

8/17/99

REVISIONS

MATCHLINE -Y4 STA. 30+50 SHEET 24

MATCHLINE -Y4 STA. 43+65 SHEET 26

PROJECT REFERENCE NO.
U-2579B

SHEET NO.
25

R/W SHEET NO.

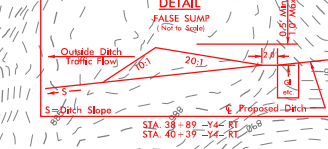
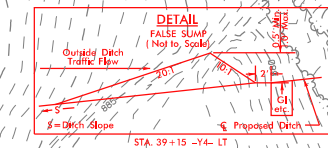
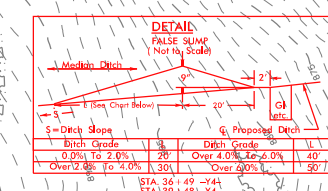
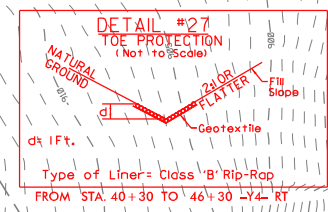
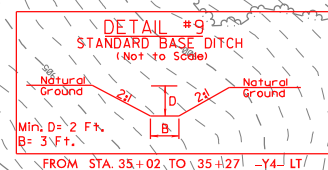
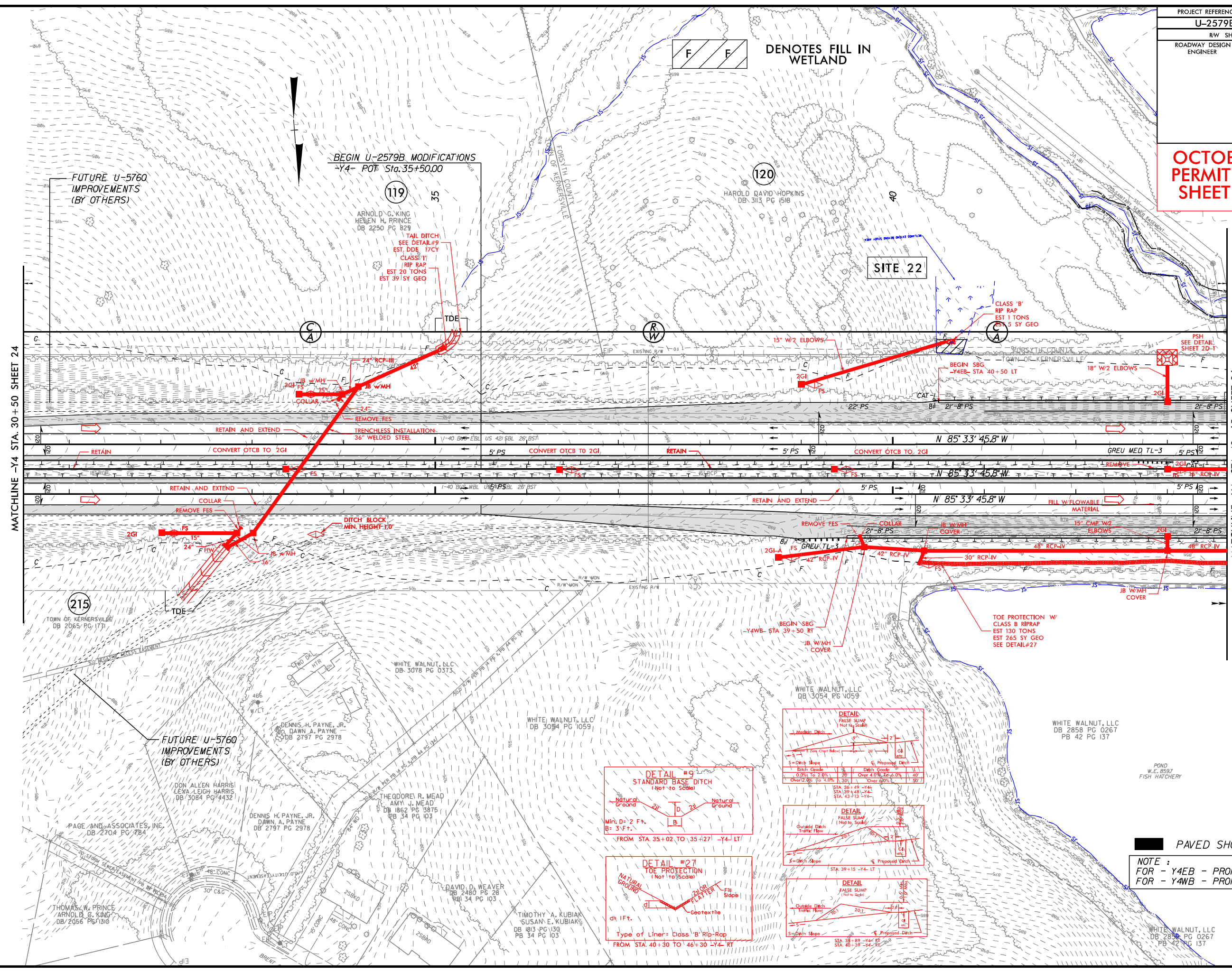
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

OCTOBER 1, 2019

PERMIT DRAWING

SHEET 2 OF 10

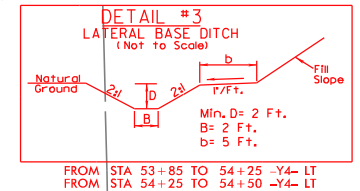
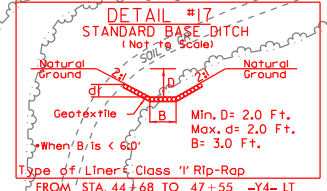
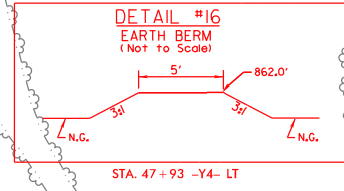


NOTE :
FOR - Y4EB - PROFILE SEE SHEET 50
FOR - Y4WB - PROFILE SEE SHEET 55

8/17/99

PERMIT DRAWING MODIFICATION LEGEND

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER	 DENOTES IMPACTS IN SURFACE WATER (CULVERT IMPACTS)	 DENOTES IMPACTS IN SURFACE WATER (STREAMBANK STABILIZATION)
 DENOTES IMPACTS IN SURFACE WATER (FILL IN STREAM)	 DENOTES IMPACTS IN SURFACE WATER (POND)	

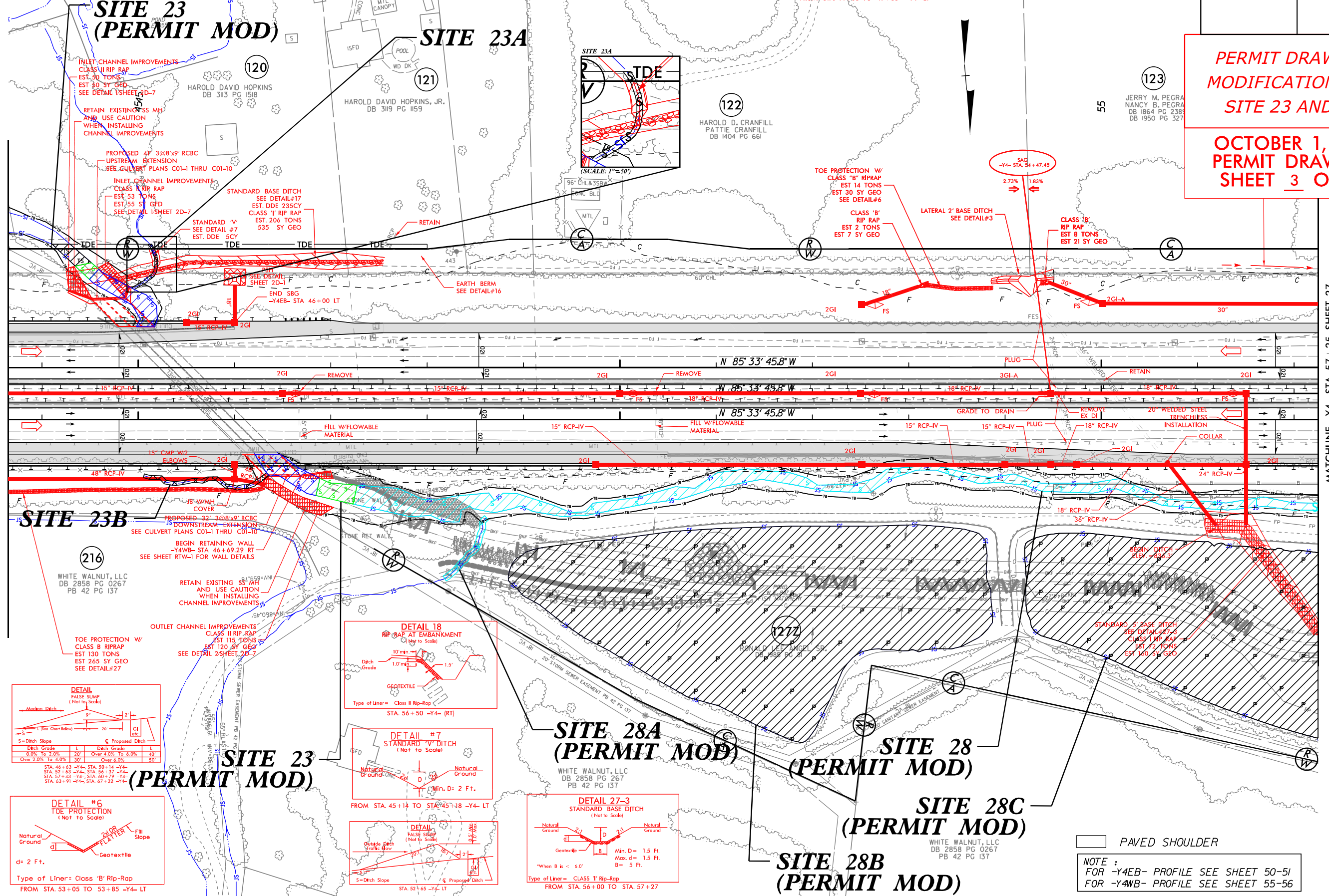


PROJECT REFERENCE NO. U-2579B		SHEET NO. 26
RW SHEET NO. ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

PERMIT DRAWING MODIFICATION FOR SITE 23 AND 28

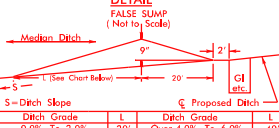
OCTOBER 1, 2019
PERMIT DRAWING SHEET 3 OF 10

MATCHLINE -Y4- STA. 43+65 SHEET 25



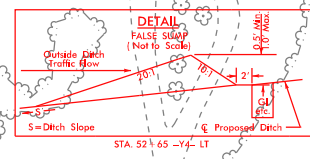
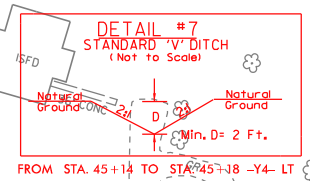
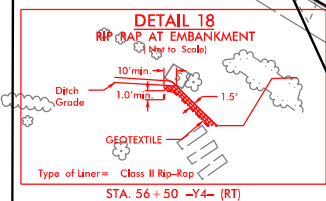
MATCHLINE -Y4- STA. 57+25 SHEET 27

DETAIL #6
TOE PROTECTION
(Not to Scale)



d= 2 Ft.

Type of Liner= Class 'B' Rip-Rap
FROM STA. 53+05 TO 53+85 -Y4- LT



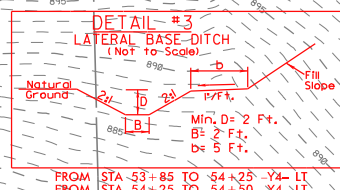
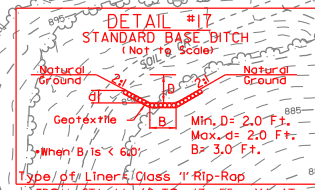
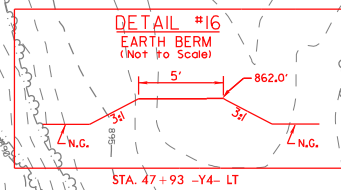
PAVED SHOULDER

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

8/17/99

PERMIT DRAWING MODIFICATION LEGEND

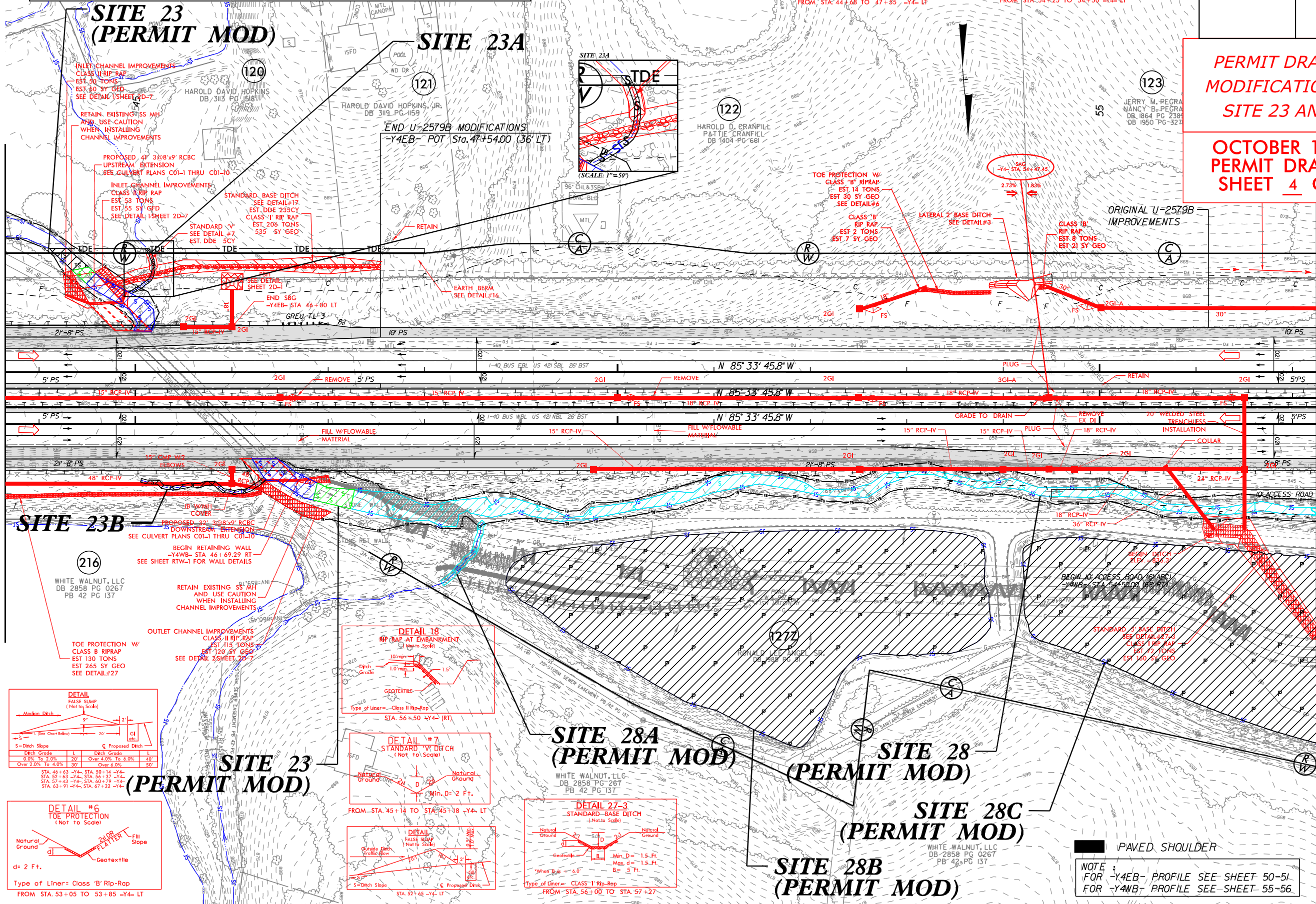
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER	 DENOTES IMPACTS IN SURFACE WATER (CULVERT IMPACTS)	 DENOTES IMPACTS IN SURFACE WATER (STREAMBANK STABILIZATION)
 DENOTES IMPACTS IN SURFACE WATER (FILL IN STREAM)	 DENOTES IMPACTS IN SURFACE WATER (POND)	



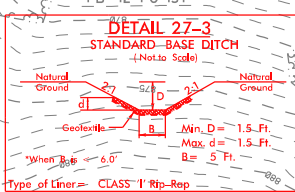
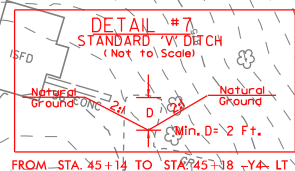
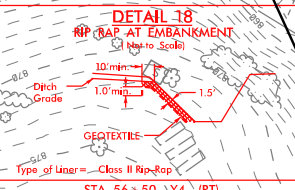
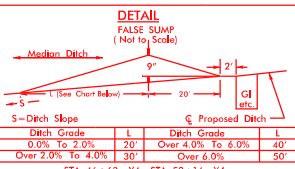
**PERMIT DRAWING
MODIFICATION FOR
SITE 23 AND 28**

**OCTOBER 1, 2019
PERMIT DRAWING
SHEET 4 OF 10**

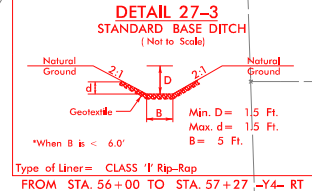
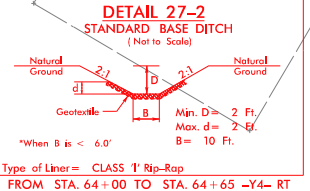
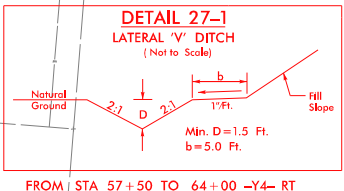
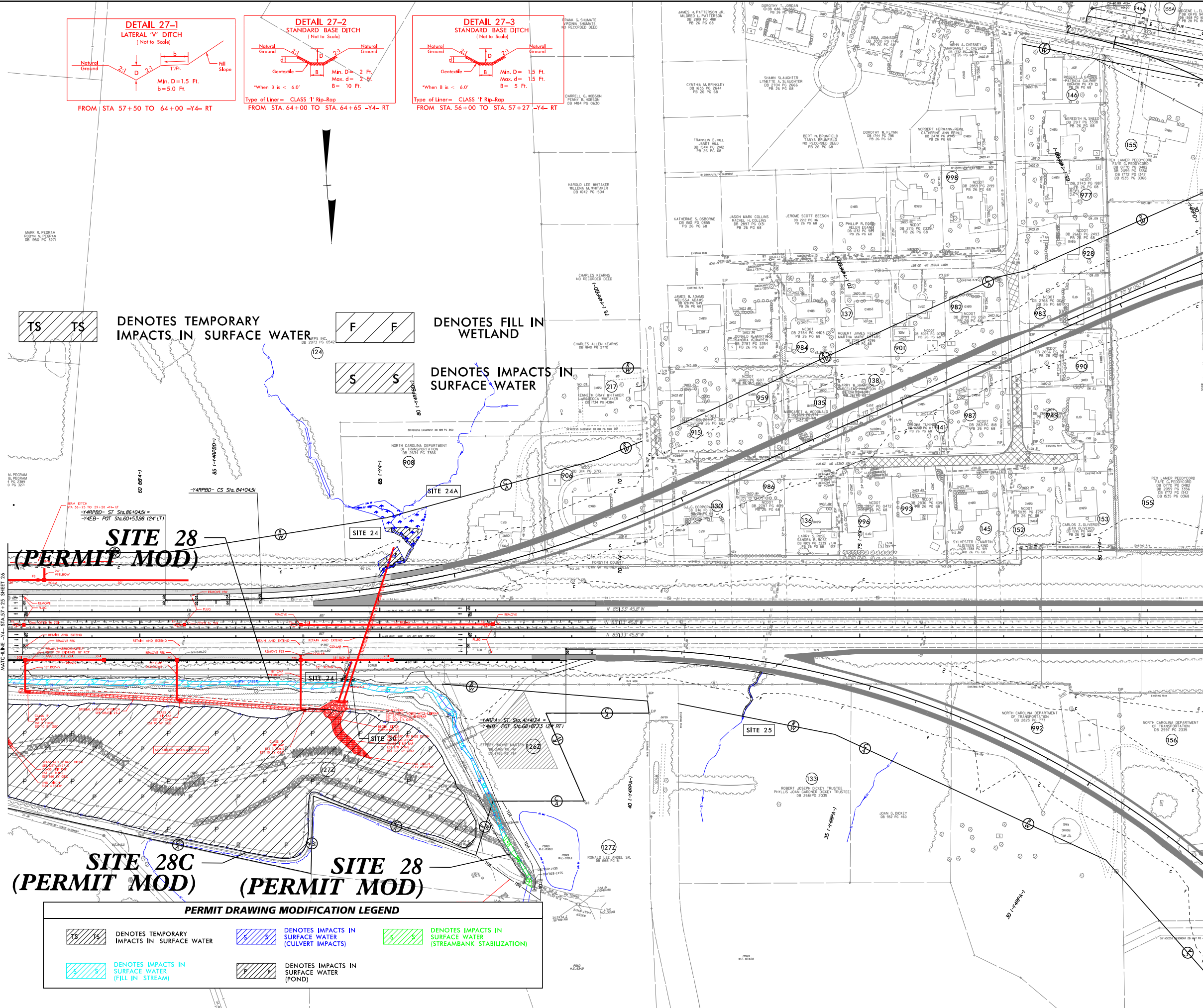
MATCHLINE -Y4- STA. 43 + 65 SHEET 25



MATCHLINE -Y4- STA. 57 + 25 SHEET 27



NOTE
FOR -Y4EB- PROFILE SEE SHEET 50-51
FOR -Y4WB- PROFILE SEE SHEET 55-56



PROJECT REFERENCE NO.	SHEET NO.
U-2579B	27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

50' 25' 0' 50' 100'		
Y4RPA		
Sta 33+05.42	Sta 64+52.40	Sta 64+51.91
Gr = 2.27 1/2%	Gr = 1.28 3/4% (LT)	Gr = 5.17 0.4%
Ls = 240.00'	Ls = 240.00'	Ls = 240.00'
T = 133.35'	T = 133.35'	T = 133.35'
ST = 66.68'	ST = 66.68'	ST = 66.68'
Y4RPA		
Sta 75+65.20	Sta 80+21.76	Sta 84+71.91
Gr = 2.27 1/2%	Gr = 1.28 3/4% (LT)	Gr = 5.17 0.4%
Ls = 240.00'	Ls = 240.00'	Ls = 240.00'
T = 133.35'	T = 133.35'	T = 133.35'
ST = 66.68'	ST = 66.68'	ST = 66.68'
Y4RPA		
Sta 11+33.35	Sta 28+67.56	Sta 40+08.43
Gr = 2.27 1/2%	Gr = 1.28 3/4% (LT)	Gr = 5.17 0.4%
Ls = 240.00'	Ls = 240.00'	Ls = 240.00'
T = 133.35'	T = 133.35'	T = 133.35'
ST = 66.68'	ST = 66.68'	ST = 66.68'
Y5DET		
Sta 11+39.44	Sta 28+67.56	Sta 40+08.43
Gr = 2.27 1/2%	Gr = 1.28 3/4% (LT)	Gr = 5.17 0.4%
Ls = 240.00'	Ls = 240.00'	Ls = 240.00'
T = 133.35'	T = 133.35'	T = 133.35'
ST = 66.68'	ST = 66.68'	ST = 66.68'

**OCTOBER 1, 2019
PERMIT DRAWING
SHEET 5 OF 10**

**PERMIT DRAWING
MODIFICATION FOR
SITE 23 AND 28**

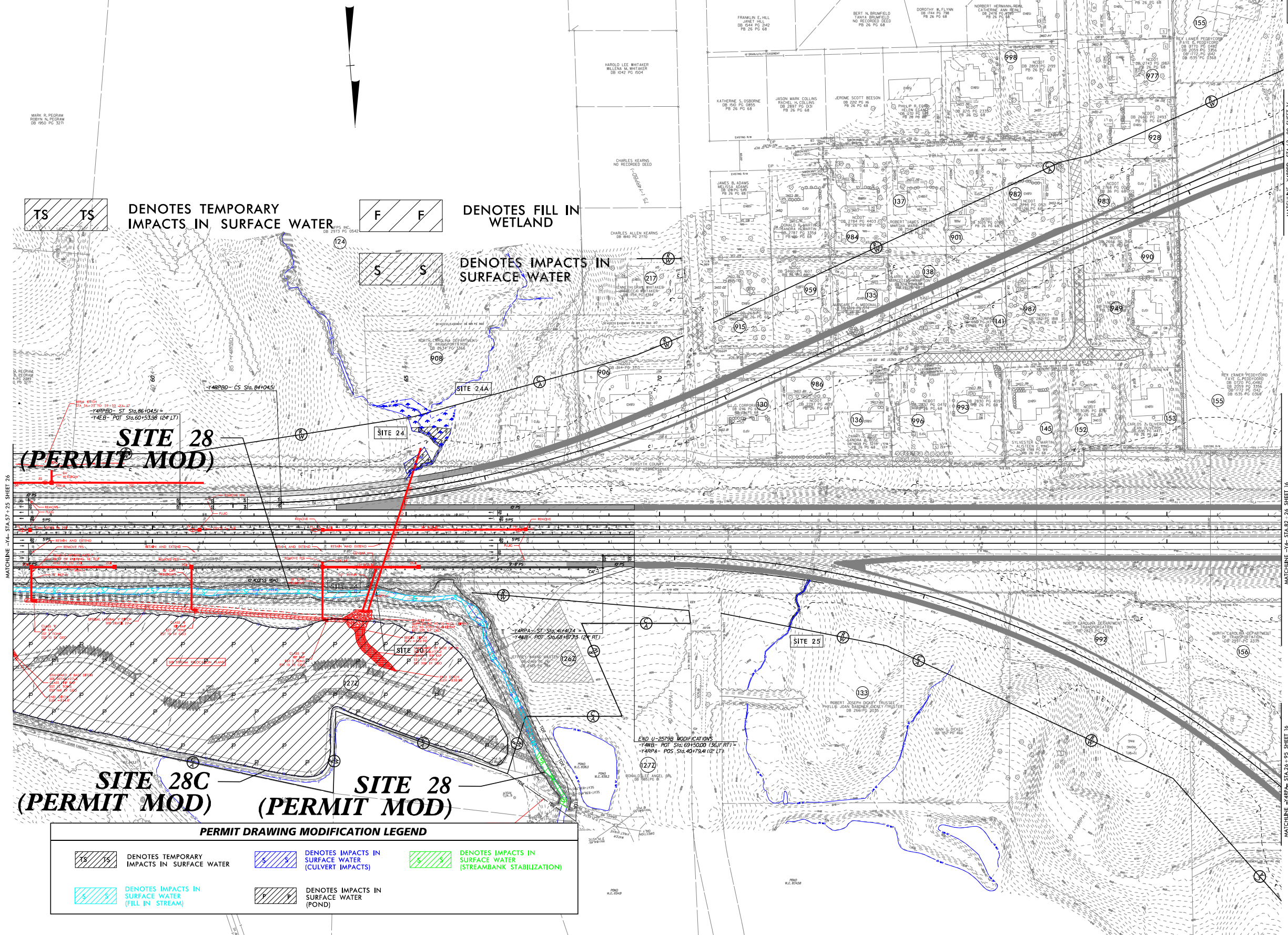
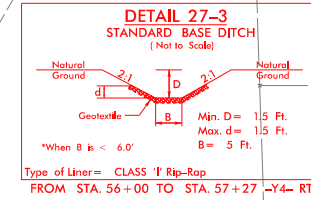
PERMIT DRAWING MODIFICATION LEGEND

	DENOTES TEMPORARY IMPACTS IN SURFACE WATER		DENOTES IMPACTS IN SURFACE WATER (CULVERT IMPACTS)		DENOTES IMPACTS IN SURFACE WATER (STREAMBANK STABILIZATION)
	DENOTES IMPACTS IN SURFACE WATER (FILL IN STREAM)		DENOTES IMPACTS IN SURFACE WATER (POND)		

PAVED SHOULDER

PAVEMENT TO BE OBLITERATED

NOTE:
FOR -Y4EB- PROFILE, SEE SHEET 51-52
FOR -Y4WB- PROFILE, SEE SHEET 56-57
FOR -Y4RPA- PROFILE, SEE SHEET 70
FOR -Y4RPA- PROFILE, SEE SHEET 75-77
FOR -Y4RPA- PROFILE, SEE SHEET 81
FOR -Y5- PROFILE, SEE SHEET 82
FOR -Y5DET- PROFILE, SEE SHEET 28-7



50' 25' 0 25' 50' 100'

YARPRD

Pis Sta 61+52.40	Pk Sta 64+51.9
Gs = 5' 10' 0.4'	Lk = 128' 39' 24.8" (LT)
D = 230.00'	Ls = 240.00'
LT = 160.75'	L = 298.50'
ST = 80.06'	T = 278.05'
	L = 133.000'
	SE = 0.06'

YARPA

Pis Sta 61+52.40	Pk Sta 80+21.75	Pis Sta 84+71.9
Gs = 5' 10' 0.4'	D = 191.00' (RT)	Lk = 2' 21' 31.6"
Ls = 200.00'	D = 2' 27' 32' (ST)	Ls = 200.00'
LT = 133.65'	T = 369.9'	ST = 66.68'
ST = 66.68'	R = 233.000'	

YARPA

Pis Sta 11+33.35	Pk Sta 28+167.56	Pis Sta 40+108.43
Gs = 2' 52' 59.2"	Lk = 62' 14' 48.0" (LT)	Gs = 2' 52' 59.2"
Ls = 200.00'	D = 2' 52' 59.2"	Ls = 200.00'
LT = 133.65'	T = 167.74'	ST = 66.68'
ST = 66.68'	T = 166.75'	
	R = 190.00'	
	SE = 0.06'	

YSEET

Pi Sta 11+39.44
Δ = 14' 34' 48.5" (RT)
Δ = 5' 15' 23.4"
L = 27.75'
T = 139.44'
R = 1290.00'

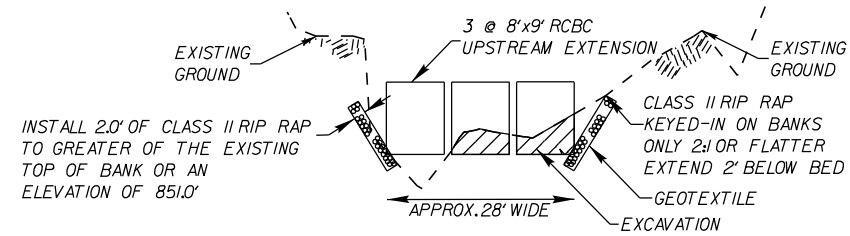
OCTOBER 1, 2019
PERMIT DRAWING
SHEET 6 OF 10

*PERMIT DRAWING
MODIFICATION FOR
SITE 23 AND 28*

PROJECT REFERENCE NO.	SHEET NO.
U-2579B	2D-7
HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

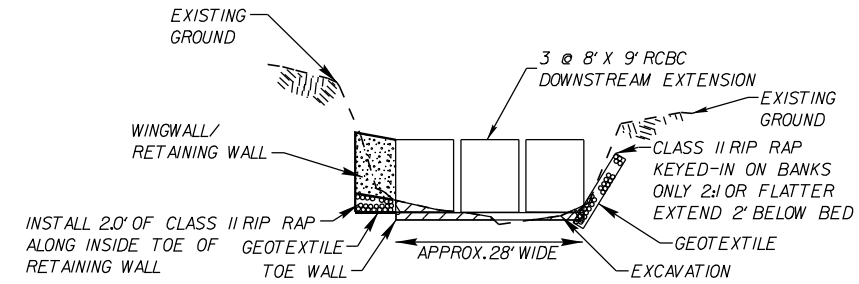
OCTOBER 1, 2019
PERMIT DRAWING
SHEET 7 OF 10

DETAIL #1
INLET CHANNEL IMPROVEMENTS



STA. 44 + 70 -Y4- LT

DETAIL #2
OUTLET CHANNEL IMPROVEMENTS



STA. 46 + 50 -Y4- RT

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)	Temporary SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	28+00 -Y-	ROAD FILL	0.03		<0.01	0.02		0.02		142		
2	16+00 -Y1 RPD-	ROAD FILL - INTERMITTENT						0.01		109		
		ROAD FILL - PERENNIAL						0.02		208		
		STREAMBANK STABILIZATION						<0.01	<0.01	10	37	
3	21+56-25+22 -Y1-	2 @ 7' x 6' RCBC						0.06	<0.01	438	33	
3A	17+36-21+53 -Y1-	DETOUR - ROAD FILL							0.08		545	
3B	20+55-21+32 -Y1-	DETOUR - ROAD FILL							0.03		194	
4	501+51-503+21 -L-	ROAD FILL						0.03	<0.01	493	18	
		STREAMBANK STABILIZATION						<0.01	<0.01	9	31	
5	503+85-507+80 -L-	ROAD FILL						0.05	<0.01	740	22	
5A	507+39-509+64 -L-	ROAD FILL						0.01		306		
6	523+00 -L-	ROAD FILL	0.03			<0.01		0.02	<0.01	312	42	
7	527+00 -L-	ROAD FILL	0.52			0.01						
		ROAD FILL - POND						0.59				
8	559-75 -L-	2 @ 10' x 6' RCBC						0.06	<0.01	442	53	
		STREAMBANK STABILIZATION						<0.01	<0.01	58	44	
9	560+75 -L-	ROAD FILL	0.03			0.01						
10	560+50-568+74 -L-	ROAD FILL	0.01					0.07	<0.01	783	22	
10A	566+84-572+75 -L-	ROAD FILL						0.05		684		
11	615+00 -L-	3 @ 10' x 9' RCBC						0.43	0.02	808	57	
11A	19+76-21+44 -Y4RPBD-	CHANNEL CHANGE						0.08	0.01	223	41	
12	15+84-18+86 -Y4RPBD-	CHANNEL CHANGE						0.01	0.02	88	205	
TOTALS:			0.62	0.00	< 0.01	0.05		1.53	0.19	5,853	1,344	

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

U-2579 B Forsyth County
Winston Salem Northern Beltway
(Eastern Section) (Future I-74)
SHEET 62 of 64

**OCTOBER 1, 2019
PERMIT DRAWING
SHEET 8 OF 10**

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)	Temporary 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' x 10' 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	
TOTALS:			1.20			0.02		3.67	0.03	3,268	142	450

11/19/2018 Revisions shown in red text.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

U-2579 B Forsyth County
Winston Salem Northern Beltway
(Eastern Section) (Future I-74)

SHEET 63 of 64

OCTOBER 1, 2019
PERMIT DRAWING
SHEET 9 OF 10

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)	Temporary 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+63 - 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		
	2018 Permit Modifications											
23	44+10 to 47+96 -Y4-	3 @ 8' x 9' RCBC Extension						0.06		151		
		STREAMBANK STABILIZATION						0.02	0.01	55	30	
28	47+96 to 56+85 -Y4-	2 @ 10' x 10' RCBC and 1 @ 10' x 8' RCBC						0.51		2309	127	2127
		STREAMBANK STABILIZATION						0.02		120		
28A	48+16 to 48+65 Y4	UT to Smith Creek Relocation						0.01		80		344
28B	48+84 to 53+86 Y4	UT to Smith Creek Relocation						1.62				
28C	54+20 to 67+00 Y4	Drain Pond						6.20				
	2019 Permit Modifications											
8A		STREAM RELOCATION								144	40	
SUBTOTALS, THIS PAGE:			0.05			<0.01		8.86	0.01	3,359	84	2471
SUBTOTALS, PAGE 1			0.62		<0.01	0.05		1.53	0.19	5,853	1,344	
SUBTOTALS, PAGE 2			1.20			0.02		3.67	0.03	3,268	142	450
TOTALS:			1.87		<0.01	0.08		14.06	0.23	12,480	1,570	2,921

11/19/2018 Revisions shown in red text.

10/10/2019 Revisions shown in green text.

9/18/2019 Revisions shown in blue text

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

U-2579 B Forsyth County
Winston Salem Northern Beltway
(Eastern Section) (Future I-74)