

PROJECT COMMITMENTS

T.I.P. Project No. U-0071
East End Connector from NC 147 (Durham Freeway/Buck Dean Expressway) to
north of NC 98 (Holloway Street) in Durham
Durham County
Federal Aid Project No. NHF-76-1(2)
WBS Element 34745.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

PDEA/Roadway Design

The NCDOT will coordinate with the City of Durham regarding providing destination signage along the East End Connector to attractions in east Durham.

The NCDOT will coordinate with the Durham Area Transit Authority (DATA) regarding delays and detours during construction, as well as potential relocations of bus stops on US 70 and Holloway Street.

NCDOT will attach conduit to the East End Connector bridges over Holloway Street and Angier Avenue.

Right-of-Way Branch

The NCDOT will mitigate the acquisition of 0.30 acres of parkland from C. R. Wood Park by acquiring land adjacent to the C. R. Wood Park and donating this land to the City of Durham Parks and Recreation Department in accordance with Section 6(f) of the Land and Water Conservation Fund Act. Prior to land donation, the NCDOT will remove the existing residence currently located on this property.

PDEA/Division 5

The NCDOT will also mitigate the acquisition of 0.30 acres of parkland from C. R. Wood Park by paving the C. R. Wood basketball courts or parking lot, in coordination with the City of Durham Parks and Recreation Department.

COMMITMENTS FROM PERMITTING

Division 5/ Hydraulics Unit

Any modifications to the 401 Water Quality Certification in the Jordan Basin portion that propose additional stream impacts or increased impervious surface requiring additional stormwater management may be subject the Jordan Water Supply Nutrient Strategy (15A NCAC02B .0267). The NCDOT shall coordinate with the NCDWR prior to submitting a modification request to determine the applicability of the Jordan Water Supply Nutrient Strategy.

This condition does not apply to major modifications for additional sections of the project that were covered under the Finding of No Significant Impact or approved in the Avoidance and Minimization stage of the project.

Permit Modification No. 1

No additional commitments have been added as a result of either the USACE permit modification, dated May 7, 2015, or the NCDWR permit modification, dated April 15, 2015.

Permit Modification No. 2

No additional commitments have been added as a result of either the USACE permit modification, dated December 7, 2015, or the NCDWR permit modification, dated October 26, 2015.

Permit Modification No. 3

No additional commitments have been added as a result of either the USACE permit modification and subsequent correction letter, dated May 17 and May 24, 2016, or the NCDWR permit modification, dated May 5, 2016.



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

May 17, 2016

Regulatory Division/1200A

Action ID: SAW-2011-00796; TIP No. U-0071

Mr. Philip S. Harris III, P.E., C.P.M.
Natural Environment Section Head
NC Department of Transportation
Project Development and Environmental Analysis
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

Reference the Department of the Army permit issued to the North Carolina Department of Transportation (NCDOT) on March 24, 2014, to authorize the discharge of fill material into waters of the United States, for construction of TIP No. U-0071; East End Connector; from US 147 between Ellis Road and Briggs Avenue, to NC 98 at US 70, in Durham County, North Carolina. Also, please reference the May 7, 2015 and December 7, 2015 modification of the permit, and your May 4, 2016 letter, requesting modification of the permit for a net increase of temporary impacts to streams of 51 linear feet, a net increase of permanent impacts to streams of 84 linear feet, a net increase of permanent riprap impacts to streams of 161 linear feet, and a net increase of wetland impacts of 0.09 acre. These changes in impacts result from revising the proposed work to provide for adequate stream stability, at Permit Sites 4, 12, and 17, and for the replacement of commercial semi-trailer parking spaces and truck turning area lost as a result of the highway construction, at new Permit Site 33. Additional wetland mitigation is proposed for the permanent wetland loss. No additional stream mitigation is proposed, since no additional permanent stream loss for streams with more than minimal function is proposed.

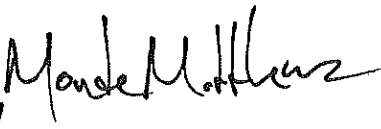
We have reviewed the requested modification, and determined that it is appropriate and reasonable, and that no public notice is required for this modification. Therefore, the permit is hereby modified to authorize a net increase of temporary impacts to streams of 51 linear feet, a net increase of permanent impacts to streams of 84 linear feet, a net increase of permanent riprap

impacts to streams of 161 linear feet, and a net increase of wetland impacts of 0.09 acre, as shown on the enclosed Permit Drawings, Sheets 30, 53, 55, 60, 90, and 91, of 91, and ABF Freight Permit Drawing Sheets 1 and 2, of 2, revised and added April 2016. In order to compensate for the additional impacts associated with this modification, additional mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization.

All other conditions of the permit, including the expiration date of December 31, 2019, and the other mitigation requirements, remain applicable.

Should you have any questions, please call Mr. Eric Alsmeyer at (919) 554-4884, ext. 23.

Sincerely,



for

Kevin P. Landers Sr.
Colonel, U.S. Army
District Commander

Enclosure

Copy furnished w/enclosure (by e-mail):
Ms. Beth Harmon
NC Department of Mitigation Services

Copies Furnished (without enclosure):

Ms. Amy Chapman
Division of Water Quality
North Carolina Department of
Environment and Natural Resources
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

Mr. Clarence Coleman
Federal Highway Administration
310 New Bern Ave., Rm 410
Raleigh, North Carolina 27601-1442

Mr. James Mason
NC Department of Transportation
Project Development and Environmental Analysis
Natural Environment Section
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: NC Department of Transportation, Div. of Highways
Project Name: East End Connector; TIP No. U-0071 (Mod3)

Action ID: SAW-2011-00796
County: Durham

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that to the U.S. Army Corps of Engineers (USACE) Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate mitigation Sponsors.

Instructions to Sponsor: The Sponsor must verify that the mitigation requirements (credits) shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated bank ledger to the Permittee, the USACE Project Manager, and the Wilmington District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation* **8-digit HUC and Basin:** 03020201, Neuse River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
				0.09		

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements: **8-digit HUC and Basin:** 03020201, Neuse River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
				0.18		

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

Statement of Mitigation Liability Acceptance: I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the USACE, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: _____

Name of Sponsor's Authorized Representative: _____

Signature of Sponsor's Authorized Representative

Date of Signature

**USACE Wilmington District
Compensatory Mitigation Responsibility Transfer Form, Page 2**

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the USACE is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the USACE is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. For authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the USACE Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the USACE, the Sponsor must obtain case-by-case approval from the USACE Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the USACE administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions:

This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. **Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 11405 Falls of Neuse Road, Wake Forest, NC 27587 (email: todd.tugwell@usace.army.mil).** Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

USACE Project Manager: Eric Alsmeyer
USACE Field Office: Raleigh Regulatory Field Office
US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
Email: eric.c.alsmeyer@usace.army.mil



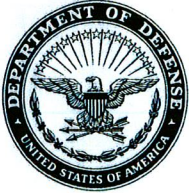
Digitally signed by ALSMEYER.ERIC.C.1087624486
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,
ou=USA, cn=ALSMEYER.ERIC.C.1087624486
Date: 2016.05.17 08:22:55 -04'00'

USACE Project Manager Signature

May 17, 2016

Date of Signature

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

May 24, 2016

Regulatory Division/1200A

Action ID: SAW-2011-00796; TIP No. U-0071

Mr. Philip S. Harris III, P.E., C.P.M.
Natural Environment Section Head
NCDOT – Project Development and Environmental Analysis
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:


Reference the Department of the Army permit issued to the North Carolina Department of Transportation (NCDOT) on March 24, 2014, to authorize the discharge of fill material into waters of the United States, for construction of TIP No. U-0071; East End Connector; from US 147 between Ellis Road and Briggs Avenue, to NC 98 at US 70, in Durham County, North Carolina. Also, please reference the May 7, 2015, December 7, 2015, and May 17, 2016 modifications of the permit.

It has come to our attention that the quantity in the May 17, 2016 modification for the net change in temporary impacts to streams was incorrect. Therefore, the modification is corrected to read "Therefore, the permit is hereby modified to authorize a net decrease of temporary impacts to streams of 69 linear feet...." No further action is necessary and NCDOT can proceed with the work as proposed.

All other conditions of the permit, including the expiration date of December 31, 2019, and the modified mitigation requirements, remain applicable.

Should you have any questions, please call Mr. Eric Alsmeyer at (919) 554-4884, extension 23.

Sincerely,


for/ Kevin P. Landers Sr.
Colonel, U.S. Army
District Commander

Copies Furnished:

Ms. Amy Chapman
Division of Water Quality
North Carolina Department of
Environment and Natural Resources
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

Mr. Clarence Coleman
Federal Highway Administration
310 New Bern Ave., Rm 410
Raleigh, North Carolina 27601-1442

Mr. James Mason
NC Department of Transportation
Project Development and Environmental Analysis
Natural Environment Section
1598 Mail Service Center
Raleigh, North Carolina 27699-1598



PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

S. JAY ZIMMERMAN

Director

May 5, 2016

Mr. Philip S. Harris, III, P.E., CPM
Natural Environment Section Head
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and NEUSE BUFFER RULES, with ADDITIONAL CONDITIONS for East End Connector from US 70 to NC 147 in Durham County, Federal Aid Project No. NHF-76-1(2), State Project No. 34745.1.1, TIP No. U-0071.
NCDWR Project No. 20131282 ver. 4

Dear Mr. Harris:

Attached hereto is a modification of Certification No. 3980 issued to The North Carolina Department of Transportation (NCDOT) dated January 28, 2014; and modified April 15, 2015 and October 26, 2015.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

S. Jay Zimmerman, Director
Division of Water Resources

Attachments

Electronic copy only distribution:

Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Chris Murray, Division 5 Environmental Officer
Chris Rivenbark, NC Department of
Beth Harmon, Division of Mitigation Services
File Copy

**Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act
and NEUSE BUFFER RULES with ADDITIONAL CONDITIONS**

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500 and 15A NCAC 2B.0233. This certification authorizes the NCDOT to impact an additional 0.09 acres of jurisdictional wetlands, 279 linear feet of jurisdictional streams and 5149 square feet of protected riparian buffers in Durham County. The project shall be constructed pursuant to the modification dated received May 4, 2016. The authorized additional impacts are as described below:

Additional Stream Impacts in the Neuse River Basin

Site	Permanent Fill to Intermittent Stream (linear ft)	Riprap to Intermittent Stream (linear ft)	Temporary Impact Intermittent Stream (linear ft)	Riprap to Perennial Stream (linear ft)	Temporary Impact to Perennial Stream (linear ft)	Total New Stream Impact (linear ft)	Impacts Requiring Mitigation (linear ft)
4	0	+ 105	+ 5	0	0	110	0
12	+ 84	- 24	- 60	0	0	84	0
17	0	0	0	+ 55	+ 5	60	55
17A	+ 25	- 19	0	0	0	25	0

Total New Stream Impacts for Modification: 279 linear feet

Additional Wetland Impacts in the Neuse River Basin

Site	Permanent Fill (ac)	Temporary Fill (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total New Wetland Impact (ac)
33	+0.09	0	0	0	0	+0.09

Total New Wetland Impact for Modification: 0.09 acres.

Additional Neuse Riparian Buffer Impacts

Site	Zone 1 Impact (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
4	633	1899	0	0
17	3845	11535	671	1007
Totals	4478	13434	671	1007

Total Additional Buffer Impact for Modification: 5149 square feet.

The application provides adequate assurance that the discharge of fill material into the waters of the Neuse River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your modified application dated received May 4, 2016. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated January 28, 2014 still apply except where superseded by this certification. Should your project change, you are required to notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). Additional buffer impacts may require compensatory mitigation as described in 15A NCAC 2B.0233. For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Conditions of Certification:

1. This modification is applicable only to the additional proposed activities. All of the authorized activities and conditions of certification associated with the original Water Quality Certification dated January 28, 2014 and subsequent modifications dated April 15, 2015 and October 26, 2015 still apply except where superseded by this certification.
2. Compensatory mitigation for additional 55 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Division of Mitigation Service (DMS) (formerly NCEEP), and that the DMS has agreed to implement the additional mitigation for the project. The DMS has indicated in a letter dated May 3, 2016 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the DMS Mitigation Banking Instrument signed July 28, 2010.
3. Compensatory mitigation for impacts to additional 4478 square feet of protected riparian buffers in Zone 1 and 671 square feet of protected riparian buffers in Zone 2 shall be required. We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Division of Mitigation Services (DMS) (formerly NCEEP). Mitigation for unavoidable additional impacts to Neuse Riparian Buffers shall be provided in the Neuse River Basin and done in accordance with 15A NCAC 2B.0295. The DMS has indicated in a letter dated May 3, 2016 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed July 28, 2010.

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission. The mailing address for the Office of Administrative Hearings is:

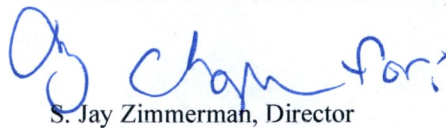
Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Sam M. Hayes, General Counsel
Department of Environmental Quality
1601 Mail Service Center

This the 5th day of May 2016

DIVISION OF WATER RESOURCES



S. Jay Zimmerman, Director


WQC No. 3980

PROJECT REFERENCE NO. U-0071	SHEET NO. 9-A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING
SHEET 30 OF 91**

Revised April 2016

 DENOTES IMPACTS IN SURFACE WATER

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

LATERAL V DITCH
W/CLASS I RIP RAP
SEE DETAIL L1R
EST 74 CY DDE
EST 55 TONS CL. I
EST 67 SY GFD

CLASS 'I' RIP RAP
EST 135 TONS
320 SY GFD

CLASS 'I' RIP RAP
EST. 24 TONS
50 SY GFD

TEMP. SURFACE
WATER IMPACTS

CLASS 'II' RIP RAP
EST. 40 TONS
75 SY GFD

LATERAL V DITCH
SEE DETAIL L1R
EST 104 CY DDE
EST 32 TONS CL. I
EST 113 SY GFD

NOTE: PROPOSED PIPE IS PROPERLY
ALIGNED WITH THE EXISTING CHANNEL.
THE JS LINE FOR THIS STREAM IS APPROXIMATE.

PERMANENT ROCK CHECK
DAMS (50' INTERVALS)
SEE RDY. STD. 1633.02

SPECIAL CUT 6' BASE
GRASSED SWALE
SEE DETAIL G6S

SURFACE WATER
IMPACTS

SPECIAL
CUT DITCH
SEE DETAIL S1R
EST 102 TONS CL. I
EST 233 SY GFD

TEMP. SURFACE
WATER IMPACTS

SITE 4

15" RCP-IV

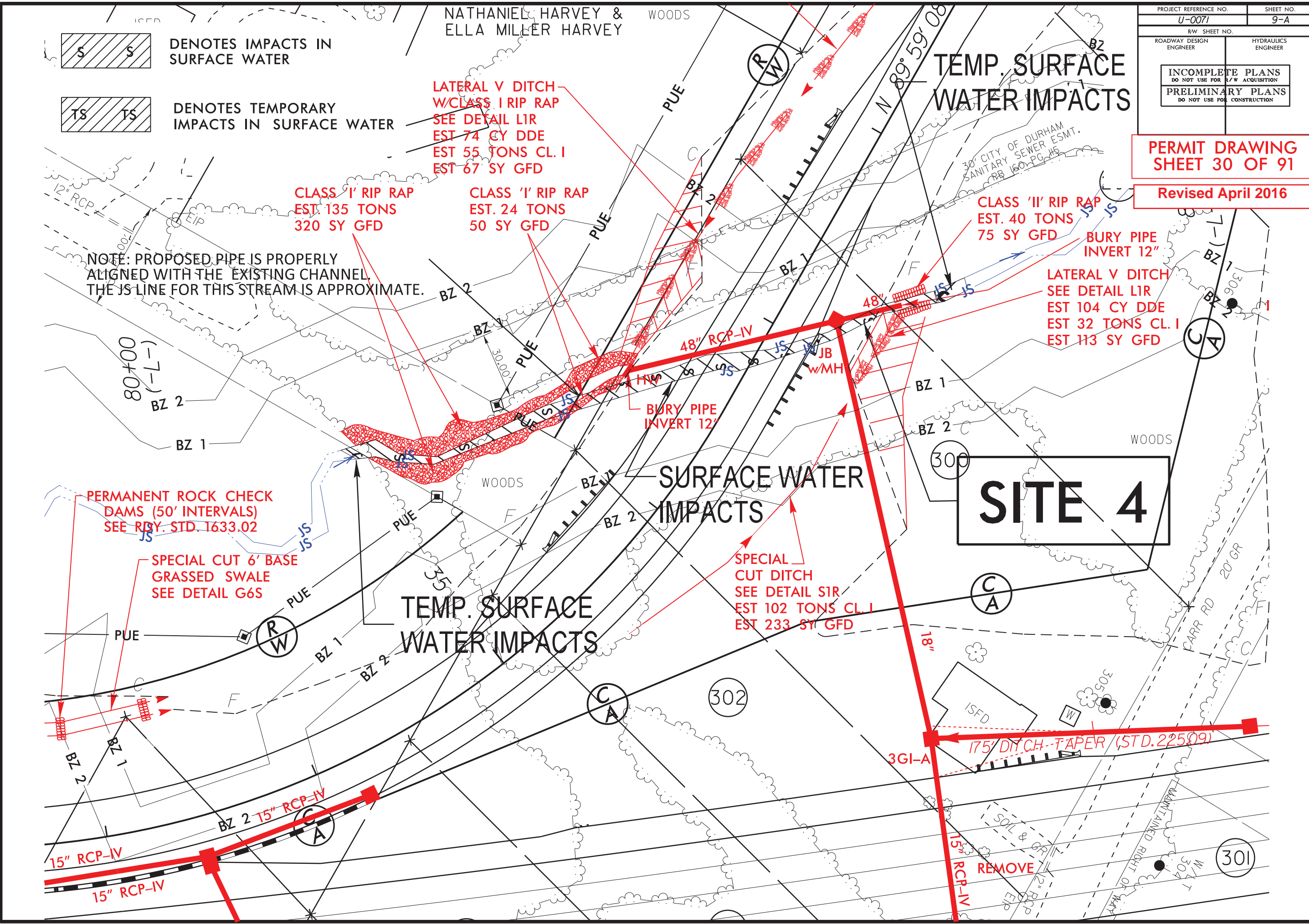
15" RCP-IV

15" RCP-IV

175' DITCH TAPER (STD. 225.09)

REMOVE

8/17/99
 REVISIONS
 \$\$\$\$SYTIME\$\$\$\$
 \$\$\$\$DESIGN\$\$\$\$
 \$\$\$\$DRAWING\$\$\$\$
 \$\$\$\$DATE\$\$\$\$



PROJECT REFERENCE NO. U-0071	SHEET NO. 10-A
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	CONSTRUCTION

PERMIT DRAWING
SHEET 53 OF 91
Revised April 2016

SURFACE WATER IMPACTS

TEMP SURFACE WATER IMPACTS

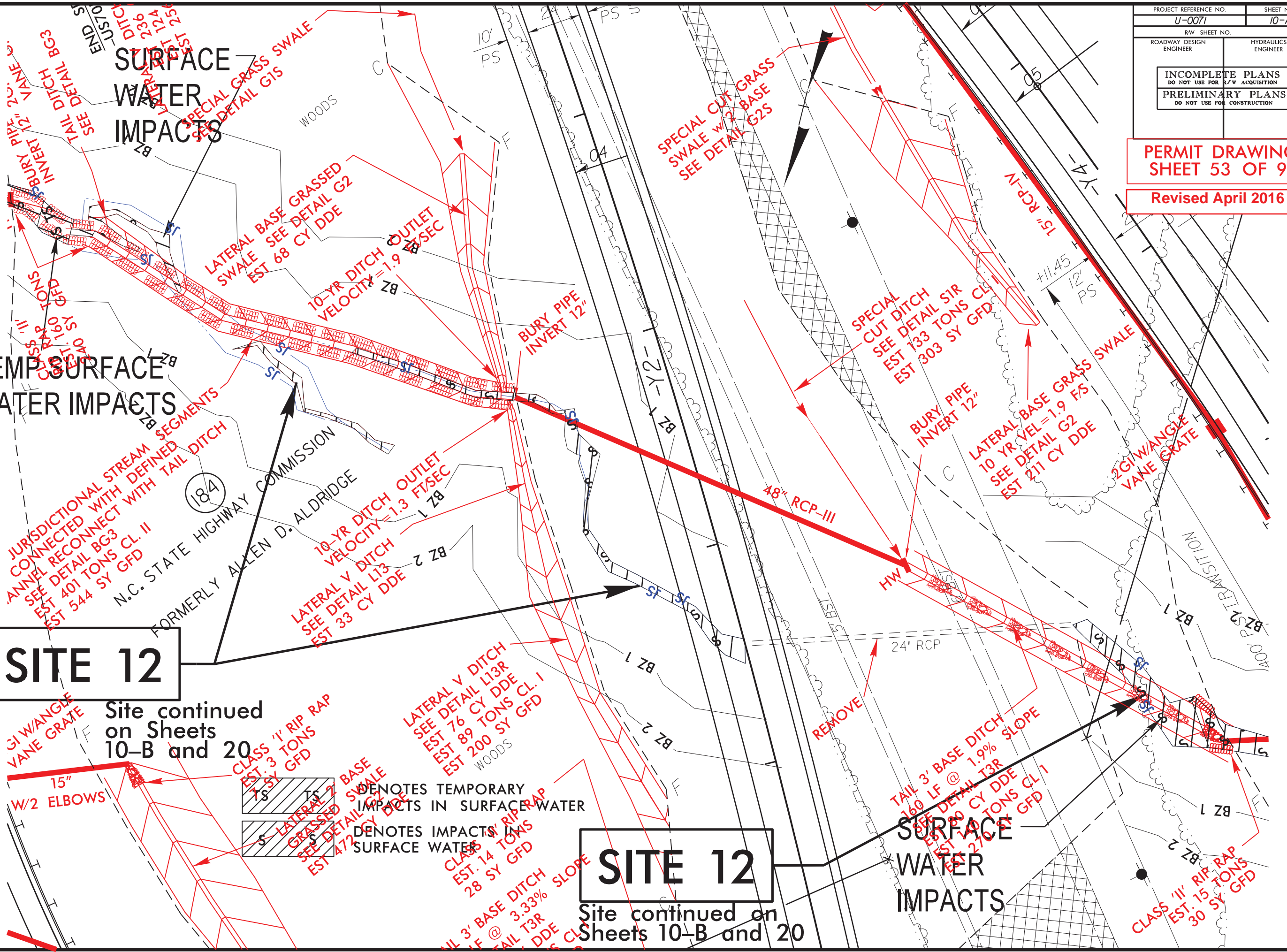
SURFACE WATER IMPACTS

SITE 12

SITE 12

Site continued on Sheets 10-B and 20

Site continued on Sheets 10-B and 20



JURISDICTIONAL STREAM CONNECTED WITH DEFINED ANNEL RECONNECT WITH TAIL DITCH SEE DETAIL BG3 EST 401 TONS CL. II EST 544 SY GFD

N.C. STATE HIGHWAY FORMERLY ALLEN D. ALDRIDGE COMMISSION

CLASS 'I' RIP RAP EST. 3 TONS

15\"/>

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER

CLASS 'I' RIP RAP EST. 14 TONS

TAIL 3' BASE DITCH 160 LF @ 3.33% SLOPE EST. 10 TONS CL. I EST. 270 SY GFD

REVISIONS

8/17/99

SYTIME DESIGN

PROJECT REFERENCE NO. U-0071	SHEET NO. 10-B
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING
 SHEET 55 OF 91
 Revised April 2016

N.C.D.O.T.

(FORMERLY ALVIS M. BAUCOM)

WOODS
SITE 13

SPECIAL LATERAL V DITCH
 SEE DETAIL SLIR
 EST 97 TONS CL. I
 EST 300 SY GFD

 CLASS 'I' RIP RAP
 EST. 7 TONS
 15 SY GFD

SITE 12

Site continued on
Sheet 10-A

TDI WANGLE
 VANE GRATE

DRAIN
 POND

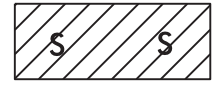
END
 RETAINING
 WALL

PROACH SLAB
 OC STA. 33+86.10
 IN SBG
 - STA. 33+72.21
 BRIDGE
 POC STA. 33+62.43

MED. GR ANCHOR



DENOTES IMPACTS IN
SURFACE WATER
(POND)



DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

2GI

15" RCP-III

BZ 1

BZ 2

Sta. 32+13.85
 Sta. 32+45.55

BARRIER
(6' LT)

REVISIONS

8/17/99

SYSTEMS DESIGN
 DESIGN
 DESIGN

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 32+58 to 36+64	FILL						0.04		412		
2	L 37+75 - SR1 34+84 Y17 11+14	66" RCP-IV, 48"RCP-III, 24"RCP-III	0.08					0.07	<0.01	673	14	
		BANK STABILIZATION								20		
3	L 44+53	30" RCP-III	0.06					0.06		410		
* 4	SR2 36+89 Y7 17+24	48" RCP-III, 60" RCP-III	0.05					0.03	<0.01	349	20	
		BANK STABILIZATION								175		
* 5(T)	Y7LPA 13+98	60" RCP-III	0.06									
6	Y7RPA 21+78	BANK STABILIZATION						<0.01		25		
7	Y7RPA 20+75 to Y6 15+90	8'x9' RCBC						0.17	0.01	665	104	
		BANK STABILIZATION								305		
8	Y4 19+63 to 22+30 and Y4 23+04 to 25+59	30" RCP-III, FILL	0.04					0.07		443		
9	Y5 23+20 RT.	30" RCP-III						0.03	<0.01	29	0	
		BANK STABILIZATION								43		
10	Y5 26+62 RT.	FILL	0.01	0.01								
11	Y6 11+15 off 104 RT.	18" RCP-III					<0.01					
12	Y2 26+53 to 27+90 LT.	48" RCP-III & RECHANNELIZATION						0.12	0.02	789	72	
		BANK STABILIZATION								18		
13(T)	Y4 35+48	36" RCP-IV						0.78				
* 14(T)	L 122+93	30" RCP-V	0.08									
* 15(T)	L 132+13	FILL	0.03									
* 16(T)	L 132+33 RT.	FILL	0.05									
17	L 133+41	6'x7' RCBC						0.06	<0.01	479	33	
		BANK STABILIZATION								140		
17A	L 133+26 264' LT	BANK STABILIZATION						<0.01	<0.01	25	37	
TOTALS:			0.46	0.01			<0.01	1.43	0.03	5000	280	

*Rounded totals are sum of actual impacts

NOTES:

* indicates isolated wetland

(T) Indicates Total Take

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

DURHAM COUNTY
WBS - 34745.1.1 (U-0071)

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)
17B	L 133+69 263' RT	FILL							<0.01		7	
18(T)	L 134+53 LT.	FILL						0.19				
19	not jurisdictional	0										
20	DFLW 27+34 to 38+06	42" RCP-III						0.02	<0.01	218	17	
21	DFLW 39+19	FILL						0.01		28		
22	DFLW 41+62	FILL						0.01		23		
23	Y3 34+45	8'x10' CULVERT						0.09	0.01	270	65	
		BANK STABILIZATION								140		
24	Y3 40+16.69 RT	30" RCP-III						0.04	0.01	104	23	
25	Y9 28+10 LT to 26+85 RT	66" RCP-III						0.01	<0.01	168	10	
		BANK STABILIZATION								35		
26	Y3 57+75 LT to RT	60" RCP-III						0.01	<0.01	50	23	
		BANK STABILIZATION								50		
27	L 129+77 414LT.	BANK STABILIZATION								10		
28	DFLW 52+08 LT & RT	36" RCP						0.02	0.01	121	20	
29	DFLW 72+35 LT	FILL						< 0.01		40		
30	DFLW 73+72 LT	FILL						< 0.01		10		
31	DFLW 78+76 LT& 81+14 RT	BANK STABILIZATION								61		
		Construction Activity							<0.01		22	
32	DFLW 78+79 LT	Construction Activity							<0.01		9	
TOTALS (page 2 of 2):			0.00	0.00		0.00		0.4	0.03	1328	196	
TOTALS (page 1 of 2):			0.46	0.01		<0.01		1.43	0.02	5000	280	
TOTALS:			0.46	0.01		<.0.01		1.83	0.06	6328	476	

*Rounded totals are sum of actual impacts

NOTES:

* indicates isolated wetland

(T) Indicates Total Take

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

DURHAM COUNTY
WBS - 34745.1.1 (U-0071)

BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT									BUFFER REPLACEMENT		
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)	
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)			
1	66" RCP-V	L 36+86RT to 38+71LT	X							41408	26834	68242		
2	30" RCP & 15"RCP	L 44+95 to 49+16 LT	X							22801	15534	38335		
3	30" RCP-III	Y17 12+93 to 13+97	X			2222	997	3219						
4	18", 48" & 60" RCP	SR2 32+99 to Y7 16+51	X							45253	35088	80341		
5	66" RCP-III	Y7RPA 21+27 to 22+32	X			2342	3142	5484						
6	TWO 8'x9' RCBC	Y7RPA 20+32 to Y7RPD 7+62	X							63171	38576	101747		
7	30" RCP-III	Y4 21+14	X							24286	16780	41066		
8	DITCH	Y5 23+24	STORMWATER MANAGEMENT			3438	1805	5243						
9	15" RCP-III	Y7 29+00			X					4340	6087	10427		
10	18" RCP-III	Y6 11+09			X					977	1780	2757		
11	PREFORMED SCOUR HOLE	Y12 10+00	STORMWATER MANAGEMENT				87	87						
12	15", 24", & 36" RCP	L 109+80 to Y2 29+08	X							77205	50757	127962		
13	8'x10' RCBC	Y3 34+44	X							27871	20229	48100		
14	30" RCP	Y3 40+73	X			7822	3210	11032						
15	60" RCP	Y9 27+33	X							13171	8861	22032		
16	60" RCP	Y3 57+71	X			7690	5252	12942						
17	6'x7' RCBC	L 133+41	X							39947	23781	63728		
18	DITCH	L 129+60	STORMWATER MANAGEMENT			2146	1897	4043						
TOTAL:						25660	16390	42050		360430	244307	604737		

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

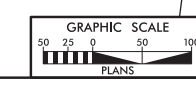
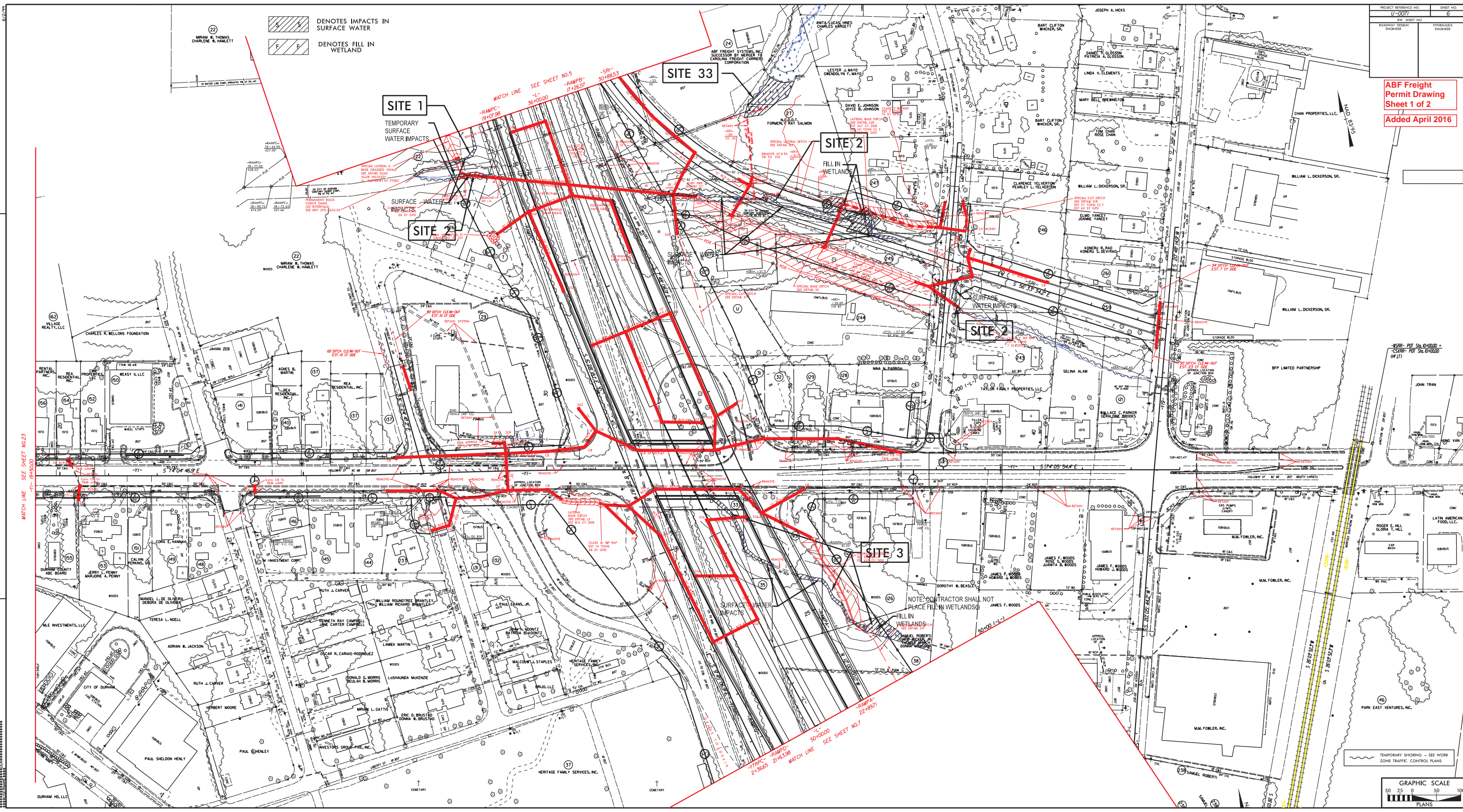
DURHAM COUNTY
PROJECT: 34745.2.8 (U-0071)

04/07/2016
SHEET 18 of 18

PROJECT REFERENCE NO.	U-0071	SHEET NO.	6
R/W SHEET NO.		HYDRAULICS ENGINEER	

ABF Freight
Permit Drawing
Sheet 1 of 2
Added April 2016

 DENOTES IMPACTS IN SURFACE WATER
 DENOTES FILL IN WETLAND



MATCH LINE - SEE SHEET NO. 23
 17'-0" 014 45.9' E

MATCH LINE - SEE SHEET NO. 7
 50'000
 24'36.65' 214°43.98'
 22'09.371'

6/2/16

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)
33	-SR1- 33+75 LT	FILL	0.09									
TOTALS*:			0.09							0	0	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 04/21/2016
 Durham County
 U-0071
 34745.1.1

ABF Freight Permit Drawing Sheet 2 of 2

Added April 2016

Revised 2013 10 24