



Neuse River Trail

Spine Trail of Eastern Wake County

Report of Recommendations



RALEIGH PARKS AND RECREATION

919.807.5139 | www.raleighnc.gov/parkplan

**Neuse River Trail
Report of Recommendations**

I.	Executive Summary.....	3
II.	Introduction.....	5
	A. Purpose of Report.....	5
	B. Project Background.....	5
	C. Planning Process.....	6
III.	Analysis of Trail Corridor, Segments and Connections.....	9
	A. Overview of Neuse River Trail Corridor.....	9
	B. Overview of Trail Segments and Connections.....	14
	Segment 1: Falls of Neuse Rd to Capital Blvd	14
	Segment 2: Capital Blvd to CASL Complex	20
	Connection A: Wake Forest.....	25
	Segment 3: CASL Complex to Buffaloe Rd	29
	Segment 4: Buffaloe Rd to Skycrest Dr	34
	Segment 5: Skycrest Dr to Crabtree Creek	39
	Connection B: Knightdale Connection.....	45
	Segment 6: Crabtree Creek to Poole Rd	49
	Segment 7: Poole Rd to Auburn Knightdale Rd	54
	Segment 8: Auburn Knightdale Rd to TerraGator Bridge	59
	Segment 9: TerraGator Bridge to Mial Plantation Rd	65
	Segment 10: Mial Plantation Rd to Wake/Johnston County Line .	70
IV.	Implementation	75
	A. Trail Design	75
	B. Estimated Project Costs	78
	C. Potential Environmental Impacts	81
	D. Permitting Requirements	82
	E. Project Schedule	83
	F. Sources of Funding	84
V.	Maintenance and Management.....	87
VI.	Appendix.....	91
	A. Meeting Minutes.....	91

Executive Summary

The Neuse River Trail – Report of Recommendations summarizes the findings of the staff representatives. The individuals who participated include: Vic Lebsock, Lisa Potts, and Stefanie Toftey – City of Raleigh; Tim Maloney, Jennifer Willis, and Chris Snow – Wake County; Ann Ayers, Candace Davis - Town of Wake Forest, Tina Cheek – Town of Knightdale; Tom Norman, Kumar Trivedi, Jeff Cox, and Bob Mosher – North Carolina Department of Transportation (NCDOT); Susan Carl - North Carolina Parks and Recreation.

In October, 2007, Raleigh residents approved a Parks and Recreation Bond that included funding for greenway trail acquisition, design and construction. Thirteen (13) million dollars was designated for the development of the Neuse River Trail. The estimated total cost for this project was approximately twenty-nine (29) million dollars. The estimated amount to complete the NRT was approximately Twenty-six (26) million dollars.

On May 29, 2008, leaders of several communities and agencies met to review the status of the Neuse River Trail (NRT) project. It was agreed that staff from Raleigh, Wake County, Wake Forest, Knightdale, NC Parks and Recreation, and NCDOT would meet and address questions concerning trail alignment, cost estimates, schedule, land acquisition, funding, and a funding schedule. The recommendations are included in this report.

The recommended alignment of the NRT is primarily located on the south and west side of the Neuse River. The exceptions to this alignment are located just near US 401 North, where the trail crosses the Neuse River to connect to Horseshoe Farm Park which contains a Significant Natural Heritage Area; a second segment located between Buffalo Road Athletic Park and the future location of the Skycrest Dr; and a final segment located at the southern end of the NRT. The report also has examined likely locations for the connection of the Wake Forest and Knightdale trail systems into the Neuse River Trail.

The acquisition, design and construction of the NRT is estimated to cost a total of twenty-nine (29) million dollars. The City of Raleigh has previously allocated two and one-half (2.5) million dollars to complete the northern segment of the trail. A balance of twenty-six and one-half (26.5) million dollars is needed to complete the entire trail – approximately five (5) million dollars for acquisition, nineteen and one-half (19.5) million dollars for construction, and two (2) million dollars for design. Costs were also estimated to install a connection to Smith Creek in Wake Forest (one and six-tenths (1.6) million dollars) and from Mango (Mingo) Creek in Knightdale (one and six-tenths (1.6) million dollars).

It will be necessary to acquire greenway interests in thirty-five (35) parcels. Twenty-seven (27) of the parcels are located south of Crabtree Creek.

The entire project is scheduled to be completed by January 2013. This is a very aggressive schedule that is contingent upon acquiring all land interests and permitting by June 2010. It will be necessary to construct separate segments of the trail simultaneously if it is to be completed in the time frame noted.

The total cost of the NRT is twenty-nine (29) million dollars. The City of Raleigh has acquired the majority of the land necessary for the project and has committed over fifteen (15) million dollars. To complete the trail will require financial assistance from others. Construction is scheduled to begin in mid-2010 and most of the additional funding will be needed at that time. To complete this vision it will be in the time-frame proposed, possible additional sources of funding are identified in this report.

II. Introduction

A. Purpose of Report

The citizens of Raleigh have approved a Park Bond referendum that includes funding in the amount of \$13 million for the purpose of completing engineering drawings and construction of the NRT. The NRT is planned to extend from the Falls Lake Dam in north central Wake County to the Wake/Johnston County line in southeast Wake County. The trail will provide opportunities for a number of other jurisdictions to access and share in the recreation benefits of the trail. In addition, the Mountain to Sea Trail, a state-wide recreation trail extending from Murfreesboro to Manteo is planned to follow the NRT through this portion of Wake County.

This report summarizes the planning efforts of various agencies that have an interest in the NRT.

City of Raleigh
Wake County
Town of Knightdale
Town of Wake Forest
North Carolina Department of Transportation
North Carolina Department of Environment and Natural Resources

B. Project Background

In 1976, the Raleigh City Council adopted the Capital Area Greenway System (CAG). The plan included the streams, creeks and rivers within the Raleigh jurisdiction and beyond. The Neuse River corridor was a corridor included in the plan.

In 1996, the City completed a study of the Neuse River corridor from the Falls Lake Dam to Poole Road, the jurisdictional limits of Raleigh at that time. This study, titled the “Neuse River Master Recreation Plan” was adopted by the Raleigh City Council. The major objectives of the plan were to seek means to protect the full 100-year flood plain on each side of the Neuse River, acquire and develop upland areas as parks every two to three miles along the length of the corridor to provide expanded recreation opportunities, and construct a 10-foot wide asphalt path the full length of the corridor.

Since 1996, the City of Raleigh and other adjoining jurisdictions have been acquiring interests in property to protect the 100-year flood plain. The City has also acquired a number of parcels that are proposed to be

developed into parks. The City has acquired interest in over 1000 acres of land to meet the goals of the Neuse River Master Recreation Plan.

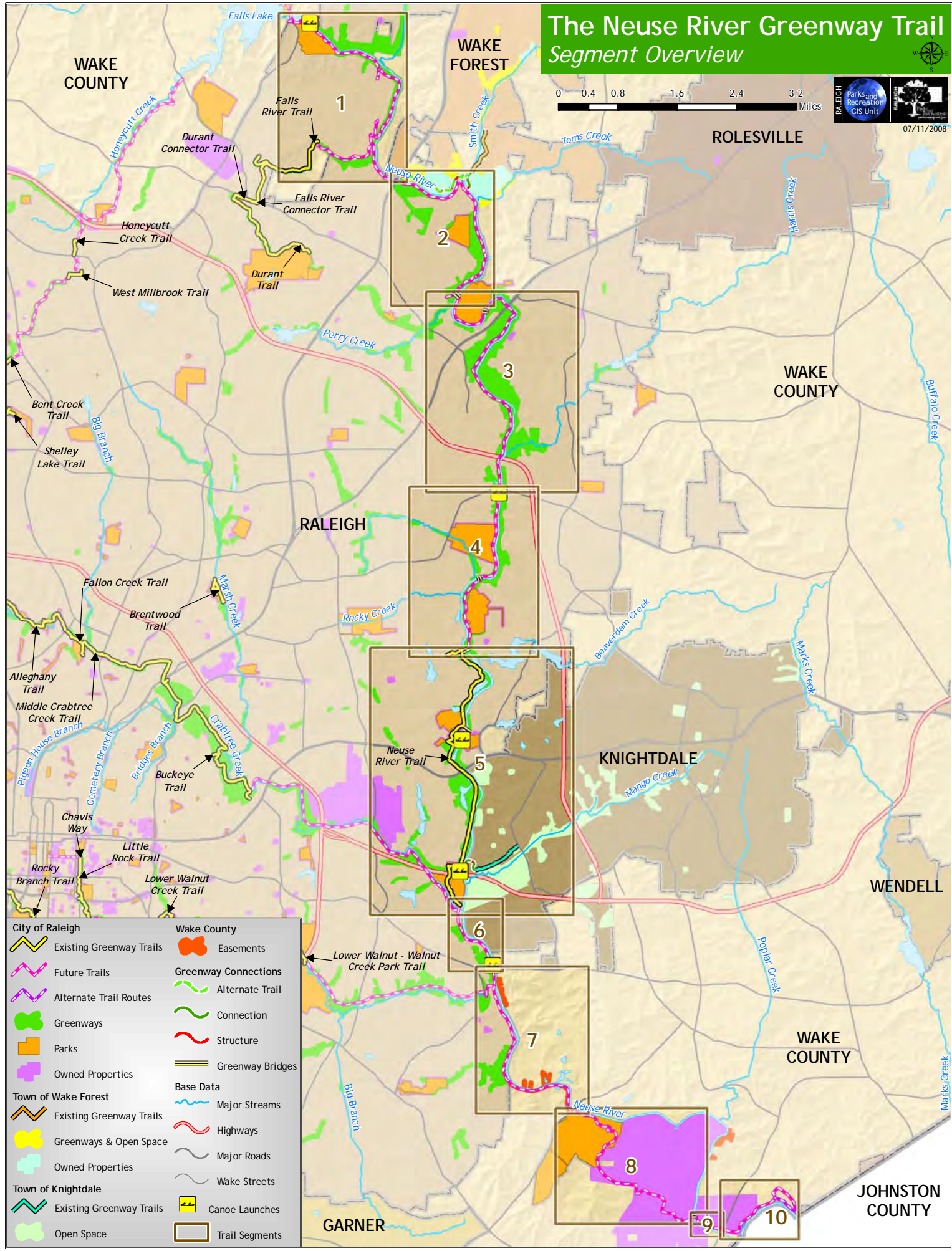
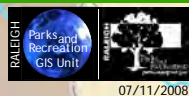
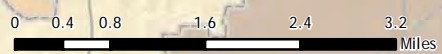
C. Planning Process

Representatives from the City of Raleigh, Wake County, Town of Knightdale, Town of Wake Forest, North Carolina Department of Transportation, and the North Carolina Department of Environment and Natural Resources Division of Parks and Recreation have met regularly to develop a preferred trail alignment, estimated costs, funding sources, and schedule. Alternatives have been evaluated and possible connections to other jurisdictions have been identified. Where feasible the trail alignment has been located on publicly owned parcels. Parcels needed to complete the trail have been identified.

The project has been separated into segments that would allow the project to be completed within four (4) years. It is assumed that permitting and design can be completed within two (2) years. Construction will have to be completed in segments of approximately 2 miles. The plan is organized upon these assumed segments.

The planning process has identified a preferred conceptual alignment. The final alignment of the trail may adjust slightly based upon detailed evaluations during the preparation of engineering drawings.

The Neuse River Greenway Trail Segment Overview



- | | |
|----------------------------|-----------------------------|
| City of Raleigh | Wake County |
| Existing Greenway Trails | Easements |
| Future Trails | Greenway Connections |
| Alternate Trail Routes | Alternate Trail |
| Greenways | Connection |
| Parks | Structure |
| Owned Properties | Greenway Bridges |
| Town of Wake Forest | Base Data |
| Existing Greenway Trails | Major Streams |
| Greenways & Open Space | Highways |
| Owned Properties | Major Roads |
| Town of Knightdale | Wake Streets |
| Existing Greenway Trails | Canoe Launches |
| Open Space | Trail Segments |

III. Analysis of Neuse River Trail Corridor, Segments and Connections

A. Overview of Neuse River Trail Corridor

The NRT is proposed to stretch along a 28 mile corridor beginning at Falls Lake Dam and ending at the Wake/Johnston County line. Six bridge crossings and connections to Falls River, Crabtree and Walnut Creek trails, the jurisdictional boundaries of Wake County, Johnston County and the Towns of Wake Forest and Knightdale are proposed.

In the most northern portion of the corridor, the trail follows the southwest bank of the Neuse River from Falls Dam to the bridge crossing that connects users to Horseshoe Farm. Along this stretch, just one quarter of a mile east of where Smith Creek meets the Neuse River, a connection to the jurisdictional boundary of Wake Forest is proposed. Smith Creek is Wake Forest's major north-south greenway corridor and primary focus for floodplain protection and development of greenway trails.

North of US 401 North/Louisburg Rd, from the east side of Horseshoe Farm the trail crosses back over to the southwest riverbank from the east side of Horseshoe Farm and continues on the southwest side until Buffalo Rd Athletic Park. At this point the trail crosses the Neuse to the east side passing through Alvis Farm and crossing back over to the west side south of Alvis Farm. At this location the trail will tie into three and a half (3 ½) miles of an existing City of Raleigh trail that passes through Milburnie Park West and extends to Anderson Point. A bridge connection to Milburnie Park East is proposed. At Anderson Point a trail connection along Mango (Mingo) Creek to the jurisdictional boundary of Knightdale is planned. From Anderson Point the trail parallels the west bank until Auburn Knightdale Rd where the trail traverses through City of Raleigh owned land west of the Neuse River Wastewater Treatment Plant (NRWWTP). This segment offers an experience not found in other sections of the corridor. From a TerraGator bridge operated by the NRWWTP, the trail follows the north side of the river to the Wake/Johnston County line.

This corridor affords a unique opportunity for long-distance, nature-oriented, off-road travel and serves as one leg of a regional Triangle greenway system. In addition, this segment operates as an important link to the state-wide Mountains-to-Sea Trail (MST), a 935 mile trail consisting of footpaths, roads, and state bike routes that stretches from the Tennessee State line to the Atlantic Ocean. In addition, the MST links to the famous north-south Appalachian Trail in the western mountains and

will also link to the proposed north-south, 2,600 mile East Coast Greenway in the central part of the state.

Current Land Use

The Neuse River Corridor lies within Raleigh's North, Northeast and Southeast Districts. The northern portion, that includes the trail segment from Falls Dam to New Bern Avenue, contains the largest segment of the corridor. A majority of the land along the Neuse within this segment is either undeveloped or in agricultural use. However, the Neuse and its associated recreational uses make the district attractive for residential development. Commercial use is in the vicinity of the US-64 Neuse River crossing and at the US 401 North and I-540 intersection.

The Southern portion of the corridor that includes the area from New Bern Avenue to the Wake/Johnston County line is bordered by City of Raleigh to the west and Knightdale and Wake County to the east. Wake County has designated two Urban Service Areas (USA) for areas extending east of the Neuse, which would eventually fall under the City's jurisdiction. The two predominant types of adjacent land use are vacant land and single family residential. The area however is substantially underdeveloped.

The City of Raleigh's primary land use controls that have been used to protect the banks of the river include the conservation buffer zoning district, flood plain development standards and the transfer of development density from flood plain areas to upland areas. Jurisdiction for land use regulations is divided between Wake County and the City of Raleigh and Towns of Wake Forest and Knightdale.

Environmental Systems

The Neuse River traverses two physiographic regions – the Piedmont Plateau and the Coastal Plain. The project area coincides with the meeting point known as the “fall line” – the transition between the two regions.

The Piedmont Plateau is typified by highly-erodible clay soils, rolling topography with broad ridges and sharply defined stream valleys, and low gradient streams composed of pools and occasional small rapids. Stream floodplains are relatively narrow and mostly forested.

The project area is generally underlain by relatively uniform bedrock which does not particularly affect the dynamics of the river. There are, however, several linear outcrops of harder rocks called diabase dikes, which run along and across the river in several places in the project area. These outcrops have caused the river to change course abruptly in places such as Riverbend. Rock outcrops have created rocky rapids in places in this otherwise flat-water corridor. The waters rocky slopes have fostered development of communities of plants more commonly found in the

mountains, such as mountain laurel, especially where the slopes face north or east. The flood plain is very narrow in these areas.

Within the project area the river is relatively uniform in width. Exceptions occur at the rapids below Falls Lake, the impoundment above Milburnie Dam and area below Milburnie Dam where the river is much wider. A large portion of the 100-year floodplain is frequently or permanently flooded and is categorized as wetlands. North of US 401 North the floodplain has been impacted by flood surges associated with intermittent discharges from Falls Lake Dam. The floodplain south of US 401 North contains a more typical cross-section.

The floodplain areas are generally forested in mixed hardwood species. Farming has occurred on small areas within the floodplain and larger areas have been timbered at times in the past. The wetness of the floodplain land in general and the frequency of flooding had limited development of the floodplain for agricultural or residential purposes in the past. Even where adjoining floodplain land was timbered or cleared, a wooded buffer remains along the river edge, resulting in a fringe of mature wetlands along much of the river. The nature of the forest communities varies depending on the relative height of the floodplain among other factors – oaks are more prevalent at higher and drier elevations where sycamores and river birches are more prevalent in lower areas.

Wetlands found within the project area include riverine and palustrine wetlands. Riverine wetlands are contained within the channel along the tributary streams and creeks and palustrine wetlands are found more in forested areas dominated by shrubs and emergent vegetation. A majority of the forested wetlands are dominated by broad-leaved deciduous trees such as Water Oak, Sycamore, River Birch, Green Ash and Red Maple. This type of flood plain is common along the corridor and is typically associated with the river flood plain. Forested wetlands that contain Bald Cypress and emergent wetlands dominated by cattail, pickerelweed and arrow arum are less commonly found within the corridor but do exist. Due to their relative scarcity these wetland communities offer an excellent opportunity for special interpretive experiences.

The extensive wetlands and large tracts of floodplain and upland forest also serve as an extensive wildlife habitat. This habitat is home to many species of birds and mammals. Special habitats do exist along the corridor including the Neuse crossing downstream of US-1, the Horseshoe Farm property and at the reach of the river from Beaverdam Lake to Poole Rd.

Cultural Resources

Records of use by Europeans within the Neuse River corridor date back to the early 1700's, with archaeological evidence by the Native Americans well before that time. Over time, bridges, ferries, mills and farmsteads have come and gone. Some evidence of this is still visible along the riverbanks.

Opportunities and Issues

Safety and Security

There are several safety and security issues that need to be addressed as part of the alignment and design details of the NRT. Mallinckrodt, a chemical manufacturing company located at the northwest corner of Capital Boulevard and Durant Road utilizes caustic chemicals as part of their production of pharmaceuticals. A fence is one of the safety features proposed along this property to ensure that the general public does not wander onto the site. If in the event that there is a chemical spill or release at the site warning signals along the trail will indicate such an incident.

In addition, there are safety and security issues concerning the close proximity of the public to areas of the Neuse River Wastewater Treatment Plant (NRWWTP). The NRWWTP is located on the south side of the Neuse River and east of Auburn Knightdale Road. In order to avoid any potential vandal, criminal, or saboteur activities, the City's Public Utilities prefers that the trail be placed outside the equipment areas of the plant. Malevolent activity to the plant's operations could create a public health hazard and cause environmental damage of the downstream receiving water.

Another area of safety concern is where the trail must cross railroads. The trail will cross under the CSX rail line at a point upstream from US-1. and The trail will also cross a rail line owned by Coastal Carolina (formerly owned by Norfolk Southern Railway) at a point north of US 264 in the northern section of Anderson Point Park.

Access & Trail Connections

Access points will be provided for local and regional use. The access points will include at a minimum, adequate parking, clear wayfinding information, and other trail related facilities such as trash cans, and benches.

Resource Protection

Within the project area undisturbed floodplain acts as a buffer that removes pollutants from the runoff before entering the river. The greenway corridor, along with other management measures, serves to protect the water quality of the river.













The City's Comprehensive Plan identifies the Neuse River as a major corridor of the Capital Area Greenway System,. City code requires dedication of a greenway easement of 150 feet measured from the river bank or the 100-year flood plain, whichever is less, whenever properties along the river are either subdivided or developed. A significant portion of the banks of the Neuse River have been placed in various forms of permanent protect, fee simple acquisition, greenway easements. The City, Wake County, Towns of Wake Forest and Knightdale continue to protect these sensitive areas which will also allow for the development of the NRT.

In addition, the City has rezoned several miles of the Neuse River floodplain as Conservation Buffer as part of recent annexation agreements. In recent years, landowners and developers along the Neuse have been willing to transfer their development densities to the uplands and preserve the floodplain in its natural state.

Every effort has been undertaken to limit impacts to the existing resources. Where feasible, bridges will be used to span tributaries of the Neuse. In cases where culverts are proposed headwalls will be installed to minimize the length of stream channel that will be impacted. Wetlands have been delineated and boardwalks will be built to span these areas.

B. Overview of Trail Segments and Connections

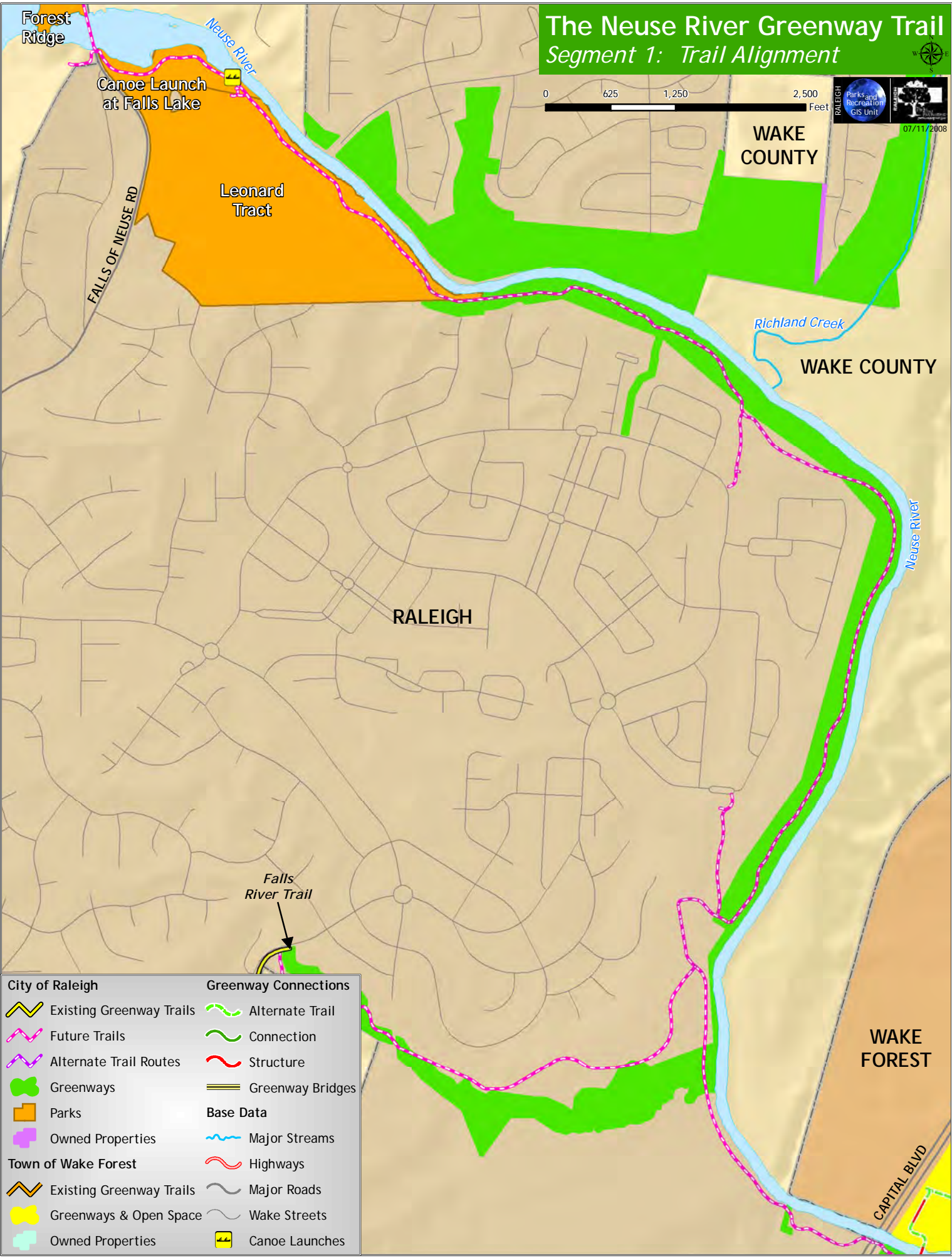
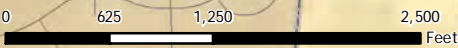
Segment 1: Falls of Neuse Rd to Capital Blvd

	Preferred Alignment	Alternative Alignment
Alignment	South and West Side of the Neuse River and along Abbott's Creek to Falls River Ave.	N/A
Length	4.91 miles	N/A
Points of Interest	<ul style="list-style-type: none">  Falls Dam and Falls Lake  Forest Ridge Park Connection  Connection to Falls Dam Canoe Launch  Future white water park  Falls Mill – Site of old Neuse Manufacturing Company  North Wake Landfill  Connections to Bedford and Falls River Communities  Blue Heron Rookery  Railroad Truss  Burlington Mill Smoke Stacks 	N/A
Infrastructure	<ul style="list-style-type: none">  5 parking areas (20 spaces each) - Falls Lake, Falls River Avenue, Settlein Lane, Dunn Rd, west side Capital Blvd  Boardwalks 	N/A
Acquisition	4 parcels	N/A
Estimated Costs*	\$4,272,917	N/A
Available Funds*	[\$2,214,000]	N/A
Funds Needed*	\$2,058,517	N/A

*Estimated costs and funding are described in detail in the implementation section.

The Neuse River Greenway Trail

Segment 1: Trail Alignment

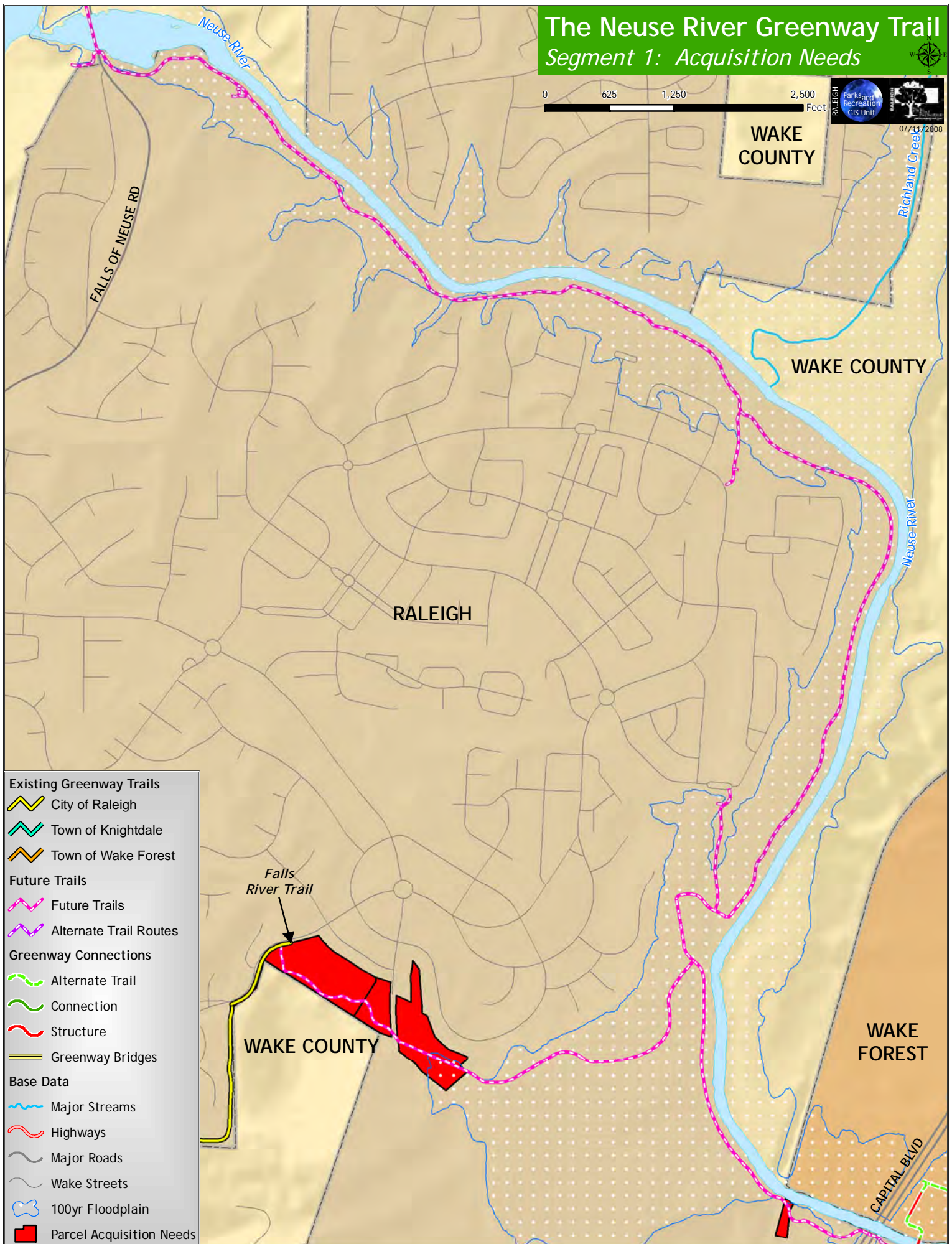


- | | | | |
|----------------------------|--------------------------|-----------------------------|------------------|
| City of Raleigh | | Greenway Connections | |
| | Existing Greenway Trails | | Alternate Trail |
| | Future Trails | | Connection |
| | Alternate Trail Routes | | Structure |
| | Greenways | | Greenway Bridges |
| | Parks | Base Data | |
| | Owned Properties | | Major Streams |
| Town of Wake Forest | | | Highways |
| | Existing Greenway Trails | | Major Roads |
| | Greenways & Open Space | | Wake Streets |
| | Owned Properties | | Canoe Launches |

The Neuse River Greenway Trail

Segment 1: Acquisition Needs

0 625 1,250 2,500 Feet



A. Alignment Characteristics

Preferred Alignment

There is only one alternative for the segment of the NRT in the segment from Falls Lake Dam to Capital Boulevard. This segment is located on the southwest side of the river. There were some minor adjustments that were made in the planning of this segment to address issues of longitudinal grade near Capital Boulevard.

Within this segment a connection to the Falls River Trail along Abbott's Creek is proposed.

Alternative Alignment

There are no alternative alignments for this segment.

Short Term Alignments

Plans for the segment of the NRT from Falls Lake Dam to Capital Boulevard have been completed. The short term alignment options are related to: 1) the New Falls of the Neuse Road/Bridge and 2) the Falls of Neuse Bridge replacement.

1. The alignment of the NRT at the New Falls of the Neuse Road will be located outside of the stream buffer of the Neuse River. The Falls of Neuse Road Project will impact the stream buffer and the permit will allow for the trail to be relocated to the buffer at that time.
2. The shoulder under the existing Falls of Neuse bridge is narrow and the adjacent slopes and stream banks dictate the short term alignment of the trail. The replacement bridge will be longer and there will be ample shoulder space for the realigned trail and also the radii for the approaches will be larger creating a safer trail condition.

B. Points of Interest

Recreational Facilities and Open Space

The City currently operates the Falls Canoe Launch just on the east side of Falls of Neuse Road. The planned NRT project proposes to realign the entrance to this facility to provide a better line of sight for the entry and will also pave the parking lot. The trail will connect to the parking lot and pass directly past the canoe launch.

The City of Raleigh has acquired an +/- 88 acre parcel of land located immediately east of Falls of Neuse Road adjacent to the Falls Canoe Launch site. The parcel is intended to provide active recreation facilities in the future.

Forest Ridge Park is located north of the Neuse River on a peninsula of Falls Lake. Plans are being completed for the first phase of improvements at this park that is intended to provide adventure programming elements. In the future this park will be connected to the NRT by a greenway that will cross the Neuse on the Falls of Neuse replacement bridge project.

This segment of the trail also connects to the North Wake Landfill site. The Master Plan for the site includes a school and future park and open space elements.

Natural Resources

Natural Resources located in the vicinity of Segment 1 of the NRT include pasture/grassland near Falls of Neuse Road. The remainder of the trail is located within a hardwood forest. There is a blue heron rookery located near the confluence of Abbotts Creek and the Neuse River. The trail will be located approximately 300' from this site to provide a buffer between the birds and the general public.

Much of the trail is bisected by tributaries with steep slopes and significant topography. This requires the installation of bridges to cross these deep channels and offers the opportunity for views in both directions along these channels.

Cultural Resources

The US Army Corps of Engineers operates the Falls Lake Project-a water reservoir at the northern end of this segment of the NRT. Facilities at this location include the dam, the spillway, a restroom facility and picnic facilities. In the future, a white water park is planned at this location.

C. Infrastructure

Bridges

There are no bridges proposed within this segment

Pedestrian Crossings

There are no pedestrian crossings proposed within this segment.

Railroad Crossings

There is one (1) railroad crossing in Segment 1. There is adequate width of shoulder under the railroad trestle and adequate height between the shoulder and trestle to allow for the construction of the trail. The railroad will require a protective cover over the trail to protect patrons from falling debris.





Parking Areas

Five (5) parking areas consisting of 20 spaces each are proposed along Segment 1. The parking areas are planned at Falls Lake, Falls River Avenue, Settlein Lane, Dunn Rd, and the west side Capital Blvd on the south side of Abbott's Creek.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

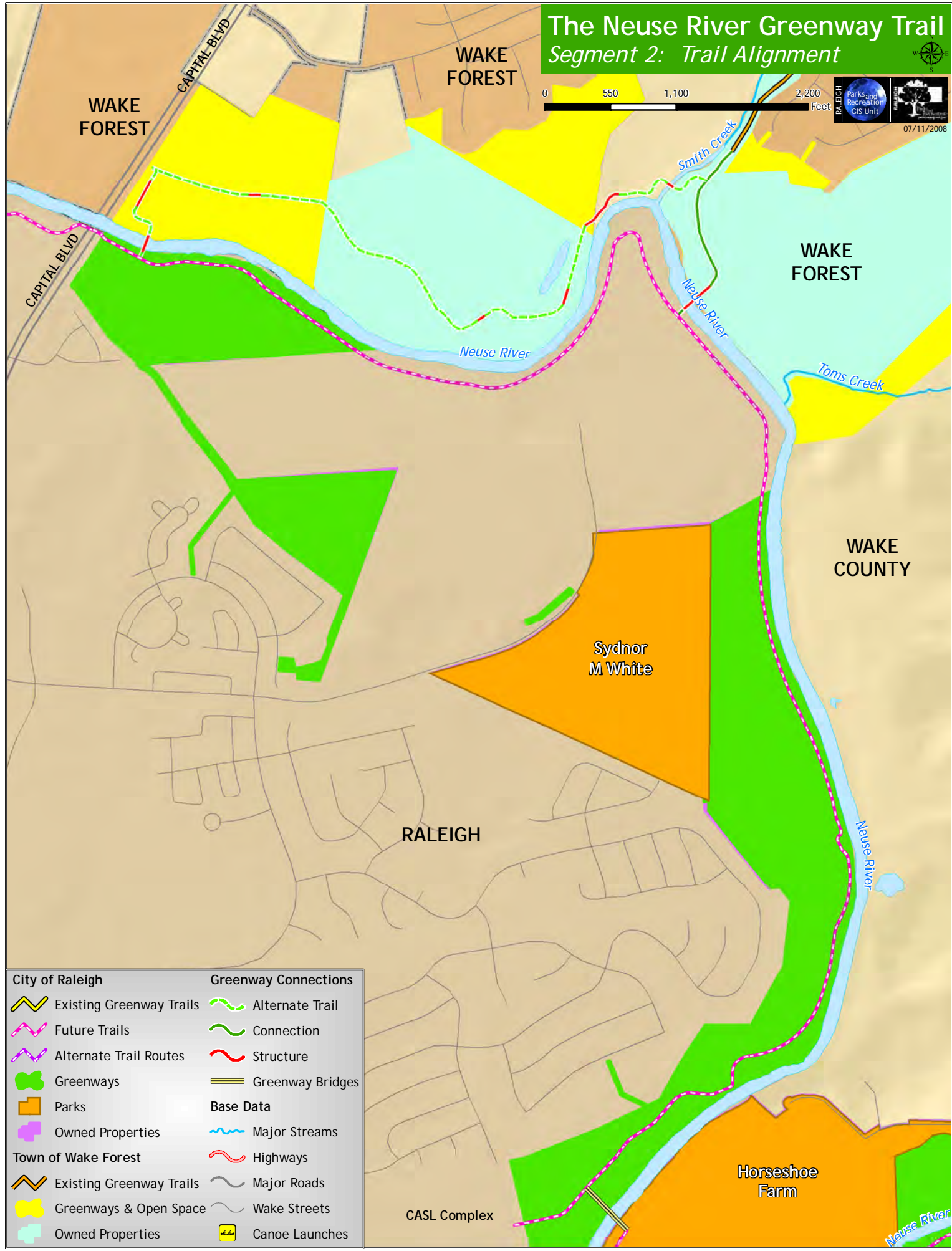
Segment 2: Capital Blvd to CASL Complex

	Preferred Alignment	Alternative Alignment
Alignment	The preferred alignment of this segment is on the southwest side of the Neuse River connecting to Sydnor White Park and CASL Soccer Complex	North side of Neuse
Length	2.97 miles	2.97 miles
Points of Interest	 Bottom land forest  Mature Ash trees	N/A
Infrastructure	 1 parking area (20 spaces) - Sydnor White Park site  Boardwalks	2 bridges
Acquisition	1 parcel (Raynor Tract)	N/A
Estimated Costs*	\$1,949,519	N/A
Available Funds*	[\$150,000]	N/A
Needed Funds*	\$1,799,519	N/A

***Estimated costs and funding are described in detail in the implementation section.**

The Neuse River Greenway Trail

Segment 2: Trail Alignment



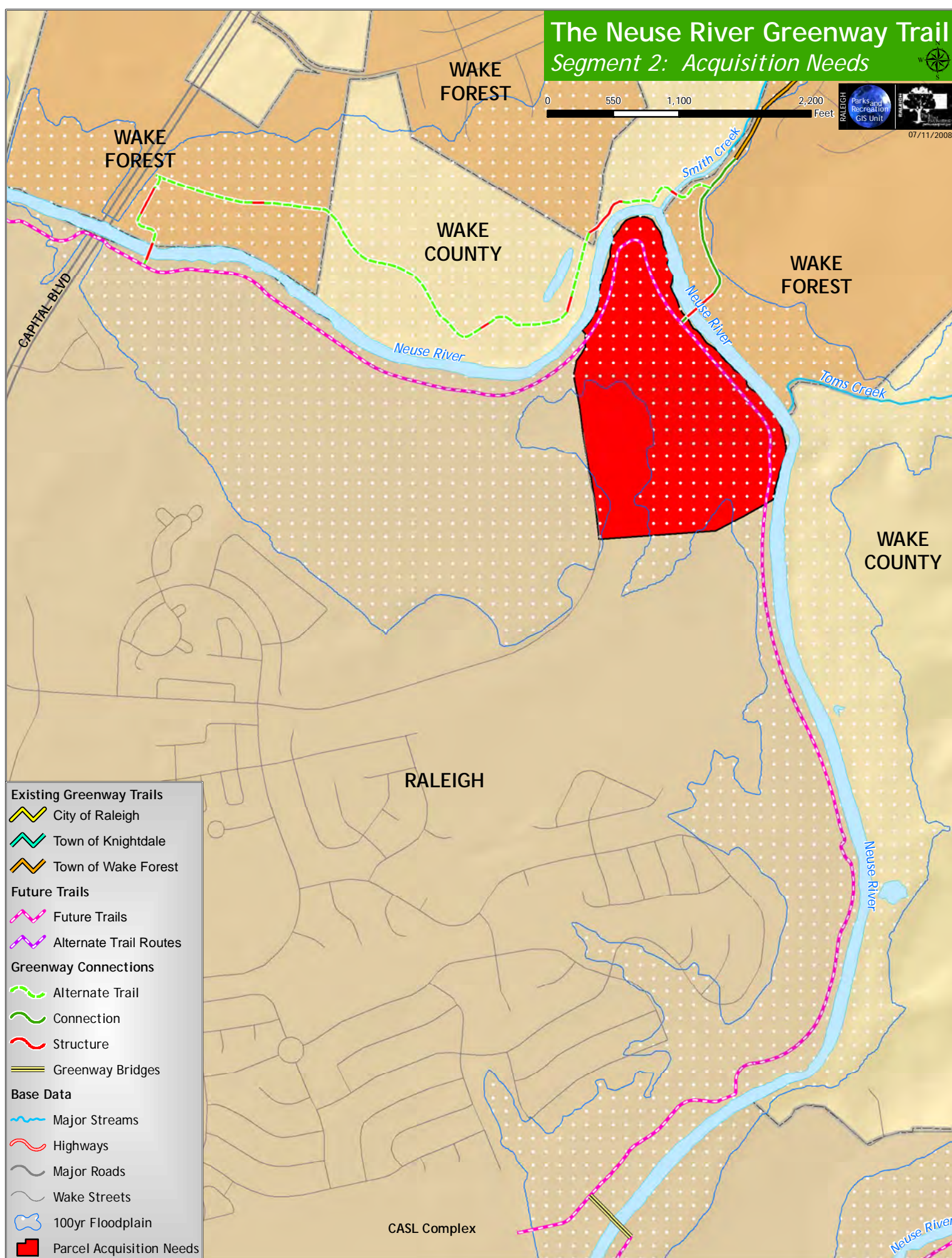
- | | |
|----------------------------|-----------------------------|
| City of Raleigh | Greenway Connections |
| Existing Greenway Trails | Alternate Trail |
| Future Trails | Connection |
| Alternate Trail Routes | Structure |
| Greenways | Greenway Bridges |
| Parks | Base Data |
| Owned Properties | Major Streams |
| Town of Wake Forest | Highways |
| Existing Greenway Trails | Major Roads |
| Greenways & Open Space | Wake Streets |
| Owned Properties | Canoe Launches |

The Neuse River Greenway Trail

Segment 2: Acquisition Needs



0 550 1,100 2,200 Feet



- Existing Greenway Trails**
 - City of Raleigh
 - Town of Knightdale
 - Town of Wake Forest
- Future Trails**
 - Future Trails
 - Alternate Trail Routes
- Greenway Connections**
 - Alternate Trail
 - Connection
 - Structure
 - Greenway Bridges
- Base Data**
 - Major Streams
 - Highways
 - Major Roads
 - Wake Streets
 - 100yr Floodplain
 - Parcel Acquisition Needs

A. Alignment Characteristics

Preferred Alignment

The preferred alignment of Segment 2 of the NRT is located on the southwest side of the Neuse River. The City has acquired all but one parcel along this route. The preferred route passes through a scenic section of quality bottomland forest and a stand of mature ash. The geomorphology sections that a remnant oxbow lake is also located in this area.

Alternative Alignment

One alternative was considered on the north side of the Neuse. This alternative requires two (2) bridges over the Neuse and because of cost was eliminated. This route has become an option for Wake Forest to add parking at Capital Boulevard to connect to the Smith Creek Trail. This will be discussed in the following section.

Short Term Alignments

There is no need to provide a short term alignment

B. Points of Interest

Recreational Facilities and Open Space

The Sydnor White Park site is located along this route. This park is planned to provide community park facilities. Plans for a community center are now being prepared.

The CASL Soccer Complex is also located along this route. There are multiple soccer fields located at this site.

Natural Resources

The section of the Neuse River east of Capital Boulevard contains quality bottomland and swamp forests. The majority of this area is classified as mature Piedmont/Mountain Bottomland Forest. On the west side, a swamp forest is present in what probably represents a remnant oxbow of the Neuse River. Numerous sloughs are found throughout the area that potentially represents important breeding sites for amphibious species. A section that is located in a sharp hairbend of the river contains a copse of large mature ash trees.

Cultural Resources

There are no known cultural resources known in this segment.

C. Infrastructure

Bridges

There are no bridges proposed for this segment.

Pedestrian Crossings

There are no pedestrian crossings proposed for this segment.

Railroad Crossings

There are no railroad crossings proposed for this segment.






Parking Areas

One (1) parking area consisting of twenty (20) spaces is proposed at the Sydnor White Park site.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

Connection A: Wake Forest Connection

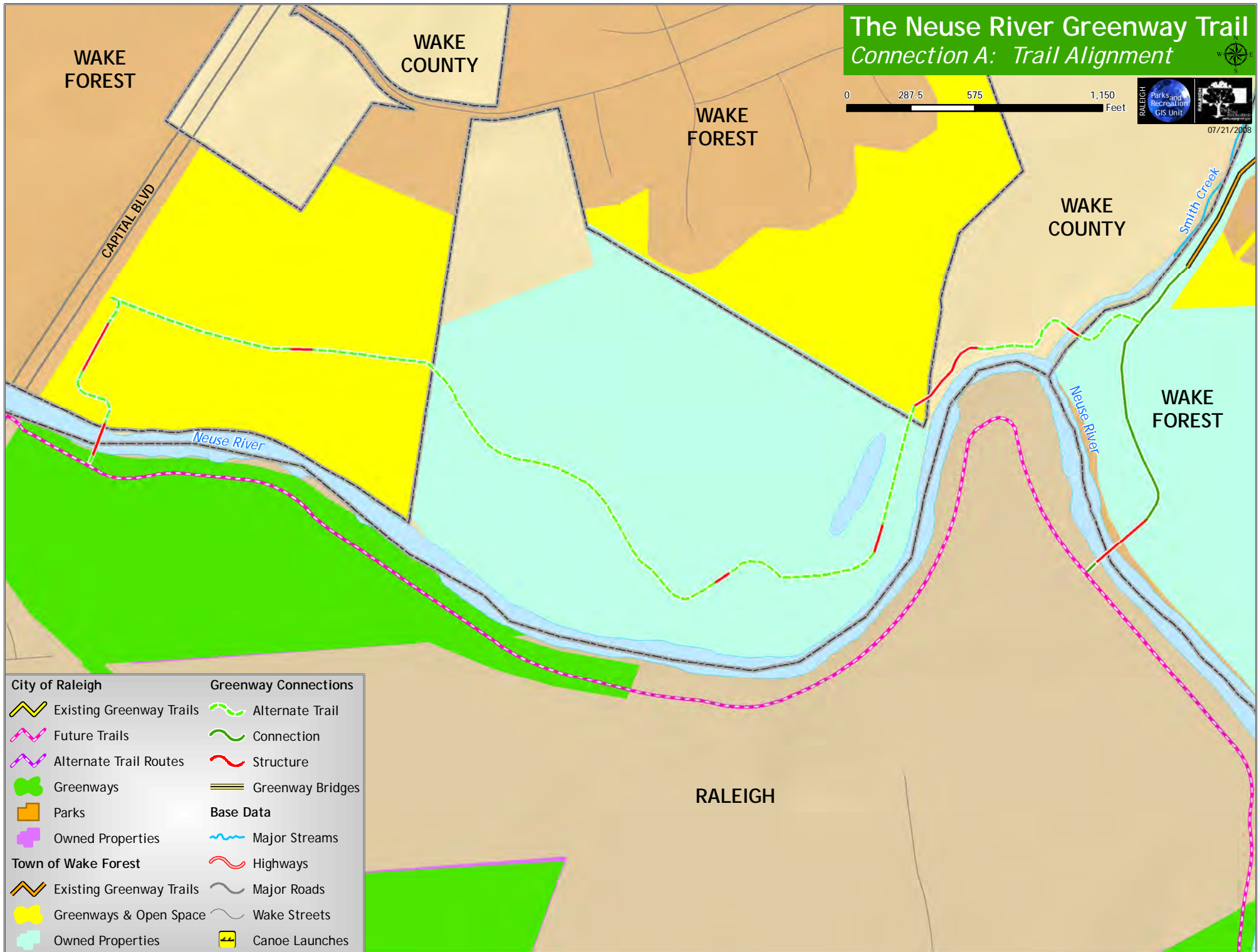
	Preferred Alignment	Alternative Alignment Option 1	Alternative Alignment Option 2
Alignment	The connection from the current end of the Smith Creek trail will continue south on the east side of the creek and cross the Neuse to connect to the NRT	<p>Parking Alternative - Smith Creek to Capital</p> <p>The preferred route to a parking area is located along the Neuse between Smith Creek and Capital Blvd</p>	<p>Parking Alternative Across Neuse</p> <p>This alternative connects a proposed parking area north of the Neuse with the NRT via a bridge over the Neuse</p>
Length	0.30 miles	1.12 miles	0.20 miles
Points of Interest	 Bottomland Forest	 Bottom land forest	 Bottom land forest
Infrastructure	 One bridge over Neuse	 Parking at Capital Blvd.	Parking at Capital Blvd.
Acquisition	N/A	One parcel	N/A
Estimated Costs*	\$1,596,319	\$1,505,537	\$1,478,215
Available Funds*	\$0	\$0	\$0
Needed Funds*	\$1,596,319	\$1,505,537	\$1,478,215

*Estimated costs and funding are described in detail in the implementation section.

The Neuse River Greenway Trail

Connection A: Trail Alignment

0 287.5 575 1,150 Feet



City of Raleigh

Existing Greenway Trails

Future Trails

Alternate Trail Routes

Greenways

Parks

Owned Properties

Town of Wake Forest

Existing Greenway Trails

Greenways & Open Space

Owned Properties

Greenway Connections

Alternate Trail

Connection

Structure

Greenway Bridges

Base Data

Major Streams

Highways

Major Roads

Wake Streets

Canoe Launches

A. Alignment Characteristics

Preferred Alignment

The preferred route of the connection from the existing Smith Creek trail to the NRT is proposed to parallel the creek and cross the Neuse. There will be a short length of boardwalk.

Alternative Alignment

Two alternatives have been evaluated to provide parking for the Smith Creek Trail. The first is a route that is located on the north side of the Neuse connecting from the current terminus of the Smith Creek trail to Capital Boulevard. This route crosses Smith Creek and also several sections of sensitive areas. One parcel of land is needed to allow this trail to be constructed.

The second alternative would connect the proposed parking area on the north side of the Neuse directly across the Neuse to the NRT. This route requires a bridge over the Neuse. Because of the cost of this bridge, this alternative was eliminated.

Short Term Alignments

There are no short term alignments for this connection.

B. Points of Interest

Recreational Facilities and Open Space

The Town of Wake Forest owns over 260 acres of land on the north side of the Neuse River between Capital Boulevard and the Smith Creek Waste Water Treatment Plant. Wake Forest intends to keep the bulk of the property in its natural state for passive recreation, protection of water quality and habitat preservation. Wake Forest's plans of record for this land include development of asphalt trails, restroom facilities, and parking to serve a trail head.

Natural Resources

The section of the Neuse River east of Capital Boulevard contains quality bottomland and swamp forests. The majority of this area is classified as mature Piedmont/Mountain Bottomland Forest. On the west side, a swamp forest is present in what probably represents a remnant oxbow of the Neuse River. Numerous sloughs are found throughout the area that potentially represents important

breeding sites for amphibious species. The area on the north side of the river also contains extensive wetland areas, including a large wetland lake.

Cultural Resources

There are no cultural resources for this connection.

C. Infrastructure

Bridges

One (1) bridge is required to cross the Neuse. Estimated length is 300 feet at an estimated cost of approximately \$1,000,000.

Pedestrian Crossings

There are no pedestrian crossings for this segment.

Railroad Crossings

There are no railroad crossings for this connection.








Parking Areas

There are is no parking proposed for the preferred connection.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

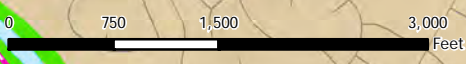
Segment 3: CASL Complex to Buffalo Rd

	Preferred Alignment	Alternative Alignment
Alignment	From the CASL Complex, located at 7700 Perry Creek Road, the trail will cross the Neuse River into Horseshoe Farm Park, follow the river and cross the Neuse River again at the southeast end of the park. From here, the trail follows the west and south sides of the river to Buffalo Road.	N/A
Length	4.23 miles	N/A
Amenities	 CASL Complex  Horseshoe Farm Park  Wake Tech Northeast Campus  Black Walnut Forest along the river south of Wake Tech	N/A
Infrastructure	 Bridge between CASL and Horseshoe Farm Park  Bridge between Horseshoe Farm Park and the southeast side of the river.  3 parking areas (20 spaces each) – Horseshoe Farm, vicinity of Southall Commons and north of I-540	N/A
Acquisition	0 parcels	N/A
Estimated Costs*	\$4,838,597	N/A
Available Funds*	\$0	N/A
Needed Funds*	\$4,838,597	N/A

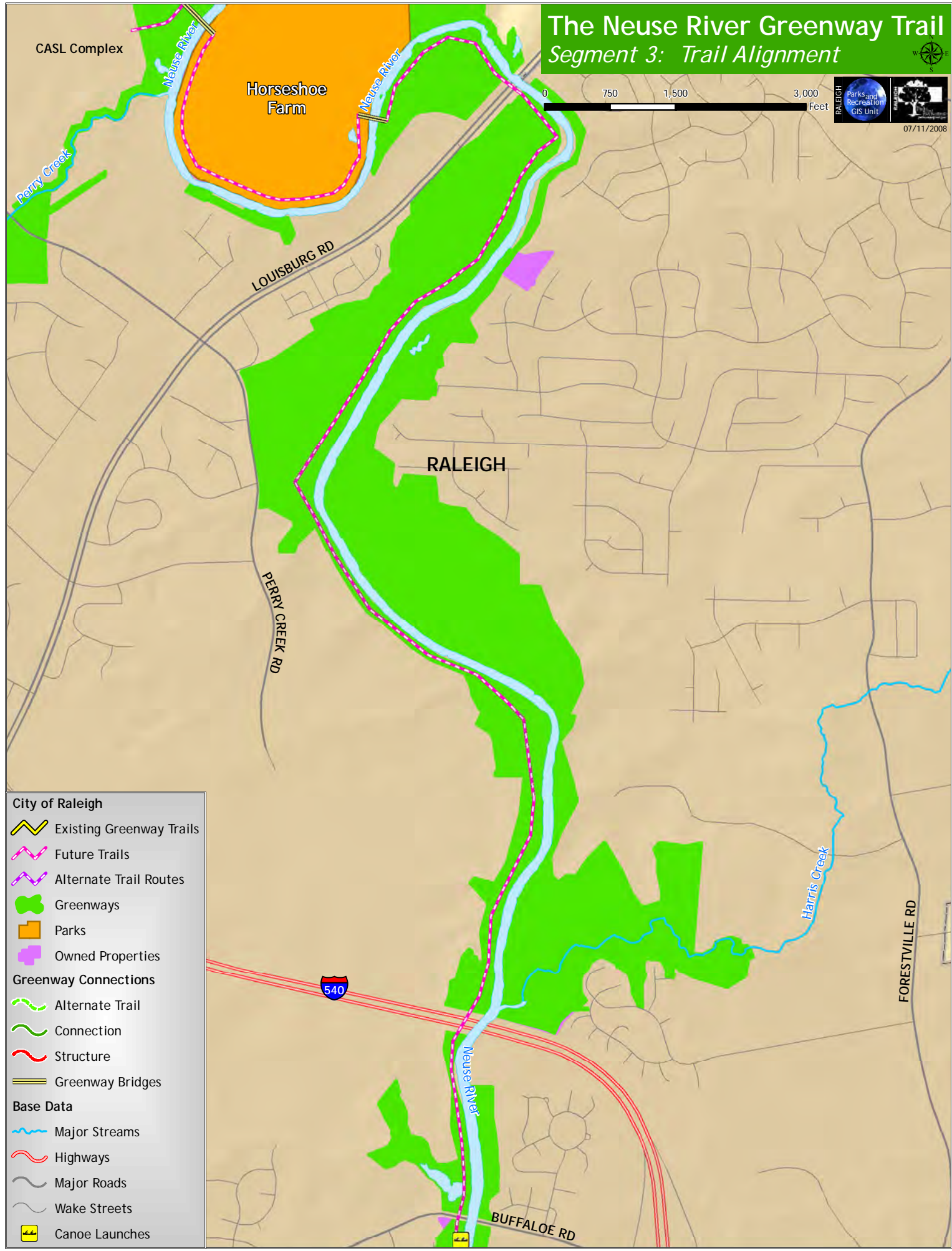
*Estimated costs and funding are described in detail in the implementation section.

The Neuse River Greenway Trail

Segment 3: Trail Alignment



07/11/2008

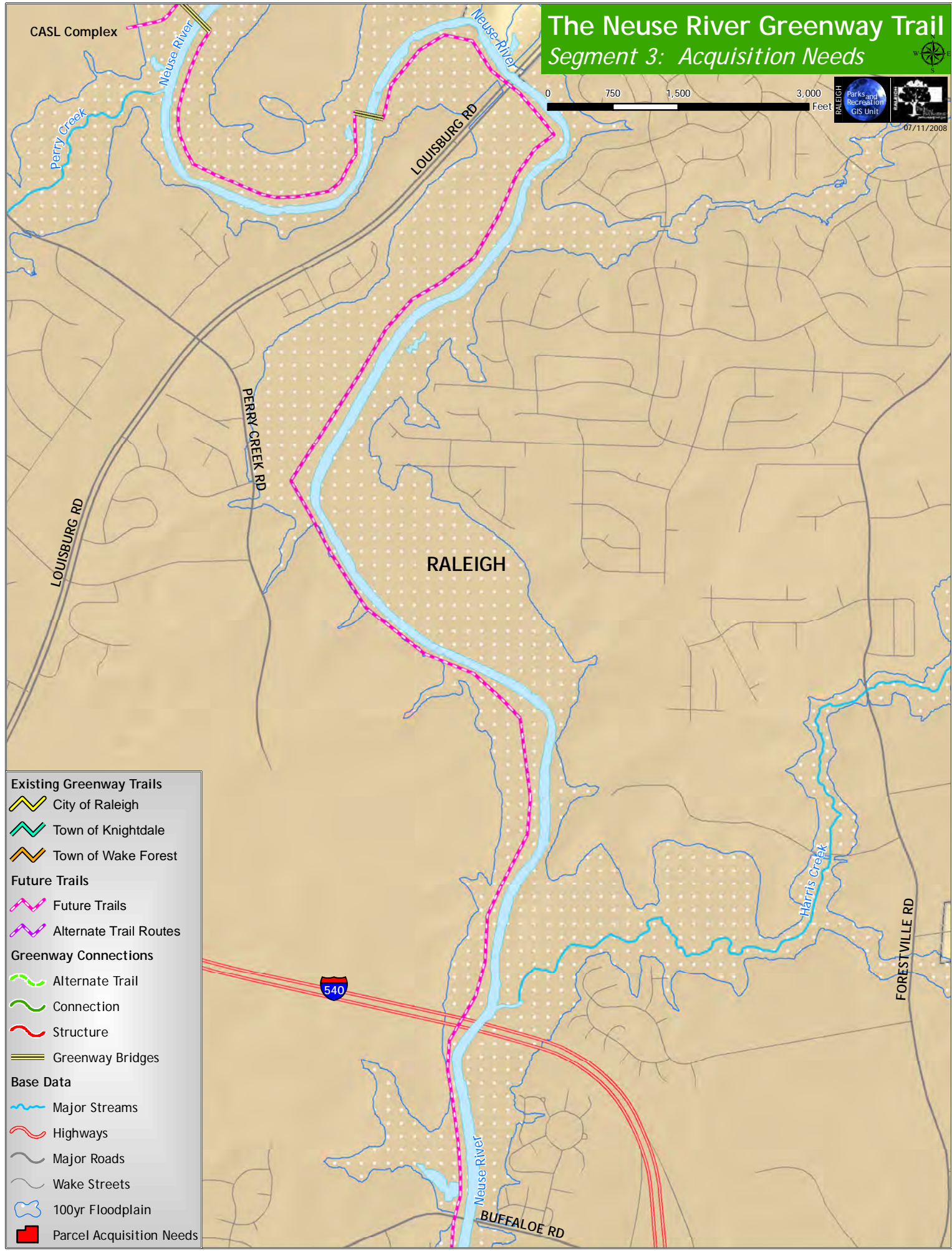


- City of Raleigh**
- Existing Greenway Trails
 - Future Trails
 - Alternate Trail Routes
 - Greenways
 - Parks
 - Owned Properties
- Greenway Connections**
- Alternate Trail
 - Connection
 - Structure
 - Greenway Bridges
- Base Data**
- Major Streams
 - Highways
 - Major Roads
 - Wake Streets
 - Canoe Launches

The Neuse River Greenway Trail

Segment 3: Acquisition Needs

0 750 1,500 3,000 Feet



- Existing Greenway Trails**
 - City of Raleigh
 - Town of Knightdale
 - Town of Wake Forest
- Future Trails**
 - Future Trails
 - Alternate Trail Routes
- Greenway Connections**
 - Alternate Trail
 - Connection
 - Structure
 - Greenway Bridges
- Base Data**
 - Major Streams
 - Highways
 - Major Roads
 - Wake Streets
 - 100yr Floodplain
 - Parcel Acquisition Needs

A. Alignment Characteristics

Preferred Alignment

From the CASL Complex, located at 7700 Perry Creek Road, the trail alignment crosses the Neuse River into Horseshoe Farm Park, follows the river and crosses the Neuse River again at the southeast end of the park. From here, the trail follows the west and south sides of the river along existing greenway property to Buffalo Road.

Access points for this trail segment:

- Existing parking lot at Horseshoe Farm
- A small parking lot between the Southall Commons mobile home community and the Neuse River
- A small parking lot south of the Wake Tech Northeast campus on the 5401 development property which is a large mixed-use development located north of I-540 and between the Neuse River and US 401 North.
- Neighborhood pedestrian connectors will be included where appropriate

Alternative Alignment

There are no alternative alignments for this segment.

Short Term Alignments

There are no short term alignments for this segment.

C. Points of Interest

Recreational Facilities and Open Space

Along this segment one finds the CASL soccer complex, consisting of approximately 118 acres and Horseshoe Farm Park, consisting of approximately 150 acres in addition to large tracts of greenway property along the west side of the Neuse River.

Natural Resources

At Horseshoe Farm Park the upland fields have been farmed as crops or pasture for generations and now offer a unique grassland/woodland boundary, supporting many bird species. The floodplain forests at Horseshoe Farm adjacent to the Neuse River have been designated by the State of North Carolina as a

Significant Natural Heritage Area due to the presence of bottom land hardwood forests, wetlands, and a system of natural river levees.

On the 5401 development property, a large mixed use development located south of Wake Tech Northeast Campus, I-540, US 401 North, and the Neuse River, there is a unique Black Walnut Forest along the Neuse River.

Cultural Resources

There are no cultural resources within this segment.

C. Infrastructure

Bridges

There are two (2) major bridges planned for this trail segment. These bridges connect Horseshoe Farm Park both to the CASL soccer complex on the northwest side of the river and to the southeast side of the Neuse.

Pedestrian Crossings

There are no pedestrian crossings proposed within this segment.

Railroad Crossings

There are no railroad crossings proposed within this segment.






Parking Areas

Three (3) parking areas consisting of twenty (20) spaces each are proposed at Horseshoe Farm, the vicinity of Southall Commons and north of I-540

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

Segment 4: Buffalo Rd to Skycrest Dr

	Preferred Alignment	Alternative Alignment
Alignment	Beginning at the Buffalo Road underpass, the trail continues on the west side of the Neuse River past the Buffalo Road canoe launch, through Buffalo Road Athletic Park, crosses the Neuse to the east side just north of the Alvis Farm property and continues to the future Skycrest Drive extension.	N/A
Length	2.03 miles	N/A
Amenities	 Buffalo Road canoe launch  Buffalo Road Athletic Park  Alvis Farm	N/A
Infrastructure	 Bridge crossing of Neuse River north of Alvis Farm, south of Buffalo Road Athletic Park  1 parking area (20 spaces) in vicinity of Skycrest Drive	N/A
Acquisition	N/A	N/A
Estimated Costs*	\$2,625,634	N/A
Available Funds*	\$0	N/A
Needed Funds*	\$2,625,634	N/A

*Estimated costs and funding are described in detail in the implementation section.

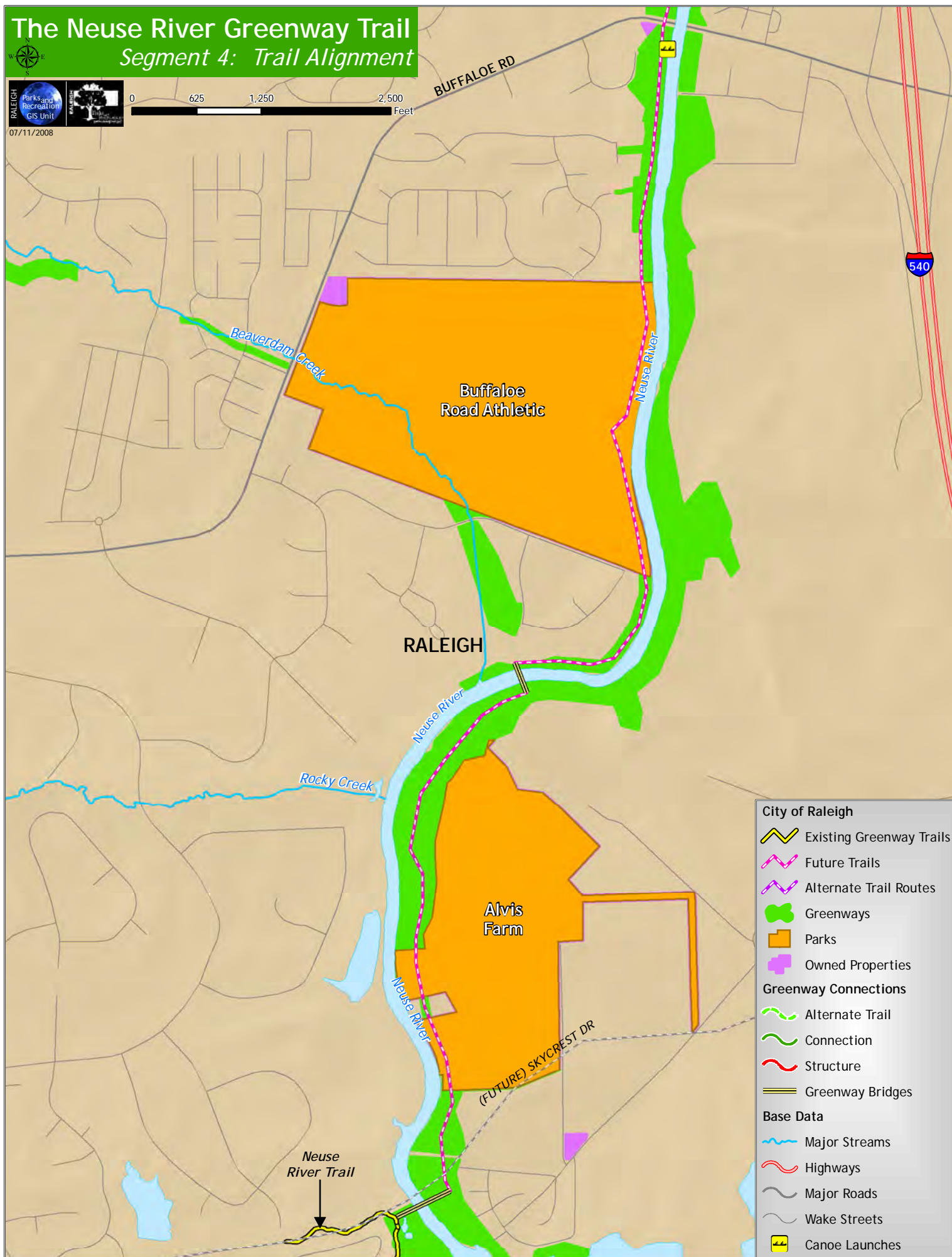
The Neuse River Greenway Trail

Segment 4: Trail Alignment



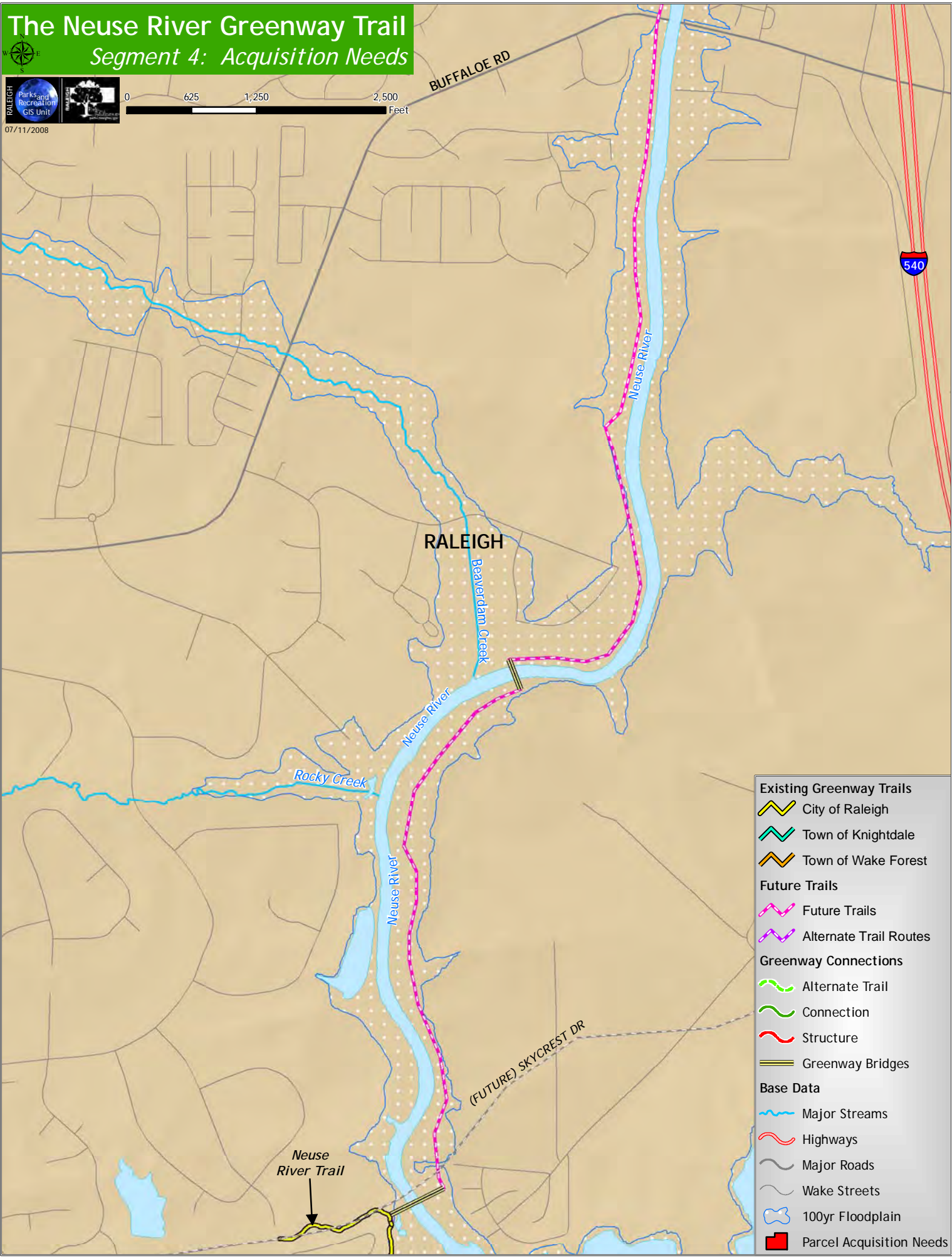
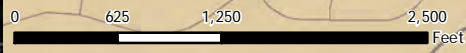
07/11/2008

0 625 1,250 2,500 Feet



The Neuse River Greenway Trail

Segment 4: Acquisition Needs



- Existing Greenway Trails**
 - City of Raleigh
 - Town of Knightdale
 - Town of Wake Forest
- Future Trails**
 - Future Trails
 - Alternate Trail Routes
- Greenway Connections**
 - Alternate Trail
 - Connection
 - Structure
 - Greenway Bridges
- Base Data**
 - Major Streams
 - Highways
 - Major Roads
 - Wake Streets
 - 100yr Floodplain
 - Parcel Acquisition Needs

A. Alignment Characteristics

Preferred Alignment

Beginning at the Buffaloe Road underpass, the trail continues on the west side of the Neuse River past the Buffaloe Road canoe launch, through Buffaloe Road Athletic Park, crosses the Neuse to the east side just north of the Alvis Farm property and continues to the future Skycrest Drive extension.

Access points for this trail segment:

- Buffaloe Road canoe launch
- Existing parking lot at Buffaloe Road Athletic Park
- Neighborhood pedestrian connectors will be included where appropriate

Alternative Alignment

There are no alternative alignments proposed within this segment.

Short Term Alignments

There are no short term alignments proposed within this segment.

D. Points of Interest

Recreational Facilities and Open Space

Located just south of Buffaloe Road, where it crosses the Neuse River, a canoe launch with associated parking is found. South of the canoe launch is Buffaloe Road Athletic Park, a 165-acre athletic facility which offers lighted ball fields, a playground, and paved walking paths.

Natural Resources

There are no cultural resources within this segment.

Cultural Resources

There are no cultural resources within this segment.

C. Infrastructure

Bridges

One (1) bridge is planned for this segment where the trail crosses the Neuse River to the southeast side of the watercourse just south of Buffalo Road Athletic Park and north of the Alvis Farm property.

Pedestrian Crossings

There are no pedestrian crossings within this segment.

Railroad Crossings

There are no railroad crossing within this segment.









Parking Areas

One (1) parking area consisting of twenty (20) parking spaces is proposed in the vicinity of Skycrest Dr.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

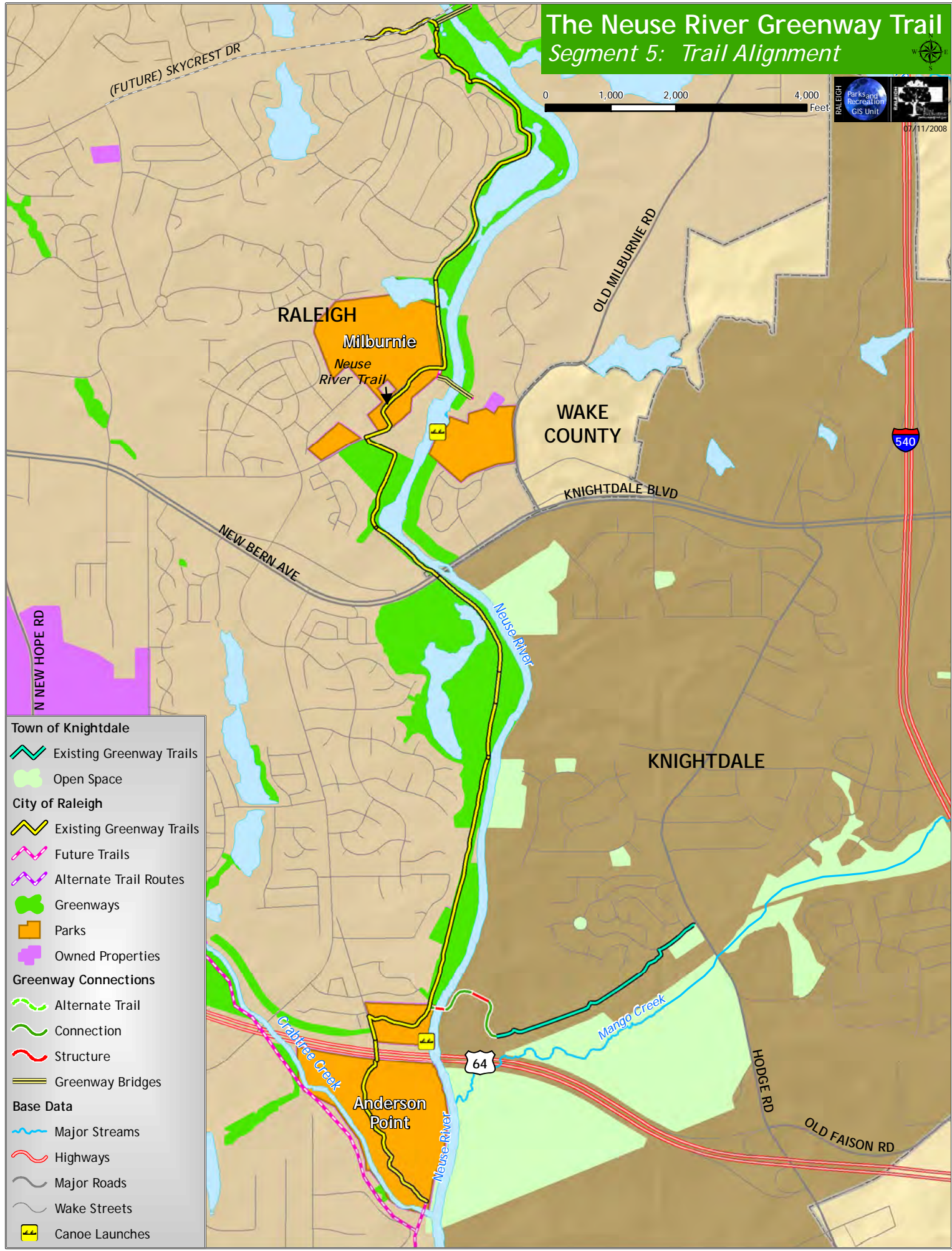
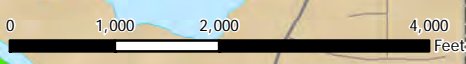
Segment 5: Skycrest Drive to Crabtree Creek

	Preferred Alignment	Alternative Alignment
Alignment	West side of the Neuse River beginning at future Skycrest Dr crossing, through Milburnie West Park down to Anderson Point Park via Anderson Point Drive.	West side of the Neuse River beginning at future Skycrest Dr crossing, through Milburnie West Park down to Anderson Point Park via the Neuse River banks.
Length	4.20 miles	4.20 miles
Amenities	<ul style="list-style-type: none">  Milburnie East Canoe Launch  Future Milburnie Park  Anderson Point Park and Canoe Launch 	<ul style="list-style-type: none">  Milburnie East Canoe Launch  Future Milburnie Park  Anderson Point Park and Canoe Launch
Infrastructure	<ul style="list-style-type: none">  Future Skycrest Dr bridge over Neuse River  Future bridge connecting Milburnie East and West  Existing NC DOT bridge crossing of Highway 64 into Anderson Point Park  2 parking areas (20 spaces each) – North of Milburnie West, at Milburnie East 	<ul style="list-style-type: none">  Future Skycrest Dr bridge over Neuse River  Future bridge connecting Milburnie East and West  Railroad underpass at north end of Anderson Point Park
Estimated Costs *	\$2,806,969	\$2,806,969
Available Funds*	\$0	\$0
Needed Funds*	\$2,806,969	\$2,806,969

***Estimated costs and funding are described in detail in the implementation section.**

The Neuse River Greenway Trail

Segment 5: Trail Alignment

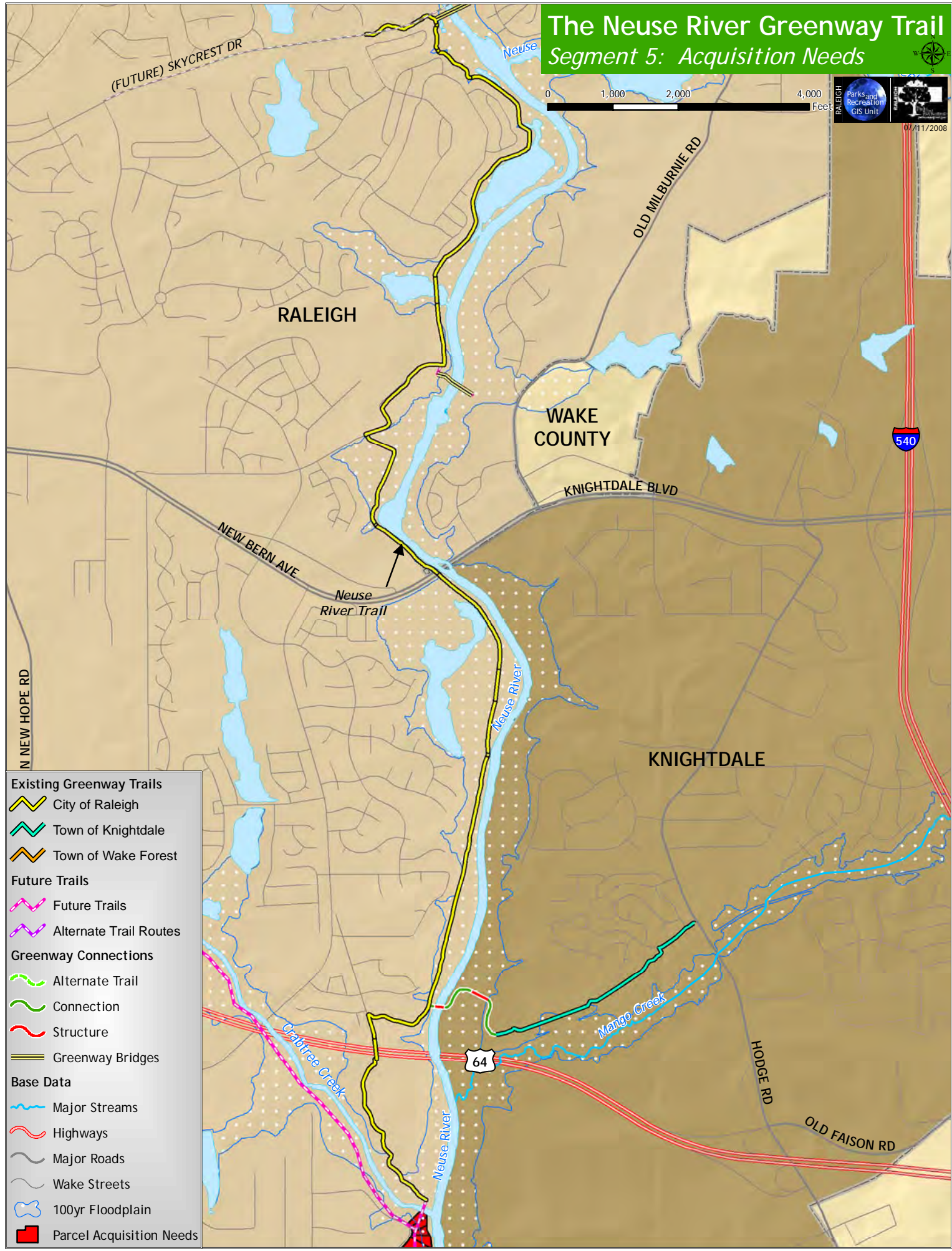


- Town of Knightdale**
 - Existing Greenway Trails
 - Open Space
- City of Raleigh**
 - Existing Greenway Trails
 - Future Trails
 - Alternate Trail Routes
 - Greenways
 - Parks
 - Owned Properties
- Greenway Connections**
 - Alternate Trail
 - Connection
 - Structure
 - Greenway Bridges
- Base Data**
 - Major Streams
 - Highways
 - Major Roads
 - Wake Streets
 - Canoe Launches

The Neuse River Greenway Trail

Segment 5: Acquisition Needs

0 1,000 2,000 4,000 Feet



- Existing Greenway Trails**
 - City of Raleigh
 - Town of Knightdale
 - Town of Wake Forest
- Future Trails**
 - Future Trails
 - Alternate Trail Routes
- Greenway Connections**
 - Alternate Trail
 - Connection
 - Structure
 - Greenway Bridges
- Base Data**
 - Major Streams
 - Highways
 - Major Roads
 - Wake Streets
 - 100yr Floodplain
 - Parcel Acquisition Needs

A. Alignment Characteristics

Preferred Alignment

This segment begins at the location of the future Skycrest Drive extension crossing of the Neuse River and follows the west side of the river, passing through the Milburnie West park property and Anderson Point Park. A portion of this segment extending northward from the north end of Anderson Point is currently a crushed stone greenway trail. This route makes use of existing greenway trail alignment and current greenway and park property ownership along the west side of the river. Two alternative routes exist where the trail will intersect Highway 64. The preferred route would make use of the Anderson Point Drive NCDOT bridge crossing and existing paved trails within Anderson Point Park.

Access points for this trail segment:

- A small parking lot at the end of Abbingdon Lane, traveling from Buffaloe Road going east from New Hope Road.
- A small parking lot in the Hedingham subdivision, located off of Southall Road at Eagle Trace Drive.
- A large parking lot in future Milburnie West Park
- An existing small parking lot located at the Milburnie East canoe launch.
- An existing parking lot located at Rogers Lane and Anderson Point Drive at Anderson Point Park. This location also offers a canoe launch.
- Neighborhood pedestrian connectors will be included where appropriate

Alternative Alignment

The alternative route at the intersection of the trail and Highway 264 would utilize both railroad and highway underpasses along the banks of the Neuse River.

Short Term Alignments

There are no alternative alignments proposed for this segment.

B. Points of Interest

Recreational Facilities and Open Space

There are two main park attractions within this segment: Milburnie (West and East) and Anderson Point. Milburnie West is 35.2 acres, Milburnie East is 23.9 acres, and Anderson Point Park is 105 acres. Milburnie West will be developed into a community park with both river-oriented and traditional park amenities. Milburnie East currently has a canoe launch and associated parking. Anderson Point Park is currently developed and includes informal sport fields, greenway trails, open space, playground, picnic areas, and a canoe launch. There is a wheel-chair accessible paved walkway around much of the park. Wake Audubon Society has entered into an Adopt-A-Park agreement with the City of Raleigh to establish various wildlife management projects to benefit birds and other wildlife.

Natural Resources

Segment 5 of the NRT includes diverse plant and animal habitats. The highest concentration of wetland areas within the project area are found within this segment, clustered mostly near Milburnie West and East Parks. Rock outcroppings and steep banks are also characteristics of this portion of the greenway. From Beaverdam Lake to Poole Road exists a significant aquatic habitat. The floodplain, just a few hundred yards wide, contains numerous wetland and small ponds. The native Neuse River Waterdog and a Gilled Aquatic Salamander have been collected at several sites along this segment. A rare mollusk has been collected in two locations but has not been found in recent years and may no longer exist within this stretch of the river.

Cultural Resources

Milburnie Dam, built between 1897 and 1903, is the only historic stone and masonry dam remaining within the project area, recalling periods of heavy mill operation along the Neuse River. Over its lifetime, the dam has been leased to a manufacturing company, served as a grist mill, and later produced over 3 million kilowatt hours a year as a hydroelectric plant. On the east side of the Neuse River once stood Major John Hinton's Clay Hill-on-the-Neuse plantation manor, part of the collection of plantations that were

considered for the state capital location. Old Mingo, a Hinton family slave, is the source of the Mingo Creek name.

C. Infrastructure

Bridges

There are two bridges proposed for this trail segment: one will cross the Neuse River at the future Skycrest Drive extension and the other will connect Milburnie West to the canoe launch at Milburnie East.

Pedestrian Crossings

There are no pedestrian crossings proposed for this segment.

Railroad Crossings

There is one possible railroad underpass located just north of Highway 64. This underpass is included in the alternative segment route only.






Parking Areas

Two (2) parking consisting of twenty (20) spaces each are proposed north of Milburnie West and at Milburnie East.

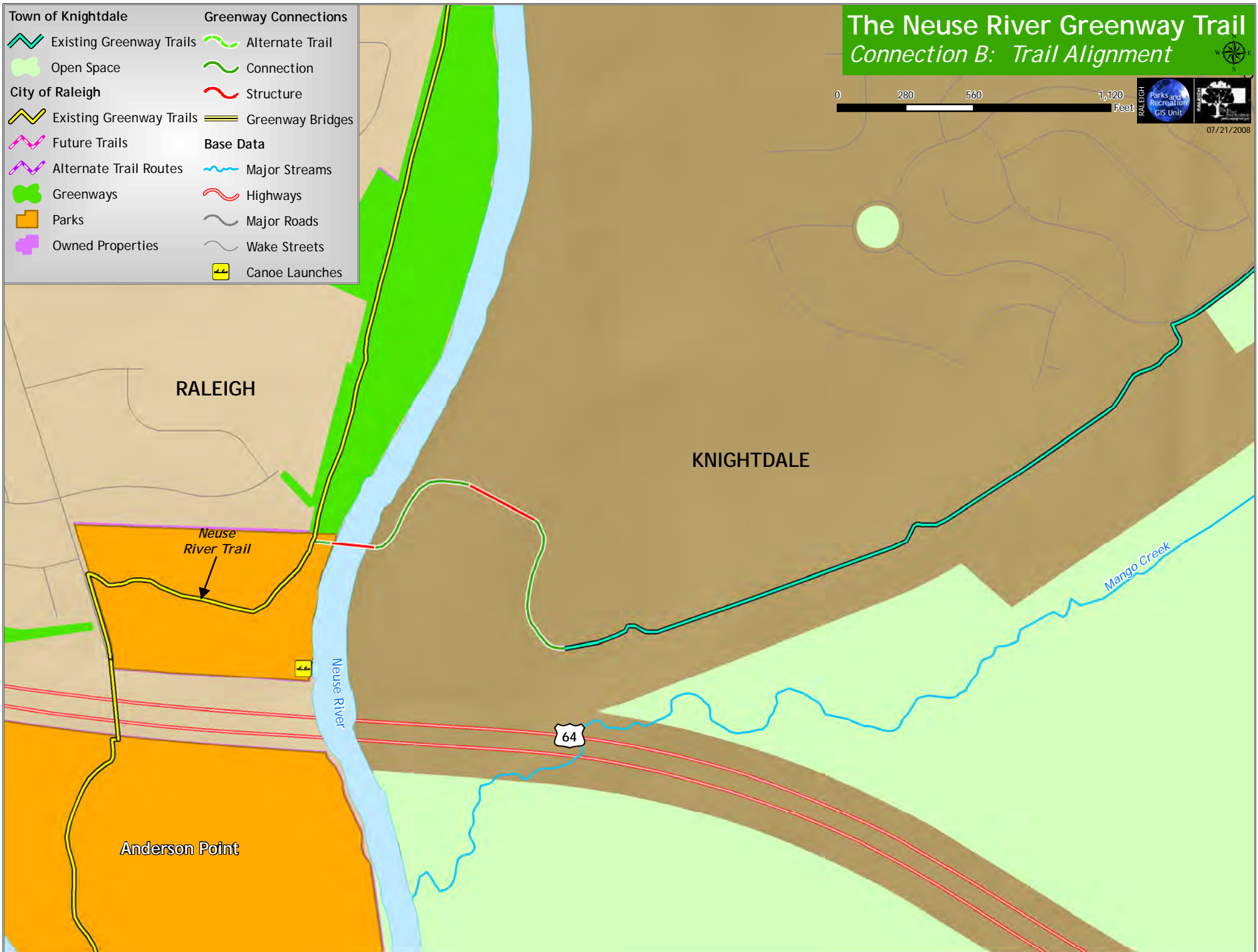
Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

Connection B: Knightdale Connection

	Preferred Alignment	Alternative Alignment
Alignment	From Hodge Road in Knightdale, the trail connection would follow existing Beaver Dam Creek Trail located on the north side of Mango (Mingo) Creek and a new section would be constructed to wind north and then southward to an identified bridge crossing location at the north end of Anderson Point Park near the canoe launch.	N/A
Length	0.4 miles	N/A
Amenities	<ul style="list-style-type: none">  Existing Beaver Dam Creek Trail  Open space  Anderson Point Park and canoe launch 	N/A
Infrastructure	<ul style="list-style-type: none">  Bridge crossing existing pond located east of the Neuse River near Anderson Point Park  Neuse River bridge crossing at the north end of Anderson Point Park 	N/A
Acquisition	0 parcels	N/A
Estimated Costs*	\$1,646,826	N/A
Available Funds*	\$0	N/A
Needed Funds*	\$1,646,826	N/A

*Estimated costs and funding are described in detail in the implementation section.



A. Alignment Characteristics

Preferred Alignment

From Hodge Road in Knightdale, the trail connection would follow the existing greenway trail located on the north side of Mango (Mingo) Creek and a new section would be constructed to extend north and then southward to an identified bridge crossing location at the north end of Anderson Point Park near the canoe launch. A 500-foot section of boardwalk is planned to span wetlands located in the area east of the Neuse River across from the north end of Anderson Point Park.

No parking areas have been identified for this connector but locations within Knightdale are being explored. Neighborhood pedestrian connectors will be included where appropriate

Alternative Alignment

There are no alternative alignments proposed for this connection.

Short Term Alignments

There are no short term alignments proposed for this connection.

B. Points of Interest

Recreational Facilities and Open Space

This segment is planned to connect to downtown Knightdale, existing open space property owned by the Town of Knightdale, and Anderson Point Park.

Natural Resources

There is a wetland area east of the Neuse River located across from the Anderson Point Park canoe launch.

Cultural Resources

There are no cultural resources within this connection.

C. Infrastructure

Bridges

One bridge is planned for this connection where it crosses the Neuse River and connects to the NRT at the north end of Anderson Point Park.

Pedestrian Crossings

There are no pedestrian crossings proposed as part of this connection.

Railroad Underpasses

There are no railroad crossings required as part this connection.






Parking Areas

There are no parking areas proposed as part of this connection.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

Segment 6: Crabtree Creek to Poole Rd

	Preferred Alignment	Alternative Alignment
Alignment	West bank and along Crabtree Creek Trail that connects to the Buckeye Trail located inside beltline	N/A
Length	1.06 miles	N/A
Points of Interest	<ul style="list-style-type: none">  Anderson Point Park  Connection to Crabtree Creek Trail  Canoe launch at Poole Rd 	N/A
Infrastructure	 N/A	N/A
Acquisition	 13 parcels on west side of Neuse	N/A
Estimated Costs	\$1,589,932	N/A
Available Funds	[\$150,000]	N/A
Funds Needed	\$1,439,932	N/A

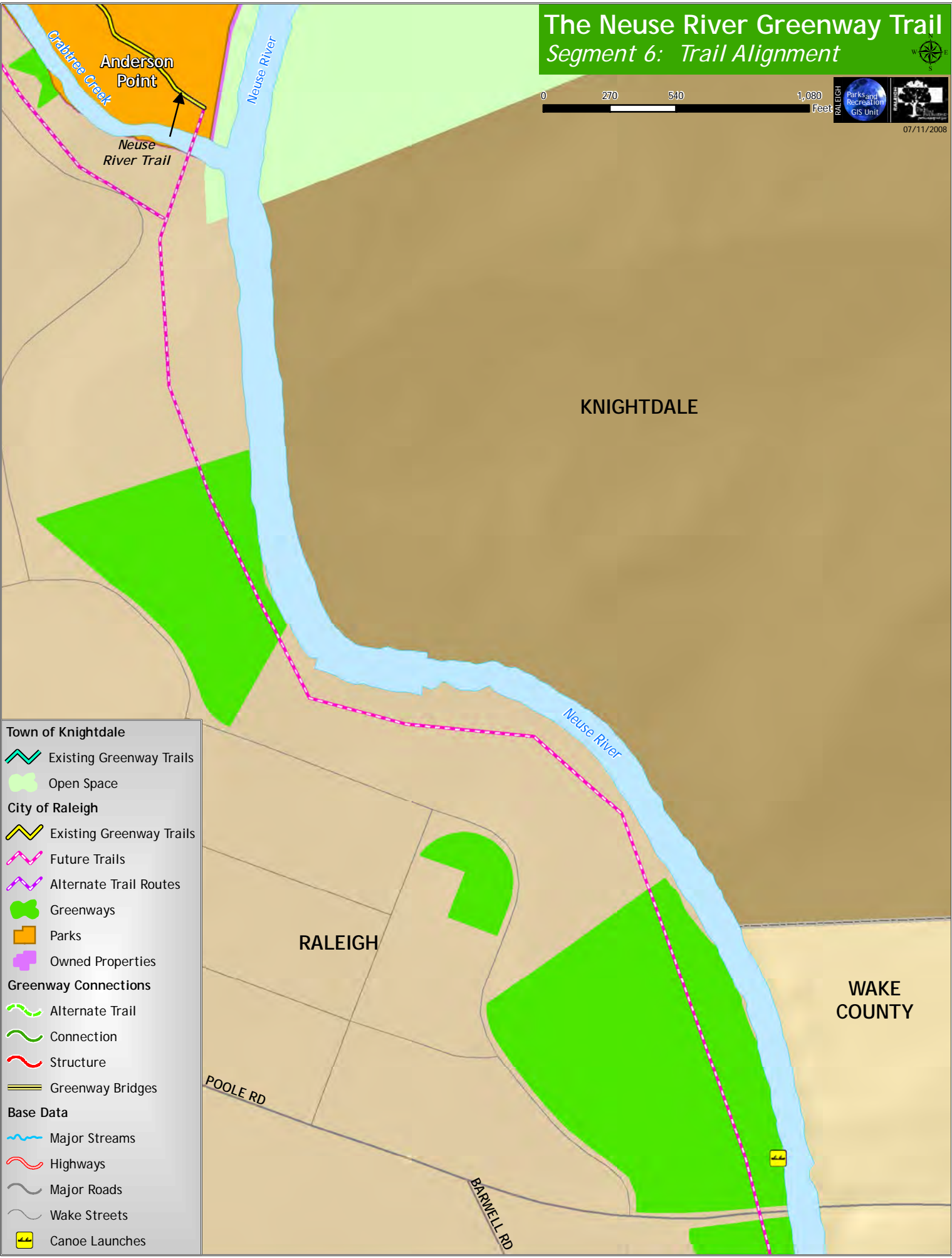
***Estimated costs and funding are described in detail in the implementation section.**

The Neuse River Greenway Trail

Segment 6: Trail Alignment



0 270 540 1,080 Feet

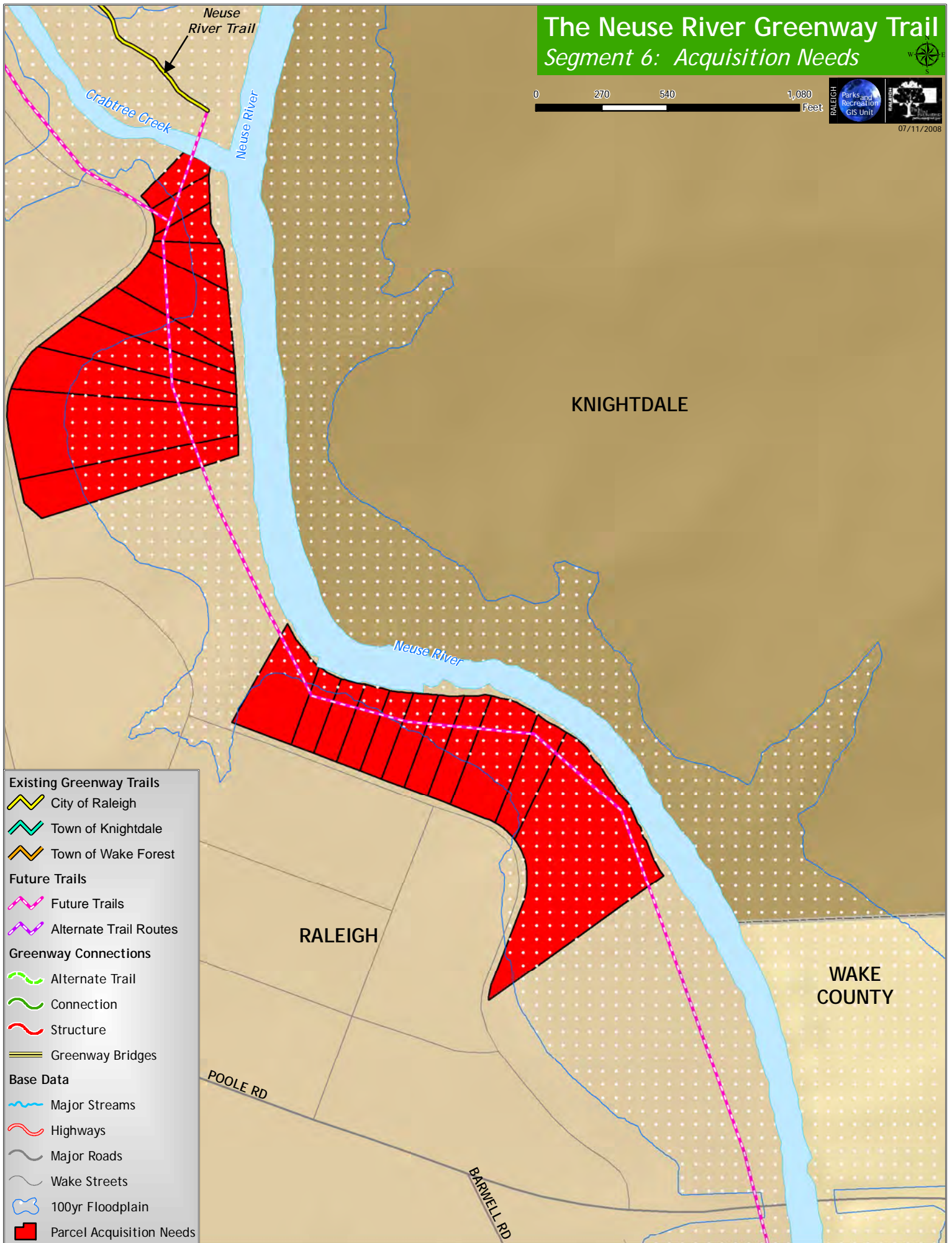


- Town of Knightdale**
 - Existing Greenway Trails
 - Open Space
- City of Raleigh**
 - Existing Greenway Trails
 - Future Trails
 - Alternate Trail Routes
 - Greenways
 - Parks
 - Owned Properties
- Greenway Connections**
 - Alternate Trail
 - Connection
 - Structure
 - Greenway Bridges
- Base Data**
 - Major Streams
 - Highways
 - Major Roads
 - Wake Streets
 - Canoe Launches

The Neuse River Greenway Trail

Segment 6: Acquisition Needs

0 270 540 1,080 Feet



- Existing Greenway Trails**
 - City of Raleigh
 - Town of Knightdale
 - Town of Wake Forest
- Future Trails**
 - Future Trails
 - Alternate Trail Routes
- Greenway Connections**
 - Alternate Trail
 - Connection
 - Structure
 - Greenway Bridges
- Base Data**
 - Major Streams
 - Highways
 - Major Roads
 - Wake Streets
 - 100yr Floodplain
 - Parcel Acquisition Needs

A. Alignment Characteristics

Preferred Alignment

The alignment is on the west side, beginning just south of Anderson Point at the confluence of Crabtree Creek and the Neuse River, the region's two main water bodies. This point is a symbolically important spot with vantage points for scenic views up and down the river.

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

Alternative Alignment

There are no alternative alignments proposed for this segment.

Short Term Alignments

There are no short term alignments proposed for this segment.

B. Points of Interest

Recreational Facilities and Open Space

Anderson Point Park arrives at the confluence of the Neuse River and Crabtree Creek, the region's two main waterbodies. This point is a symbolically important spot with vantage points for scenic views up and down river and Crabtree Creek. The park environment is a natural setting with 105 acres of open recreation, three informal sport fields, greenway trails, playground, canoe launch, and picnic areas. However, the future site amenities include: a major gateway to the Neuse River and Crabtree Creek greenways; a variety of recreational elements in the main section of the park accentuating the confluence point; connections to the river; and the scenic pastoral character of the land. A canoe launch is located at Poole Rd.

Natural Resources

A significant aquatic habitat is shared the full length of segments 5 and 6. The floodplain, just a few hundred yards wide, contains numerous wetland and small ponds. The native Neuse River

Waterdog and a Gilled Aquatic Salamander has been collected at several sites along this segment. A rare mollusk has been collected in two locations but has not been found in recent years and may no longer exist within this stretch of the river.

Cultural Resources

There are no cultural resources within this segment.

C. Infrastructure

Bridges

There are no bridges proposed within this segment.

Pedestrian Crossings

There are no pedestrian crossings proposed within this segment.

Railroad Underpasses

There are no railroad crossings required within this segment.




Parking Areas

There are no parking areas proposed as part of this segment.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

Segment 7: Poole Rd to Auburn Knightdale Rd

	Preferred Alignment	Alternative Alignment
Alignment	West Bank of Neuse	N/A
Length	2.62	N/A
Points of Interest	 Walnut Creek Trail Connection	N/A
Infrastructure	 One Parking Area (20 spaces) – West of Auburn Knightdale Rd	N/A
Acquisition	 13 parcels	N/A
Estimated Costs	\$4,305,944	N/A
Available Funds	\$0	N/A
Funds Needed	\$4,305,944	N/A

***Estimated costs and funding are described in detail in the implementation section.**

The Neuse River Greenway Trail

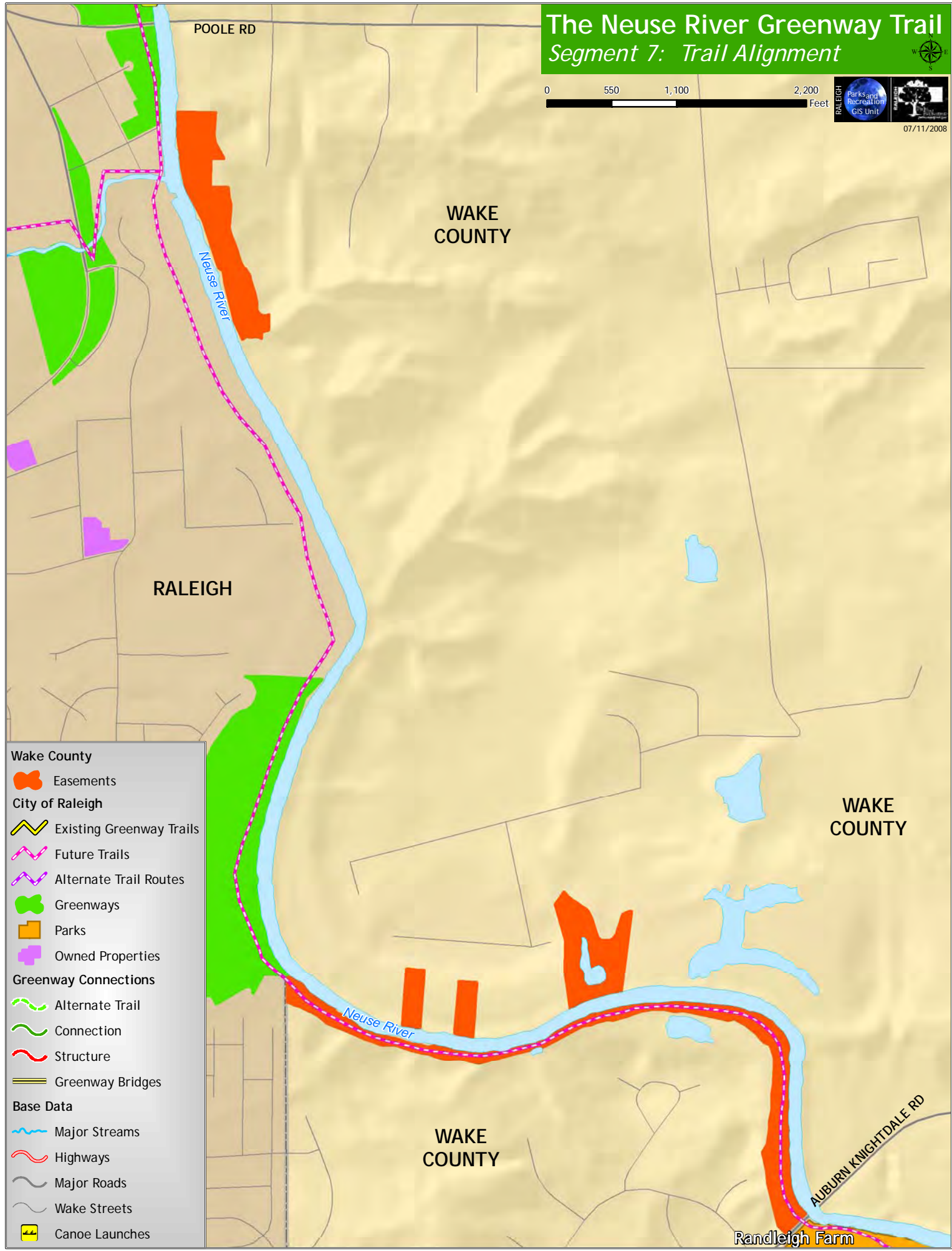
Segment 7: Trail Alignment



0 550 1,100 2,200 Feet



07/11/2008



Wake County

Easements

City of Raleigh

Existing Greenway Trails

Future Trails

Alternate Trail Routes

Greenways

Parks

Owned Properties

Greenway Connections

Alternate Trail

Connection

Structure

Greenway Bridges

Base Data

Major Streams

Highways

Major Roads

Wake Streets

Canoe Launches

WAKE COUNTY

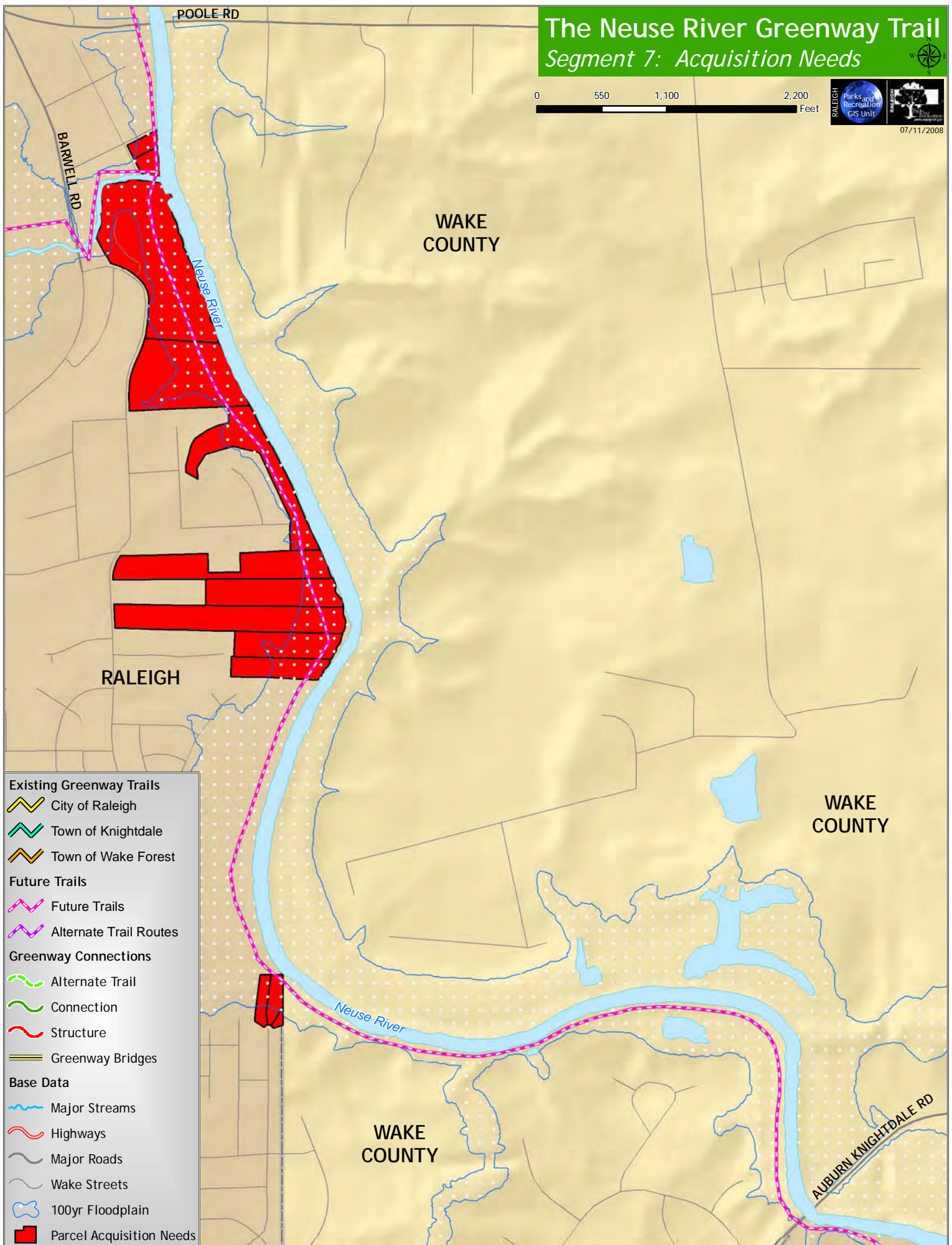
WAKE COUNTY

Randleigh Farm

AUBURN KNIGHTDALE RD



07/11/2008



A. Alignment Characteristics

Preferred Alignment

The preferred route for Segment 7 follows the west bank of the Neuse from Poole Rd to Auburn Knightdale Rd. The trail is proposed to extend the Walnut Creek trail to inside the I-440. Parking for approximately 20 vehicles will be located near the confluence of Walnut Creek and the Neuse River.

Alternative Alignment

There is no alternative alignment proposed for this segment.

Short Term Alignments

There are no short term alignments proposed for this segment.

B. Points of Interest

Recreational Facilities and Open Space

There are no recreational facilities along this segment. The City is in ownership of open space along the banks of the Neuse.

Natural Resources

There are no significant natural resources found within this segment.

Cultural Resources

There are no cultural resources found within this segment.

C. Infrastructure

Bridges

There are no bridges proposed within this segment.

Pedestrian Crossings

There are no pedestrian crossings proposed within this segment.

Railroad Underpasses

There are no railroad crossings required within this segment..

Parking Areas

One (1) parking area consisting of twenty (20) parking spaces is proposed west side of Auburn Knightdale Rd.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

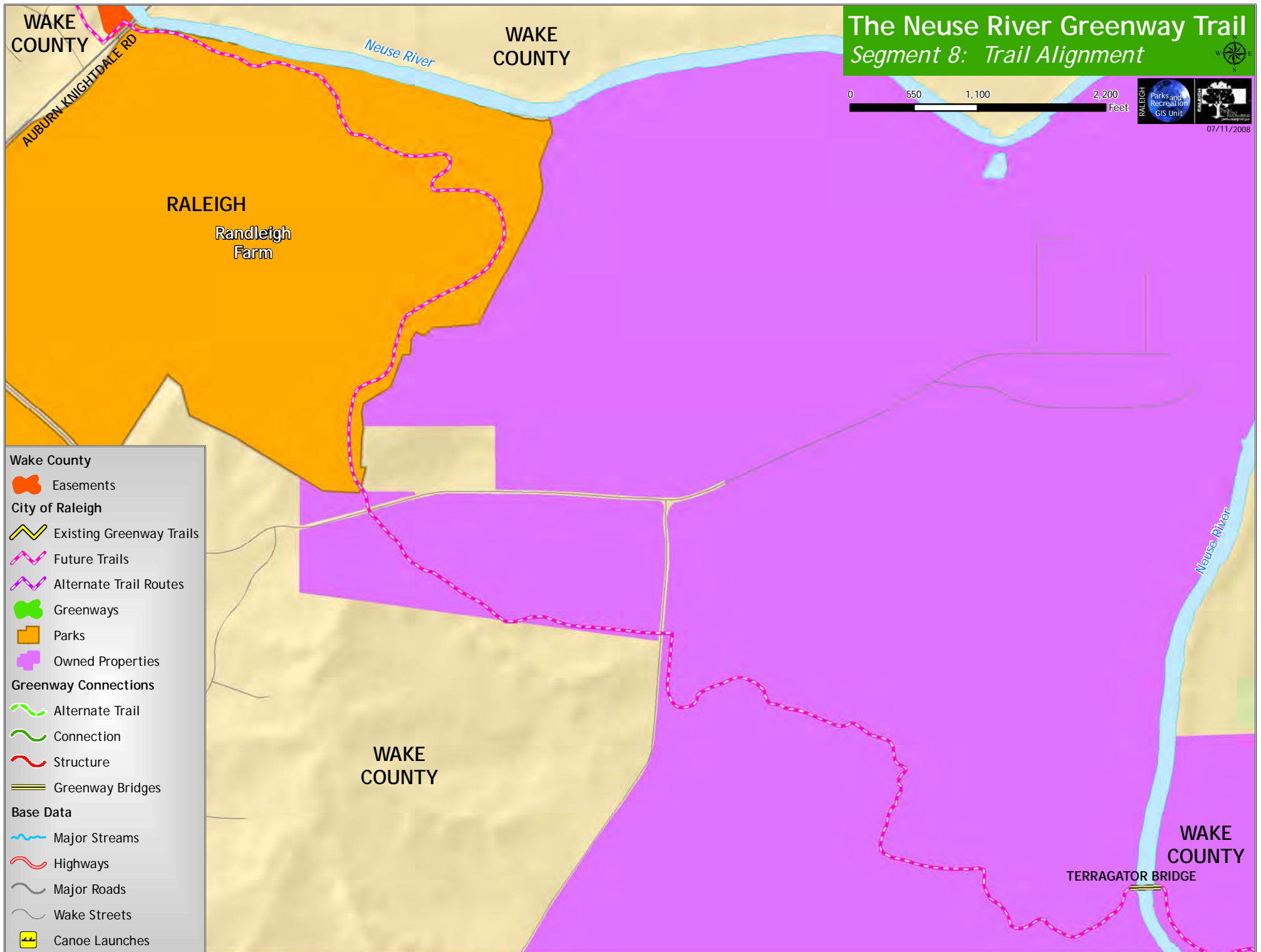
Segment 8: Auburn Knightdale Rd to TerraGator Bridge

	Preferred Alignment	Alternative Alignment
Alignment	Southwest side of the Neuse River, Along west side of Randleigh Farm, to the west of the Waste Water Treatment Plant	Southwest side of the Neuse near the joint Wake County Sherriff and City of Raleigh Police Training Center and Firing Range.
Length	2.9 miles	3.3 miles
Points of Interest	 Different Greenway Experience  Randleigh farm	N/A
Infrastructure	 2 parking lots (20 spaces each) – Randleigh Farm, Battle Bridge Road  Fencing Required	 Fencing Required
Acquisition	 N/A	 N/A
Estimated Costs	\$2,627,313	\$2,667,373
Available Funds	\$0	\$0
Funds Needed	\$2,627,313	\$2,667,373

***Estimated costs and funding are described in detail in the implementation section.**




07/11/2008





A. Alignment Characteristics

Preferred Alignment

The proposed alignment offers a different experience from that presented along other segments of the NRT. This alignment travels not along the Neuse as most other segments do but through agricultural lands of Randleigh Farm and farm fields west of the NRWTP operations area. Randleigh Farm is a 420 acre site purchased jointly by the City and County. The farm fields contain crops that are treated with biosolids produced by the NRWTP and then sold as animal feed. There are also areas where the trail will follow streams. The land is operated by the City of Raleigh therefore no land acquisition is needed. Properties surrounding this site consist of residential properties, farmland, commercial and state-owned forestland. There is an opportunity to provide an educational component across the NRWTP site is present.

Alternative Alignment

This alignment would parallel the Neuse on the southwest side through the Randleigh Farm property. It will then traverse a stream channel near the Raleigh Police Department's (RPD) firing range and adjacent to the new joint Wake County/RPD training center. Because of concerns of noise to greenway patrons and possible vandal criminal activities at the firing range and training center, this alignment is strongly discouraged.

Short Term Alignments

There are no short term alignments proposed for this segment..

B. Points of Interest

Recreational Facilities and Open Space

In March 2005, the City of Raleigh and Wake County purchased Randleigh Farm, a 420-acre tract located just east of Auburn Knightdale Road. The Wake County Public School System (WCPSS) has joined the City of Raleigh and Wake County in a partnership to develop the site.

Four silos in a grove of oak trees will be maintained on Randleigh Farm to remind residents, not only of North Carolina's proud and prominent agricultural history, but of the nearly three decades that this very land was dedicated to nurturing champion cattle. The immediate goal of the partnership involving the City, Wake

County and WCPSS is to develop the Randleigh Farm as a model site that encourages:

- Public and private partnership;
- Preserves open space;
- Protects the Neuse River;
- Promotes resource recycling;
- Encourages public education on the environment;
- Provides for greenway access, and;
- Encourages sustainable development.

Natural Resources

Natural Resources located in the vicinity of Segment 8 of the NRT is comprised mainly of farmland. The remainder of the trail is located within a hardwood forest along several streams. Much of the trail alignment is bisected by tributaries and steep slopes of significant topography. 600 acres farmed for corn, small grain, sorghum and coastal Bermuda hay.

Cultural Resources

There are no cultural resources within this segment.

C. Infrastructure

Bridges

There are no bridges proposed within this segment.

Pedestrian Crossings

There are no pedestrian crossings proposed within this segment.

Railroad Underpasses

There are no railroad crossings required within this segment..

Parking Areas

Two (2) parking areas consisting of twenty (20) parking spaces are proposed at Randleigh Farm and Rock Quarry Rd.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

Segment 9: TerraGator Bridge to Mial Plantation Rd

	Preferred Alignment	Alternative Alignment
Alignment	Northeast side of the Neuse	N/A
Length	½ mile	N/A
Points of Interest	 TerraGator Bridge	N/A
Infrastructure	 1 parking area – West of Mial Plantation Rd	N/A
Acquisition	 N/A	N/A
Estimated Costs	\$1,175,227	N/A
Available Funds	\$0	N/A
Funds Needed	\$1,175,227	N/A

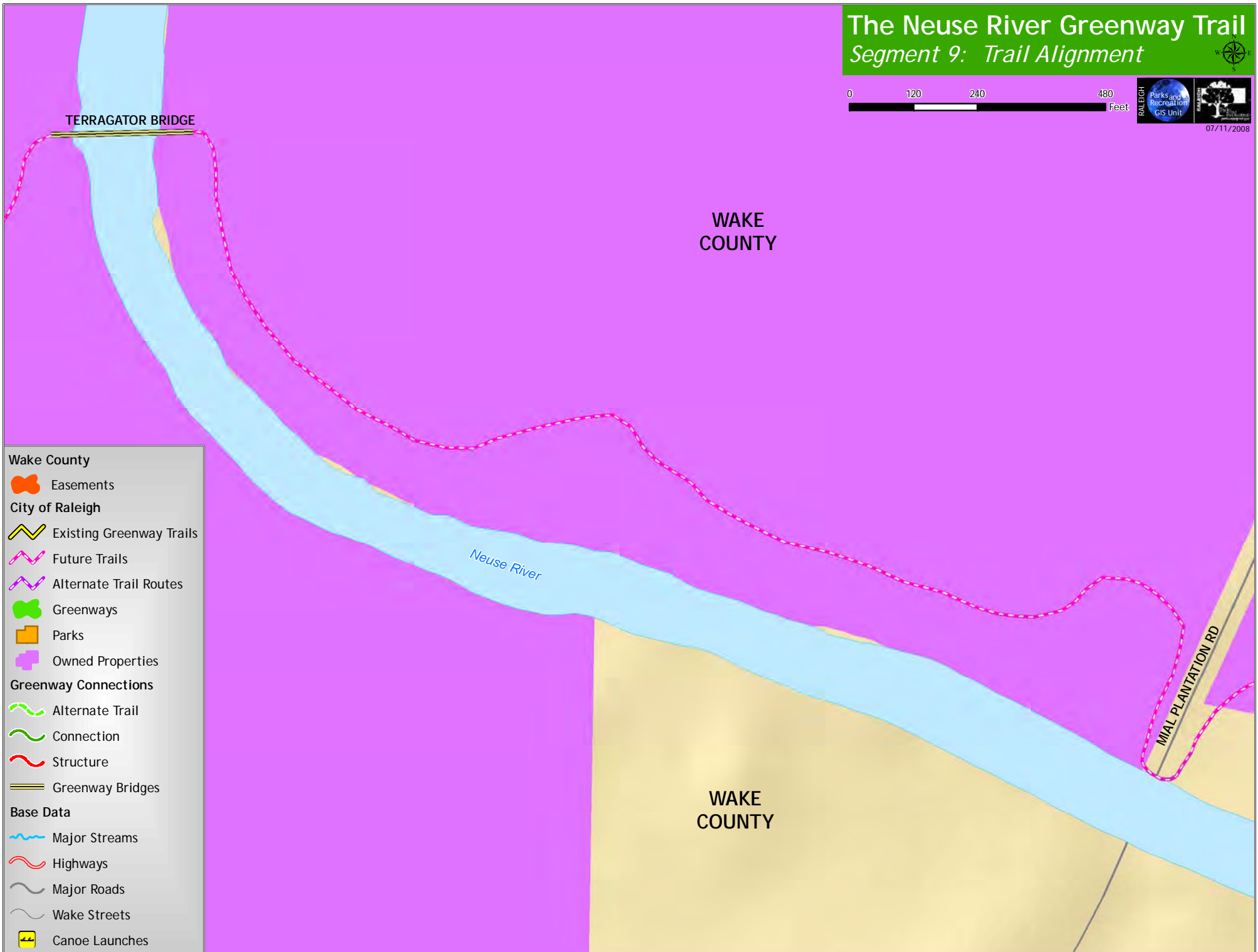
***Estimated costs and funding are described in detail in the implementation section.**

The Neuse River Greenway Trail

Segment 9: Trail Alignment



0 120 240 480 Feet



- Wake County**
-  Easements
- City of Raleigh**
-  Existing Greenway Trails
-  Future Trails
-  Alternate Trail Routes
-  Greenways
-  Parks
-  Owned Properties
- Greenway Connections**
-  Alternate Trail
-  Connection
-  Structure
-  Greenway Bridges
- Base Data**
-  Major Streams
-  Highways
-  Major Roads
-  Wake Streets
-  Canoe Launches

The Neuse River Greenway Trail

Segment 9: Acquisition Needs



0 120 240 480 Feet



07/11/2008

TERRAGATOR BRIDGE

WAKE
COUNTY

Neuse River

MIAL PLANTATION RD

WAKE
COUNTY

- Existing Greenway Trails**
 - City of Raleigh
 - Town of Knightdale
 - Town of Wake Forest
- Future Trails**
 - Future Trails
 - Alternate Trail Routes
- Greenway Connections**
 - Alternate Trail
 - Connection
 - Structure
 - Greenway Bridges
- Base Data**
 - Major Streams
 - Highways
 - Major Roads
 - Wake Streets
 - 100yr Floodplain
 - Parcel Acquisition Needs

A. Alignment Characteristics

Preferred Alignment

The preferred alignment follows the northeast side of the Neuse from the TerraGator bridge to Mial Plantation Road. This alignment would require a pedestrian crossing across the Neuse on the south side of the TerraGator bridge. The alignment would follow the forest edge along crops of corn, small grain, sorghum and coastal Bermuda hay.

Alternative Alignment

There is no alternative alignment proposed for this segment.

Short Term Alignments

There are no short term alignments proposed for this segment.

B. Points of Interests

Recreational Facilities and Open Space

The City owns the farmland just north of the alignment. This property consist of 211 acres of farmland used to grow corn, small grain, sorghum and coastal Bermuda hay for animal feed.

Natural Resources

There are no significant natural resources found within this segment.

Cultural Resources

There are no cultural resources found within this segment.

C. Infrastructure

Bridges

There are no bridges proposed within this segment.

Pedestrian Crossings

Pedestrian underpasses are not planned where the trail might cross roads used for TerraGator operations. This will be studied in detailed design to confirm that there is limited conflict and underpasses are not necessary.

Railroad Underpasses

There are no railroad crossings required within this segment..





Parking Areas

One (1) parking area consisting of twenty (20) parking spaces is proposed west side of Mial Plantation Rd.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

Segment 10: Mial Plantation Rd to Wake/Johnston County Line

	Preferred Alignment	Alternative Alignment
Alignment	Northeast side of the Neuse, follow ridgeline to avoid wetland area	Northeast side of the Neuse across wetland area
Length	1.5 miles	1.4 miles
Points of Interest	 N/A	 Wetland area
Infrastructure	 2 parking lots (20 spaces each) – 1 east side of Mial Plantation, 1 near Wake/Johnston County line	Boardwalk across sensitive areas
Acquisition	 6 parcels	6 parcels
Estimated Costs	\$2,856,103	\$3,125,406
Available Funds	\$150,000	\$150,000
Funds Needed	\$2,706,103	\$2,975,406

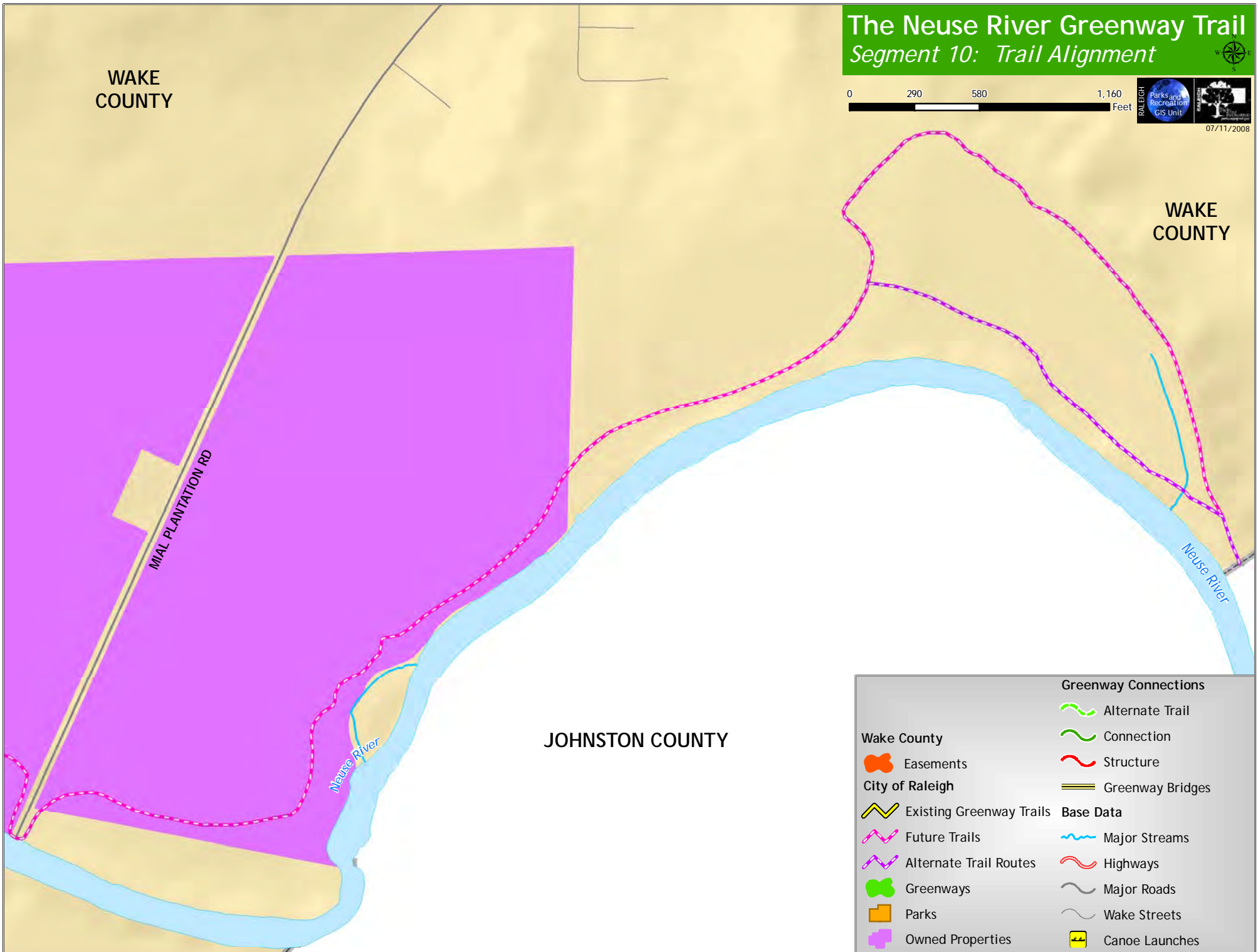
***Estimated costs and funding are described in detail in the implementation section.**

The Neuse River Greenway Trail

Segment 10: Trail Alignment



0 290 580 1,160 Feet



Wake County		Greenway Connections	
	Easements		Alternate Trail
City of Raleigh			Connection
	Existing Greenway Trails		Structure
	Future Trails		Greenway Bridges
	Alternate Trail Routes	Base Data	
	Greenways		Major Streams
	Parks		Highways
	Owned Properties		Major Roads
			Wake Streets
			Canoe Launches

The Neuse River Greenway Trail

Segment 10: Acquisition Needs



0 287.5 575 1,150 Feet



WAKE COUNTY

JOHNSTON COUNTY

Existing Greenway Trails

- City of Raleigh
- Town of Knightdale
- Town of Wake Forest

Future Trails

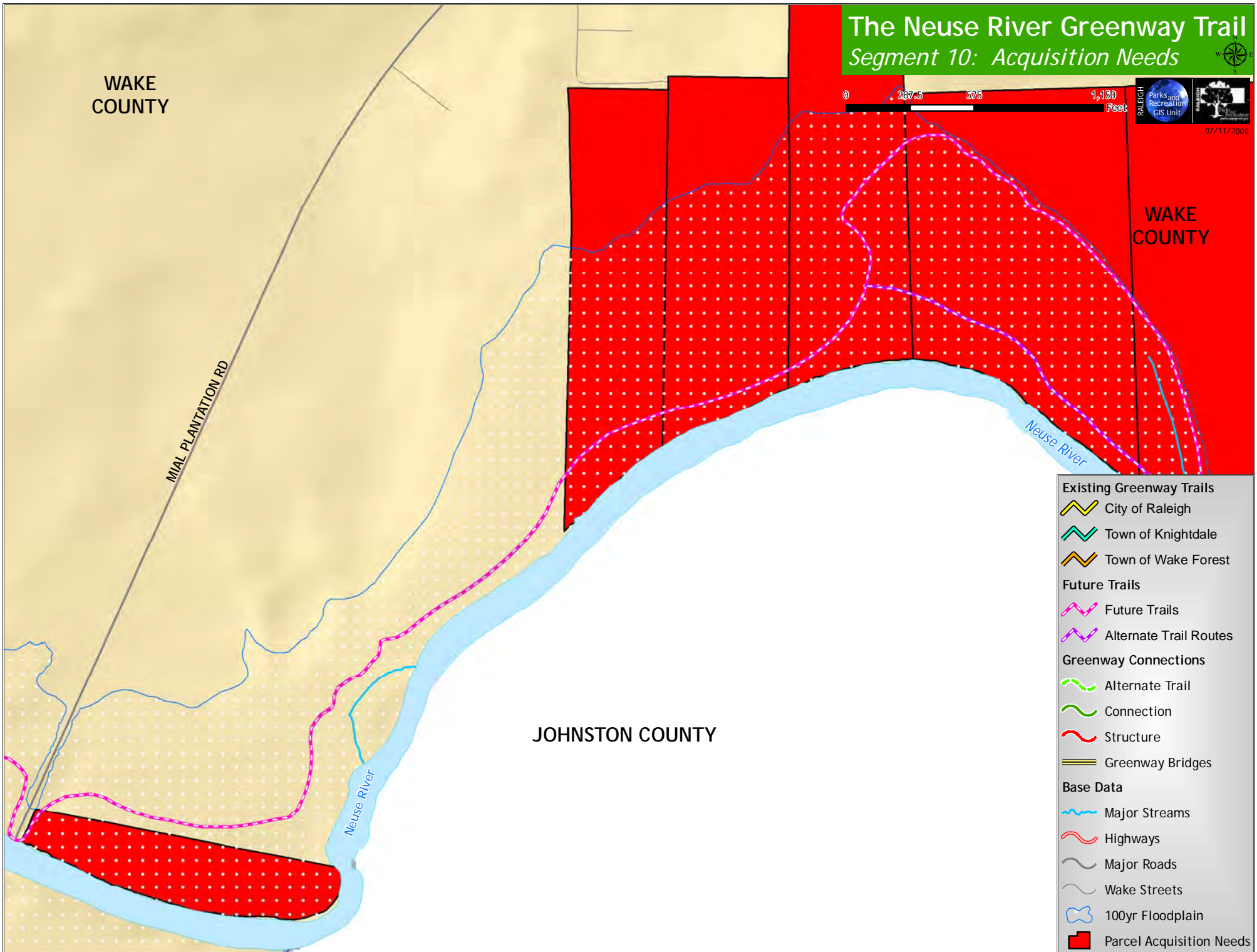
- Future Trails
- Alternate Trail Routes

Greenway Connections

- Alternate Trail
- Connection
- Structure
- Greenway Bridges

Base Data

- Major Streams
- Highways
- Major Roads
- Wake Streets
- 100yr Floodplain
- Parcel Acquisition Needs



A. Alignment Characteristics

Preferred Alignment

The preferred alignment follows the northeast side of the Neuse from Mial Plantation Road for about ¾ of this segment. The alignment then goes north away from the Neuse to high ground. This is to avoid areas of sensitive land that may need to be boardwalked. Both alignments end at the same location – the Wake/Johnston County Line

Alternative Alignment

The alternative alignment follows the northeast side of the Neuse from Mial Plantation Road to the Wake/Johnston County Line. Boardwalks may be needed at sensitive areas.

Short Term Alignments

There are no short term alignments proposed for this segment..

B. Points of Interest

Recreational Facilities and Open Space

There are no recreational facilities along this segment.

Natural resources

There are no significant natural resources within this segment.

Cultural Resources

There are no cultural resources within this segment.

C. Infrastructure

Bridges

There are no bridges proposed within this segment.

Pedestrian Crossings

A pedestrian underpass is proposed at the TerraGator bridge.

Railroad Underpasses

There are no railroad crossings required within this segment..

Parking Areas

Two (2) parking areas consisting of twenty (20) parking spaces are proposed on east side of Mial Plantation Rd and near the Wake/Johnston County line.

Boardwalks

Boardwalks will be utilized when the trail has to cross sensitive areas. An estimate of the boardwalk length as been has been calculated for each segment based upon inspection of aerial photographs and mapped topography. Actual field conditions will determine the precise placement and length.

IV. Implementation

A. Trail Design

1. General Trail Characteristics

The typical greenway trail is a 10-feet wide asphalt trail with 2-foot shoulders on each side. Where it is not possible to avoid sensitive areas, boardwalk structures will be built to minimize impacts of the trail.

The City of Raleigh will engage a Professional Engineering firm qualified to design greenway trails in floodplain-wetland areas. The consultant, in coordination with the City, will field-locate the preferred corridor for the trail. The specific alignment of the trail will not be determined at this stage. Additional evaluations will be completed at this stage to determine the practicality and economic feasibility of constructing the trail within this preferred alignment. The evaluation completed at this time will be wetland delineation by a licensed professional certified to perform these evaluations; a preliminary assessment of stream bank and buffer impacts; a geotechnical evaluation of the soils; and the potential need for completing a flood evaluation. After completing these initial assessments of the trail corridor, the preliminary alignment will be set and plans drawn. The trail plans will include site plans showing the alignment, sediment and erosion control plans, expanded plans of selected areas as needed, and details.

Based upon the Preliminary Plans, formal wetland delineations, stream impacts, and buffer impacts will be evaluated and permit applications submitted to United States Army Corps of Engineers (USACE) and the North Carolina Department of Environment and Natural Resources (DENR). Other permits will be sought as needed. Upon approval of all permits the project will be awarded.

2. Trail Amenities

Trailheads

Trailheads typically include parking for approximately twenty (20) vehicles, trash receptacles, identification signage, and rules signage. The location of individual trailheads will be evaluated in the overall trail planning process. Preferred locations will be those where the trail crosses a street. Other locations might be where

existing subdivisions have provided easements to allow for neighborhood connections.

Signage

Signage provided along the length of the trail will include mileage markers, directional/wayfinding signs, and interpretive signs.

Benches

Benches will be provided in strategic locations and it is anticipated that additional benches will be added as trail users request them in specific locations.

Pedestrian Culverts

The preliminary alignment does not include the need for any pedestrian culverts. Major roads will be crossed underneath the existing highway bridges. Preliminary assessment indicates that there is adequate shoulder area and height between the trail surface and the bridge structure to allow the trail to pass under.

There are two crossings of railroad right of ways. The first is west of Capital Boulevard. There is adequate shoulder area and elevation between the structure and the proposed trail to allow for the trail to be constructed underneath. The railroad will require an overhead cover to protect pedestrians from possible falling debris.

A second possible railroad crossing is located at Anderson Point Park. A bridge has been built over the railroad line and US 264 that provides access into Anderson Point Park. This route can be used but the preferred route would be located adjacent to the river under the railroad trestle. This structure may not be permitted but an evaluation will be completed. This crossing, if allowed and possible, will also require a covering to protect patrons from falling debris.

Bridges and Low Flow Crossings

The Neuse River Trail generally parallels the Neuse River. There are numerous tributaries of the Neuse which must be crossed. Tributaries that require a bridge are deep with steep slopes or have significant constant flow because of the size of the drainage. The bridges are anticipated to be pre-manufactured, clear span bridges. The travel lane width will be 10 feet. The materials are proposed to

be Corten steel framing with a light weight concrete deck. The load capacity of the bridges will be 10,000 pounds per square foot.

Culverts will be used for the crossing of tributaries with small drainage areas and relative shallow channels. The length of these culverts will be minimized by using headwalls at each end of the culvert. This will minimize stream channel impacts.

Fencing

The Capital Area Greenway is intended to serve the recreation needs of the general public. Fencing is considered on a case-by-case basis and generally would be included in the project across industrial sites to provide security for the ongoing operations of these uses. For example, in Segment 1, Falls Dam to Capital Boulevard, fencing will be included on the Covidien Property (formerly Mallinckrodt) and under the CSX Railroad line to prevent pedestrian access to the railroad tracks.

B. Estimated Project Costs

NEUSE RIVER TRAIL - COST SUMMARY SHEET						(2010 costs)	
Segment 1: South Shore Trail to Capital Blvd -4.91 mi	Acquisition		Design		Construction	Total	
Neuse - South Shore Trail to Falls of Neuse Road	\$	-	\$	32,038	\$	236,070	
Neuse - Falls of Neuse to Bedford	\$	2,516	\$	89,419	\$	697,927	
Neuse - Bedford to Abbotts Creek	\$	-	\$	126,207	\$	1,058,462	
Abbotts Creek - Falls River Ave to Neuse	\$	197,131	\$	75,980	\$	629,588	
Neuse - Abbotts Creek to Capital Blvd	\$	194,223	\$	87,790	\$	845,566	
Subtotal	\$	393,870	\$	411,434	\$	3,467,613	\$ 4,272,917
Less Existing Funding	\$	-	\$	350,000	\$	1,864,000	\$ 2,214,000
Funding Needs	\$	393,870	\$	61,434	\$	1,603,613	\$ 2,058,917
Segment 2: Capital Blvd. to CASL Soccer Complex -2.97 mi	Acquisition		Design		Construction	Total	
Neuse - Capital Blvd to Thornton Road	\$	439,379	\$	87,496	\$	653,348	
Neuse - Thornton to CASL	\$	2,973	\$	94,670	\$	671,652	
Subtotal	\$	442,352	\$	182,167	\$	1,325,001	\$ 1,949,519
Less Existing Funding	\$	-	\$	150,000	\$	-	\$ 150,000
Funding Needs	\$	442,352	\$	32,167	\$	1,325,001	\$ 1,799,519
Segment 3: CASL Soccer Complex to Buffalo Road -4.23 mi	Acquisition		Design		Construction	Total	
Neuse - CASL to 401North	\$	-	\$	223,879	\$	2,231,905	
Neuse - 401N to I540	\$	-	\$	212,389	\$	1,808,427	
Neuse - I540 to Buffalo Road	\$	-	\$	37,537	\$	324,460	
Subtotal	\$	-	\$	473,805	\$	4,364,792	\$ 4,838,597
Segment 4: Buffalo Road to Skycrest Drive -2.03 mi	Acquisition		Design		Construction	Total	
Neuse - Buffalo Road to Buffalo Road Park	\$	-	\$	37,462	\$	308,690	
Neuse - Buffalo Road Park to Skycrest	\$	-	\$	213,993	\$	2,065,488	
Subtotal	\$	-	\$	251,455	\$	2,374,179	\$ 2,625,634
Segment 5: Skycrest Drive to Anderson Point Park -4.20 mi	Acquisition		Design		Construction	Total	
Neuse - Skycrest Drive to Neuse West Park	\$	-	\$	60,988	\$	426,521	
Neuse - Neuse West Park	\$	-	\$	102,349	\$	1,058,536	
Neuse - Neuse West to Anderson Point Park	\$	-	\$	78,117	\$	366,069	
Neuse - Anderson Point Park	\$	-	\$	69,955	\$	644,433	
Subtotal	\$	-	\$	311,409	\$	2,495,560	\$ 2,806,969

NEUSE RIVER TRAIL - COST SUMMARY SHEET					(2010 costs)
Segment 6: Anderson Point Park - Poole Road -1.06 mi	Acquisition	Design	Construction	Total	
Neuse -- Anderson Point to Poole Road	\$ 382,500	\$ 118,324	\$ 1,089,108		
Subtotal	\$ 382,500	\$ 118,324	\$ 1,089,108	\$	1,589,932
Segment 7: Poole Road to Auburn Knightdale Rd. -2.62 mi	Acquisition	Design	Construction	Total	
Neuse - Poole Road to Walnut Creek	\$ 26,463	\$ 26,011	\$ 240,956		
Neuse - Walnut Creek to Auburn Knightdale Road	\$ 2,270,565	\$ 188,795	\$ 1,553,155		
Subtotal	\$ 2,297,028	\$ 214,805	\$ 1,794,111	\$	4,305,944
Segment 8: Auburn Knightdale Rd. to TerraGator Bridge - 3.27 mi	Acquisition	Design	Construction	Total	
Neuse -Auburn Knightdale to Terragator Bridge	\$ -	\$ 276,957	\$ 2,350,356	\$	2,627,313
Subtotal	\$ -	\$ 276,957	\$ 2,350,356	\$	2,627,313
Less Existing Funding	\$ -	\$ -	\$ -		0
Funding Needs	\$ -	\$ 276,957	\$ 2,350,356	\$	2,627,313
Segment 9: TerraGator Bridge to Mial Plantation Rd - 0.54 mi	Acquisition	Design	Construction	Total	
Neuse - Terragator Bridge to Mial Plantation	\$ -	\$ 104,836	\$ 1,070,390	\$	1,175,227
Subtotal	\$ -	\$ 104,836	\$ 1,070,390	\$	1,175,227
Less Existing Funding	\$ -	\$ -	\$ -		0
Funding Needs	\$ -	\$ 104,836	\$ 1,070,390	\$	1,175,227
Segment 10: Mial Plantation Rd to County Line	Acquisition	Design	Construction	Total	
Neuse - Mial plantation to county line Alt 1 -- 1.61 miles	\$ 1,545,000	\$ 136,712	\$ 1,174,391	\$	2,856,103
Neuse - Mial plantation to county line Alt 2 -- 1.37 miles	\$ 840,000	\$ 210,349	\$ 2,075,056	\$	3,125,406
Subtotal	\$ 1,545,000	\$ 136,712	\$ 1,174,391	\$	2,856,103
Less Existing Funding	\$ 150,000	\$ -	\$ -	\$	150,000
Funding Needs	\$ 1,395,000	\$ 136,712	\$ 1,174,391	\$	2,706,103
Total Project costs (estimated)	\$ 5,060,749	\$ 2,481,904	\$ 21,505,501	\$	29,048,154
Less Existing Fund (FY2003 and Federal Funds)	\$ 150,000	\$ 500,000	\$ 1,864,000	\$	2,514,000
Total Funds Needed (Estimated)	\$ 4,910,749	\$ 1,981,904	\$ 19,641,501	\$	26,534,154

NEUSE RIVER TRAIL CONNECTIONS - COST SUMMARY SHEET					(2010 costs)
Connection A: Town of Wake Forest - 1.62 miles	Acquisition		Design	Construction	Total
Smith Creek Extension to Neuse (Segment A) - 0.31 miles	\$	-	\$ 133,466	\$ 1,462,854	
Smith Creek to Capital (Segment B) - 1.14 miles	\$	168,750	\$ 129,813	\$ 1,206,974	
WF Connection along Capital Blvd (Segment C) - 0.17 miles	\$	-	\$ 121,962	\$ 1,356,253	
Subtotal	\$	168,750	\$ 263,279	\$ 2,669,828	\$ 3,101,857
Connection B: Town of Knightdale - 0.33 miles	Acquisition		Design	Construction	Total
Mango (Mingo) Creek to Neuse (Segment D)	\$	-	\$ 139,269	\$ 1,507,557	
Subtotal	\$	-	\$ 139,269	\$ 1,507,557	\$ 1,646,826

C. Potential Environmental Impacts

1. Wetlands

Wetlands will be encountered in planning the greenway trail. When wetlands are encountered one of two strategies will be used: 1) avoid the wetlands by realigning the trail to bypass around the wetland area; or 2) avoid the wetlands by constructing boardwalk over the wetland area.

Sections of boardwalk have been included in the estimate where it is possible that wetlands will be encountered and cannot be avoided by realigning the trail. In other areas, an attempt has been made to predict the location of the wetlands and the alignment has been routed around these areas.

2. Riparian Buffers

Neuse River Riparian Buffers are located within 50 feet of each side of permanent or intermittent water courses. The route of the Neuse River Trail, wherever possible, will be located outside of the buffer of the Neuse River. The trail will be crossing numerous tributaries of the Neuse River and at these locations the buffers will be impacted. The trail will be designed to minimize the impact to the buffer by: 1) crossing the buffer perpendicular to the stream; and 2) limited width of clearing.

3. Stream Banks

The NRT will span numerous tributaries of the Neuse River. Each of these crossings has the potential of impacting the stream banks. Bridges are planned to be located on those tributaries where the tributaries are deep with steep slopes. This process will avoid impacts to the stream banks. Where the drainage areas of the tributaries are small and the channel is not deep, culverts will be used. These culvert crossings constitute stream bank impacts. These impacts will be minimized by crossing the channels at a perpendicular angle and by installing headwalls to limit the length of the impact.

4. Animal Habitat

Stream corridors are corridors for the movement of wildlife along them. Studies have found that a desirable minimum width of these wildlife corridors is 300 feet. In many locations along the river, the City has acquired widths far in excess of 300 feet.

In designing the trail, locations of habitat supporting significant wildlife will be identified and avoided if at all possible. Topography, soil

conditions, hydrology, and adjacency of residential property might require some limited impact to wildlife habitat.

D. Permitting Requirements

1. Individual Permit

Construction projects are required to assess impacts to wetlands, stream buffers and stream banks. The US Army Corps of Engineers has requested that the City submit an overarching Individual Permit application based upon the most recent greenway trail project along the Neuse River. Using these impacts, future impacts are to be calculated for the entire Capital Area Greenway System. For future greenway trail projects, the impacts and mitigation measures approved by this permit will be applied, making the approval process very simple.

2. Pre-Construction Notification

Each Segment will require a separate Pre-Construction Notification Permit. This application includes the specific wetland, stream buffer and stream bank impacts for each segment. These impacts and allowable mitigations as determined by the Individual Permit noted above will be applied.

3. Certified Letter of Map Revision – FEMA

There are several crossings of the Neuse River included in the proposed alignment. Each of these crossings will require a flood study and a Certified Letter of Map Revision to the Federal Emergency Management Agency. The flood study is required when there is a possible impact to the 100-year flood elevation.

4. Cultural

There are no known cultural impacts along the NRT alignment. The engineering consultant will be required to contact the North Carolina State Department of Cultural Resources to confirm that no cultural resources are present.

5. NCDENR – Division of Land Resources

NCDENR – Division of Land Resources issues Sediment and Erosion Control Permits. After final Sediment and Erosion Control Plans have been prepared by the selected consultant, plans will be summated to DLR office for approval. This office has a 30 day statutory requirement to respond to applications submitted for approval.

6. City of Raleigh – Building Permits

Greenway trail projects are required to be submitted to the City Building Permits/Inspections office. The Building permits office will review the plans for compliance to landscape requirements associated with site plans (parking areas), storm water compliance, tree conservation requirements, and structural approval of bridges and boardwalks.

D. Project Schedule

The City of Raleigh has completed the design of Segments 1 and 2. Final Permits for the project are expected within 60 days. Construction is scheduled to begin in February, 2009 and completion is scheduled for June, 2011.

The remainder of the Neuse River Trail Project has been broken into 6 major categories:

1. Consultant Selection
2. Preparation of the Individual Permit
3. Preparation of Engineering Drawings
4. Acquisition
5. Bidding and Award
6. Construction

1. Acquisition

The parcels needed for the completion of this project have been identified. The City of Raleigh Real Estate staff has begun efforts to acquire these parcels. These negotiations will continue up to 120 days before each segment of the project is scheduled to be let for bid. At that time a request to authorize condemnation of these parcels will be forwarded to the City Council. The City Attorney will complete the final settlement arrangements to secure all properties needed for the construction of the greenway trail.

2. Consultant Selection

A Request for Qualifications (RFQ) has been issued. Statements of Qualifications are scheduled to be received on August 14, 2008. A team composed of representatives of the partners will review the proposals and make a recommendation to the Raleigh City Council to authorize negotiations with the most qualified firm. It is expected that a Notice to Proceed can be issued in April, 2009.

3. Preparation of Individual Permit and Engineering Drawings

The Engineering firm will begin the preparation of the Individual Permit and the Engineering Drawings simultaneously. It is expected that the Individual Permit can be received within 12 months. The completion of the Engineering drawings will vary depending upon the complexity of each specific segment. It is anticipated that all Engineering Drawings can be completed by the fall of 2010.

4. Bidding and Award

Following standard City procedures bidding and award of each individual construction contract takes approximately 120 days. For purposes of this report, it is planned that the routing of contracts for signature will be expedited and this process can be completed within 60 days.

5. Construction

The overall NRT project has been separated into segments of approximately 2 miles. This represents a length that a contractor will be able to complete within 2 years. Based upon this projection the last segment will be completed in fall of 2012.

F. Sources of Funding

The total cost of acquisition, design, and construction for the NRT is \$29 million. The City has previously appropriated \$15.1 million for this project and has secured an additional \$500,000 of Federal appropriations. The balance of funding needed to complete the project is \$13.9 million.

Wake County is a key partner in the planning, design, and implementation of the NRT. The segment of trail that extends south of Poole Road to the Wake/Johnston County line is primarily located in Wake County's jurisdiction. Pending approval from the Wake County Board of Commissioners, the County is prepared to commit current funds from the Open Space program for design and implementation of the trail from Poole Road extending south to Auburn-Knightdale Road and the Randleigh Farm area in accordance with the proposed schedule for the NRT.

The County is also prepared to commit to design and implementation of the segment of the NRT extending south from Auburn-Knightdale Road and the Randleigh Farm area to the Wake/Johnston County line. However, implementation of this segment will not occur until Johnston County and/or Town of Clayton can make logical connections.

Additionally, County funds for design and implementation of this segment of the trail will come from future unidentified funds.

The North Carolina Department of Transportation Bicycle Pedestrian program assists in the funding of greenway trails. These funds are available for projects that would provide critical links of other trails in a larger network. These funds will be sought after as design plans and the construction schedule are more firmly established.

In the capital budget, the state legislature approved the authorization of \$50 million in special indebtedness (certificates of participation, or "COPS") to finance capital improvement costs of acquiring State park lands and conservation areas for DENR's Land for Tomorrow initiative. Mountains to Seas trail (MST) development is specifically mentioned as a purpose of these funds.

The City has received Federal Appropriations previously for the design of the Upper Neuse Greenway Trail and toward the construction of a portion of that trail. Wake County and the City of Raleigh have submitted applications for these funds in the coming fiscal year. Efforts should continue to secure additional Federal Appropriations.

V. Management & Maintenance

A. Capital Area Greenway Standard Management Practices

The standard trail in the Capital Area Greenway system is a 10-foot wide asphalt trail with 2 foot shoulders on each side. The trail is aligned to avoid wetland areas wherever possible. When it is not possible to avoid wetlands, boardwalks are constructed across the wetlands. The boardwalks are typically 10-foot wide wooden structures usually (but not always) supported by driven piles. The shoulders are either stabilized with a grass mixture or with mulch. This treatment is dependent upon whether the area is heavily wooded and shaded. A map is attached which shows the preliminary conceptual alignment. The specific alternative will be determined after a wetland delineation is completed prior to construction.

The City of Raleigh employs a full-time greenway maintenance staff consisting of 23 employees. It is the responsibility of this crew to monitor and maintain the existing greenways areas and trails and associated open spaces in the Capital Area Greenway System. The greenways are monitored and tasks performed as described below: The City's Capital Improvement Process provides for greenway resurfacing as needed.

1. Routine Maintenance and Capital Repairs

The City of Raleigh Parks and Recreation Department or its designee shall be responsible for the following routine and ongoing maintenance of the NRT. Routine maintenance shall be performed to current department standards and at current frequencies, typical of all trails maintained as part of the Capital Area Greenway System.

Access for routine maintenance shall occur from the parking areas noted in the description of each of the segments, and from other locations designated when construction plans are developed. This work will be accomplished by pick-up truck or gator type vehicle.

Access for tree work or major repair work requiring larger vehicles and/or equipment maintenance shall occur from the parking areas noted in the description of each of the segments, and from other locations designated when construction plans are developed.

Some maintenance tasks will require closure of the trail (or portions of the trail) for brief periods of time (herbicide application, tree maintenance, storm clean-up). The department will secure work areas when necessary in order to safeguard the public.

The P&R Department or its designee shall be responsible for the following routine maintenance:

Litter and Debris Removal

- Removal of accumulated trash and man-made debris generated by trail users.
- Removal of debris resulting from illegal dumping.
- Removal of accumulated trash and debris at bridges and boardwalks.

Trail Surface Cleaning

- Removal of tree litter, sediment or other foreign matter from the trail surface.

Mowing Maintenance

- Mowing and trimming of grassed trail shoulders.

Application of Herbicide

- Use of herbicides to control Bermuda grass intrusion of asphalt trail surfaces.
- Use of herbicides to control noxious weed species – poison ivy, etc.
- Herbicide selection and application shall occur in strict accordance with the Department’s pesticide management policy.

Bridge/Boardwalk Inspection and Minor Repairs

- Monthly inspection of bridges and boardwalks.
- Replacement of damaged or deteriorated deck boards, handrails and other non-structural members.
- Repair of stream bank scouring impacting bridge/boardwalk footings or abutments as permitted by DWQ.

Site Furniture Repair and Replacement

- Inspection and repair of standard Department benches, picnic tables, litter receptacles, and other installed site furnishings.
- Replacement of damaged or deteriorated site furnishings as needed.

Trail Signage Repair and Replacement

- Inspection and repair of standard Department trail signage including trail identification signs, directional signage, information signs, pavement markings, mile markers, etc.
- Replacement of Department trail signage due to damage or deterioration as needed.

Tree Maintenance

- Inspection and removal of tree hazards (hanging limbs, split trees, leaning trees, dead trees, ice damage and other hazardous conditions) that pose a safety concern for trail users.
- Inspection and removal of any tree that is adversely impacting the trail surface (asphalt upheaval) or a permanent structure (bridge, boardwalk, retaining wall).
- A formal written assessment shall be completed by the Department's Urban Forestry staff (certified arborist) prior to the removal of any tree. Tree removal must be approved by the Parks Superintendent.
- Tree work shall be limited to those trees that potentially could impact the trail. Any hazardous tree or portion thereof that has the potential to strike the trail corridor shall be considered under this maintenance task.

Vandalism

- Removal of graffiti from trail surfaces, permanent structures, site furnishings, signage, trees, etc. under the Department's maintenance.
- Repair and/or removal and replacement of damaged or destroyed structures, furnishings, signage, etc. under the Department's maintenance.

Emergency Storm Response

- In the event of weather-related damage (severe windstorm, hurricane, ice storm, tornado, flood or other natural disaster), the Department shall provide hazard removal and clean-up as noted above under trail surface cleaning and tree maintenance sections above. Response to this facility will be prioritized along with other Department responsibilities during an emergency event.
- During these weather-related events, the trail will be monitored daily and secured (closed to public access) until hazard removal and clean-up can occur.

- The department shall also be responsible for repair or replacement of Department owned structures that are damaged or destroyed as a result of a natural disaster.

The Raleigh Parks and Recreation Department or its designee shall be responsible for the following Capital Repairs:

Capital Repairs

- All costs associated with resurfacing or replacement of the paved asphalt and/or concrete trail in part or whole as a result of tree root damage, sub-grade failure, recurring flooding, surface wear and deterioration, etc.
- All costs associated with replacement of bridges, boardwalks, and retaining walls resulting from natural stream movement, structural deterioration or failure.
- All costs associated with major structural repairs to bridges and boardwalks, including abutments and footings.

Neuse River Trail Meeting Notes

NCDOT Division of Bicycle and Pedestrian Transportation
401 Oberlin Road, Suite 250, Raleigh, NC
10:00 A.M. June 16th, 2008

Attendees:

*Vic Lebsock, City of Raleigh Parks and Recreation
Lisa Potts, City of Raleigh Parks and Recreation
Stefanie Toftey, City of Raleigh Parks and Recreation
Tom Norman, NCDOT Division of Bicycle and Pedestrian Transportation
Bob Mosher, NCDOT Division of Bicycle and Pedestrian Transportation
Kumar Trivedi, NCDOT Division of Bicycle and Pedestrian Transportation
Susan Carl, NC State Parks Recreational Trails Program
Tim Maloney, Wake County Community Services
Jennifer Willis, Wake County Budget and Management Services
Chris Snow, Wake County Parks, Recreation, & Open Space
Tina Cheek, Town of Knightdale
Ann Ayers, Town of Wake Forest*

Vic Lebsock started the meeting at 10:10 am.

1. The following materials were distributed by the City of Raleigh staff: updated cost estimates (by segment), fiscal impact statement, bridge example, and ppt.

Tom Norman asked if maintenance costs include work following weather events when trails are under water for a period of time. Vic verified that the cost estimates account for this.

2. Review of Knightdale and Wake Forest connection maps: Determine if these are reasonable alignments and if reasonable cost estimates are provided.

Knightdale alignment/structure map.

- The topography is best (highest) at north end of Anderson Point park, thus providing the best placement for a bridge crossing.
- One thing not included in Knightdale cost estimate is land acquisition along existing trail – assumed to have been built by the developer.
- Tom Norman advises that the cost estimate for the 300' bridge is low. Action Item → revise bridge costs Get better cost estimate from engineering firm and/or manufacturer.
- Geotechnical and wetland delineation missing from the cost estimate. Action Item → add geotechnical and wetland delineation to the cost estimate?

- This area is also within the floodplain boundary so this can easily be included in the nation-wide permit.

Wake Forest alignment/structure map.

- Topography is the highest where the easternmost bridge is located.
- Trail is proposed for both sides b/c Wake Forest asked to see a route that links to NRT but also a trail that links up to a future parking lot off of Capital Blvd.
- Tim Maloney suggested that we build the only the trail on the south side. This alternative would require us to build an additional bridge but might be budget neutral. The segment from Smith Ck to Neuse River is \$1.6M; Look at a second bridge against \$1.3M of trail on north side. No change on parking lot location (on north side – 20 spaces and included in \$1.3M). Wake Forest would phase the connection. Tim Maloney asked for a refined cost estimate. Action Item → calculate two alternative cost estimates (one in which the trail on the north side is eliminated and an additional bridge is added). Update map as well.
- Jennifer Willis asked if a new elementary school going in near the proposed parking lot location.

3. Proposed Timeline:

RFP to be written in July. Firm selection in late Fall. Design to begin in November/December. 18-24 months for entire design.

An inter-local agreement with Wake Forest will be needed for the connection from the bridge to existing Wake Forest trail.

4. Other points:

Land acquisition meant for open space but it can provide an opportunity for a park of some kind.

Individual Permit for 25 years can most likely be applied to both the Wake Forest and Knightdale segments.

Action Item → Distribute the updated financial package by email

Sheet 10 of the financial package shows the biggest change in the cost (note that fencing is not currently included in the costs).

Action Item → Mapping notes: Wake County's open space layer shows both public and private open space. The GIS data that Louise emailed Will with the City of Raleigh includes only property Wake County owns fee simple or for which they control an easement.

Action Item → The 300' GIS buffer represents Wake County's open space acquisition target and can be removed from the maps.

Action Item → Should have a red line along golf course near Randleigh – have Will work with Chris Snow from WC.

Action Item → Map canoe launches.

Vic Lebsock pointed out land acquisition needs for the project. Three segments on northern segment. Acquisition numbers for these are on the big costs sheets. Next gap is at Anderson Point park – three on this segment. The City of Raleigh is currently working on the acquisition for sites south of Poole Road.

Action Item → highlight COR property ownership.

Action Item → have a map that shows where land acquisition is needed – also show which jurisdiction is responsible.

Action Item → Email Ann a pdf of the revised structure map showing alternatives

One option is for us to use the existing bridge currently used by wastewater treatment plant to cross over to the east side of the river. Johnston County is planning a trail on the east side so this is the preferred alignment at the south end (Bob Mosher). Tina pointed out that Knightdale is looking to get land donations/easements on the remaining segments between existing trail (for which they DO have easements for use/maintenance) and the proposed trail.

Action Item → add the additional easements to current cost estimates.

Jeff Cox is working on the feasibility study for Knightdale alignment and boardwalk/bridges. Currently there are two substandard structures on the existing trail segment and Knightdale is meeting with the State 6-17-08 to discuss.

Tom Norman – asked how the other participants are locking in what they are doing so that we can present the info to the mayors/managers.

Vic Lebsock – by the time of the next meeting, the City of Raleigh will have already sent out the big cost spreadsheet. Staff from each community was asked to talk to their decision makers about available funding and possible funding schedules. E.g. is funding available from state parks? Tom Norman requested that we put a timeline on land acquisition.

The City of Raleigh can condemn at this point but Wake County does not for open space acquisition. Wake County can participate in the acquisition of those parcels where the owners agree to sell.

Wake Forest – Ann Ayers gave a summary of their trail plans and where the land acquisition gaps are.

5. Next Steps:

Tim Maloney proposed that he meet with City of Raleigh staff to develop a plan that outlines contributions and a timeline for: funding, acquisition, design, and development for Wake County, City of Raleigh, Town of Knightdale, Town of Wake Forest. Schedule for all components: master document that outlines it. This can be simple, one-page to map out the next 4 years (much info behind this but it can be simple). Start with the numbers, divide numbers into logical development segments and determine how each community fits in.

6. The next meeting:

Decision-makers help determine available funding and funding schedule.

Ann Ayers offered to brief their greenway board about what is happening (not until July).

Meeting adjourned at 11:14

Neuse River Trail Meeting Notes

NCDOT Division of Bicycle and Pedestrian Transportation
401 Oberlin Road, Suite 250, Raleigh, NC
10:00 A.M. June 23, 2008

Attendees:

Vic Lebsock, City of Raleigh Parks and Recreation
Lisa Potts, City of Raleigh Parks and Recreation
Stefanie Toftey, City of Raleigh Parks and Recreation
Tom Norman, NCDOT Division of Bicycle and Pedestrian Transportation
Kumar Trivedi, NCDOT Division of Bicycle and Pedestrian Transportation
Jeff Cox, NCDOT Division of Bicycle and Pedestrian Transportation
Susan Carl, NC State Parks Recreational Trails Program
Tim Maloney, Wake County Community Services
Jennifer Willis, Wake County Budget and Management Services
Tina Cheek, Town of Knightdale
Ann Ayers, Town of Wake Forest
Candace Davis, Town of Wake Forest

Vic Lebsock began meeting at 10:02 am

Distributed materials: Project schedule, updated cost estimates (connections not part of schedule but are included in cost estimates)

Land Acquisition – immediately and ongoing
RFQ – permitting and design
Separate time frames for each segment – match the segments in cost estimate
--combine Falls of Neuse and Capital Blvd (tasks 11 and 21 currently Upper Neuse project)
--line 28 and on relates to work yet to do
--every parcel is listed in the schedule so that we know the timeline for acquisition
--Vic Lebsock will need to tweak the schedule to fit within 4 years
--schedule broken out this way b/c each one will need to be done by separate contractors or broken up by a single contractor to allow simultaneous segment construction
--Individual permit – a permit that will cover the entire master plan

Construction beyond Buffalo Road will begin in early 2011 –

Design and permitting timelines are identical – if other partners participate, they will fit in with the same schedule sequence

Permitting process – one consultant informed Vic that this permit can be processed in 6 months but Vic has scheduled 8 months just in case.

Task duration column – Tim Maloney requested to have this view next time on the next schedule

Upper Neuse (Falls of Neuse to Capital Blvd) – have permit, doing final permit now, 5 properties in last phase of acquisition – currently in 95% design

Kumar Trivedi asked about state bridge timeline – Vic Lebsock answered spring of 2012 for construction commencement – we will have our greenway in place before the bridge construction begins

Capital Blvd to CASL complex – one parcel in final phase of acquisition – permits reviewed and accepted by DWQ and Army Corps of Engineers – final permitting phase now

Vic Lebsock will work on alternate cost estimate – different bridge location

All costs are 2010 costs – Tim Maloney asked – Vic Lebsock b/c we assume we will begin construction in 2010 (inflation rates: 7.5%, 7.5%, 12%)

Ann – July 1st taking the project to their greenway board – asking them to place this project as their priority for the next 4 years

CASL to Buffalo Road two bridges along Horseshoe Farm Park – we will be acquiring another park within the next few months south of Horseshoe Farm Park – Wake Tech, school, etc.

Buffaloe Road to Neuse River West – no land acquisition needed –Buffaloe Road Athletic Park, cross over to Alvis Farm.

Vic Lebsock needs to change line 33 – should say “to skycrest”; line 38 will be skycrest to crabtree creek

Skycrest Drive – extension – no ped bridge in cost estimate b/c we assume that this will be included within the bridge crossing (but it is likely that our trail will go in before the road) – Vic Lebsock will meet with City of Raleigh transportation engineers to determine timeline

A bridge is shown from Milburnie West to East but we do not currently have property or easements to make the crossing – just north of this crossing, there are many wetlands – requires boardwalk

Skycrest to Crabtree Creek – currently stone path will be paved -- seed stone – drainage/bridges/boardwalk is already in place – only cost is the asphalt

JCox – based on a feasibility study, he recommends crossing river north of Anderson point to link up with Knightdale

Due south of Anderson point – many parcels that we need – Vic Lebsock to add 13 parcels to the Crabtree Ck to Poole Road segment on schedule

1st approach is to acquire easements – many parcels south of Anderson Point are in the floodplain and are undevelopable – encumbered with the floodplain – City of Raleigh purchase land under this circumstance

Poole Road to Auburn Knightdale Road – river ridge acquisition (biggest dollar amt in acq), other parcels

Auburn Knightdale Road to TerraGator bridge – Neuse River Wastewater Treatment Plant

Trail to connect just south of the TerraGator bridge as expansion of the existing bridge for pedestrian use. TerraGator bridge will be used more often in the future and we do not want trail users interfering with TerraGator use.

Jennifer Willis looked at land acquisition – posed question to Tim Maloney whether or not this would be 50/50 with the COR

Vic Lebsock summarized the outcome of our work meeting with Tim Maloney – justification for alignment along sections will serve as the framework for the report – proposes that we skip one week so that we meet next on Monday July 7th

Tim Maloney will share this info so far with their board to discuss the nature of the partnership

Report:
Sections
Text justification
Maps
Powerpoint that echoes report

Ann Ayers will need the cost estimate for the second bridge for her greenway advisory board –

Tim Maloney would like to add funding sources: RTP, Federal tax dollars, DOT, federal earmarks, etc. document what we have applied for and what the other opportunities – lay out funding program options

Bridge closest to Capital Blvd, AA says that Wake Forest Planning Director, Chip Russell said that this cost should fit within the Hwy 1 corridor study project that lays out an alternative route for pedestrians – their Smith Creek corridor will be an important north-south trail

Tom Norman – we need to add a discrete project requests– campo will need to set priorities to send to the state for TIP – state will not view this as one project – also

Reimbursement agreements with jurisdictions need to be presented as part of the project – rationale for segmenting them – acquisition of properties, permitting, design,

partnership buy-in, all good justifications for TIP projects – TIP update 2015 just passed – he thinks that amendments are possible if approved by CAMPO and the projects fit within the existing set criteria, time frame and dollar amount – it is clear that this project benefits ‘everybody’ –

Jennifer Willis – there should be adequate political support from within CAMPO

COR to contact Ed Johnson

Jeff Cox – they met with Knightdale last week – Mingo Creek greenway from Hodge Road to Carrington Drive (near downtown K) – feasibility study – several substandard bridges – Knightdale’s priority is to connect a downtown park (in future b/c of transportation challenges) – Mayor of Knightdale suggested that they change their priority to be the connection to the Neuse River Trail as phase 1 – their council have already accepted the notion of a bridge connection over the Neuse so they are set to participate in design/construction – Vic Lebsock said that the Mingo Creek section can be included in the overall permit – Tom Norman \$700K is their proposed match for local project funds for 2010 for Knightdale project –

State Trails program – Susan Carl – Mountains-to-Sea trail funding question from Vic – Jennifer Willis – COPS or general fund – not currently in the senate budget but is an item for them to conference

Consultant selection –

Next two weeks –review a draft RFQ on July 7th – provide comments –

Tim Maloney suggested that we conduct interviews for consulting engineer selection

Ann asked Tim to give us notice of discussion by Commissioners – TM said that this will likely have a presentation from Vic, Mayor, City Manager – the board will also likely have a work session to follow up

Tim Maloney asked to get a revised cost estimate by Wednesday – he will be meeting with the chair on Monday

Vic Lebsock adjourned the meeting at 11:00 am

Neuse River Trail Meeting Notes

NCDOT Division of Bicycle and Pedestrian Transportation
401 Oberlin Road, Suite 250, Raleigh, NC
10:00 A.M. July 7, 2008

Attendees:

Vic Lebsock, City of Raleigh Parks and Recreation
Lisa Potts, City of Raleigh Parks and Recreation
Stefanie Toftey, City of Raleigh Parks and Recreation
Tom Norman, NCDOT Division of Bicycle and Pedestrian Transportation
Bob Mosher, NCDOT Division of Bicycle and Pedestrian Transportation
Susan Carl, NC State Parks Recreational Trails Program
Chris Snow, Wake County Parks, Recreation, & Open Space
Tim Maloney, Wake County Community Services
Alicia Medina, Wake County Community Services
Tina Cheek, Town of Knightdale
Ann Ayers, Town of Wake Forest
Candace Davis, Town of Wake Forest

Vic Lebsock began meeting at 10:06 am

Distributed materials: Draft Report Outline Framework

Remaining alignment priorities: connections to Wake Forest and Knightdale and alignment through the Waste Water Treatment Plant. Vic asked the attendees to review the accuracy of the map.

Section cost estimates include retaining walls.

Currently there is no 'developed' canoe launch on the west side of Capital Boulevard. Ann asked whether or not it would be a good idea to develop a launch near the proposed parking lot. If the trail can be located under the bridge, Vic proposed that the lot go in on the other (east) side of the road.

Ann reported on the Wake Forest board: Greenway board wants to see a trail on the north side. The City Manager would like to see the bridge closer to Capital. Vic agrees about fewer bridges because of ongoing, long-term maintenance. Board brought up maintenance and the possibility of a canoe launch. Vic Lebsock mentioned that the launch would be a small investment compared with the parking lot.

Knightdale – Tina told the group that they have changed their TIP focus to include this project. They are looking at possible parking lot locations for a trail head. Once we are in the RFQ stage, they would like to be involved to decide whether or not to go in on

design/construction contract with the City of Raleigh. Knightdale would like to have it all done by 2012.

Tim Maloney. Board update: shared with David Cook the cost estimates, but felt that inflation rate estimates were high but agreed to use higher numbers. Alignment: for the Neuse River Wastewater Treatment Plant area, no land acquisitions necessary on the east side but Wake County will still pursue these for open space. In later phase for connection to Johnston County line, we will need to make sure that they are ready to connect – maybe postpone the final southern link (to be provided by Clayton, NC). Wake Co has open space bond money – their commitment for Poole Road south would likely be in future monies and this would need to be included in some type of ILA. They do not want to commit current funds for construction that is two years out. Vic recommends using ILA language to verify Wake Co's commitment in two years to dedicate construction money in two years.

Bob Mosher – Johnston Co will be on the east side of the river – they already have funding so they should be ready. Johnston Co does not have a recreation program but Tom Norman discussed how they are working with land owners to make a connection from Clayton to the county line (it will not be Johnston County line but rather Clayton...). State park lands but Clayton will maintain it.

Vic presented the map showing land acquisition needs.

Chris Snow would like a pdf of the two maps.

Vic said, for the sake of this map, acquisition needs for Wake Forest and Knightdale are not included.

Chris Snow – Wake Co has easements in Johnston County along the Neuse River.

Vic Lebsock – report preparation – distributed the draft outline for the report. This will be written up by section with justifications by section. Vic Lebsock would like to have a draft report by next Monday. Advised the group that he is working with City manager, mayor, county chair of the commission and manager – next meeting will be either July 28, 29, or 30 at 4:00 pm.

Vic Lebsock two maps (alignment, jurisdictional boundaries, hydrology, current park or gwnwy ownership; alignment with land needs). All done by segments – detailed costs to be included as an appendix. Will need an executive summary.

Tom Norman – agenda for late July meeting? Vic Lebsock – alignment, costs, schedule. Tom Norman: any action items proposed for Wake Forest or Knightdale leaders? Vic Lebsock – here's the project and your action item is to enter into an ILA at some level to commit to the scopes of each connection. Do we create an ILA individually between each two-party relation or one overall 4-party ILA. Ann – either use capital funds over 4 years or put forth a bond – it will be difficult for them to commit to a timeline. Tim Maloney – no reason for Wake County to be in an ILA with Wake Forest or Knightdale – each group will be funding it differently.

Tom Norman – NC State DOT is currently helping Clayton determine alignment and funding sources for a county line connection. Tom Norman said that they can work in a similar way with Wake Forest but they will need a project proposal in order to get started. Tom Norman can look into larger funding levels b/c COR and Wake Co are such large partners – he needs to see exactly how much we need in order to complete the project. Vic Lebsock – we are at \$23 M, leaving us ~\$3M short. Tom Norman – through CAMPO, Raleigh and Wake Co can propose millions through the TIP based on the number of people to be served by the system and the size of the jurisdictions. Tom Norman – will need a very specific timeline for the project so that funds could be scheduled. Tim Maloney – the projects need to be described specifically – exact geographic location and exact elements. Vic Lebsock – joint application to CAMPO? Tom Norman – larger entities in this, COR and Wake Co, can have a partnership in proposing this project for a TIP with the support of Wake Forest and Knightdale. TAC or straight to CAMPO? Tom Norman – TCC first and then approved by TAC. The TCC figures out the project description before it goes for final consideration/allocation. Vic Lebsock - CAMPO will need certified acquisition and environmental permitting. If our design falls 1 year behind, how does this affect NCDOT construction funds. Tom Norman – you must complete significant design. Vic Lebsock – looking at a request in the third year once acquisition, permits, etc are taken care of. Now we need to determine which segment is the most: connectivity, no acquisition issues, no issues if it operates as a stand-alone for a while, bridges. Vic Lebsock's segments based on pieces that go from one road to another so these should all operate individually. Tom Norman – the more you ask for, the better the benefit needs to be. Vic Lebsock – assume we make a request, would it go to the top of the list this year, next year, 3 years? Tom Norman – amendments are always possible but it depends on what can actually be built. At least 2010, but more likely 2011 or 2012. Vic Lebsock – greatest benefit is the link from Crabtree Ck to Walnut Creek – Tom Norman agrees. BUT, this is where we have the least amount of acquisition now but by next year we should have the land. Focus on acquisition for now b/c the loop benefit between Crabtree and Walnut Creeks so that when we apply for TIP funds, they have a greater benefit. Before this we will need to define the level of involvement from all partners. Tom Norman – CAMPO – a lot of competition from all over so all partnering communities would have to agree about the benefit to all. Vic Lebsock – money to fund this could come from NCDOT Bike/Ped money? Tom Norman – maybe, but other funding sources are from other division heads.

Last thing – draft RFQ was sent to Tim, Tina and Ann to get comments back late this week. Vic would like to advertise for 30 days. Vic Lebsock – four year completion date. Ann – include Wake Forest and Knightdale in the partner section.

Comments or questions?

Tom Norman – actions – city/county manager/mayor – short list of things on the agenda at the end of the month? He wants us to make the best use of their time in helping to direct us. Vic Lebsock would like the executive summary of the report to define what actions are needed by each community. Vic Lebsock – Brad Miller and his office would help make this project a priority. Poole Road may be the separation between two districts.

Tom Norman – time for a press release? Tim Maloney – wait until we present. Vic Lebsock – called by the City manager so wait until we have our final draft. Although, it is up to the mayor/managers to decide when to announce.

The same attendees from the May meeting will be invited to participate in this second meeting. Likely to be in a big room Tim Maloney – has a large conference room. Vic Lebsock – do they have internet access in that room? Yes.

Tom Norman – DENR – specific role for DENR? Vic Lebsock – asked to invite them. What does the State Park budget have? Susan – she can only speak to their small grants. Tom Norman – DENR is supportive of the MTS trail – invite Lewis Ledford, director of Parks and Recreation in Wake County, in addition to the others.

Give Tim Maloney the date for the mtg so that he can schedule a room.

Mountains-to-Sea Trail funding – Susan will talk to Lewis about all possible funding sources.

DWQ – Tom Norman – early input is helpful in order to make this project streamlined. Vic Lebsock – not sure if this project will have...

Richard Rogers to be invited at the next meeting.

Wake Forest connection construction to begin, assuming we do the Individual Permit, design as another segment of our trail. Time limit is the FEMA flood study for the bridge (6-9 months for approval). RFQ, designer on board, surveying, cross-sections, assuming contract in November of this year, contract in 6 weeks – construction could begin in 2010...

Vic Lebsock adjourned the meeting at 10:55 am

South lake trail in falls lake recreation area – CS asked if would like to see this on the maps. Have Will map this or get the data from the Corps or Wake County. Make pdfs for the group.