

## Bicycle & Pedestrian Element

### *Introduction*

Transportation plans no longer focus solely on roadway solutions. In the quest for an improved quality of life, we now strive to enhance the livability of our communities. One common theme of any livable community is how well it accommodates pedestrians and cyclists.

Walking and bicycling have numerous benefits, including:

- **Personal Benefits** — Cardiovascular fitness, health, and transportation cost savings;
- **Societal Benefits** — Reduced vehicle miles of travel, improved public health through a cleaner environment and healthier citizens, and improved mobility for those that are disabled or without access to private automobiles; and
- **Environmental Benefits** — Reduced air and noise pollution and improved water quality from fewer parking lots/spaces/structures

The gap between the tremendous potential for bicycling and walking in the CHATS study area and the current conditions and proposed transportation projects is raised in almost every discussion about bicycling and walking in the region. In each of the public meetings held as part of the update of this plan, residents expressed a strong desire for improvements to the conditions and opportunities for bicycling and walking. Citizens want to be able to walk safely within their community to run errands, shop, visit friends, and neighbors, and get to work. They want to be able to bicycle to their downtown communities and throughout the region, and firmly believe there is significant potential to enhance the experience of tourists visiting the region. Similarly, public agency staff and local officials recognize the need to improve safety and opportunities for bicycling and walking throughout the region. In addition, bicycle and pedestrian facilities can benefit other roadway users. For example, paved shoulders provide a refuge for motorists with disabled vehicles and help to slow travel lane pavement deterioration.

### *Existing Conditions*

#### *Walking*

Pedestrian can be defined both as “undistinguished, ordinary” and “going on foot.” Considering both definitions, travel by foot should be ordinary and commonplace. Downtown Charleston, Downtown Summerville, and the Old Village of Mount Pleasant primarily exhibit an interconnected network of sidewalks in relatively good condition. Traveling further from these urban centers,

sidewalks appear only on main corridors or in some neighborhoods, and are less frequent and well-connected. Approaching the rural fringe, few, if any, sidewalks exist.

Recent efforts have been made by the South Carolina Department of Transportation to incorporate pedestrian facilities into standard roadway design. The South Carolina Department of Transportation’s Highway Design Manual (May 2003) states the following concerning sidewalk construction:

Generally, sidewalks are an integral part of city streets. For suburban residential areas, the construction of sidewalks is often deferred. However, sidewalks in rural and suburban areas are still often justified at points of community development such as schools, local businesses, shopping centers, and industrial plants that result in pedestrian concentrations along the highway. If pedestrian activity is anticipated, include sidewalks as part of the construction.

In addition to sidewalks, the Berkeley Charleston Dorchester (BCD) area includes greenways and trails. Greenways Incorporated defines greenways as “corridors of land recognized for their ability to connect people and places together; greenway trails can be paved or unpaved, and can be designated to accommodate a variety of trail users, including: bicyclists, walkers, hikers, joggers, skaters, horseback riders, and those confined to wheelchairs.” Greenways have been shown to enhance residential property value in the neighborhoods served.

In 2005, the BCDCOG was awarded a grant from the S.C. Forestry Commission to complete a study to determine the appropriate regional routing of the 2,500 mile East Coast Greenway that will extend from Maine to Key West Florida ([www.greenway.org](http://www.greenway.org)). Within the BCD region, a 95 mile long trail has been proposed, extending through Charleston County, mostly in close proximity to US 17. The Greenway will link neighborhoods, communities, local, state, and national parks (including the Francis Marion National Forest, the Santee Coastal Reserve, and the Cape Romain National Wildlife Refuge), local, state, and national bicycle routes and trails (including the Palmetto Trail), schools, health care centers, and shopping nodes for local users. This important stretch of the East Coast Greenway provides an opportunity to explain and highlight Coastal South Carolina as well as the significance of the area in the nation’s history to the visitors using the East Coast Greenway

This greenway routing makes connections with existing greenways and trails along its proposed route while encouraging the development of new dedicated right-of-way facilities for bicycles and

pedestrians along the corridor. The selected routing was approved by all of the counties and municipalities along the route but may be changed as more areas are developed.

**Figure 5.1;** illustrate existing and proposed bicycle and multi-use facilities in the BCD region.

### *Bicycling*

The Highway Design Manual produced by SCDOT in 2003 also emphasizes the importance of constructing bicycle facilities on new roadways and offers several fiscally conservative methods of improving conditions for bicycle riders. An Engineering Directive Memorandum issued by SCDOT in 2003 affirms this focus on bicycle facilities and provides guidelines for the selection and design of bicycle facilities for new roadway projects.

Grade school youth can pedal for a substantial amount of time and distance at 10 mph on a bike. Destinations within a 5-mile radius (trip duration of 30 minutes) are achievable for many citizens. Although the Berkeley Charleston Dorchester region has few designated bicycle facilities and routes at this time (with the exception of greenways), the combination of interconnected streets and mixed land uses makes it possible to bicycle for short trips using quiet streets in neighborhoods in several urban areas in the region.

For the advanced or more experienced recreational cyclist, existing rural roads with (comparatively) lower traffic volumes provide an opportunity for cyclists to enjoy longer uninterrupted scenic trips, albeit sharing the road with vehicular traffic. Although there are only two designated bicycle touring routes in the BCD region (the Walter Ezell Route and the Coastal Route), experienced cyclists routinely use the rural road network for bicycling. The existing greenways/multi-use paths and bikeways are illustrated in **Figure 5.1**.

### *Bicycle & Pedestrian Environment*

The study area has many contrasts for the bicycling and walking public. The region has both good and bad examples of accommodating bicyclists and walkers, sometimes within a few blocks of each other.

Downtown Charleston is one of the most walkable communities in the nation, featuring a human scale-built environment, pedestrian-friendly street patterns, and a mix of interesting residential, retail, and business locations generating traffic on foot. The historic Old Village area of Mount Pleasant has many of the same characteristics.

Within a few miles of downtown Charleston, the beach communities of Kiawah Island, Sullivan’s Island, Folly Beach, the Isle of Palms, and Seabrook Island offer residents and visitors alike the opportunity to ride their bicycles conveniently and safely throughout the community. In these areas, rails, bike lanes, and relatively quiet residential streets invite people to take to two wheels for all kinds of trips.

I’On, in the Mount Pleasant area, provides residents with a setting featuring connected streets, sidewalks, and paths that offer variety for walking, jogging, and pedaling through the neighborhood. By design, public space abounds — from quiet trails and parks to the vibrant shops at I’On Square. I’On received the 2001 Platinum Award for Best Smart Growth Community in the Nation from the National Association of Homebuilders for its innovative design practices. The Goose Creek hiker-biker trail system and the Summerville multi-use trail system are other good examples of integrating bicyclists and pedestrians into the fabric of the community.

Other features of the study area suggest a great potential for improving conditions for bicycling and walking, such as:

- Climate for year-round bicycling and walking
- Flat terrain
- Numerous self-contained communities (e.g., Mount Pleasant, James Island, West Ashley)
- Mixed-use land areas (e.g., North Charleston, Summerville)
- Short distances between destinations in these communities

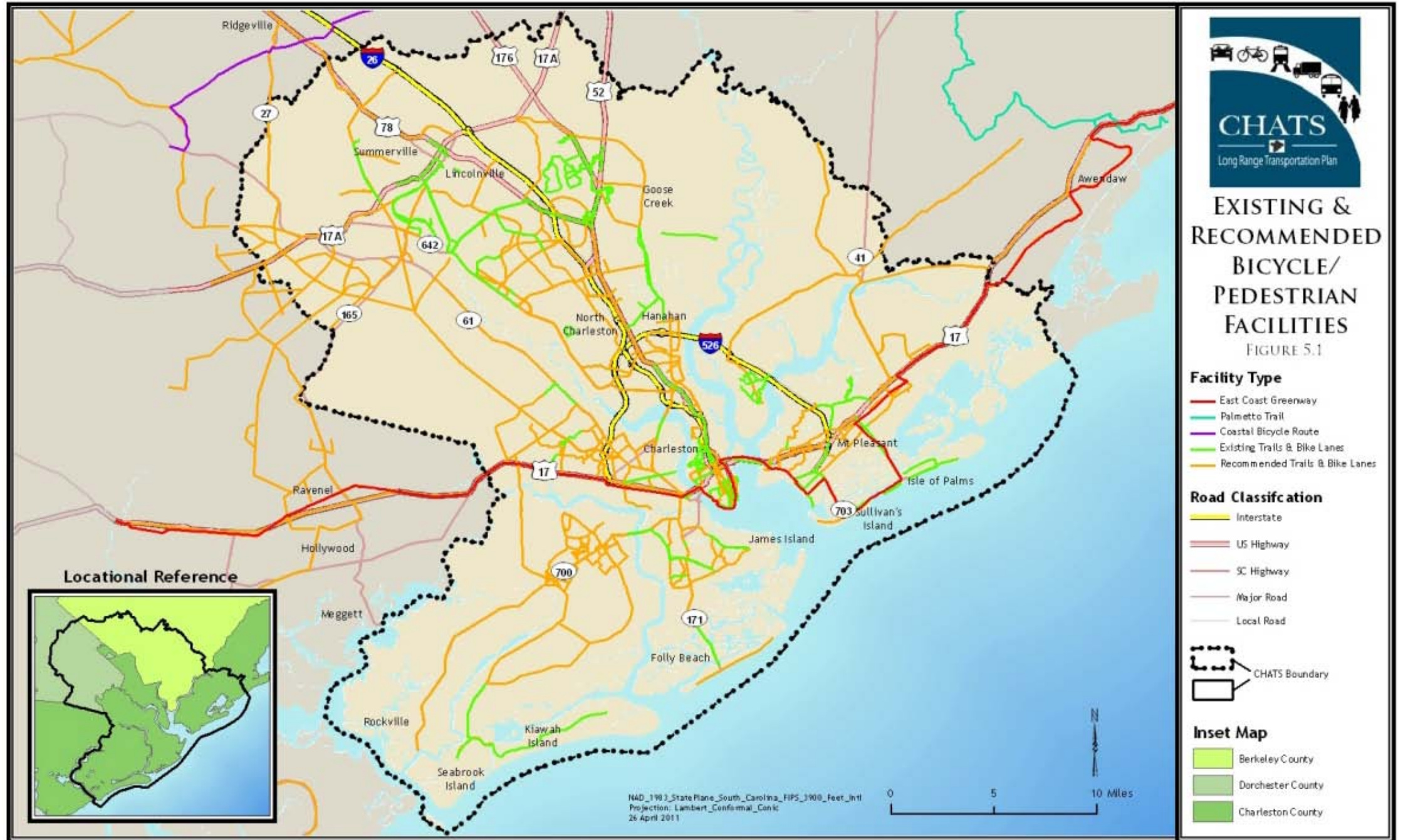
Despite these many positive attributes, the reality is that bicycling and walking are not considered viable options for most trips by many people in the area. There are more examples of areas that are unsafe for potential bicyclists and pedestrians than there are positive examples in the BCD area.

While the potential for foot and bicycle travel within the communities in the study area is great, the same cannot be said for the long distance or inter-community travel. Deterrents to inter-community travel include:

- Lack of safe water crossings of the Ashley, Stono, Wapoo, and Wando Rivers;
- Design of arterials discourages all but the most determined bicyclists;
- Gaps in safe facilities make longer distance travel difficult;
- Distances between the suburban growth centers, such as Summerville, and the traditional employment centers in North Charleston and Charleston are too great for the majority of people to consider bicycling and
- Increasing suburbanization that will make these factors worse

The reality of bicycling and walking in the study area is that “you can’t get there from here.” There are few safe places to ride or walk. There are few opportunities, for example, to travel east or west from North Charleston into neighboring communities. Although significant improvements have been made in recent years (such as the construction of Wonders Way as part of the Arthur Ravenel Bridge), Downtown Charleston, while offering many bicycle and pedestrian facilities within its boundaries, is almost completely sealed off from bicycle and pedestrian access from elsewhere in the region. Existing bicycle and pedestrian facilities entering and exiting this area have sometimes been poorly designed or have developed a reputation for not being safe. This lack of quality bicycle and pedestrian facilities also has a negative effect on the physically-challenged. Those individuals that






**EXISTING & RECOMMENDED BICYCLE/PEDESTRIAN FACILITIES**  
FIGURE 5.1

require ADA compliant facilities to safely travel would benefit greatly from an interconnected pedestrian network.

Much of the existing bicycling and walking in the BCD area falls into two quite distinct categories.

1. **Utilitarian, non-discretionary travel.** A significant portion of the population in the study area does not have access to a car. Children, students, and many elderly are not able to drive. In addition, some households cannot afford an automobile. According to the 2000 Census, an average of 9.7% of all households in the Berkeley-Charleston-Dorchester region do not have a vehicle available. This number is highest in Charleston County, where 11.9% of all households have no vehicle available. For these households, bicycling and walking may be the only option they have for most of the trips they must make every day, regardless of the conditions they experience.
2. **Recreational, discretionary travel.** Bicycle clubs, such as the Coastal Cyclists, organize numerous rides throughout the year and have an active membership. There are many bicycling, walking, and running events that use the highway system on a regular basis. Joggers, bicyclists, and fitness walkers can be seen in almost every neighborhood. The beach communities have high levels of bicycling and walking.

### *The Four Es of Bicycle & Pedestrian Planning*

Four important components contribute to the success of a non-vehicular transportation system:

- **Engineering** — Before there can be facilities for walking and riding bicycles, a network of pathways must be planned and designed. Good design and route choices are essential parts of a successful pathway network.
- **Education** — Once pathway systems are developed and in-place, new and experienced cyclists need to be made aware of where these systems are and what destinations can be accessed. Motorists, pedestrians, and cyclists need to understand the “rules of the road” to keep themselves safe while operating not only on, but also adjacent to these facilities.
- **Encouragement** — The most nebulous of the four components, people need to be encouraged to walk and bicycle. The more desirable the BCD area becomes for pedestrians and cyclists (by providing safe access to more destinations in the region) the more successful these modes will become. Setting a regional goal to be widely recognized as bicycle-friendly is a worthy idea.
- **Enforcement** — It is critical to make sure that laws pertaining to the interaction between motorists and pedestrians/cyclists are heeded by all to ensure safety.

### *Previous Planning Efforts*

The Berkeley Charleston Dorchester (BCD) region, with its subtropical climate and unique historic coastal setting, has the opportunity to be a national player in the incorporation of bicycle and pedestrian facilities into the fabric of its transportation network. The BCD region has had the vision of a bicycle network incorporated into its transportation system for a number of years, starting with the development of the 1976 Long Range Bikeway Plan. Unfortunately, only small portions of that plan were implemented. This limited plan implementation can be traced to the historical trend, nationwide and in the BCD region, where transportation planning and design has been focused on the needs of the motorist. Standards were developed and limits imposed based on the capabilities of the automobile. The needs and limitations of the non-motorized traveler were secondary considerations that were either overlooked or eliminated in roadway design.

However, perceptions about bicycle and pedestrian facilities and their necessity in the fabric of our communities have changed. In addition, SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) has encouraged the incorporation of bicycle and pedestrian facilities into the transportation network and has raised the level of understanding relative to the consideration of bicycling and walking as a viable and necessary means of transportation.

In September 1995, the CHATS and Charleston County Bikeway and Pedestrian Master Plan was prepared for the Charleston County Park and Recreation Commission by a consultant team headed by HOH Associates, Inc. This plan identified existing conditions, as well as recommendations for improvements to the bicycle and pedestrian networks.

Integral in the development of the 1995 plan, because of the number of communities and associated agencies in the study area, was the active involvement of the residents, local government staff, and elected officials from all relevant jurisdictions. During the planning process, the project team developed a wide range of activities in order to provide maximum opportunity for their involvement. Additionally, a Bicycle and Pedestrian Technical Advisory Committee was formed at the outset of the planning process. This committee was designed to be instrumental in the comprehensive planning effort, as it ensured coordination with the jurisdictions represented, improving community support of the plan, and making it more responsive to local needs. The committee, made up of agency and community representatives, participated in major team planning work sessions, helped identify key planning issues, detailed potential planning opportunities, addressed implementation challenges raised during the planning process, reviewed and commented on major draft level products, and helped guide the final plan through the approval process of the respective members’ city council or commission.

The master plan process was developed in response to the Berkeley Charleston Dorchester region’s diversity and varied needs, and included the following components:

- An inventory and review of existing conditions, regulations, and policies;
- The establishment of visions, goals, and policies relative to the Charleston region and community expectations;



- The development of engineering, education, enforcement, and encouragement programs and policies in response to the region's visions and goals;
- The development of a Regional Bicycle Route Master Plan;
- The development of bicycle and pedestrian facility engineering design guidelines; and
- The establishment of the Master Plan implementation strategy

As a part of the development of the 1995 plan, the following primary policies were adopted by the CHATS Policy Committee and the Charleston County Transportation Committee. Other area jurisdictions and agencies have been encouraged to adopt or endorse these policies as appropriate. These recommendations were also incorporated into the 1998, the 2005 CHATS Long Range Transportation Plan, and now herein.

1. All new and improved non-controlled access highways in the CHATS study area will provide a minimum level of safe accommodation for bicyclists and pedestrians.
2. On key routes identified in the CHATS plan, streets and highways shall be retrofitted to better accommodate bicyclists and pedestrians.
3. All new and improved bridges in the CHATS study area will provide safe bicycle and pedestrian access.
4. Improvements to area transit services must ensure safe and convenient access for bicyclists and pedestrians.
5. All existing rail and utility corridors will be reviewed for their potential to incorporate multi-use trails. The CHATS Policy Committee recommends that area jurisdictions shall act immediately to protect and preserve abandoned railroad corridors that have the potential to become part of a regional trail network.
6. The design, designation, and signing of bicycle and pedestrian facilities in the CHATS study area will conform to current standards and guidelines developed at the national level.
7. The CHATS Policy Committee recommends that area jurisdictions shall encourage bicycle- and pedestrian-friendly retail, commercial, and residential developments.
8. The CHATS Policy Committee recommends that area jurisdictions adopt policies and procedures to encourage the installation of secure bicycle parking facilities throughout the study area.
9. The CHATS Policy Committee will support efforts so that area residents and visitors will have the opportunity to receive training and information to enable bicyclists, pedestrians, and motorists to more safely coexist on area roads.
10. The CHATS Policy Committee will recommend to State and local jurisdictions that enforcement of laws regarding dangerous and illegal behavior by motorists, bicyclists, and pedestrians be improved.

### *Current Planning Efforts*

A set of resolutions approved by the South Carolina Department of Transportation Commission conceives the following vision for the future:

Now, therefore, be it resolved that the South Carolina Department of Transportation Commission in meeting duly assembled this 14<sup>th</sup> day of January 2003, affirms that bicycling and walking accommodations should be a routine part of the department's planning, design, construction and operating activities, and will be included in the everyday operations of our transportation system; and "Therefore, be it further resolved, that the South Carolina Department of Transportation Commission requires South Carolina counties and municipalities to make bicycling and pedestrian improvements an integral part of their transportation planning and programming where State or Federal Highway funding is utilized.

### *Regional Bike and Pedestrian Action Plan*

In 2005, the BCDCOG completed a regional ***Bike and Pedestrian Action Plan*** funded by the Robert Wood Johnson Foundation. With the assistance of healthcare providers, the school districts and other partners, the Berkeley-Charleston-Dorchester Regional Bicycle and Pedestrian Action Plan is based on three principles:

- (1) Children should be able to safely walk and bike to school if they and their parents so choose.
- (2) Roadways should equally accommodate pedestrians, bicyclists, and motorists.
- (3) Bicycling and walking should become a routine part of daily activity in the BCD region.

With these principles as a guide, an Action Plan was developed to improve walking and bicycling conditions in the region and to encourage residents to walk and bike on a daily basis. The Action Plan consists of three elements:

#### **(1) Safe Routes to School (SRTS) Programs**

The goal of a SRTS program is to create a safer environment for children who already walk and bike to school, and to encourage more children to become physically active by walking or bicycling to school. SRTS programs also benefit the community by reducing traffic congestion around schools, improving air quality, and reducing school transportation costs.

#### **(2) Complete Streets**

A *Complete Street* is a street that is safe and convenient for all users, including pedestrians, bicyclists, and motorists. Complete Streets policies should be routinely implemented at state and local levels to insure that pedestrian and bicycle facilities are included in all transportation projects.

This approach is far less expensive than costly retrofits on streets that were only designed to accommodate motor vehicles. Accommodating pedestrians and bicyclists is particularly important in the Charleston region as substantial activity occurs in economically disadvantaged communities where residents rely on non-motorized transportation. Recommendations for the implementation of Complete Streets policies are included in numerous municipal Comprehensive Plans within the BCD region.

### (3) Community Intervention

To foster environments where walking and bicycling are a routine part of daily activity, a variety of community interventions are needed in the BCD region. Physical interventions such as sidewalks, trails, and roadway improvements are needed to improve bicycle and pedestrian access. Social interventions are needed to encourage people to walk or bicycle for health, fitness, and transportation.

Recommendations are detailed in the Implementation section of this document and include allocating more funding to improve bike and pedestrian facilities, encouraging local governments to adopt Complete Streets policies and designating a district pedestrian and bicycle coordinator within SCDOT.

In addition to the initiatives in the Bike and Pedestrian Action Plan, the BCDCOG staff has coordinated with the League of American Bicyclists to support the Bicycle Friendly Community (BFC) Program. According to the League, The BFC program provides incentives, hands-on assistance, and award recognition for communities that actively support bicycling. Applications for inclusion as a BFC are based on the following criteria:

- 1) Engineering
- 2) Education
- 3) Encouragement
- 4) Evaluation & Planning
- 5) Enforcement

The fulfillment of these goals of increased funding of and attention to bicycle and pedestrian projects at a local and statewide level sets a precedent for the BCD region. Berkeley, Charleston, and Dorchester Counties and their constituent municipalities can build on current successes and ensure that as they experience growth, pedestrian and bicyclist issues will be given appropriate consideration.

Since the adoption of the CHATS and Charleston County Bikeway and Pedestrian Master Plan in 1995, communities in the BCD region have demonstrated an increasing commitment to pedestrian and bicycle improvements. This dedication to providing a complete range of transportation options is integral to the success of an overall transportation plan.

Seven public involvement workshops were conducted as a part of the development of the 2010 CHATS Long-Range Transportation Plan update. As a part of these workshops, a survey was

distributed to attendees (this survey was also distributed through a range of other venues as well). The results of this survey indicate that residents of the BCD area are dissatisfied with the quality of bicycle and pedestrian facilities currently available to them. Survey respondents rated the quality of the bicycle and pedestrian systems in the BCD area as poor. The public survey respondents indicated that of every \$100 spent on transportation improvements, they would spend \$27 on bicycle and pedestrian facilities. However, based on a 5-year spending projection of state and federal funds, only \$1.00 of every \$100 in transportation improvements is dedicated to bicycle and pedestrian projects.

In addition, bicycle and pedestrian issues were addressed at meetings of the CHATS Study Team, meetings of the Transportation Planning Advisory Group (TPAG), and meetings of the CHATS Policy Committee. A policy survey also was distributed to counties and municipalities in the BCD region to address policies in their jurisdictions that could affect the development of bicycle and pedestrian facilities. The results of this survey can be found in **Table 5.1**.

The results of this policy review indicate several things. Many of the larger municipalities have guidelines to help shape the development of bicycle and pedestrian facilities in their areas, and have recommended additional guidelines in their updated comprehensive plans. In contrast, Berkeley, Charleston, and Dorchester Counties have fewer requirements for these facilities, however these communities have also recommended more stringent provisions for bicycle and pedestrian facilities. Most of the municipalities surveyed stated that they have plans to build sidewalks and/or bikeways in specific locations using public funds, indicating support for improving the bicycle and pedestrian network at a local level.

In addition to these efforts, a separate study was conducted by Kimley-Horn and Associates for the development of the East Coast Greenway through the BCD region. The East Coast Greenway will ultimately extend from Calais, Maine to Key West, Florida. Nationwide, much of the East Coast Greenway will be comprised of existing local trails (greenways, bikeways, rail trails, canal towpaths, park pathways, waterfront esplanades, etc.) Users will include walkers, cyclists, skaters, wheelchairs, strollers, and in snowy areas of the country, even skiers in northern communities. As of January 2011, less than 20 % of the Greenway is completed, with an additional 20 % currently under development. It is hoped that at completion of the Greenway, at least 80% of the system will be located along traffic separated trails with the remaining 20% on low traffic rural roads and city streets. Trail segments are planned to retain local character, function as community facilities, and boost local economies with new tourism dollars spent in the local communities. The East Coast Greenway will complement existing bicycle and pedestrian planning efforts in the Berkeley Charleston Dorchester region by promoting bike- and pedestrian oriented transportation projects and access within and adjacent to the Greenway corridor. The recommended East Coast Greenway route in the Berkeley Charleston Dorchester region is shown in **Figure 5.1**.

The Citadel, Clemson University, and South Carolina State University conducted a study entitled “South Carolina East Coast Greenway Transportation Safety, Route Location, and Facility Needs Study.” This study examined route conditions and planning issues that would affect the development

of a preferred East Coast Greenway alignment. This information was compiled into a Bicycle Compatibility Index Level of Service procedure and a preferred route was developed based on this information. The route proposed in that document is virtually identical to the alignment documented in the Kimley-Horn study, with a few minor changes.

## Identified Needs

### Bicycle

#### Types of Cyclists

In order to develop an appropriate bicycle element, the following “ABCs” of cyclists need to be understood.

**Advanced Cyclists** — These are usually experienced cyclists who have the ability to safely ride under more typical thoroughfare conditions of higher traffic volume and speed. This group of cyclists generally prefers shared roadways as opposed to striped bike lanes and paths. Although surveys show this group represents only about 20 percent of all cyclists, they also show that these cyclists ride about 80 percent of the bicycle miles traveled yearly. With monthly street sweeping of gutter debris, advanced cyclists typically accept striped bike lanes.

**Basic Cyclists** — These cyclists are casual or new adult and teenage riders less secure in their ability to ride in traffic without special accommodations. They typically prefer bike paths and bike lanes on collector or arterial streets with less exposure to fast-moving and heavy traffic. Surveys of the cycling public indicate that 80 percent of cyclists can be categorized as basic cyclists.

**Child Cyclists** — This group, which is a subset of the basic cyclists, includes children (aged 12 and under) on bicycles who have a more limited field of vision as they ride. This group generally keeps to neighborhood streets, sidewalks, and greenways. When children venture out onto busier roadways, they typically stay on sidewalks or bicycle facilities that keep them safely away from traffic. Given the comfort level of these cyclists, it is recommended that areas in the BCD region lacking bike lanes allow children and other cyclists who are uncomfortable riding in traffic to ride on sidewalks with the requirement that they yield to pedestrians.



In addition, within the BCD region a significant subsection of bicyclists are what can be classified as *Cyclists of Necessity*. While amongst the most present of cyclist groups on a number of regional streets, cyclists of necessity share many of the traits that characterize basic cyclists. This group utilizes bicycles heavily for commuting and shopping, yet like basic cyclists, these bicyclists prefer to utilize sidewalks and trails. Typically found in low-income communities, many members of this group have minimal awareness of safety regulations and possess minimal bicycle safety accessories (helmets, lights, etc).

Cyclists, not unlike drivers, generally become more experienced over time and miles of riding. As cyclists ride and gain more experience operating in traffic, they eventually graduate from the classification of a basic cyclist to an advanced cyclist more capable of operating under typical roadway conditions.

#### Facilities

As with the definitions for the types of cyclists, it also is important to understand the differences between the types of facilities.

**Shared Lane** — This type of facility is often referred to as a “wide outside lane,” a “shared lane,” or a “wide curb lane.” These facilities provide extra width in the outermost travel lane on either single- or multi-lane roadways to accommodate cyclists. Typically, shared lane facilities have an outer lane width of 14 feet on multi-lane roadways and 15 feet on two-lane roadways. It is important to note that the lane width that is measured on this facility type does not include the width of the gutter adjacent to the travel lane. This facility is most appropriate on travel routes with moderate traffic volumes and is suitable for cyclists who are comfortable riding with the flow of regular traffic. These routes can be ridden by basic cyclists, but are most often preferred by advanced cyclists.



**Sharrows** – In 2009, the federal Manual on Uniform Traffic Control Devices (MUTCD) was amended to include the use of “Sharrows” Shared Lane road markings. MUTCD 9C.07’s recommended placement of Shared Lane Marking centers “at least 4 feet from the face of the curb, or from the edge of the pavement where there is no curb” applies to “a street without on-street parking that has an outside travel lane that is less than 14 feet wide” According to the MUTCD, the Shared Lane Marking “may be used to assist bicyclists with lateral positioning in a shared lane with on-street parallel parking in order to reduce the chance of a





bicyclist’s impacting the open door of a parked vehicle, assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane, alert road users of the lateral location bicyclists are likely to occupy within the traveled way, and encourage safe passing of bicyclists by motorists, and reduce the incidence of wrong-way bicycling.”

The Shared Lane Marking should not be placed on roadways that have a speed limit above 35 mph or on shoulders or in designated bicycle lanes.

**Striped Lanes** — This type of facility consists of an exclusive-use area adjacent to the outermost travel lane. The area delineated for cyclists is a minimum of 4-foot-wide and is marked by a solid white line on the left side and frequent signs and stenciled pavement markings indicating either “Bike Only” or another such message so as to deter vehicles other than bicycles from using the lane for travel. In situations where a striped lane encounters on-street parking, extra width is required, most often a minimum of one additional foot (5-foot total lane width). As with the shared lane facility, delineated bike lane minimum widths do not include any curb-and-gutter that may exist, as these areas may be unsuitable for bicycle travel. Striped bike lanes are one of the facilities of choice for basic and child cyclists because they offer a measure of security (separation from vehicles) not found in all other facilities.



*Multi-use path parallel to a roadway*

**Multi-Use Paths** (one side of street) — This type of facility is typically a minimum 10-foot-wide asphalt path that runs parallel to the street and is shared by pedestrians, cyclists, and in-line skaters. These paths are set back from the curb by a planted verge area that is a minimum width of 5 feet. It is generally unacceptable to construct this type of facility where there are frequent curb cuts and intersections because the chance for conflicts between cyclists and vehicles is dramatically increased. This facility type is generally suitable for all levels of cyclists,

but is most often preferred by basic and child cyclists.

Off-road multi-use paths can increase the value of neighboring real estate and protect existing corridors from development. Trails and other greenway corridors promote parkland development, wetland preservation, and environmental protection.

**Signed Routes** — This type of route is created in cases where no room or need exists to create additional space for cyclists. Often, signed routes lead cyclists through the “quieter” streets of a city, using neighborhood streets where traffic speeds and volumes are low. This type of route is good for cyclists of any level, provided it is planned on streets that have low traffic volumes and speed. Signed routes are helpful in wayfinding to link neighborhoods with networks of greenways and bike lanes.

The residents of the BCD area possess a wide range of skill levels and facility preferences. Differences in riding ability and trip purposes were considered when identifying the most suitable bikeway system. The recommended bicycle facilities map, as seen in **Figure 5.1**, represent a system of interconnected facilities, which, when implemented, will provide the basic necessities for all skill levels. These recommended projects are a critical part of the annual transportation planning process, and should be used as a guide for future capital projects.

The goal is to develop an interconnected system of trails and bikeways that would allow users to safely travel between major destination points in the BCD area. However, facility types were not specified, since this is best determined on a project-by-project basis. Several of these bikeways and trails follow the alignment for the proposed East Coast Greenway, which will hopefully contribute to the success of this route by making it more accessible to bikers, pedestrians, and the disabled.



*U-shaped bike rack*

One bicycle accommodation not included in the map is the provision for bicycle parking. Many potential bicyclists fear their vehicles will get stolen if they are parked on bike racks. However, most bicycle thefts occur at the residences when bikes are left unattended. Bicycle theft can never be eliminated; however, some common sense measures can be taken to avoid or limit the chance of theft. First, the placement of bicycle parking should always be in a visible, weather-protected, and well-lighted location. Secondly, bicycles should be locked using the wheel and frame for security. U-shaped bicycle racks are recommended.

Consideration should be given to providing bicycle parking at key destination points throughout the region. Some potential areas include, but are not limited to, malls, theaters, parks, central business districts, and schools. The cost for such amenities ranges from a few hundred to several thousand dollars, depending on the type and quality of material.

### *Pedestrian*

The pedestrian plan was developed based on the premise of providing safe travel without being required to walk in a vehicle lane, a ditch, or an unpaved shoulder. Rather than proposing specific corridors for improvement, the plan developed a set of walkability criteria. These criteria assigned labels to areas or roads in the BCD region based on a standard set of characteristics. This information does not take in to account safety of street crossing or ADA accommodations. These attributes are as follows:

#### Not Walkable Areas

- Interstate corridors
- Neighborhoods with average ½-acre lots or larger



- Industrial parks
- Rural areas

#### Not Walkable Roads

- Roads lacking sidewalks or a multi-use path
- Installation of a sidewalk would not be practical or would not enable safe pedestrian travel

#### Potentially Walkable Areas

- Neighborhoods without continuous sidewalks or multi-use paths
- Higher-traffic areas where safety would be improved with a dedicated pedestrian path

#### Potentially Walkable Roads

- Roads currently lacking pedestrian facilities
- Roads with worn paths or other indicators of existing pedestrian traffic
- Roads where installation of a sidewalk would enable pedestrians to safely travel the corridor

#### Walkable Areas

- Sidewalks or multi-use paths are present
- Neighborhoods with low traffic volumes and speeds

#### Walkable Roads

- Roads that currently have sidewalks or multi-use paths or are low-traffic volume/speed

#### Not Applicable Areas

- Military bases
- Ports
- Airports

## *Recommendations*

Recommendations designed to enhance the walkability and bicycle-friendliness of the CHATS region are organized by policies, programs, retrofit projects, new construction and then funding and priorities.

### *Standards*

The South Carolina Department of Transportation has established standards for pedestrian and bicycle facilities that are presented in the 2003 Highway Design Manual as well as the 2003 Engineering Directive. As appropriate, considerations should be given to enhancements of the standards, as described in Chapter 4 “Complete Streets.”

### *Policies*

A survey of local governmental agencies in the region was conducted in November 2010 and is summarized in **Table 5.1**. It shows a varying degree of implementation of pedestrian and bicycle-friendly policies. Implementing agencies may use **Table 5.1** as they consider policy updates.

Three general steps can be taken to provide an improved pedestrian and bicycle environment:

1. Integrating land use and transportation to create communities and neighborhoods that are designed for walking and cycling
2. Adopting pedestrian- and bicycle-friendly development standards, policies, and guidelines
3. Having a proactive attitude toward change

Respondents to the public survey said they would like to dedicate \$24 of every \$100 spent on transportation improvements to bicycle and pedestrian facilities. In contrast, based on a 5-year spending projection of state and federal funds, only \$0.50 of every \$100 in transportation improvements is spent on bicycle and pedestrian projects. The discrepancy in actual funding versus desired funding levels by the public indicates a shift could occur in the way the BCD region spends its money.

The responsibility for making the policy changes and improvements needed to change this will be shared by numerous and different agencies and jurisdictions, including SCDOT, the CHATS Policy Committee, Berkeley, Charleston, and Dorchester Counties, and all municipalities.

The primary strategies and actions recommended are as follows:

- Currently, sidewalk implementation is required either on one or both sides of the street in most counties and cities in the CHATS study area for residential land development. It is recommended that these policies be implemented in those counties and cities that do not already have them. A strong commitment to sidewalk implementation should be an integral part of the development review process.
- Promote bicycling and walking as legitimate, popular, and mainstream activities that all sections of society and all ages can enjoy.
- Support employer programs to promote bicycling and walking as modes of commuting, including relevant safety information.
- Use driver education classes and curricula, driver testing and licensing information, and public awareness campaigns to inform motorists about passing bicyclists with care, using the horn appropriately, and yielding to bicyclists at intersections. Supply information to drivers on how to share the road with bicyclists and pedestrians in ways that are not intimidating. Additionally, provide enforcement and publicity of cases where motorists are abusive and threatening to bicyclists or pedestrians.

<sup>1</sup> Note: Shaded boxes above indicate the agency answered yes, or a *qualified* yes.

**General Comments:**  
 [A] Dorchester County Transportation Master Plan contains bikeway recommendations; [B] City of Folly Beach Planning Commission may require sidewalks and pedestrian easements for interparcel connectivity; [C] City of Goose Creek Zoning Ordinance includes a downtown redevelopment area; [D] City of Hanahan - The City applies yearly for grants to add bikeways/sidewalks for older developments. New developments are required to install sidewalks; [E] Town of Mt. Pleasant - Commercial Village Ordinance is in effect with a goal of creating pedestrian friendly commercial development. Sidewalk ordinance is required with one or both sides determined by density and allows for paths and trails in some instances; [F] Sullivan's Island - In process of rewriting zoning ordinance

Table 5.1 – Bicycle and Pedestrian Policy Review	Berkeley County	Charleston County	Dorchester County	City of Charleston	City of Folly Beach	City of Goose	City of Hanahan
<b>General Issues</b>							
Our Comprehensive Plan supports improvements to bicycle and pedestrian mobility.							
Our Comprehensive Plan expresses support for greenways and/or trails.							
Our annual budget includes funding for sidewalk improvements.							
Our annual budget includes funding for trails.							
Our annual budget includes funding for on-road bikeways.							
We have completed an ADA Transition Plan, which identifies locations							
<b>Land Development Issues</b>							
Our zoning ordinance identifies areas where mixed uses are:	Permitted	Permitted	Permitted	Required &	Permitted	Permitted	Permitted
Our zoning ordinance permits residential and commercial densities that encourage a compact, pedestrian friendly design.							
We have a transit oriented development ordinance.							
We have a Traditional Neighborhood Development ordinance.							
Our residential land development ordinance addresses street design.							
Our residential land development ordinance requires sidewalks on both sides							
Our residential land development ordinance requires sidewalks on one side of							
Our commercial land development ordinance requires sidewalks if property is							
Our commercial land development ordinance requires sidewalks on both sides							
Our commercial land development ordinance requires sidewalks on one side							
Our commercial land development ordinance discourages homes with garages							
Our commercial lot development standards require on-site connections.							
Our commercial lot development standards require pedestrian and/or bicycle connections to adjacent developments and residential areas.							
Our parking ordinance allows for side lot and rear lot parking in lieu of front							
Our parking ordinance includes a requirement to install bike racks.							
Our parking ordinance requires that parking garages include bike racks.							
Our parking ordinance requires connections between sidewalks along the street							
Our street design standards include sidewalks.							
Our street design standards require a minimum -- feet of sidewalk width and --							
Sidewalk Width		4		5		4	
Verge Width		5		Varies	2	3	
Our street design standards include bike lanes.							
Our street design standards allow traffic calming.							
We have plans to build sidewalks using public funds in the following locations:				All Areas of the City			Murray Blvd.
We have plans to provide bikeways using public funds in the following locations:				All Areas of the City			
General Comments:			[A]		[B]	[C]	[D]



Note: Shaded boxes above indicate the agency answered yes, or a *qualified* yes.

**General Comments:** [A] Dorchester County Transportation Master Plan contains bikeway recommendations; [B] City of Folly Beach Planning Commission may require sidewalks and pedestrian easements for interparcel connectivity; [C] City of Goose Creek Zoning Ordinance includes a downtown redevelopment area; [D] City of Hanahan - The City applies yearly for grants to add bikeways/sidewalks for older developments. New developments are required to install sidewalks; [E] Town of Mt. Pleasant - Commercial Village Ordinance is in effect with a goal of creating pedestrian friendly commercial development. Sidewalk ordinance is required with one or both sides determined by density and allows for paths and trails in some instances; [F] Sullivan's Island - In process of rewriting zoning ordinance

	Isle of Palms	Town of Kiawah Island	Town of Lincolnville	Town of Mt. Pleasant	City of North Charleston	Town of Seabrook	Town of Sullivan's Island	Town of Summerville
<b>General Issues</b>								
Our Comprehensive Plan								
Our annual budget								
Our annual budget								
We have completed an ADA Transition Plan, which identifies locations needing curb ramps.								
<b>Land Development Issues</b>								
Our zoning ordinance	Permit	Not Allowed	Permitted	Permitted	Permitted	Permitted		Permitted
Our zoning ordinance permits residential and								
We have a transit								
We have a Traditional								
Our residential land								
Our residential land								
Our residential land								
Our commercial land								
Our commercial land								
Our commercial land								
Our commercial lot								
Our commercial lot development standards								
Our parking ordinance								
Our parking ordinance								
Our parking ordinance								
Our parking ordinance								
Our street design								
Our street design								
Sidewalk Width			3(5 Commercial)	5				4
Verge Width			5		5			5
Our street design								
Our street design								
We have plans to build sidewalks using public	Ocean Blvd.,		Lincoln Ave., Broad St.	Rifle Range Rd., Long Point Rd.	Midland Park Rd., James Bell Dr.			
We have plans to provide	Breach	Kiawah Island						Sawmill Branch, 3rd
General Comments:				[E]			[F]	



- Teach parents and young children the correct use of crosswalks and safe crossing strategies. Teach bicyclists of all ages to ride with traffic, and teach older child cyclists and adults to ride on the street rather than the sidewalk. Ensure that every elementary school child receives comprehensive bicycling and walking instruction by the age of eleven.
- Enforce pedestrian right-of-way laws. Explain to motorists the need to watch out for pedestrians crossing the road and to yield to pedestrians when entering a major highway from a side road. Teach motorists to yield to bicyclists and pedestrians when turning and entering driveways. Increase motorist awareness of the presence of bicyclists on streets and pedestrians on sidewalks.
- Enforce traffic laws that will reduce illegal behavior by both bicyclists and motorists. Provide programs that will better acquaint both motor vehicle and bicycle operators with their rights and responsibilities when operating on the highway system.
- A policy to improve bicycle route signage and directional signage will show connections between the routes. Comprehensive and frequent bicycle signage also can promote bicycling by making the extensive bicycle route system more easily discernible and generally known. With this in mind, it is recommended that bicycle signage be implemented area wide to provide a comprehensive, understandable system.

### *Programs Encouragement*

Many existing and potential bicyclists and pedestrians in the BCD region say they would ride or walk more often if conditions were better and if there was more encouragement given to the activity. There is an important link between these two “ifs.” Communities with the highest levels of bicycle activity in the United States, such as Madison, Wisconsin, Seattle, Washington, and Davis, California, have not only developed an impressive infrastructure for bicycles with bike lanes, trails, and other facilities, but they also have actively promoted bicycling in their communities. Similarly, cities such as Copenhagen, Denmark; New York, New York; Washington, DC; and San Francisco, California have developed an extensive sidewalk network that provides interconnectivity and encourages people to walk.

There are four key messages that residents and visitors in Berkeley, Charleston, and Dorchester Counties must hear before they are likely to change their travel habits:

- Bicycling and walking are legitimate and realistic means of travel;
- Transportation is much more than getting to and from work;
- Bicycling and walking can be done safely; and
- Bicycling and walking are a great value

There also are four key groups of people who need to be involved in encouraging bicycling and walking in the region:

- Government agencies and politicians;
- Employers;
- Retailers; and

- Bicycle user and pedestrian advocacy groups

A series of policies and programs could be adopted to promote bicycling and walking in the BCD area, including:

- Encouraging bicycle and pedestrian commuting;
- Bike to work/walk to work events;
- Employee Commute Options (ECO) programs;
- Maps and other information;
- Encouraging shopping by bicycle or on foot;
- Encouraging bicycling or walking to school and church; and
- Encouraging recreational bicycling, walking, and running

Improving the safety of bicyclists and pedestrians will require a comprehensive program that can be condensed into a number of key actions:

- Literature for college students and tourists visiting the BCD region;
- Increase the level of commuting and utilitarian bicycling and walking;
- Create a conveniently-spaced network of bicycle- and pedestrian-facilities throughout the BCD region;
- Provide better information about the bicycle and pedestrian system;
- Install bicycle-friendly curb inlets and drainage grates;
- Remove debris from the edge of the street;
- Adopt a child helmet law;

The integration of bicycle and pedestrian facilities into the transportation planning and design process is crucial. A part-time bicycle and pedestrian coordinator and periodic training will help achieve the full integration of bicycles into our everyday lives. Initially a part-time coordinator on the BCDCOG staff could write grant applications for new funding and promote policy changes within each of the city and county government agencies. This part-time regional planner position should evolve into full-time bicycle and pedestrian coordinators working for the largest cities and counties. At that time, the COG may consider retaining a regional planner to serve the smaller jurisdictions.

### *Safety*

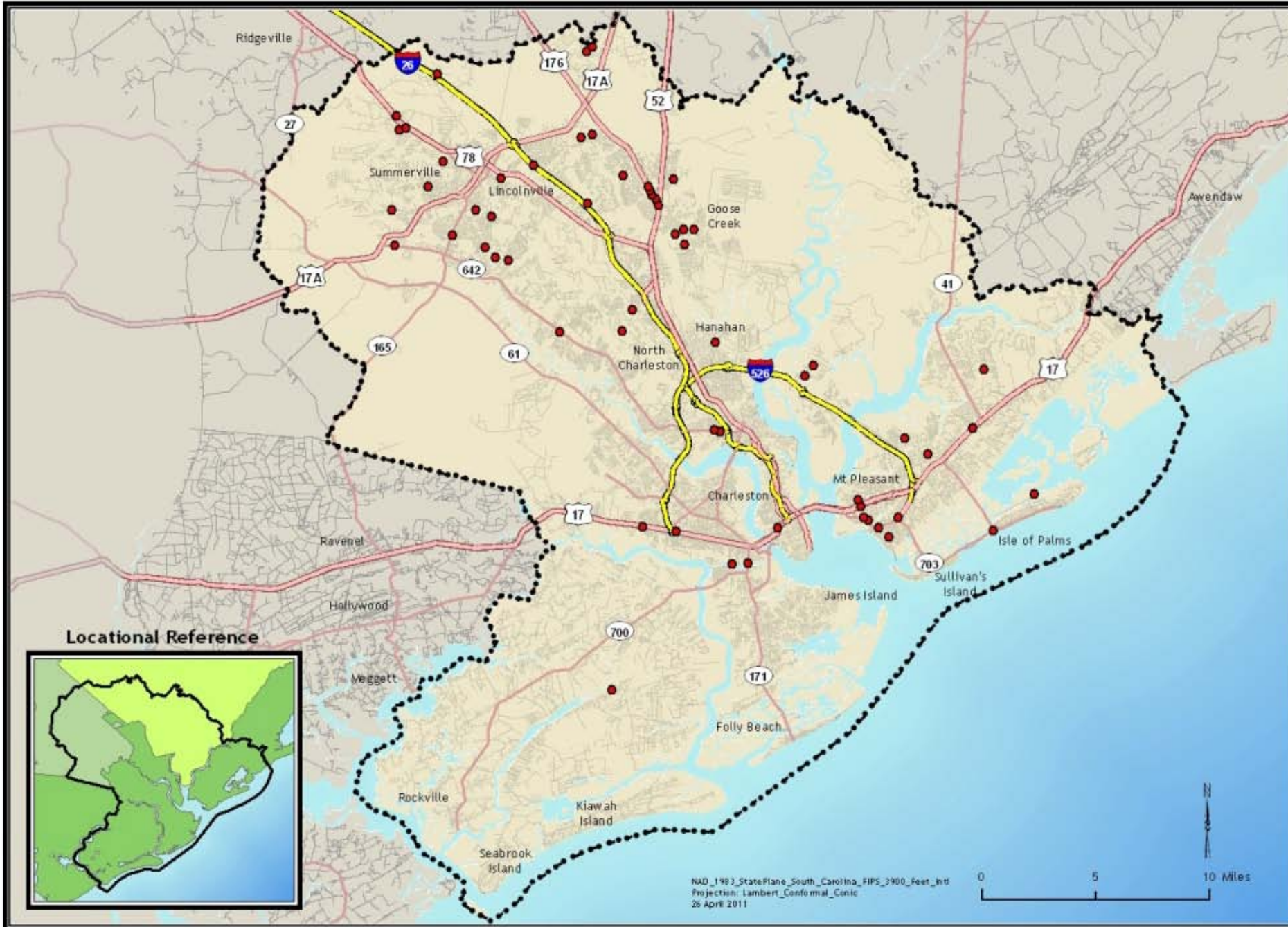
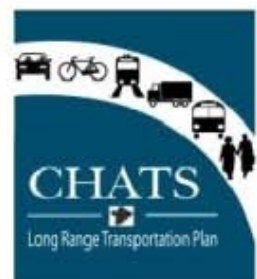
Identifying safety issues was a critical element of the plan. Crash data involving a pedestrian or bicyclist were obtained from SCDOT for the period January 1, 2003 through December 31, 2009, the last year data is available for both pedestrian and bicycle accidents. A summary of the data is shown in **Table 5.2**. The annual trends for each county indicate that Charleston County has consistently had the more crashes. This would be expected because of the density of the county compared to

Berkeley and Dorchester Counties and due to Charleston County possessing the majority of the large roadways located in the region.

Table 5.2 – Annual Crash Trends by County

	2003	2004	2005	2006	2007	2008	2009
Berkeley	32	39	35	43	40	58	49
Charleston	236	249	220	284	277	276	240
Dorchester	34	32	41	24	44	37	34

Crashes involving pedestrians and bicyclists are still somewhat of a random occurrence, so when more than one crash involving a pedestrian or bicyclist occurs at one location or if multiple accidents occur along a corridor, it may suggest a need for countermeasures that are specific to that area. In recent years, SCDOT has noticed that while the locations of these accidents are random, the causes of many of these accidents are similar in nature. With this realization in mind, SCDOT has undertaken a safety program on its roadways that looks to lower both accidents and fatalities along state roadways. These measures include larger, more visible signage in the vicinity of frequent accident areas, better placement of traffic control signage in the intersection areas, and the utilization of traffic control features to limit accidents and fatalities. **Figure 5.2** shows the location of all pedestrian/bicycle crashes with injuries or fatalities in 2009. A follow-up study of multiple accident areas and corridors where accidents frequently occur should be undertaken, beginning with updated crash data, a review of the officer’s crash reports, a site investigation, consideration of alternative countermeasures, and a search for funding to implement the countermeasures, design and then implementation.

**2009 BICYCLE OR PEDESTRIAN CRASH LOCATIONS**  
FIGURE 5.2

- Crash Locations

**Road Classification**

- Interstate
- US Highway
- SC Highway
- Major Road
- Local Road

**Inset Map**

- Berkeley County
- Dorchester County
- Charleston County

Legend for CHATS Boundary and Inset Map symbols.

NAD\_1983\_StatePlane\_South\_Carolina\_FIPS\_3900\_Feet\_int  
Projection: Lambert\_Conformal\_Conic  
26 April 2011

0 5 10 Miles



## Bicycle Safety

For instance, there are different levels of bicycle riders using area bicycle facilities for different needs, each having different handling abilities. The need for bicycle education is apparent in numerous sections of the BCD Region. On several occasions, bicyclists were observed riding on the wrong side of the road in areas such as Downtown Charleston, West Ashley, and North Charleston, and on major corridors such as Meeting St. and Montague Ave., a contributing factor in accidents and fatalities involving a bicycle. In fact, 30 percent of car/bike accidents nationwide occur because the bicyclist is riding on the wrong side of the road. In addition, many riders, particularly the “cyclists of necessity” do not wear a helmet while riding, despite the use of a helmet considerably lowering of the risk of the head injuries that are the major cause of bicycle fatalities. It is thus recommended that local schools, civic groups, and family activity centers become more involved and organize some type of bicycle safety program.

The best way to get started is to build on the success of other local programs. Such a program exists in the region at the Medical University of South Carolina and is now in their second decade of activity. The “SC Low Country Think First” program is intended to keep kids safe through grass roots education and prevention. Their mission statement reads “To prevent brain, spinal cord and other traumatic injuries through the education of individuals, community leaders and the creators of public policy.” The program operates in collaboration with other injury prevention programs in the area, especially the Trident Area “SAFE KIDS” program located at MUSC.

The program is an award-winning public education effort. The S.C. Low Country Think First Program covers Charleston, Dorchester, and Berkeley counties primarily. The program covers all ages. The primary emphasis is on two educational programs geared toward teenagers and young adults, and children in grades K-3. These programs are the “Think First for Teens and “Think First for Kids

The “Think First for Teens” program concentrates on teaching young people about their own personal vulnerability and risk taking. Each year an estimated 500,000 persons sustain permanent brain and spinal cord injuries in the United States. The most frequent causes of these injuries are motor vehicle crashes, falls, and sports and recreation especially diving and violence. Teens and young adults are a high risk for these devastating injuries, many of which are preventable.” By utilizing speakers who have sustained brain and spinal cord injuries, the message that we promote is the following: You can have a fun-filled, exciting life, without hurting yourself, if you “THINK FIRST” and use your mind to protect your body.”

The “Think First for Kids” safety and prevention program is comprised of six safety modules, including vehicular, bicycle, water, sports and recreational, and violence avoidance. It was launched in 1996 and is the first program of its kind designed specifically for children ages six to eight.

Through the use of classroom curriculums, comics, videos and posters featuring *Street Smart*, the safety super hero, we try to instill and reinforce safe behavioral patterns during these formative years.

## Enforcement

Many bicyclists across all user groups are unaware that legally, bicycles are considered vehicles, and that bicyclists are expected to obey traffic laws as they would when driving an automobile. Bicyclists have a reputation for not obeying traffic laws. In a number of cities, including Charleston, the law specifically prohibits cycling on sidewalks. Cyclists are frequently seen running red lights and stop signs, riding against traffic, and riding for long periods within the median of multi-lane roadways. This behavior puts the bicyclists at risk and increases conflicts with pedestrians and motorists. Likewise, pedestrians have a tendency to cross streets at inappropriate locations; for instance, between parked cars or mid-block. For these reasons, stronger local ordinances, control measures, and enforcement efforts should be implemented. The following bicycle and pedestrian ordinances and enforcement initiatives are recommended for the planning area:

- Work with local police to increase enforcement on the following offenses:
  - Running stoplights and stop signs;
  - Riding the wrong way down the street;
  - Riding in the median of multi-lane roadways; and
  - Riding at night without lights
- Increase police patrols preferably with police on bicycles within the planning area including off-street trail system and parks.
- Ride bicycles in the same direction as traffic.
- Require safety helmets to be worn by all bicyclists riding on a public facility.

With these goals in mind, in 2008, the South Carolina legislature passed H3006, the Bicycle Safety Bill. In addition to a number of the recommendations presented above, the new law requires that vehicles maintain a safe operating distance between motorists and cyclists and provides penalties for violations of this, as well as for harassment of bicyclists by drivers. However, there is still no mandatory helmet law for any rider group in the state.

## Retrofit

Within the approximately 800 square miles of the CHATS study area, most existing roadways are not pedestrian or bicycle friendly; hence there is a considerable backlog of retrofit work. While this task may appear daunting to municipalities, realistically every paved street has a lifespan that will

eventually necessitate some degree of comprehensive repair work. Different options are referred to as resurfacing, milling and paving, and full reconstruction and each has a respective cost and expected extension of lifespan for the pavement. The point is that as streets are scheduled for pavement maintenance, a policy should be in place that would consider changing the finished street such that pedestrians and bicyclists are accommodated, often with just a bucket of paint when restriping a street.

**Restriping Improvements** — Restriping is a low-cost alternative that can modify an existing roadway cross-section for use by bicyclists without widening. The stripe provides bicyclists the comfort of being delineated from the motorist travel lane, and also visually alerts the motorist to the potential presence of bicyclists on the roadway. Restriping projects can be completed in conjunction with resurfacing or other road improvement projects.

*Interconnectivity between existing neighborhoods-* In addition, in many developed areas where it may be impossible to provide road connections between neighborhoods, a sensible alternative may be to provide pedestrian or bicycle interconnections. By doing so, communities can create a shorter alternative for these user groups, as well as encourage a better sense of community between adjacent neighborhood areas.

#### *New Construction*

As new streets are constructed and existing streets are extended or interconnected, the “Complete Streets” concept described in Chapter 4 and incorporated within the comprehensive plan of numerous municipalities in the BCD region should be used to incorporate full accommodation of non-automotive travel, including for bicyclists and pedestrians. The incremental cost to accommodate bicyclists and pedestrians is much less than the cost to retrofit. Such a policy should be negotiated with the South Carolina Department of Transportation at a regional level once the long-range transportation plan has been adopted. The cost should be borne by developers who build local streets to serve their developments. It would be expected that the cost would be passed on to the ultimate users (buyers and renters). If any county or municipality requires developers to pay for and build collector streets then the incremental cost to accommodate pedestrians and bicyclists should be funded by the developers. There is strong demand nationwide for residential and mixed-use communities with sidewalks and bikeways as they are now considered a top amenity.

**Greenway Construction** — Explore the use of property contiguous to sewer, fiber optics, TV cable, phone line, or natural gas right-of-ways (ROW) for multi-use easements. This should help to alleviate the cost associated with ROW acquisition and renegotiations.

#### *Implementation Considerations*

Implementation of policies, programs, and projects requires public support, political will, and staff diligence. The public outreach sessions held throughout the region in conjunction with this long-range transportation plan show strong public support for “complete streets” that safely and conveniently accommodate pedestrians and bicyclists.

Funding for retrofit projects is scarce and very competitive. The federal Transportation Enhancements Program is extremely popular in this region and across the nation. Funds are set aside for statewide competition every two years. This region has been successful using Enhancement Funds to build hiker-biker trails in Goose Creek, multi-use trails in Summerville, trails and sidewalks in Mount Pleasant, and many other projects.

Streets funded with state and federal transportation monies are a steady source to build a network, however these projects are typically scattered throughout the region and rarely form an immediate network serving a specific area. Nevertheless, most of these streets form critical links in the transportation system and would be very expensive to retrofit for sidewalks and bikeways compared with the incremental cost of accommodation as other transportation improvements are constructed.

Funding for new construction occurs as development occurs, if developers are required to provide infrastructure. This “pay as you go” system is effective in that streets are built as new development occurs. However, these public streets are often used by general traffic that did not pay for them so a degree of fairness is introduced if a public-private partnership is formed with a mixture of funds from both the developer and the public sector.

In conclusion, a multi-pronged approach is necessary that includes:

#### Short-term

- BCDCOG funding for a part-time bicycle-pedestrian coordinator for three years
- Ongoing use of federal Transportation Enhancement funds to construct facilities identified in this Pedestrian and Bicycle Plan
- Development of project scoring system to use technical criteria to rank candidate projects for prioritization by decision-makers.
- Policy changes to implement demonstration projects
- Policy changes to adopt pedestrian and bicycle-friendly ordinances and policies in each jurisdiction

#### Mid-term

- County and large city funding for their own pedestrian-bicycle coordinators
- Consideration of using “flexible” state and federal surface transportation program funds to construct pedestrian and bicycle projects

### *Project Selection Criteria for On-Street Facilities and Multi-Use Paths*

Following are criteria to consider in developing a prioritization scoring procedure for pedestrian and bicycle projects.

- Provide connectivity between important activity centers within each jurisdiction and within the region
- Provide service to existing areas of the greatest population and employment density, as well as areas of expected growth
- Provide service to residents making bicycle and pedestrian trips outside their home jurisdiction
- Serve the primary connectivity needs between jurisdictions within the region and neighboring jurisdictions outside the region
- Provide key crossings of the major highway, rivers, and/or railroad barriers that make regional bicycle and pedestrian connectivity difficult or impossible
- Include many of the roadways and other corridors with the greatest potential to serve pedestrian trips
- Project consistency with adopted state, regional or local plans
- Project addresses social equity or environmental justice issues
- Cooperation/joint application with multi-jurisdictional sponsorship of project
- Degree of public participation in the development of the project and/or support of non-governmental groups
- Quality of the management/maintenance program to provide for the upkeep of the project
- Overall benefit to the community/MPO