

ROCKY BRANCH GREENWAY



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GREENWAY TEAM



GEOG 549 - SPRING 2013

Greenway Team:

John Hutchinson, Jim Olsen (G), Gabrielle Petty, Gavin Witherspoon



Anthropogenic transformation of the biomes



Anthromes

Used

Dense Settlements

- Urban
- Mixed settlements

Villages

- Rice villages
- Irrigated villages
- Rainfed villages
- Pastoral villages

Croplands

- Residential irrigated croplands
- Residential rainfed croplands
- Populated croplands
- Remote croplands

Rangelands

- Residential rangelands
- Populated rangelands
- Remote rangelands

Seminatural

Seminatural

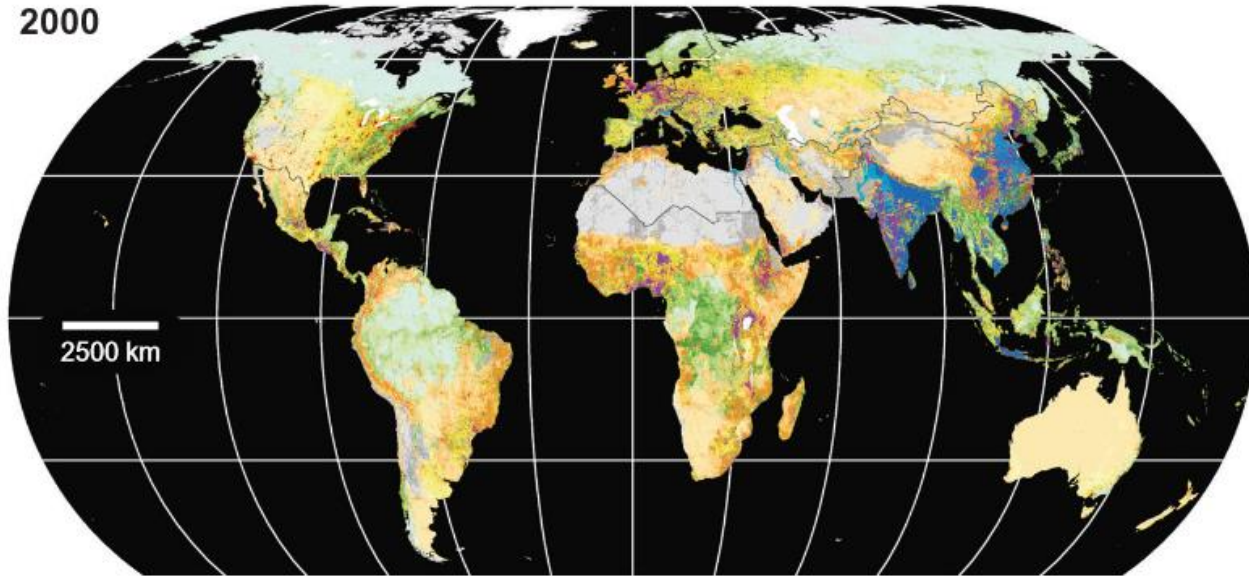
- Residential woodlands
- Populated woodlands
- Remote woodlands
- Inhabited treeless & barren

Wild

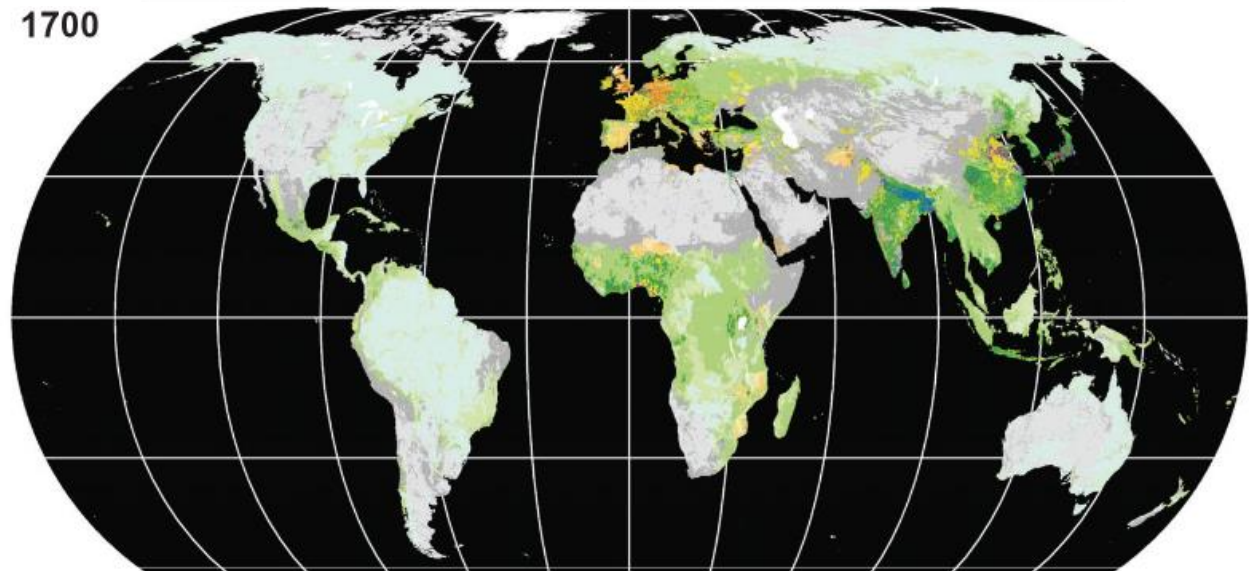
Wildlands

- Wild woodlands
- Wild treeless & barren lands

2000

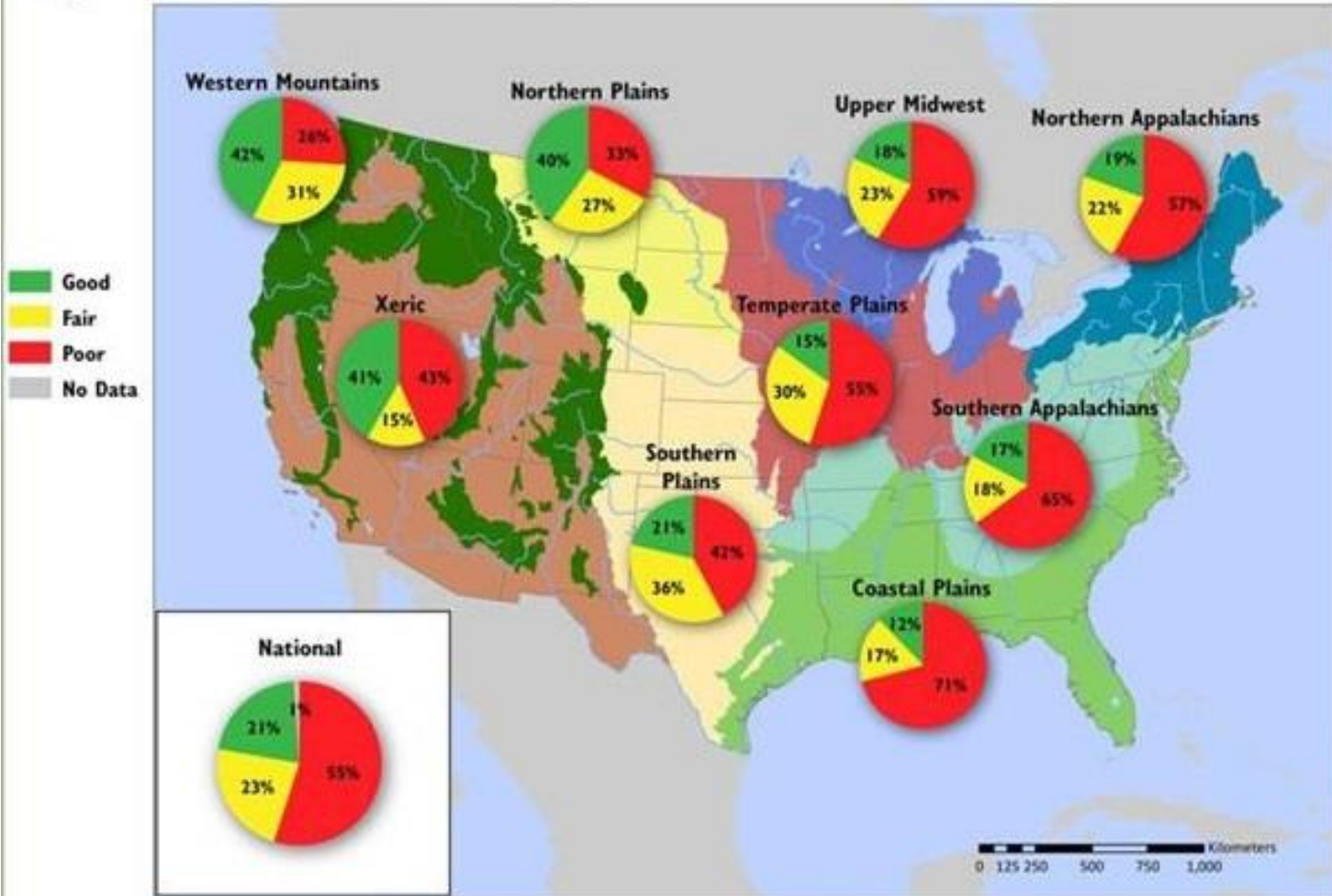


1700



EPA – 55% of nation’s streams and rivers are “poor” condition, posing health risks to fish, other wildlife and humans

Biological Condition — Macroinvertebrate MMI





Research the potential for combining transportation functionality with a riparian buffer and study land availability based on present land use and land conditions.



- **Intro (Jim)**
- **Physical Inventory (Gavin)**
- **Real Estate Inventory (John)**
- **Greenway Case Studies (Gabrielle)**
- **COAs for Rock Branch (Jim)**



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Physical Inventory



GAVIN





Stream Bank Assessments



Ground Cover

A	0%-25%
B	26%-50%
C	51%-75%
D	76%-100%

Slope of Bank

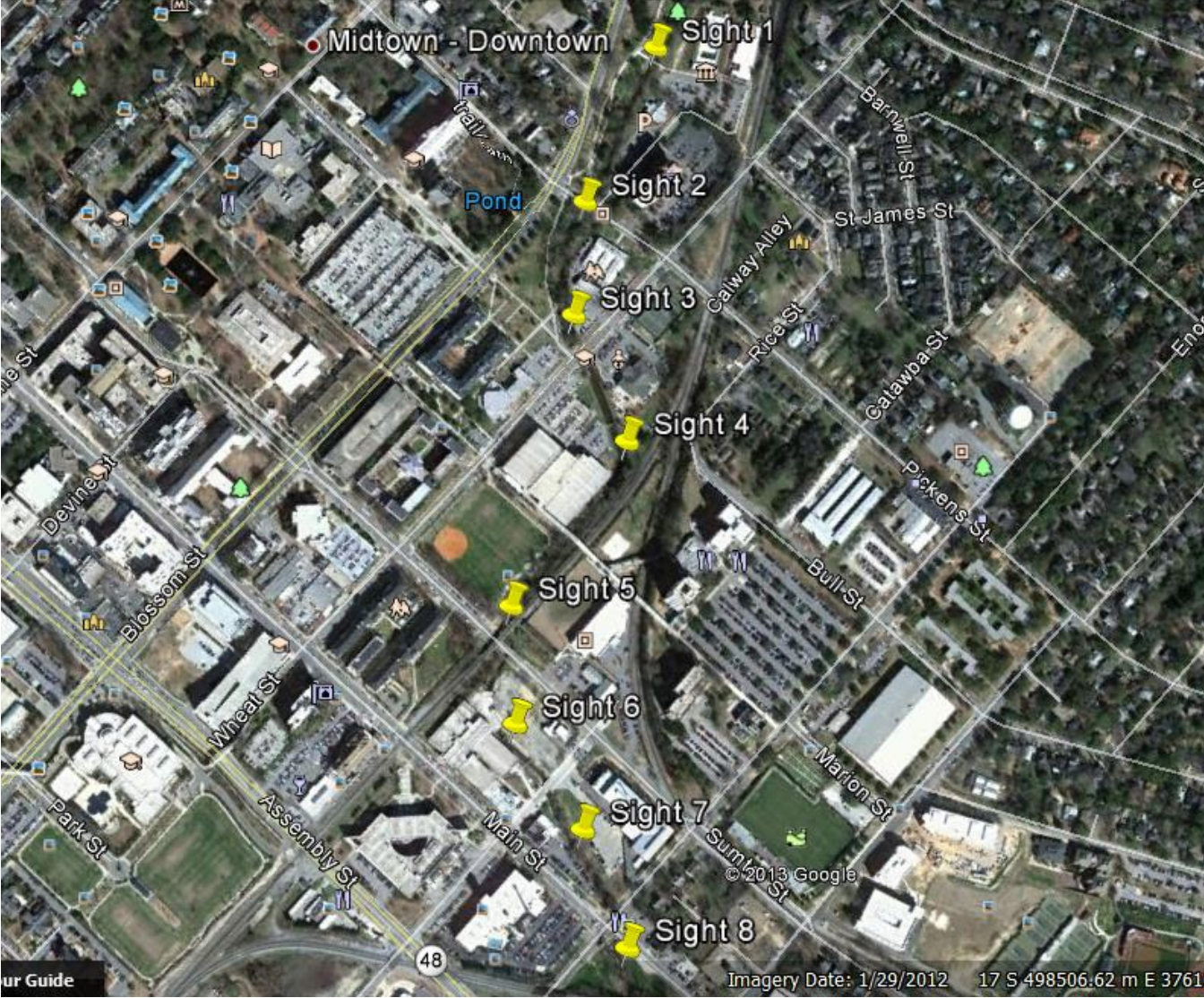
1	Less than 45 degrees
2	Greater than 45 degrees

Erosion Prone

Yes
No



Locations





Examples



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Examples



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What does this mean?

- Identify areas that were prone to erosion as well as show what factors such as bank slope and ground cover that either aid in the erosion process or help protect against it
- Using these findings we can now see which areas do or do not need extra attention when constructing the greenway
- The aid to trouble areas will not only help insure the overall function of Rocky Branch Creek for generations to come, but also the greenway.



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Real Estate Inventory



JOHN

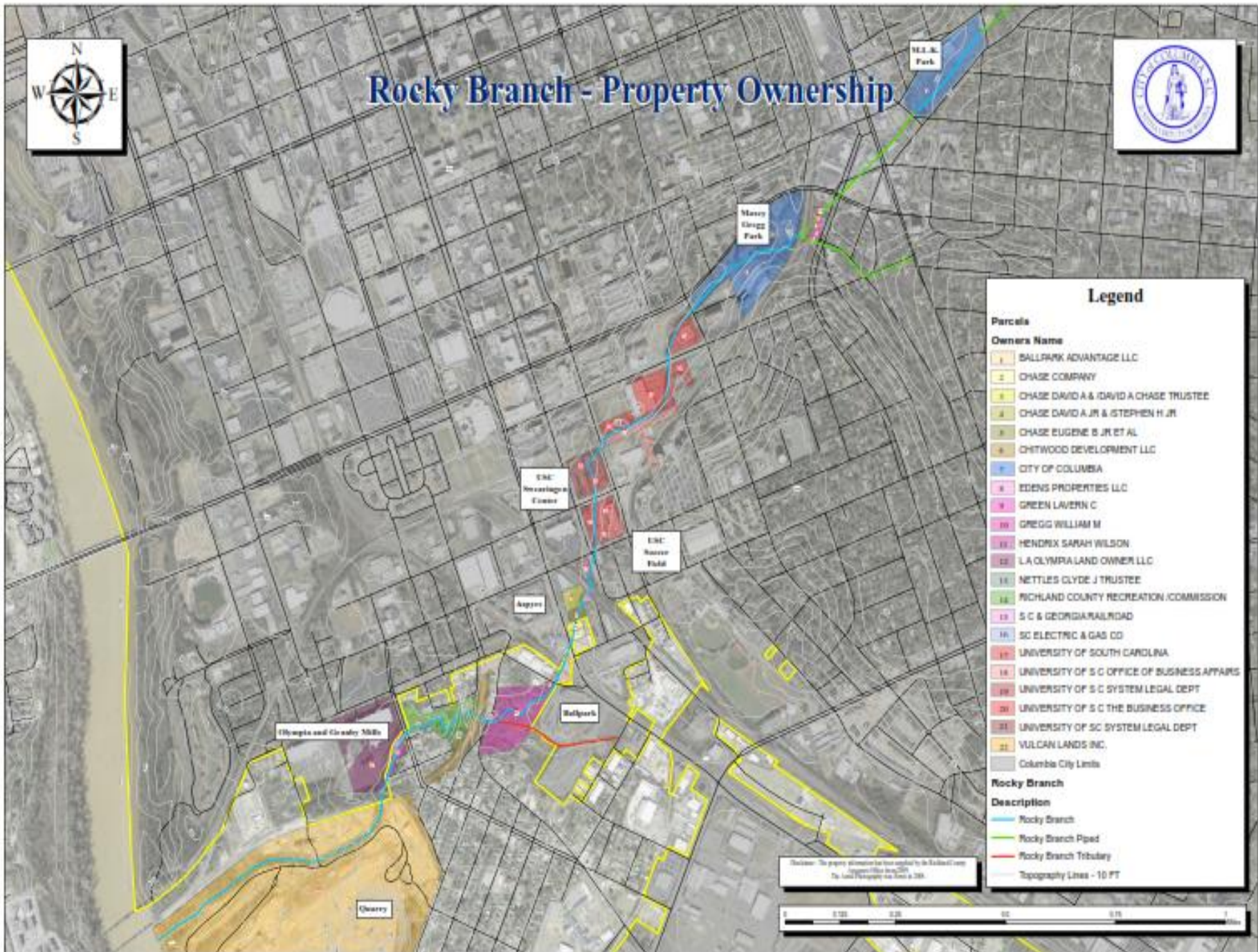
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Rocky Branch - Property Ownership

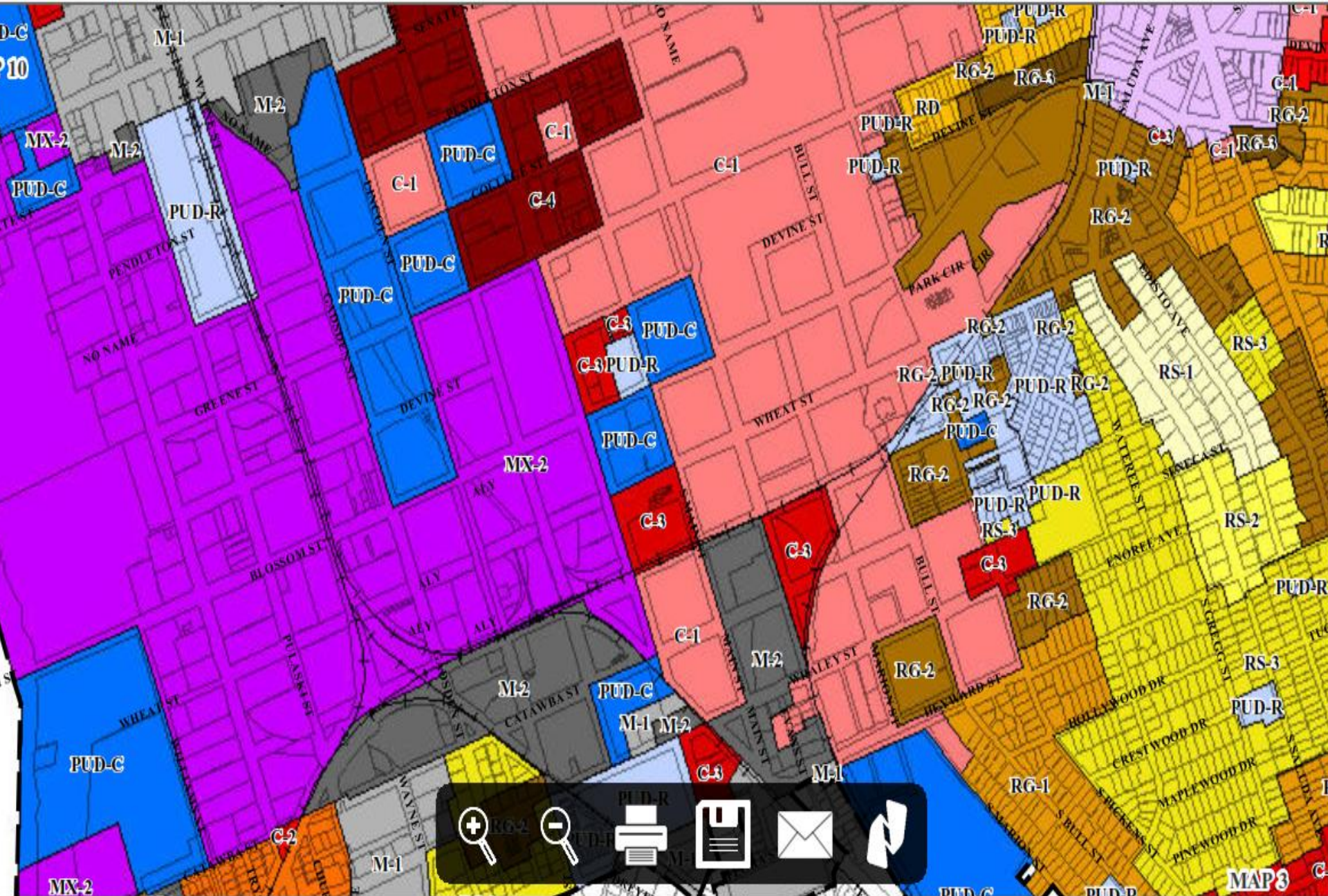


Legend

- Parcels**
- Owners Name**
- 1 BALLPARK ADVANTAGE LLC
 - 2 CHASE COMPANY
 - 3 CHASE DAVID A & DAVID A CHASE TRUSTEE
 - 4 CHASE DAVID A JR & ISTEPHEN H JR
 - 5 CHASE EUGENE B JR ET AL
 - 6 CHITWOOD DEVELOPMENT LLC
 - 7 CITY OF COLUMBIA
 - 8 EDENS PROPERTIES LLC
 - 9 GREEN LAVERN C
 - 10 GREGG WILLIAM M
 - 11 HENDRIX SARAH WILSON
 - 12 LA OLYMPIA LAND OWNER LLC
 - 13 NETTLES CLYDE J TRUSTEE
 - 14 RICHLAND COUNTY RECREATION /COMMISSION
 - 15 S C & GEORGIA RAILROAD
 - 16 SC ELECTRIC & GAS CO
 - 17 UNIVERSITY OF SOUTH CAROLINA
 - 18 UNIVERSITY OF S C OFFICE OF BUSINESS AFFAIRS
 - 19 UNIVERSITY OF S C SYSTEM LEGAL DEPT
 - 20 UNIVERSITY OF S C THE BUSINESS OFFICE
 - 21 UNIVERSITY OF SC SYSTEM LEGAL DEPT
 - 22 VULCAN LANDS INC.
 - 23 Columbia City Limits
- Rocky Branch**
- Description**
- Rocky Branch
 - Rocky Branch Poed
 - Rocky Branch Tributary
 - Topography Lines - 10 FT

Disclaimer: The property information has been compiled by the Columbia County Land Information Office using GIS. The Land Information Office does not warrant the accuracy of the information.







Rocky Branch Real Estate

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© GreenvilleDailyPhoto.com



Importance of Trails to Home Builders and Buyers...

“Residential properties will realize a greater gain in value the closer they are located to trails and greenspace. According to a 2002 survey of recent home buyers by the National Association of Home Realtors and the National Association of Home Builders, trails ranked as the second most important community amenity out of a list of 18 choices. Additionally the study found that trail availability outranked 16 other options including security, ball fields, golf courses, parks, and access to shopping or business centers.” www.greenvillesc.gov

Improvements seen from Greenway construction around the United States...

- Tallahassee, FL: The Florida Department of Environmental Protection Office of Greenways and Trails estimate an economic benefit of \$2.2 million annually from the 16 mile St. Marks Trail.
- Leadville, CO: In the months following the opening of the Mineral Belt Trail, the city reported a 19 percent increase in sales tax revenues.
- Dallas, TX: The 20 mile Mineral Wells to Weatherford Trail attracts 300,000 people annually and generates local revenues of \$2 million.
- Apex, NC: The Shepard's Vineyard housing development added \$5,000 to the price of 40 homes adjacent to the regional greenway, and those homes were still the first to sell.
- Front Royal, VA: A developer who donated a 50 foot wide seven mile long easement along a popular trail sold all 50 parcels bordering the trail in only 4 months.
- Salem, OR: Land adjacent to a greenbelt was found to be worth about \$1200 an acre more than land only 1000 feet away.
- Oakland, CA: A three mile greenbelt around Lake Merritt, near the city center, was found to add \$41 million to surrounding property values.
- Seattle, WA: Homes bordering the 12 mile Burke-Gilman trail sold for 6 percent more than other houses of comparable size.
- San Antonio, TX: Riverwalk Park, created for \$425,000, has surpassed the Alamo as the most popular attraction for the city's \$3.5 billion tourism industry.
- From www.greenvillesc.gov

Greenville, SC Greenway Property Appreciation Analysis

Location	Lot size	Building SF	Room Count	Most recent Sale	Prior Sale	Annual Increase
8 Woodland Way Circle Greenville,SC 29601	.88 Acres	3675 sq. ft.	4 bed/3.5 bath	8/12/2010-\$700,000	10/21/2007-\$500,000	13.00%
116 Ridgeland Dr. Greenville,SC 29601	.24 Acres	5320 sq. ft.	5 bed/5.5 bath	8/14/2008-\$975,000	9/11/2003-\$764,073	6.00%
600 University Ridge Greenville,SC 29601	.024 Acres	957 sq. ft.	2 bed/1bath	6/7/2010-\$115,000	3/28/2006-\$85,000	8.00%
Avg. Annual Increase						9%

Columbia, SC Greenway Property Projected Appreciation Analysis

Location	Lot size	Building SF	Room Count	Assessed Value	Projected Value
Post Greenway Construction					
1700 Wheat St. Columbia,SC 29205	.12 Acres	4612 sq.ft.	3 bed/3.5 bath	2012- \$649,500	\$707,955
1715 Wheat St. Columbia,SC 29205	.04 Acres	630 sq.ft.	2 bed/1.5 bath	2012- \$51,200	\$55,808
1600 Park Cir. Unit 1210 Columbia, SC 29201	NA	NA	1 bed/1 bath	2012- \$79,400	\$86,546



Based on the Data from Greenville, SC this property located at 1715 Wheat St. stands to increase its value by \$4,608 with the development of the Rocky Branch Creek Greenway.



The Rocky Branch Creek Greenway could potentially raise the value of this property located at 1700 Wheat St. by \$58,455, based on similar gains seen in Greenville, SC.



Given the Appreciation Analysis from Greenville, SC the Condominium unit 1210 located at 1600 Park Circle, could see a \$7,146 gain in property value with the development of the RBC Greenway, similar gains could be expected of other units in the building.

Sources

1. www.greenvillesc.gov/ParksRec/Trails/forms/GreenwaysMasterPlan/Chapter1.pdf
2. “Parks and property values in Greenville, South Carolina” Molly Espey, Kwame Owusu Edusei, Department of Agricultural and Applied Economics Clemson University, Jan. 2001
3. The Appraisal of Real Estate, 13th ed. Appraisal Institute, Chicago IL, 2008
4. www.columbia.sc.gov/coc/index.cfm/...and.../zoning/zoning-maps/
5. www.richlandonline.com/services/assessorsearch/assessorsearch.asp



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Greenway Case Studies



GABRIELLE

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Types of Greenways



urban riverside/waterfront
recreational
ecologically significant natural corridors
scenic/historic routes
comprehensive greenway systems/networks

Problems:

most polluted urban stream in NC
filled in floodplains
non-natural channelization
heavy development in drainage area

Goals:

stabilize the creek
improve water quality
create a healthier aquatic and wildlife habitat
integrate the creek into the campus
environment



Successes/Improvements:

newly created natural floodplain
native vegetation increases width of the
forested buffer zone
three bioretention and wetland areas
pedestrian trails



Rocky Branch, NC State (cont.)



Problems:

imperviousness of the entire watershed is 49%
calculated to rise to 65.9%

A greenway would...

reduce the percentage of impervious surfaces
in area

reduces the intensity of flood events
help improve water quality of the stream



Suggestions for RBC



remove buildings in floodplain areas to restore
the natural floodplain
restore riparian buffers
install bioretention ponds and wetlands
construct trails along areas of the stream



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COAs for Rock Branch



JIM

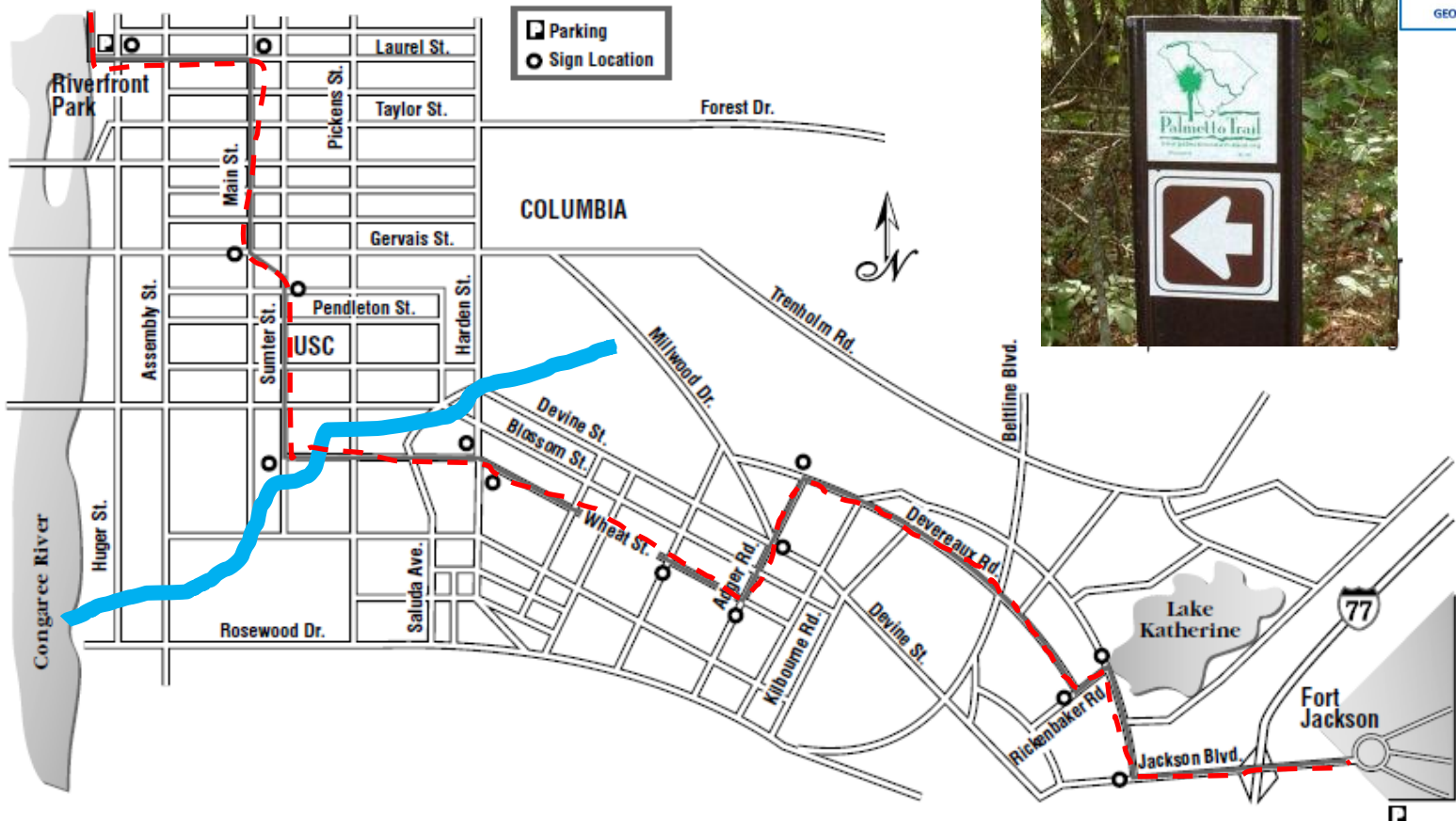
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PALMETTO TRAIL – Capital City Passage



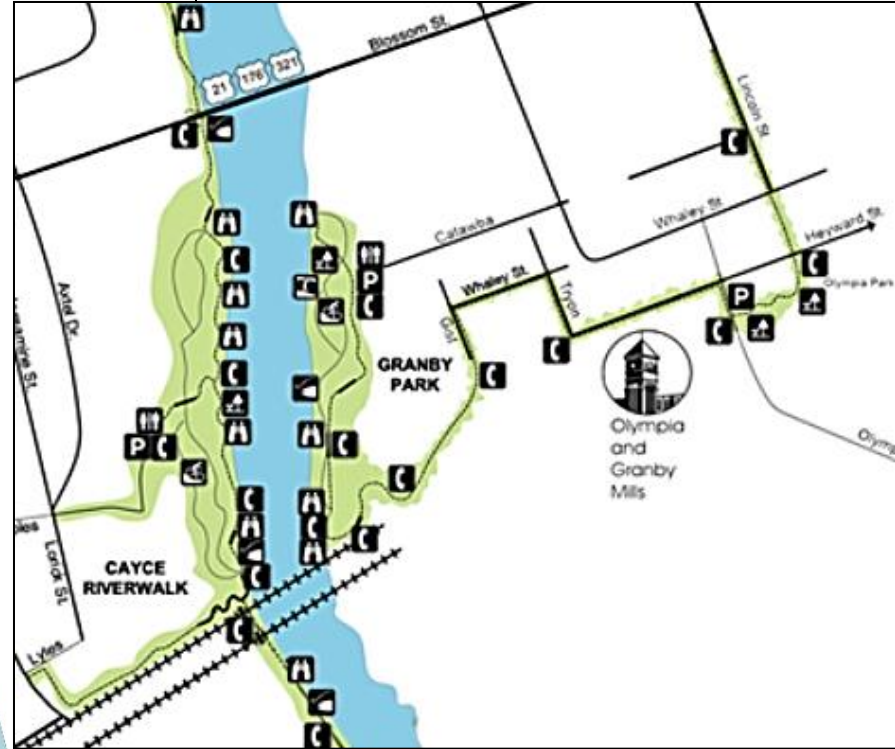
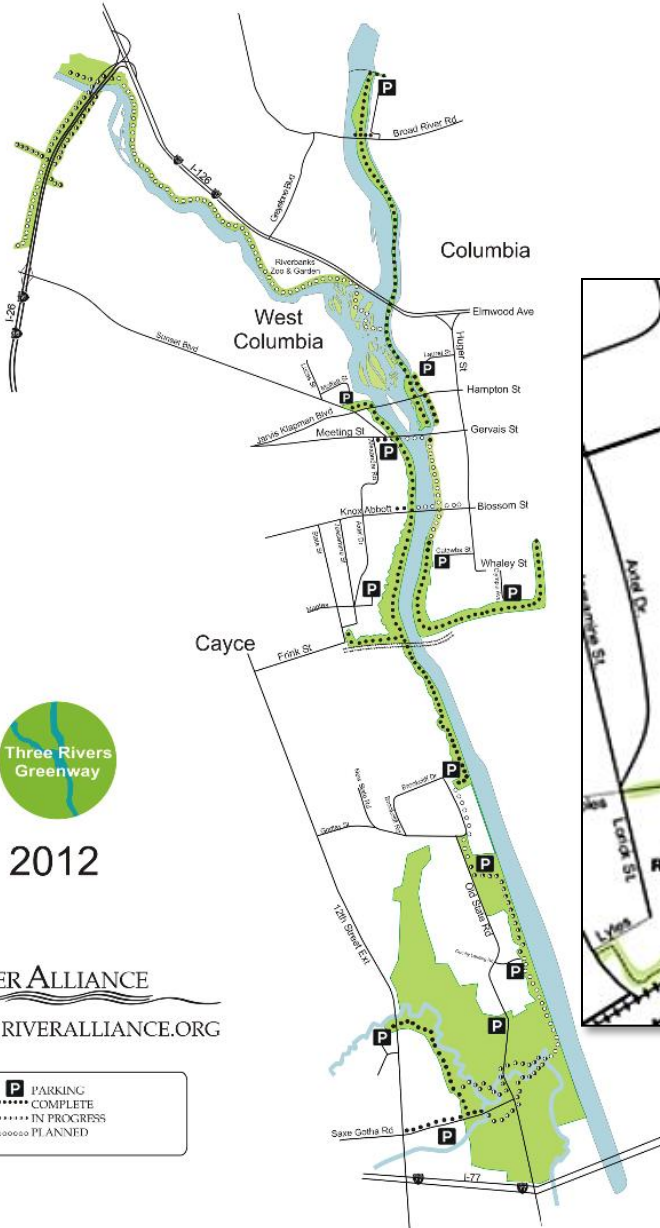
The Capital City Passage is the 9th passage to be opened on the 400 + mile Mountains to The Sea, Palmetto Trail. It is the first urban segment of the trail and uses the city's sidewalks to connect the Fort Jackson Passage to Riverfront Park. Eventually the trail will continue north following the Broad River.

The 7.5 miles of this urban passage truly highlight all that is great about Columbia. Taking you from Fort Jackson on one end

to the Broad River and Riverfront Park at the other end. In between you will walk through beautiful neighborhoods, past city parks and schools, as well as the Horseshoe at the University of South Carolina and the steps of the State Capital.

Feel free to wander off this trail and enjoy the shopping, restaurants and many points of interest that help make Columbia a great city.

Three Rivers Greenway



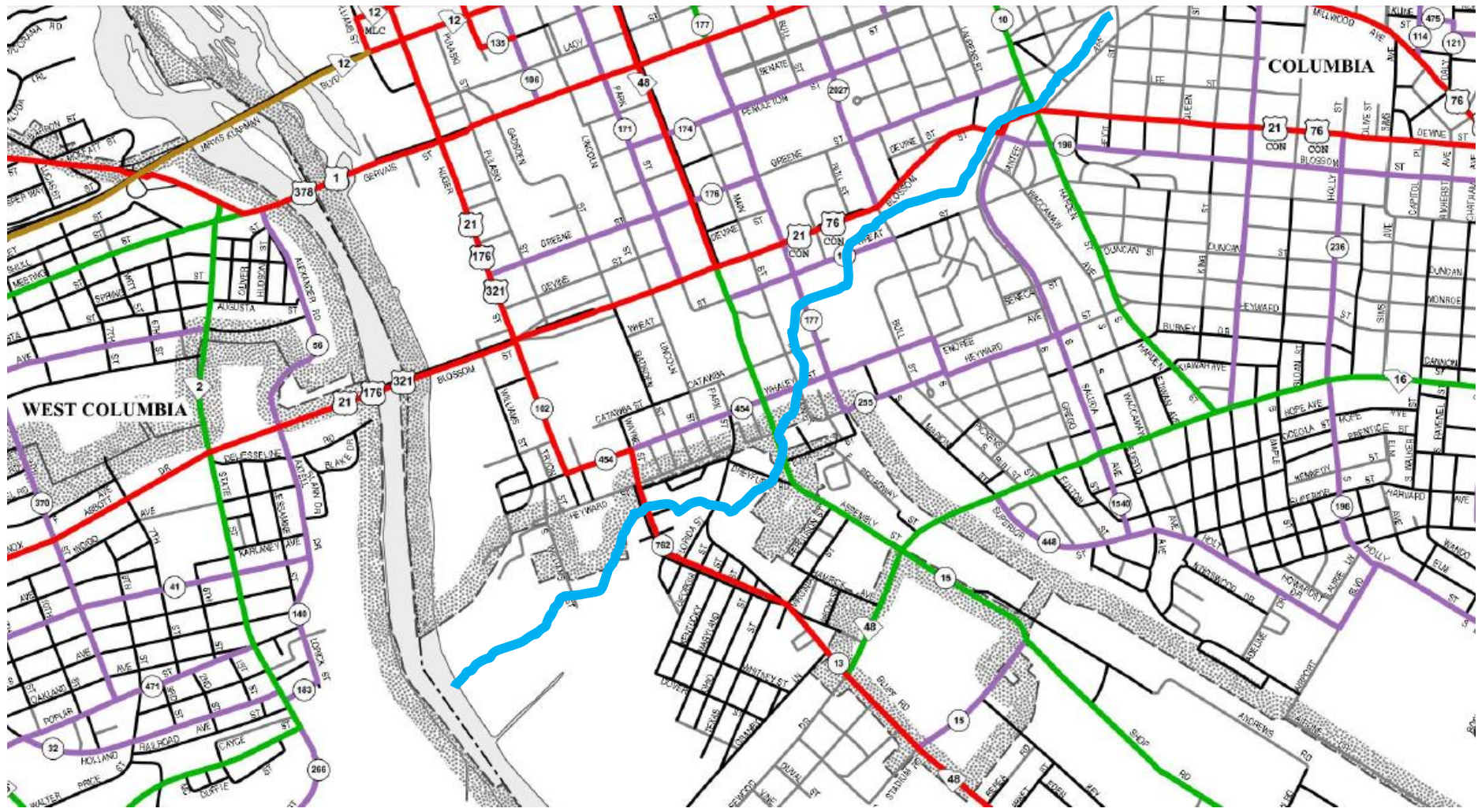
2012

THE RIVER ALLIANCE
WWW.RIVERALLIANCE.ORG

- P** PARKING
- COMPLETE
- IN PROGRESS
- PLANNED



SCDOT TRAFFIC PATTERNS



— Principal Arterial
 — Minor Arterial
 — Collectors
 — Rocky Branch



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COA_{1b} - PEDESTRIAN COORIDOR





COA 2 – RIPAREAN FOCUS





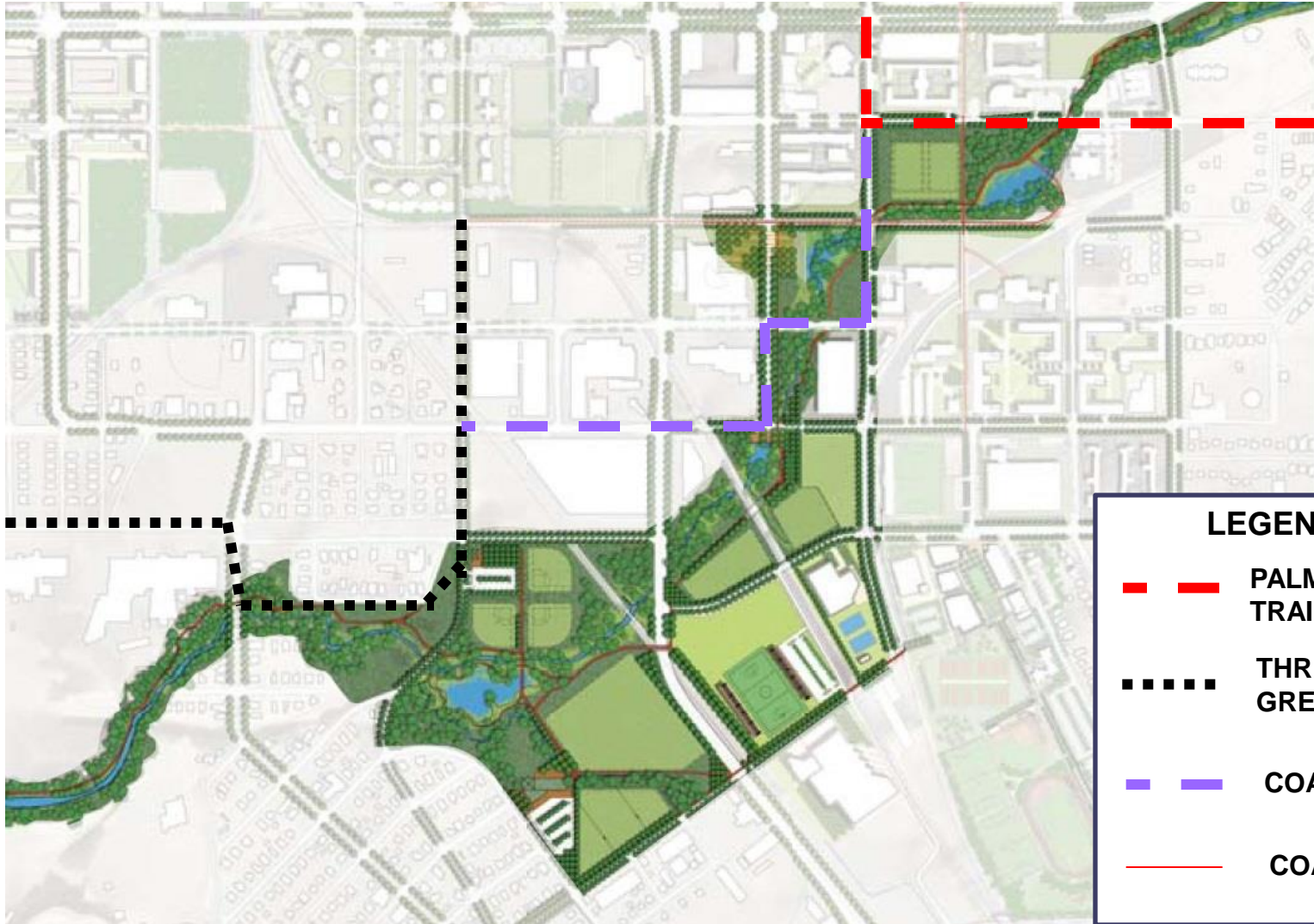
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Notional Retention Pond on USC Campus









NOTIONAL SOUTH CAMPUS WITH COAs



LEGEND

-  **PALMETTO TRAIL**
-  **THREE RIVERS GREENWAY**
-  **COA1a + b**
-  **COA2**



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Rock Branch Watershed



THANK YOU

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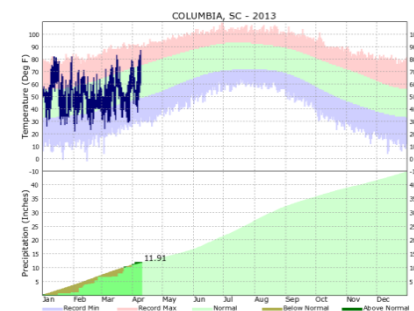
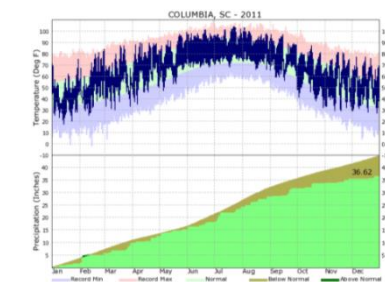
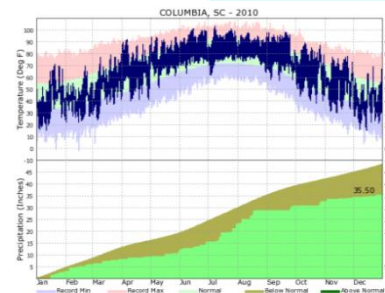
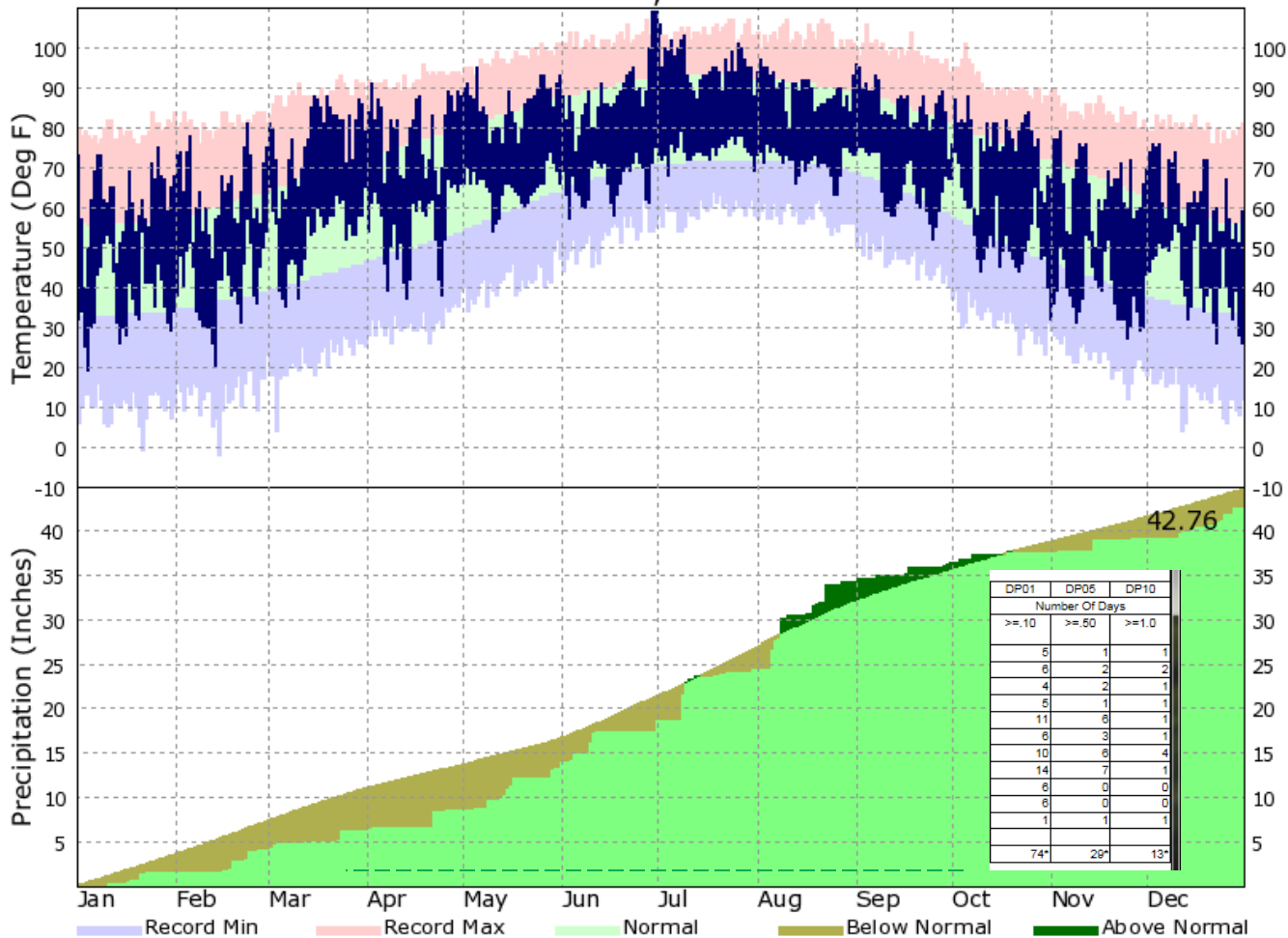
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2012 Columbia Metro Climate Plot



COLUMBIA, SC - 2012



“We have entered an environment in which turbulence seems the norm and change is the only constant.”

- The Team Handbook (Scholtes, Joiner, Streibel), 1996