

Project Submittal Interim Form

Updated September 4, 2020



*Please note: fields marked with a red asterisk * below are required. You will not be able to submit the form until all mandatory questions are answered.*

Project Type: *

- ☐ For the Record Only (Courtesy Copy)
- ☐ New Project
- ☒ Modification/New Project with Existing ID
- ☐ More Information Response
- ☐ Other Agency Comments
- ☐ Pre-Application Submittal
- ☐ Re-Issuance/Renewal Request
- ☐ Stream or Buffer Appeal

Pre-Filing Meeting Date Request was submitted on:

11/5/2021

Project Contact Information

Name:

Chris Rivenbark

Who is submitting the information?

Email Address: *

crivenbark@ncdot.gov

Project Information

Existing ID #: *

20210926

20170001 (no dashes)

Existing Version: *

1

1

Project Name: *

Intersection of US 401 at SR 2044 (Ligon Mill Road) and SR 2224 (Mitchell Mill Road) (U-5748 Central)

Is this a public transportation project? *

- ☒ Yes
- ☐ No

Is this a DOT project? *

- ☒ Yes
- ☐ No

Is the project located within a NC DCM Area of Environmental Concern (AEC)? *

- ☐ Yes
- ☒ No
- ☐ Unknown

TIP#:

U-5748

WBS#:

50168.1.1

(Applies to DOT projects only)

County (ies) *

Wake

Please upload all files that need to be submitted.

[Click the upload button or drag and drop files here to attach document](#)

U-5748 General Modification September 12 2022.pdf 5.6MB

[Only pdf or kmz files are accepted.](#)

Describe the attachments or add comments:

Cover letter, NCDMS acceptance letter, revised permit and buffer drawings.

* ☒ By checking the box and signing box below, I certify that:

- I, the project proponent, hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.
- I, the project proponent, hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.
- I agree that submission of this online form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the online form.

Signature: *

A rectangular box containing a handwritten signature in black ink that reads "Chris Riverbank".

Submittal Date:

09/12/2022

[Is filled in automatically once submitted.](#)



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

September 12, 2022

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

N.C. Division of Water Resources
1617 Mail Service Center
Raleigh, NC 27699-1617

Attn: Mr. Andrew Williams
NCDOT Coordinator

Mr. Rob Ridings
NCDOT Coordinator

Subject: **Modification Request for Section 404 Regional General Permit 50, Section 401 Water Quality Certification and Neuse Riparian Buffer Authorization** for Upgrade of an Existing at-grade Intersection of US 401 at SR 2044 (Ligon Mill Road) and SR 2224 (Mitchell Mill Road) to offset Continuous Flow Intersection from the US 401 and Leland Avenue Intersection to the US 401 and Perry Creek Road Intersection in Wake County; TIP Number U-5748. Debit \$570 from WBS Element 50168.1.1.

Dear Sirs:

As you are aware, the North Carolina Department of Transportation (NCDOT) applied for permits for the subject project on November 5, 2021. The Corps of Engineers issued the Section 404 permit for the project on January 5, 2022. The North Carolina Division of Water Resources issued the 401 Water Quality Certification for the project on November 10, 2021 (NCDWR Project No. 20210926). This correspondence is to request modification to Site 7 and Site 13.

Site 7: Due to constructability concerns, a drainage design revision was required to delete a deep drainage inlet. This revision removed the pipe outlet at Site 13 and instead, directs the water to outlet at Site 7. Due to the poor existing conditions of the channel at Site 7 and the proposed increase in drainage to this area, rip rap channel stabilization is proposed to be added for the length of the degraded channel section. This will result in the following changes:

- 213 linear feet increase in permanent stream impacts
- 14 linear feet increase in temporary stream impacts
- Increase of 12,526 sq ft Buffer Zone 1 impacts
- Increase of 2,541 sq ft Buffer Zone 2 impacts

Site 13: Due to constructability concerns, a drainage design revision was required to delete a deep drainage inlet. This revision removed the pipe outlet at Site 13 and instead, directs the water to outlet at Site 7. This will result in the following changes:

- 20 linear feet decrease in bank stabilization impacts
- 29 linear feet decrease in temporary stream impacts
- Decrease of 1,876 sq ft Buffer Zone 1 impacts
- Decrease of 792 sq ft Buffer Zone 2 impacts

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-707-6000
FAX: 919-212-5785
WEBSITE: NCDOT.GOV

LOCATION:
CENTURY CENTER, BUILDING A
1000 BIRCH RIDGE DRIVE
RALEIGH NC, 27610-4328

Attached are the following revised permit drawings depicting the affected area, all of which have a revision date of August 25, 2022:

- Permit Drawing 15: plan sheet 6 without contours
- Permit Drawing 16: plan sheet 6 with contours
- Permit Drawing 17: plan sheet 6 inset
- Permit Drawing 18: plan sheet 6A
- Permit Drawing 28: summary table
- Buffer Drawing 5: buffer plan sheet 6
- Buffer Drawing 8: summary table

Avoidance/Minimization

In order to eliminate the deep drainage inlet and new pipe bore extending through an existing reinforced fill slope, both of which include constructability and future maintenance issues, drainage was revised to outlet at Permit Site 7; stream SE. The original outlet stabilization footprint at Permit Site 7 was determined to be insufficient for the increased drainage to this outlet. Further, the option of providing a larger outlet stabilization structure (i.e. energy dissipator) within the existing footprint was evaluated, however, the current condition of the channel below the original footprint was also determined to have existing head cuts and eroded slopes, which would be worsened by the increased flow to this area. Calculations show that the increase in flow to this already eroded channel would result in a design velocity and shear stress too high for a vegetated channel. Therefore, the channel was determined to need rip rap stabilization. The length of rip rap stabilization needed was limited to the extent possible where the channel below these improvements would be able to remain stable given the increased flow to this area. The outlet of this channel stabilization was located at a point where the existing channel fans out further downstream and allows for a milder slope and wider base, providing better long-term stability. The rip rap channel stabilization includes countersunk rip rap in the flow line to facilitate eventual sediment loading and stream naturalization.

Compensatory Mitigation

Per coordination with the USACE, the 213 linear feet of stream impacts at Site 7 can be mitigated at a 1:1 ratio. NCDOT has received the appropriate additional mitigation from the N.C. Division of Mitigation Services. The revised acceptance letter is included with this modification request.

REGULATORY APPROVALS

Section 404: NCDOT requests modification to the USACE 404 Regional General Permit 50 for the project as required for the above-described activities.

Section 401/Riparian Buffers: We are also requesting modification of the Section 401 Water Quality Certification and Neuse Riparian Buffer Authorization. We are providing this request to NCDWR, for their approval. Authorization to debit the \$570.00 Permit Application Fee from TIP No. U-5748/WBS 50168.1.1 is hereby given.

A copy of the permit modification and its distribution list will be posted at <https://xfer.services.ncdot.gov/pdea/PermApps/>.

If you have any questions or need additional information, please contact me at crivenbark@ncdot.gov or 919-707-6152.

Sincerely,

DocuSigned by:

Mack C. Rivenbark III

AAAD1248B309416...

Chris Rivenbark, Eastern Team Lead
Environmental Coordination and Permitting Group

cc: NCDOT Permit Application Standard Distribution List

ROY COOPER

Governor

ELIZABETH S. BISER

Secretary

MARC RECKTENWALD

Director



NORTH CAROLINA
Environmental Quality

September 9, 2022

Mr. Jamie Lancaster, P.E.
Environmental Analysis Unit
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Lancaster:

Subject: DMS Mitigation Acceptance Letter:

U-5748, US 401 Intersection Improvements at SR 2044 (Ligon Mill Road), SR 2224 (Mitchell Mill Road) and SR 2006 (Perry Creek Road), Wake County

References: USACE 404 General Permit 50 issued January 5, 2022 (USACE Action ID 2017-00321)

NCDWR 401 Water Quality Certification issued November 10, 2021 (NCDWR ID 2021-0926)

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the additional mitigation for the subject project. Based on the information supplied by you on September 8, 2022, the additional impacts are located in CU 03020201 of the Neuse River basin in the Central Piedmont (CP) Eco-Region, and are as follows:

Table 1 – Additional Impacts (feet / acres)

Neuse 03020201 CP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	213.000	0	0	0	17,236.000	5,605.000

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

This additional impact and associated mitigation needs were not projected by the NCDOT in the 2022 impact data. DMS is currently providing buffer mitigation for the impacts associated with this project located in cataloging unit 03020201 of the Neuse River basin as required by the 401 Water Quality and Buffer Authorization Certifications issued in November 2021, as shown in the below table (in mitigation credits):



North Carolina Department of Environmental Quality | Division of Mitigation Services
217 West Jones Street | 1652 Mail Service Center | Raleigh, North Carolina 27699-1652
919.707.8976

Table 2 – Current Permitted Impacts and Associated Mitigation Requirements provided by DMS (based on issued permits) and Revised Anticipated Impacts (based on mitigation request)

Impact Service Area	Impact Type	Total Permitted Impacts* (feet / acre / sq ft)	Mitigation Provided by DMS per Issued Permits (Credits)	Additional Impact (for approval)	Revised Total Impacts**
Neuse 03020201	Stream	0.000	0.000	213.000	213.000
	Riparian Buffer – Zone 1	61,898.000	185,694.000	17,236.000	79,134.000
	Riparian Buffer – Zone 2	49,525.000	74,288.000	5,605.000	55,130.000

* "Total Permitted Impacts" is defined as impacts which require mitigation through NCDEQ – DMS. Impacts that require mitigation from other sources are not included in NCDEQ – DMS's data.

**Some of the additional stream impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details. DMS will provide the amount of mitigation as determined by the regulatory agencies.

All buffer mitigation request and approvals are administrated through the Riparian Restoration Buffer Fund. The NCDOT will be responsible to ensure that appropriate compensation for the buffer mitigation will be provided in the agreed upon method of fund transfer. Upon receipt of the NCDWR's Buffer Authorization Certification, DMS will transfer funds from the NCDOT 2984 Fund into the Riparian Restoration Buffer Fund. Upon completion of the transfer payment, NCDOT will have completed its additional riparian buffer mitigation responsibility for TIP U-5748 in Wake County.

DMS commits to implementing additional sufficient compensatory stream mitigation credits to offset the additional impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of 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,

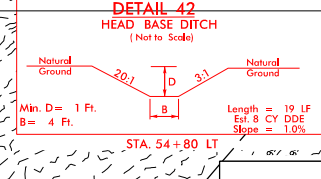
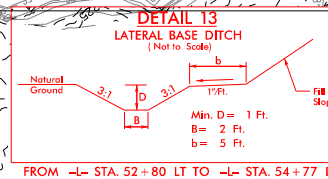
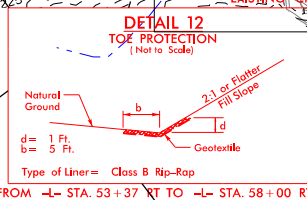
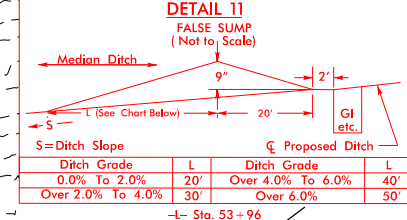
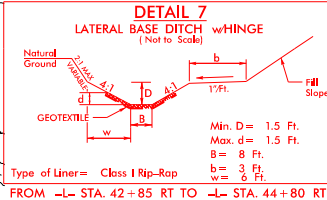
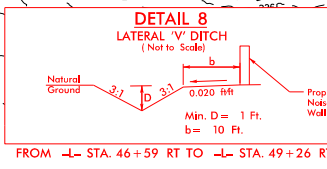
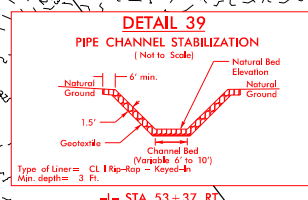
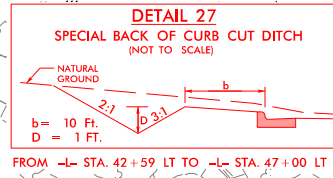
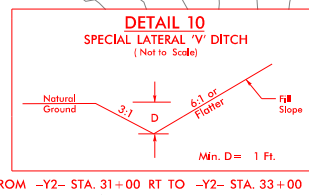
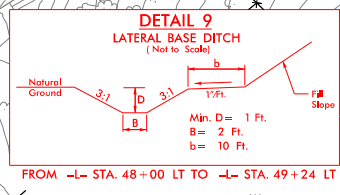
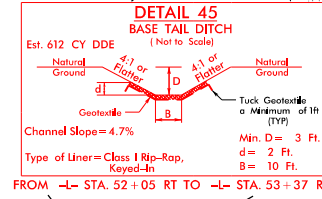
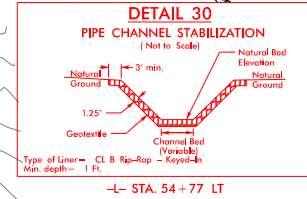
Elizabeth Harmon

for James B. Stanfill
DMS Deputy Director

cc: Mr. Monte Matthews, USACE – Raleigh Regulatory Field Office
Ms. Amy Chapman, Division of Water Resources, Wetlands/401 Unit
File: U-5748 Mod



MICHAEL J. WENG



DENOTES IMPACTS IN
 SURFACE WATER
 DENOTES TEMPORARY
 IMPACTS IN SURFACE WATER

SEE ENLARGEMENT SHEET 17

FOR -L- PROFILE, SEE SHEET NO. 14
FOR -Y2- PROFILE, SEE SHEET NO. 18
FOR -DRIVE2- PROFILE, SEE SHEET NO. 21
FOR -DRIVE4- PROFILE, SEE SHEET NO. 22

50' 0' 50' 10'

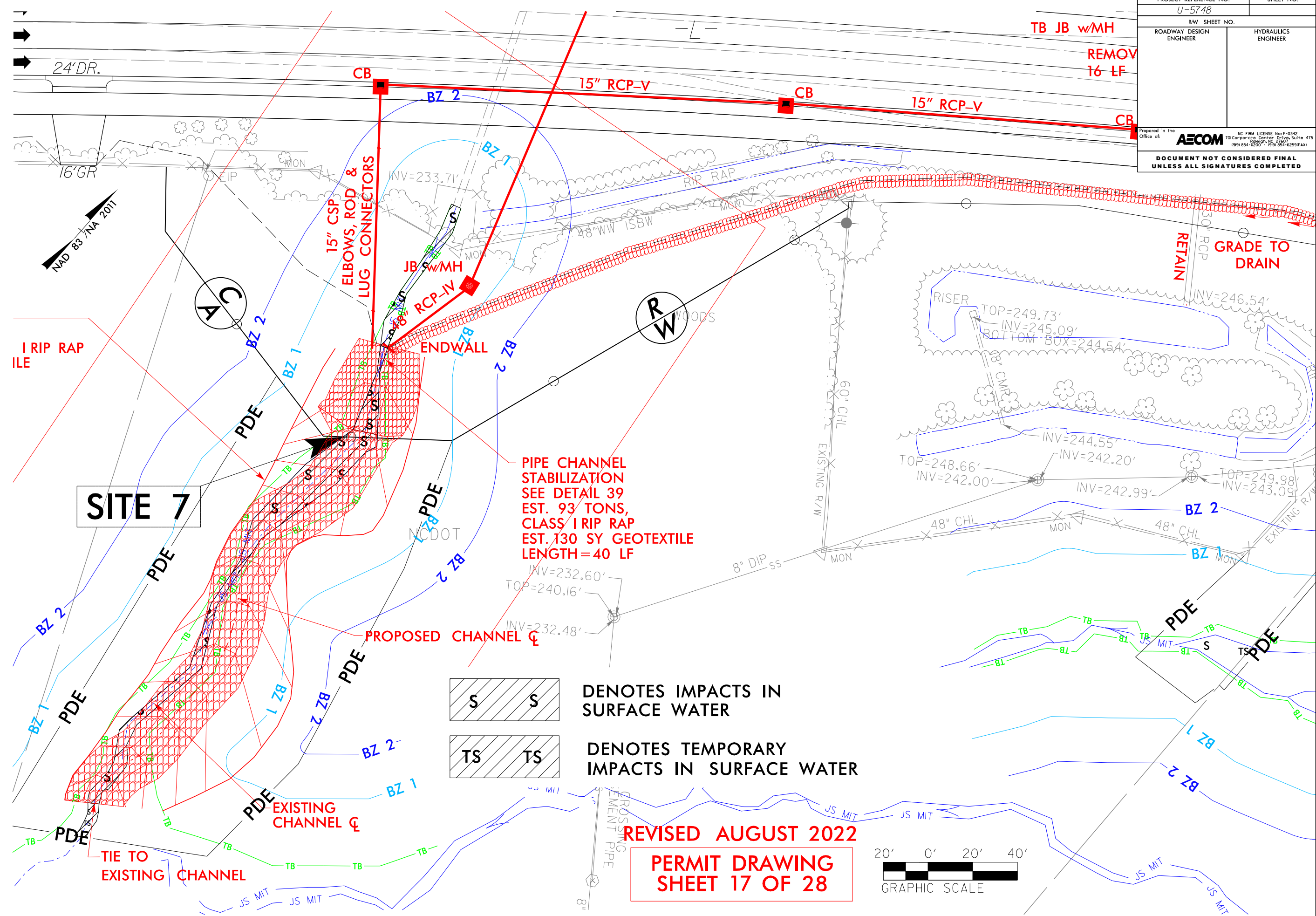
GRAPHIC SCALE

REVISIONS

8/22/2022
M:\11\500-CAD\GIS\910-CAD\70-NCDDT_TIP\Hydrolics\PERMITS-Environmental\Drawings\PSH_WET\16-U5748-prm-wet_psh06.dgn

E 114,100

PROJECT REFERENCE NO.		SHEET NO.
U-5748		
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
Prepared in the Office of:		NC FIRM LICENSE No F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259 (FAX)
AECOM		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

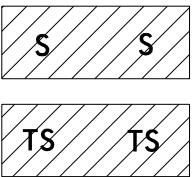


PROJECT REFERENCE NO.	SHEET NO.
U-5748	6A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Prepared in the Office of: AECOM NC FIRM LICENSE No. F-0342 5438 Wade Park Blvd., Suite 200 Raleigh, NC 27607 (919)461-8000	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 18 OF 28

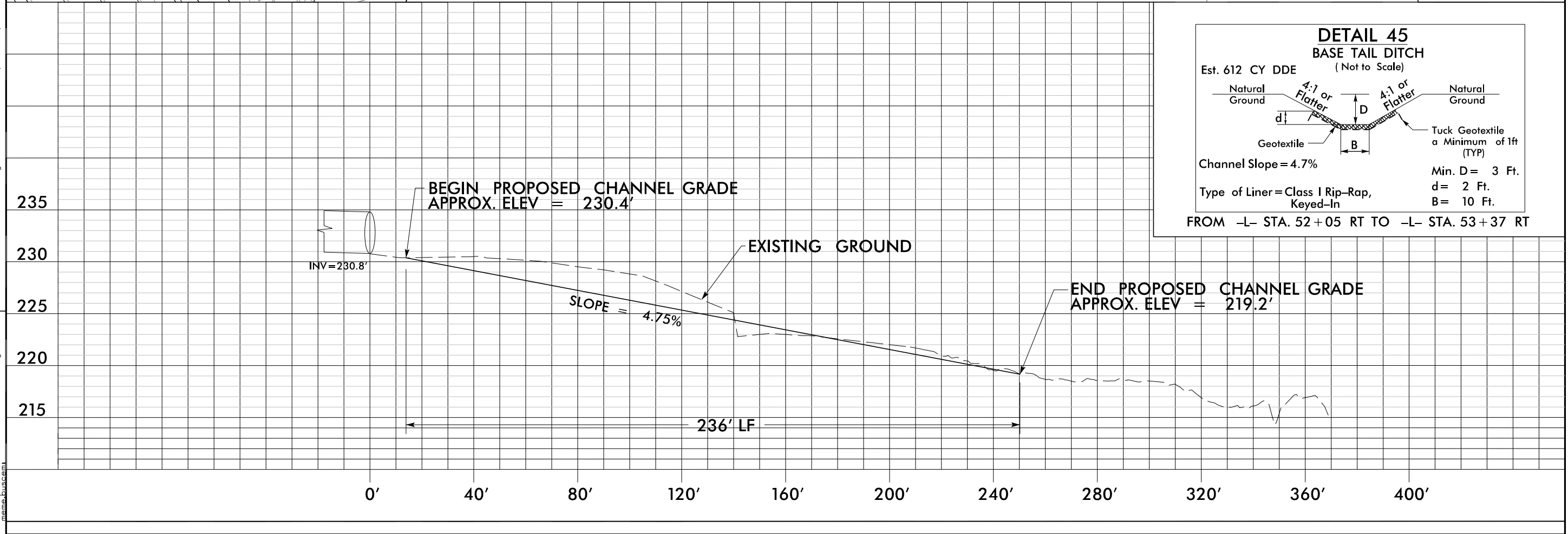
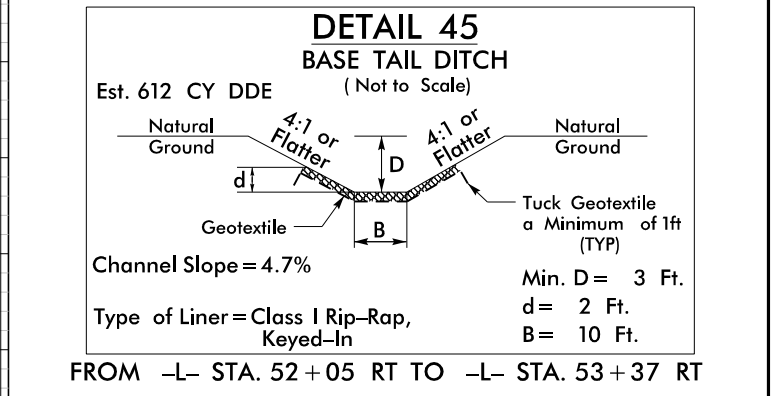
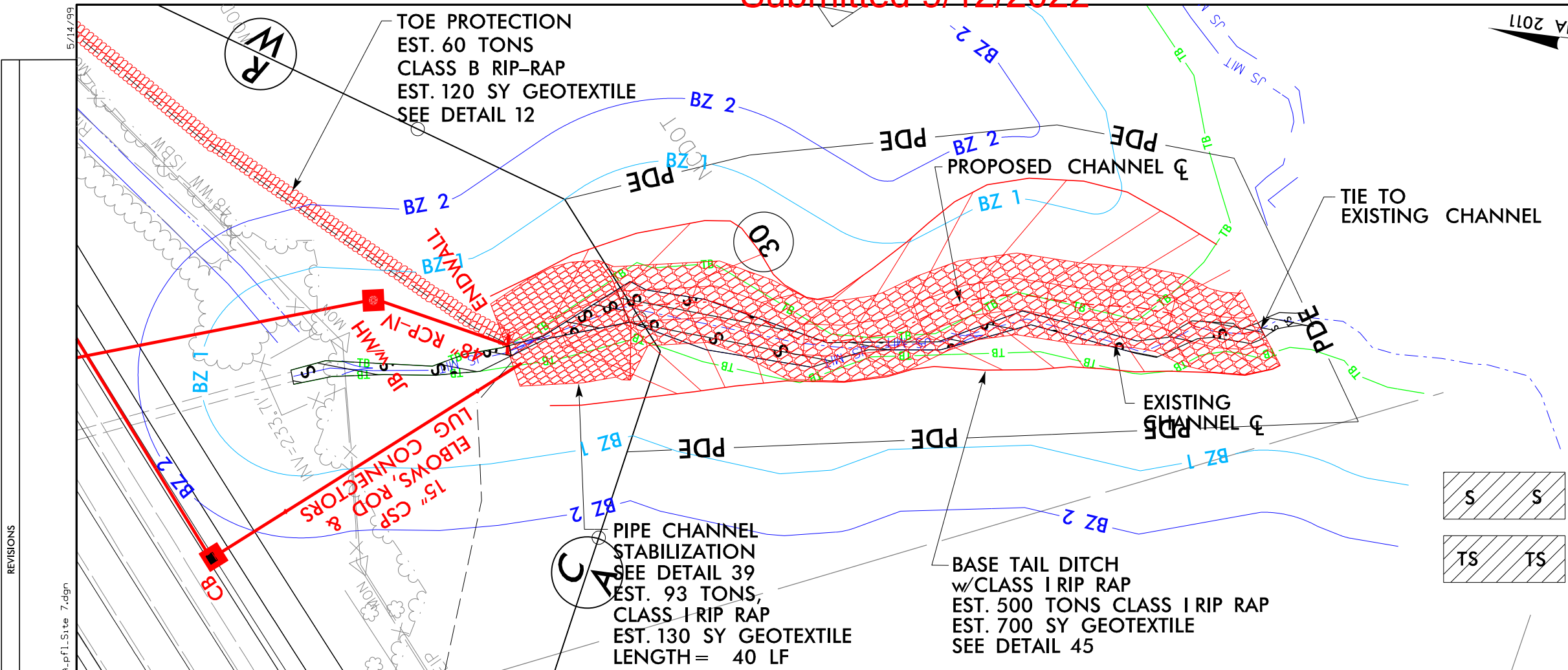
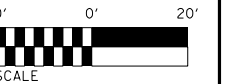
REVISED AUGUST 2022

SITE 7



DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



REVISIONS

8/22/2022 8:42 AM M:\11\9000-6427\0383\0_CAD\70_NCDOT_TIP\Hydraulics\PERMITS\Environmental\Drawings\PSH_WET\18_U5748_prm_wet_psh06A.pfl_Site 7.dgn

WETLAND AND SURFACE WATER IMPACTS 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- 21+88 - 23+06 LT	Prop. Rdwy Fill / Toe Protection	< 0.01			0.08						
2	-L- 24+16 - 25+36	Bridge Widening Temporary Work Pad							0.08		171	
		Bridge Widening / Bank Stabilization						0.02		91		
3**	-L- 27+23 - 27+63 RT	Proposed Roadway Fill	0.02			0.01						
4	-L- 33+61 - 34+17 LT	2 @ 78" Pipe Trenchless						< 0.01	< 0.01	34	14	
5	-Y4- 16+39 - 16+71 LT	72" Pipe / Bank Stabilization						< 0.01	< 0.01	30	19	
6	-L- 37+08 - 40+21 RT	2 @ 78" Pipe Trenchless	0.10			0.03		0.03	< 0.01	241	153	
7	-L- 51+96 - 53+70 RT	48" Pipe, 15" Pipe						< 0.01		71		
		Channel Stabilization						< 0.01	< 0.01	40		
		Tail Ditch						0.03	< 0.01	212	17	
8	-L- 59+73 - 60+10 RT	15" Pipe	< 0.01			0.02		< 0.01	< 0.01	6	39	
9	-L- 64+18 - 65+08 LT	48" Pipe						< 0.01		97		
		Bank Stabilization						< 0.01	< 0.01	30	26	
10	-Y2- 24+69 - 25+98	72" Pipe / Riprap Ditch	0.04			< 0.01		< 0.01	< 0.01	118	16	
		Existing Pond Draining						1.14				
11	-Y2- 25+38 - 25+45 RT	Riprap Ditch						< 0.01	< 0.01	31	12	
12	-L- 41+32 - 42+04 RT	Toe Protection	0.03			0.01						
TOTALS*:			0.20			0.17		1.26	0.10	1001	467	0

*Rounded totals are sum of actual impacts

NOTES:

** Isolated Wetland

Bridge Pier Permanent Impact Area = 127 sq. ft. (Eight 4.5 ft. diameter piers)

NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS


08/22/2022

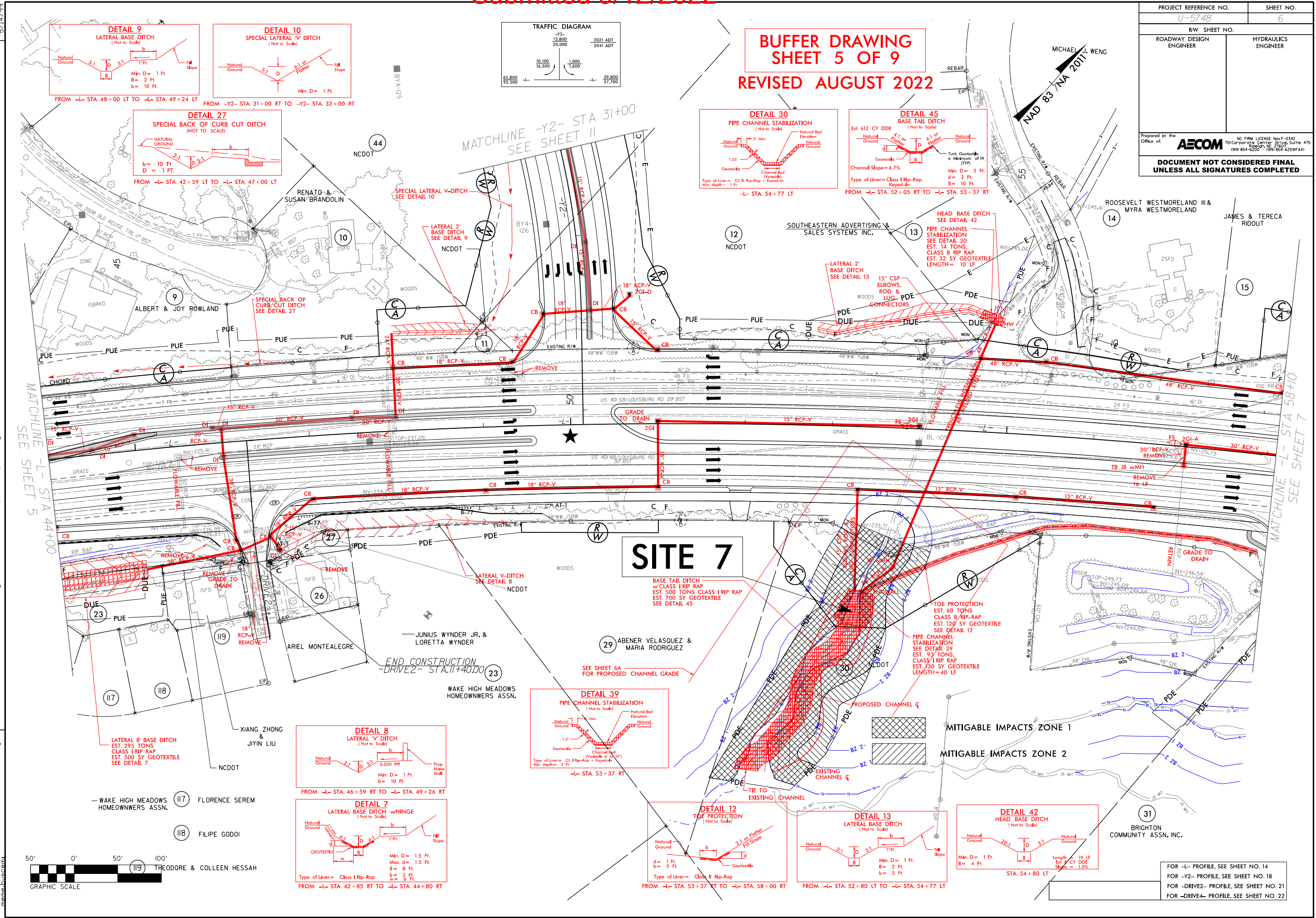
WAKE COUNTY

U-5748

50168.1.1

BUFFER DRAWING
SHEET 5 OF 9
REVISED AUGUST 2022

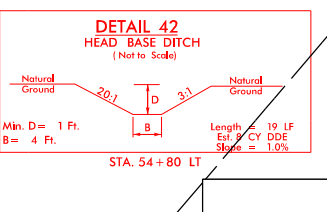
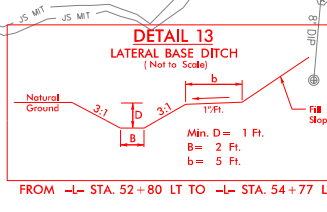
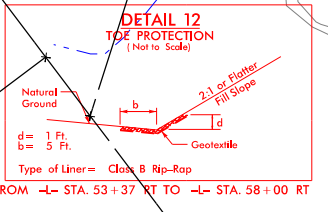
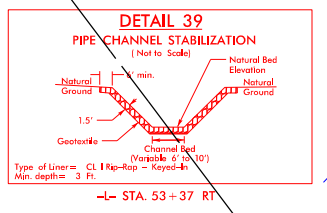
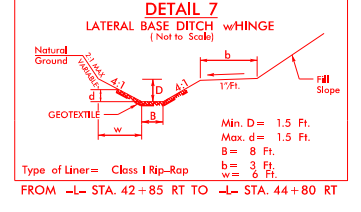
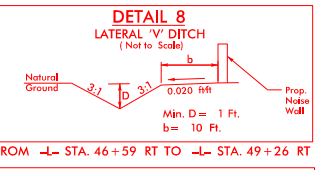
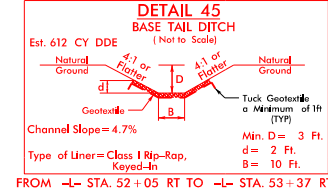
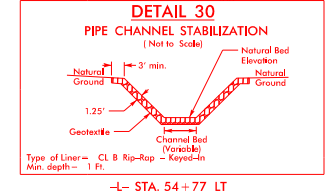
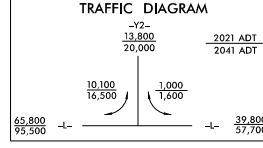
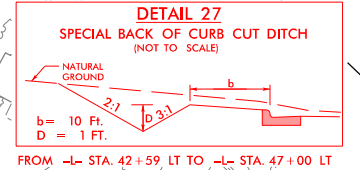
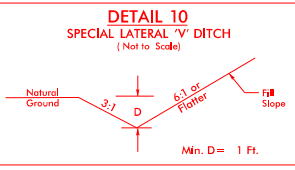
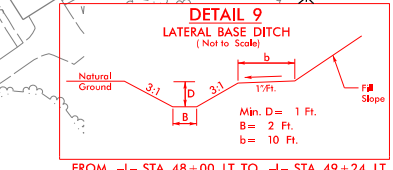
PROJECT REFERENCE NO. U-5748		SHEET NO. 6	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
Prepared in the Office of:		NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259 (FAX)	
			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



5/14/99
8/22/2022
L:\05\050626\GIS\910_CAD\70_NCDOT_TIP\Hydraulics\PERMITS\Environmental\Drawings\PSH_BUF_05_U5748_prm_buf_psh06.dgn
manabusem

MATCHLINE -L- STA 44+00
SEE SHEET 5

MATCHLINE -L- STA 58+10
SEE SHEET 7



FOR -L- PROFILE, SEE SHEET NO. 14
FOR -Y2- PROFILE, SEE SHEET NO. 18
FOR -DRIVE2- PROFILE, SEE SHEET NO. 21
FOR -DRIVE4- PROFILE, SEE SHEET NO. 22

RIPARIAN BUFFER IMPACTS SUMMARY													
Site No.	Station (From/To)	Structure Size / Type	IMPACTS									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)
2	-L- 23+58 - 26+19	Bridge Widening		X		11170	7735	18905			0		
4	-L- 32+26 - 34+33 LT	2 @ 78" Pipe Trenchless	X			2625	1836	4461					
5	-Y4- 15+07 - 17+32 LT	72" Pipe	X			2854	1504	4358					
6*	-L- 36+58 - 40+67 RT	Roadway Widening			X				18329	11898	30227		
12*	-L- 40+67 - 41+72 RT	24" Pipe	X			3447	2184	5631					
7	-L- 52+76 - 54+22 RT	48" Pipe / Tail Ditch	X						19112	6397	25509		
8	-L- 59+07 - 60+10 RT	15" Pipe	X						2640	1782	4422		
9	-L- 63+69 - 65+60 LT	48" Pipe	X			8674	5347	14021					
10*	-Y2- 24+14 - 26+39	72" Pipe / Riprap Ditch	X						48553	33525	82078		
11*	-Y2- 25+09 - 25+79 RT	Riprap Ditch	X						2570	1528	4098		
TOTALS*:						28770	18606	47376	91205	55130	146334	0	0

NOTES:
** Sites 6 & 12 and Sites 10 & 11 directly adjacent to each other.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
08/22/2022
WAKE COUNTY
U-5748
50168.1.1
SHEET 8 OF 9

Revised 2018 Feb