non-federal match.

Funding priorities include bird, fish, marine/coastal, and wildlife and habitat conservation. Other projects that are considered include controlling invasive species, enhancing delivery of ecosystem services in agricultural systems, minimizing the impact on wildlife of emerging energy sources, and developing future conservation leaders and professionals.

More information: http://www.nfwf.org/AM/Template.cfm?Section=Grants

The Trust for Public Land

Land conservation is central to the mission of the Trust for Public Land (TPL). Founded in 1972, the Trust for Public Land is the only national nonprofit working exclusively to protect land for human enjoyment and wellbeing. TPL helps conserve land for recreation and spiritual nourishment and to improve the health and quality of life of American communities. Also, TPL is the leading organization helping agencies and communities identify and create funds for conservation from federal, state, local, and philanthropic sources.

Since 1996, TPL has helped states and communities craft and pass over 382 successful ballot measures, generating $34 billion in new conservation-related funding.

More information: http://www.tpl.org/what-we-do/services/conservation-finance/

Community Action for a Renewed Environment (CARE)

CARE is a competitive grant program that offers an innovative way for a community to organize and take action to re-duce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them. By providing financial and technical assistance, EPA helps CARE communities get on the path to a renewed environment. Transportation and "smart-growth" types of projects are eligible. Grants range between $90,000 and $275,000.

More information: http://www.epa.gov/care/

Local Trail Sponsors

A sponsorship program for trail amenities allows smaller donations to be received from both individuals and businesses. Cash donations could be placed into a trust fund to be accessed for certain construction or acquisition projects associated with the greenways and open space system. Some recognition of the donors is appropriate and can be accomplished through the placement of a plaque, the naming of a trail segment, and/or special recognition at an opening ceremony. Types of gifts other than cash could include donations of services, equipment, labor, or reduced costs for supplies.

Corporate Donations

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Employers recognize that creating places to bike and walk is one way to build community and attract a quality work force. Bicycling and outdoor recreation businesses often support local projects and programs. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

Other Sources

Volunteer Work and Public-Private Partnerships

Individual volunteers from the community can be brought together with groups of volunteers from church groups, civic groups, scout troops and environmental groups to work on greenway development on special community workdays. Volunteers can also be used for fundraising, maintenance, and programming needs. Local schools or community groups may use the bikeway projects as a project for the year, possibly working with a local designer or engineer. Work parties may be formed to help clear the right-of-way where needed. A local construction company may donate or discount services. A challenge grant program with local businesses may be a good source of local funding, where corporations 'adopt' a bikeway and help construct and maintain the facility.

Private Individual Donations

Private individual donations can come in the form of liquid investments (i.e. cash, stock, bonds) or land. Municipalities typically create funds to facilitate and simplify a transaction from an individual's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

Fundraising / Campaign Drives

Organizations and individuals can participate in a fundraiser or a campaign drive. It is essential to market the purpose of a fundraiser to rally support and financial backing. Oftentimes fundraising satisfies the need for public awareness, public education, and financial support.

Land Trust Acquisition and Donation

Land trusts are held by a third party other than the primary holder and the beneficiaries. This land is oftentimes held in a corporation for facilitating the transfer between two parties. For conservation purposes, land is often held in a land trust and received through a land trust. A land trust typically has a specific purpose such as conservation and is used so land will be preserved as the primary holder had originally intended.

Adopt a Trail Program

A challenge grant program with local businesses may be a good source of local funding, where corporations 'adopt' a trail and help maintain the facility. Foundation grants, volunteer work, and donations of in-kind services, equipment, labor or materials are other sources of support that can play a supporting role in gathering resources to design and build new bicycle and pedestrian facilities.

Residents and other community members are excellent resources for garnering support and enthusiasm for a trail, and Kershaw County should work with volunteers to substantially reduce implementation and maintenance costs. Local schools, community groups, or a group of dedicated neighbors may use the project as a goal for the year, possibly working with a local designer or engineer. Work parties can be formed to help clear the right-of-way for a new trail or maintain existing facilities where needed.

Appendix F: Design Guidelines

Discard this page and insert Appendix F