



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

NICHOLAS J. TENNYSON
SECRETARY

September 30, 2015

U. S. Army Corps of Engineers
Regulatory Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587

ATTN: Mr. Dave Bailey
NCDOT Coordinator

SUBJECT: **Request for Modification to the Section 404 Individual Permit and Section 401 Water Quality Certification** for the proposed Greensboro Western Loop from north of SR 2176 (Bryan Boulevard) to SR 2303 (Lawndale Drive), Guilford County, Division 7. Federal Aid Project No. STP-NHF-124(1), WBS Element No. 34820.1.2, TIP No. U-2524C and D.

REFERENCE: USACE Individual Permit Action ID SAW-2001-21125, dated August 1, 2013.
USACE Individual Permit Modification Action ID SAW-2001-21125, dated March 25, 2014.
USACE Individual Permit Modification Action ID SAW-2001-21125, dated June 19, 2015.
NCDWR Project No. 20130223, Certification No. 3965, dated July 2, 2013.
NCDWR Project No. 20130223_v2, Modification to Certification No. 3965, dated April 15, 2014.
NCDWR Project No. 20130223_v3, Modification to Certification No. 3965, dated June 25, 2015.

Dear Sir:

The purpose of this letter is to request a modification to the United States Army Corps of Engineers (USACE) Section 404 Individual Permit and North Carolina Division of Water Resources Section 401 Certification for the above referenced project. The NCDOT is submitting for approval for replacing the previously listed 37 linear feet of bank stabilization at Permit Site 5 with 37 linear feet of permanent fill impacts.

Once the new 10'x6' reinforced concrete pipe culvert (RCBC) was constructed at Permit Site 5, it was discovered that water was flowing under the culvert. The Division believes that this is groundwater that was trapped during the backfilling of the culvert. This flow is detrimental to the structure foundation and could eventually cause settlement of the new structure or collapse of the wing walls.

After consultation with the Geotechnical Unit, the NCDOT proposes removing the streambed material from the area within the wingwalls to an elevation below the culvert footing. Then place geotextile fabric

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NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

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FAX: 919-212-5785
WEBSITE: NCDOT.GOV

LOCATION:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

and rip rap mixed with the excavated material and cap with a one foot layer of the original streambed material. This activity would occur within the same footprint for which the 37 linear feet of bank stabilization was originally proposed at this site. Please see Table 1 below and the attached revised Permit Drawing Sheets 9, 9A and 39. Table 2 on page 3 has been updated to show current required mitigation from the NC Division of Mitigation Services (DMS) for Section C. The revised DMS acceptance letter, dated September 21, 2015, is attached.

Table 1. U-2524C Surface Water Impacts (Final)

Permit Site No.	Impact Type	Permanent Impact Length (ft)	Impacts requiring NCDWQ mitigation (ft)	Impacts requiring USACE mitigation (ft) ¹	Temporary Impact Length (ft)
1	48" RCP	385	385	385	13
	Bank Stabilization	11	11	0 ²	
2	30" RCP	13	0 ³	13	14
	Bank Stabilization	32 11	32 ⁴ 0 ³	0 ² 0 ²	
3	36" RCP	338	338	338	20
	Bank Stabilization	10	10	0 ²	
3A	36" RCP	30	30	30	
4	10' x 7' RCBC	331	331	331	46
	Bank Stabilization	30	30	0 ²	
5	10' x 6' RCBC	725*	725*	725*	40
	Bank Stabilization	0*	0	0	
5A	Fill	90	0 ³	90	
	Bank Stabilization	25	0 ³	0 ²	
6	Fill	60	0 ⁵	0 ⁵	15
7	30" RCP	227	227	227	10
	Bank Stabilization	11	11	0 ²	
7A	15" RCP	57	0 ³	57	
8	54" RCP	412	412	412	20
	Bank Stabilization	13	13	0 ²	
10	Bank Stabilization	16	0 ³	0 ²	
13	Bridge, Roadway	204	204	204	20
	Bank Stabilization	60 22	60 ⁶ 0 ³	0 ² 0 ²	

Table 1. Continued

Permit Site No.	Impact Type	Permanent Impact Length (ft)	Impacts requiring NCDWQ mitigation (ft)	Impacts requiring USACE mitigation (ft) ¹	Temporary Impact Length (ft)
HC1	Utilities				40
HC2	Utilities				20
HC3	Utilities				20
HC4	Utilities				20
HC5	Utilities				20
I1 ⁷	Utilities				40
Totals		3,113	2,819	2,812*	358

¹Determined from USACE during verification site visit on July 25, 2012. ²Mitigation for bank stabilization not required by USACE. ³Mitigation not required by NCDWR (less than 150 linear feet of stream). ⁴Same stream as Site 1; different stream than stream with 11 feet of bank stabilization. ⁵Stream deemed unimportant by the USACE requiring no mitigation by USACE and NCDWR. ⁶Different stream than stream with 22 feet of bank stabilization. ⁷Stream identified by Colonial Pipe Lines and not field verified by NCDOT, USACE, or NCDWR since it was outside of NCDOT project area limits during field verification process. *Numbers that have changed since the June 2015 Permit Modification

Table 2. Revised U-2524C Required Compensatory Mitigation Summary (Final)

	Stream Impacts in Length (ft)	Riparian Wetland Impacts (ac)
Required USACE Mitigation	2,812 @ 2:1	4.42 @ 2:1 1.73 @ 1:1
Total USACE Mitigation	5,624	10.57
Required NCDWR Mitigation	2,819 at 1:1	6.15 @ 1:1
Total NCDWR Mitigation	2,819	6.15

A copy of this permit modification application and its distribution list will be posted on the NCDOT website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>. Thank you for your time and assistance with this project. Please contact Erin Cheely at either ekcheely@ncdot.gov or (919) 707-6108 if you have any questions or need additional information.

Sincerely,



for Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis Unit

cc: NCDOT Permit Application Standard Distribution List

North Carolina Department of Environmental Quality

Pat McCrory
Governor

Division of Mitigation Services

Donald R. van der Vaart
Secretary

September 21, 2015

Mr. Richard W. Hancock, P.E.
Project Development and Environmental Analysis Unit
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Mr. Hancock:

Subject: EEP Mitigation Acceptance Letter:

U-2524C / D, Greensboro – Western Loop from North of Bryan Boulevard to Lawndale Drive,
Guilford County

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the compensatory stream and riparian wetland mitigation for the subject project. Based on the information contained in the 404 Individual permits and 401 Water Quality Certifications issued in 2013 and 2014, the impacts are located in CU 03030002 of the Cape Fear River basin in the Central Piedmont (CP) Eco-Region, and are as follows:

Cape Fear 03030002 SICP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts* (feet/acres)	0	0	7,416.0	6.15	0	0	0	0

*Some of the stream and wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

This mitigation acceptance letter replaces the mitigation acceptance letter issued on February 26, May 17 and May 22, 2013, May 20, 2014 and June 26, 2015. DMS commits to implementing sufficient compensatory stream and riparian wetland mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from DMS.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,



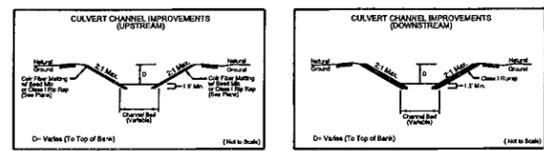
James B. Stanfill
Asset Management Supervisor

cc: Mr. David Bailey, USACE – Raleigh Regulatory Field Office
Mr. Dave Wanucha, Division of Water Quality, Winston-Salem Office
File: U-2524C/D, Revised 6

8/17/09

PARSONS
RALEIGH, NORTH CAROLINA

PROJECT REFERENCE NO. U-2524C	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
PERMIT DRAWINGS Rev. SHEET 9 OF 39	



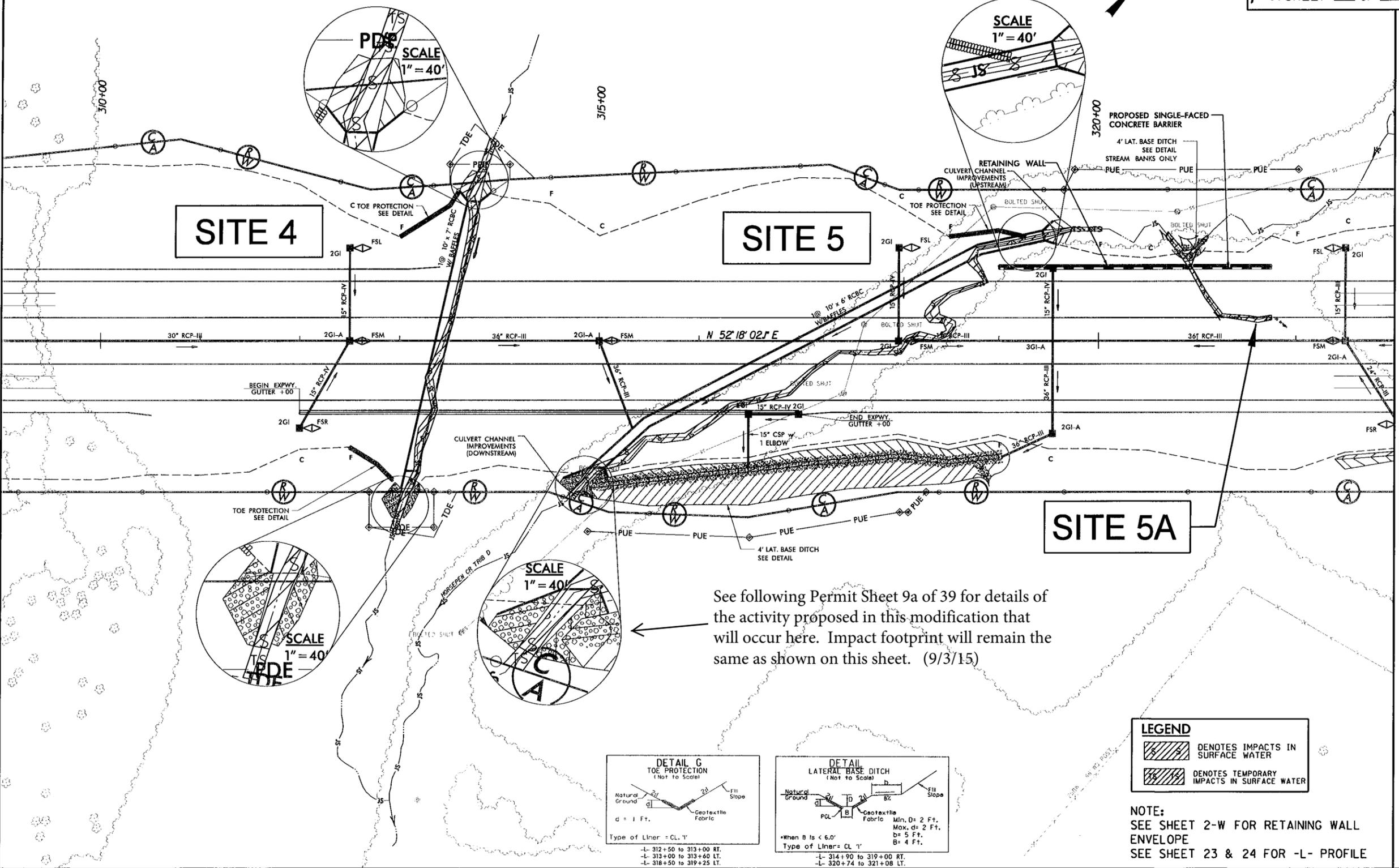
MATCH LINE -L- STA 309 + 00 SEE SHEET 9

MATCH LINE -L- STA 323 + 00 SEE SHEET 11

SITE 4

SITE 5

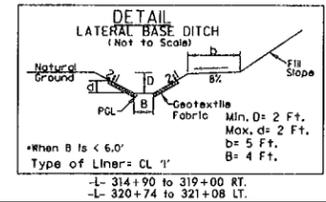
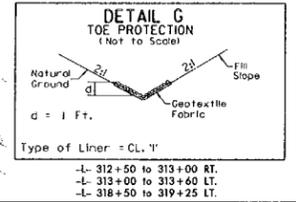
SITE 5A



See following Permit Sheet 9a of 39 for details of the activity proposed in this modification that will occur here. Impact footprint will remain the same as shown on this sheet. (9/3/15)

REVISIONS

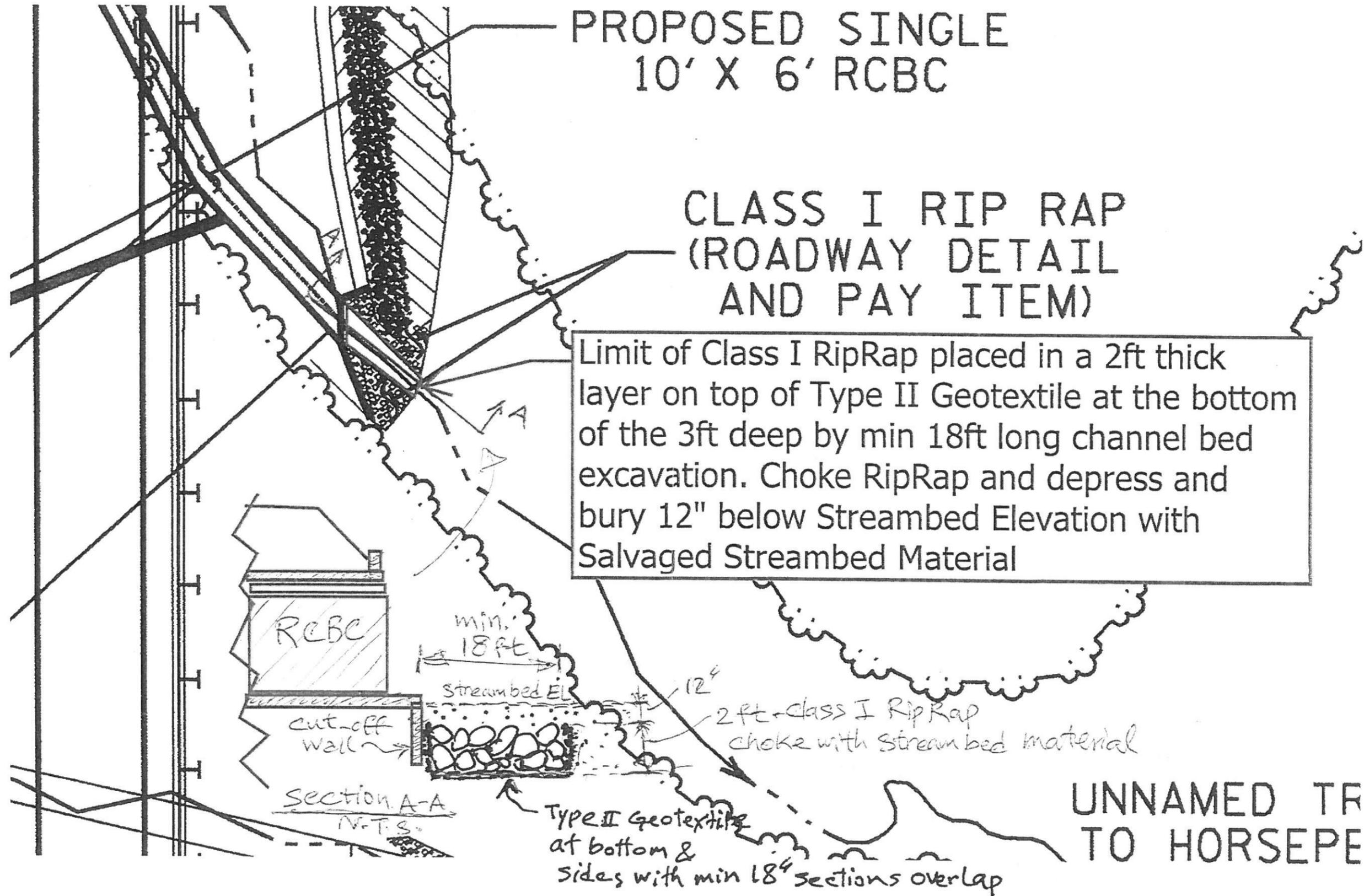
5:54:22 PM U-2524C.RDY_PSH.10A.dgn
 C:\Users\jshelton\Documents\Projects\U-2524C\PSH.10A.dgn



LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NOTE:
 SEE SHEET 2-W FOR RETAINING WALL ENVELOPE
 SEE SHEET 23 & 24 FOR -L- PROFILE



WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- 283+36 TO 286+34	48" RCP	0.10	-	-	0.02	-	0.03	0.01	385	13	-
	-L- 286+11 TO 286+22	Bank Stabilization	-	-	-	-	-	-	-	11	-	-
2	-L- 287+09 TO 287+21	30" RCP	-	-	-	-	-	0.01	0.01	13	14	-
	-L- 287+00 TO 287+30	Bank Stabilization	-	-	-	-	-	-	-	11	-	-
	-L- 287+11 TO 287+17	Bank Stabilization	-	-	-	-	-	-	-	32	-	-
3	-L- 296+40 TO 297+18	36" RCP	-	-	-	-	-	0.03	0.01	338	20	-
	-L- 296+44 TO 296+52	Bank Stabilization	-	-	-	-	-	-	-	10	-	-
3A	-L- 296+82 TO 297+00	Roadway	-	-	-	-	-	0.01	-	30	-	-
4	-L- 312+90 TO 313+91	1 @ 10' x 7' RCBC	-	-	-	-	-	0.06	0.01	331	46	-
	-L- 312+95 TO 313+13	Bank Stabilization	-	-	-	-	-	-	-	30	-	-
5	-L- 314+67 TO 321+11	1 @ 10' x 6' RCBC	-	-	-	-	-	0.10	0.01	688	40	-
	-L- 314+72 TO 315+05	fill	-	-	-	-	-	-	-	37	-	-
5A	-L- 320+86 TO 321+95	Roadway	-	-	-	-	-	0.01	-	90	-	-
	-L- 320+78 TO 321+04	Bank Stabilization	-	-	-	-	-	-	-	25	-	-
6	-L- 323+60 TO 324+44	-	-	-	-	-	-	0.04	0.01	60	15	-
7	-L- 345+01 TO 345+88	30" RCP	0.01	-	-	-	-	0.03	0.01	227	10	-
	-L- 345+74 TO 345+85	Bank Stabilization	-	-	-	-	-	-	-	11	-	-
7A	-L- 345+02 TO 345+49	Roadway	-	-	-	-	-	0.01	-	57	-	-
8	-L- 358+77 TO 360+29	54" RCP	-	-	-	-	-	0.05	0.01	412	20	-
	-L- 359+46 TO 359+57	Bank Stabilization	-	-	-	-	-	-	-	13	-	-
9	-L- 380+47 TO 382+86	Bridge	-	-	-	0.02	0.40	-	-	-	-	-
10	-L- 387+31 TO 387+46	Bank Stabilization	-	-	-	-	-	0.01	-	16	-	-
10A	-Y3DET- 11+23 TO 13+92	Temporary Detour	-	0.01	-	0.01	-	-	-	-	-	-
11	-L- 389+65 TO 398+04	Bridge	-	-	-	0.19	1.44	-	-	-	-	-
12	-L- 399+62 TO 408+51	Bridge & Roadway	2.57	-	-	0.36	0.96	-	-	-	-	-
13	-L- 407+72 TO 415+79	Hazardous Spill Basins, Bridge, Roadway & 66" RCP	1.25	-	0.34	0.65	1.57	0.03	0.01	204	20	-
	-L- 409+67 TO 409+73	Bank Stabilization	-	-	-	-	-	-	-	12	-	-
	-L- 410+77 TO 410+89	Bank Stabilization	-	-	-	-	-	-	-	12	-	-
	-L- 411+08 TO 411+42	Bank Stabilization	-	-	-	-	-	-	-	36	-	-
	-L- 414+83 TO 415+16	Bank Stabilization	-	-	-	-	-	-	-	22	-	-
14	-L- 419+09 TO 420+79	Bridge	0.11	-	-	-	-	-	-	-	-	-
TOTALS:			4.04	0.01	0.34	1.25	4.37	0.42	0.09	3113	198	-

Notes: Permanent Wetland Impacts from bridge construction = 0.11 acres
Temporary Wetland Impacts from work bridge construction = 0.14 acres
See Sheet _____ of _____ for a detailed breakdown of the proposed bridge construction impacts.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GUILFORD COUNTY
U-2524C
Revised 9/3/15
SHEET 39 OF 39 9/3/2015