Monitoring Data Record

Project Title: U-3462 Smith Ave. Ext. COE Action ID: 19982173
Stream Name: Charles Branch and UT to Charles Branch DWQ Number: 20081177
City, County and other Location Information: Shallotte, NC (Intersection of US 17 Business. (Main St.) and Smith Ave.
Date Construction Completed: Streambank Reforestation completed January 2012
Monitoring Year: (5) of 5
Ecoregion: Carolina Flatwoods 8 digit HUC unit 03040207
USGS Quad Name and Coordinates: Shallotte 33.979506, -78.377487
Rosgen Classification: _____
Length of Project: Enhancement 630 ft. and Restoration 95 ft. Urban or Rural: Urban
Watershed Size: 1.63 sq. miles
Monitoring DATA collected by: M. Green , J. Young and P. Allen Date: 1/26/16
Applicant Information:
Name: NCDOT Roadside Environmental Unit
Address: 1425 Rock Quarry Rd. Raleigh, NC 27610
Telephone Number: (919) 861-3772 Email address: mlgreen@ncdot.gov
Consultant Information:
Name: _____
Address: _____
Telephone Number: _____ Email address: _____
Project Status: _____

Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.): Level 1

The NCDOT plans to enhance approximately 630 feet and restore approximately 95 feet of stream as part of this project. Monitoring of the stream enhancement and restoration areas shall consist of Level 1 monitoring requirements. Monitoring shall be performed twice annually (summer and winter) for each year of a five year period following completion of the work. Monitoring activities shall consist of reference photos, plant survival determination, and visual inspection of stream stability. The sites shall be monitored for five years, provided at least two bankfull events have occurred during this monitoring period. If two bankfull events have not occurred by the end of the five year monitoring period, the NCDOT may, at DWQ's discretion, cease further monitoring of the site. The two bankfull events should occur within different monitoring years.

Section 1. PHOTO REFERENCE SITES
(Monitoring at all levels must complete this section)

Total number of reference photo locations at this site: 5 photos were taken from 4 photo point locations and 2 overview photos of the buffer plantings
Dates reference photos have been taken at this site: 1/26/12, 7/31/12, 2/6/13, 7/30/13, 1/27/14, 6/24/14, 1/9/15, 8/4/15, 1/26/16

Individual from whom additional photos can be obtained (name, address, phone):_____

Other Information relative to site photo reference: A site map is attached showing the photo point locations.

If required to complete Level 3 monitoring only stop here; otherwise, complete section 2.

Section 2. PLANT SURVIVAL
Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):
It was noted that some woody vegetation was cut by the adjacent property along Charles Branch next to the Big Lots parking lot. An SVR permit to cut this vegetation had been applied for by permission had not been granted.

Estimated causes, and proposed/required remedial action: NCDOT plans to contact the adjacent property.

ADDITIONAL COMMENTS: Streambank reforestation was completed in January 2012. Site maps are attached showing the streambank and wetland grass planted areas. Black willow and silky dogwood live stakes were planted along the streambank and green ash, sycamore, and tulip poplar bareroot seedlings were planted in the buffer. Additional live staking was completed on the right bank at UT to Charles Branch around the log sills on 2-6-13. On 1-9-15, the right buffer at PP#2 was supplementally planted with 6 – 3 gallon trees where mowing had been taking place. Additional signs noting that this area is not to be disturbed were also installed. NCDOT will continue to monitor plant survival.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

Charles Branch and the UT to Charles Branch are stable for Year 5 Winter evaluation. The lower log sill along the UT to Charles Branch which had water piping under it was repaired on 10-15-12. This log sill had water flowing over top of the structure at the time of monitoring visit. A bankfull event was noted at time of monitoring. NCDOT will continue to monitor for channel stability.

Date Inspected	Station Number	Station Number	Station Number	Station Number	Station Number
Structure Type					
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?					
Other problems noted?					
Bankfull event dates and how it was noted	6/24/14 Bankfull event occurred along UT to Charles Br. while onsite	8/4/15 Bankfull event visually noted	1/26/16 Bankfull event visually noted		

Section 4. DEBIT LEDGER

The entire Charles Branch and UT to Charles Branch stream relocation sites were used for the U-3462 project to compensate for unavoidable stream impacts.

Charles Branch Stream Mitigation Site

Photo Point #1 (Upstream) – Charles Branch

Photo Point #2 (Upstream) – UT to Charles Branch

Photo Point #2 (Downstream) – UT to Charles Branch

Photo Point #3 (Downstream) – Charles Branch
Year 5 Winter – January 2016

Photo Point #4 (Upstream) – Charles Branch

Charles Branch Stream Mitigation Site

Buffer overview at PP#1

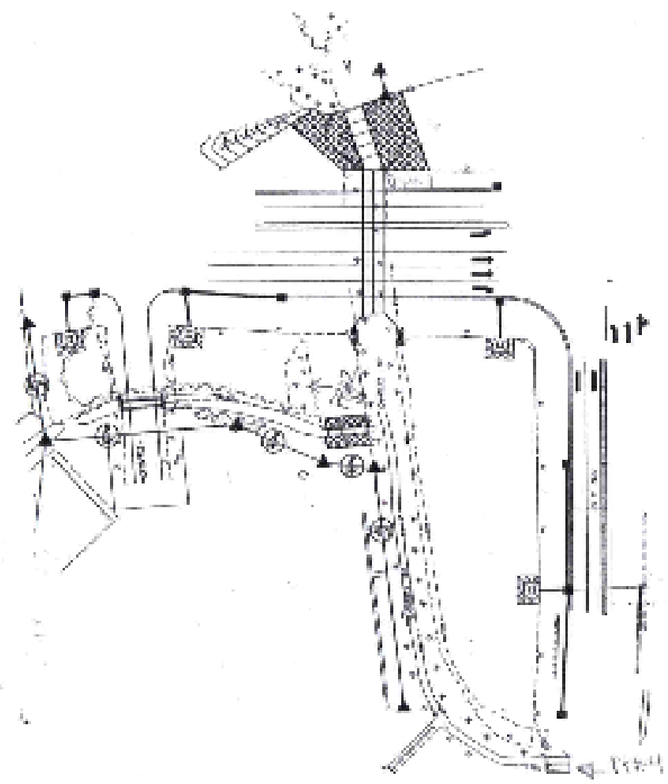
Woody Vegetation Cut Along Charles Branch

U-3462 Charles Branch Mitigation Site
Stream Photo Point Locations
Brunswick County, North Carolina

0 125 250 500 Feet

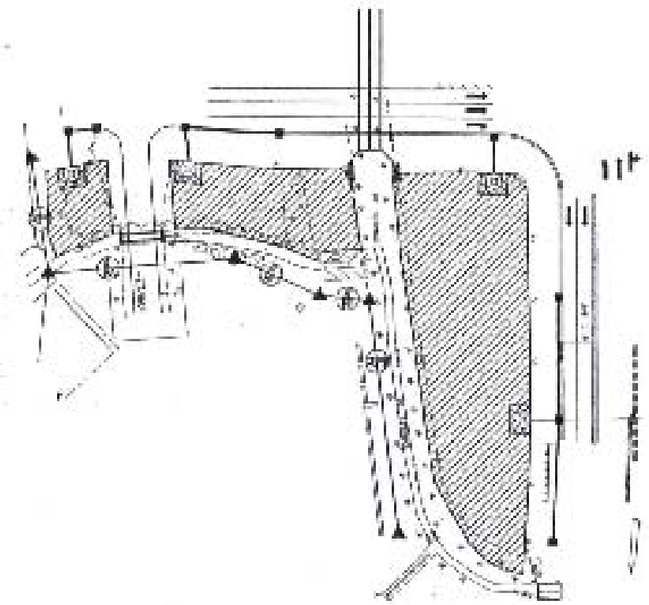
N
W E
S

0.1 ACRE STREAMBANK REFORESTATION



SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

0.9 ACRE WETLAND GRASS PLANTING



SEE EC-24 AND PROJECT SPECIAL PROVISIONS

PROJECT VICINITY - U-3462
Charles Branch Mitigation Site
Brunswick County, North Carolina

0 62.5 125 250 375 500 Feet

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