



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

June 10, 2014

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

ATTN: Mr. John Thomas
NCDOT Coordinator

SUBJECT: **Request for Modification to the Section 404 Individual Permit and Section 401 Water Quality Certification** for the proposed Winston-Salem Northern Beltway Eastern Section from US 158 to I-40 Bus/US 421, Forsyth County, Division 9. WBS Element No. 34839.1.2, TIP No. U-2579B.

REFERENCE: USACE Individual Permit Action ID SAW-2008-03183, dated June 2, 2014.
NCDWR Project No. 2014-0090, Certification No. 3987, dated April 11, 2014.

Dear Sir:

The purpose of this letter is to request a modification to the United States Army Corps of Engineers (USACE) Individual Permit and North Carolina Division of Water Resources Certification for the above referenced project. The requested modification is to account for additional bank stabilization and temporary stream impacts to the project since the approval of the above permit. It was recently determined that a retaining wall will be necessary to keep the widening of US 421 out of Smith Creek. Permit Sites 23 and 28 will be affected from this activity. Temporary stream impacts will increase from 21 linear feet to 89 linear feet for Permit Site 23. Bank stabilization for Permit Site 28 will increase from 25 linear feet to 365 linear feet and associated temporary impacts will be 188 linear feet for Permit Site 28. These impacts are shown in the attached Revised Permit Drawing Sheets 38, 39, and 40 of 64, and in Table 1 below.

Please replace the current permit drawings with the new revised drawings (Revised Permit Drawing Sheets 2, 3, 38, 39, and 40 of 64) attached with this letter and insert the new Permit Drawing Sheets 61a – 61d of 64 (cross-sections for revised Permit Site 28). Permit Drawing Sheets 2 and 3 were revised due to a non-jurisdictional stream shown as jurisdictional in the original permit application. The revised sheets have removed that feature. No permit sites are affected by this revision.

Below is the revised stream impact table (Table 1). The revised permit sites are Permit Sites 23 and 28 with revisions shown in bold and italicized. All other tables from the original permit application remain the same. The NCDWR stream mitigation requirements increased 340 linear feet due to bank stabilization, however, the mitigation requirements are still covered by the current NCEEP acceptance letter. The USACE mitigation requirements listed in the original permit still remain the same.

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

TELEPHONE: 919-707-6000
FAX: 919-212-5785

WEBSITE: NCDOT.GOV

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

Table 1. Revised U-2579B Stream Impacts (revised May 18, 2014)

Permit Site No.	Stream Name/JD Packet ID	I/P Flow Status	Impact Type	Permanent Impacts (ft)	Impacts requiring USACE mitigation (ft)	USACE Mitigation Ratio ¹	Impacts requiring NCDWR mitigation (ft)	Temp Impacts (ft)
1	UT to Lowery Mill Creek/ ES-S45	I	Fill	142	142	1:1	0 ³	0
2	UT to Lowery Mill Creek/ ES-S36	I	Fill	109	109	1:1	0 ³	0
		P	Fill	208	208	2:1	208	0
		P	BS	10	0 ²		10	37
3	UT to Lowery Mill Creek/ ES-S35	P	Fill	438	438	2:1	438	33
3A	UT to Lowery Mill Creek/ ES-S35	P	Temp Detour	0	0		0	545
3B	UT to Lowery Mill Creek/ ES-S47	P	Temp Detour	0	0		0	194
4	UT to Lowery Mill Creek/ ES-S37	P	Fill	493	493	2:1	493	18
		P	BS	9	0 ²		9	31
5	UT to Lowery Mill Creek/ ES-S38	P	Fill	740	740	2:1	740	22
5A	UT to Lowery Mill Creek/ ES-S39	I	Fill	306	306	1:1	0 ³	0
6	UT to Martin Mill Creek/ ES-S40	P	Fill	312	312	2:1	312	42
8	UT to Martin Mill Creek/ ES-S42	P	Fill	442	442	2:1	442	53
			BS	58	0 ²		58	44
10	UT to Martin Mill Creek/ ES-S43	P	Fill	783	783	2:1	783	22
10A	UT to Martin Mill Creek/ ES-S44	P	Fill	684	684	2:1	684	0

Table 1. Revised U-2579B Stream Impacts (revised May 18, 2014) continued

Permit Site No.	Stream Name/JD Packet ID	I/P Flow Status	Impact Type	Permanent Impacts (ft)	Impacts requiring USACE mitigation (ft)	USACE Mitigation Ratio ¹	Impacts requiring NCDWR mitigation (ft)	Temp Impacts (ft)
11	Kerners Mill Creek/ ESE-S1	P	Fill	808	808	2:1	808	57
11A	Kerners Mill Creek/ ESE-S1	P	Fill	223	223	2:1	223	41
12	UT to Kerners Mill Creek/ ESE-S30	I	Fill	88	88	1:1	0 ³	205
14	UT to Smith Creek/ ESE-S3	I	Fill	688	688	1:1	0 ³	0
15	UT to Smith Creek/ ESE-S31	P	Fill	332	332	2:1	332	0
15A	UT to Smith Creek/ ESE-S32	I	Fill	108	108	1:1	0 ³	0
16	UT to Smith Creek/ ESE-S36	I	Fill	104	104	1:1	0 ³	0
17	UT to Fishers Branch/ ESE-S5	P	Fill	928	928	2:1	928	0
18	Fishers Branch/ ESE-S4	P	Fill	377	377	2:1	377	67
			BS	80	0 ²		80	59
20	UT to Fishers Branch/ ESE-S7	P	Fill	163	163	2:1	163	0
23	Smith Creek/ ESE-S29	P	Fill	100	100	2:1	100	32
			BS	54	0 ²		54	89
23A	UT to Smith Creek/ ESE-S43	I	Fill	57	57	1:1	0 ³	0

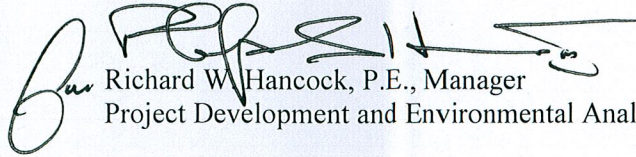
Table 1. Revised U-2579B Stream Impacts (revised May 18, 2014) continued

Permit Site No.	Stream Name/JD Packet ID	I/P Flow Status	Impact Type	Permanent Impacts (ft)	Impacts requiring USACE mitigation (ft)	USACE Mitigation Ratio ¹	Impacts requiring NCDWR mitigation (ft)	Temp Impacts (ft)
23B	UT to Smith Creek/ ESE-S38	P	Fill	135	135	2:1	0 ⁴	0
24	UT to Smith Creek/ ESE-S40	P	Fill	202	202	2:1	202	0
25	UT to Smith Creek/ ESE-S41	I	Fill	73	73	1:1	0 ³	0
			BS	21	0 ²		0 ³	16
27A	UT to Smith Creek/ ESE-S24	P	Fill	205	205	2:1	205	0
27B	UT to Smith Creek/ ESE-S33	P	Fill	130	130	2:1	0 ⁴	14
27C	UT to Smith Creek/ ESE-S34	P	Fill	116	116	2:1	0 ⁴	0
28	Smith Creek/ ESE-S29	P	BS	365	0 ²		365	188
30	Smith Creek/ ESE-S29	P	BS	28	0 ²		0 ⁴	0
31	Martin Mill Creek/ ES-S41	P	BS	21	0 ²		0 ⁴	0
TOTALS (ft)				10,140	9,494		7,830	1,809

Notes: P = Perennial; I = Intermittent; BS = Bank Stabilization. ¹Determined by USACE during final JD packet review. ²Mitigation for bank stabilization not required by USACE. ³Intermittent streams grandfathered from NCDWR mitigation. ⁴Mitigation not required by NCDWR (less than 150 linear feet of stream).

A copy of this permit modification application and its distribution list will be posted on the NCDOT website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>. Thank you for your time and assistance with this project. Please contact Greg Price at either gwprice@ncdot.gov or (919) 707-6148 if you have any questions or need additional information.

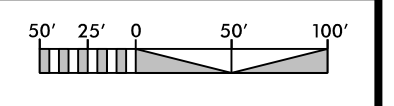
Sincerely,

A handwritten signature in black ink, appearing to read 'Richard W. Hancock', is written over the typed name.

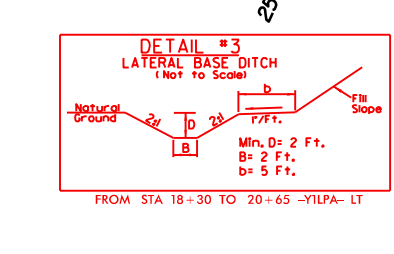
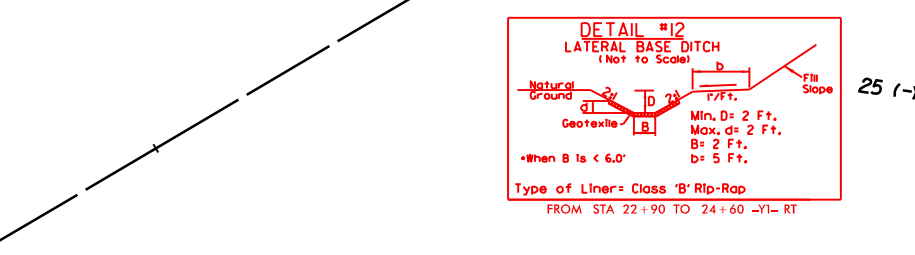
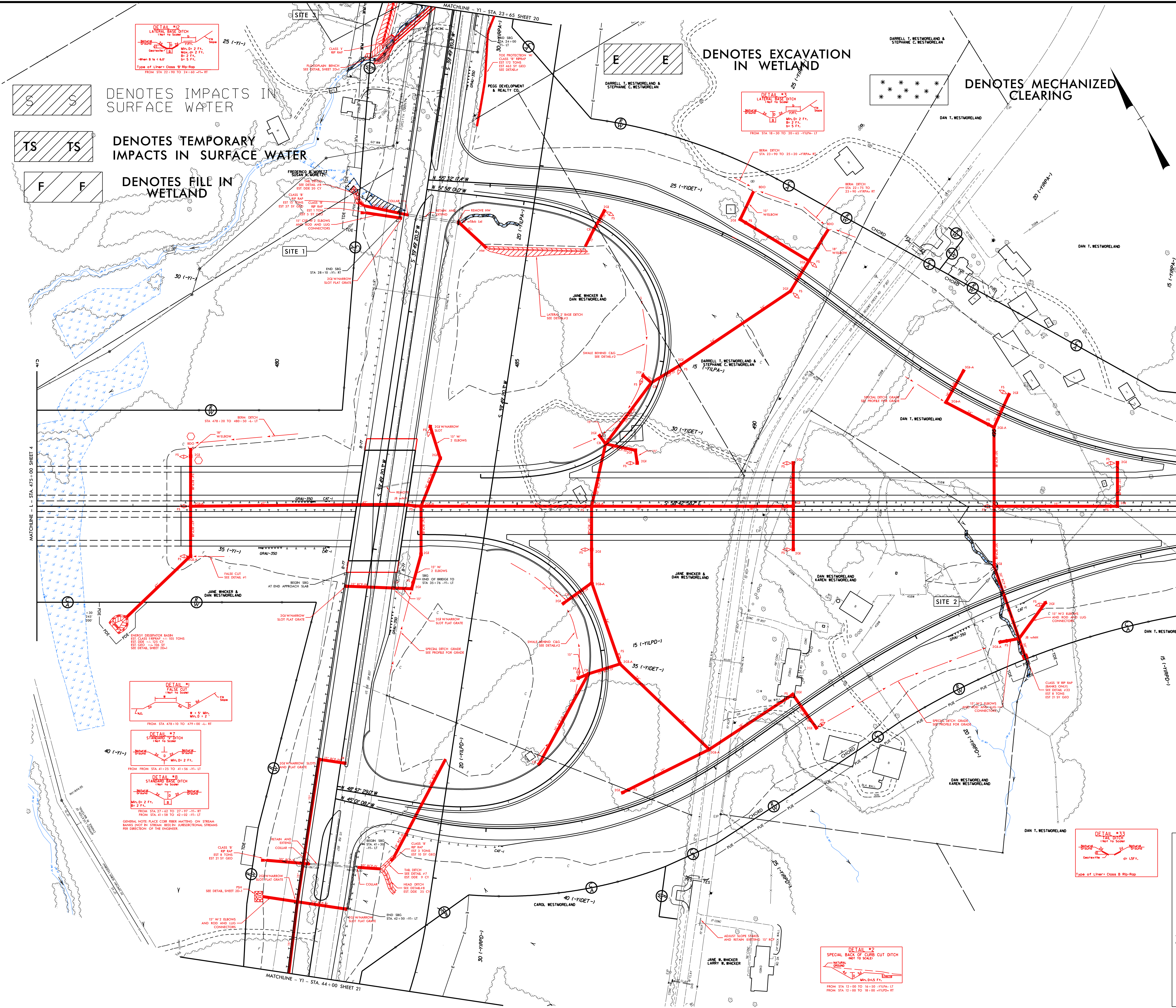
Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis Unit

Cc: NCDOT Permit Application Standard Distribution List

PROJECT REFERENCE NO.		SHEET NO.	
U-2579B		5	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS		DO NOT USE FOR CONSTRUCTION	



PERMIT DRAWING
SHEET 2 OF 64
REVISED
6-4-14



S S DENOTES IMPACTS IN SURFACE WATER

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

F F DENOTES FILL IN WETLAND

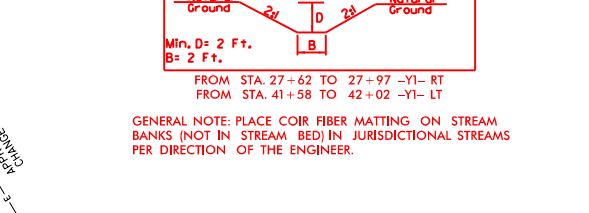
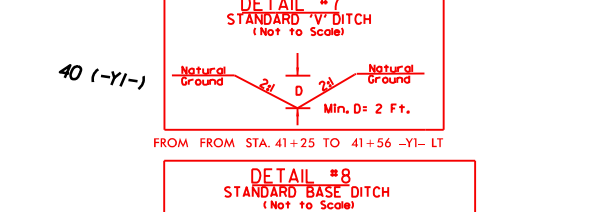
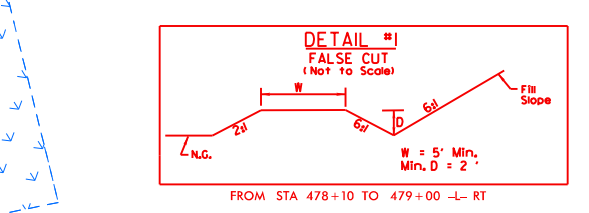
E E DENOTES EXCAVATION IN WETLAND

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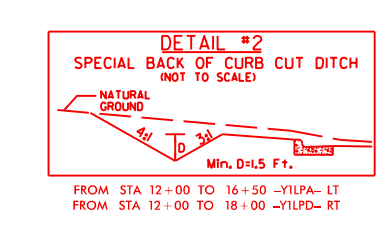
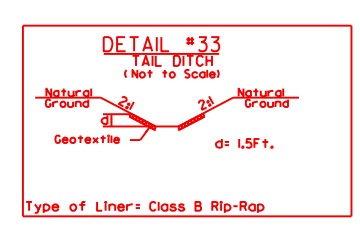
REVISIONS

RIGHT OF WAY REVISION 11/5/12 - PARCEL NUMBER 3 REMOVED

6/24/2014
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GENERAL NOTE: PLACE COPR FIBER MATTING ON STREAM BANKS NOT BY STREAM BEDS IN SUBSIDIARY STREAMS PER DIRECTION OF THE ENGINEER.

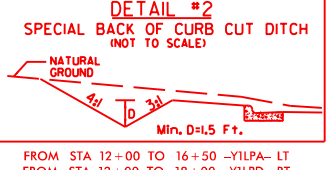
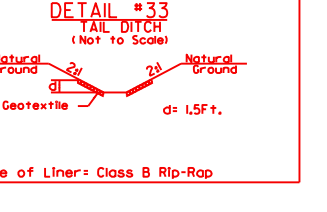
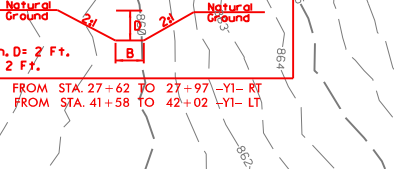
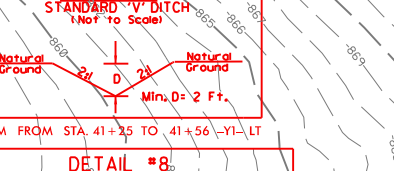
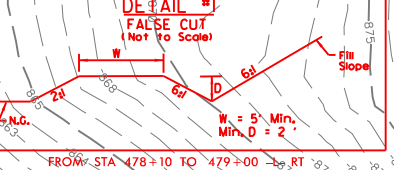
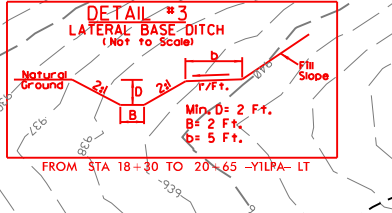
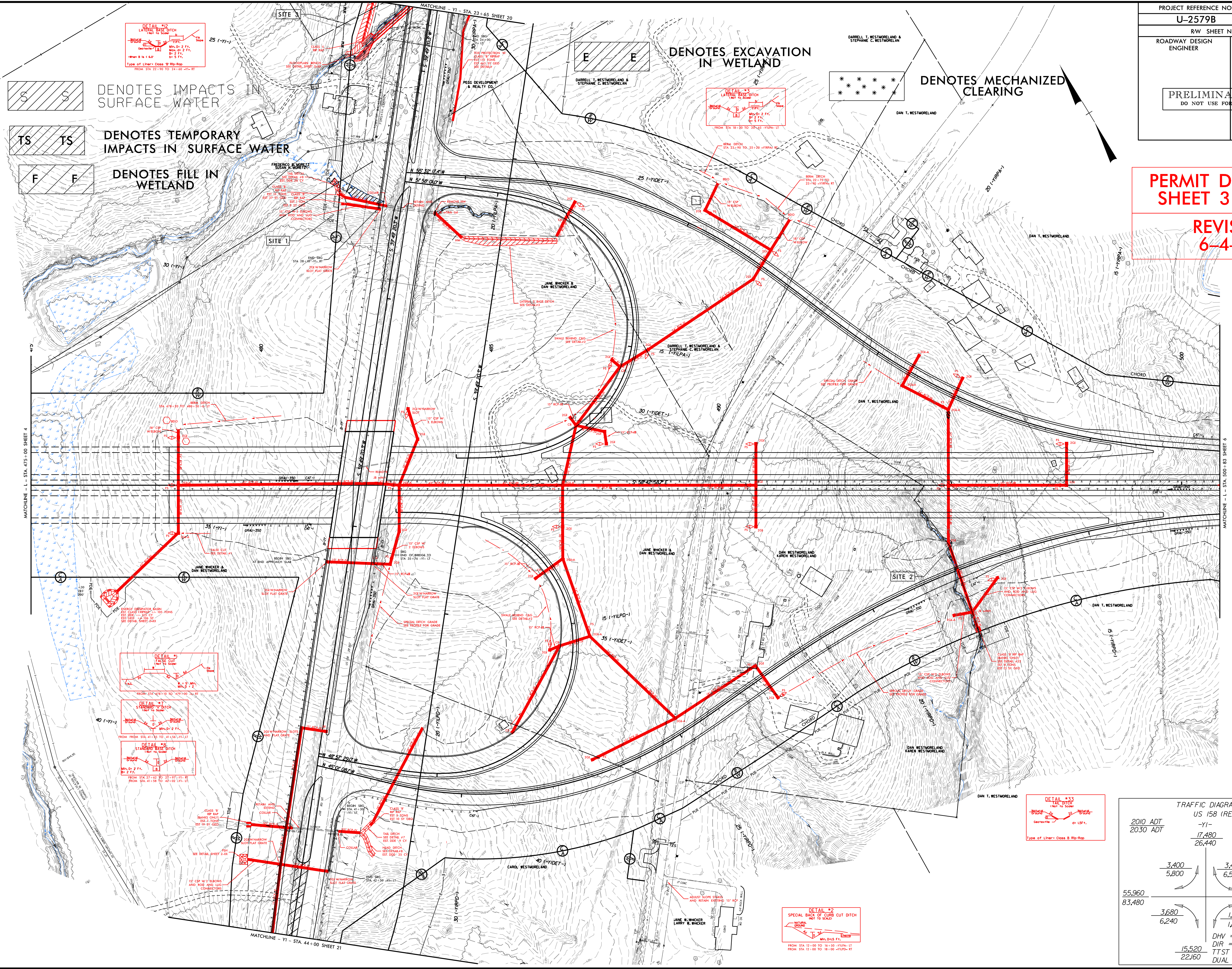
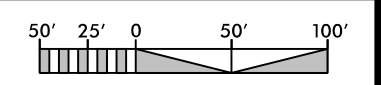


TRAFFIC DIAGRAM US 158 (REIDSVILLE ROAD)				
2010 ADT		-Y1-		
2030 ADT		17,480		
		26,440		
3,400	5,800	3,460	6,580	DHV = 10%
				DIR = 60%
				TTST = 12%
				DUAL = 6%
55,960			53,560	-L-
83,480			79,880	BELTWAY
3,680	6,240	1,220	1,860	DHV = 10%
				DIR = 60%
				TTST = 5%
				DUAL = 3%

PROJECT REFERENCE NO.	SHEET NO.
U-2579B	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING
SHEET 3 OF 64

REVISED
6-4-14



TRAFFIC DIAGRAM
US 158 (REIDSVILLE ROAD)
-Y1-

2010 ADT		2030 ADT	
55,960		17,480	26,440
83,480		6,240	1,860
		1,220	1,860
		15,520	22,160

DHW = 10%
DIR = 60%
TTST = 12%
DUAL = 6%

DHW = 10%
DIR = 60%
TTST = 5%
DUAL = 3%

REVISIONS
RIGHT OF WAY REVISION.11/5/12 - PARCEL NUMBER 3 REMOVED

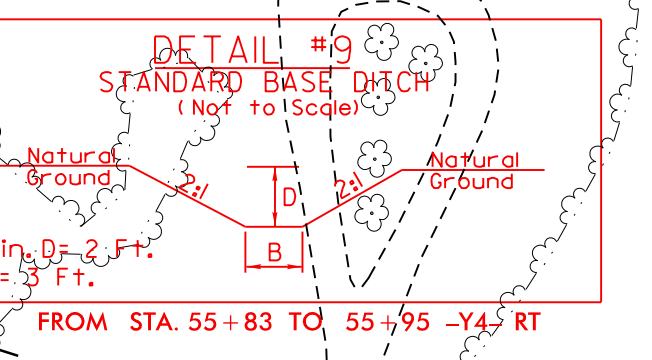
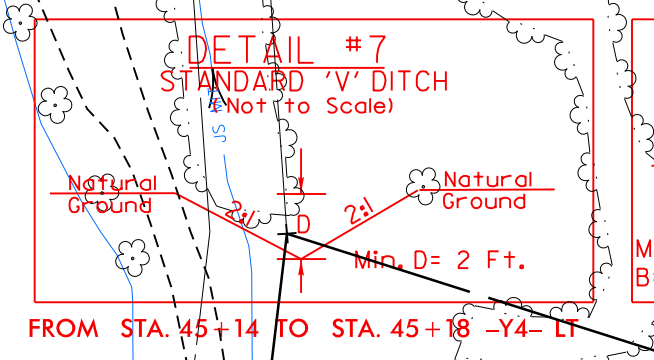
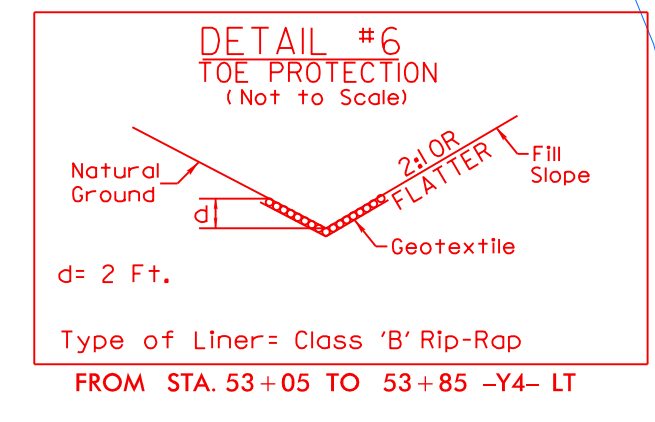
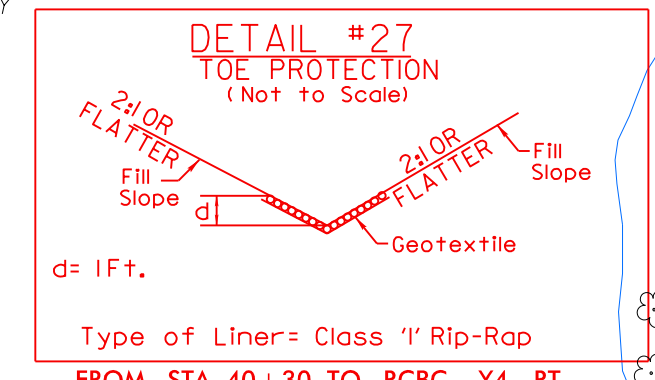
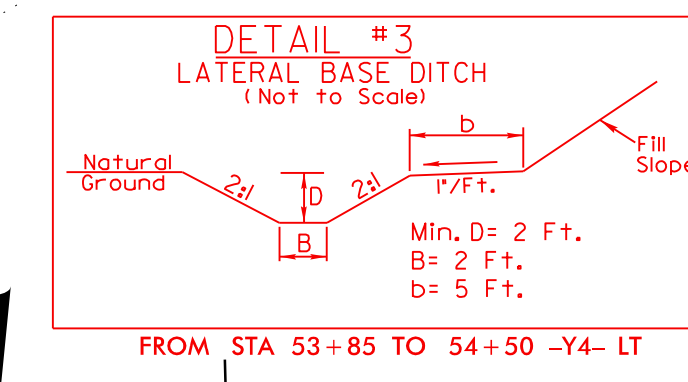
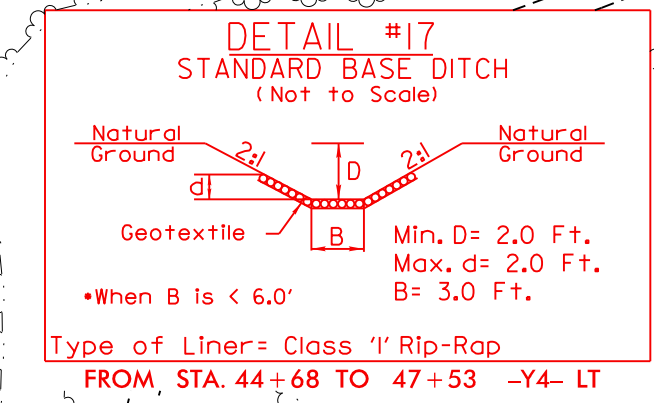
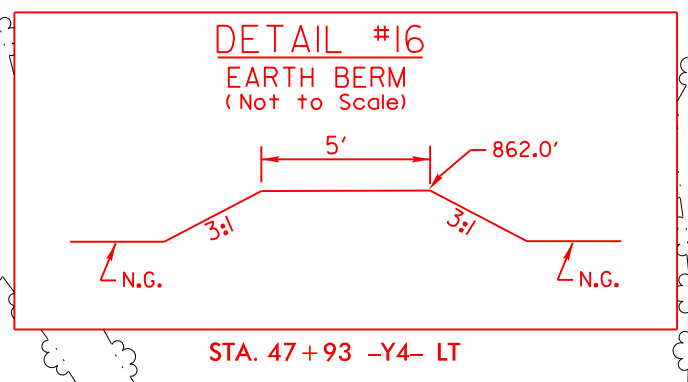
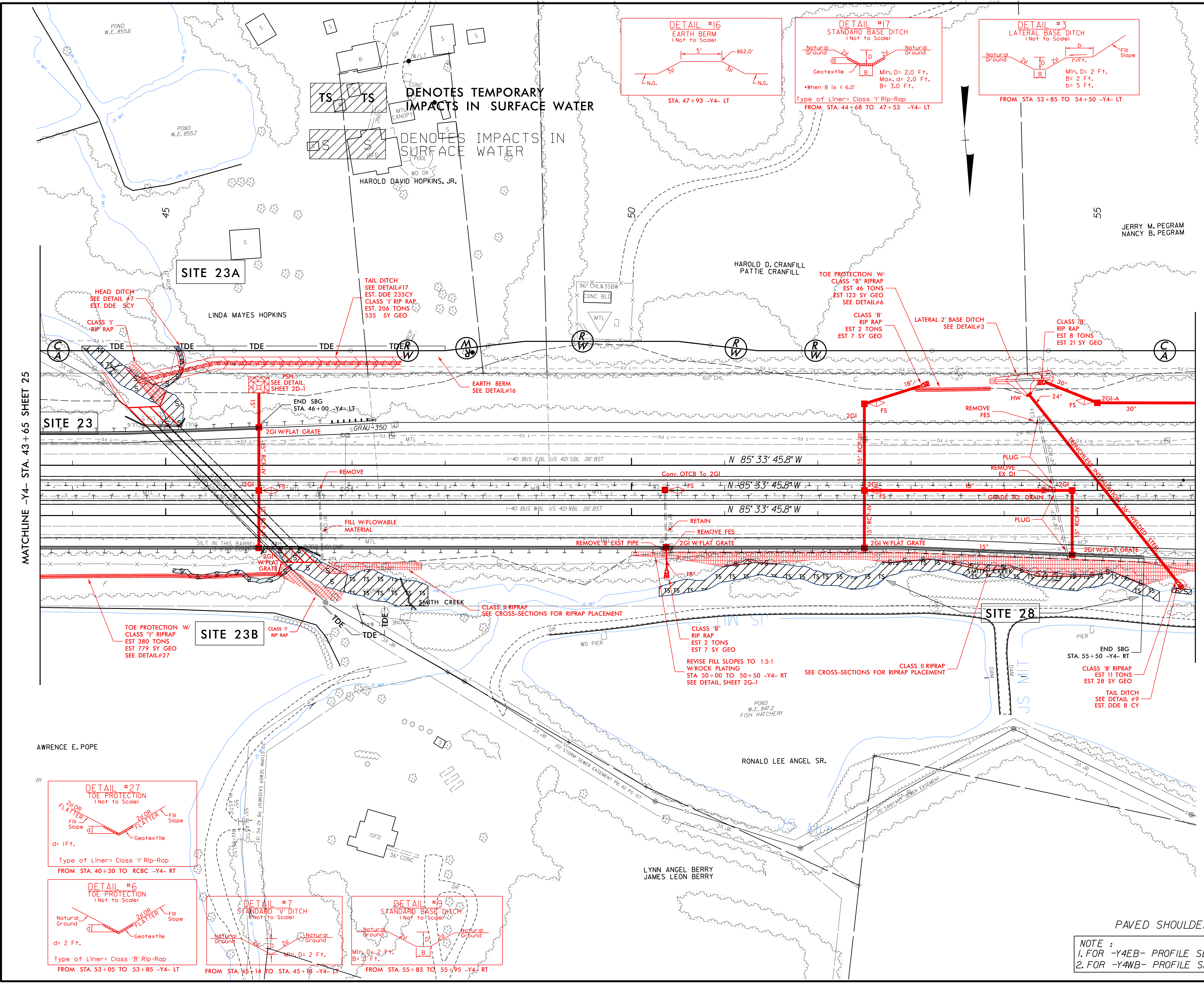
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PROJECT REFERENCE NO.	SHEET NO.
U-2579B	26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING
SHEET 38 OF 64

REVISED
5-18-14

JERRY M. PEGRAM
NANCY B. PEGRAM



PAVED SHOULDER

NOTE :
1. FOR -Y4EB- PROFILE SEE SHEET 50-51
2. FOR -Y4WB- PROFILE SEE SHEET 55-56

REVISIONS

MATCHLINE -Y4- STA. 43 + 65 SHEET 25

MATCHLINE -Y4- STA. 56 + 61 SHEET 27

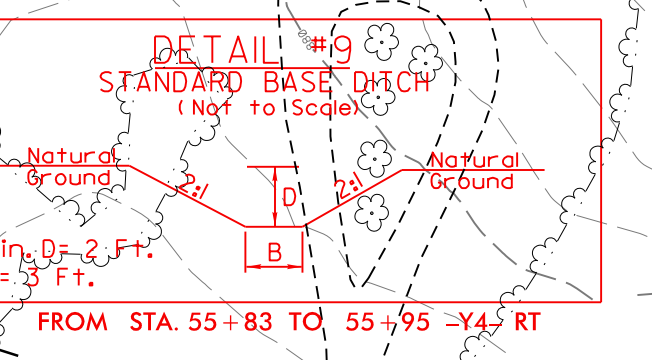
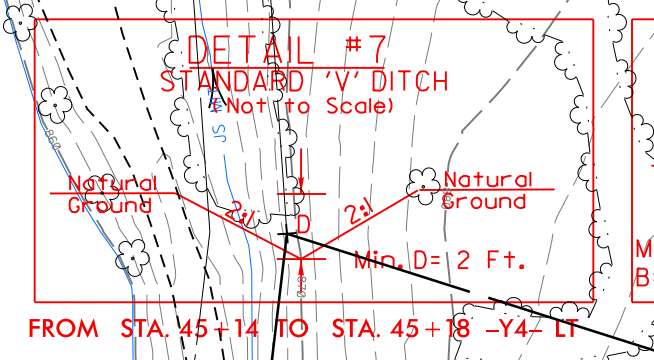
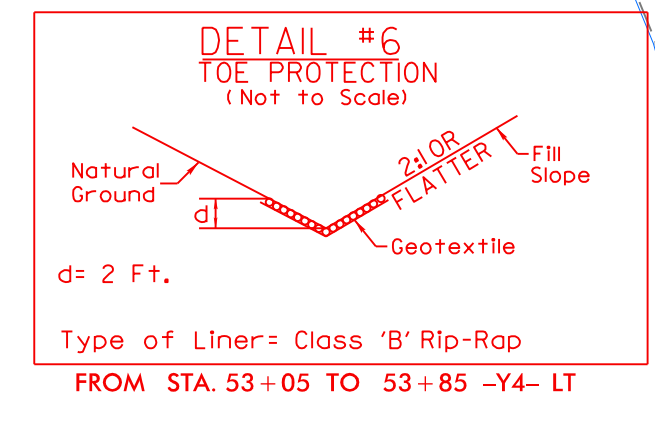
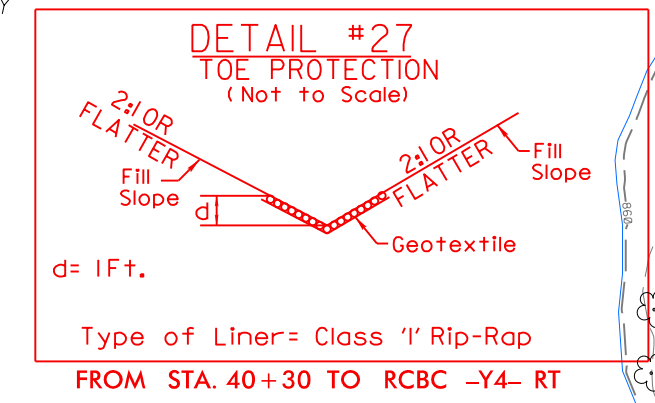
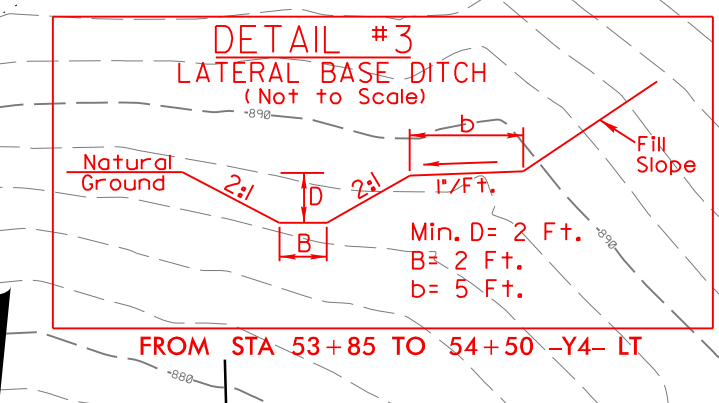
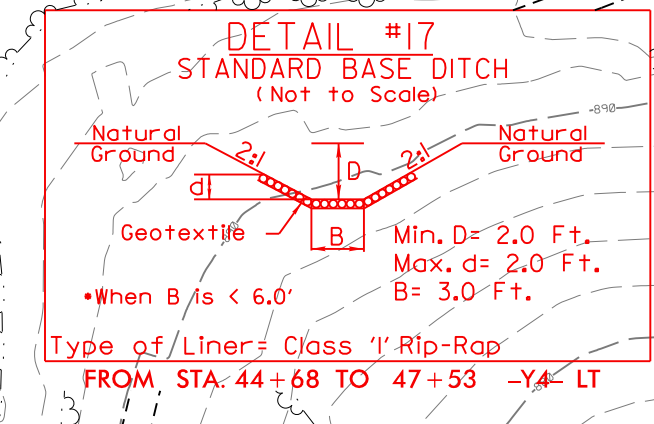
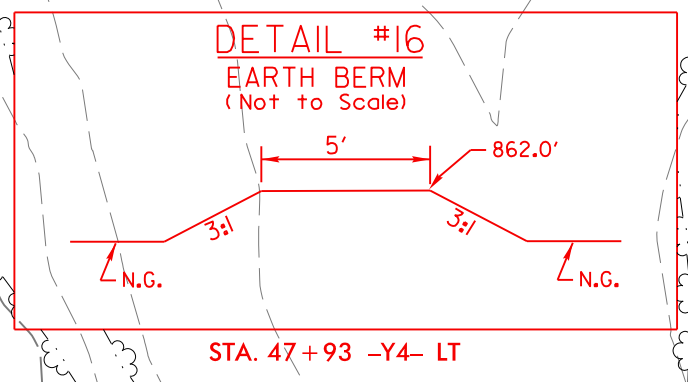
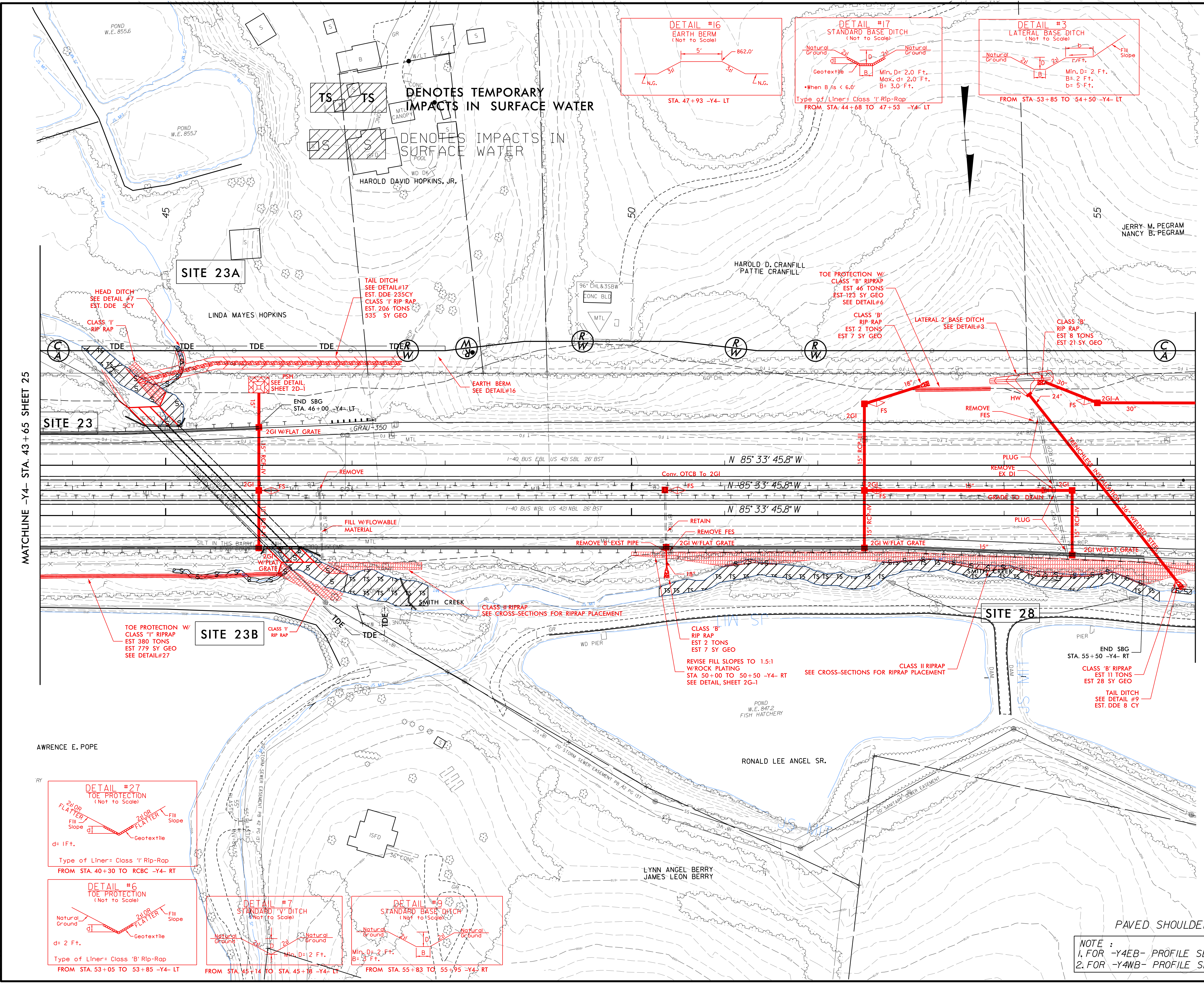
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PROJECT REFERENCE NO.	SHEET NO.
U-2579B	26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING
SHEET 39 OF 64

REVISED
5-18-14



NOTE :
1. FOR -Y4B- PROFILE SEE SHEET 50-51
2. FOR -Y4WB- PROFILE SEE SHEET 55-56

REVISIONS

MATCHLINE -Y4- STA. 43 + 65 SHEET 25

MATCHLINE -Y4- STA. 56 + 61 SHEET 27

6/24/2014 U-2579B_hyd_prm_wet_psh26_con.dgn

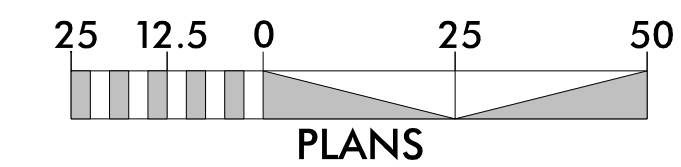
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DENOTES IMPACTS IN SURFACE WATER



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PLANS

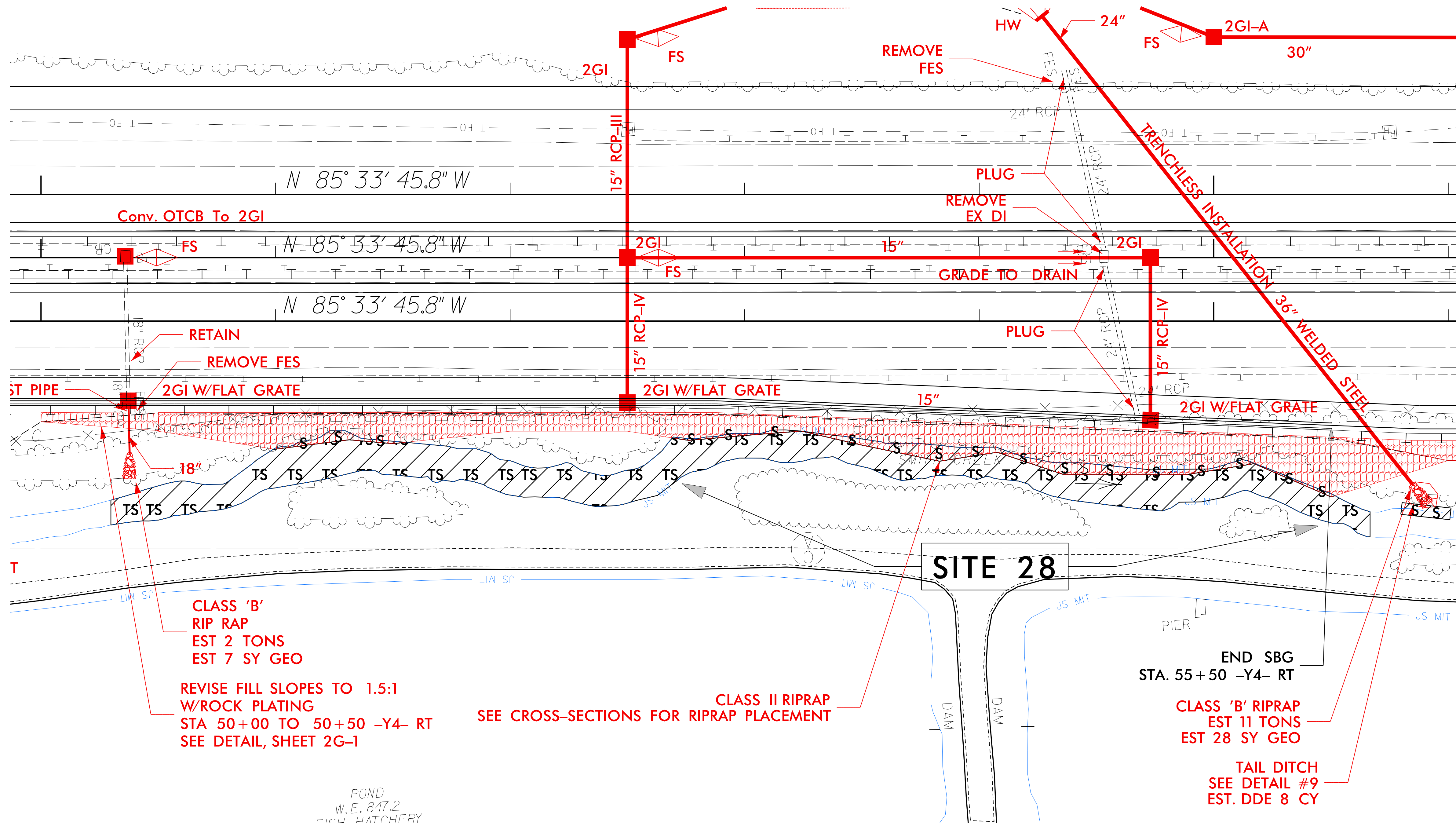


PROJECT REFERENCE NO. U-2579B	SHEET NO. 26-1
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING SHEET 40 OF 64

REVISED 5-18-14

REVISIONS



CLASS 'B' RIP RAP
EST 2 TONS
EST 7 SY GEO

REVISE FILL SLOPES TO 1.5:1
W/ROCK PLATING
STA 50+00 TO 50+50 -Y4- RT
SEE DETAIL, SHEET 2G-1

SEE CROSS-SECTIONS FOR RIPRAP PLACEMENT

END SBG
STA. 55+50 -Y4- RT

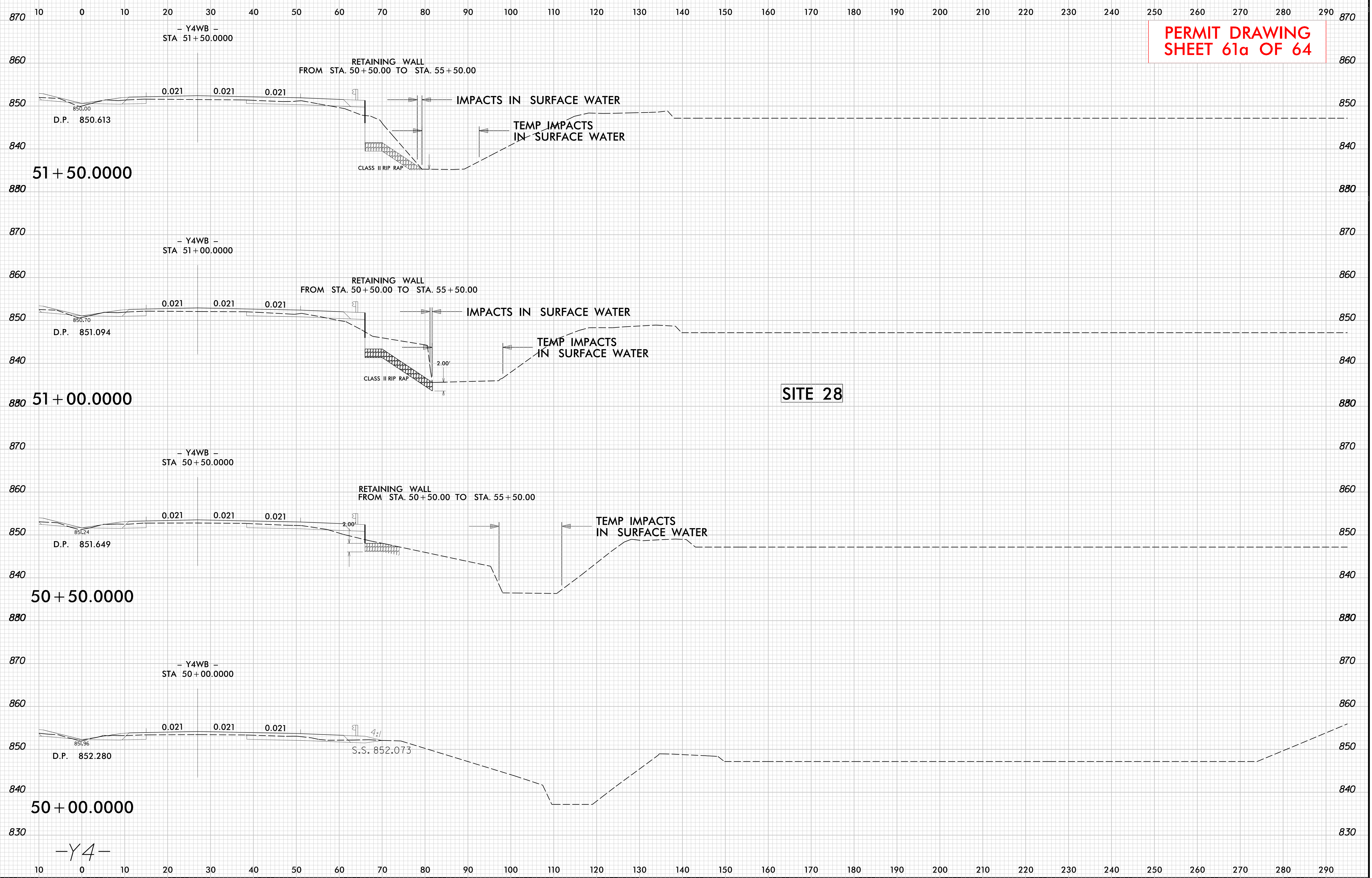
CLASS 'B' RIPRAP
EST 11 TONS
EST 28 SY GEO

TAIL DITCH
SEE DETAIL #9
EST. DDE 8 CY

POND
W.E. 847.2
FISH HATCHERY

6/26/2014
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10:00 AM

8/23/99



**PERMIT DRAWING
SHEET 61a OF 64**

SITE 28

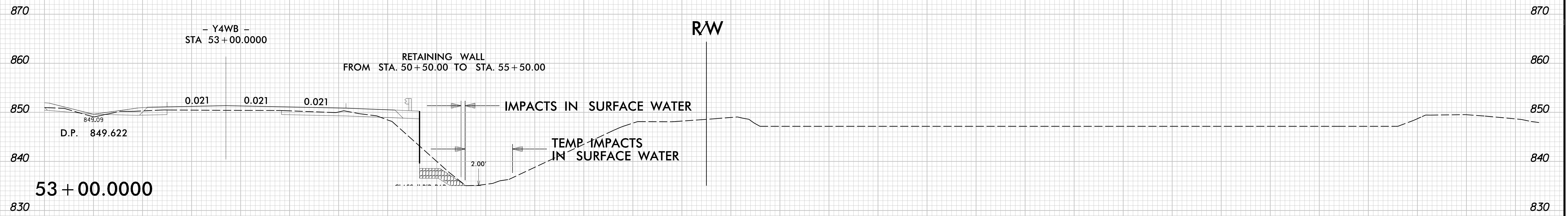
6/2/2014
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jharvey

-Y4-

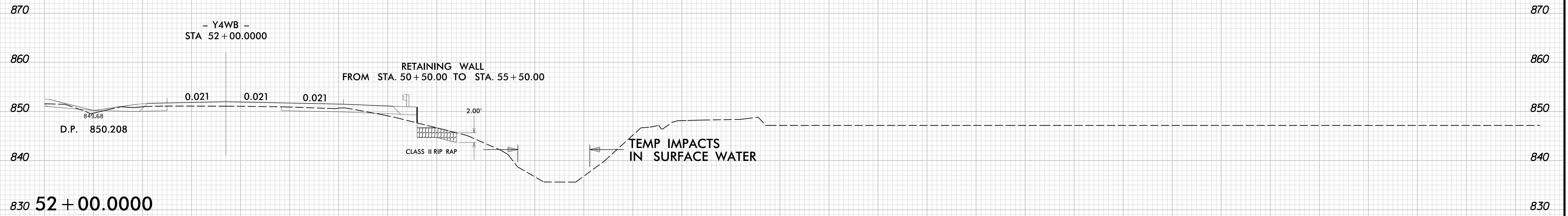
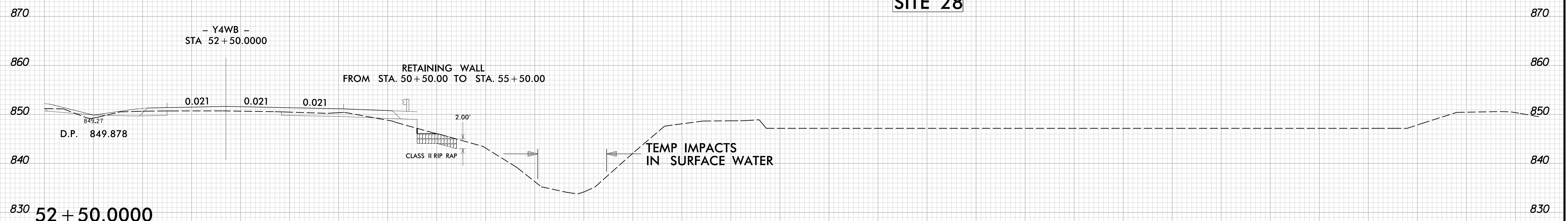
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**PERMIT DRAWING
SHEET 61b OF 64**



SITE 28

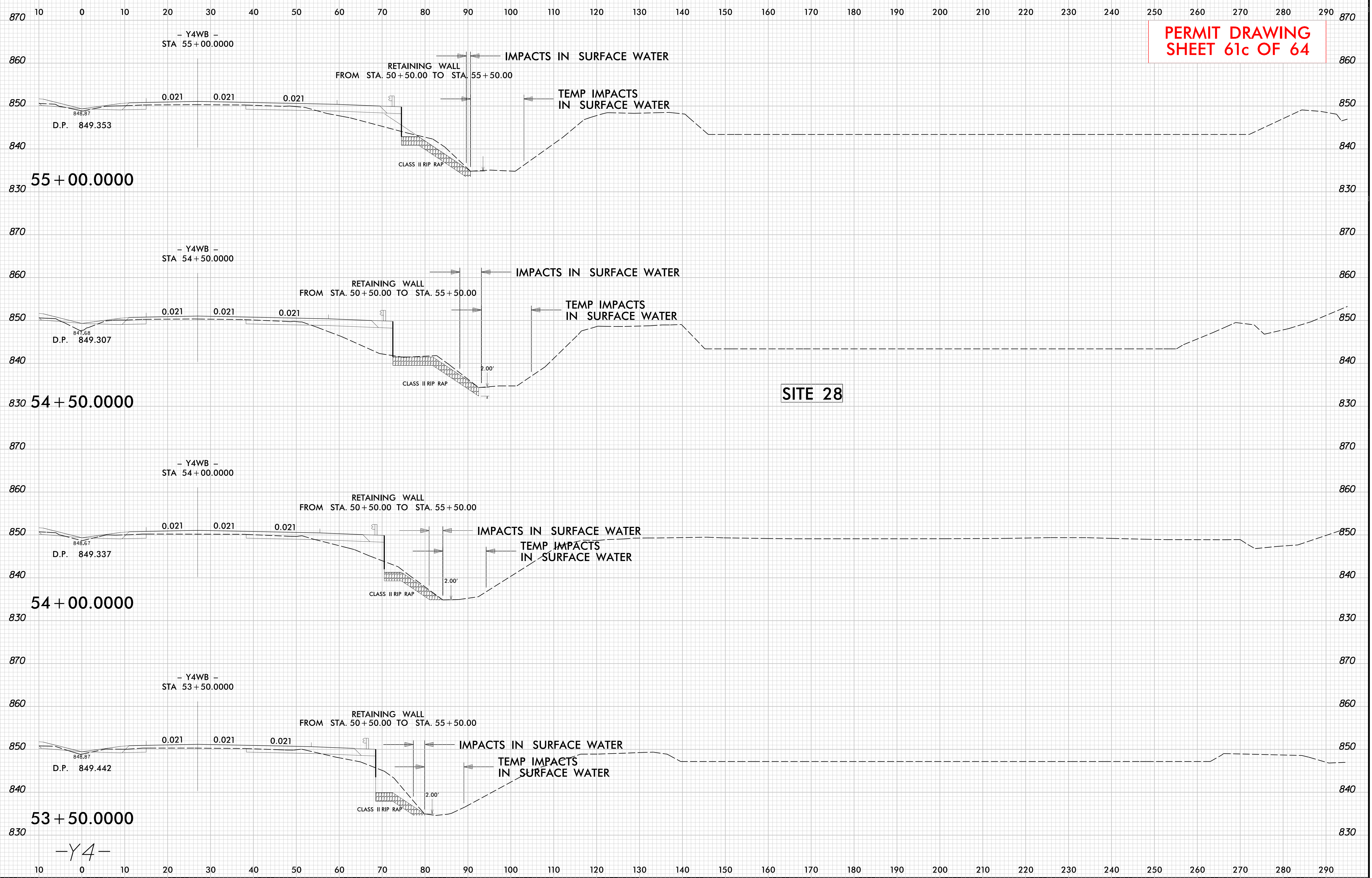


-Y4-

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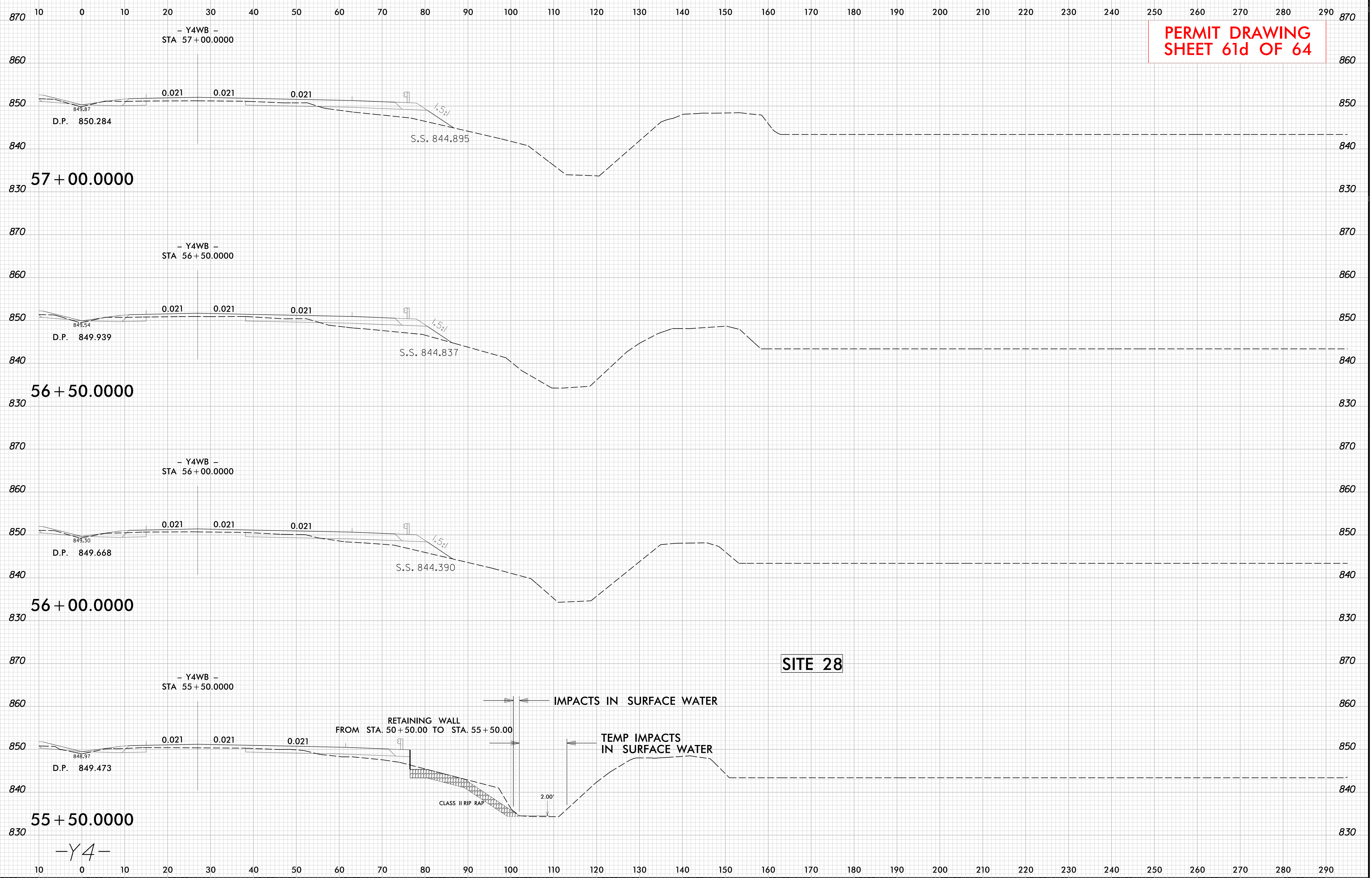
PERMIT DRAWING
SHEET 61c OF 64

SITE 28

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-Y4-

8/23/99



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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)
13	20+00-21+40 -Y4RPBD-	ROAD FILL	0.33									
14	629+95-635+90 -L-	ROAD FILL	0.04					0.05		688		
15	636+32-641+55 -L-	ROAD FILL	0.18					0.04		332		
		ROAD FILL-POND						2.38				
15A	644+00-645+00 -L-	ROAD FILL						< 0.01		108		
16	643+56-644+61 -L-	ROAD FILL						< 0.01		104		
		ROAD FILL-POND						0.16				
17	663+65-667+00 -L-	ROAD FILL	0.09			< 0.01		0.06		928		
18	667+15 -L-	3 @ 12'x10' RCBC						0.06	0.02	377	67	
		STREAMBANK STABILIZATION						0.02	0.01	80	59	
19	668+50 -L-	ROAD FILL	0.47			0.01						
20	687+80-691+59 -L-	ROAD FILL						0.03		163		
		ROAD FILL-POND						0.85				450
21	22+50 -Y1-	ROAD FILL	0.02									
22	40+50 -Y4-	OUTLET PAD	0.01									
23	45+65 -Y4-	CULVERT EXTENSION						0.06	0.01	100	32	
		STREAMBANK STABILIZATION						0.02	0.06	54	89	
23A	44+95-45+18 -Y4-	ROAD FILL						< 0.01		57		
23B	45+07-46+34 -Y4-	ROAD FILL						0.01		135		
24	80+73-81+57-Y4RPBD-	ROAD FILL						0.02		202		
24A	80+50-81+51-Y4RPBD-	ROAD FILL	0.06									
25	37+31 -Y4RPA-	30" RCP						< 0.01		73		
		STREAMBANK STABILIZATION						< 0.01	< 0.01	21	16	
SUBTOTALS*:			1.20			0.02		3.77	0.09	3422	263	450

*Rounded totals are sum of actual impacts

NOTES:
Revised: 5-18-14

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
6-2-14
U-2579B FORSYTH COUNTY
WINSTON SALEM NORTHERN BELTWAY
(EASTERN SECTION) (FUTURE I-74)
SHEET 63 OF 64

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)	
26	29+16-31+12 -Y4RPC-	ROAD FILL-POND							0.38				
27A	104+62 - 107+53 -Y4-	ROAD FILL							0.02		205		
27B	107+60 -Y4-	42" WELDED STEEL	0.05						0.01	< 0.01	130	14	
27C	107+58 - 108+44 -Y4-	30" RCP							< 0.01		116		
28	50+50 - 56+00 -Y4- Rt	STREAMBANK STABILIZATION							0.02	0.15	365	188	
29	145+62 -Y4-	ROAD FILL				< 0.01							
30	64+34 -Y4-	STREAMBANK STABILIZATION							< 0.01		28		
31	557+28 -L-	STREAMBANK STABILIZATION							< 0.01		21		
SUBTOTALS*:			0.05			< 0.01			0.44	0.16	865	202	
SUBTOTALS FROM PAGE 1*:			0.62		< 0.01	0.05			1.53	0.19	5853	1344	
SUBTOTALS FROM PAGE 2*:			1.20			0.02			3.77	0.09	3422	263	450
TOTALS*:			1.87		< 0.01	0.08			5.73	0.44	10140	1809	450

*Rounded totals are sum of actual impacts

NOTES:
Revised: 6-4-14

NC DEPARTMENT OF TRANSPORTATION
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WINSTON SALEM NORTHERN BELTWAY
(EASTERN SECTION) (FUTURE I-74)
SHEET 64 OF 64