Monitoring Data Record

Project Title: R-2248D – Charlotte Outer Loop COE Action ID: 200131321
Stream Name: Trib. to Dixon Branch (Site 16) DWQ Number: 011231
City, County and other Location Information: Mecklenburg County, Charlotte Outer Loop, R-2248D Right of Project Station 13+50 Ramp 2D
Date Construction Completed: February 2005 Monitoring Year: (6) of 5
Ecoregion: 8 digit HUC unit 03050101
USGS Quad Name and Coordinates: 35.361329, -80.840961
Rosgen Classification: Proposed C4 stream type classification
Length of Project: 548 ft. Urban or Rural: Urban Watershed Size:
Monitoring DATA collected by: M. Green, J. Elliott, P. Allen Date: 9/9/14
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 permittee shall perform the following components of Level I monitoring each year for the 5-year monitoring period or through two documented bankfull flow events. Reference photos; plant survival (i.e. identify specific problem areas (missing, stressed, damaged or dead plantings), estimated causes, and proposed/required remedial action);visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. The permittee shall submit the monitoring reports to the USACE, Raleigh Regulatory Field Office Project Manager, within sixty days after completing the monitoring. If less than two bankfull events occur during the first 5 years, the permittee shall continue monitoring until the second bankfull event is documented. The bankfull events must occur during separate monitoring years. In the event that the required bankfull events do not occur during the five-year monitoring period, the USACE, in consultation with the resource agencies, may determine that further monitoring is not required. It is suggested that all bankfull occurrences be monitored and reported through the required monitoring period. The permittee shall perform and submit photo documentation twice each year (summer and winter) for the 5-year monitoring period, and for any subsequently required monitoring period.

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

Total number of reference photo locations at this site: 6 photos were taken from 3 photo point locations.

Dates reference photos have been taken at this site: 2/23/09, 9/1/09, 3/16/10, 9/28/10, 3/2/11, 9/12/11, 1/25/12, 9/20/12, 1/23/13, 9/17/13, 9/9/14

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

Other Information relative to site photo reference: A site map with photo point locations is attached to this report.

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):

Estimated causes, and proposed/required remedial action:

ADDITIONAL COMMENTS: The planted vegetation is surviving and is well established along the streambank and within the buffer. The planted vegetation noted surviving included silky dogwood, black willow, willow oak, sycamore, river birch, and yellow poplar. NCDOT performed a supplemental planting at Site 16 on March 2, 2011. Other vegetation noted onsite included winged elm, sweetgum, pine, cottonwood, baccharis, lespedeza, briars, green ash, red maple, and various grasses. NCDOT proposes to discontinue plant survival monitoring at the Tributary to Dixon Branch (Site 16).

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.

This completes the Year 6 Summer evaluation for the UT to Dixon Branch (Site 16) stream relocation. NCDOT installed log sills in May 2010 to stop the previously noted headcut and further stabilize the stream. Three of the four installed log sills failed due to improper installation.

On June 5, 2012, an onsite meeting was attended by regulatory agencies and NCDOT. It was determined at the meeting to remove the log sills that were not functioning properly. See chart below for the action that was completed on these log sills on 9/20/12.

On April 21, 2014, an onsite meeting was attended by regulatory agencies and NCDOT to propose close out of the site. It was determined by the regulatory agencies that additional logs of the log sills should be removed to prevent further bank erosion in these areas.

On May 21, 2014, NCDOT removed the remaining footer log at Log Sill #1 and the header log at Log Sill #2. During the September 9, 2014 monitoring evaluation it was noted that the removal of these logs helped to prevent further bank erosion in these areas. The left bank erosion at Log Sill #1 has started to fill in with sediment deposits from bankfull events and the right bank at Log Sill #2 had not change since last year. The channel is incised but stable. A bankfull event had occurred since the last monitoring evaluation. High rack lines were noted on the trees within the buffer. During the 6-year monitoring period a total of 7 bankfull events were visually noted by wrack lines during site visits. NCDOT proposes to discontinue channel stability monitoring at Tributary to Dixon Branch (Site 16).

Date 9-9-14	Between PP#1 and PP#2	Between PP#1 and PP#2	Between PP#1 and PP#2	Between PP#1 and PP#2
Structure Type	Log Sill #1	Log Sill #2	Log Sill #3	Log Sill #4
Is water piping through or around structure?				Water is flowing over log sill
Head cut or down cut present?				
Bank or scour erosion present?		Right bank has eroded		
Other problems noted?	Removed header log on (9/20/12) & footer log on (5/21/14)	Removed header log on (5/21/14)	Removed header log on (9/20/12)	Log sill left in place
Bankfull event dates and how it was noted	Wrack Line 9/1/09, 3/16/10, 9/28/10, 1/25/12, 9/20/12, 9/17/13, 9/9/14			

Section 4. <u>DEBIT LEDGER</u>

The entire UT to Dixon Branch (Site 16) stream mitigation site was used for the R-2248D project to compensate for unavoidable stream impacts.

UT to Dixon Branch Site 16

Photo Point #1 (Upstream)

Photo Point #1 (Downstream)

Photo Point #2 (Upstream)

Photo Point #2 (Downstream)

Photo Point #3 (Upstream)

Photo Point #3 (Downstream)

Year 6 Summer – September 2014

UT to Dixon Branch Site 16

Log Sill #1

Left bank at Log Sill #1

Log Sill #2

Right bank at Log Sill #2

Log Sill #3

Log Sill #4

Year 6 Summer – September 2014

UT to Dixon Branch Site 16

Site 16 Overview Photo

Site Map: Photo Point Locations

R-2248D UT to Dixon Branch Site 16
Mecklenburg County, North Carolina

0 0.01 0.02 0.04 Miles

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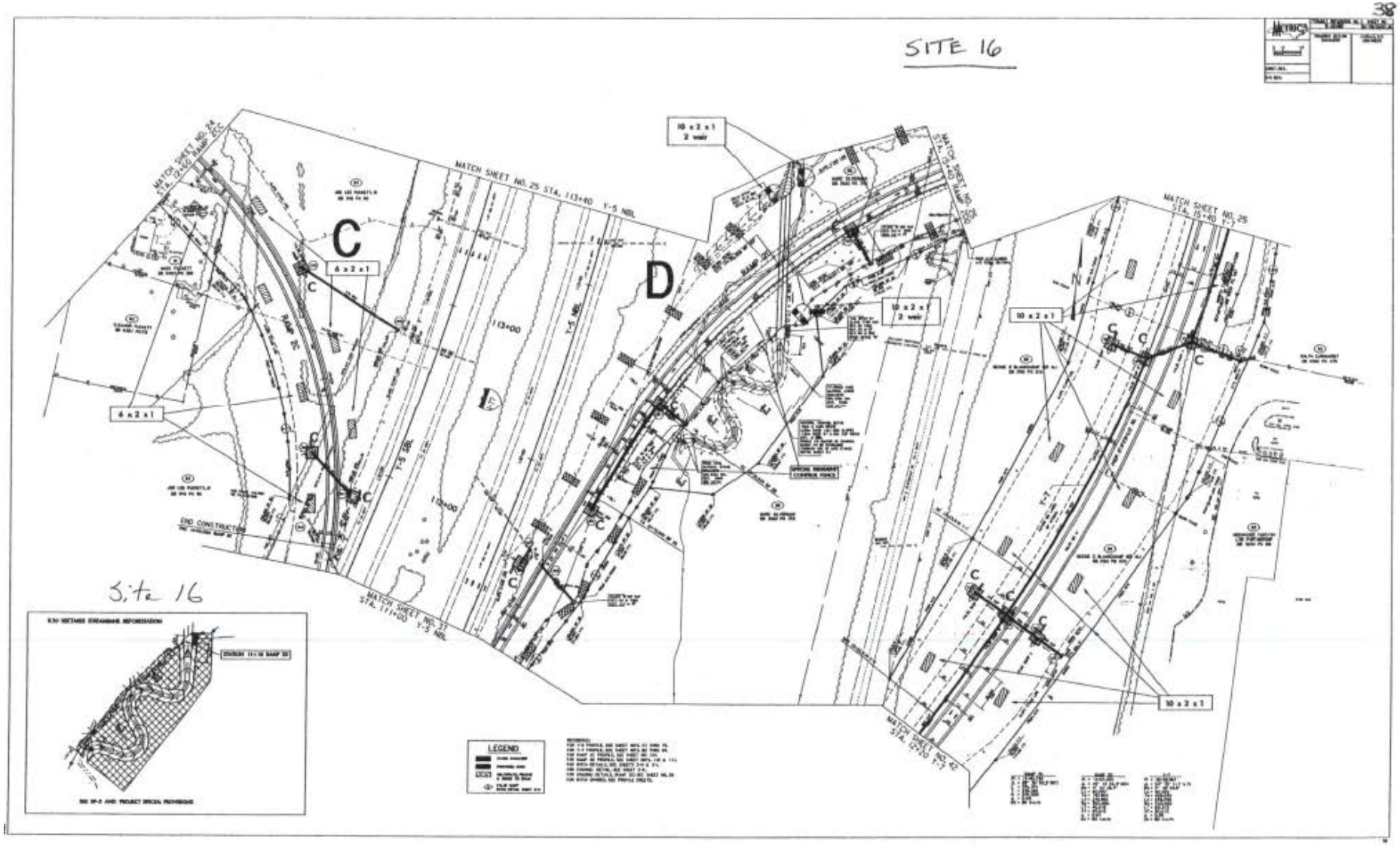

Streambank Reforestation Plan
R-2248D UT to Dixon Branch Site 16
Mecklenburg County, North Carolina

Vicinity Map
R-2248D UT to Dixon Branch Site 16
Mecklenburg County, North Carolina

0 0.1 0.2 0.4 Miles

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