Water Resources
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

S. JAY ZIMMERMAN
Director

7 July 2016
Cumberland County
NCDWR Project No. 20160576
SR 2252/SR2238 & SR 2242
State Project No. 45336.1.21/
W-5206U

APPROVAL of 401 WATER QUALITY CERTIFICATION with ADDITIONAL CONDITIONS

NCDOT, Division 6
Greg Burns, P.E., Division Engineer
PO Box 1150
Fayetteville, NC 28302

Dear Mr. Burns:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of reconfiguring the intersection of Chicken foot Road (SR 2252) with Sandhill Road (SR 2238) and Braxton Road (SR 2242) in Cumberland County:

Stream Impacts in the Cape Fear River Basin

Site	Station	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
S1	19+83 -L-			11	10	21	11
S2	23+54-Y1-			88	48	136	88
S3	27+03.68 -Y2-	16	20			36	16
						0	0
TOTAL		**16**	**20**	**99**	**58**	**193**	**115**

Total Stream Impact for Project: 193 linear feet.

Wetland Impacts in the Cape Fear River Basin

Site	Station	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
W1	18+20-21+40-L-	0.04				0.08	0.12	0.04
W2	22+25-25+10 -Y1-	0.72			0.14		0.86	0.86
							0.00	0.00
							0.00	0.00
Total		**0.76**	**0**	**0.00**	**0.14**	**0.08**	**0.98**	**0.90**

Total Wetland Impact for Project: 0.98 acres.

Open Water Impacts in the Cape Fear River Basin

Site	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
O1	0.001	0.001	0.002
			0.00
			0.00
			0.00
TOTAL	**0.00**	**0.001**	**0.002**

Total Open Water Impact for Project: 0.002 acres.

The project shall be constructed in accordance with your application dated received 8 June 2016. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 3891. This certification corresponds to the **Nationwide Permit 23** issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must 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 total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification and any additional conditions listed below.

Condition(s) of Certification:

Project Specific Conditions

1. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams, shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the

above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]

2. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage. [15A NCAC 02H.0506(b)(2)]

3. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed. [15A NCAC 02H.0506(b)(2)]

4. For the 10 linear feet of streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species. [15A NCAC 02H.0506(b)(2)]

5. NCDOT shall be in compliance with the NCS00250 issued to the NCDOT, including the applicable requirements of the NCG01000.

6. Tall fescue shall not be used in the establishment of temporary or permanent groundcover within riparian areas. For the establishment of permanent herbaceous cover, erosion control matting shall be used in conjunction with an appropriate native seed mix on disturbed soils within the riparian area and on disturbed steep slopes with the following exception. Erosion control matting is not necessary if the area is contained by perimeter erosion control devices such as silt fence, temporary sediment ditches, basins, etc. Matting should be secured in place with staples, stakes, or wherever possible, live stakes of native trees. Erosion control matting placed in riparian areas shall not contain a nylon mesh grid, which can impinge and entrap small animals. For the establishment of temporary groundcover within riparian areas, hydroseeding along with wood or cellulose based hydro mulch applied from a fertilizer- and limestone-free tank is allowable at the appropriate rate in conjunction with the erosion control measures. Discharging hydroseed mixtures and wood or cellulose mulch into surface waters in prohibited. Riparian areas are defined as a distance 25 feet landward from top of stream bank.

General Conditions

7. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]

8. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]

9. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]

10. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]

11. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]

12. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]

13. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]

14. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]

15. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]

16. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]

17. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]

18. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]

19. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]

20. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]

21. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.

22. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]

23. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]

24. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction.[15A NCAC 02B.0506(b)(2)]

25. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.[15A NCAC 02H.0506(b)(3) and (c)(3)]

26. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:

    a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual.*
    b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual.* The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
    c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual.*
    d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

27. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]

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
Raleigh, NC 27699-1601

This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact Joanne Steenhuis at 910.796.7306 or Joanne.Steenhuis@ncdenr.gov.

Sincerely,

S. Jay Zimmerman, Director
Division of Water Resources

Attachments – Design Plans Sheets 1-13

Electronic copy only distribution:

Liz Hair, US Army Corps of Engineers, Wilmington Field Office
Jim Rerko, Division 6 Environmental Officer
Gary Jordan, US Fish and Wildlife Service
Travis Wilson, NC Wildlife Resources Commission
Joanne Steenhuis, NC Division of Water Resources Wilmington Regional Office
File Copy

Water Resources
ENVIRONMENTAL QUALITY

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Secretary

S. JAY ZIMMERMAN
Director

NCDWR Project No.: _____ **County:** _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, **or** the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date:_____

Engineer's Certification

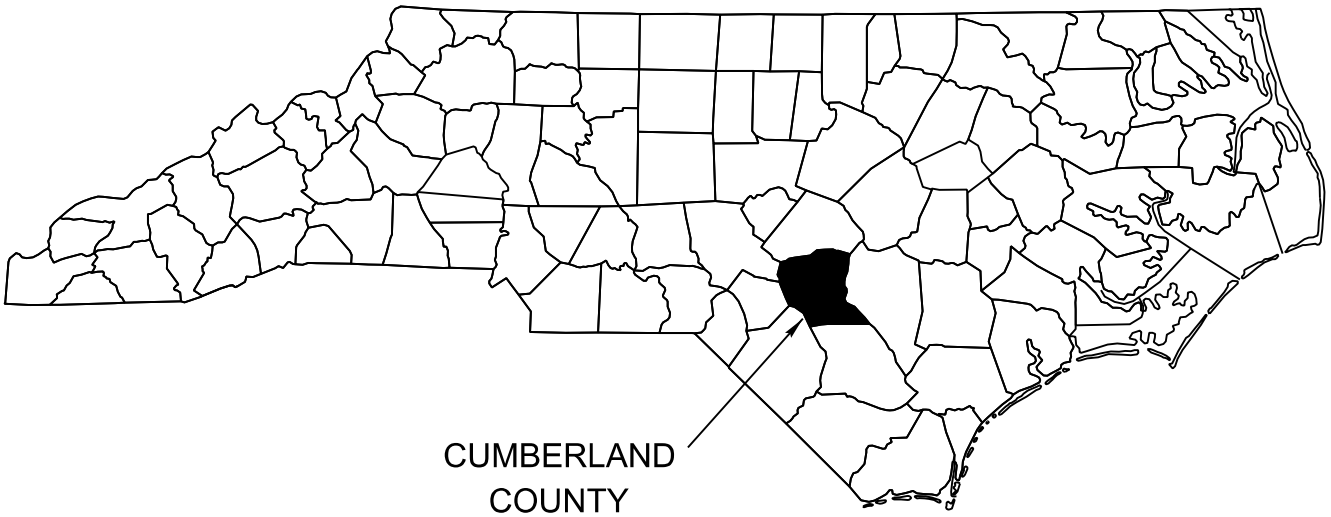
_____ Partial _____ Final

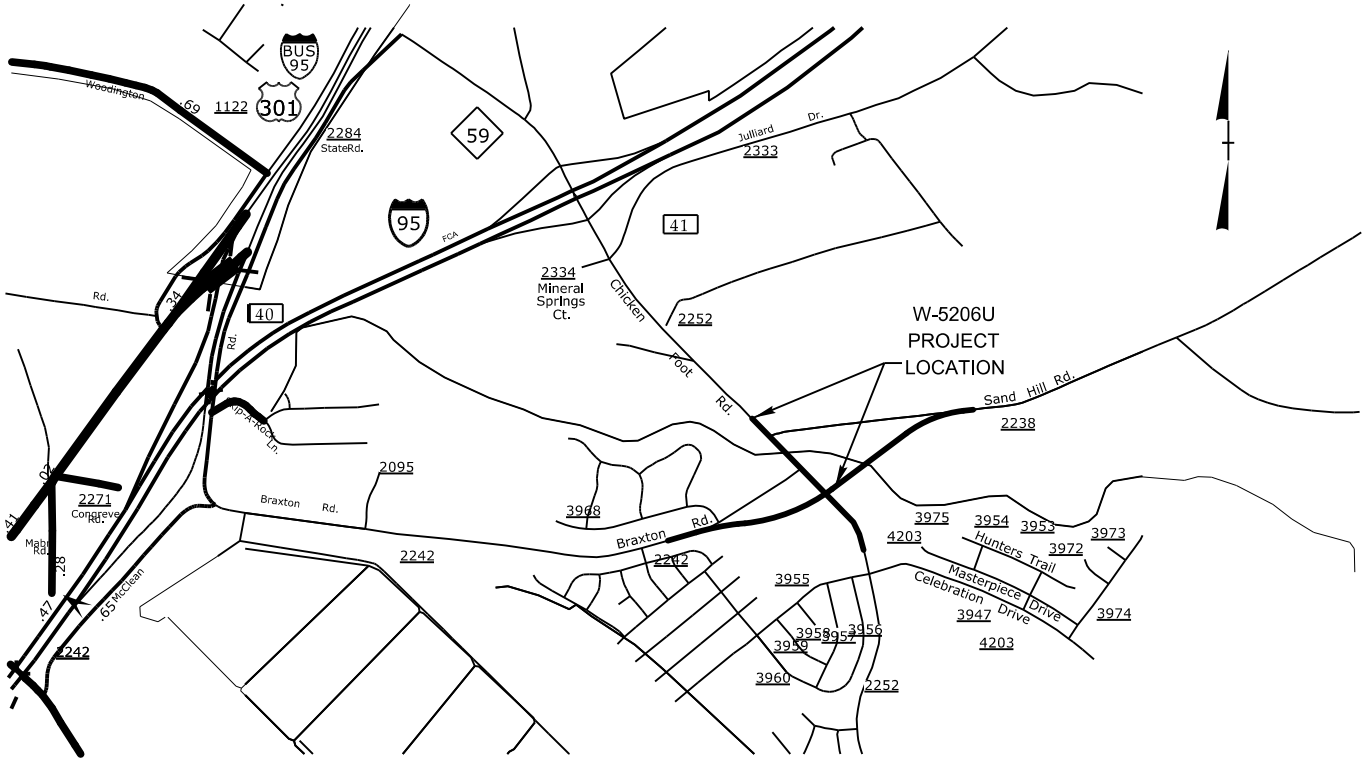
I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____

NORTH CAROLINA





VICINITY MAP

DATE: 12-29-14 SCALE: 1"=2500'

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CHICKENFOOT ROAD (SR 2241) &
BRAXTON ROAD (SR 2242) &
SANDHILL ROAD (SR 2238)

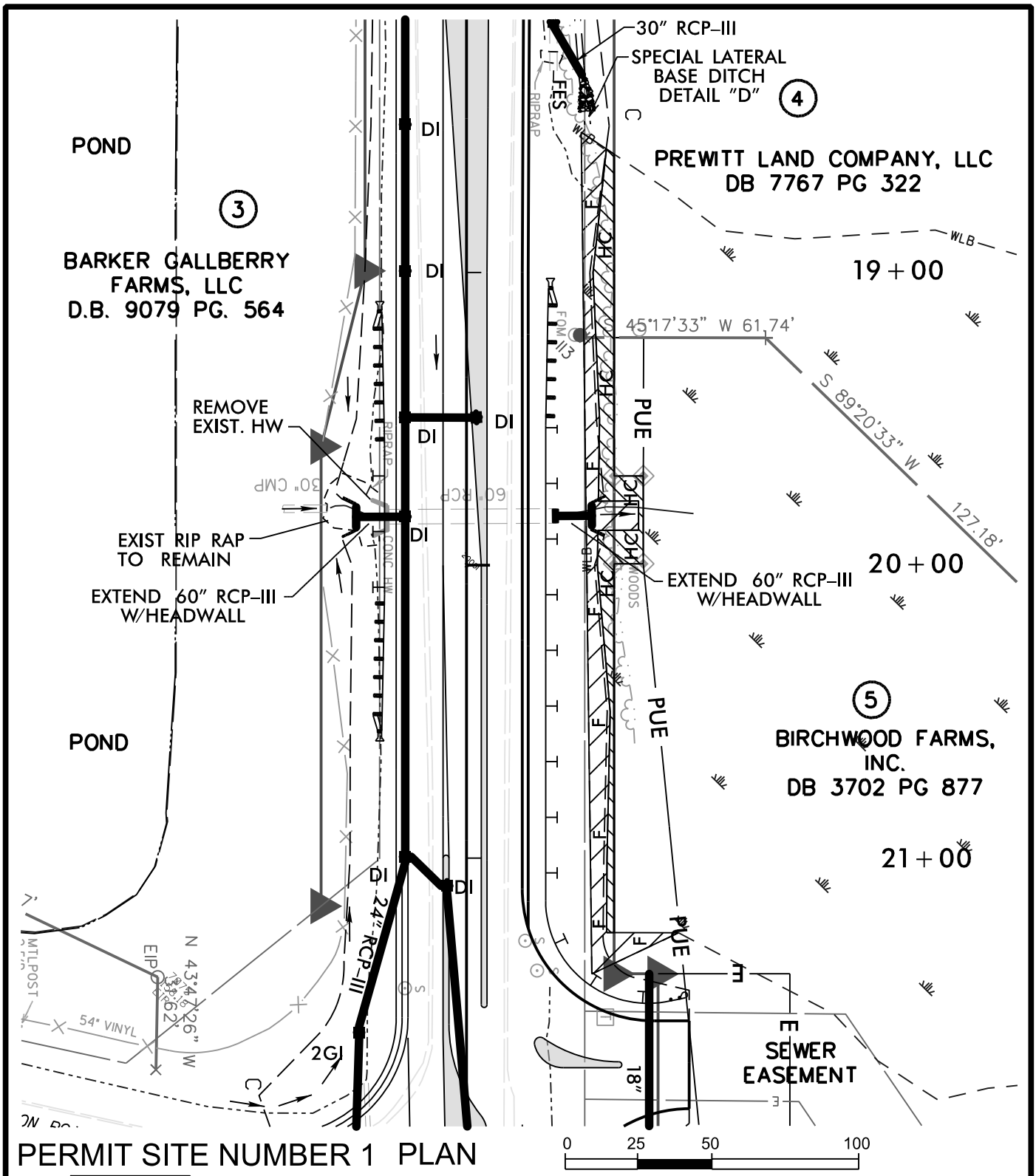
SHEET 1 OF 15

SITE MAP

DATE: 12-02-14 SCALE: 1"=500'

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CHICKENFOOT ROAD (SR 2241) &
BRAXTON ROAD (SR 2242) &
SANDHILL ROAD (SR 2238)



PERMIT SITE NUMBER 1 PLAN

F F — DENOTES FILL IN WETLAND

HC HC — DENOTES HAND CLEARING

S S — DENOTES IMPACTS IN SURFACE WATER

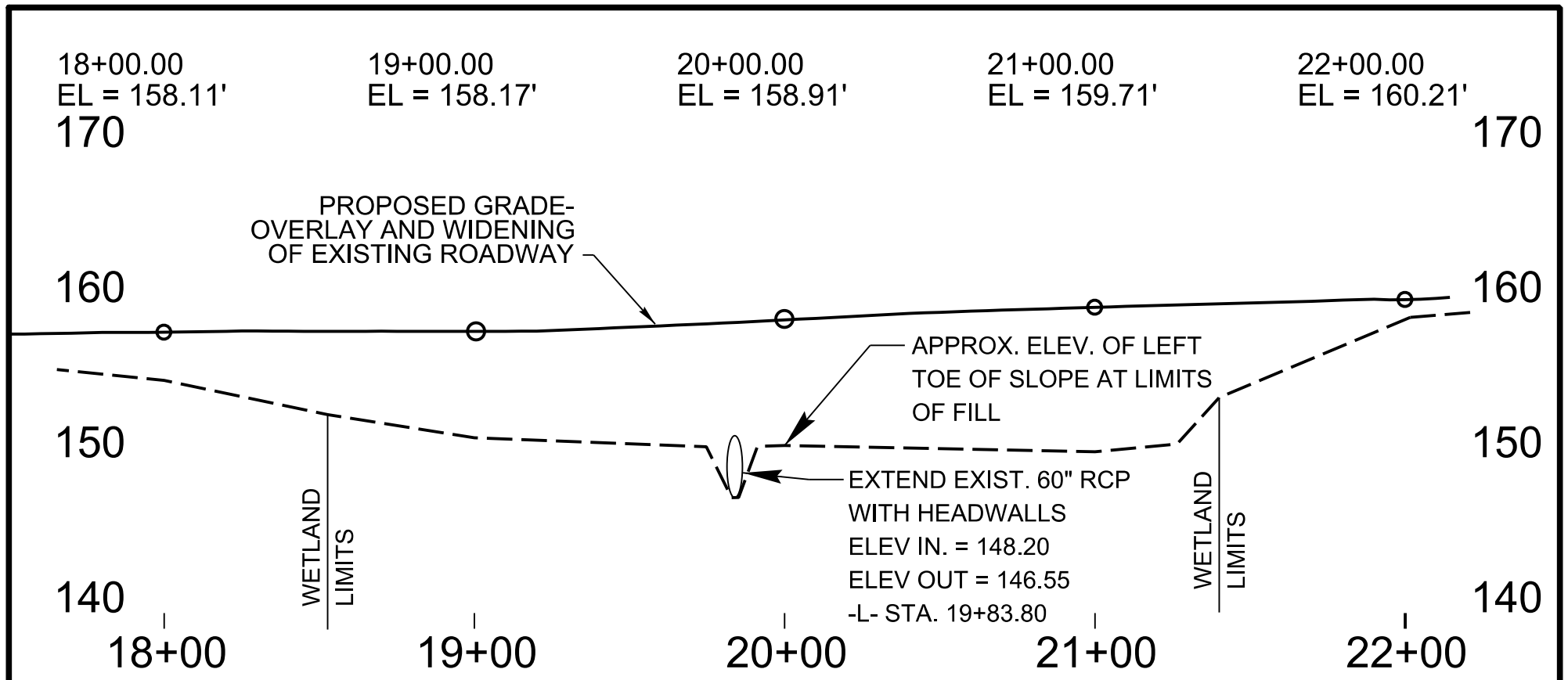
ST ST — DENOTES STREAM IMPACTS

DATE: 12-29-14 SCALE: 1"=50'

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON
GRAYS CREEK UNDER
-L- S.R. 2252 (CHICKENFOOT ROAD)

SHEET 3 OF 15



PERMIT SITE NUMBER 1
S.R. 2252
CHICKENFOOT ROAD
-L- PROFILE

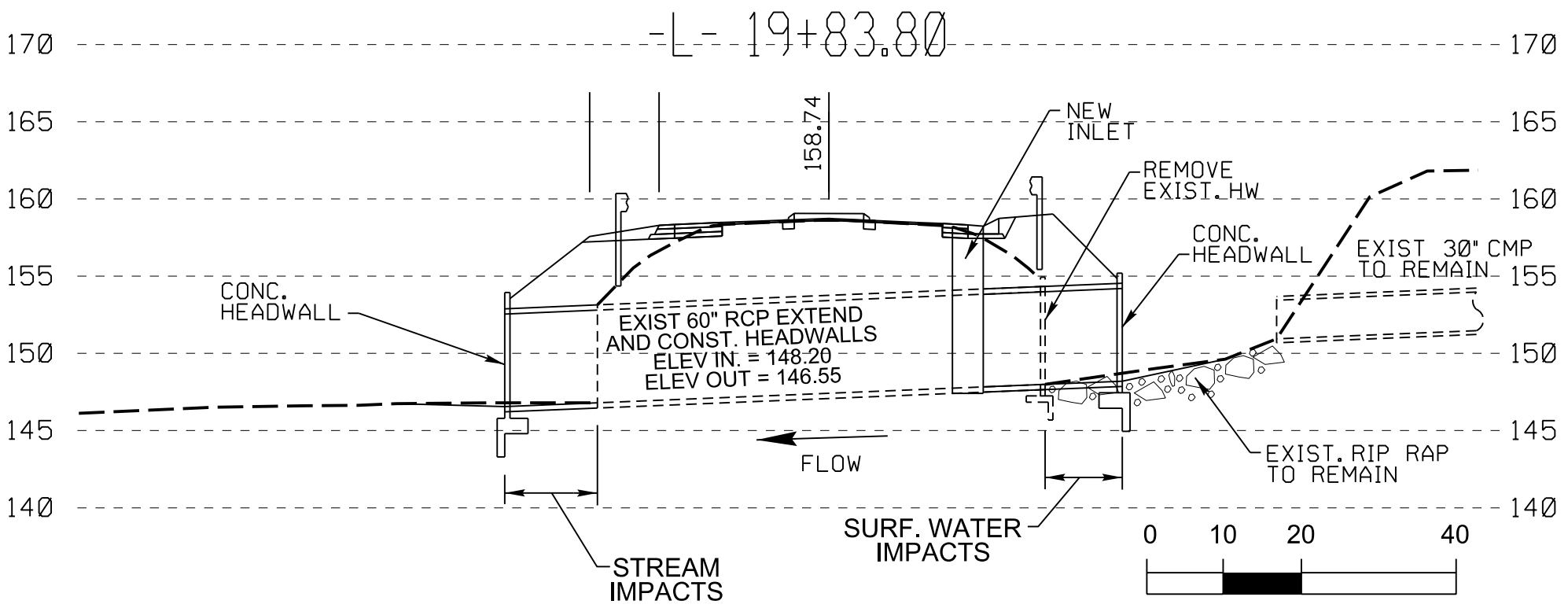
DATE: 12-2-14

SCALE:
1"=50' (HORIZ)
1"=10' (VERT)

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON
GRAYS CREEK UNDER
S.R. 2252 (CHICKENFOOT ROAD)

SHEET 4 OF 15



SCALE:
1"=20' (HORIZ)
1"=10' (VERT)

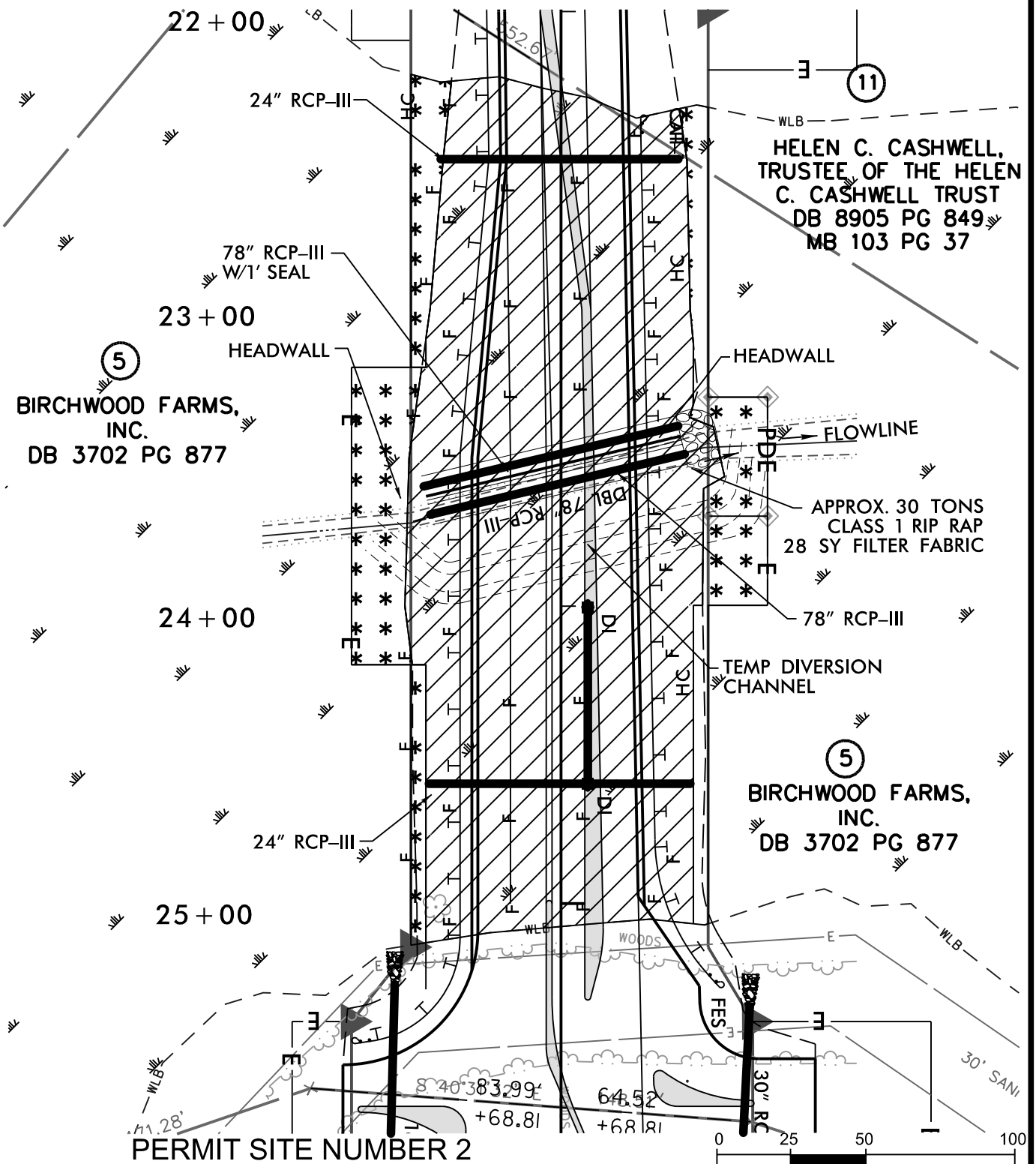
PERMIT SITE NUMBER 1
S.R. 2252
CHICKENFOOT ROAD
SECTION VIEW

DATE: 12-29-14

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON
GRAYS CREEK UNDER
S.R. 2252 (CHICKENFOOT ROAD)

SHEET 5 OF 15



PERMIT SITE NUMBER 2 PLAN

F F DENOTES FILL IN WETLAND

DENOTES MECHANIZED CLEARING

HC HC DENOTES HAND CLEARING

ST ST DENOTES STREAM IMPACTS

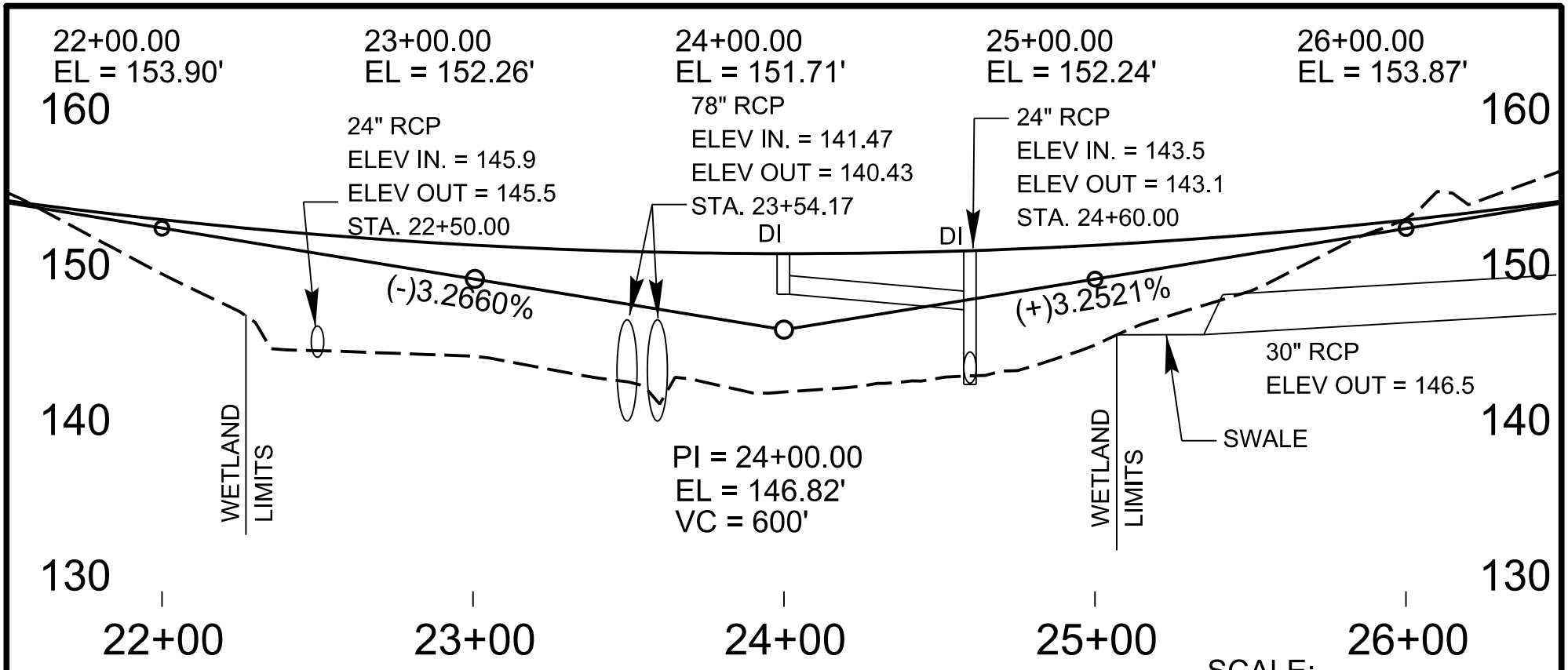
DATE: 12-29-14 SCALE: 1"=50'

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON
GRAYS CREEK UNDER
-Y1- S.R. 2238 (SANDHILL ROAD)

SHEET 6 OF 15

REVISED 5-17-16



SCALE:
1"=50' (HORIZ)
1"=10' (VERT)

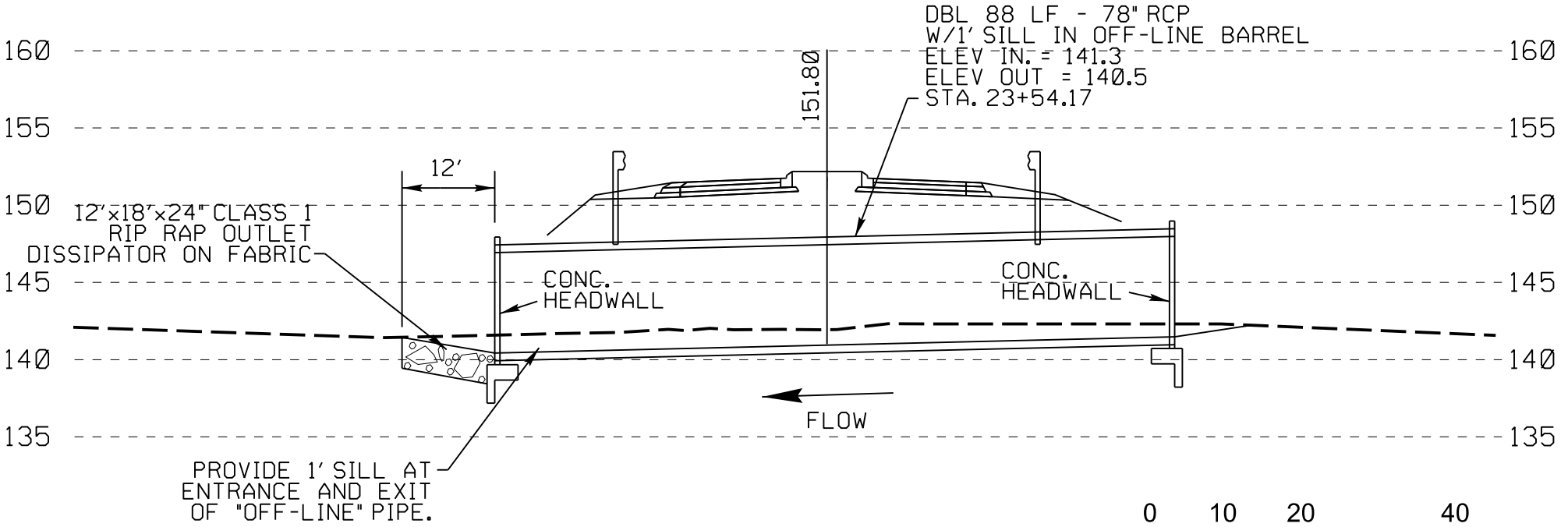
PERMIT SITE NUMBER 2
S.R. 2238
SANDHILL RD.
-Y1- PROFILE

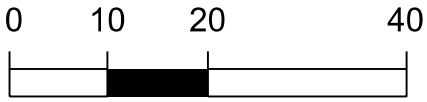
DATE: 12-2-14 REVISED 5-17-16

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON
GRAYS CREEK UNDER
S.R. 2238 (SANDHILL ROAD)

SHEET 7 OF 15





SCALE:
1"=20' (HORIZ)
1"=10' (VERT)

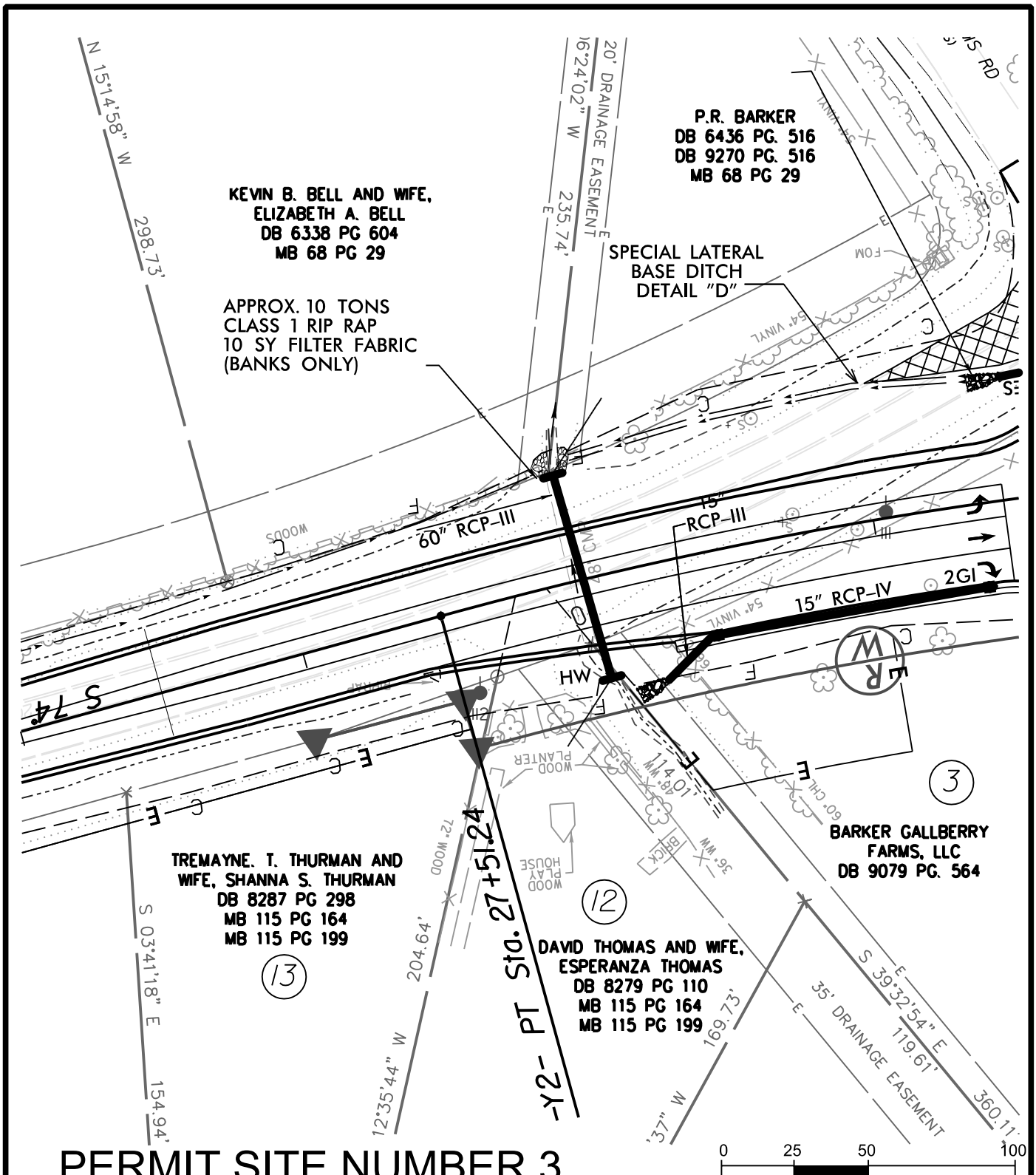
PERMIT SITE NUMBER 2
S.R. 2238
SANDHILL RD.
SECTION VIEW

DATE:12-2-14 REVISED 5-17-16

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON
GRAYS CREEK UNDER
S.R. 2238 (SANDHILL ROAD)

SHEET 8 OF 15



PERMIT SITE NUMBER 3 PLAN

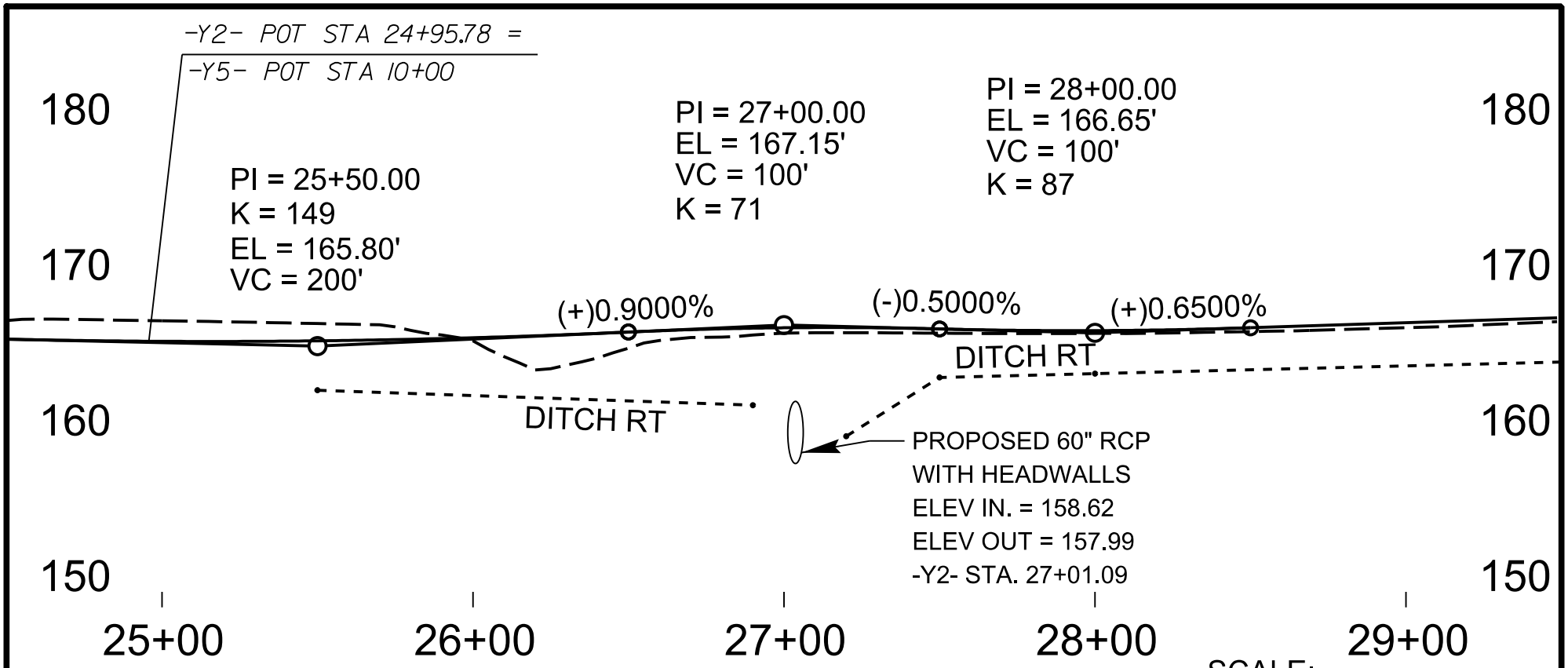
ST ST DENOTES STREAM IMPACTS

DATE: 06-06-16 SCALE: 1"=50'
REVISED: 5-7-16

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON TRIBUTARY
TO GRAYS CREEK UNDER
-Y2- S.R. 2242 (BRAXTON ROAD)

SHEET 9 OF 15



SCALE:
1"=50' (HORIZ)
1"=10' (VERT)

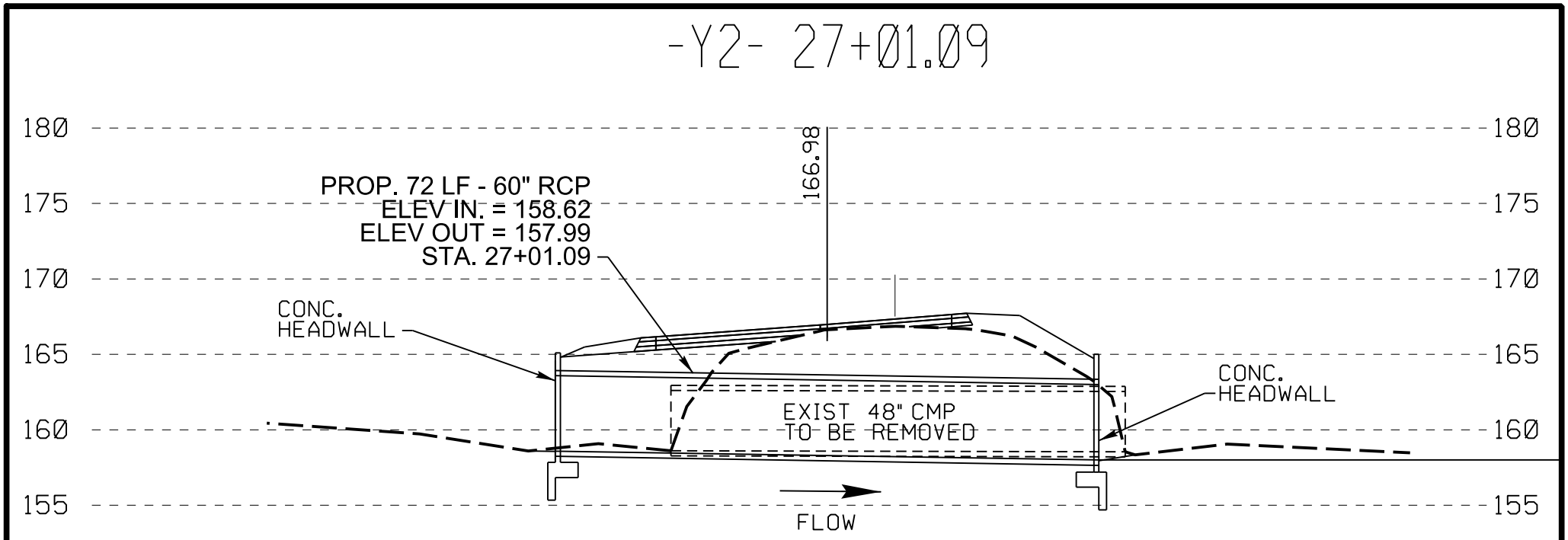
PERMIT SITE NUMBER 3
S.R. 2242
BRAXTON RD.
-Y2- PROFILE

DATE: 12-2-14 REVISED: 5-17-16

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON TRIBUTARY
GRAYS CREEK UNDER
-Y2- S.R. 2242 (BRAXTON ROAD)

SHEET 10 OF 15



0 10 20 40

SCALE:
1"=20' (HORIZ) 1"=10' (VERT)

PERMIT SITE NUMBER 3
S.R. 2242
-Y2- BRAXTON RD.
SECTION VIEW

DATE: 12-29-14
REVISED: 5-17-16

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON TRIBUTARY
GRAYS CREEK UNDER
S.R. 2242 (BRAXTON ROAD)

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	DEED INFORMATION
③	BARKER GALLBERRY FARMS, LLC 5556 BRAXTON ROAD HOPE MILL, NORTH CAROLINA 28348	DEED BOOK 9079, PAGE 564
④	PREWITT LAND COMPANY, LLC 1277 CHICKEN FOOT ROAD HOPE MILL, NORTH CAROLINA 28348	DEED BOOK 7767, PAGE 322
⑤	BIRCHWOOD FARMS, INC 2126 CYPRESS LAKES ROAD HOPE MILL, NORTH CAROLINA 28348	DEED BOOK 3702, PAGE 877
⑪	HELEN C. CASHWELL,TRUSTEE OF THE HELEN C CASHWELL TRUST 3407 E. YACHT DRIVE OAK ISLAND, NORTH CAROLINA 28465	DEED BOOK 8905, PAGE 849

DATE: 12-2-14

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
CUMBERLAND COUNTY

PROJECT: 45336.1.21 (W-5206U)
CULVERT ON
GRAYS CREEK UNDER
S.R. 2252 (CHICKENFOOT ROAD)

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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- 18+50 - 21+40	Roadway Fill in Wetland	0.04				0.08					
1	-L- 19+83.91	Extend Existing 60" RCP						< 0.01	< 0.01	11	10	
2	-Y1- 22+25 -25+10	Roadway Fill in Wetland	0.72			0.14						
2	-Y1- 23+58.64	DBL 78" RCP								76	48	
										12		
3	-Y2- 27+03.68	Replace Exist 48" With 60" RCP								16	20	
TOTALS*:			0.76			0.14	0.08	< 0.01	< 0.01	115	78	0

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
5/26/2016
CUMBERLAND COUNTY
W5206U
45336.1.21

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released July 2012)

Project/TIP No.: W-5206U **County(ies):** Cumberland

General Project Information

Project No.:	W-5206U	**Project Type:**	Roadway Widening	**Date:**	1/6/2015
NCDOT Contact:	Sean P. Matuszewski	**Contractor / Designer:**	Rivers And Associates		
Address:	Division 6 Design and Construction PO Box 1150 Fayettevill, North Carolina 28302	**Address:**	5808 Farringdon Place Suite 203 Raleigh, North Carolina 27609		
Phone:	910-437-2611	**Phone:**	919-848-3347, Ext 6257		
Email:	spmatuszewski@ncdot.gov	**Email:**	dsmith@riversandassociates.com		
City/Town:	Spring Lake	**County(ies):**	Cumberland		
River Basin(s):	Cape Fear	**CAMA County?**	No		
Primary Receiving Water:	Grays Creek	**NCDWQ Stream Index No.:**	18-35 (1)		
NCDWQ Surface Water Classification for Primary Receiving Water	**Primary:**	Class B			
	Supplemental:				
Other Stream Classification:					
303(d) Impairments:	None				
Buffer Rules in Effect	N/A				

Project Description

Project Length (lin. Miles or feet):	6,200 FT	**Surrounding Land Use:**	Predominately Rural Residential/Agricultural

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	6.70 ac.	2.60 ac.
Typical Cross Section Description:	Three Lane undivided road with shoulder section	Two lane undivided road with shoulder section
Average Daily Traffic (veh/hr/day):	Design/Future: 20,500	Existing: 11,000

General Project Narrative:

The W-5206U is a safety project intended to improve the alignment and traffic flow at the intersection of Chicken Foot Road (SR 2241) and Braxton/Sandhill Roads (SR 2242 & SR 2238). The current configuration consists of two tee intersections to be replaced by one 4-way signalized intersection with turn lanes. The intersection location was shifted toward the south east along Chickenfoot Road to provide for a perpendicular crossing of the main wetland feature along Grays creek. The roadway construction is typical of a rural/emerging urban road with shoulder section throughout and limited curb and gutter. The existing road pavement was utilized along Chckenfoot Road where feasable.

References

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Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR LINEAR ROADWAY PROJECTS

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Project Environmental Summary

Surface Water Impacts

Sheet No.	Station (From / To)	Feature Impacted	Water / Wetland / Buffer Type	Receiving Surface Water Name	NRTR Map ID	NCDWQ Stream Index	NCDWQ Surface Water Classification	303(d) Impairments	Type of Impact	Existing SCM	Proposed SCM
4	-L- 18+50 21+40	Wetland	Bottomland Hardwood	Grays Creek		18-35 (1)	B	None	Fill		
4	-L- 19+83.80	Stream	Perennial	Grays Creek		18-35 (1)	B	None	Culvert		
4	-L- 19+83.80	Open Water	Other	Grays Creek		18-35 (1)	B	None	Culvert		
7	-Y1- 22+25 -Y1- 25+10	Wetland	Bottomland Hardwood	Grays Creek		18-35 (1)	B	None	Fill		
7	-Y1- 23+54.17	Stream	Perennial	Grays Creek		18-35 (1)	B	None	Culvert		
9	-Y2- 27+01.09	Stream	Perennial	Grays Creek		18-35 (1)	B	None	Culvert		

* List all stream and surface water impact locations regardless of jurisdiction or size.

Equalizer Pipes to be noted as a minimization of impacts.

All proposed SCMs listed must also be listed under Swales, Preformed Sour Holes and other Energy Dissipators, or Other Stormwater Control Measures.

Description of Minimization of Impacts or Mitigation

References