



Transportation

PAT McCRORY  
Governor

NICHOLAS J. TENNYSON  
Secretary

May 20, 2016

Raleigh Regulatory Field Office  
US Army Corps of Engineers  
3331 Heritage Trade Drive, Suite 105  
Raleigh, North Carolina 27587

ATTN: Mr. Andy Williams  
NCDOT Coordinator

Dear Sir:

Subject: **Request for Modification of the Section 404 Individual Permit and Section 401 Water Quality Certification** for the proposed NC 24/27 Troy Bypass from west of SR 1138 (Dairy Road) to just east of Little River, Montgomery County, Division 8. WBS Element No. 34352.1.1, TIP No. R-0623 Debit \$570.00 from WBS Element No. 34352.1.1

REFERENCE: USACE Individual Permit, Action ID No. SAW-2004-01203, September 25, 2014.

NCDWR Section 401 Water Quality Certification, and Isolated Wetlands Permit, Project No. 20140285 v1, Certification No. 003992, May 23, 2014.

Dear Sir:

The purpose of this letter is to request a modification to the United States Army Corps of Engineers (USACE) Section 401 Individual Permit and North Carolina Division of Water Resources (NCDWR) Section 401 Water Quality Certification for the above-referenced project.

In addition to this cover letter, please find enclosed the revised Division of Mitigation Services (DMS) Acceptance Letter, revised permit drawing sheet nos. 1, 55, 56, 90, and 91 as well as 4 additional permit drawings.

The modification request is to accommodate a request from the Town of Troy. The design was revised to provide a free movement connection to the town. Public officials felt an intersection would discourage travelers and make it difficult for locals who have always had free movement to the town. A grade separated crossing has been added on Troy-Candor Road over the Troy Bypass, along with connecting roadways in the northwest and southeast quadrants. These changes will replace the directional crossovers and U-turn bulb outs along the Troy Bypass in the vicinity of Troy-Candor Road. In addition, these changes will allow for uninterrupted traffic movements on Troy-Candor Road across the Bypass and will eliminate the need to make U-turn movements from the Bypass to access Troy-Candor Road.



Proposed permanent impact increases include:

- An additional 38 feet of permanent stream impacts have been added to permit site 15 due to bank stabilization associated with the 66" culvert.
- Stream impacts for new permit site 25 are associated with the stream crossing at the proposed Ramp D due to a 72" culvert. This will result in 270 linear feet of permanent and 28 linear feet of intermittent stream impacts for this site.
- Stream impacts for new permit site 26 are due to raising the grade on Troy-Candor road to accommodate the new interchange. This will result in 66 linear feet of permanent impacts, 7 linear feet of temporary impacts, and 8 feet of bank stabilization.

### **Compensatory Mitigation**

With the additional impacts at these 3 sites, the project will permanently impact 5,298 feet of warm water streams. Of these 5,298 feet, there are 393 feet of bank stabilization that do not require mitigation by the USACE, resulting in 4,905 feet of stream impacts requiring USACE mitigation. The USACE requires 2:1 mitigation for 3,398 feet (perennial) and 1:1 mitigation for 1,507 feet (intermittent) of stream impacts. NCDWR requires 1:1 mitigation for 3,483 feet of stream impacts (perennial including bank stabilization). Therefore, the total USACE mitigation requirement exceeds the NCDWR requirement. The mitigation requirements of 4,905 feet of permanent warm water stream impacts will be provided by DMS for R-0623.

### **Regulatory Approvals**

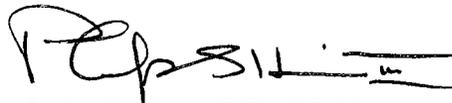
Section 404: We are hereby requesting the modifications described above for the USACE Individual 404 Permit SAW-2004-01203, issued September 25, 2014, for the above-described activities.

Section 401: We are hereby requesting a modification to the 401 Water Quality Certification from the NCDWQ Certification No. 003992, issued May 23, 2014. In compliance with Section 143-215.3D(e) of the NCAC, we will provide \$570.00 to act as payment for processing the Section 401 permit modification.

A copy of this modification request and its distribution list will be posted on the NCDOT website at: <https://connect.ncdot.gov/resources/Environmental>

Thank you for your assistance with this project. If you have any questions or need additional information, please contact John Merritt at 919-707-6140 or [jsmerritt@ncdot.gov](mailto:jsmerritt@ncdot.gov).

Sincerely,



Philip S. Harris, P.E., C.P.M.  
Natural Environment Section Head

cc:

NCDOT Permit Application Standard Distribution List.



PAT MCCRORY  
Governor

DONALD R. VAN DER VAART  
Secretary

May 13, 2016

Mr. Philip S. Harris, III, P.E., CPM  
Natural Environment Unit  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Mr. Harris:

Subject: Mitigation Acceptance Letter:

**TIP Number R-0623**, Troy Bypass – NC 24 / 27 from SR 1138 (Dairy Road) to East of the Little River, Montgomery County

Reference: USACE 404 Individual Permit issued September 25, 2014 (USACE Action ID 2004-01203)

NCDWR 401 Water Quality Certification (WQC) issued August 14, 2014 (NCDWR ID 2014-0285)

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the additional stream and riparian wetland mitigation for the subject project. Based on the information supplied by you on May 13, 2016, the additional stream and riparian wetland impacts are located in CU 03040104 of the Yadkin River Basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

**Table 1 – Additional Impacts (feet / acres)**

Yadkin 03040104 SP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1 (3:1)	Zone 2 (1.5:1)
Impacts (feet/acres)	0	0	382.0	0.02	0	0	0	0

\*NOTE: Some of the stream impacts may be proposed to be mitigated at a 1:1 mitigation ratio. NCDMS is providing riparian wetland credits for all wetland impacts associated with this project. See permit application for details.

These impacts and associated mitigation needs were not projected by the NCDOT in the 2016 impact data. DMS is currently providing stream and riparian wetland mitigation for the impacts associated with this project located in cataloging unit 03040104 of the Yadkin River basin as required by the 404 and 401 permits issued in September 2014 and August 2014, respectively, as shown in the below table (in mitigation credits):

Mr. Harris  
TIP R-0623  
May 13, 2016  
Page Two

**Table 2 – Current Permitted Impacts and Associated Mitigation Requirements provided by DMS (based on 2015 permits) and Revised Anticipated Impacts (based on mitigation request)**

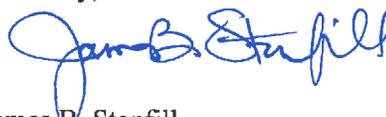
Impact Type	Total Permitted Impacts (feet / acre / sq ft)	Mitigation Provided by DMS per Issued Permits (Credits)	Additional Impact (for approval)	Revised Total Impacts*
Stream	4,569.0	7,697.0	382.0	4,951.0
Riparian Wetland	1.23	2.40	0.02	1.25

\*Some of the additional wetland 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.

**This mitigation acceptance letter replaces the mitigation acceptance letters issued on February 25, March 7, and July 28, 2014.** In accordance with the directive from the February 8, 2011 IRT meeting, non-riparian wetland impacts located in the mountain and piedmont areas of North Carolina will be accepted as requested but mitigated utilizing riparian wetland mitigation credits. DMS commits to implementing sufficient compensatory warm stream mitigation and riparian wetland mitigation credits to offset the additional impacts. This impact and associated mitigation need were under projected by the NCDOT in the 2016 impact data. DMS will commit to implement sufficient compensatory 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 you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,



James B. Stanfill  
Credit Management Supervisor

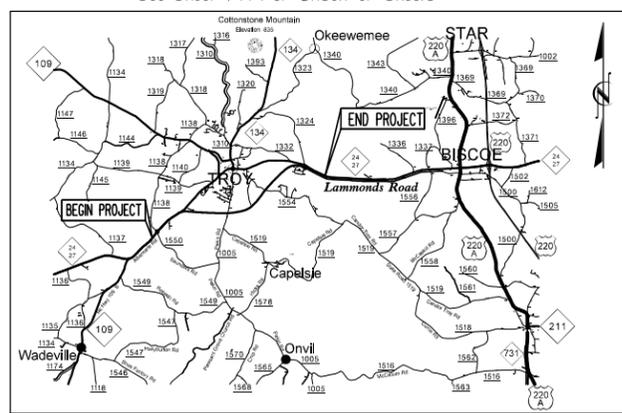
Cc: Mr. David Bailey, USACE – Raleigh Regulatory Field Office  
Ms. Amy Chapman, NCDWR  
File: R-0623 Additional

09/08/19

TIP PROJECT: R-0623

CONTRACT:

See Sheet 1-A For Index of Sheets



VICINITY MAP

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARY OF TROY

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

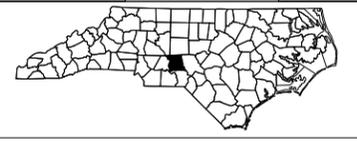
**MONTGOMERY COUNTY**

LOCATION: NC 2427 TROY BYPASS FROM WEST OF SR 1138  
(DAIRY ROAD) TO JUST EAST OF LITTLE RIVER

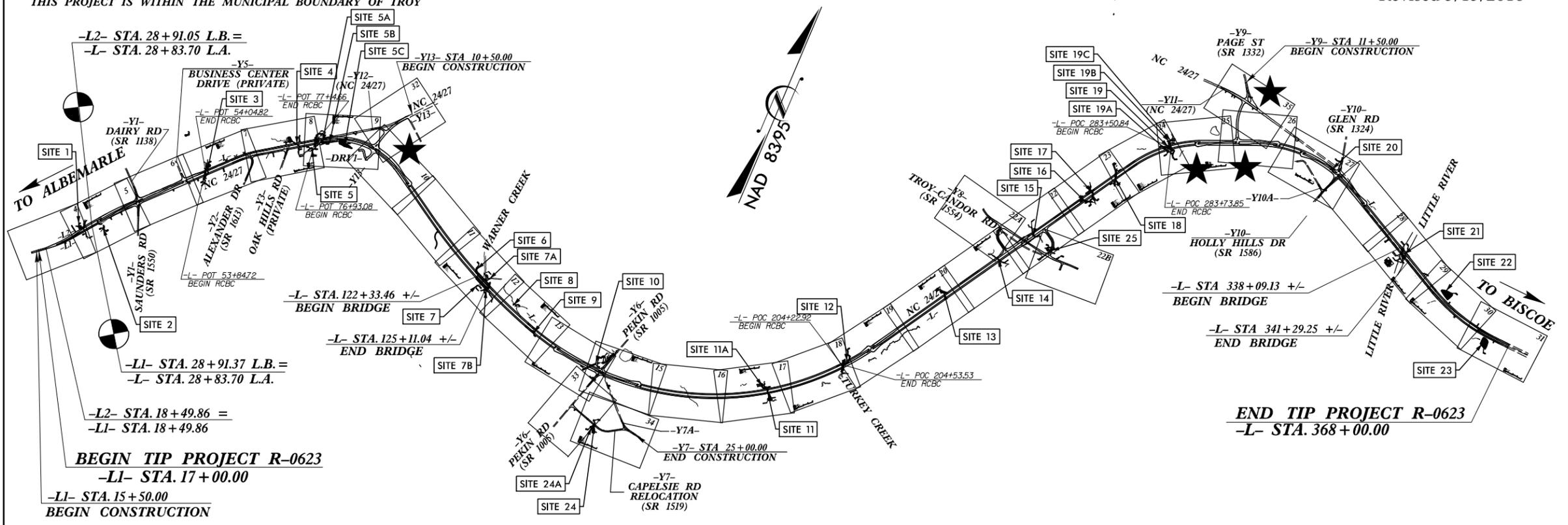
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES  
SIGNALS AND SIGNING

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-0623	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34352.1.1	STP-24(6)	PE	



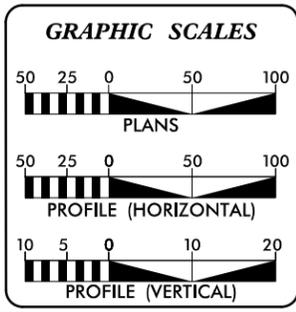
Permit Drawing  
Sheet 1 of 91  
Revised 5/13/2016



★ TRAFFIC SIGNAL

NOTE: THIS PROJECT IS A PARTIAL CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2014	= 6610 - 12,641
ADT 2040	= 9300 - 18,200
DHV	= 10 %
D	= 55 %
T	= 17 % *
V	= 60 MPH
* TTST	= 12% DUAL 5%

FUNCTIONAL CLASSIFICATION  
RURAL ARTERIAL  
REGIONAL TIER PROJECT

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-0623	= 6.518 MILES
LENGTH STRUCTURES TIP PROJECT R-0623	= 0.131 MILES
TOTAL LENGTH OF TIP PROJECT R-0623	= 6.649 MILES

Prepared In the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
JANUARY 30, 2013

LETTING DATE:  
NOVEMBER 18, 2014

G. E. BREW, P.E.  
PROJECT ENGINEER

I.T. YOUNIS  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

SIGNATURE: \_\_\_\_\_ P.E.

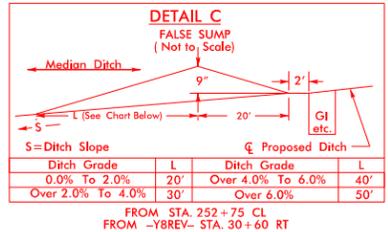


SYSTEMS  
CONSTRUCTION  
SURVEYING

8/17/99  
REVISIONS  
CITY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
STREET LIGHTING DIVISION  
STREET LIGHTING SECTION

MATCH LINE -Y8REV- STA 22+75  
SEE SHEET 22A

FOR DRAINAGE DITCH DETAILS  
SEE SHEETS 2D-1 THRU 2D-3



FOR PROFILE OF LINE -L- SEE SHEETS 45  
AND 46  
FOR PROFILE OF LINE -Y8REV- SEE SHEET 57  
FOR PROFILE OF LINE -RBD- SEE SHEET 58

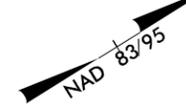
PROJECT REFERENCE NO. <b>R-0623</b>	SHEET NO. <b>22</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

MATCH LINE -L- STA 245+00 SEE SHEET 21

MATCH LINE -L- STA 259+00  
SEE SHEET 23

-Y8REV-  
PI Sta 32+77.24  
 $\Delta = 12^\circ 38' 05.9''$  (LT)  
D = 3' 49' 11.0"  
L = 330.78'  
T = 166.07'  
R = 1,500.00'  
e = SEE PLANS

5" MONOLITHIC CONC. ISLAND

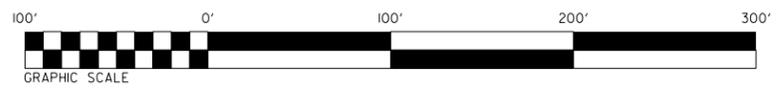


(5)  
RICKY HARRIS  
DB 489 PG 509  
PC D SLIDE I24D

(5)  
RICKY HARRIS  
DB 489 PG 509  
PC D SLIDE I24D

-RPD-  
PI Sta 12+76.78  
 $\Delta = 68^\circ 15' 52.2''$  (LT)  
D = 28' 38' 52.4"  
L = 238.29'  
T = 135.57'  
R = 200.00'

5' S DENOTES IMPACTS IN SURFACE WATER  
15' S DENOTES TEMPORARY IMPACTS IN SURFACE WATER

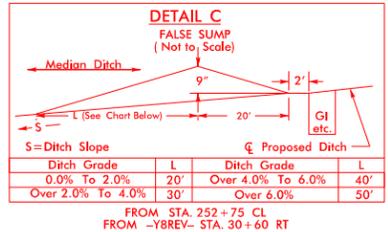


Permit Drawing  
Sheet 55 of 91  
Revised 5/13/2016

8/17/99  
REVISIONS  
CITY OF TAMPA  
ENGINEERING  
DESIGN  
DIVISION  
STANDARD  
DRAWING  
PRACTICES  
NO. 1000

MATCH LINE -Y8REV- STA 22+75  
SEE SHEET 22A

FOR DRAINAGE DITCH DETAILS  
SEE SHEETS 2D-1 THRU 2D-3



FOR PROFILE OF LINE -L- SEE SHEETS 45  
AND 46  
FOR PROFILE OF LINE -Y8REV- SEE SHEET 57  
FOR PROFILE OF LINE -RBD- SEE SHEET 58

PROJECT REFERENCE NO. <b>R-0623</b>	SHEET NO. <b>22</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



(5)  
RICKY HARRIS  
DB 489 PG 509  
PC D SLIDE I240

MATCH LINE -L- STA 245+00 SEE SHEET 21

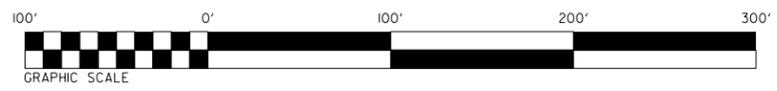
MATCH LINE -L- STA 259+00  
SEE SHEET 23

-Y8REV-  
PI Sta 32+77.24  
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D = 3' 49' 11.0"  
L = 330.78'  
T = 166.07'  
R = 1,500.00'  
e = SEE PLANS

5" MONOLITHIC CONC. ISLAND

-RPD-  
PI Sta 12+76.78  
 $\Delta = 68^\circ 15' 52.2''$  (LT)  
D = 28' 38' 52.4"  
L = 238.29'  
T = 135.57'  
R = 200.00'

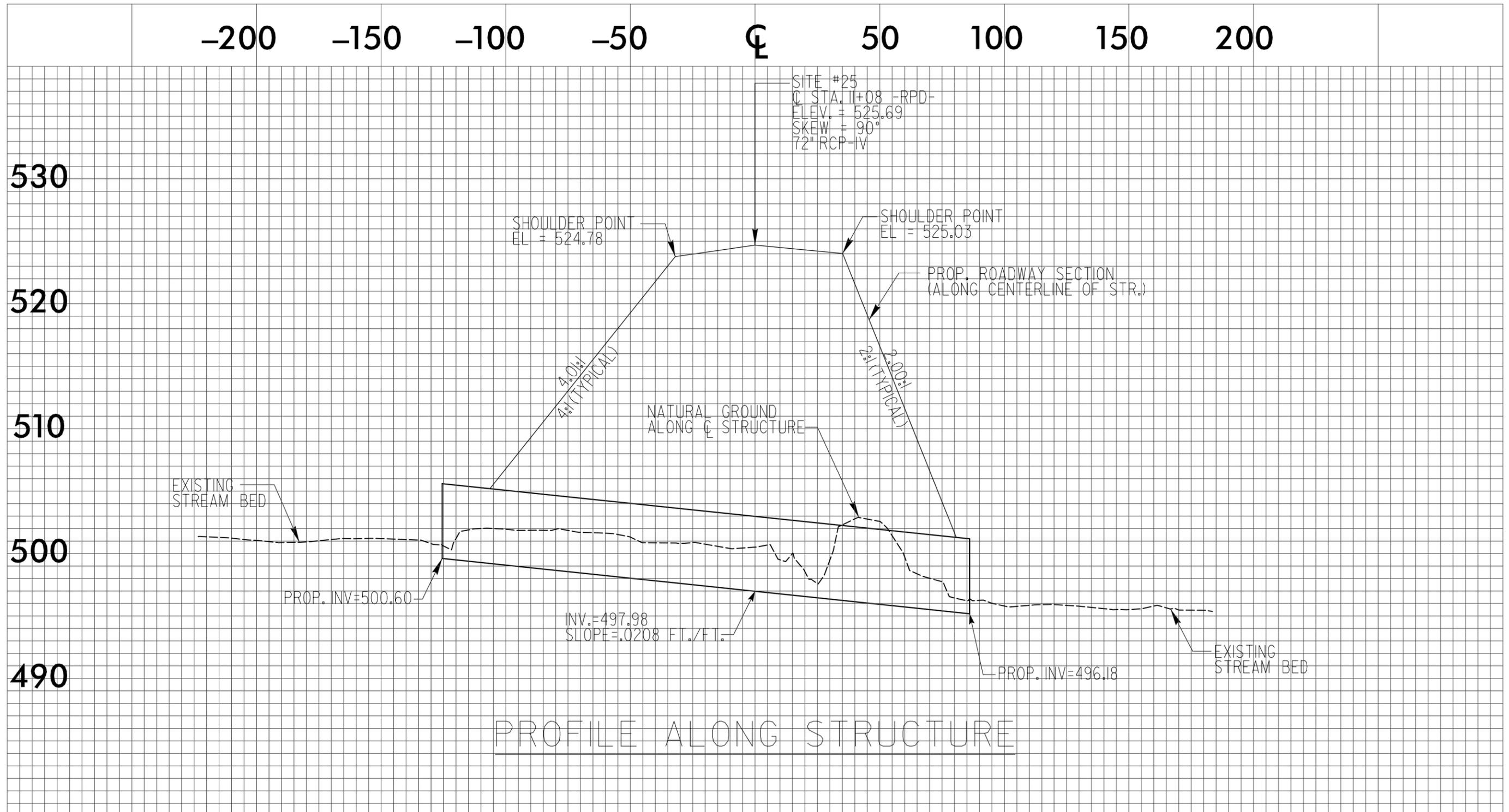
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER



Permit Drawing  
Sheet 56 of 91  
Revised 5/13/2016

# SITE 25

Permit Drawing  
Sheet 1 of 4  
Added 5/13/2016



8/17/99

REVISIONS

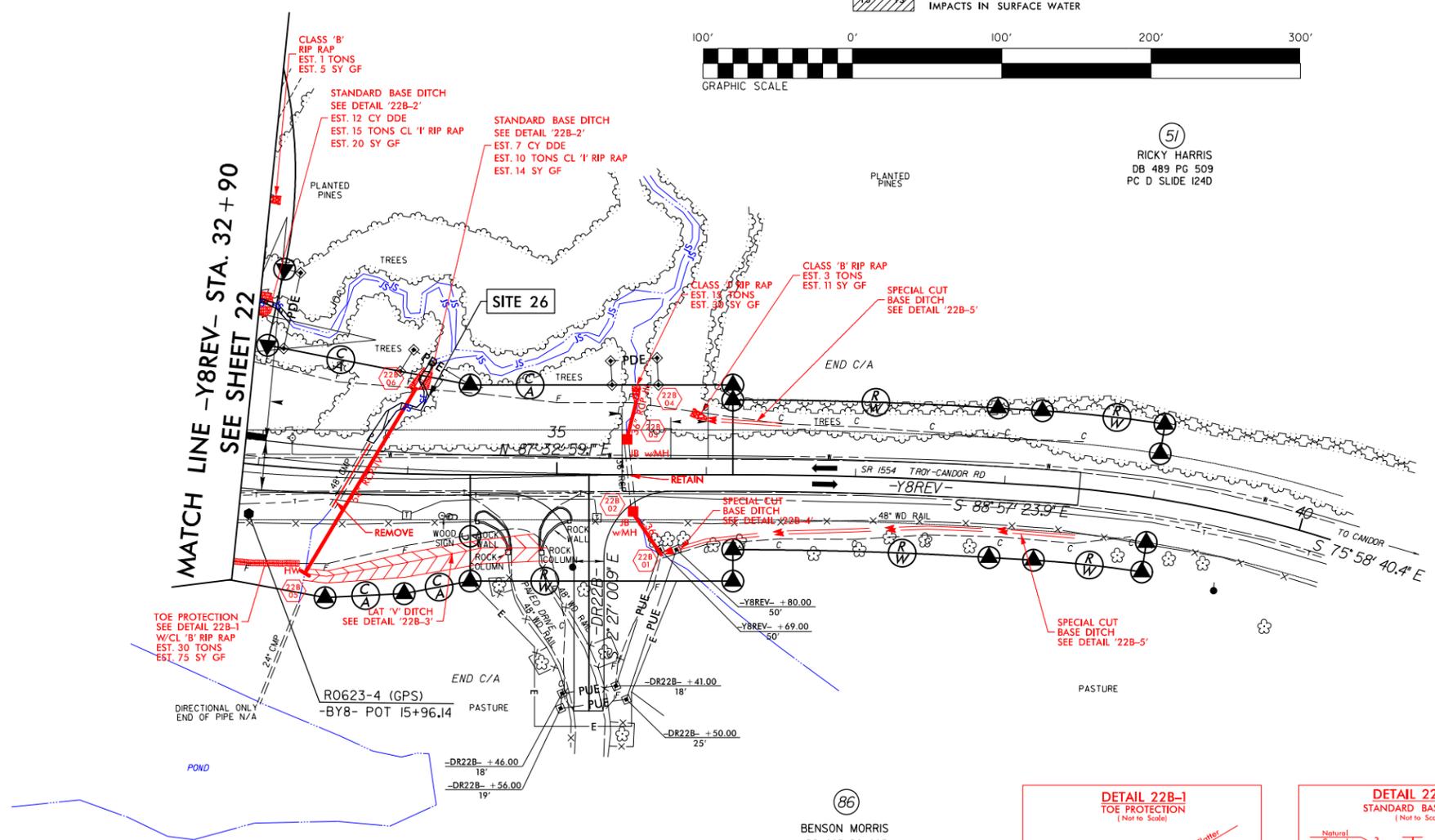
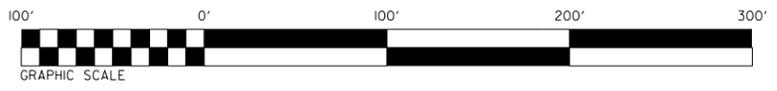
FOR DRAINAGE DITCH DETAILS SEE SHEETS 2D-1 THRU 2D-3

PROJECT REFERENCE NO. <b>R-0623</b>	SHEET NO. <b>22B</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	
FOR PROFILE OF -Y8REV- SEE SHEET 57 FOR PROFILE OF -DR22B- SEE SHEET 58	

5" MONOLITHIC CONC. ISLAND



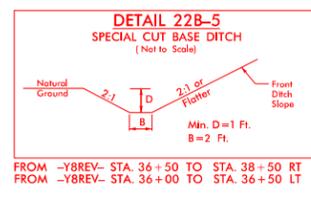
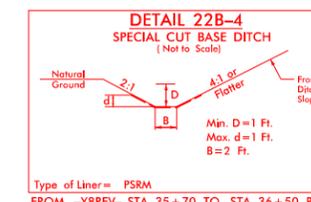
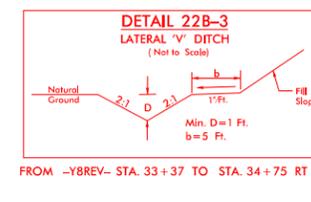
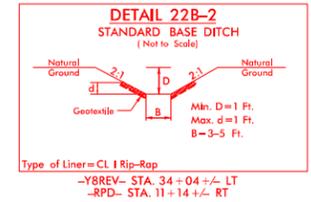
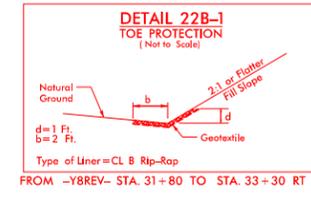
DENOTES IMPACTS IN SURFACE WATER  
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER



(5)  
RICKY HARRIS  
DB 489 PG 509  
PC D SLIDE 124D

(86)  
BENSON MORRIS  
DB 283 PG 265

-Y8REV-		
PI Sta 32+77.24	PI Sta 37+05.21	PI Sta 39+15.44
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D = 3' 49' 11.0"	D = 2' 00' 00.0"	D = 7' 00' 00.0"
L = 330.78'	L = 174.68'	L = 185.41'
T = 166.07'	T = 87.37'	T = 93.10'
R = 1,500.00'	R = 2,864.79'	R = 818.51'
e = SEE PLANS	e = SEE PLANS	e = EXISTING



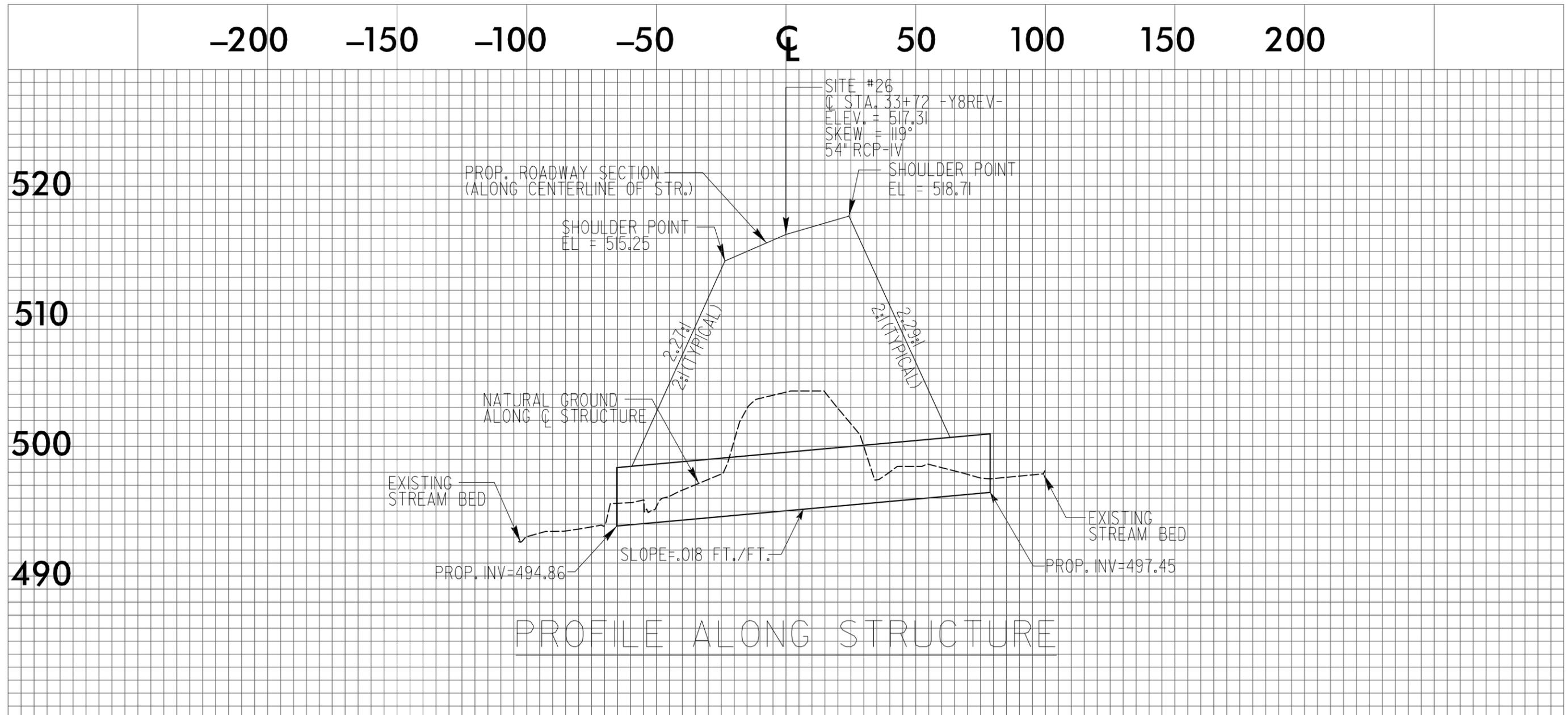
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Permit Drawing  
 Sheet 2 of 4  
 Added 5/13/2016



# SITE 26

Permit Drawing  
Sheet 4 of 4  
Added 5/13/2016



**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	L2 26+14 to 28+48	Roadway Fill	0.13				0.02	0.01	<0.01	136	16	
		Bank Stabilization							<0.01	11		
2	L 30+39 to 30+81 Rt	15"			<0.01		<0.01	<0.01	<0.01	39	34	
3	L 53+20 to 55+42	2@8'x6' RCBC			0.02		0.02	0.03	<0.01	294	24	
4	L 70+83 to 73+70	60" RCP IV	0.02				0.06	0.02	<0.01	271	73	
5	L 75+30 to 84+50	2@10'x7' RCBC						0.05	<0.01	295	17	
		Bank Stabilization							0.01	62		
5A		Roadway Fill	0.04					0.02		500		
5B		Roadway Fill	0.01									
5C		Pond	0.02		0.02			0.34				
6	L 120+95 to 121+90 Lt	Roadway Fill	0.08									
7	L 122+87 to 123+78	Bank Stabilization							<0.01	43		
7A	L 124+42 Lt	Bank Stabilization							<0.01	16		
7B	L 124+91 to 128+04	Roadway Fill	0.16					0.02	<0.01	355	72	
8	L 131+38 to 132+10 Lt	Roadway Fill	<0.01				<0.01		<0.01		10	
9	L 137+97 to 138+55	Roadway Fill	0.03									
10	L 150+48 to Y6 11+00 Rt	Roadway Fill	0.14		<0.01		0.13					
11	L 187+35 to 188+66	1@10'x6' RCBC						0.03	0.01	319	56	
		Bank Stabilization							<0.01	47		
11A	L 187+80 to 187+98	Roadway Fill						0.01	0.01	105	21	
		Bank Stabilization							<0.01	6		
12	L 203+49 to 206+55	2@12'x8' RCBC						0.10	0.01	499	38	
13	L 228+85 to 229+98	Roadway Fill	0.05				0.04					
14	L 241+68 to 242+88	54" RCP IV						0.02	0.01	229	60	
		Bank Stabilization						<0.01		12		
15	L 250+61 to 251+71	66" RCP-IV						0.02	<0.01	370	31	
		Bank Stabilization							<0.01	51		
<b>TOTALS:</b>			<b>0.68</b>		<b>0.04</b>		<b>0.27</b>	<b>0.68</b>	<b>0.08</b>	<b>3660</b>	<b>452</b>	

Stream Bank Stabilization Sites 1-15 = 248 feet

Permit Drawing  
Sheet 90 of 91  
Revised 5/13/2016

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

MONTGOMERY COUNTY  
WBS - 34352.1.1 (R-0623)

**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)
16	L 262+36 to 264+32	30" RCP-III	0.14				0.01					
17	L 264+70 to 265+86	54" RCP-III	0.10		0.01		0.03	0.01	<0.01	280	57	
		Bank Stabilization						<0.01	21			
18	L269+62 to 272+04	42" RCP-III	0.11		<0.01		0.02	0.01	<0.01	297	44	
		Bank Stabilization						<0.01	22			
19	L 282+75 to 283+36	Roadway Fill	0.04									
19A	L 282+68 to 283+49	Roadway Fill	0.01				0.02					
19B	L 283+33 to 283+47	2@11'x7' RCBC							<0.01		17	
19C	L 283+47 to 284+20	2@11'x7' RCBC						0.05		340		
		Bank Stabilization						<0.01	9			
20	L 316+99 to 317+88	Roadway Fill	0.05									
21	L 338+46 to 340+55	Bank Stabilization							0.01	75		
		Causeways							0.08		112	
22	L 350+09 to 352+49 Lt	Pond						0.55				
23	L 362+75 to 364+14 Rt	Pond						0.48				
24	Y7 15+26 to 15+49 Lt	Roadway Fill	<0.01				<0.01					
24A	Y7 15+63 to 16+31	48" RCP	0.04				0.02	0.01	<0.01	240	18	
		Bank Stabilization						<0.01	10			
25	RPD 11+14 to 11+73											
		72" RCP-IV						0.02	<0.01	270	28	
26	Y8REV 33+36 to 34+13	54" RCP-IV						0.01	<0.01	66	7	
		Bank Stabilization						<0.01	8			
SHEET TOTALS (SITES 16-24A):			0.49		0.02		0.11	1.14	0.10	1638	283	
SHEET TOTALS (SITES 1-15):			0.68		0.04		0.27	0.68	0.08	3660	452	
TOTALS:			1.17		0.06		0.39	1.82	0.17	5298	735	

Stream Bank Stabilization Sites 16-26 = 145 feet

Permit Drawing  
Sheet 91 of 91  
Revised 5/13/2016

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

MONTGOMERY COUNTY  
WBS - 34352.1.1 (R-0623)