Sumter Connectivity & Greenways Master Plan for Shot Pouch Creek



Sumter City-County Planning Department Updated February 2014

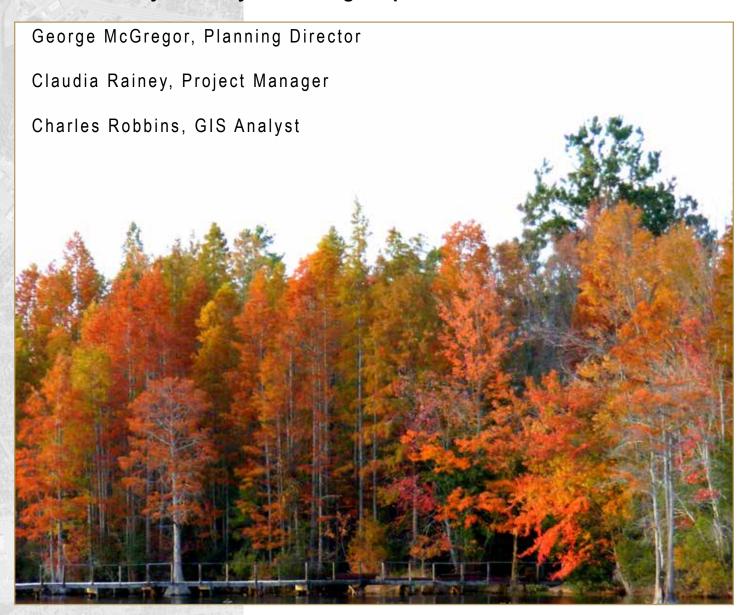




A rare snow on Shot Pouch Creek (C. Rainey, January 2014) Cover Photo: Shot Pouch Creek near Swan Lake (C. Rainey, April 2010)

January 2011 (Updated February 2014)

Sumter City-County Planning Department



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INTRODUCTION: Project Purpose





Shot Pouch Creek spans approximately 4 miles, connecting Dillon Park to McCray's Mill Road. Along the way, it bisects Sumter's neighborhoods, commercial corridors, and public parks. It might not look like much today, but it has tremendous potential. Great places have great vision.

The Master Plan for the Shot Pouch Creek envisions this natural greenway as a viable community amenity, designed to connect neighborhoods, encourage recreational walking and biking, and as a catalyst for new niche neighborhood commercial development. In essence, this plan sees a linear park serving as a "spine" for greater connectivity in Sumter. Think of all the stops along Shot Pouch: Dillon Park, North Pike, Broad Street, the YMCA, Guignard Drive, Swan Lake, Second Mill Pond, and the Birnie Hope Center.

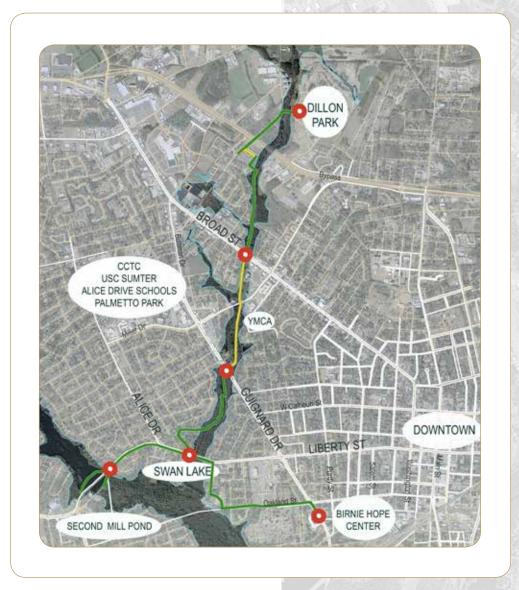
The Shot Pouch Greenway will be a sustainable central artery for the community - one that does not require the use of a car! Dozens of Sumter's neighborhoods lie in close proximity and could be easily connected to the greenway.

On the following pages, the Master Plan proposes the concept, phases, opportunities and challenges offered by the Shot Pouch Creek Greenway. We encourage citizen feedback. In fact, public participation will be a key to the success of this project.

INTRODUCTION: Vision & Goals

The primary goals of this project are to provide Sumter with a Master Plan for a greenway system, and to create a connected network between the primary amenities of the community

- Swan Lake
- Dillon Park
- Liberty, Guignard and Broad Streets
- Second Mill Pond
- Birnie Hope Center
- Proposed
 Enhancements to
 Liberty and Guignard in
 order to connect CCTC,
 USC Sumter, Alice
 Drive Schools and
 Palmetto Park, as well
 as downtown Sumter
- Existing paths are shown in yellow



The map above shows the focus area and proposed greenway path.

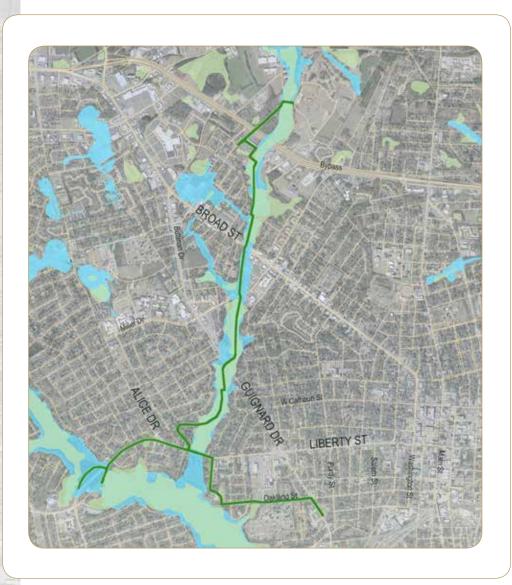
The vision is to be determined through a public participatory design process. The ultimate goal of the process is to make possible many scenarios through creation of a greenway: families riding their bicycles on Saturday to get ice cream, professionals riding their bicycles to work, the entire Sumter community becoming more active and more actively engaged with the natural world.

^{*}Darker area around path indicates Shot Pouch's flood plain.

ANALYSIS: Area of Focus

The focus area for the proposed greenway was determined by a number of factors including location of existing amenities, floodplain and existing paths and sidewalks.

The best use of floodplain areas is to utilize them as open greenspaces. The green area indicates potential wetlands, which can also pose difficulties for development.



Shot Pouch Creek



Wooded area near Swan Lake



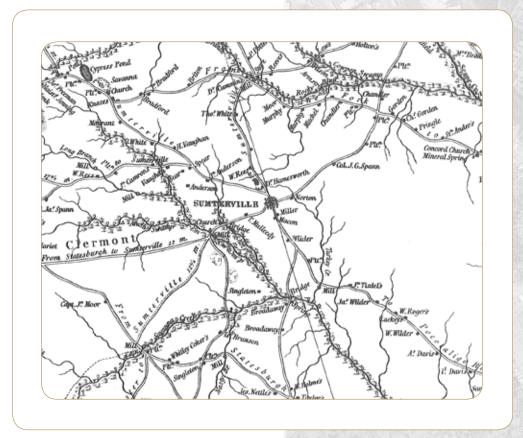
South Guignard Drive



ANALYSIS: History

Sumter has a rich history that spans back to the colonial era when Thomas Sumter and other settlers carved out a living in the Carolina "backcountry". Prior to that there were Native American settlements along the Wateree and Black Rivers, although there is no historical evidence of Indian settlements along Shot Pouch Creek.

The map to the right shows some of the early property owners in the Sumter area.





The canal that encompasses portions of Shotpouch Creek was probably built as the city expanded westward in the nineteenth century. Some engineering and fortification of the canal system in Sumter may have been part of WPA or CCC projects during the 1930s as well.

ANALYSIS: Environment

Habitats such as the blackwater creek, right, are increasingly rare to find in South Carolina, particularly in urban areas such as this one at Second Mill Pond, near Liberty Street. Providing access to areas such as this is essential for city dwellers, for learning about and experiencing the natural world.

Many species of birds
migrate north every year along the Atlantic
Flyway, which passes directly over Sumter
County. Riparian corridors such as Shot
Pouch Creek serve as invaluable resting and
feeding areas for these birds.

Birds such as the Great Blue Heron live in Sumter year-round and utilize both natural and constructed wetlands for fishing and breeding. This photo was taken at the pond adjacent to the trail at Shotpouch Creek, between Broad and Miller.







ANALYSIS: Sumter Demographics



	County	City	South Carolina
Population*	108,052	40,836	4,723,723
Race Black White Hispanic	47% 49.4% 3.6%	49.1% 45.3% 3.6%	28% 68.4% 5.3%
High School Bachelor's Degree or Higher	81.4% 17.8%	84.3% 25.8%	83.6% 24.2%
Age < 5 < 18 > 65	7.1% 25% 13.7%	8.3% 25.9% 13.9%	6.3% 22.9% 14.7%
Median Income Home Ownership Rate	\$40542 66.5%	\$37,409 53.3%	\$44,587 69.8%

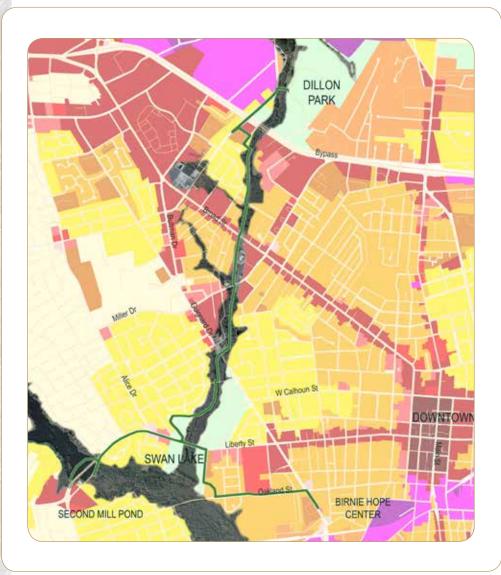
All Data based on 2010 Census *2012 estimate

ANALYSIS: Land Use









The map above shows zoning in the area.

- Yellow and Orange Residential
- Red Commercial
- Purple Industrial

Land Use in the Shot Pouch Creek area is a mixture of residential neighborhoods and commercial corridors such as Broad, Guignard and Liberty Streets. The proposed paths would connect these neighborhoods and commercial areas, providing access to shopping, work and recreation areas for many of Sumter's residents. The photo, *above left*, depicts an existing path that extends between a commercial use and an apartment complex near Wise Drive. Improving paths such as this, and connecting them to amenities and greenspaces, will enable many residential areas to access the greenway system.

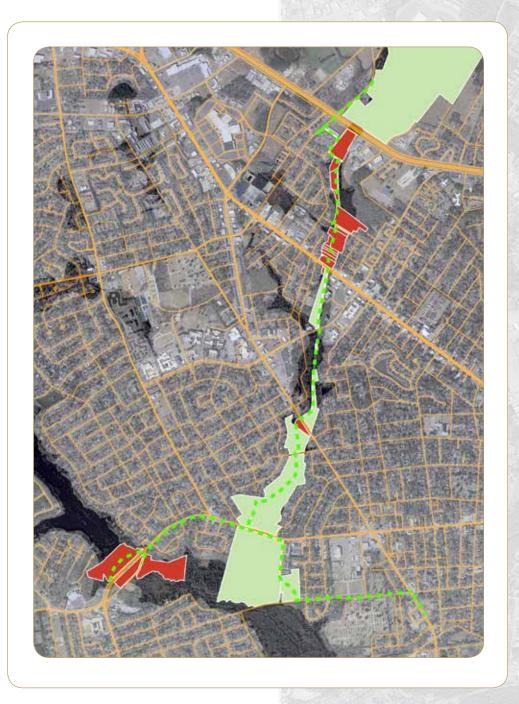
ANALYSIS: Property Ownership

Property Ownership along the proposed greenway spaces is a mixture of city and county-owned existing greenspaces, such as Swan Lake and Dillon Park, as well as residential and commercial parcels that are privately owned. Many of the parcels that comprise the proposed greenway path also lie in floodway, floodplain or wetland conditions. In order for this vision to succeed, participation in the process by private property owners is essential. Creating public greenspace will preserve those areas that are not suitable for other types of development.

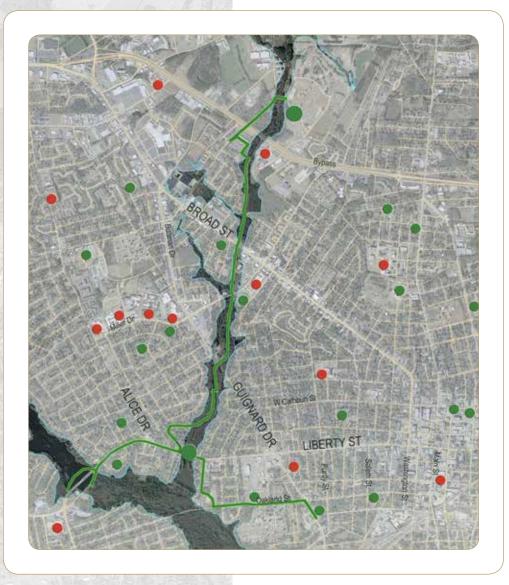
The map to the right shows the entire Shot Pouch area with green designating parcels already owned by the city or county. Red area indicates parcels that will need to be obtained for the project.

The complete set of property ownership maps is shown in Appendix A.

Note: Darker area around path indicates Shot Pouch's flood plain.



ANALYSIS: Existing Greenspaces & Schools



Note: Darker area around path indicates Shot Pouch's flood plain.





The map above shows existing parks in green, and schools in red.

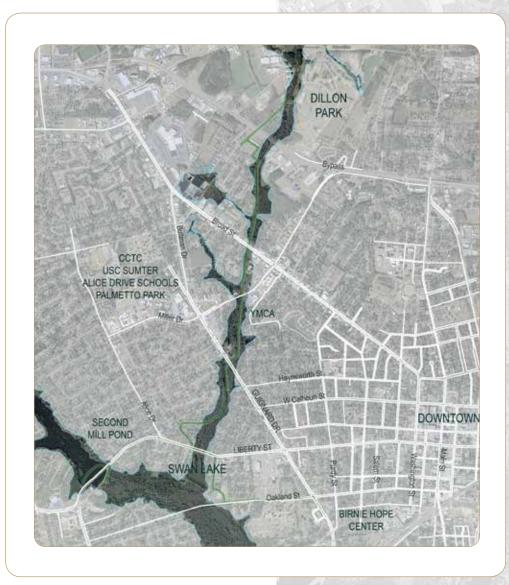
Sumter is already blessed with beautiful parks and functional recreational spaces. Swan Lake is exceptional and draws thousands of people every year to enjoy its scenery and wildlife. Dillon Park is an important green space for area residents. The newly constructed Shot Pouch Creek boardwalk between Broad Street and the YMCA is well designed and provides another access to natural beauty. However, the main problem with all of these destinations is that they are primarily accessible, at this time, by car. None of these greenspaces are easily accessed on foot or bicycle, unless one happens to live right next door to them. Several schools are also in close proximity to the proposed greenway and would be better connected to adjacent neighborhoods if it is built. The proposed greenway will help make existing schools and greenspaces accessible to everyone.

ANALYSIS: Existing Connectivity





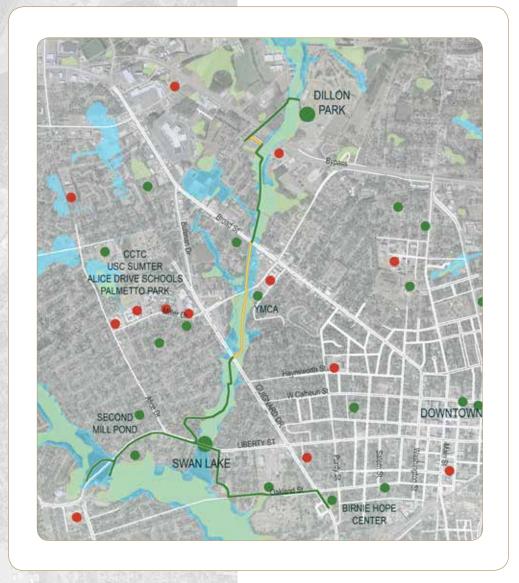




The map above shows existing sidewalks in white.

There are sidewalks in many parts of Sumter. However, many of these sidewalks suffer from poor connectivity. Connectivity with regards to sidewalks is a multi-faceted problem. An overabundance of curb cuts, wide street crossings and a lack of maintenance are all factors in the connection problems Sumter is currently experiencing. Pedestrian friendly intersections - that include a crosswalk, and a lighted pedestrian signal - are an important part of connectivity as well. Even intersections with such facilities are often still dangerous because of the distance necessary to travel across them on foot, or the design of the street itself negatively impacting the pedestrian environment. *Darker area around path indicates Shot Pouch's flood plain.

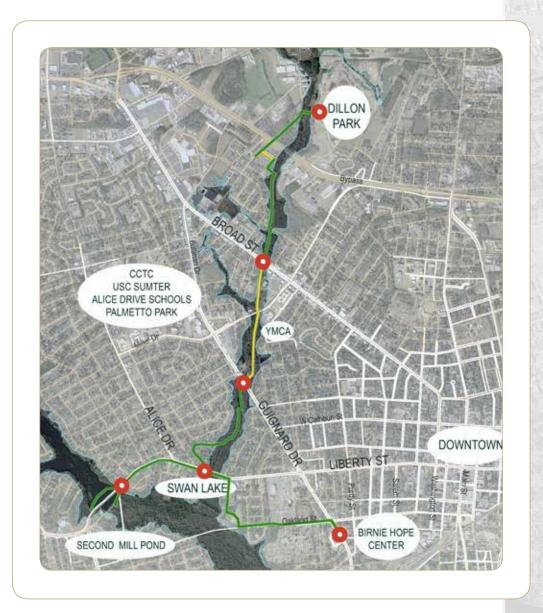
ANALYSIS: Combined Existing Conditions



The map above shows the combined existing conditions.

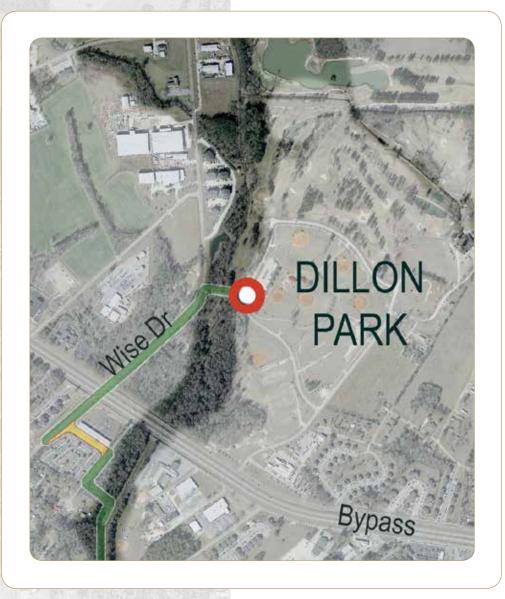
- NWI Wetlands are light green
- · Floodplain is light blue
- · Sidewalks are white
- Schools are red dots
- Parks are green dots
- Existing path is yellow

SHOT POUCH GREENWAY MASTER PLAN



The map above shows the proposed master plan.

- The proposed path is green
- Existing path is yellow
- Sidewalks are white
- · Amenities such as Swan Lake are red and white dots
- The darker area around path indicates Shot Pouch's flood plain





Dillon Park is a county park with a wetland / floodplain area that runs along the western edge. When the bypass and Pike Roads were constructed, the creek that flows through this portion of Sumter was undoubtedly piped underneath them. The water continues above ground after South Pike Road, where it becomes known as Shot Pouch Creek.

The park is a very nice recreational facility with soccer fields, baseball diamonds, a running track and a golf course. Unfortunately, it is very disconnected from the rest of Sumter by the bypass, and is not well connected to the neighborhoods immediately adjacent to the park. While the bypass is not a barrier that can be removed, other strategies can be employed to link the park to Sumter better, both visually and physically.





The map above shows the concept for improving the entrance to Dillon Park from the Wise Drive and the Greenway:

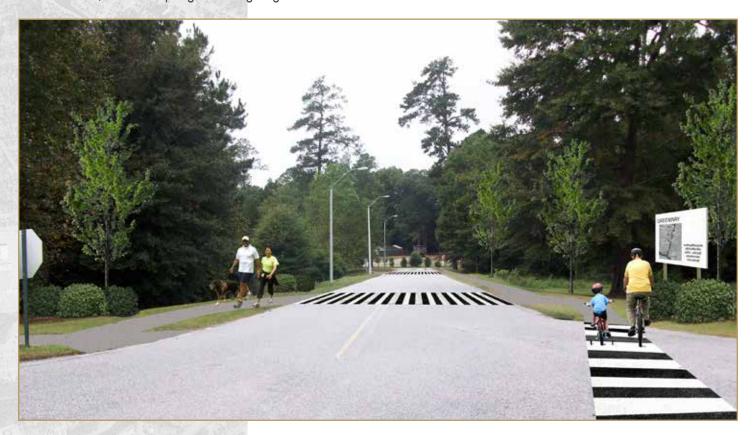
Right now, Dillon Park is almost completely inaccessible except by car. The Greenway Plan will:

- Provide new paths and crosswalks to make walking and cycling safer for those accessing the park from Wise Drive
- Link existing paths such as the walking loop and wooded path to the Greenway
- Provide signage and landscaping to improve navigation and aesthetics for the entrance area





Below: Concept for connecting existing paths with sidewalk, crosswalks, landscaping and signage.







Above and Below: The path leaves Dillon Park at Wise Drive and travels south towards the 378 By-Pass bridge, going past Greenhouse Runaway Shelter and joining the wooded path to Dillon Park. Concepts for path placement shown on right.



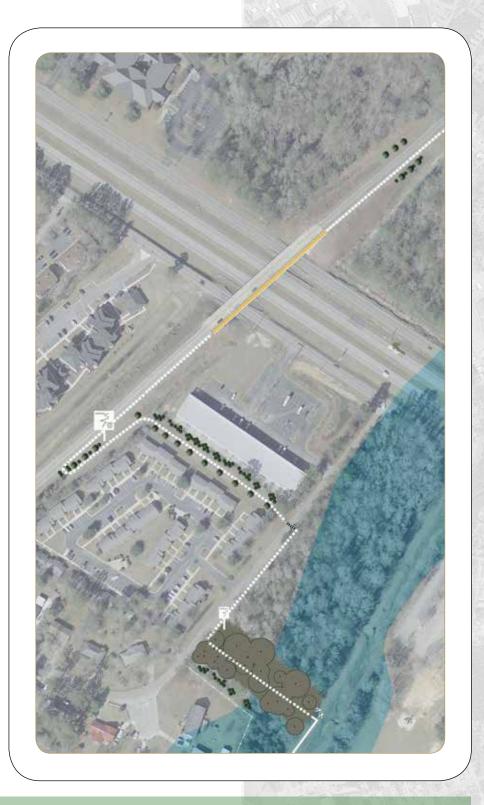




Below: Concept for improving the bridge with landscaping, lighted delineators and textured surfacing for ADA compatibility.







Below: Looking back towards the bridge on Wise Drive over the By-Pass. An existing path leaves Wise Drive and connects behind an apartment complex on Hilliard Street to Shot Pouch Creek. New bollards, landscaping and better maintenance of the path will improve this area greatly. Conceptual images are on the right, below.













Below: The path continues along Hilliard Street, a quiet residential area and then turns and goes through a wooded area before ending in the open area next to Shot Pouch Creek. It is clear that this path was meant to continue, but is incomplete at this time. Better maintenance and clearing the underbrush for better visibility will improve both aesthetics and safety.







Above: Concept for the path leading from Hilliard Street so that underbrush is removed and therefore visibility and security are improved.

Left and Below: First glimpse of Shot Pouch Creek. This area is open and sunny, with good views in both directions and a nice natural habitat.

Below Right: Concept for path at start of Shot Pouch Creek





Because this area backs up to neighborhoods on both sides, security issues are paramount. There will be a security fence in the woods between the greenway and Hilliard, Dicks, Rast and Newman Street residents. There will also be security cameras and a police call box located in this area.













Above and Left: The creek is home to many aquatic and wetland plants. A bench is further proof that this greenway is not a new idea. This portion of the proposed greenway crosses over Dick Street bridge and continues towards Broad Street.





Approaching Broad Street there is a beautiful hackberry tree and a stone culvert at the edge of the open area.

This part of Broad Street was developed long ago and has many non-conforming lots and vacant, underutilized spaces. This area is also in the flood plain and is most suitable for environmentally sensitive redevelopment.







Above Right: Concept for nature center and constructed wetland at Broad Street Node.

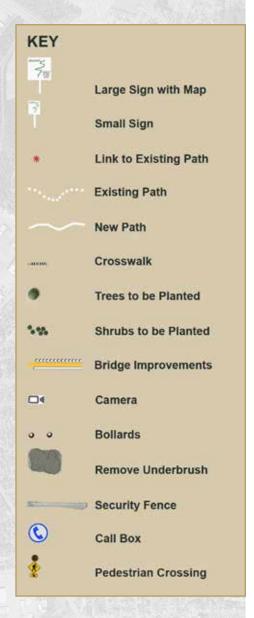
GREENWAY MASTER PLAN: The Broad Street Node



This is an aerial view of the Broad Street Node that was taken in 2012. There are large areas of vacant asphalt which discourage pedestrian use of these spaces. And, the presence of floodway (*indicated in orange*) dictates that no development is possible within that area, and is discouraged within a buffer surrounding it.

The Sumter County Watershed Planning Report states: "An example of an area that could benefit from a walking trail could be Shot Pouch Branch, a creek located between Dillon and Vim Parks within the Green Swamp watershed. By extending the trail alongside the riparian areas, conservation efforts to preserve the forested areas would be favorable to bike riders and pedestrians alike by keeping the area in its natural state and keeping users cool in the hot summer months. It would also preserve this wildlife corridor and help to maintain the natural state of riparian buffers within an urban setting."

GREENWAY MASTER PLAN: The Broad Street Node

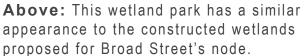




Envision this possibility for Broad Street: A pedestrian friendly retail and dining space borders an interpretive center that teaches visitors about local wetland habitats. A constructed wetland acts as a bioswale for the water which is on site, as well as a teaching tool and beautiful amenity. A bus stop is located here, and a safe crossing so that people can also enjoy the Shot Pouch Creek boardwalks, or continue along the greenway. Trees and a centerlane refuge add traffic calming features to the area. The concept above shows removing pavement from the vacant parcel where the new path is to be located, and adding landscaping and a safe pedestrian crossing. However, bringing foot traffic to this area opens up many new possibilities for this Portion of Broad Street.

GREENWAY MASTER PLAN: The Broad Street Node





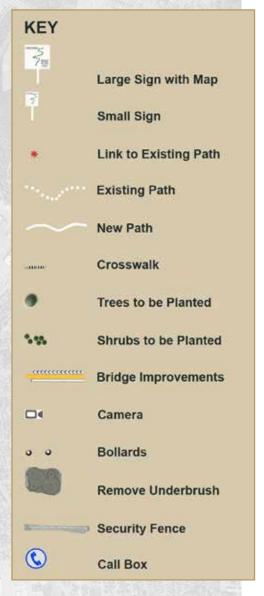
Right and Below: Reed Creek Nature Park is a wetlands interpretive center in Evans, Georgia, that also has a similar concept to the proposed center on Broad Street.







GREENWAY MASTER PLAN: Broad Street to Guignard Drive



Right: These maps show the area between Broad Street and Guignard Drive, which is for the most part already delevoped with a path. Proposed additions include a planted median at Miller Drive and cameras and a call box in the remote area between the YMCA and Guignard Drive.



GREENWAY MASTER PLAN: Broad Street to Guignard Drive





Above: From Broad Street the greenway continues into an area recently developed by the city. This public space has great potential for being a main attraction to the greenway. A series of bridges, boardwalks and paths have been constructed around a canal and pond at this point. However, the entrance could benefit from attractive landscaping and relocation of the billboard to make it more inviting.

Below Right: A few issues still need to be addressed in this area. Pipes leading into the creek lend a negative perception to the site. Redirecting stormwater into a properly constructed bioswale is recommended.





GREENWAY MASTER PLAN: Broad Street to Guignard Drive



Above: There is a marked crosswalk at Miller Road, which is helpful in providing safe access to pedestrians. However, a refuge and additional landscaping would further improve this crossing

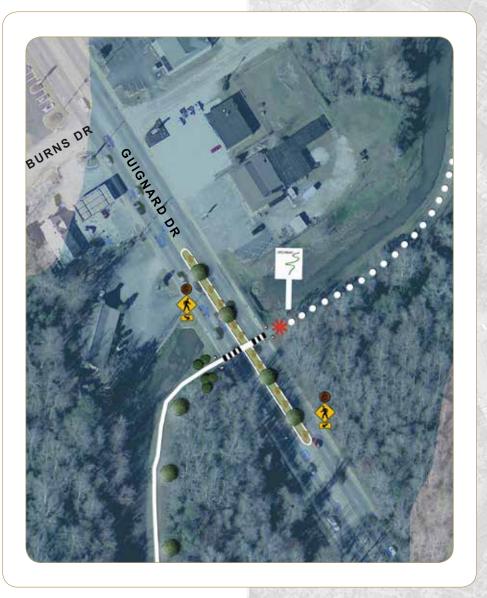
Below Left: The greenway continues across Miller Road towards the YMCA and then veers to the right and is nicely developed along the canal, leading to Guignard Drive. Currently the greenway ends at this point, although the proposal is for the path to extend to Haynsworth St, Swan Lake and beyond (below right).





GREENWAY MASTER PLAN: The Guignard Drive Node





Like Broad Street, The Guignard node will provide new opportunities for a pedestrian friendly retail and dining space with transit access, and a safe crossing with trees and a centerlane refuge. Proximity to existing restaurants and shops make this node particularly compatible with the greenway plan, bringing foot traffic right past Stanley Welch clothiers, the Rustic Market, Guignard Diner and many other locally owned businesses.

GREENWAY MASTER PLAN: The Guignard Drive Node





Above Left: The floodplain impacting the proposed Guignard Drive Node. Orange indicates the actual floodway, where development is not permitted. The photo (*above right*) indicates the presence of stormwater and poor drainage issues at this time. This photo was taken several days after a heavy rain.



A streetview of Guignard Drive, facing north. Visual clutter, a wide expanse of street, flooding issues and large commercial front setbacks have over time created a space that is not pedestrian friendly. A concept for pedestrian improvements to the Guignard crossing is shown below.



GREENWAY MASTER PLAN: The Guignard Drive Node



Left: The redevelopment of this node could address the environmental concerns posed by the floodplain and floodway. Structures that were once in the floodway (in orange) would eventually be moved to floodplain areas (light blue), where they can be redeveloped with careful architectural design. Paths and parking would be constructed of pervious materials such as pervious pavement and wooden decking. The greenway intersection might provide a pocket park for nearby residents, with a walking loop and beautiful wetland views. The site offers opportunities for nature based art installations. This would make the site a further destination point and amenity.





Above: Concept for boardwalk at Guignard Drive, leading towards Haynsworth Street.

GREENWAY MASTER PLAN: Guignard Drive to Swan Lake



Right: Map shows area between Guignard Drive and the north side of Swan Lake.

Black Dot indicates gated point of entry to Swan Lake



GREENWAY MASTER PLAN: Haynsworth Street





Above: The proposed path leaves Guignard Drive and continues south through an area that is not developed at this time. The next path intersection is at Haynsworth Street, where a pedestrian bridge has already been built. The path from here leads into Swan Lake, and becomes very wet and swampy. A barricade has been placed there (above right) to discourage four-wheelers from accessing this area.



Above: Concept for boardwalk at Haynsworth Street, leading towards Swan Lake.

GREENWAY MASTER PLAN: Guignward Drive to Swan Lake









The area between Haynsworth Street and Swan Lake is exceptionally beautiful and natural. It is also very wet and, at a certain point, impassable.



GREENWAY MASTER PLAN: Guignard Drive to Swan Lake



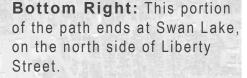
Below: Construction of a boardwalk will be necessary for providing access through to Swan Lake from here. The concept portrays what that boardwalk might look like.



GREENWAY MASTER PLAN: Guignard Drive to Swan Lake

Right: Two viewing decks are proposed within this area. These will not only provide a place to rest and enjoy the scenery, they will also add to security by giving people room to maneuver around perceived threats. There will also be cameras and a police call box in this area, and fencing in the woods between residences and the greenway.

Concept showing one of the viewing decks in between Haynsworth Street and Swan Lake. The decks will be carefully situated to protect the privacy of residents living on either side.



The photo shows the area of Swan Lake where the greenway will enter the park and wind around its edge after leaving the boardwalk and swamp. Dogs and bicycles will be restricted to the path in this area.







GREENWAY MASTER PLAN: Swan Lake



Above and Below Left: Swan Lake is a beautiful old park that highlights the natural wetlands in this area of Liberty Street. The northern section of the park has boardwalks that weave through the swamp and give spectacular views of the trees and water.

The proposed path would cross Liberty Street to continue through the southern portion of Swan Lake. Although there is a pedestrian bridge across Liberty Street, huge numbers of people cross at street level, particularly during events such as the Iris Festival, and therefore a safer crossing on Liberty Street is an important improvement to consider.





GREENWAY MASTER PLAN: Liberty Street Node at Swan Lake



Above: Concept for the Liberty Street Node at Swan Lake.

The proposed design includes attractive red brick and bollards to match the area in front of the Opera House, downtown. Because of the high pedestrian traffic at this juncture during events at Swan Lake, it is important to slow traffic and provide a safe means of walking across Liberty Street, which is five lanes of traffic at this point. Traffic calming such as median plantings and highly visible pedestrian area will greatly increase safety in this area, and aesthetics are important as well because of Swan Lake's prominence as Sumter's greatest attraction.



GREENWAY MASTER PLAN: Liberty Street Node at Swan Lake







Above: Brickwork crossing will be similar in style to downtown Sumter, in front of the Opera House

GREENWAY MASTER PLAN: Swan Lake





Above: Swan Lake's main entrance and parking area are located on the south side of Liberty Street.

Below: Leaving Liberty Street, the path continues along Garden Street and is currently gated where it reaches Oakland Avenue.





GREENWAY MASTER PLAN: Swan Lake

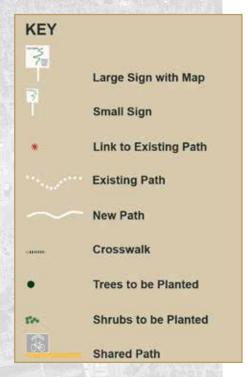


Below: Concept for the Oakland Avenue entrance to Swan Lake, to match other entrances to the park.



GREENWAY MASTER PLAN: Swan Lake to Birnie Hope Center





Above: The path from Swan Lake to the end of the proposed greenway is composed of existing sidewalks. Improvements include new crosswalks, a shared path along Garden Street, signage and a new gate at the Oakland Street entrance to Swan Lake (indicated in black).

GREENWAY MASTER PLAN: Oakland Avenue





Above: Sumter Cemetery is on Oakland, and has several distinctive areas to explore: The original cemetery has graves going back to the 1700's, and there are also adjacent Roman Catholic, Jewish and African American cemeteries.

Below Left: Oakland Avenue has existing sidewalks that require some maintenance but will suffice for the greenway at this time.

Below Right: Oakland Avenue intersects with South Guignard Drive, very close to Birnie Hope Center. The proposed greenway ends here at this time.





GREENWAY MASTER PLAN: Second Mill Pond



Above: Closeup of Master Plan showing the Proposed linkage between Second Mill Pond and Swan Lake. There is a dirt trail that goes into the woods behind the dam at Second Mill. This path could continue along the edge of the creek until it intersects with Swan Lake. Removing underbrush and clearing underneath the trees would provide good visibility along the greenway.

GREENWAY MASTER PLAN: Second Mill Pond





Above: Closer view of proposed amenities at Second Mill Pond

GREENWAY MASTER PLAN: Boardwalk at Second Mill



Boardwalk at Second Mill is a proposal for a walkway that curves away from Liberty Street, out into Second Mill Pond, so that the public can easily enjoy one of the most beautiful natural areas Sumter has to offer. Not only does this open up recreational opportunities, it also provides economic benefits to surrounding businesses that will have more foot traffic, and enables new business opportunities such as restaurants, shopping, etc. in this area.

Below Right: Concept for boardwalk at Second Mill Pond

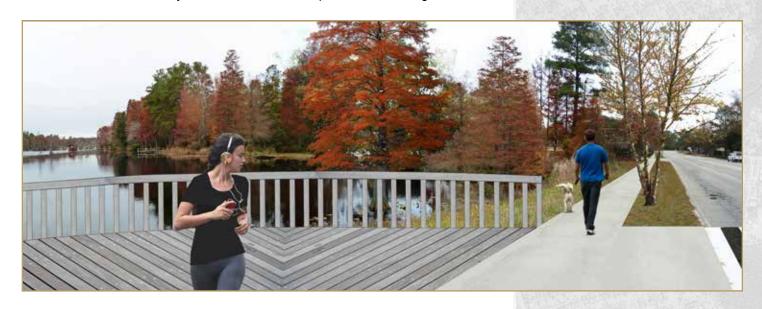




GREENWAY MASTER PLAN: Boardwalk at Second Mill



There is one residence immediately adjacent to the proposed Boardwalk at Second Mill - and it is also very close to Liberty Street. A stand of bald cypresses planted in the water and along the bank near this house will screen the residents from both the road and the project, giving them privacy and blocking out noise. The boardwalk project will provide a beautiful area to gather, socialize and enjoy the spectactular views of Second Mill. A pedestrian crossing here leads to the fishing area on the other side. Sidewalks continue on both sides of Liberty Street from this point, heading towards Swan Lake.



GREENWAY MASTER PLAN: Second Mill Pond Fishing Area





Second Mill Pond is located on Liberty Street between the Bi-Lo shopping center and Alice Drive. The north side of the pond is gorgeous, with graceful cypresses and spanish moss. The southern access to the pond from Liberty Street, however, has a very industrial character at present. This is unfortunate because the portion of the creek that continues after the dam is pretty as well, and is also a very popular fishing area. This area could easily be tied in to the larger greenway system, whereby it would provide access to the greenway for many residential areas, and would also link the larger greenway system to a popular fishing hole. This link is therefore important to the overall success of the greenway system, because every amenity that is added to the total equation will increase the use of the greenway. Slight modifications to the entrance area would make this a much more attractive space, which would also increase its visibility and use.





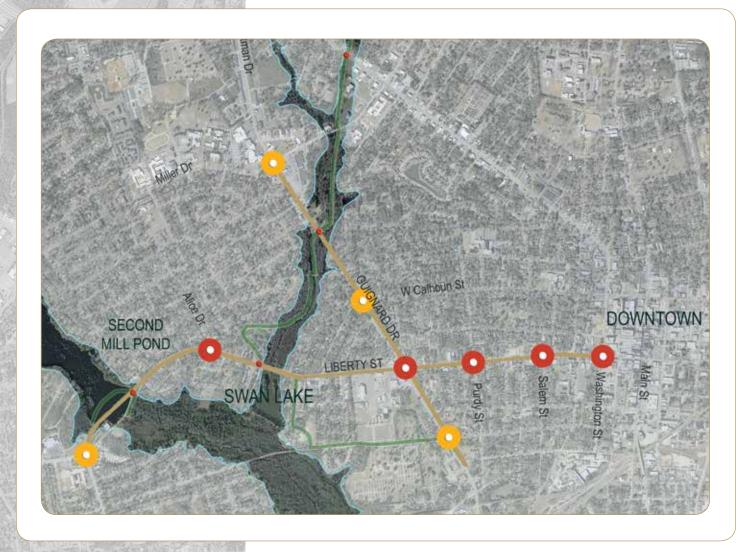
GREENWAY MASTER PLAN: Second Mill Pond Fishing Area





Above: Concept for Fishing Area at Second Mill Pond. The dam and outlet structure are unattractive and could be screened with nicer fencing and perhaps a flowering vine. An overlook at the dam would improve views to the creek, and paths could be constructed on either side to access the lower level fishing area.

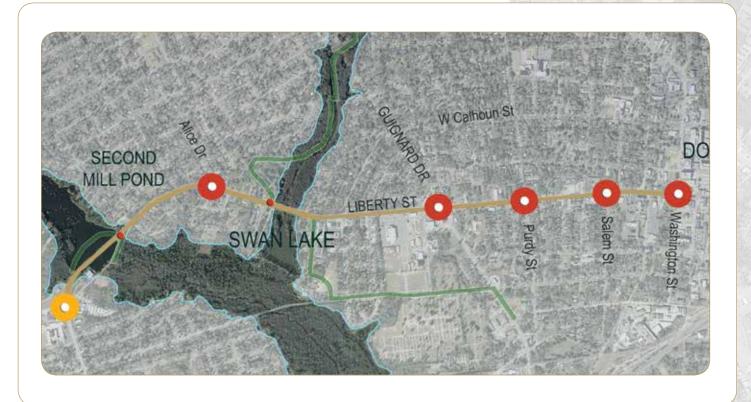
CORRIDOR ENHANCEMENTS



Improving the functionality and aesthetics of Sumter's corridors will integrate the greenway with the surrounding neighborhoods and provide safe, convenient linkages for pedestrians and cyclists in Sumter. Proposed corridor enhancements include signalized pedestrian crossings and better crosswalk markings.

Large Yellow Dots - Intersection Enhancements
Large Red Dots - Intersection Enhancements with Mast Arms and Red Brick
Small Red Dots - Greenway intersections with Corridors

CORRIDOR ENHANCEMENTS: Liberty Street



Above: Liberty Street is one of the main east-west corridors through the city, and links Swan Lake to downtown Sumter. The large dots indicate those intersections where enhancements are proposed. The large red dots show those intersections where decorative mast arms and red brick crosswalks are proposed to match those downtown. These decorative treatments are to provide visual linkage between Swan Lake and downtown along this important corridor. The intersection of Pinewood Road, Liberty Street and Wedgefield Road is yellow because it is the only enhancement project on the Liberty Corridor that is not proposed to have the mast arm style treatments. Smaller red dots indicate where the greenway intersects with the corridor.

CORRIDOR ENHANCEMENTS: Liberty Street

Below: Intersection at Pinewood Road, Liberty Street and Wedgefield Roads. The proximity to neighborhoods, retail centers and a school make this a priority intersection with regards to connectivity.

Because this intersection is not between Swan Lake and Downtown Sumter it is not considered part of the aesthetically important "entryway" aspect of Liberty Street. It is, however, a dangerous intersection at this time with regards to pedestrian access, and therefore needs to be improved because of its proximity to the greenway and the surrounding elements to be connected.







CORRIDOR ENHANCEMENTS: Swan Lake to Downtown Entryway

Right: The intersection enhancements that include the mast arms and decorative pavement to match the downtown are indicated with red and white dots.











CORRIDOR ENHANCEMENTS: Liberty Street and Alice Drive

Intersection at Liberty Street and Alice Drive. This is the first of the proposed intersection enhancements that include the mast arms and decorative pavement to match the downtown.











CORRIDOR ENHANCEMENTS: Liberty Street and Guignard Drive

Intersection at Liberty Street and Guignard Drive. This is one of the proposed intersection enhancements that include the mast arms and decorative pavement to match the downtown.









CORRIDOR ENHANCEMENTS: Liberty Street and Purdy Street

Intersection at Liberty Street and Purdy Street. This is another of the proposed intersection enhancements that include the mast arms and decorative pavement to match the downtown.







CORRIDOR ENHANCEMENTS: Liberty Street and Salem Street

Intersection at Liberty Street and Salem Street. This is another of the proposed intersection enhancements that include the mast arms and decorative pavement to match the downtown. There is no light at this intersection currently.



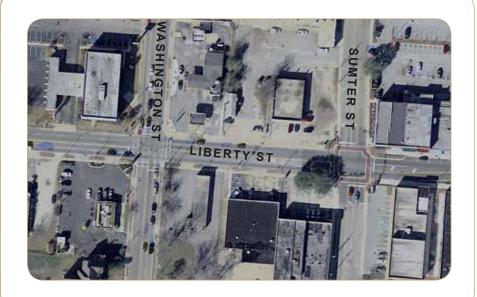




CORRIDOR ENHANCEMENTS: Liberty Street and Washington Street

Intersection at Liberty Street and Washington Street. This is closest to downtown of the proposed intersection enhancements that include the mast arms and decorative pavement.

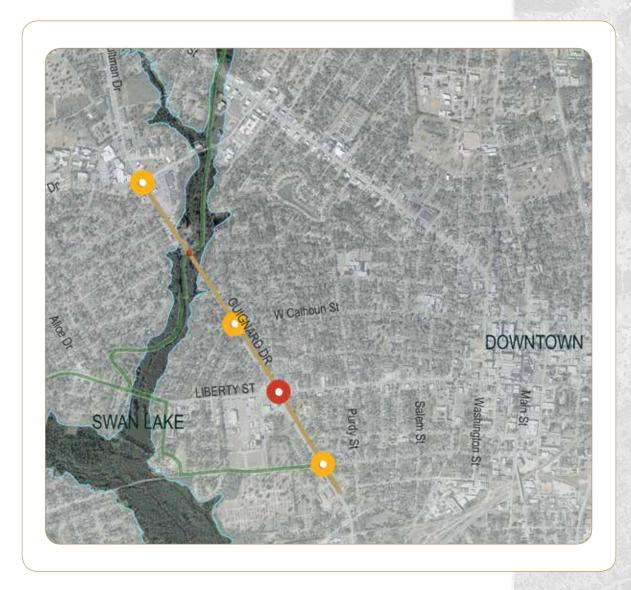




Left: The map shows the proposed intersection improvement at Washington Street, as well as the already completed improvement at Sumter Street.



CORRIDOR ENHANCEMENTS: Guignard Drive



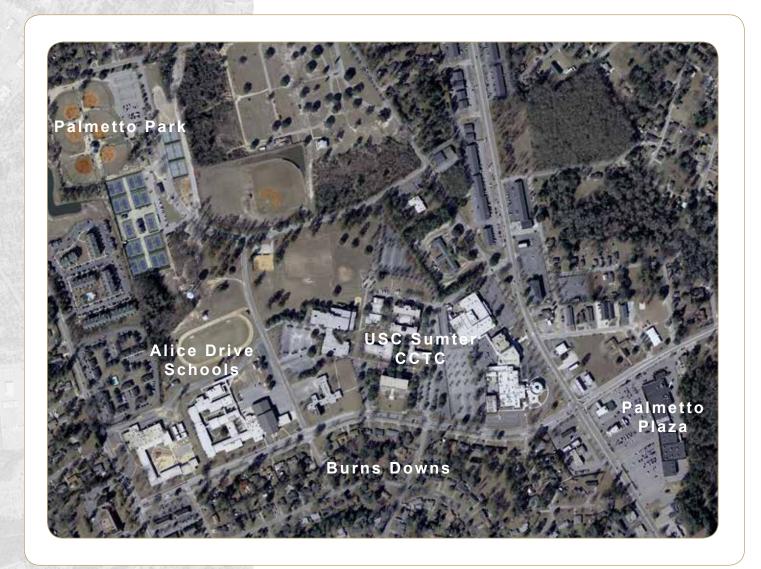
Above: Like Liberty Street, Guignard Drive is a major corridor through the city that intersects with the greenway at two points - Shot Pouch Creek and also at the end, near the Birnie Hope Center. Guignard connects many important areas: The node at Miller Road, the neighborhoods of Hampton Park Historic District, Burns Downs, and Oakland, and many commercial and industrial points along the way.

The large dots indicate those intersections where enhancements are proposed. The large red dot at Guignard and Liberty was discussed as part of the Liberty Street enhancements. The smaller red dot indicates where the greenway intersects with the corridor, near Haynsworth Street.

CORRIDOR ENHANCEMENTS: Miller Road Complex

The node created at the intersection of Miller Road and Guignard Drive includes CCTC, USC Sumter, Alice Drive Schools, Willow Drive Elementary, Palmetto Park, and the Palmetto Plaza shopping center is extremely important in terms of connectivity to the rest of Sumter and the greenway. The south side of Miller Road does not have sidewalks at this time, so an additional recommendation of the project scope is to add sidewalks there to further improve connectivity.





CORRIDOR ENHANCEMENTS: Guignard Drive and Miller Road





Intersection at Guignard
Drive and Miller Road links
the complex shown on the
preceding page with Willow
Drive Elementary, Palmetto
Plaza shopping center,
shopping further north along
Bultman Drive, and the
neighborhoods nearby.

Below: Concept for intersection improvements



CORRIDOR ENHANCEMENTS: Guignard Drive and Calhoun Street





Intersection at Guignard
Drive and Miller Road links
the complex shown on the
preceding page with Willow
Drive Elementary, Palmetto
Plaza shopping center,
shopping further north along
Bultman Drive, and the
neighborhoods nearby.

Below: Concept for intersection improvements



CORRIDOR ENHANCEMENTS: Guignard Drive and Calhoun Street





Intersection at Guignard Drive and Oakland Avenue is the end of the current proposed greenway, and links the Birnie Hope Center to the cemetery and Swan Lake, as well as to neighborhoods nearby.



CORRIDOR ENHANCEMENTS: Traffic Calming

Improving the functionality and aesthetics of Sumter's corridors will integrate the greenway with the surrounding neighborhoods and provide safe, convenient linkages for pedestrians and cyclists in Sumter. Proposed corridor enhancements include traffic calming measures such as planted medians, shown below in light green:





Left: Unlike pedestrian crossings that include ADA accessible crosswalks, and are often lighted with signage to alert drivers to a pedestrian area, a planted median is simply a tool for calming and slowing traffic. There is no structured pedestrian access to the median.

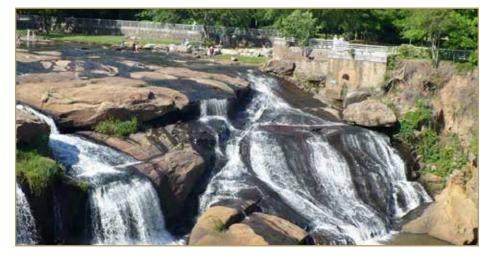
CASE STUDIES



Yadkin River Greenway Wilkes & Catawba Counties, NC



Three Rivers Greenway Metro Columbia, SC



Swamp Rabbit Trail Metro Greenville, SC

CASE STUDIES: Yadkin River Greenway

Wilkes & Catawba Counties, NC



The Yadkin River Greenway begins in North Wilkesboro, NC, and follows the river southwest towards Lenoir, NC. This greenway is not yet complete, but the portion staff visited left a good impression. The Yadkin River eventually joins with other streams to form the Great Pee Dee River.



Left and Below: The parking area is visible from the main road, as is the greenway sign. Good branding, visual connectivity and signage are important components for attracting greenway users.





CASE STUDIES: Yadkin River Greenway

Wilkes & Catawba Counties, NC





Above Left: A bridge connects the greenway to a local ballfield. Providing physical connectivity to amenities such as this is very important.

Above Right: Local Boy and Girl Scout groups, garden clubs and master gardeners provided plants, handmade birdhouses, benches, and windchimes along the greenway.

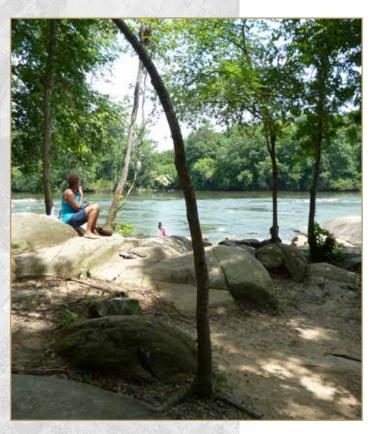
Below Left: There are a few access points along the river, such as the "beach" which is discovered after following a small path.

Below Right: This country store is located next to the parking area, providing amenities for the greenway users as well as foot traffic for the store.





Metro Columbia, SC



The Three Rivers Greenway links portions of Columbia, West Columbia and Cayce, SC, and extends more than 8 miles through the metro Columbia area. The Broad, Saluda and Congaree Rivers converge in the center of this area, and the greenway crosses and provides access to all three. One of the most interesting points about this greenway is the impact it has had on adjacent development: in several locations high-end residential development has followed the greenway installation. In one location, million-dollar residences overlook the greenway and are built on an old landfill site. The greenway system has provided many opportunities for neighborhood revitalization in the Columbia area.

Below Left: A full parking lot at West Columbia Riverwalk on a weekday morning.

Below Right: The architecture of the restroom facilities is specifically designed to emulate historic styles common to the area.



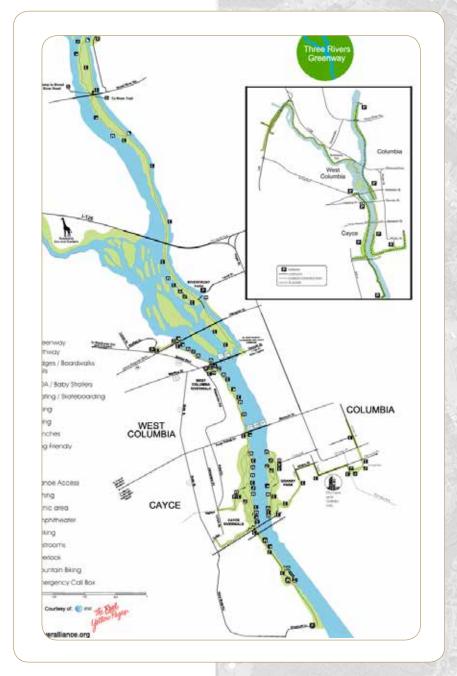


Metro Columbia, SC



Above and Below: Views of the city and architectural features such as old bridges add visual and historical interest along the greenway.





Right: A map of the Three Rivers Greenway system at present. A non-profit, intergovernmental organization was created to manage the greenway. Public input, or "dreamcatching", revealed immense interest in providing environmentally sensitive access to the rivers.







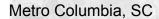
Above Left: Path going beneath a bridge overpass.

Above and Below Right: Recent residential development that is built on an old landfill site, overlooking the greenway.

Below Left: Residents of a nearby condominium were concerned about privacy, so a trellis covered path was constructed. A locked gate provides them with access.













Above: The Cayce portion of the greenway is shaded and sits on a high bluff with beautiful views of the river and the old railroad bridge.

Left and Below:

Stunning views of the river and a nicely designed public space begin the greenway at the Diversion Dam portion.

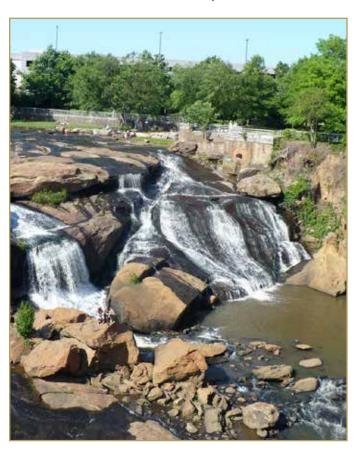


CASE STUDIES: Swamp Rabbit Trail

Greenville, SC

Greenville has been diligently strategizing to revitalize their city for many years now. In the late 1970s they implemented a new trail system in Cleveland Park, and since then several trail networks have been built throughout the city, the most recent being the Hincapie Path, which was completed in summer of 2008. The trails extend beyond the city in several directions, linking nearby communities and rural county areas to the urban area. The most dramatic and exciting aspect of this trail network is Falls Park, completed in 2004, which features gorgeous views of a waterfall from a pedestrian bridge that crosses what was once a kudzu-entwined, littered wasteland.

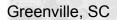
Downtown revitalization began in the 1970's, when landscape architect Lawrence Halprin redesigned Main Street. Many new architectural additions have contributed to the energy and vitality of downtown Greenville in recent years.







CASE STUDIES: Swamp Rabbit Trail









The Children's Garden features a rainbow garden, alphabet garden, native plants, sculptures and many interactive elements for children.





CASE STUDIES: Swamp Rabbit Trail



Hospitality taxes have funded most of the Swamp Rabbit Trail. The city has also issued bonds to cover some of the costs. The local hospital system has given money in return for marketing and naming rights along the trails, and local businesses can also "buy" portions of the greenway and advertise within certain parameters in those areas. Greenville staff recommended conducting a feasibility study at the beginning of the planning process, to determine the cost of the proposed greenway.

Greenville, SC

None of the trails in Greenville are lighted - it was decided that lighting would provide a false sense of security. The trails remain open from dawn to dusk. Public service announcements teach the community about rules and etiquette along the trails. So far, no crimes have been reported along the greenway itself, although there have been a few car break-ins at some of the more remote parking areas. The city is in the process of installing mile markers and navigation signs at this time. Police are a presence in the Central Business District and in Falls Park, as well as on some of the trails (on bicycles).





Research indicates that women. particularly, often feel unsafe in public spaces such as parks. Older citizens, those with physical disabilities, and children are also less likely to feel safe in an urban open space environment. Urban greenways are criticized because they are linear in form, often with only single-route connections. The principle of prospect and refuge is very important to consider with regard to design of such public open spaces. Prospect refers to the ability to clearly see one's surroundings, and refuge is the ability to reach safety. Greenway design, therefore, must address the following with regard to safety and security.



Users must be placed in a position of control, where they can clearly see how to avoid and escape potentially dangerous places. Awareness of connections and routes to safe places are the keys to attaining this goal.



Above: On this path, a pedestrian has prospect (the point in the distance to which they are heading) and refuge (the open area to the left). This photo was taken at the Columbia Riverwalk.



Park design is just one of four important criteria to the safety of a public space, along with citizen involvement, programming and maintenance, and enforcement.

Left: A security guard stationed along the West Columbia portion of the Three Rivers Greenway. A fence in the background separates the greenway from residential areas. Privacy and security for neighborhoods adjacent to greenways is critically important.

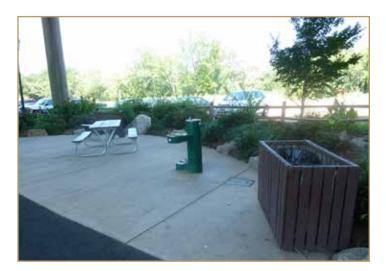


Below: A lack of route choices, which is often inherent to a linear design such as a greenway, can result in predictable movement patterns, which is an unsafe situation. Therefore, the greater the connectivity to surrounding roads, neighborhoods and districts, the safer the path itself will be. Likewise, providing these connections will give police and 'passive police' (citizens and passersby) greater access and visibility to the greenway, which will enhance its safety.

Above: Perception of environmental hazards will decrease the feeling of security about cleanliness, which can hinder use of a public space. This is at Shotpouch Creek, between Miller Road and Broad Street in Sumter.

A public space must be designed with a high level of imageability: that is, clearly visible entrances, a sense of openness within the space, and a lack of hidden or secluded spaces. Signs of antisocial behavior such as graffiti, trash, broken bottles and drug paraphernalia need to be kept under control within the space.





This path is adjacent to the Children's Garden. The presence of parents at a children's playground or play area is one of the best forms of 'passive policing'. Parents act as hawks, surveying the environment carefully for dangers. Placing a parking area next to a playground is one of the best ways to prevent car break-ins and other crimes, for this reason.



Statistically, crime rates do not increase significantly with the presence of homeless people. However, their presence can cause discomfort for other greenway users. The best way to address this issue is through enforcement, and by minimizing hidden spaces and sheltering environments through good design.



The concept of prospect, as mentioned before, includes the ability to recognize strangers and to visually survey the environment around oneself. Freedom of movement is important to the concept of refuge, giving a person the ability to avoid isolated places and escape threatening or annoying social encounters. Even within the linear context of a greenway, it is possible to design the space to achieve these goals.



Lighting is important to a greenway only if the space is designed to be used at night. Otherwise, it can actually encourage people to venture into a space that may not be safe. If lighting is to be used, it should be designed with an even, consistent level, and should avoid bright spots and pools of shadow. A person should be able to recognize another person's face at a distance of approximately 80 feet, for lighting to be effective and safe. If the decision is made to not light a space, this should be clearly communicated through signage.



Light poles or signage can also be numbered so that a person calling from a cell phone can state the number they are closest to along the greenway. This reference system can be coordinated with dispatch so that emergency personnel can easily reach a given location. The numbering system can also designate distance travelled, which aids in navigability.

Signage is important for providing navigability. The awareness of a person's relationship to their surroundings is paramount to their



sense of security. Signs and maps should clearly show location along the greenway, where assistance is available, and provide landmarks to help the user navigate. Branding is another important element - note the logo on the right side of this sign for Greenville's Greenway System.

The single biggest factor in increasing safety in any public space is use. The more the greenway is used, the safer it will be for everyone on it. Therefore, it is critical to provide good anchors, or amenities along the greenway. These anchors generate activity along the greenway, and in turn benefit themselves from increased activity. It is a win-win situation for both sides. The proximity of this path to downtown Columbia is probably the reason it is so crowded in the middle of a weekday.

BENEFITS





Aside from the obvious health benefits offered by providing a recreational space to a cross-section of the city, the proposed greenway also provides many other secondary benefits. First, it will provide foot traffic to several proposed "neighborhood nodes" that will benefit from pedestrian activity. This commercial aspect is important not only to the economy of those businesses and to Sumter at-large, but also increases use along the greenway. Second, the greenway provides an alternate route for many people to get to work, particularly if they are employed on any of the following major corridors in the city: Pike Road, Broad Street, Wise Drive, Guignard Drive, Miller Road, Alice Drive and Liberty Street. This will benefit not only those people who currently do not have access to a car, but also the many people who appreciate the health, environmental and economic benefits of walking or cycling to work.



CONNECTIVITY





Connectivity is a critical component of any trail network. A path that leads nowhere does not encourage any sort of use. The greater the access to a greenway, the more intensive the use will be. Likewise, the greater the activity in any public space, the safer and more secure it will be. Therefore, it is of paramount importance that a greenway be well connected to the surrounding urban fabric. Physical connectivity in Sumter suffers because of a lack of sidewalks and walkable spaces.

Above Left: This path connects to a park within a neighborhood in Mt. Pleasant, SC. Connectivity is very beneficial within neighborhoods as well as in more urban areas, for providing access to green spaces.

Pedestrians prefer not to walk in deadened spaces, except by necessity. Providing better connectivity and destinations within the city will encourage everyone to walk more, for recreation and health benefits as well as to reach employment, shopping, etc. This enhanced connectivity not only promotes a more healthful lifestyle, it also creates a more sustainable environment that decreases reliance upon vehicular travel.

Below Left: Numerous curb cuts and vast expanses of parking in front of businesses discourage a walkable environment along many of the city's priority commercial corridors. Visually, the connectivity in Sumter suffers for the same reasons.

PUBLIC INPUT

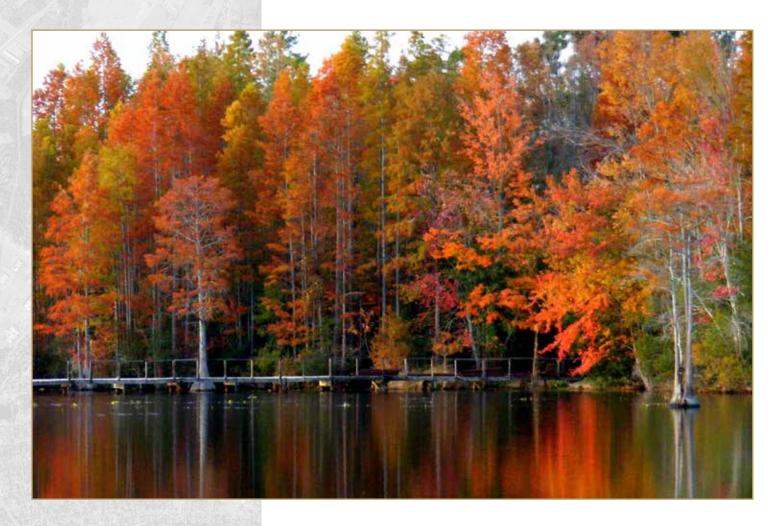


This draft plan provides a framework for public participation to streamline a specific vision. An extensive public participation process will help identify community members and stakeholders critical in the planning process. Public process is the key to creating a public greenway that serves the needs of the entire community.





CONCLUSION

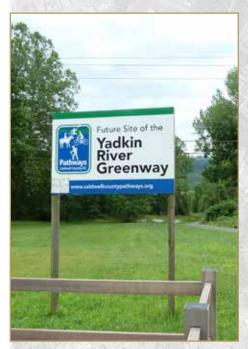


Sumter is blessed with some truly beautiful natural environments, right in the middle of the city. Providing access to these areas, and simultaneously providing a connected network of paths for people to use for both their recreation and employment needs, will benefit the community in countless and unforeseeable ways. Many cities are now offering such amenities as a way of attracting new businesses and technology to their area. Sumter has the potential to provide such an amenity. In fact, many components of this already exist and simply need to be connected to each other. This project strives to do just that. If you build it, they will come.

DESIGN GUIDELINES: Signage







The following guidelines are based on accepted national standards for greenways. Individual situations along the proposed greenway will present unique obstacles that may require altering these guidelines to address specific needs. The core principles of accessibility, safety and environmental sensitivity should be upheld despite any modifications that may be required. Recycled materials should be used whenever possible in the materials for this project.

<u>Signage</u>

Wayfinding strategies for the greenway include a unified logo and branding strategy, milemarkers and maps wherever possible, and protocol signs to instruct users about safety and path-sharing rules (i.e. "Bicyclists please pass to the left"). Historic or environmental interpretive signage is also a great way to provide users with interesting stopping points along the greenway. Sponsors of the greenway can "adopt" certain sections and post advertisements within these areas. Setting parameters for the size and type of advertising is also important to consider.



DESIGN GUIDELINES: Paths





Paths

Three types of paths will be required to complete the connectivity system proposed for this greenway.

Path Type I: Permeable Asphalt Surface

This surface will allow water to penetrate, thereby reducing the environmental impact that traditional impervious surfaces can have. This surface is best for areas that are in floodplain or wetland conditions, but are not wet most of the time. The width of these paths is 8 feet, for multimodal use. The Greenville greenway also uses a soft surface running path to the right of the asphalt (see photo above right)

Path Type II: Wooden Boardwalk

This surface will allow water to penetrate as well, but is best for areas that are wet much of the time, or floodway areas. Wooden boardwalks can be constructed either at grade or on pilings. An advantage is that they can be constructed off-site and carried in by sections, to minimize the impact of construction in wetland environments. The width of the boardwalks should be at least 8 feet, to accommodate both a cyclist and a pedestrian.

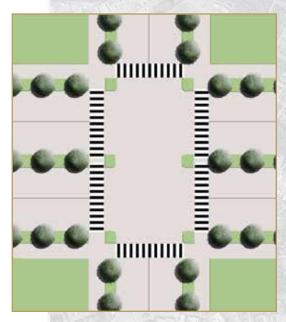
Path Type III: Sidewalk

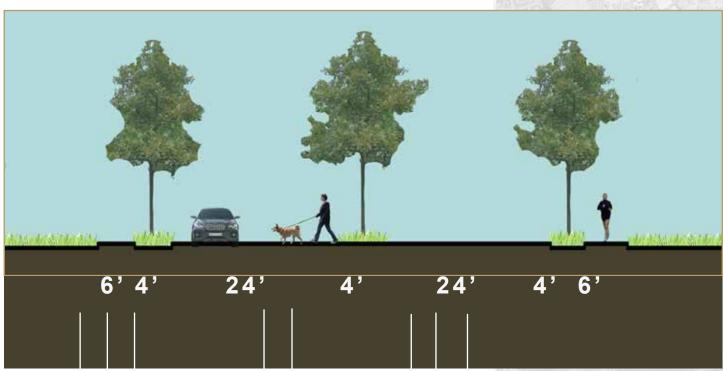
Asphalt or concrete sidewalks are constructed along streets to tie into existing pedestrian networks. The recommended sidewalk width is 6 feet, with a minimum of 4.5 feet.

DESIGN GUIDELINES: Intersections

Intersections

Below: A section shows the dimensions of lanes, refuges and sidewalks at a crossing area. The diagram to the right portrays how an intersection can safely address pedestrian crossings: the turning radius at the corners has been significantly reduced, the crossing areas are bright and very visible, and where the road is four lanes wide, there is a refuge. Trees are planted in the center and along the edges, both to calm traffic and to help protect pedestrians on sidewalks and at the refuges.





DESIGN GUIDELINES: Marketing & Branding

Marketing is an extremely important component of a greenway system. Branding the system with an easily identifiable logo will help with navigability, as well as recognition of different areas being part of the larger system. Signs displaying the logo should be clearly visible from roads, transit stops and any areas where people gather, such as shopping centers and parks. Sumter can promote and market the greenway through t-shirts and other advertising means, as well.

Having a greenway system with a recognizable logo will aid in the larger marketing of Sumter as a progressive city. This will in turn attract young professionals and businesses that desire to offer quality of life for their employees. A well-designed, well-connected greenway system can have a positive effect on the entire community, as is evidenced by the beautiful and well-connected green spaces in Greenville, SC.





DESIGN GUIDELINES: Materials, Furnishings & Plants

Materials and furnishings for this project should be unified in concept and appearance in order to provide continuity across the entire greenway. Site furnishings should be compatible with the style used in downtown and Swan Lake.

Because the greenway is primarily located in riparian floodplain areas, it is very important that the plant material selected for this project be only native plants. Stream corridors will disperse seeds downstream, so the use of any potentially invasive species is definitely inappropriate. Trees such as River Birch, Live Oak, Red Maple and other natives are the best choice for these environments. Smaller shrubs and ornamental plants such as Virginia Sweetspire, ferns and native grasses will also be suitable landscaping plants for the greenway.











FUTURE CONNECTIVITY PROJECTS: Neighborhood Plan

Sumter is blessed with a wide variety of neighborhoods and communities, each with their own unique characteristics. However, many of these neighborhoods lack definition and a sense of identity at this time. A neighborhood plan would strive to identify the boundaries of each neighborhood in the eyes of those who live there, and find common visions for their residents. Having an identity gives a neighborhood power, and control over addressing the needs and challenges unique to that area. It gives residents a sense of place and belonging. A neighborhood plan is a great way to empower the citizens of Sumter and help them take control of their own community. An urban gardening program would be an important component of neighborhood planning that ties in with the greenway concept nicely.



FUTURE CONNECTIVITY PROJECTS: Turkey Creek



Turkey Creek is a channelized creek that runs through both neighborhoods and industrial areas on the east side of downtown Sumter, before meeting up with the Pocataligo River on the south side of town. This creek presents many challenges in terms of engineering and design, because of the fact that many homes and businesses are impacted by its proximity. There are also brownfield industrial sites to consider in any redesign of this area. However, there is also great potential for connecting the people in these neighborhoods to each other, to green spaces and to commercial areas via a greenway. As with the Shotpouch area, Turkey Creek is environmentally in need of restoration. If this restoration is accompanied by better connectivity and access to nature and recreation for residents in that area, it would be a great bonus. Changing the dimensions of the channel, planting native plants along the banks for stabilization, and providing a path network are the first steps towards improving the entire Turkey Creek area.

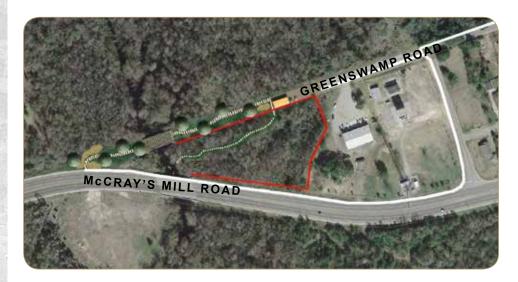




Above Right: Concept for path at Turkey Creek

FUTURE CONNECTIVITY PROJECTS: Kayaking & Canoeing Center

Right: A diagram of the proposed canoeing and kayaking center at the Greenswamp Road landing. The existing road would be replaced with a greenspace that would link to McCray's Mill Road. A fence would be constructed around the perimeter of the boating area, and a small office and parking area located just past the Fire Training Facility.



Below: Greenswamp Road currently ends abruptly after the bridge and before meeting McCray's Mill Road. This area is in the floodway (*orange*) so removing some of the existing road to create added greenspace would be beneficial for environmental reasons. It would also create a small fishing spot and park at this location, which is near many residential neighborhoods.



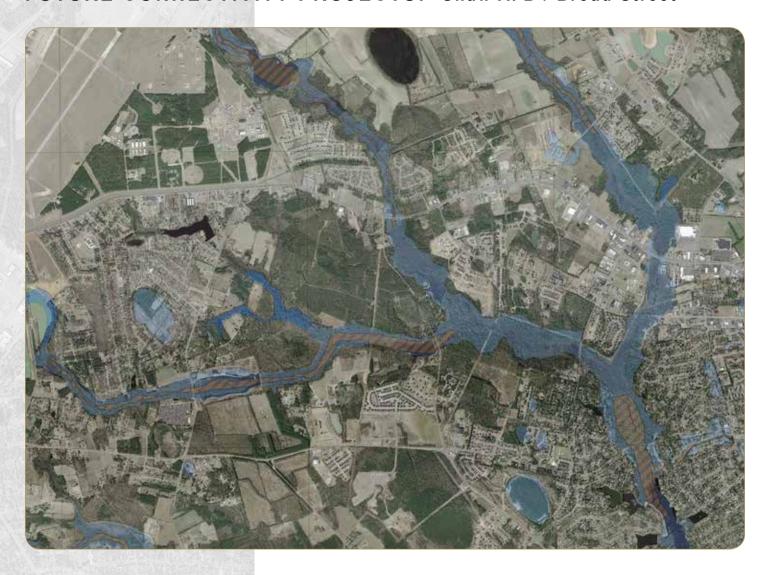
GREENWAY MASTER PLAN: Kayaking & Canoeing Center

Below: A view of Greenswamp Road looking towards the bridge from the east; McCray's Mill Road is in the distance. The picture below right shows how removing the asphalt, restoring a green area and adding trees and a kayaking and canoeing center might look. The bridge is covered with a lattice to provide shade, and would become a fishing area for surrounding residents.



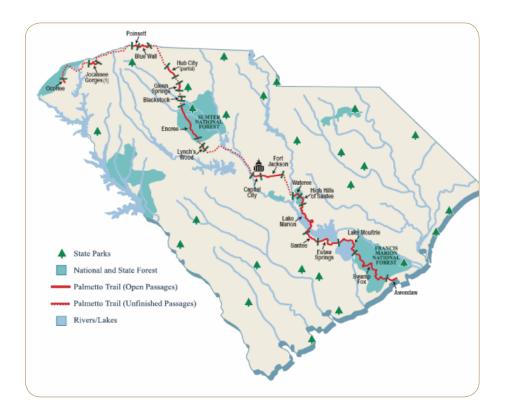


FUTURE CONNECTIVITY PROJECTS: Shaw AFB / Broad Street



Shaw Air Force Base is a military installation to the west of Sumter. At this time, the only connections to the base are via major road networks. However, base representatives have shown an interest in providing a greenway extension that would link the City of Sumter to the base for cyclists and runners. This connection would also cross Broad Street, an important commercial corridor. The connection point could be made into a commercial node much like the proposed nodes at Guignard Drive and Broad Street in the city. This would benefit the entire Sumter community greatly and make the area very attractive to prospective military families looking at Sumter to relocate.

REGIONAL CONNECTIONS



Regional connections to be examined for cycling routes include the Wateree River, Woods Bay State Park, Florence, Camden, Columbia, and Santee / Lake Marion. The Palmetto Trail passes through the Lake Marion area, where it could connect to a Sumter route. Providing good facilities and attractions for longdistance cyclists would help in establishing Sumter as a regional destination. This idea could tie into a larger marketing scheme for the city and county. The more types of recreational uses Sumter encourages, the more layers of use will be gained. This will have many positive impacts on the community and on others' perceptions of what Sumter has to offer.

ACKNOWLEDGEMENTS

Sumter 2030 Comprehensive Plan

Sumter County Watershed Report 2010

Historic Map of Sumter

Source: Robert Mills, Atlas of South Carolina, Hurlburt and Lloyd, Charleston, 1825

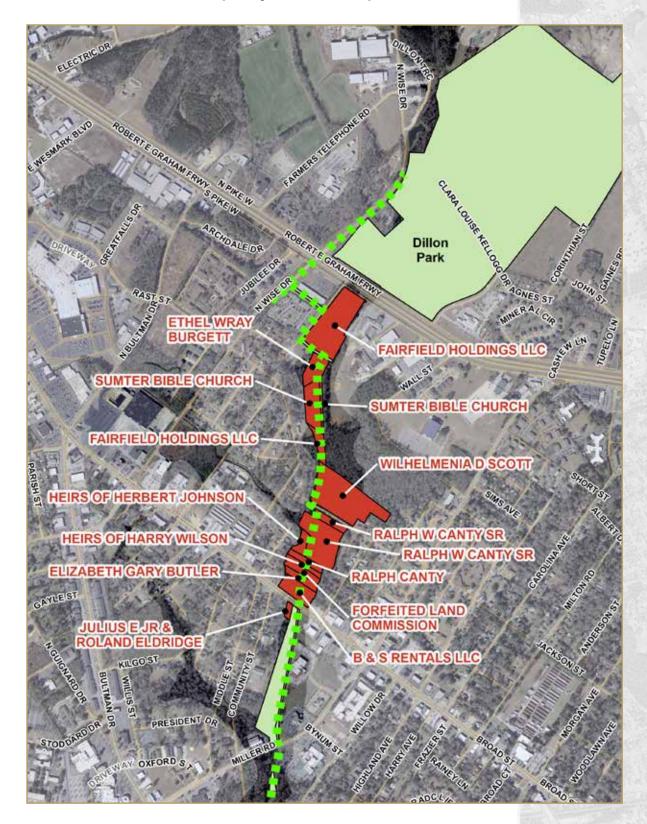
Map of Atlantic Flyway

tpwd.state.tx.us/huntwild/wild/birding/migration/flyways/atlantic/

Demographic information taken from 2010 US Census

Property ownership maps created by Charles Robbins, Sumter City-County Planning Dept. using ArcGIS

APPENDIX A: Property Ownership



APPENDIX A: Property Ownership



