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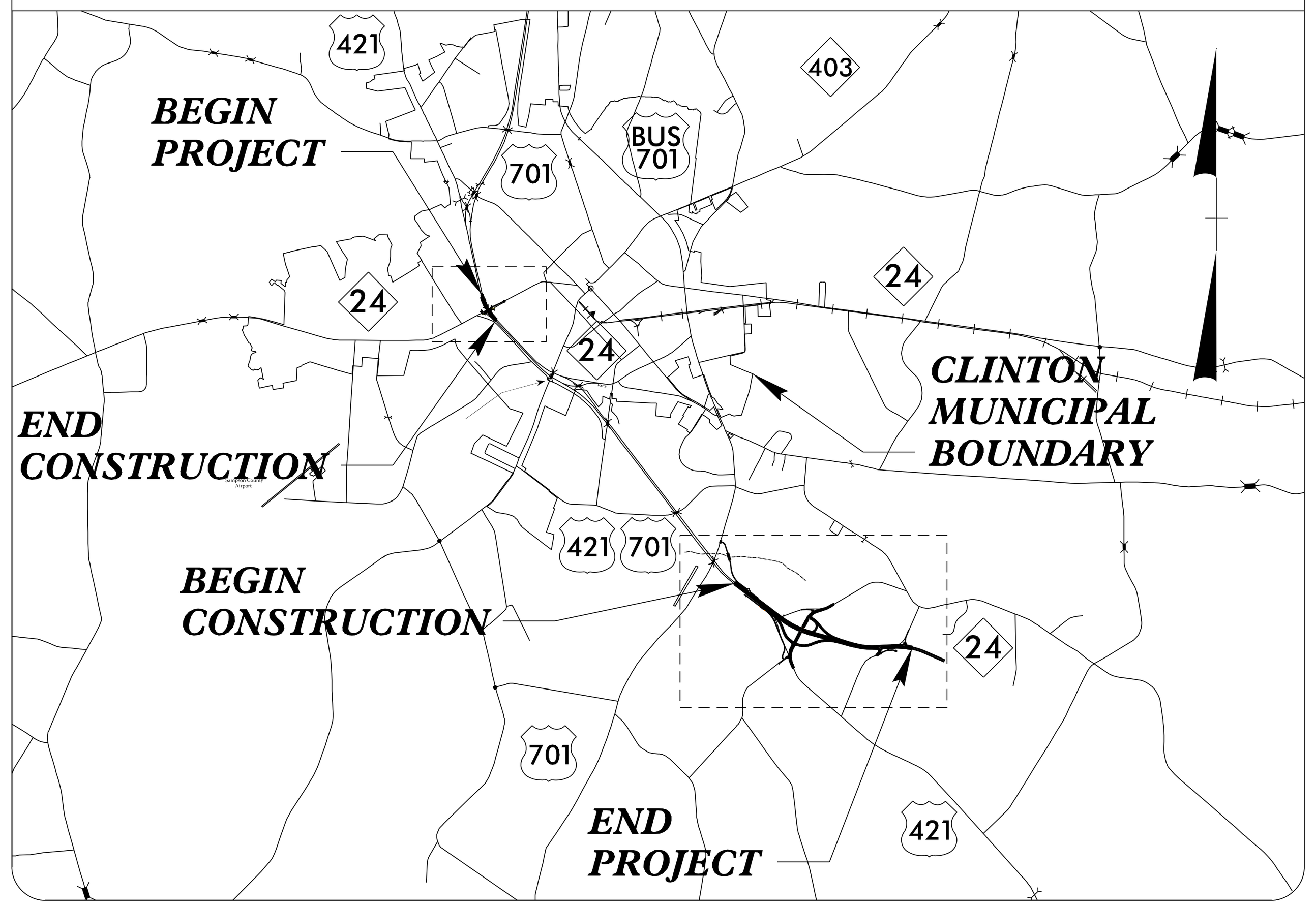
TIP PROJECT: R-2303E

CONTRACT:

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2303E	EC-1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
34416.1.S1		PE
34416.2.8		RW/UTIL.
		CONST.



VICINITY MAP

NOT TO SCALE

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

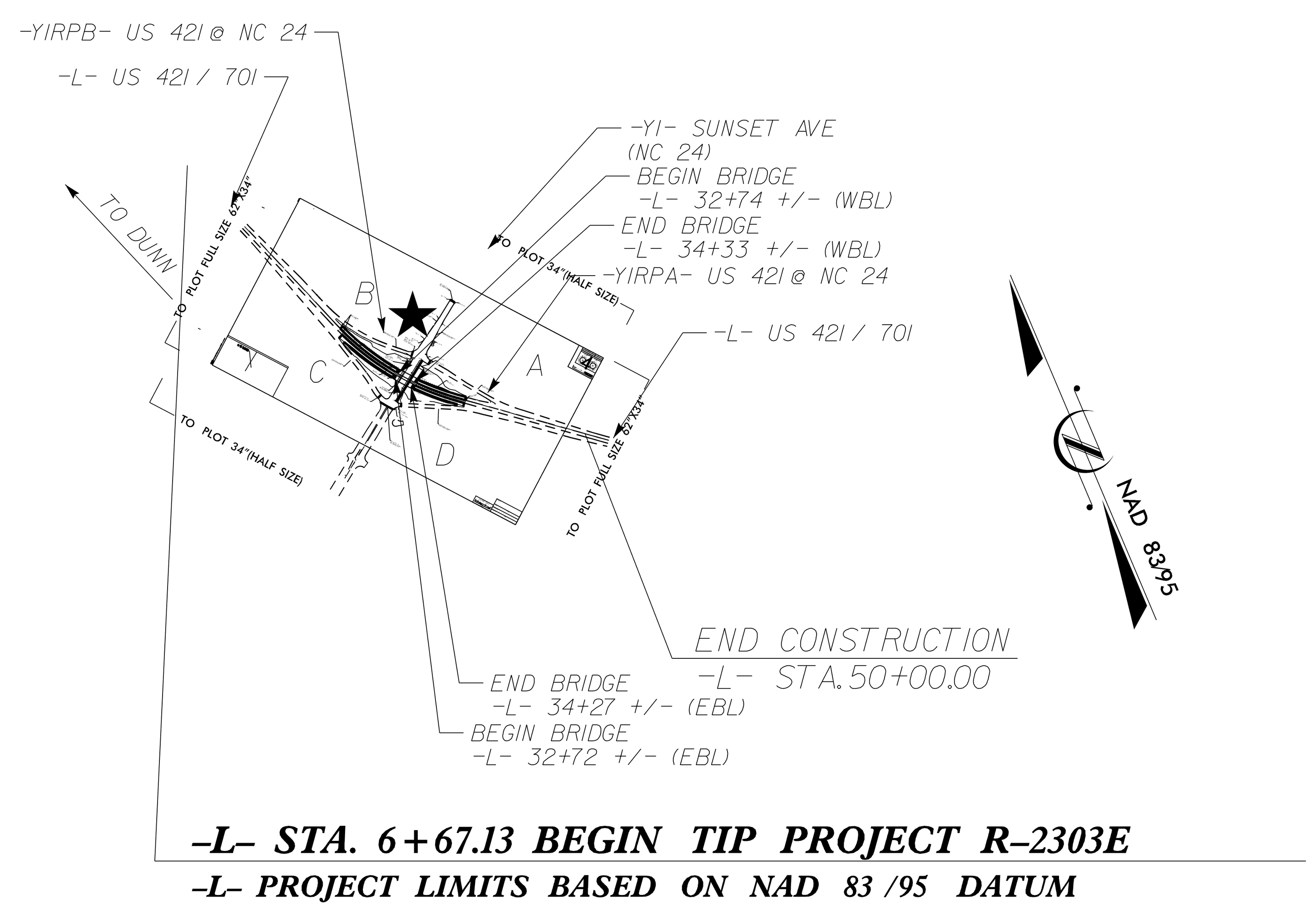
PLAN FOR PROPOSED

HIGHWAY EROSION CONTROL

SAMPSON COUNTY

LOCATION: NC 24 AT SR 1296 (SUNSET AVE) AND NC 24 FROM US 701 (SOUTHEAST BLVD.) TO EAST OF SR 1935 (CECIL-ODIE RD)

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

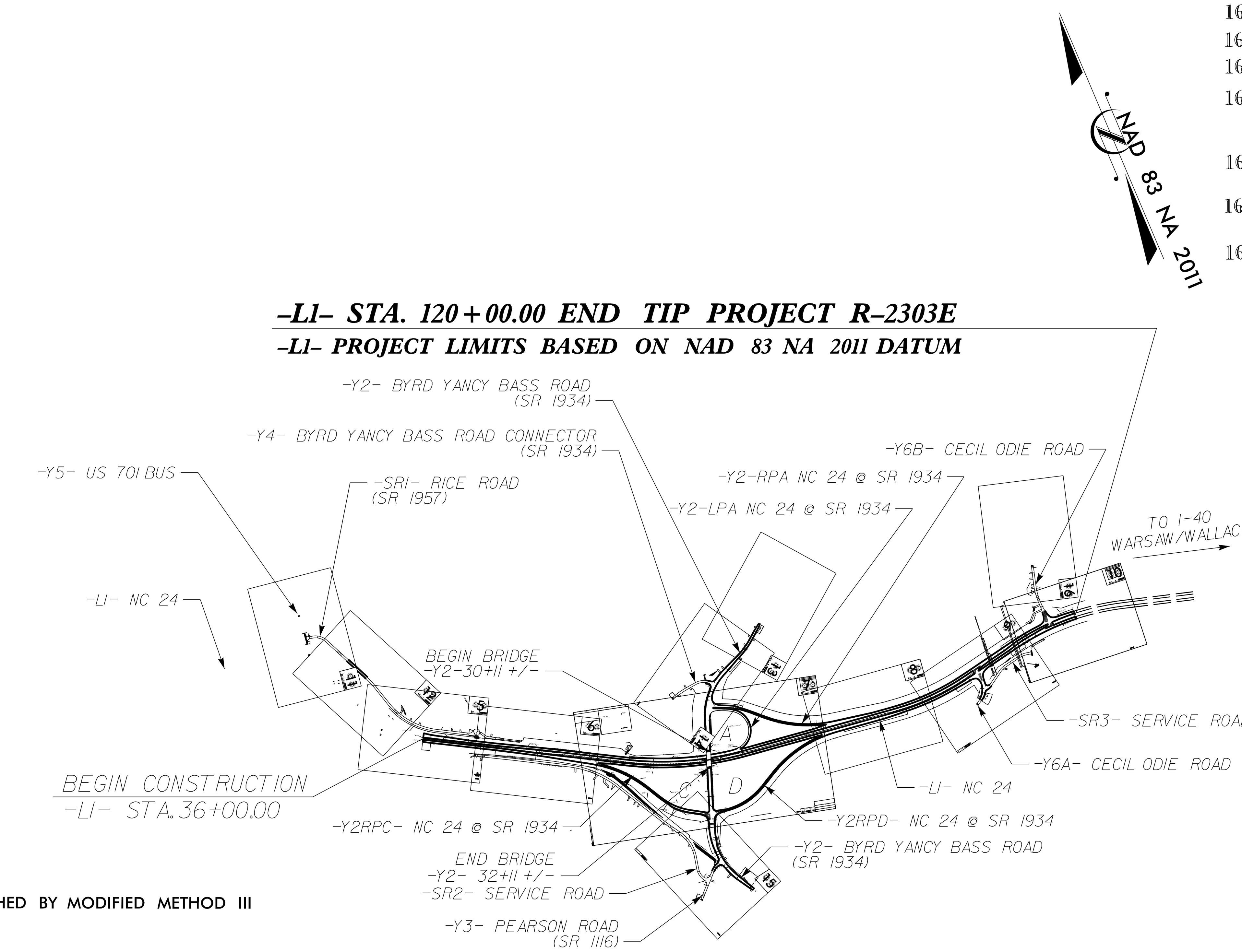


★ PROPOSED SIGNAL

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CLINTON.

THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO THE INTERCHANGES.

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY MODIFIED METHOD III



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle/Coir Fiber Wattle	EW / CFW
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THE OUTSIDE BUFFER, WETLAND OR WATER BOUNDARY SHALL BE CLEARLY MARKED BY HIGHLY VISIBLE FENCING. (ORANGE SAFETY FENCE)

GRAPHIC SCALE

50 25 0 50 100

PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.

moffatt & nichol

Prepared In the Office of:

MOFFATT & NICHOL

4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919)781-4626 PHONE (919)781-4869 FAX

Designed by:

SAURABH NOMULA ***#4067***

NAME *LEVEL III CERTIFICATION NO.*

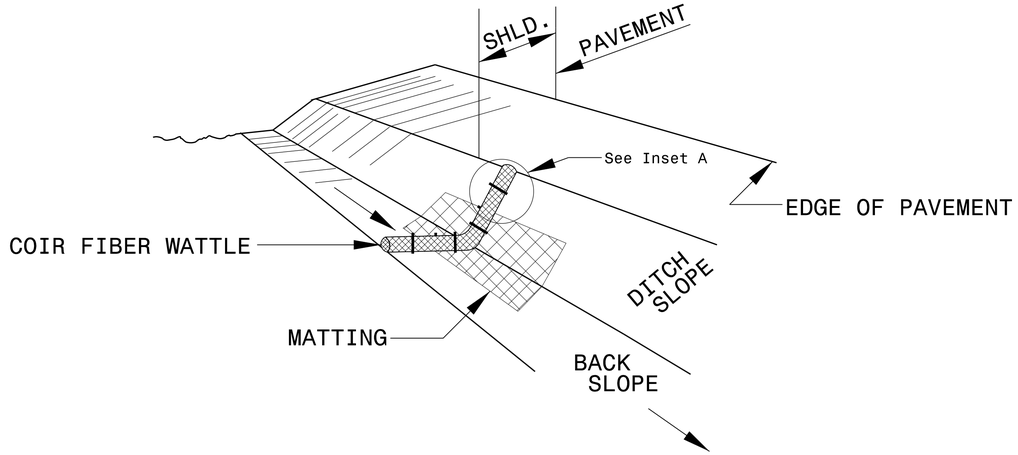
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2018 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

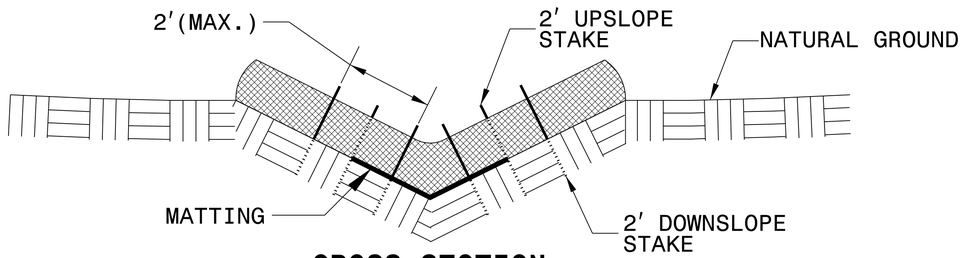
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-02A

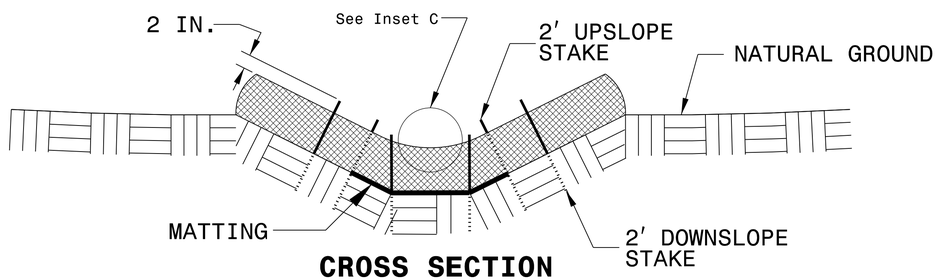
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

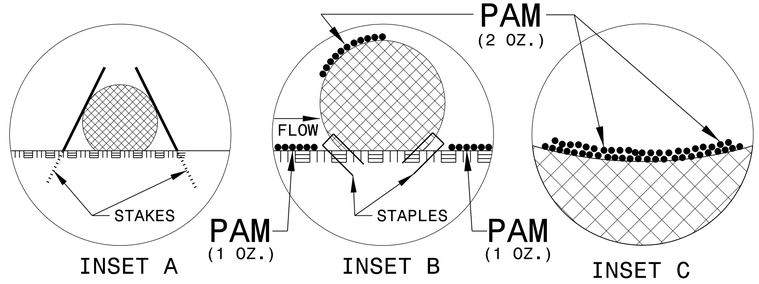
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

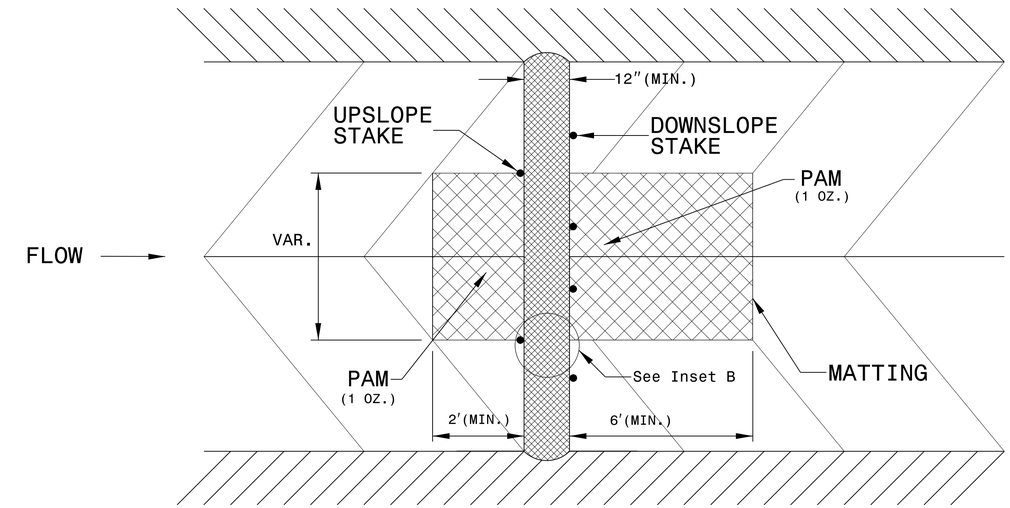
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

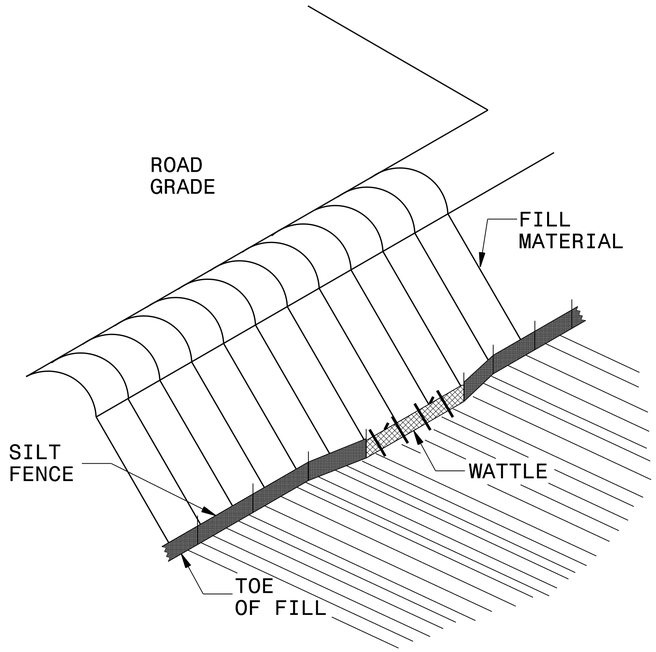




TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-02B

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

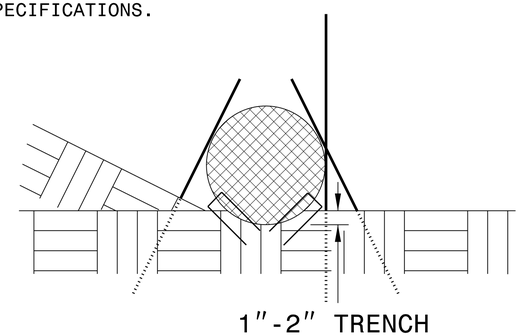
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

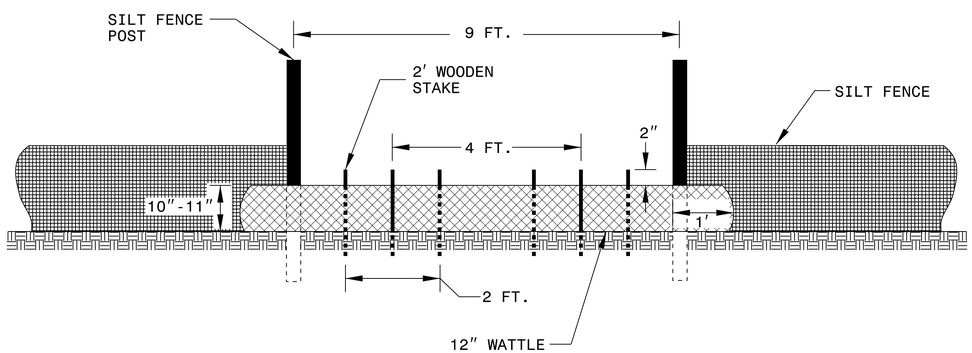
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

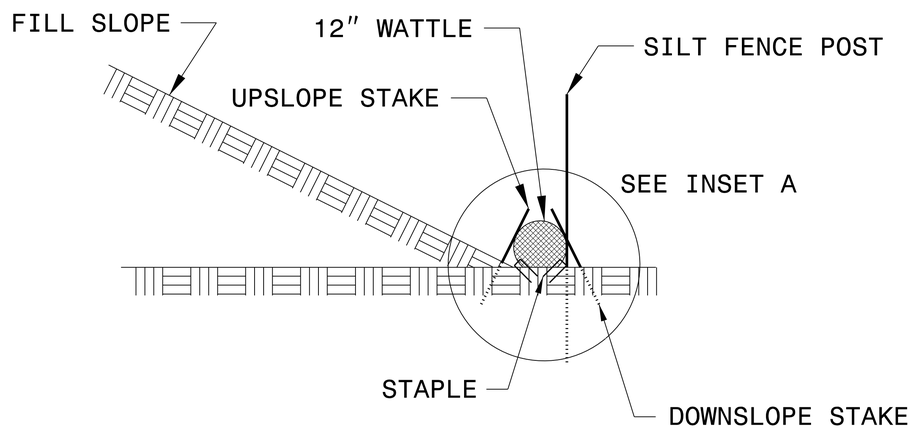
INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A





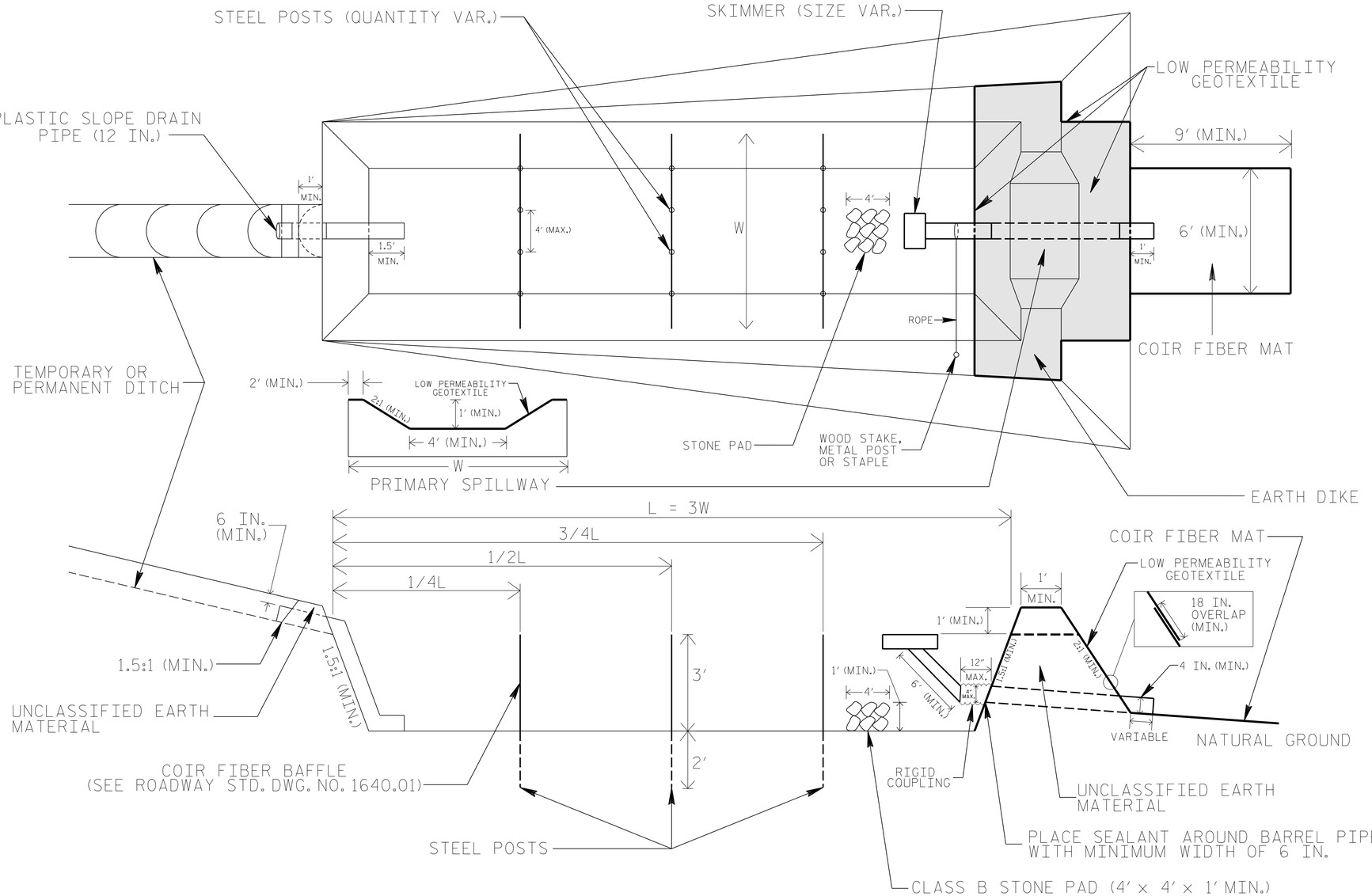
VIEW FROM SLOPE



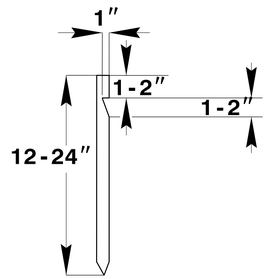
SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-02C

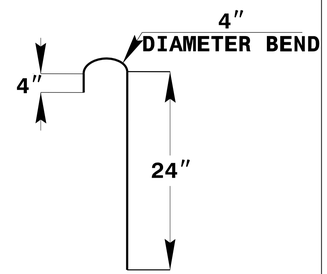
SKIMMER BASIN WITH BAFFLES DETAIL (EAST)



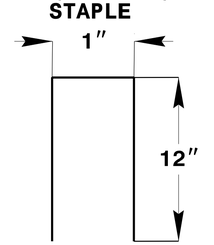
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

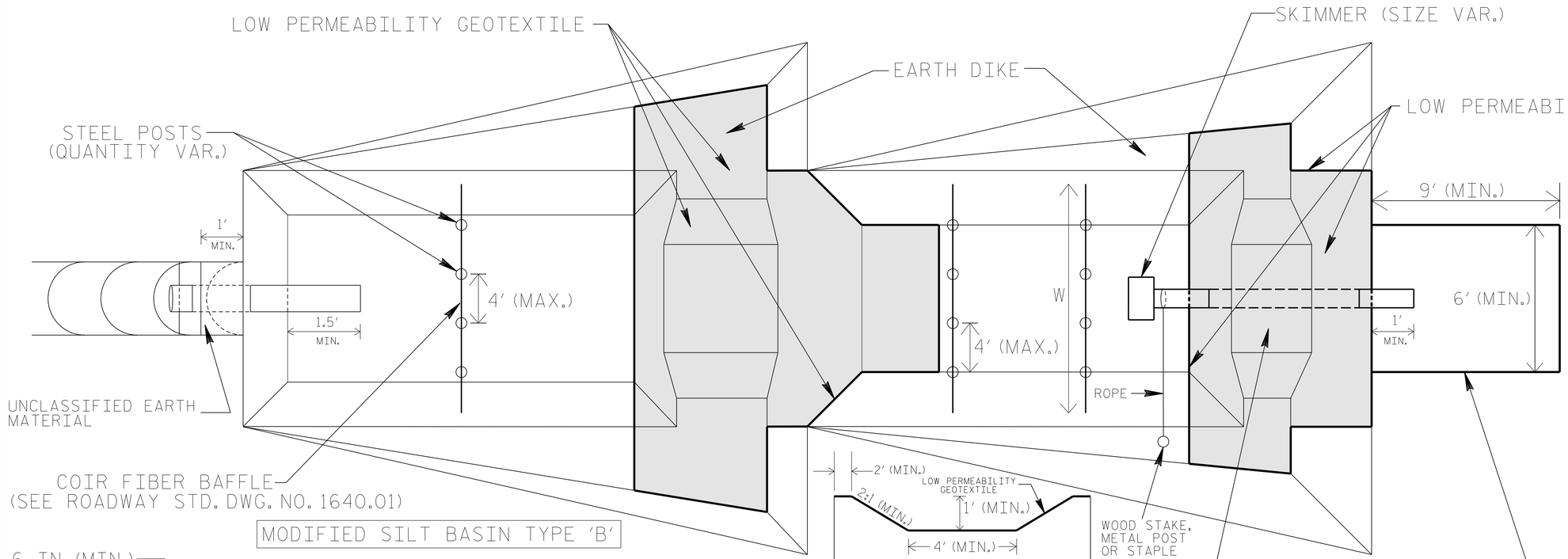
NOTES

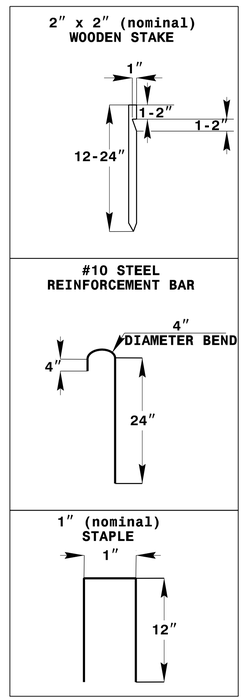
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-02D

TIERED SKIMMER BASIN DETAIL (EAST)





COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. FOR BASIN DEPTHS OF 3FT., THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE PRIMARY SPILLWAY WEIR LENGTHS (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-02E

BORROW PIT DEWATERING BASIN DETAIL

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING V = 8.0203 * Q * T, WHERE V IS VOLUME (FT^3), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1640-14.

PROVIDE 5′ STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3′ OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12″ STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

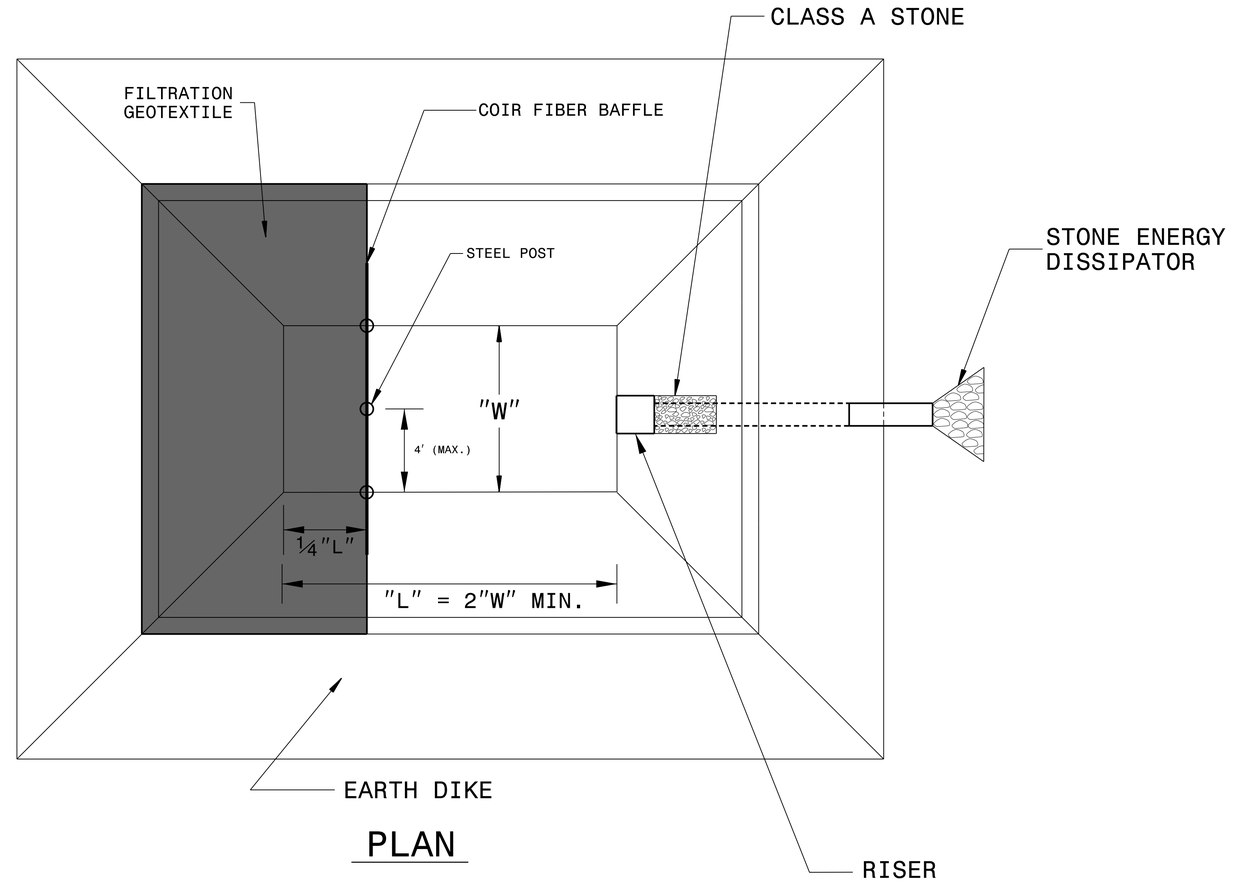
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

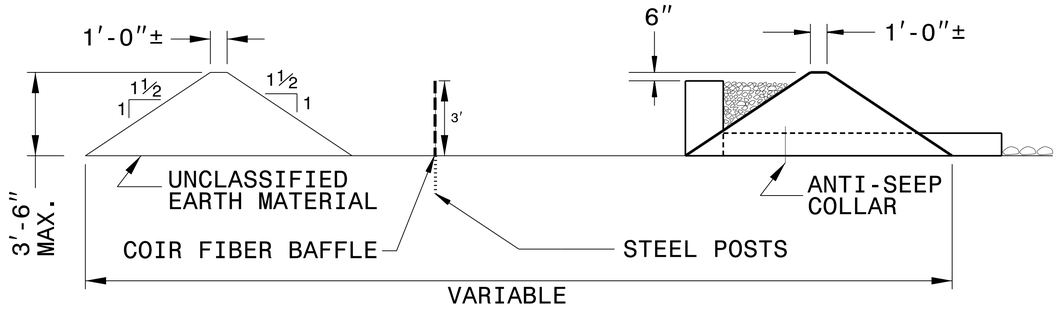
SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



PLAN

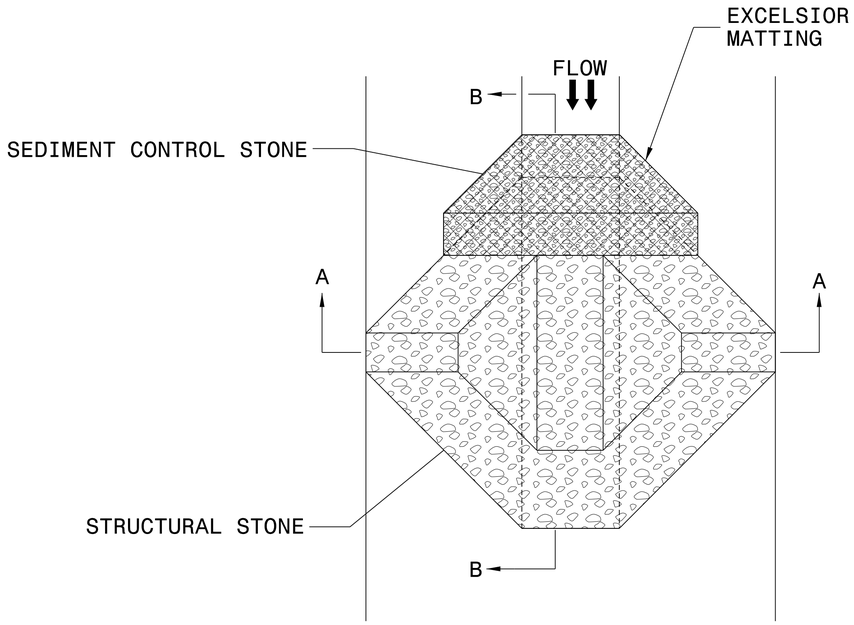


TYPICAL SECTION VIEW

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-02F

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN

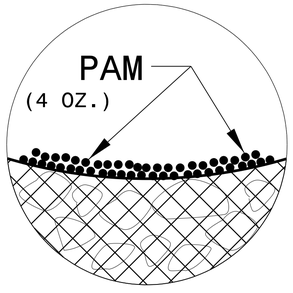
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

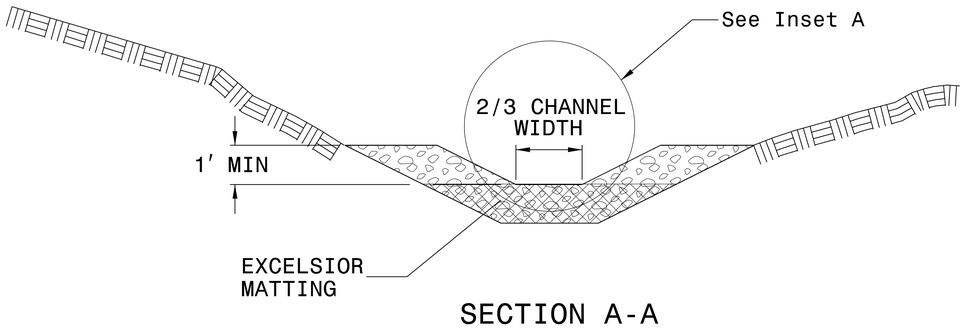
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

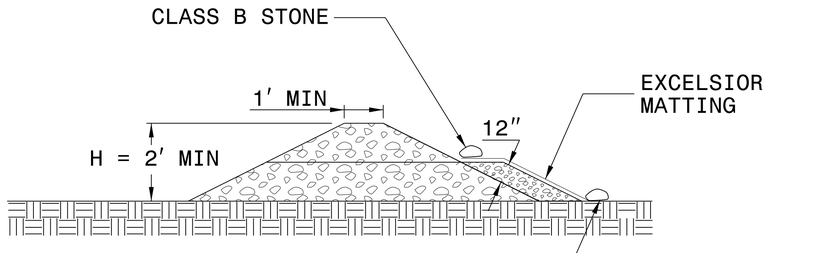
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A

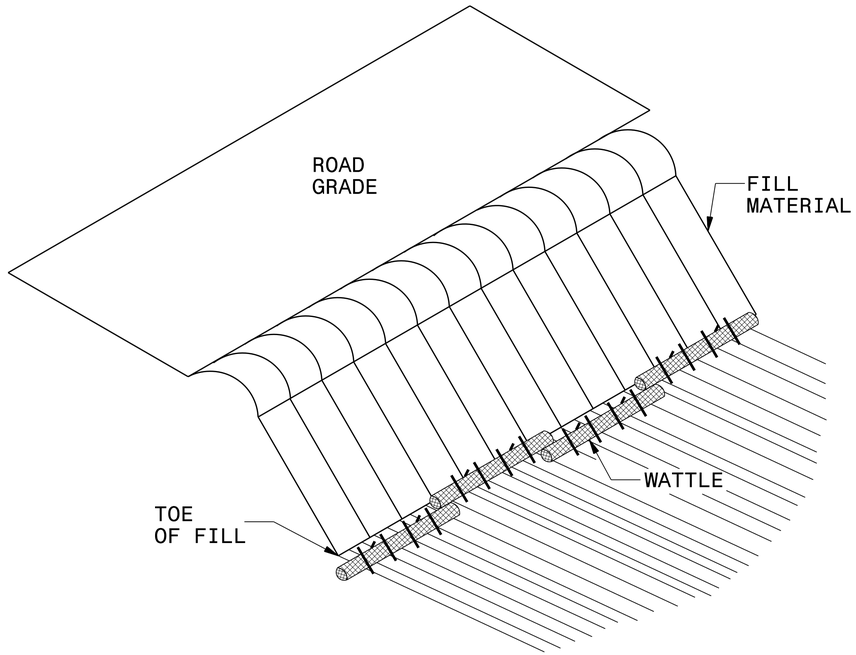


SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-26

COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 18 IN. NOMINAL DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

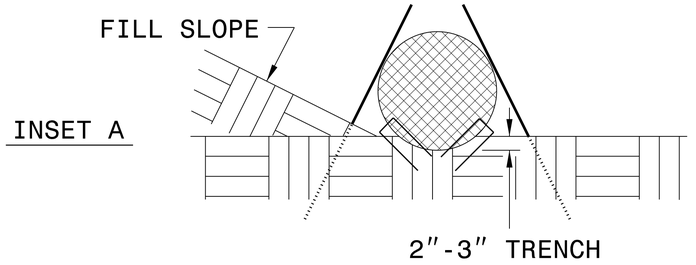
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

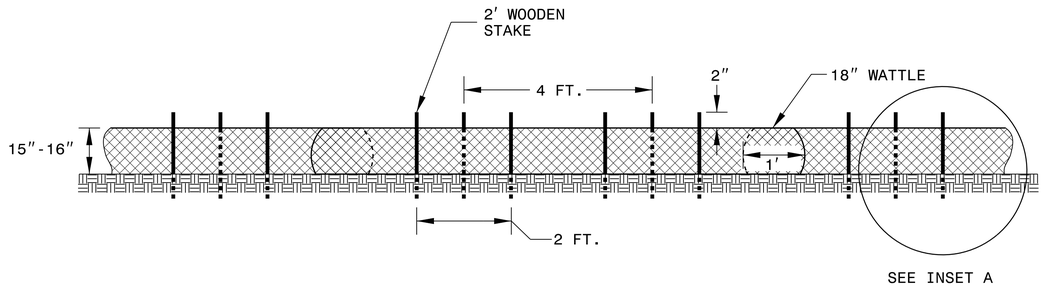
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

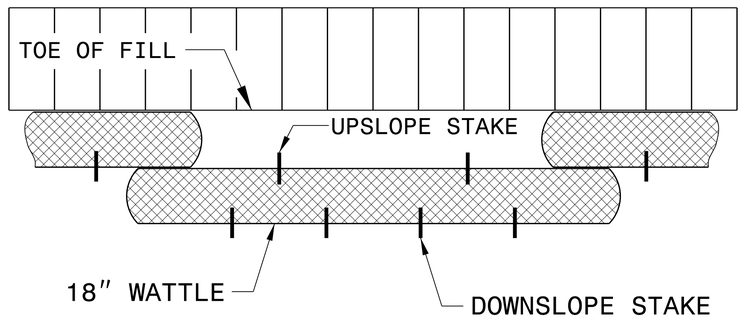
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.





FRONT VIEW



TOP VIEW

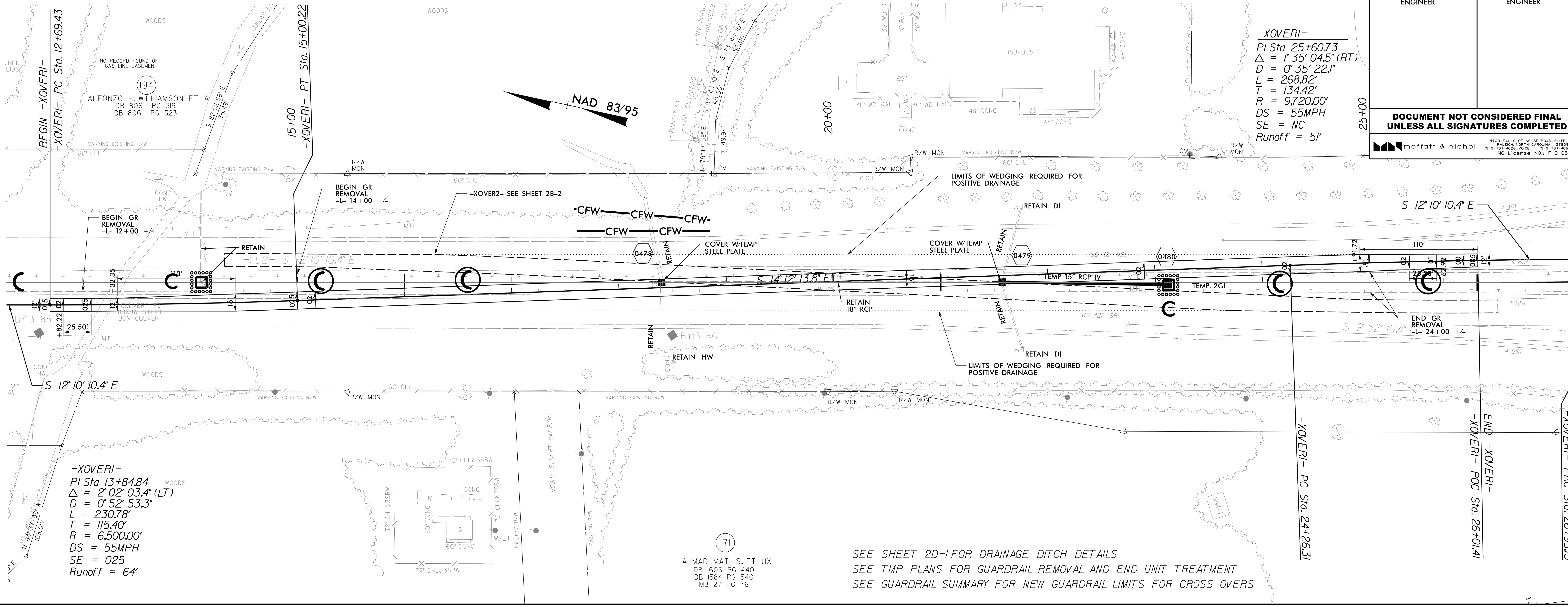
PROJECT REFERENCE NO.	SHEET NO.
R-2303E	2B-1/EC 2H-1

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

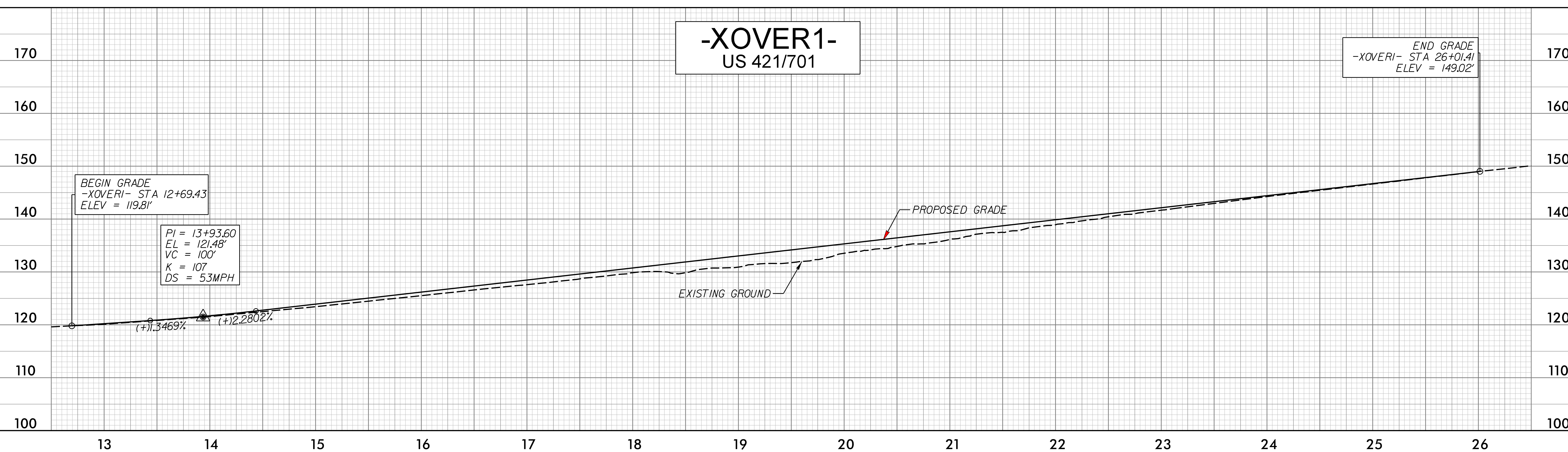
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

moffatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105



SEE SHEET 2D-1 FOR DRAINAGE DITCH DETAILS
SEE TMP PLANS FOR GUARDRAIL REMOVAL AND END UNIT TREATMENT
SEE GUARDRAIL SUMMARY FOR NEW GUARDRAIL LIMITS FOR CROSS OVERS

-XOVER1-
US 421/701



5/28/99
11/5/2019
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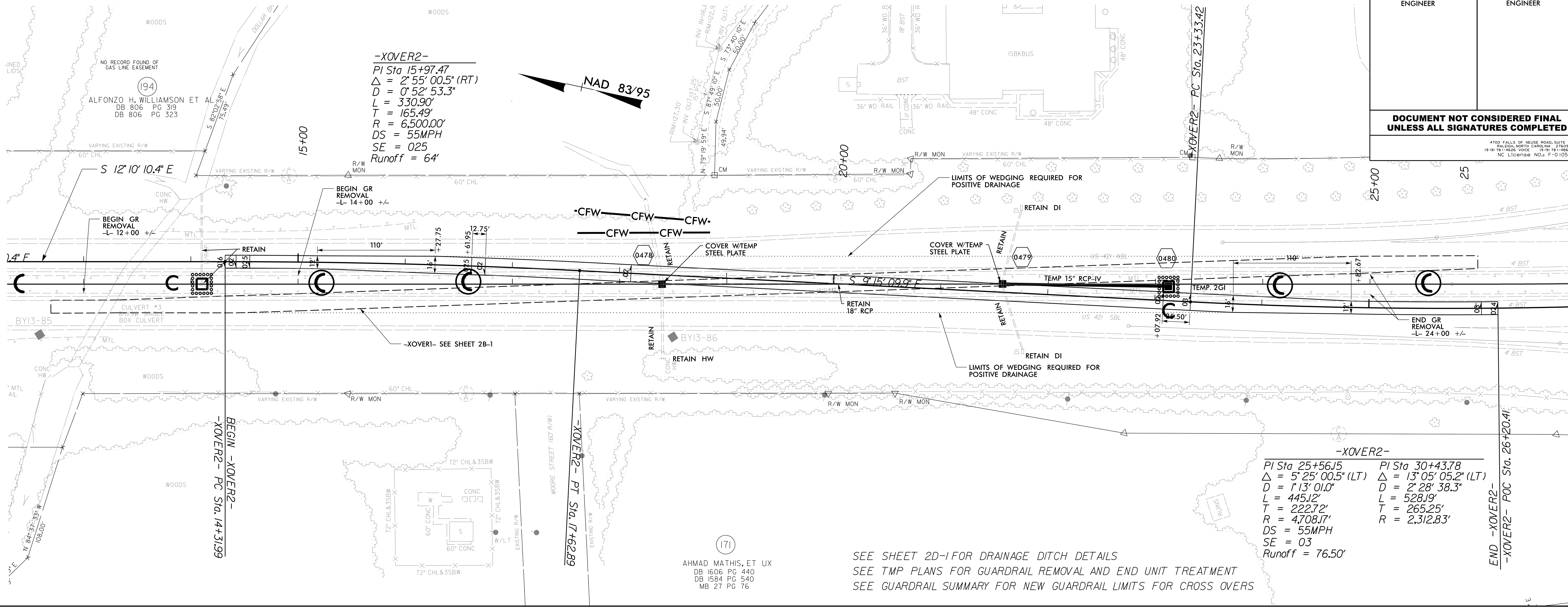
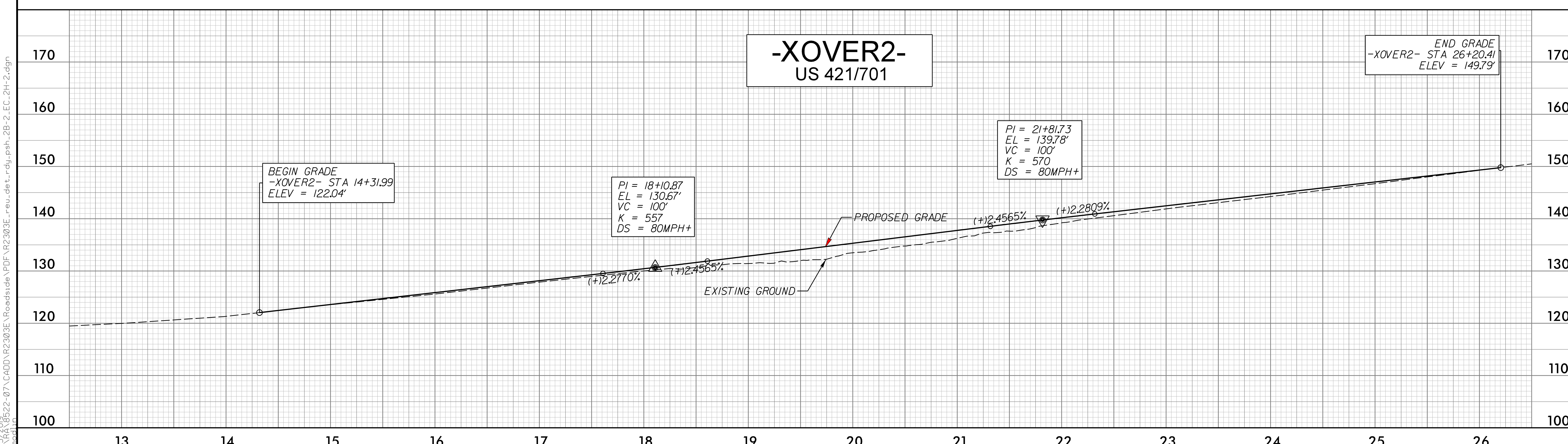
5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	2B-2/EC 2H-2
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

4700 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 NC License NO.: F-0105





11/5/2019
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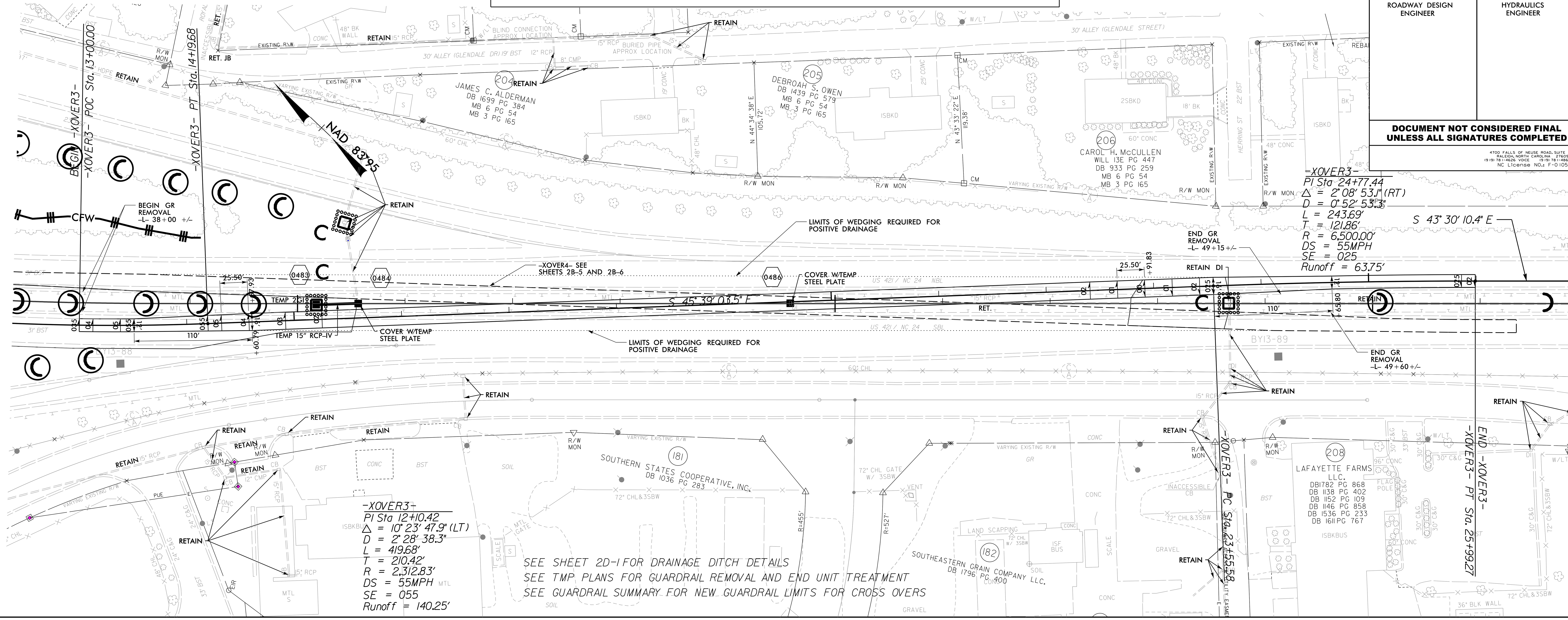
PROJECT REFERENCE NO.	SHEET NO.
R-2303E	2B-3/EC 2H-3

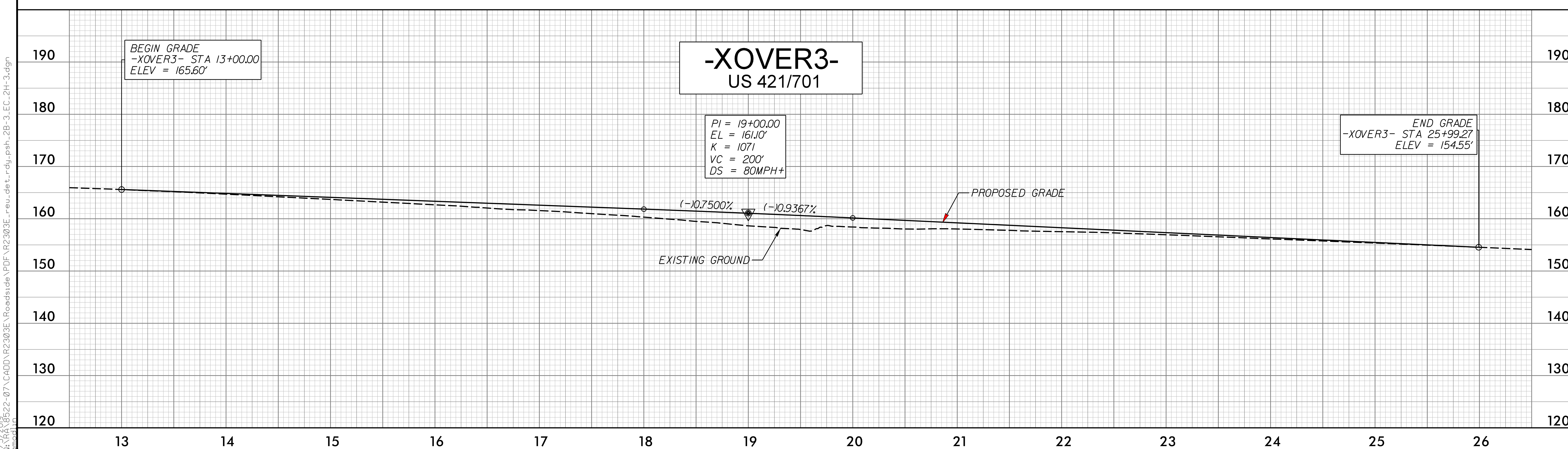
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105





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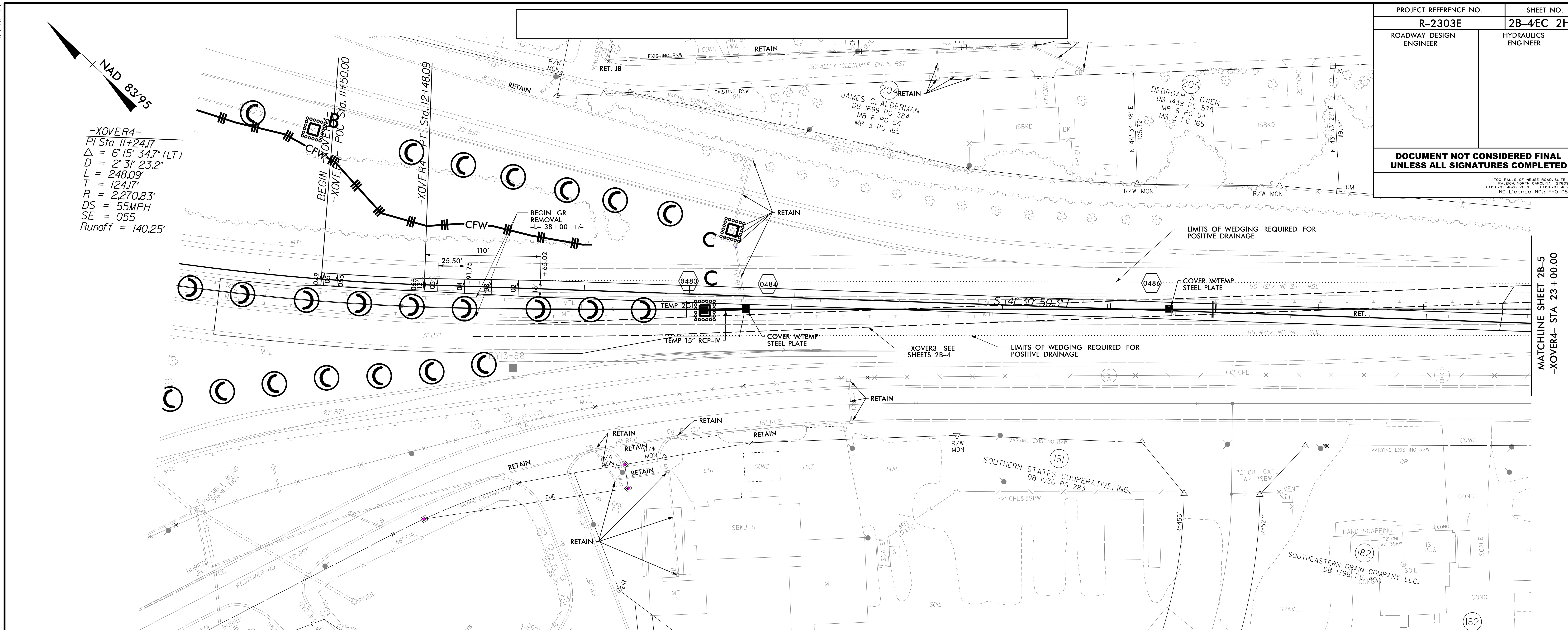
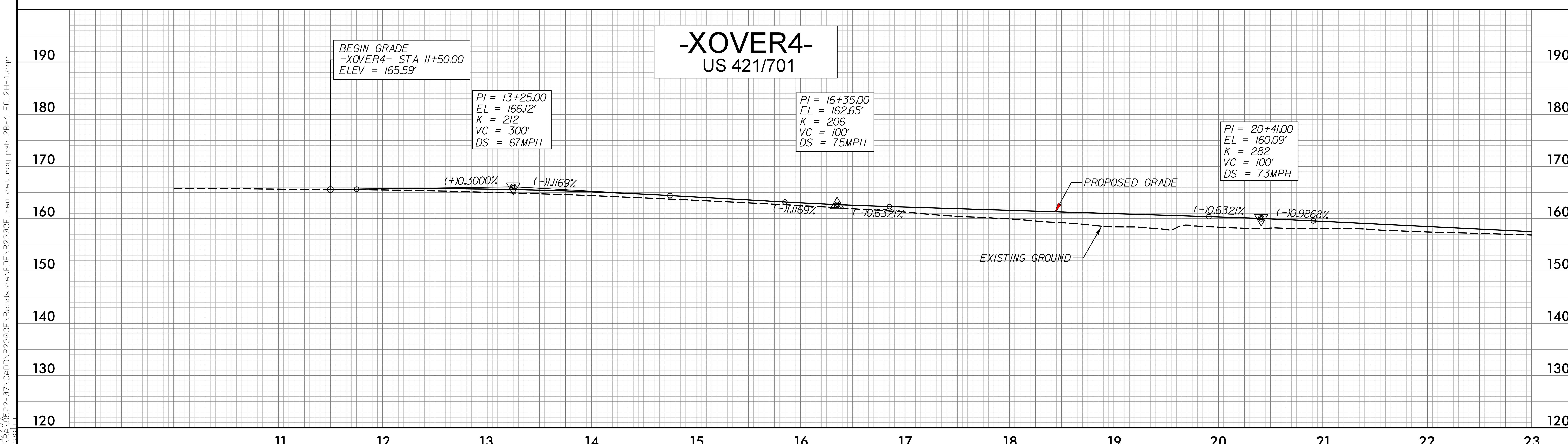
PROJECT REFERENCE NO.	SHEET NO.
R-2303E	2B-4/EC 2H-4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105

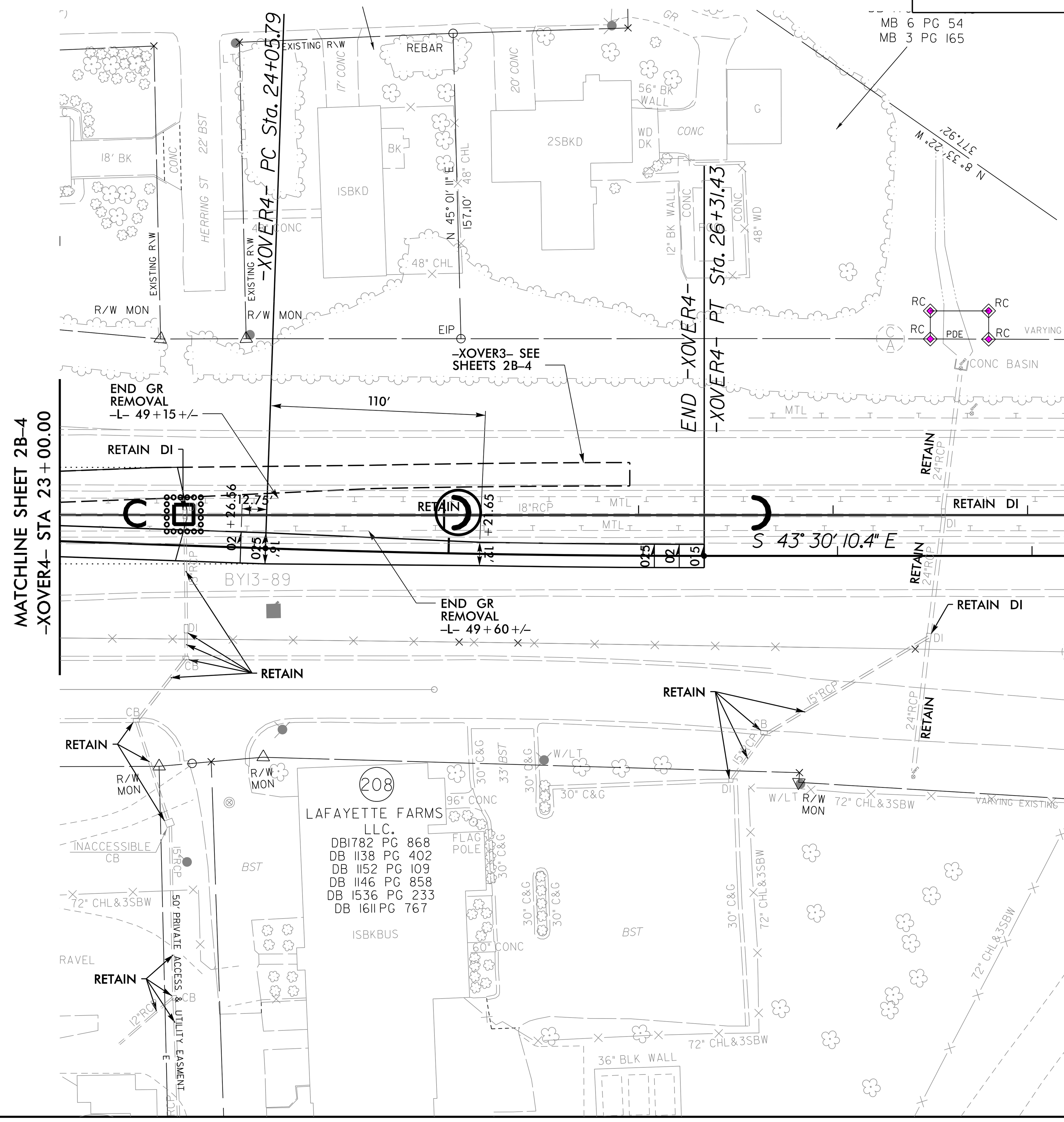




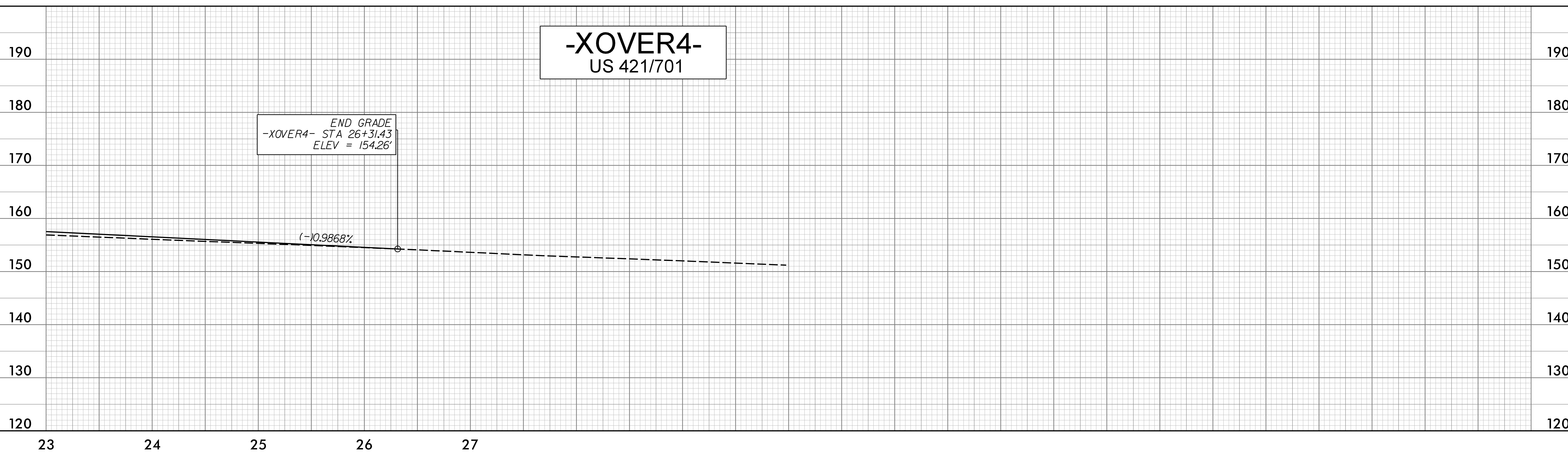
PROJECT REFERENCE NO.	SHEET NO.
R-2303E	2B-5/EC 2H-5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

moffatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105



-XOVER4-
PI Sta 25+18.62
Δ = 1° 59' 20.1" (LT)
D = 0° 52' 53.3"
L = 225.64'
T = 112.83'
R = 6,500.00'
DS = 55MPH
SE = .025
Runoff = 63.75'



5/28/99

11/5/2019
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pmedlin

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	2B-6/EC 2H-6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

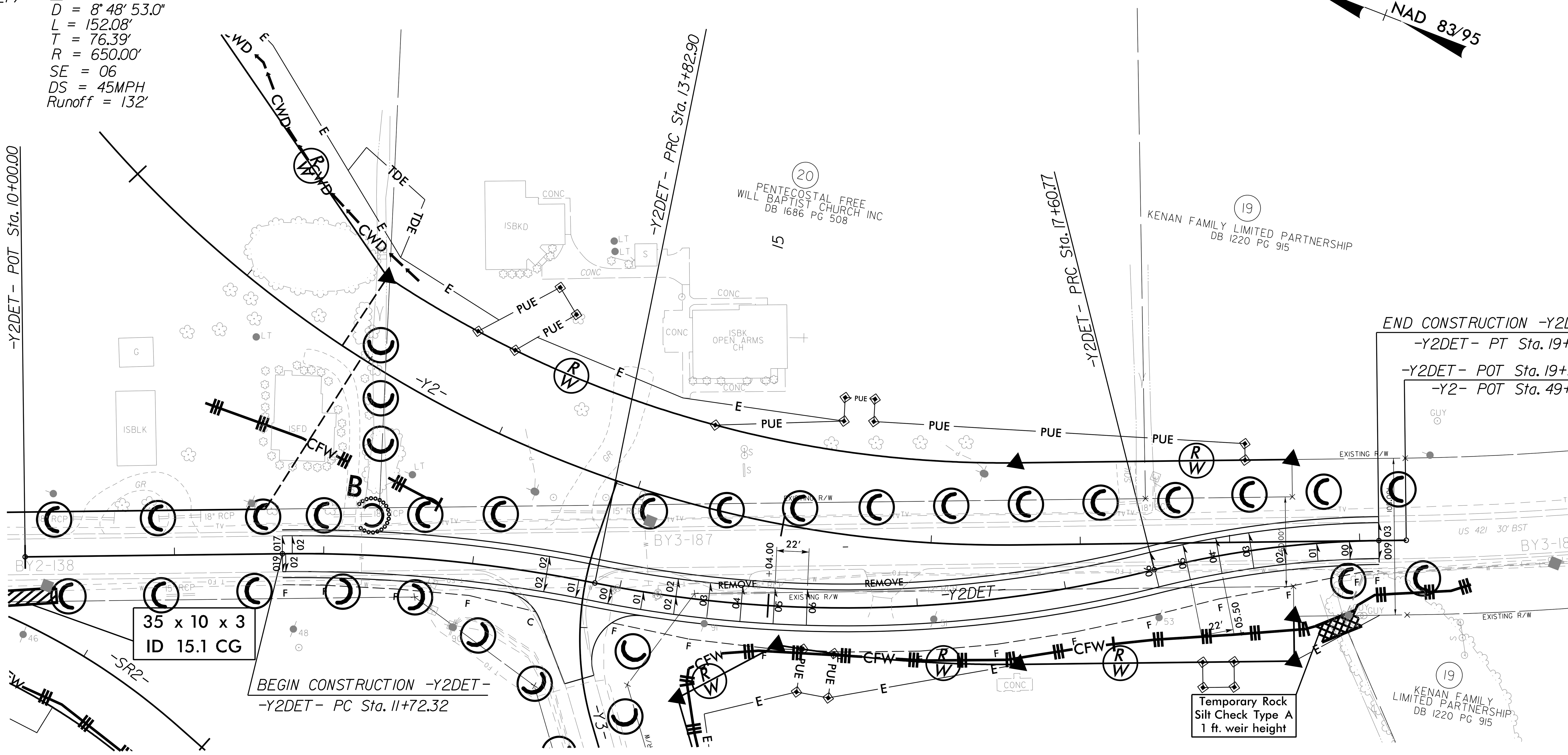
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

moffatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License No.: F-0105

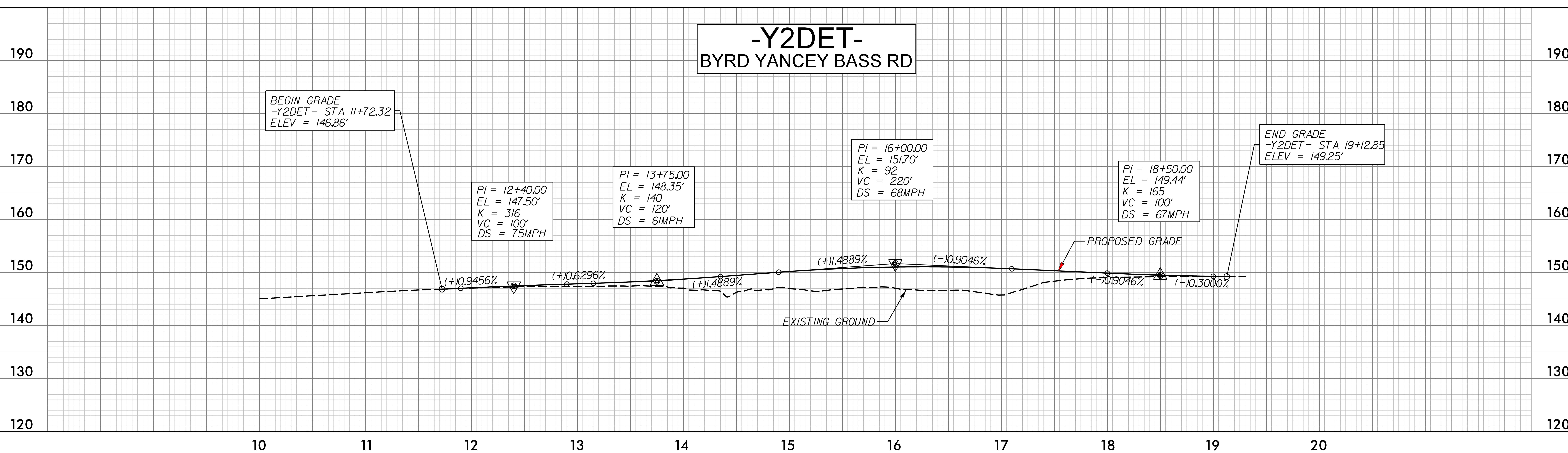
NO ADDITIONAL DETOUR DRAINAGE MEASURES REQUIRED ON THIS PLAN SHEET

-Y2DET-

PI Sta 12+78.00	PI Sta 15+75.01	PI Sta 18+37.16
△ = 12° 03' 56.2" (RT)	△ = 25° 28' 15.4" (LT)	△ = 13° 24' 19.2" (RT)
D = 5° 43' 46.5"	D = 6° 44' 26.4"	D = 8° 48' 53.0"
L = 210.58'	L = 377.87'	L = 152.08'
T = 105.68'	T = 192.11'	T = 76.39'
R = 1,000.00'	R = 850.00'	R = 650.00'
SE = NC	SE = .06	SE = .06
DS = 45MPH	DS = 45MPH	DS = 45MPH
Runoff = 44'	Runoff = 132'	Runoff = 132'



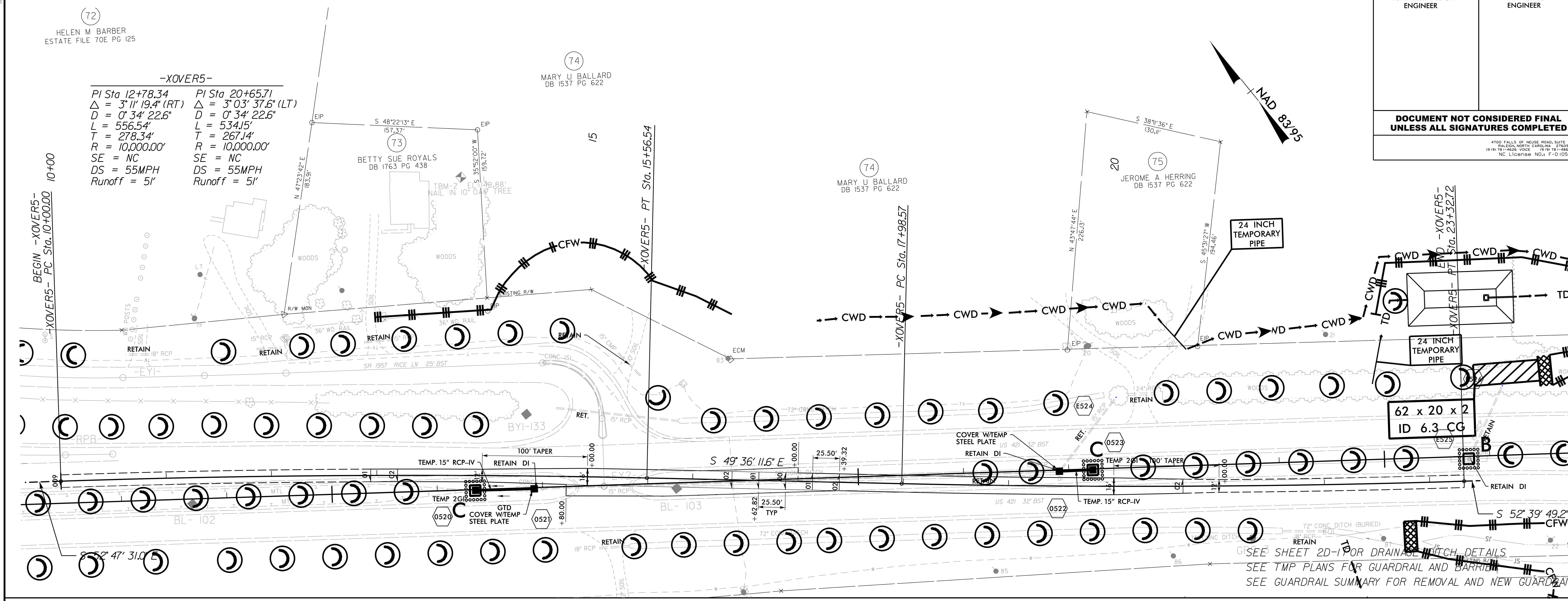
SEE TMP PLANS FOR DETAILS



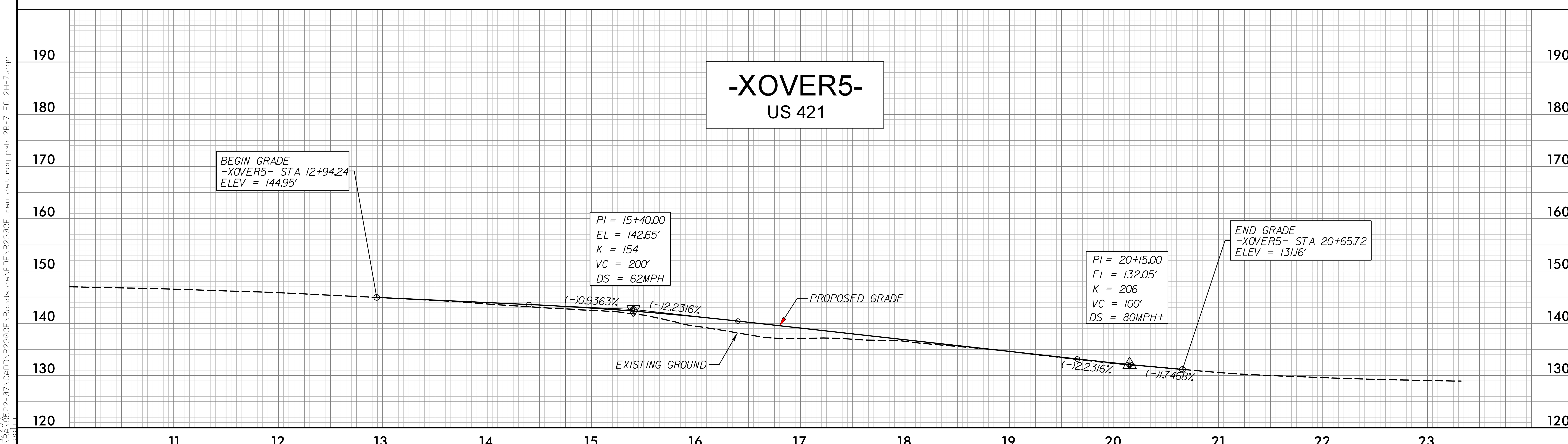
5/28/99
11/5/2019
Q:\RA\8522-07\CADD\R2303E\Roadside\PDF\R2303E_reu_det_rdy_psh_2B-6_EC_2H-6.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	2B-7/EC 2H-7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



-XOVER5-
PI Sta 12+78.34
△ = 3° 11' 19.4" (RT)
D = 0° 34' 22.6"
L = 556.54'
T = 278.34'
R = 10,000.00'
SE = NC
DS = 55MPH
Runoff = 51'
PI Sta 20+65.71
△ = 3° 03' 37.6" (LT)
D = 0° 34' 22.6"
L = 534.15'
T = 267.14'
R = 10,000.00'
SE = NC
DS = 55MPH
Runoff = 51'
HELEN M BARBER ESTATE FILE 70E PG 125
MARY U BALLARD DB 1537 PG 622
BETTY SUE ROYALS DB 1763 PG 438
JEROME A HERRING DB 1537 PG 622
NAD 83/95
BEGIN -XOVER5- PC Sta. 10+00.00
-XOVER5- PT Sta. 15+56.54
-XOVER5- PC Sta. 17+98.57
-XOVER5- PT Sta. 23+32.72
S 49° 36' 11.6" E
S 52° 47' 31.0" E
S 52° 39' 49.2" E
24 INCH TEMPORARY PIPE
62 x 20 x 2 ID 6.3 CG
100' TAPER
RETAIN DI
TEMP. 15" RCP-IV
COVER W/TEMP STEEL PLATE
SEE SHEET 2D-1 FOR DRAINAGE DITCH DETAILS
SEE TMP PLANS FOR GUARDRAIL AND BARRIER
SEE GUARDRAIL SUMMARY FOR REMOVAL AND NEW GUARDRAIL



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	26+25	26+50	MED	40
4	-L-	26+50	28+93	MED	550
4	-L-	27+25	29+25	LT	515
4	-L-	28+93	32+83	MED	710
4	-L-	36+20	38+25	RT	215
4	-L-	36+34	38+50	MED	395
5	-L1-	36+50	37+20	LT	240
5	-L1-	36+50	43+00	RT	2190
5	-L1-	36+90	41+92	MED	1345
5	-L1-	37+20	41+50	LT	1450
5/6	-L1-	41+50	43+40	LT	695
5/6	-L1-	41+92	46+91	MED	1340
5/12	-SR1-	23+00	27+40	LT	1415
5	-SR1-	27+40	30+75	LT	1025
5	-SR1-	31+50	35+51	LT	1290
5/6	-SR2-	13+00	17+00	RT	645
6	-DR1-	10+00	12+00	LT	805
6	-L1-	43+00	45+50	RT	1340
6	-L1-	43+40	46+50	LT	1045
6	-L1-	45+50	49+00	RT	1875
6	-L1-	46+91	50+55	MED	1220
6/7	-L1-	50+80	60+50	MED	3895
6	-L1-	52+50	56+00	RT	1410
6	-L1-	54+00	60+50	LT	5355
6	-SR2-	17+00	20+00	RT	790
6	-SR2-	20+00	22+55	RT	325
6/7	-SR2-	25+85	34+40	RT	4540
6/7	-SR2-	27+00	31+00	LT	805
6	-Y2RPC-	13+30	15+00	RT	610
6	-Y2RPC-	15+00	17+00	RT	615
6	-Y2RPC-	17+00	17+50	LT	155

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
7	-L1-	58+27	60+50	RT	890
7	-L1-	60+50	64+50	RT	410
7	-L1-	60+50	66+24	MED	1925
7	-L1-	61+00	65+00	LT	485
7	-L1-	65+00	66+29	LT	235
7	-L1-	66+24	73+75	MED	1005
7	-L1-	72+50	75+00	RT	715
7	-L1-	75+00	76+80	RT	405
7	-L1-	75+68	77+50	LT	450
7	-L1-	76+80	82+40	RT	1800
7	-L1-	82+40	84+72	RT	745
7	-L1-	82+50	85+50	LT	2415
7	-L1-	84+00	85+00	LT	290
7	-SR2-	31+00	35+70	LT	565
7	-SR2-	34+40	38+75	RT	705
7/15	-SR2-	35+70	40+40	LT	565
7	-Y2RPA/L1- TAIL 1	20+04 / 87'	77+92 / 143'	LT / LT	735
7	-Y2RPD- TAIL 2	20+51 / 43'	20+54 / 102'	RT / RT	155
7	-Y2RPC/L1- TAIL 3	26+90 / 154'	66+25 / 146'	LT / RT	1025
7	-L1/Y2- TAIL 4	74+79 / 163'	27+11 / 197'	LT / LT	710
7	-L1- TAIL 5	73+37 / 135'	74+51 / 257'	LT / LT	355
7	-Y2LPA/Y2- TAIL 6	17+35 / 87'	27+28 / 210'	LT / LT	180
7	-Y2-	27+80	30+00	RT	970
7	-Y2-	32+00	36+80	LT	1005
7/15	-Y2-	38+60	39+95	RT	235
7	-Y2RPA-	16+00	20+04	RT	2850
7	-Y2RPA-	20+04	22+50	RT	1180
7	-Y2RPA-	22+50	25+00	RT	765
7	-Y2RPA-	25+00	27+00	RT	565
7	-Y2RPC-	14+15	17+50	RT	1025
7	-Y2RPC-	17+50	22+50	RT	1020

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
7	-Y2RPC-	22+50	25+41	RT	405
7	-Y2RPC-	25+41	26+90	RT	365
7	-Y2RPC-	26+90	29+40	RT	110
7/8	-Y2RPD-	10+00	15+50	LT	1240
7	-Y2RPD-	15+50	17+00	LT	265
7	-Y2RPD-	16+15	20+00	RT	930
7	-Y2RPD-	17+00	20+50	LT	970
7	-Y2RPD-	20+50	21+00	LT	175
7	-Y2RPD-	26+45	29+05	LT	275
8	-L1-	85+00	89+75	LT	2195
8	-L1-	88+25	88+75	RT	190
8	-L1-	89+00	94+10	RT	2965
8	-L1-	89+75	93+85	LT	1080
8/9	-L1-	93+85	102+00	LT	2795
8/9	-L1-	94+50	105+05	RT	3195
9	-L1-	101+00	105+45	MED	1790
9	-L1-	102+00	111+25	LT	2430
9	-L1-	106+85	109+00	RT	825
9	-L1-	109+00	111+15	RT	815
9	-L1-	111+15	120+00	RT	2705
9/10	-L1-	111+25	115+75	LT	1905
9/10	-L1-	112+90	115+90	MED	605
9	-SR3-	10+35	16+50	RT	1235
9	-SR3-	11+15	14+75	LT	725
9	-SR3-	14+75	17+00	LT	365
9	-Y6A-	11+50	15+00	LT	1125
9	-Y6A-	11+50	12+39	RT	215
9	-Y6A-	13+12	13+34	RT	50
9	-Y6A-	14+30	15+15	RT	260
10	-L1-	117+78	119+50	LT	555
10	-Y6B-	19+50	21+45	LT	590

MATTING FOR EROSION CONTROL

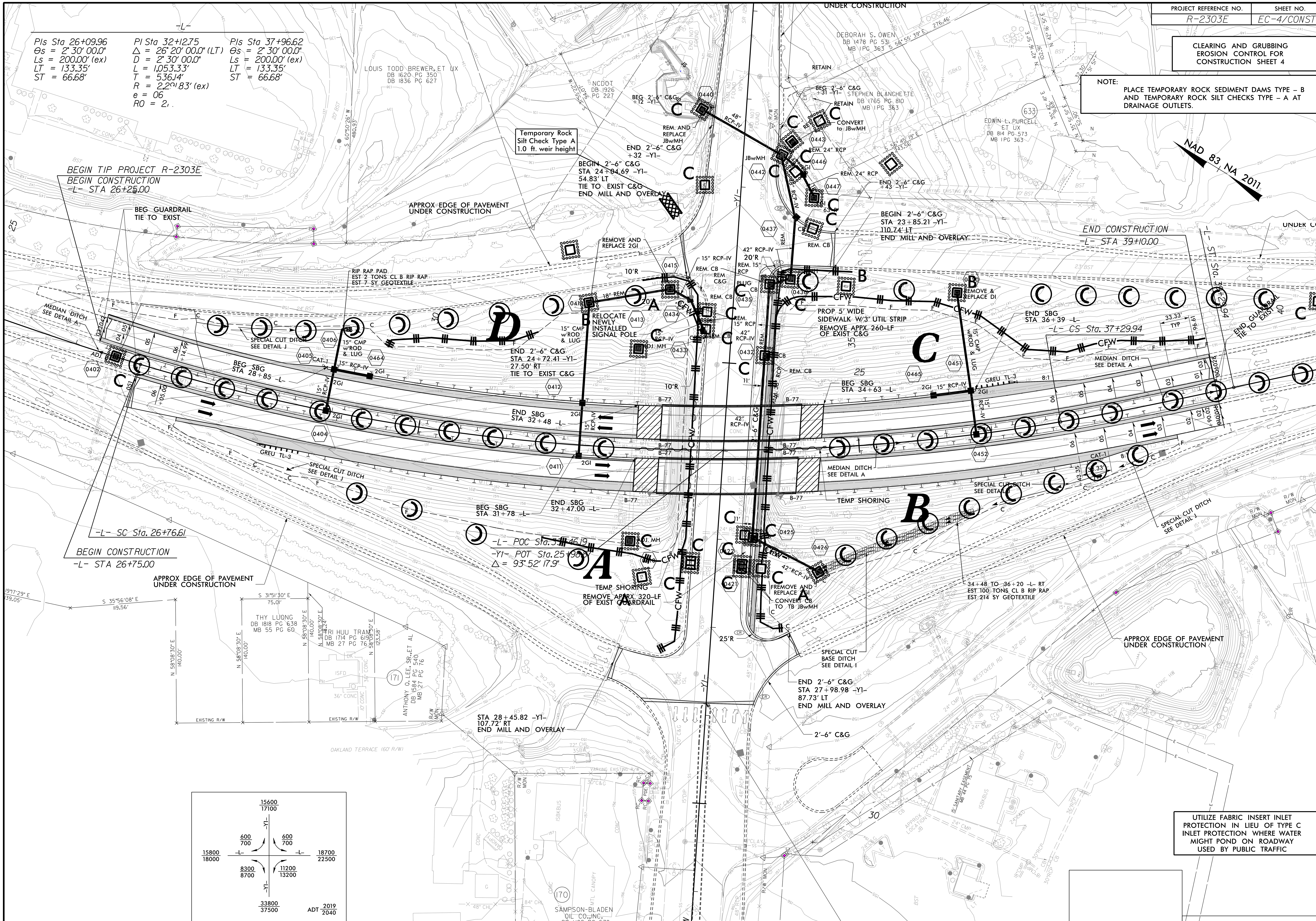
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
10	-Y6B-	21+00	21+45	RT	220
11/12	-SR1-	10+75	14+45	LT	1565
12	-SR1-	21+00	23+00	LT	690
13	-Y2-	12+75	13+50	LT	125
13/14	-Y2-	12+75	18+50	RT	1155
13/14	-Y2-	13+50	17+00	LT	565
14	-Y2-	18+50	21+30	RT	735
14	-Y2-	21+95	23+35	LT	285
14	-Y4-	10+75	13+00	LT	510
14	-Y4-	13+00	15+05	LT	705
14	-Y4-	10+05	14+00	RT	605
15	-SR2-	42+20	46+50	LT	1035
15	-SR2-	43+35	46+70	RT	405
15	-Y2-	38+50	39+95	LT	335
15	-Y2-	39+95	40+50	LT	160
15	-Y2-	40+50	41+00	LT	145
15	-Y2-	41+00	48+00	LT	1940
15	-Y3-	11+50	13+57	LT	530
15	-Y3-	13+95	16+10	RT	550
16	-Y6B-	15+00	17+00	LT	645
16	-Y6B-	15+00	17+10	RT	675
16	-Y6B-	17+00	18+00	LT	245
10/16	-Y6B-	18+00	19+50	LT	395
10/16	-Y6B-	18+60	19+55	RT	230
				SUBTOTAL	113,025
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					35,275
				TOTAL	148,300
				SAY	148,500

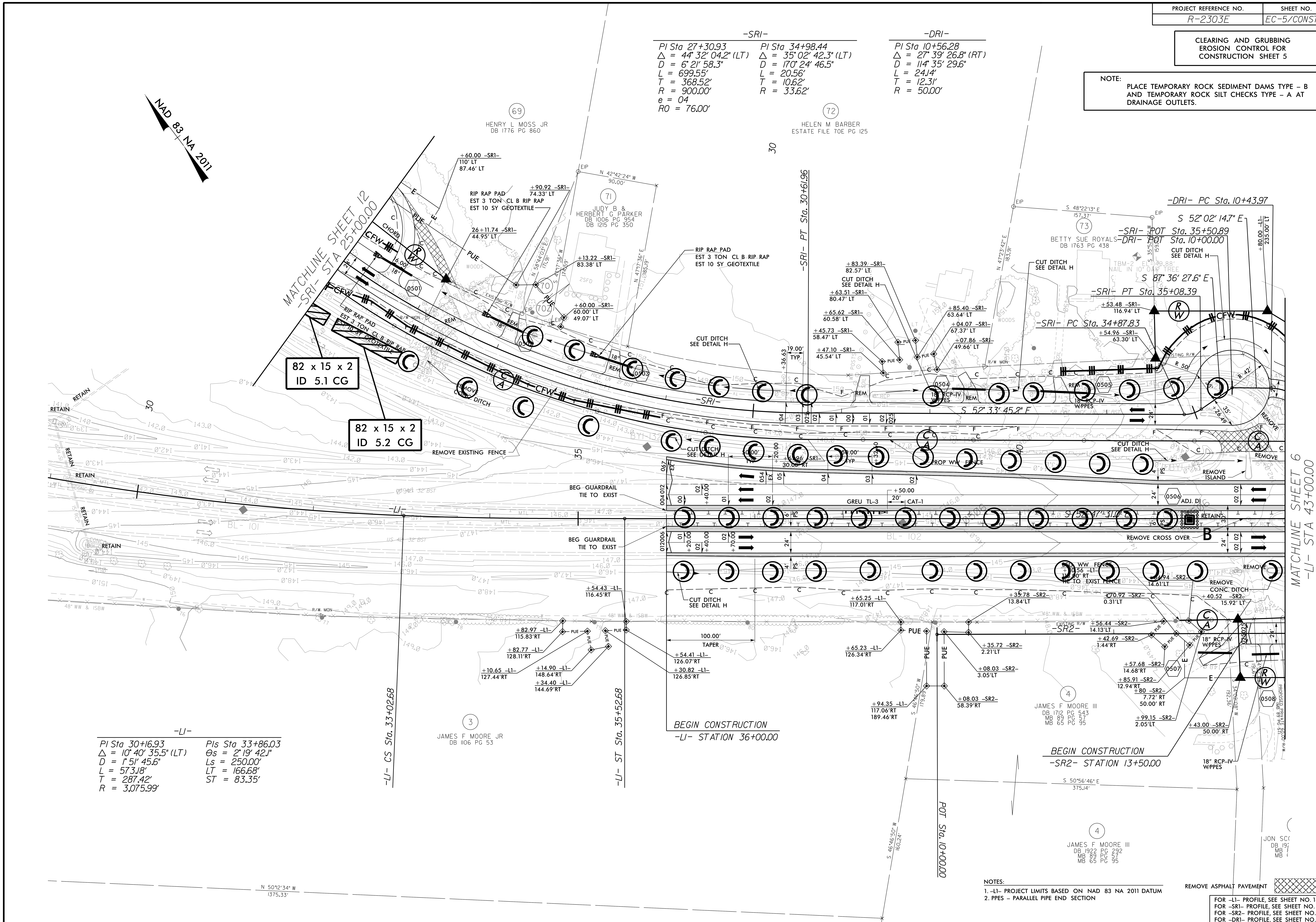
PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-03C

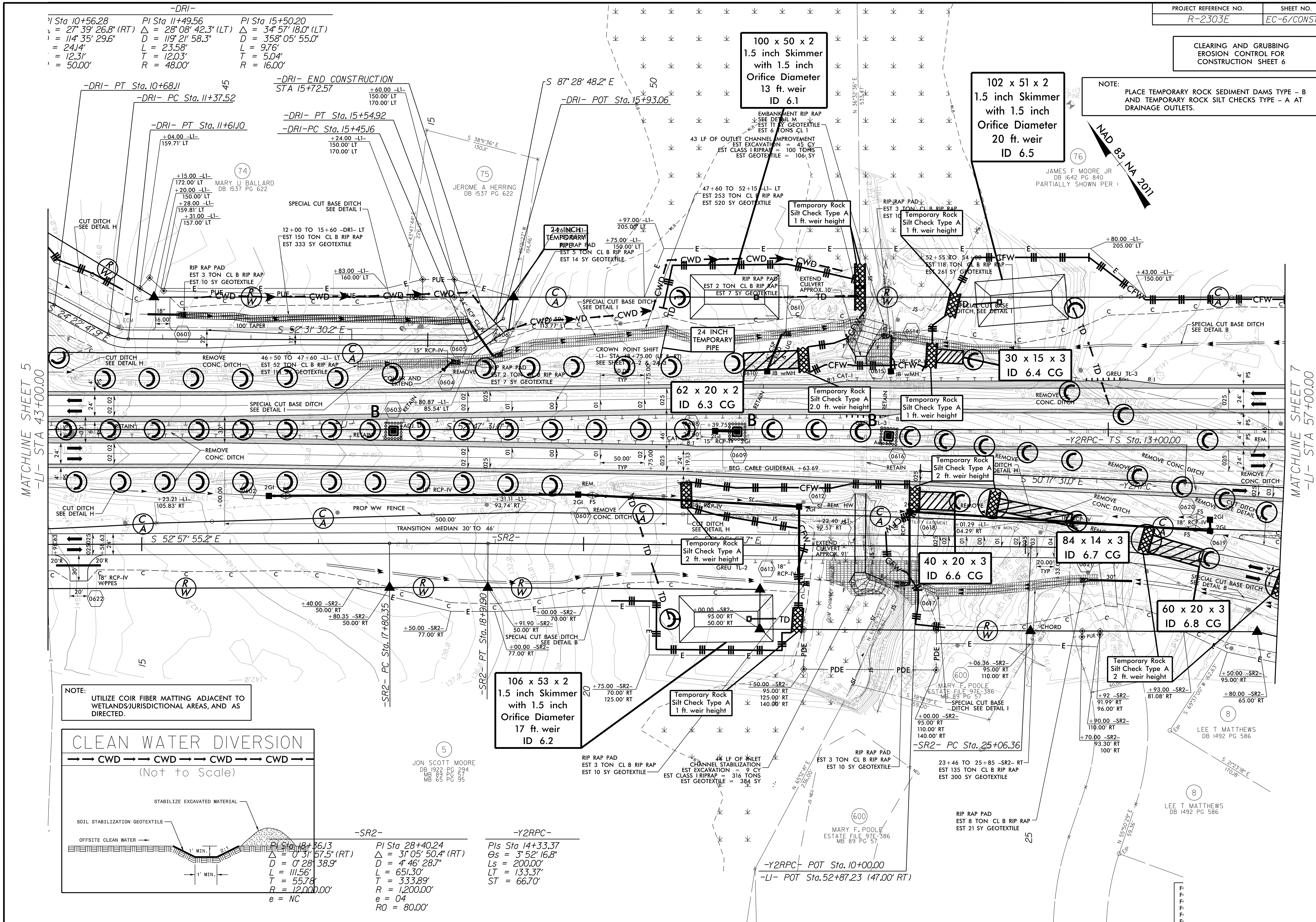
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.


PROJECT REFERENCE NO. R-2303E
SHEET NO. EC-4/CONST.4
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.
NAD 83 NA 2011
-L-
PIs Sta 26+09.96
Θs = 2° 30' 00.0"
Ls = 200.00' (ex)
LT = 133.35'
ST = 66.68'
PI Sta 32+12.75
Δ = 26° 20' 00.0" (LT)
D = 2° 30' 00.0"
L = 1,053.33'
T = 536.14'
R = 2,291.83' (ex)
e = 06
RO = 2
PIs Sta 37+96.62
Θs = 2° 30' 00.0"
Ls = 200.00' (ex)
LT = 133.35'
ST = 66.68'
BEGIN TIP PROJECT R-2303E
BEGIN CONSTRUCTION -L- STA 26+25.00
BEGIN CONSTRUCTION -L- STA 26+75.00
END CONSTRUCTION -L- STA 39+10.00
-L- SC Sta. 26+76.61
-L- POC Sta. 31+46.19
-Y1- POT Sta. 25+93.5
Δ = 93° 52' 17.9"
-L- CS Sta. 37+29.94
Temporary Rock Silt Check Type A 1.0 ft. weir height
APPROX EDGE OF PAVEMENT UNDER CONSTRUCTION
BEG GUARDRAIL TIE TO EXIST
RIP RAP PAD EST 2 TONS CL B RIP RAP EST 7 SY GEOTEXTILE
SPECIAL CUT DITCH SEE DETAIL J
MEDIAN DITCH SEE DETAIL A
BEG SBG STA 28+85 -L-
END SBG STA 32+48 -L-
BEG SBG STA 31+78 -L-
END SBG 32+47.00 -L-
BEG SBG STA 34+63 -L-
END SBG STA 36+39 -L-
END GUARDRAIL TIE TO EXIST
RELOCATE NEWLY INSTALLED SIGNAL POLE
END 2'-6" C&G STA 24+72.41 -Y1- 27.50' RT TIE TO EXIST C&G
BEGIN 2'-6" C&G STA 24+04.69 -Y1- 54.83' LT TIE TO EXIST C&G END MILL AND OVERLAY
BEGIN 2'-6" C&G STA 23+85.21 -Y1- 110.74' LT END MILL AND OVERLAY
PROP 5' WIDE SIDEWALK W/3' UTIL STRIP
REMOVE APPX. 260-LF OF EXIST C&G
TEMP SHORING
REMOVE APPX. 320-LF OF EXIST GUARDRAIL
34+48 TO 36+20 -L- RT EST 100 TONS CL B RIP RAP EST 214 SY GEOTEXTILE
SPECIAL CUT BASE DITCH SEE DETAIL I
END 2'-6" C&G STA 27+98.98 -Y1- 87.73' LT END MILL AND OVERLAY
STA 28+45.82 -Y1- 107.72' RT END MILL AND OVERLAY
STA 28+86.36 -Y1-
2'-6" C&G
LOUIS TODD BREWER, ET UX DB 1620 PG 350 DB 1836 PG 627
NCDOT DB 1926 PG 227
DEBORAH S. OWEN DB 1478 PG 531 MB 1 PG 363
STEPHEN BLANCHETTE DB 1765 PG 810 MB 1 PG 363
EDWIN L. PURCELL ET UX DB 814 PG 573 MB 1 PG 363
THY LUONG DB 1818 PG 638 MB 55 PG 60
TRI HUU TRAM DB 1714 PG 619 MB 27 PG 76
ANTHONY O. LEE, SR., ET AL DB 1584 PG 540 MB 27 PG 76
SAMPSON-BLADEN OIL CO., INC. DB 1102 PG 578
UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF TYPE C INLET PROTECTION WHERE WATER MIGHT POND ON ROADWAY USED BY PUBLIC TRAFFIC
ADT 2019/2040
15600/17100
15800/18000
18700/22500
33800/37500
600/700
600/700
8300/8700
11200/13200


PROJECT REFERENCE NO.
R-2303E
SHEET NO.
EC-5/CONST.5
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.
-SRI-
PI Sta 27+30.93
△ = 44° 32' 04.2" (LT)
D = 6° 21' 58.3"
L = 699.55'
T = 368.52'
R = 900.00'
e = 04
RO = 76.00'
PI Sta 34+98.44
△ = 35° 02' 42.3" (LT)
D = 170° 24' 46.5"
L = 20.56'
T = 10.62'
R = 33.62'
-DRI-
PI Sta 10+56.28
△ = 27° 39' 26.8" (RT)
D = 114° 35' 29.6"
L = 24.14'
T = 12.31'
R = 50.00'
NAD 83 NA 2011
HENRY L MOSS JR
DB 1776 PG 860
HELEN M BARBER
ESTATE FILE 70E PG 125
JUDY B &
HERBERT G PARKER
DB 1006 PG 954
DB 1215 PG 350
BETTY SUE ROYALS
DB 1763 PG 438
MATCHLINE SHEET 12
-SRI- STA 25+00.00
MATCHLINE SHEET 6
-LI- STA 43+00.00
RIP RAP PAD
EST 3 TON CL B RIP RAP
EST 10 SY GEOTEXTILE
82 x 15 x 2
ID 5.1 CG
82 x 15 x 2
ID 5.2 CG
REMOVE EXISTING FENCE
-SRI- PT Sta. 30+61.96
-DRI- PC Sta. 10+43.97
S 52° 02' 14.7" E
-SRI- POT Sta. 35+50.89
-DRI- POT Sta. 10+00.00
S 87° 36' 27.6" E
-SRI- PT Sta. 35+08.39
-SRI- PC Sta. 34+87.83
S 52° 33' 45.2" E
CUT DITCH
SEE DETAIL H
BEG GUARDRAIL
TIE TO EXIST
GREU TL-3
CAT-1
REMOVE CROSS OVER
REMOVE ISLAND
REMOVE CONC. DITCH
100.00'
TAPER
-LI- CS Sta. 33+02.68
-LI- ST Sta. 35+52.68
BEGIN CONSTRUCTION
-LI- STATION 36+00.00
BEGIN CONSTRUCTION
-SR2- STATION 13+50.00
POT Sta. 10+00.00
JAMES F MOORE JR
DB 1106 PG 53
JAMES F MOORE III
DB 1712 PG 543
MB 89 PG 57
MB 65 PG 95
JAMES F MOORE III
DB 1922 PG 292
MB 89 PG 57
MB 65 PG 95
-LI-
PI Sta 30+16.93
△ = 10° 40' 35.5" (LT)
D = 1° 51' 45.6"
L = 573.18'
T = 287.42'
R = 3,075.99'
PIs Sta 33+86.03
θs = 2° 19' 42.1"
Ls = 250.00'
LT = 166.68'
ST = 83.35'
N 50°12'34" W
1375.33'
S 50°56'46" E
375.14'
NOTES:
1. -LI- PROJECT LIMITS BASED ON NAD 83 NA 2011 DATUM
2. PPES – PARALLEL PIPE END SECTION
REMOVE ASPHALT PAVEMENT
FOR -LI- PROFILE, SEE SHEET NO. 18
FOR -SR1- PROFILE, SEE SHEET NO. 30
FOR -SR2- PROFILE, SEE SHEET NO. 30
FOR -DR1- PROFILE, SEE SHEET NO. 32
FOR DITCH DETAILS SEE SHEET 2D-1

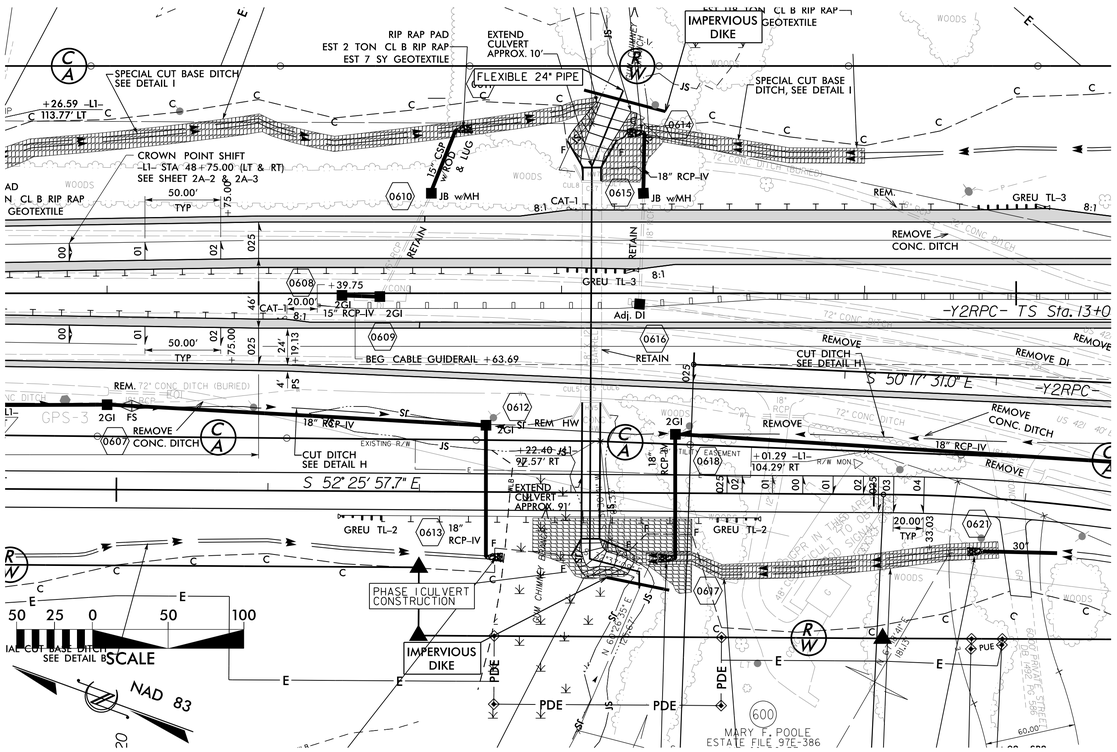


PROJECT REFERENCE NO. R-2303E
SHEET NO. EC-6/CONST.6
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.
NAD 83/NA 2011
-DRI-
PI Sta 10+56.28
PI Sta 11+49.56
△ = 28° 08' 42.3" (LT)
D = 119° 21' 58.3"
L = 23.58'
T = 12.03'
R = 48.00'
PI Sta 15+50.20
△ = 34° 57' 18.0" (LT)
D = 358° 05' 55.0"
L = 9.76'
T = 5.04'
R = 16.00'
-DRI- PT Sta. 10+68.11
-DRI- PC Sta. 11+37.52
-DRI- PT Sta. 11+61.10
-DRI- END CONSTRUCTION STA 15+72.57
-DRI- PT Sta. 15+54.92
-DRI-PC Sta. 15+45.16
-DRI- POT Sta. 15+93.06
100 x 50 x 2
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
13 ft. weir
ID 6.1
102 x 51 x 2
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
20 ft. weir
ID 6.5
106 x 53 x 2
1.5 inch Skimmer
with 1.5 inch
Orifice Diameter
17 ft. weir
ID 6.2
62 x 20 x 2
ID 6.3 CG
30 x 15 x 3
ID 6.4 CG
40 x 20 x 3
ID 6.6 CG
84 x 14 x 3
ID 6.7 CG
60 x 20 x 3
ID 6.8 CG
Temporary Rock Silt Check Type A 1 ft. weir height
Temporary Rock Silt Check Type A 2.0 ft. weir height
Temporary Rock Silt Check Type A 2 ft. weir height
24 INCH TEMPORARY PIPE
MARY U BALLARD DB 1537 PG 622
JEROME A HERRING DB 1537 PG 622
JAMES F MOORE JR DB 1642 PG 840
JON SCOTT MOORE DB 1922 PG 294
MARY F. POOLE ESTATE FILE 97E-386 MB 89 PG 57
LEE T MATTHEWS DB 1492 PG 586
MATCHLINE SHEET 5 -L1- STA 43+00.00
MATCHLINE SHEET 7 -L1- STA 57+00.00
-Y2RPC- TS Sta. 13+00.00
-SR2- PC Sta. 17+80.35
-SR2- PT Sta. 18+91.90
-SR2- PC Sta. 25+06.36
-Y2RPC- POT Sta. 10+00.00
-L1- POT Sta. 52+87.23 (47.00' RT)
NOTE: UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.
CLEAN WATER DIVERSION
CWD → CWD → CWD → CWD
(Not to Scale)
STABILIZE EXCAVATED MATERIAL
SOIL STABILIZATION GEOTEXTILE
OFFSITE CLEAN WATER
1' MIN.
-SR2-
PI Sta 18+36.13
△ = 0° 31' 57.5" (RT)
D = 0° 28' 38.9"
L = 111.56'
T = 55.78'
R = 12,000.00'
e = NC
PI Sta 28+40.24
△ = 31° 05' 50.4" (RT)
D = 4° 46' 28.7"
L = 651.30'
T = 333.89'
R = 1,200.00'
e = 04
RO = 80.00'
-Y2RPC-
PIs Sta 14+33.37
θs = 3° 52' 16.8"
Ls = 200.00'
LT = 133.37'
ST = 66.70'

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-6A

CULVERT CONSTRUCTION SEQUENCE STA. 52+20 –L1–

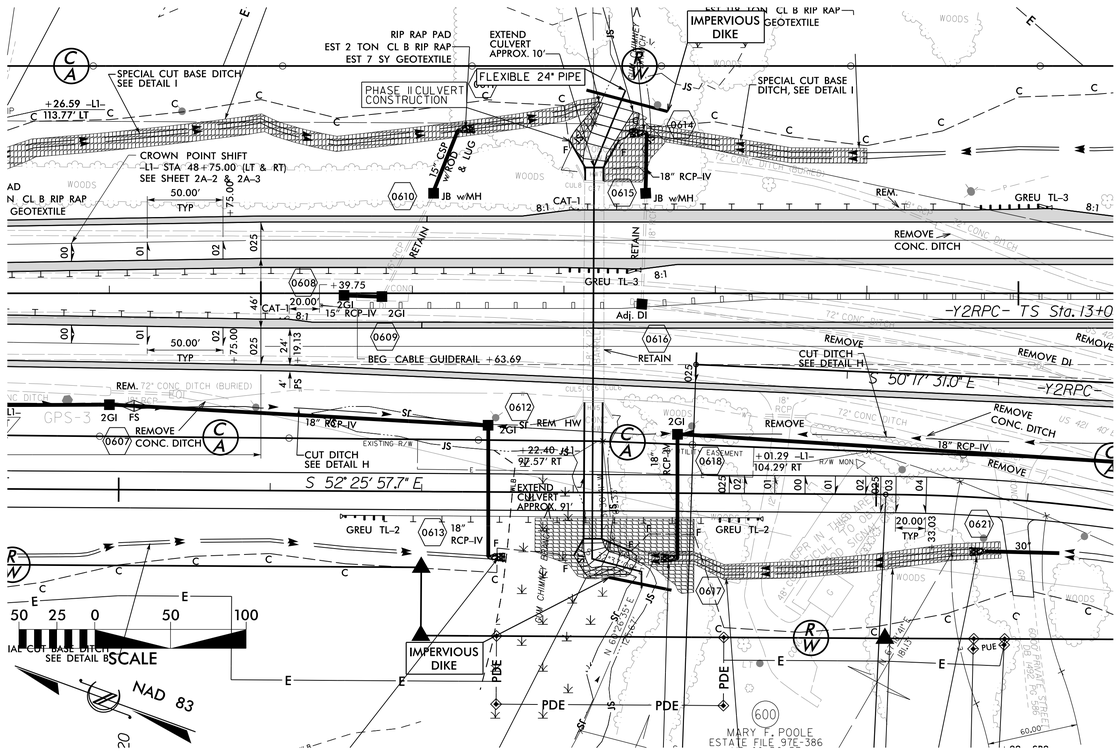
PHASE I



CULVERT CONSTRUCTION SEQUENCE

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. INSTALL FLEXIBLE 24" PIPE
3. INSTALL IMPERVIOUS DIKES TO A TOP ELEV = 119.2' (UPSTREAM & DOWNSTREAM)
4. REMOVE EXISTING HEADWALL AND WINGWALLS ON UPSTREAM SIDE.
5. EXTEND EXISTING CULVERT 91' ON UPSTREAM SIDE. CONSTRUCT UPSTREAM WINGWALLS AND UPSTREAM RIP RAP PROTECTION. REALIGN 24" BYPASS PIPE AS NECESSARY.

PHASE II



CULVERT CONSTRUCTION SEQUENCE

6. REMOVE EXISTING HEADWALL AND WINGWALLS ON DOWNSTREAM SIDE.
7. EXTEND EXISTING CULVERT 5' ON DOWNSTREAM SIDE. CONSTRUCT DOWNSTREAM WINGWALLS AND DOWNSTREAM CHANNEL IMPROVEMENTS. REALIGN 24" BYPASS PIPE AS NECESSARY.
8. REMOVE TEMPORARY PIPE, IMPERVIOUS DIKES, AND ANY REMAINING SPECIAL STILLING BASINS.
9. COMPLETE CONSTRUCTION OF PROPOSED ROADWAY ALIGNMENT.

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-7/CONST-7

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

NOTE:
UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

-Y2RPA-

PIs Sta 12+83.38	PI Sta 16+91.44	PIs Sta 20+88.13	PIs Sta 23+54.88	PI Sta 25+07.87
θs = 3° 49' 11.0"	Δ = 25° 38' 49.5" (RT)	θs = 3° 49' 11.0"	θs = 7° 09' 43.1"	Δ = 12° 19' 57.1" (LT)
Ls = 200.00'	D = 3° 49' 11.0"	Ls = 200.00'	Ls = 200.00'	D = 7° 09' 43.1"
LT = 133.36'	L = 671.44'	LT = 133.36'	LT = 133.44'	L = 172.19'
ST = 66.69'	T = 341.44'	ST = 66.69'	ST = 66.77'	T = 86.43'
	R = 1,500.00'			R = 800.00'
	e = 06			e = 08
	RO = 200.00'			RO = 200.00'

-Y2-

PI Sta 23+16.81
Δ = 45° 09' 55.6" (LT)
D = 7° 32' 20.1"
L = 599.10'
T = 316.09'
R = 760.00'
e = 08
RO = 240.00'

-Y2LPA-

PI Sta 16+26.48	PIs Sta 17+87.99
Δ = 119° 14' 34.0" (LT)	θs = 22° 55' 05.9"
D = 22° 55' 05.9"	Ls = 200.00'
L = 520.29'	LT = 134.47'
T = 426.48'	ST = 67.70'
R = 250.00'	
e = 08	
RO = 200.00'	

-SR2-

PI Sta 28+40.24	PI Sta 38+85.55
Δ = 31° 05' 50.4" (RT)	Δ = 2° 52' 14.7" (LT)
D = 4° 46' 28.7"	D = 1° 47' 25.8"
L = 651.30'	L = 160.33'
T = 333.89'	T = 80.18'
R = 1,200.00'	R = 3,200.00'
e = 04	e = NC
RO = 80.00'	

-Y2RPC-

a 14+33.37	PI Sta 17+86.30	PIs Sta 21+32.31	PIs Sta 23+99.07	PI Sta 26+18.58
3° 52' 16.8"	Δ = 21° 53' 49.1" (RT)	θs = 3° 52' 16.8"	θs = 7° 32' 20.1"	Δ = 22° 45' 32.7" (LT)
200.00'	D = 3° 52' 16.8"	Ls = 200.00'	Ls = 200.00'	D = 7° 32' 20.1"
133.37'	L = 565.62'	LT = 133.37'	LT = 133.45'	L = 301.89'
66.70'	T = 286.30'	ST = 66.70'	ST = 66.78'	T = 152.96'
	R = 1,480.00'			R = 760.00'
	e = 06			e = 08
	RO = 200.00'			RO = 200.00'

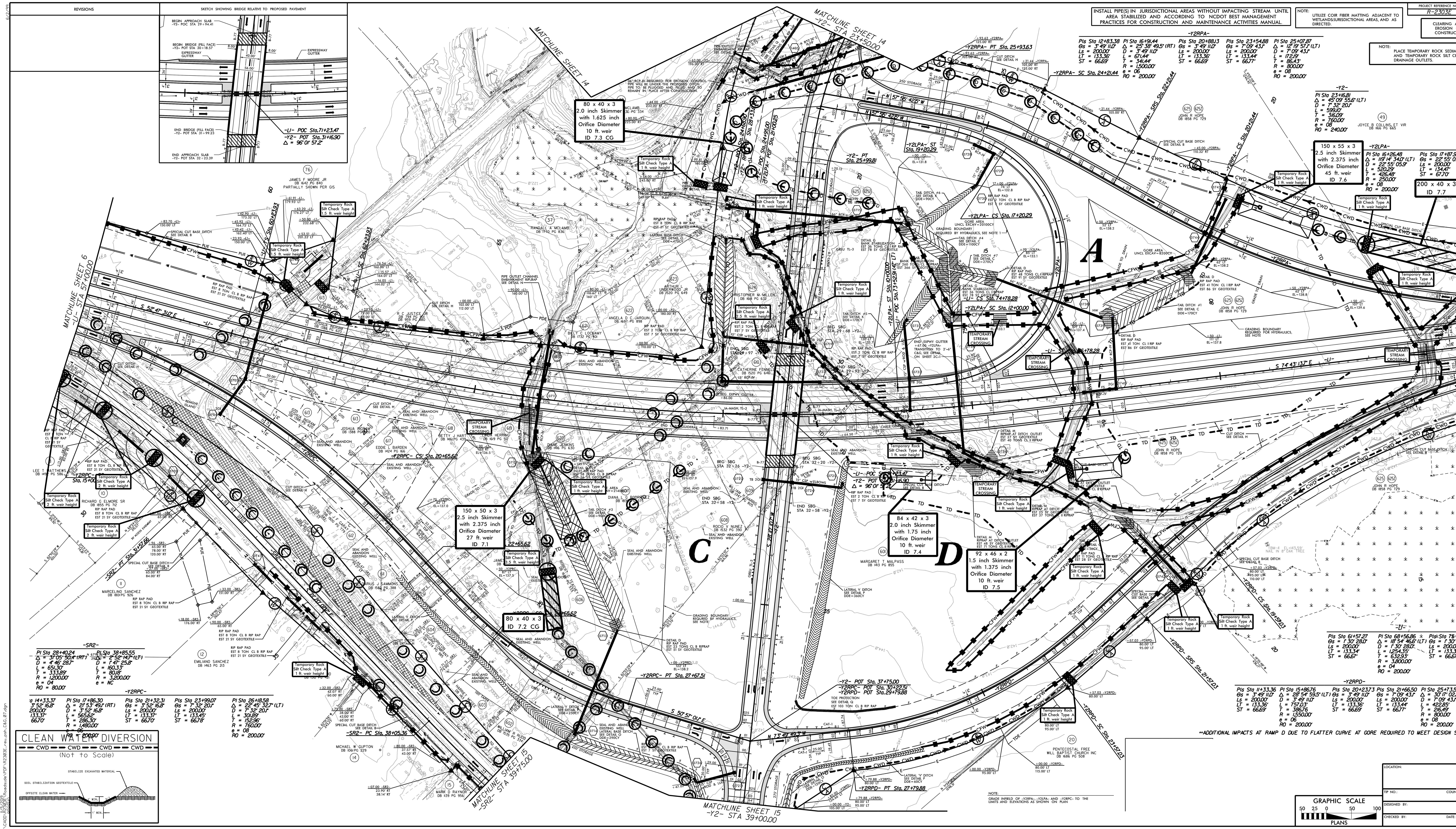
-L-

PIs Sta 61+57.27	PI Sta 68+56.86	PIs Sta 75+44.95
θs = 1° 30' 28.0"	Δ = 18° 54' 46.6" (LT)	θs = 1° 30' 28.0"
Ls = 200.00'	D = 1° 30' 28.0"	Ls = 200.00'
LT = 133.34'	L = 1,254.35'	LT = 133.34'
ST = 66.67'	T = 632.93'	ST = 66.67'
	R = 3,800.00'	
	e = 04	
	RO = 200.00'	

-Y2RPD-

PIs Sta 11+33.36	PI Sta 15+86.76	PIs Sta 20+23.73	PIs Sta 21+66.50	PI Sta 25+73.52
θs = 3° 49' 11.0"	Δ = 28° 54' 59.5" (LT)	θs = 3° 49' 11.0"	θs = 7° 09' 43.1"	Δ = 30° 17' 02.8" (RT)
Ls = 200.00'	D = 3° 49' 11.0"	Ls = 200.00'	Ls = 200.00'	D = 7° 09' 43.1"
LT = 133.36'	L = 757.03'	LT = 133.36'	LT = 133.44'	L = 422.85'
ST = 66.69'	T = 386.76	ST = 66.69'	ST = 66.77'	T = 216.49'
	R = 1,550.00'			R = 800.00'
	e = 06			e = 08
	RO = 200.00'			RO = 200.00'

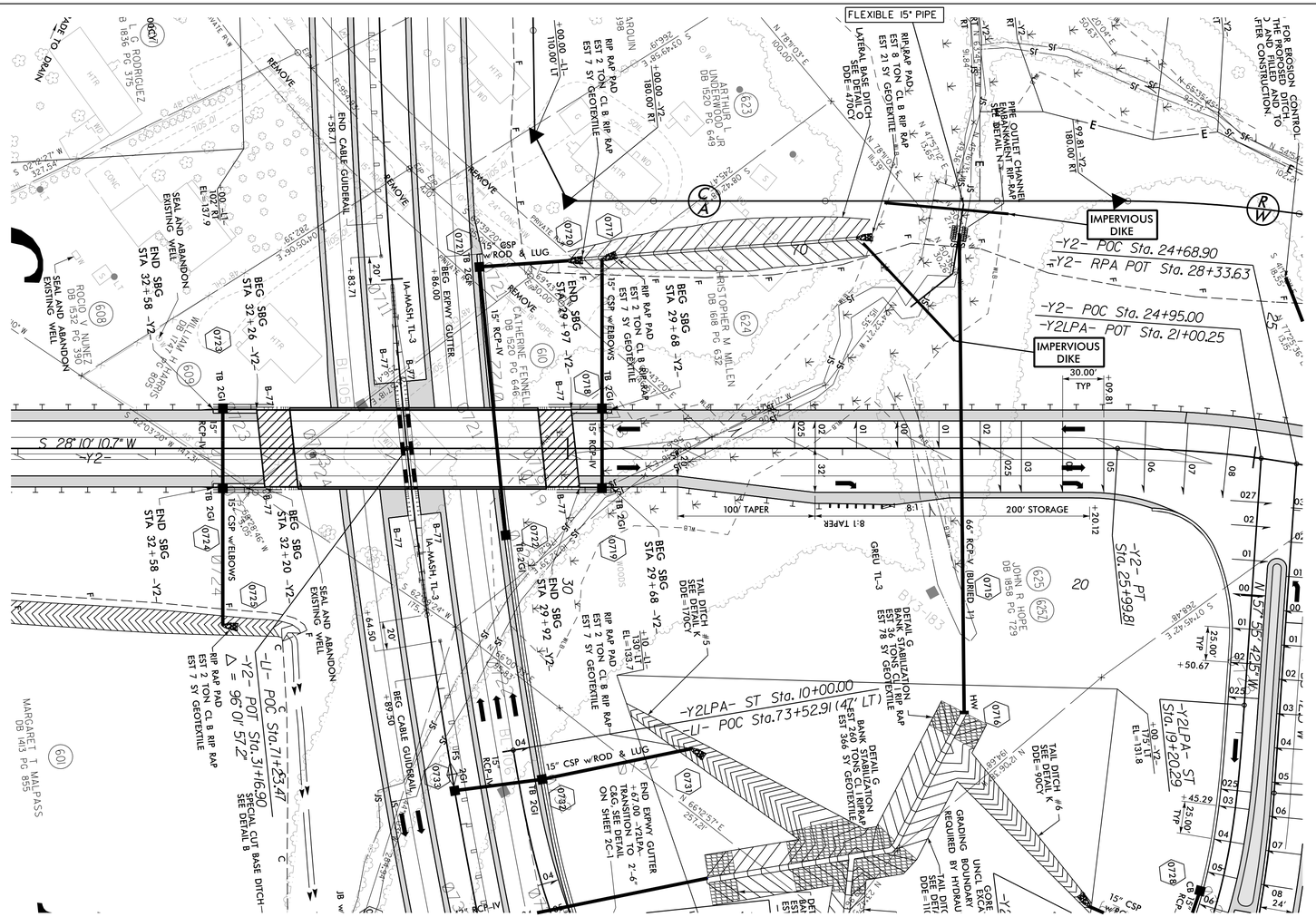
**ADDITIONAL IMPACTS AT RAMP D DUE TO FLATTER CURVE AT GORE REQUIRED TO MEET DESIGN SPEED



PROJECT REFERENCE NO.	SHEET NO.
R-2303EF	EC-07A

CULVERT CONSTRUCTION SEQUENCE STA. 27+13 –Y2–

INTERMEDIATE PHASE



CULVERT CONSTRUCTION SEQUENCE

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. INSTALL FLEXIBLE 15" PIPE
3. INSTALL IMPERVIOUS DIKES TO A TOP ELEV = 129.5' (UPSTREAM & DOWNSTREAM)
4. CONSTRUCT 66" RCP–V PIPE BURIED 1.0'. REALIGN 15" BYPASS PIPE AS NECESSARY. CONSTRUCT RIP RAP PAD AT OUTLET.
5. COMPLETE CONSTRUCTION OF PROPOSED ROADWAY ALIGNMENT.
6. REMOVE TEMPORARY PIPE, IMPERVIOUS DIKES, AND ANY REMAINING SPECIAL STILLING BASINS.

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-8/CONST.8

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 8

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

MATCHLINE SHEET 7
-L1- STA 85+00.00

51
JOYCE B COLLINS, ET VIR
DB 1166 PG 665

49
JOYCE B COLLINS, ET VIR
DB 1166 PG 665

79
ELLIOTT C. & JANE C.BYRD TRUSTEES
DB 1770 PG 366

77
MICHAEL L WILLIAMSON
DB 1281PG 86

-Y2RPA-
PIs Sta 12+83.38
Θs = 3° 49' 11.0"
Ls = 200.00'
LT = 133.36'
ST = 66.69'

PI Sta 16+91.44
Δ = 25° 38' 49.5" (RT)
D = 3° 49' 11.0"
L = 671.44'
T = 341.44'
R = 1,500.00'
e = 06
R0 = 200.00'

TBM-5 EL=147.1'
NAIL IN 14" GUM TREE

-L1-
PIs Sta 95+06.75
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

PI Sta 99+58.28
Δ = 14° 37' 15.5" (LT)
D = 1° 54' 35.5"
L = 765.55'
T = 384.87'
R = 3,000.00'
e = 05
R0 = 200.00'

-Y2RPA- SC Sta. 13+50.00
-Y2RPA- TS Sta. 11+50.00
-Y2RPA- POT Sta. 10+00.00
-L1- POT Sta. 89+73.39 (47.00' LT)
-L1- TS Sta. 93+73.41
-L1- SC Sta. 95+73.41

Temporary Rock Silt Check Type A 1 ft. weir height

Temporary Rock Silt Check Type A 1 ft. weir height

190 x 40 x 3
ID 8.1

SPECIAL CUT BASE DITCH SEE DETAIL B

+50.00 -Y2RPA-
115.00' RT

+00.00 -Y2RPA-
115.00' RT

+73.41 -L1-
135.00' LT

RIP RAP PAD
EST 11 TON CL B RIP RAP
EST 28 SY GEOTEXTILE

RIP RAP PAD
EST 8 TON CL B RIP RAP
EST 21 SY GEOTEXTILE

CHORD

CWD

TD

0801 0802 0803 0804 0805 0806 0807

-Y2RPA-
N 17° 43' 13.7" W

S 74° 43' 13.7" E

-L1-

CABLE GUIDERAIL

TEMPORARY STREAM CROSSING

TEMPORARY STREAM CROSSING

30" RCP-IV

36" RCP-IV

15" RCP-IV

2GI

FS

500'
ACCELERATION LANE

300'
TAPER

-Y2RPD-

SPECIAL CUT BASE DITCH SEE DETAIL B

+00.00 -Y2RPD-
80.00' LT

+00.00 -Y2RPD-
95.00' LT

+00.00 -Y2RPD-
80.00' LT

+00.00 -Y2RPD-
95.00' LT

+25.00 -L1-
132.84' RT
150.00' RT

+73.41 -L1-
135.00' RT

+73.41 -L1-
135.00' LT

SPECIAL CUT BASE DITCH SEE DETAIL B

-Y2RPD- SC Sta. 12+00.00

-Y2RPD- ST Sta. 10+00.00
-L1- POT Sta. 88+22.54 (47.00' RT)

625 625Z
JOHN R HOPE
DB 1858 PG 729

77
MICHAEL L WILLIAMSON
DB 1281PG 86

79
ELLIOTT C. & JANE C.BYRD TRUSTEES
DB 1770 PG 366

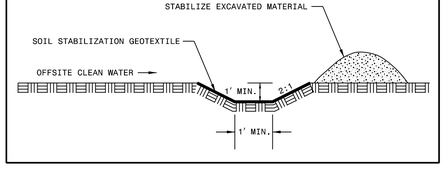
MATCHLINE SHEET 9
-L1- STA 99+00.00

-Y2RPD-
PIs Sta 11+33.36
Θs = 3° 49' 11.0"
Ls = 200.00'
LT = 133.36'
ST = 66.69'
**ADDITIONAL IMPACTS AT RAMP D DUE TO FLATTER CURVE AT GORE REQUIRED TO MEET DESIGN SPEED

CLEAN WATER DIVERSION

CWD CWD CWD CWD

(Not to Scale)



NOTE:
UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.

FOR –L1– PROFILE, SEE SHEET NO. 20
FOR –Y2RPA– PROFILE, SEE SHEET NO. 23
FOR –Y2RPD– PROFILE, SEE SHEET NO. 26
FOR DITCH DETAILS SEE SHEET 2D-1

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-9/CONST.9

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NOTE:
UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.

NAD 83 NA 2011

-LI-
PI Sta 99+58.28
Δ = 14° 37' 15.5" (LT)
D = 1° 54' 35.5"
L = 765.55'
T = 384.87'
R = 3,000.00'
e = 05
RO = 200.00'

PIs Sta 104+05.64
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

PIs Sta 112+06.98
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

MATCHLINE SHEET 8
-LI- STA 99+00.00

MATCHLINE SHEET 10
-LI- STA 113+00.00

-LI- CS Sta. 103+38.96

-LI- ST Sta. 105+38.96

-LI- TS Sta. 110+73.64

-LI- SC Sta. 112+73.64

-LI- POT Sta. 108+90.00

-Y6A- POT Sta.16+11.08

-Y6A- PT Sta. 15+13.40

-Y6A- PC Sta. 12+15.93

BEGIN CONSTRUCTION
-Y6A- STA 11+50.00

-Y6A- POT Sta. 10+00.00

-Y6A- POC Sta. 13+50.00
-SR3- PC Sta. 10+00.00

-SR3- PC Sta. 13+02.41

-SR3- PT Sta. 11+04.72

-SR3- PT Sta. 13+97.59

"DO NOT DISTURB"
-SR3- PC Sta. 16+01.99

-SR3-
PI Sta 10+54.60
Δ = 40° 00' 03.8" (LT)
D = 38° 11' 49.9"
L = 104.72'
T = 54.60'
R = 150.00'
e = 04
RO = 62.00'
DS = 15 mph

PI Sta 13+50.61
Δ = 21° 49' 34.8" (RT)
D = 22° 55' 05.9"
L = 95.24'
T = 48.20'
R = 250.00'
e = 04
RO = 68.00'

PI Sta 16+55.30
Δ = 24° 04' 22.4" (RT)
D = 22° 55' 05.9"
L = 105.04'
T = 53.31'
R = 250.00'
e = 04
RO = 56.00'

NC 24 (-L1-) AT
CECIL ODIE RD (-Y6A-)
ADT 2019 / 2040

CLEAN WATER DIVERSION
(Not to Scale)

REMOVE ASPHALT PAVEMENT

REMOVE ASPHALT PAVEMENT

moffatt & nichol
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4626 VOICE (919) 781-4869 FAX
NC License NO.: F-0105

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-10/CONST.10

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

MATCHLINE SHEET 16
-Y6B- STA 19+00.00

MATCHLINE SHEET 9
-LI- STA 113+00.00

MATCHLINE SHEET 9
-SR3- STA 17+00.00

-SR3- PT Sta. 17+07.03

NAD 83 NA 2011

-DR3-
PI Sta 11+10.61
Δ = 40° 02' 02.5" (LT)
D = 179° 02' 57.5"
L = 22.36'
T = 11.66'
R = 32.00'

PI Sta 12+07.26
Δ = 44° 41' 30.9" (RT)
D = 179° 02' 57.5"
L = 24.96'
T = 13.15'
R = 32.00'

-LI-
PIs Sta 112+06.98
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

PI Sta 118+87.81
Δ = 23° 08' 23.7" (RT)
D = 1° 54' 35.5"
L = 1,211.60'
T = 614.17'
R = 3,000.00'
e = 05
R0 = 200.00'

PIs Sta 125+51.92
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

-Y6B-
PI Sta 18+55.87
Δ = 17° 31' 01.3" (LT)
D = 7° 09' 43.1"
L = 244.58'
T = 123.25'
R = 800.00'
e = 04
R0 = 76.00'

-DR4-
PI Sta 10+78.09
Δ = 69° 34' 19.1" (RT)
D = 190° 59' 09.4"
L = 36.43'
T = 20.84'
R = 30.00'

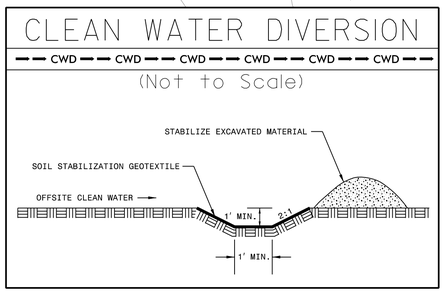
PI Sta 11+57.76
Δ = 2° 33' 22.5" (RT)
D = 1° 59' 41.9"
L = 128.13'
T = 64.08'
R = 2,872.00'

PI Sta 12+41.50
Δ = 17° 54' 14.8" (RT)
D = 45° 50' 11.8"
L = 39.06'
T = 19.69'
R = 125.00'

CLEAN WATER DIVERSION

CWD CWD CWD CWD CWD CWD

(Not to Scale)



REMOVE ASPHALT PAVEMENT

FOR –LI– PROFILE, SEE SHEET NO. 21
FOR –Y6B– PROFILE, SEE SHEET NO. 29
FOR –DR3– PROFILE, SEE SHEET NO. 33
FOR INTERSECTION DETAIL, SEE SHEET 2B-12
FOR DITCH DETAILS SEE SHEET 2D-1

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-11/CONST.JI

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NAD 83 NA 2011

-SR1-
PI Sta 11+91.97
△ = 56° 58' 13.8" (RT)
D = 28° 38' 52.4"
L = 198.86'
T = 108.52'
R = 200.00'
e = 06
RO = 108.00'
DS = 25 mph

-SR1- PT Sta. 12+82.31

-SR1- PC Sta. 10+83.45

-Y5- POT Sta. 10+00.00

-Y5- POT Sta. 14+86.51

MATCHLINE SHEET 12 -SR1- STA 15+00.00

Temporary Rock Silt Check Type A 1 ft. weir height

67 JAMES L HOPE DB 1425 PG 956

68 MARTHA P HALES DB 1922 PG 367

62 ANN W. PERERSON, ET AL DB 1570 PG 174 PARTIALLY SHOWN PER GIS

65 ANN W PETERSON DB 1570 PG 174

64 WILLIAM M WARREN DB 1740 PG 958

63 PETERSON DEVELOPMENT CORP DB 1162 PG 70

BEGIN CONSTRUCTION -SR1- STA 10+12.09

-Y5- POT Sta.13+17.80
-SR1- POT Sta. 10+00.00

RIP RAP PAD
EST 5 TON CL B RIP RAP
EST 14 SY GEOTEXTILE

SPECIAL CUT BASE DITCH SEE DETAIL B

CFW-2 PROVISION SEE DETAIL Q
EST 234 TONS CL B RIP RAP

CLEAN OUT AND RETAIN

24" RCP-IV

RETAIN

PUE

EXISTING R/W

R/W MON

NAIL

EIP

PK

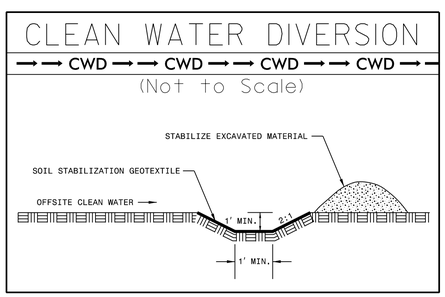
BY-127

BY-128

CLEAN WATER DIVERSION

CWD CWD CWD CWD

(Not to Scale)



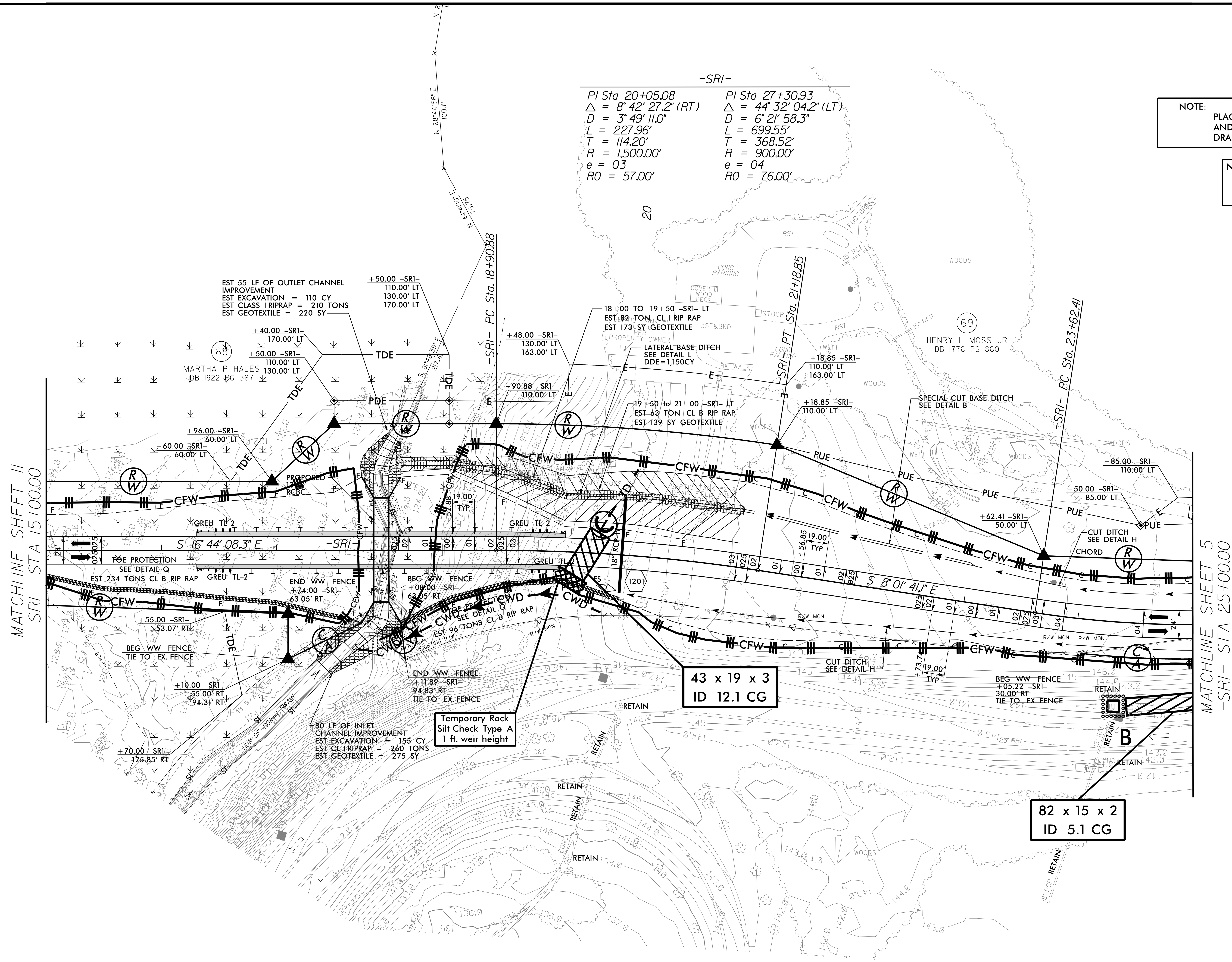
FOR -Y5- PROFILE, SEE SHEET NO. 34
FOR -SR1- PROFILE, SEE SHEET NO. 35

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-12/CONST J2

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

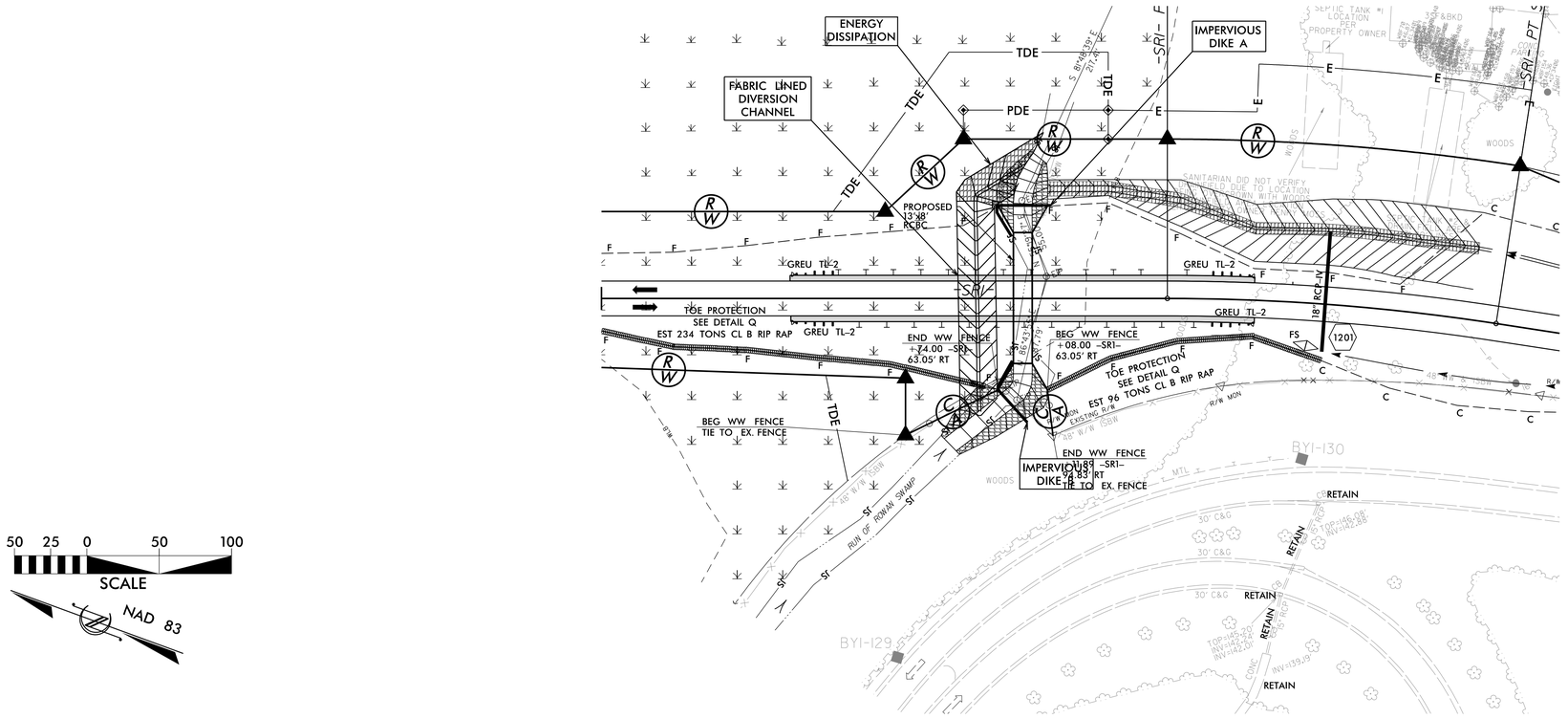
NOTE:
UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.



PROJECT REFERENCE NO.	SHEET NO.
R-2303EF	EC-12A

CULVERT CONSTRUCTION SEQUENCE STA. 17+91 –SR1–

PHASE I



50 25 0 50 100
SCALE
NAD 83

CULVERT CONSTRUCTION SEQUENCE

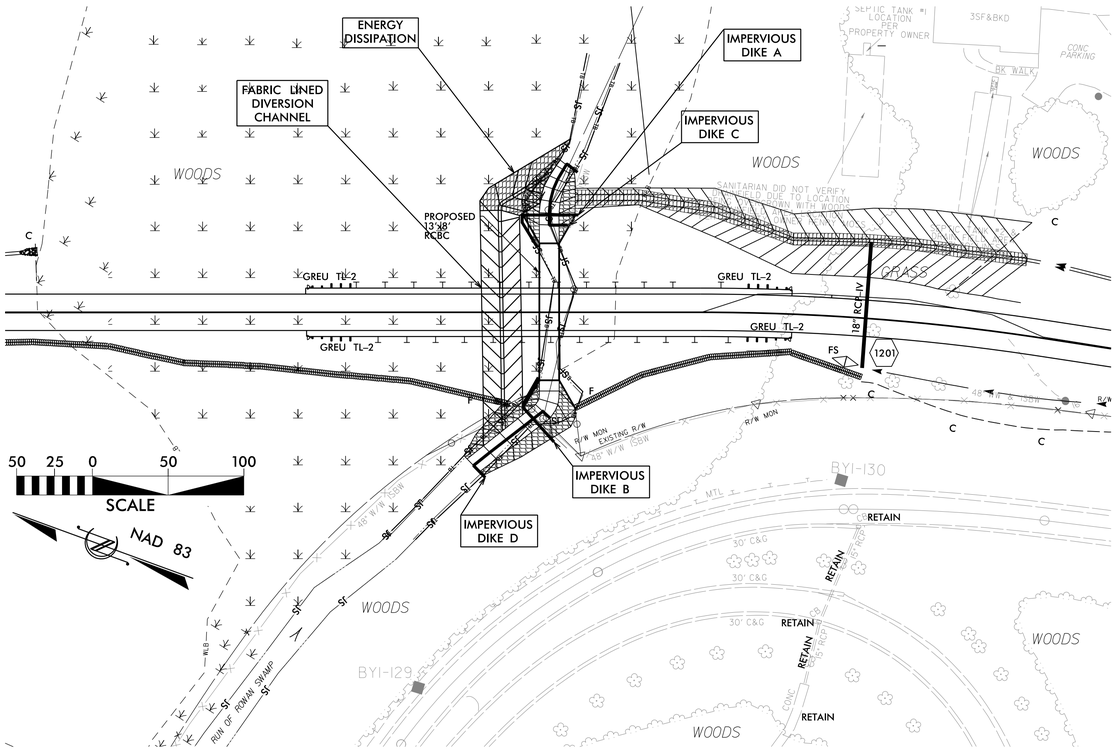
1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. CONSTRUCT 2′ WIDE AND 6′ DEEP FABRIC LINED DIVERSION CHANNEL WITH 2:1 SIDES. MATCH UPSTREAM & DOWNSTREAM INVERT ELEVATIONS TO STREAM. PLACE CLASS 1 RIPRAP ENERGY DISSIPATOR IN DIVERSION CHANNEL FROM OUTFALL TO 40′ UPSTREAM OF OUTFALL.
3. INSTALL IMPERVIOUS DIKES A AND B TO A TOP ELEV = 124.0′
4. CONSTRUCT PROPOSED CULVERT, INCLUDING WINGWALLS, CHANNEL IMPROVEMENTS AND RIPRAP BETWEEN THE IMPERVIOUS DIKES.

PROJECT REFERENCE NO.	SHEET NO.
R-2303EF	EC-12B

CULVERT CONSTRUCTION SEQUENCE STA. 17+91 –SR1–

PHASE II

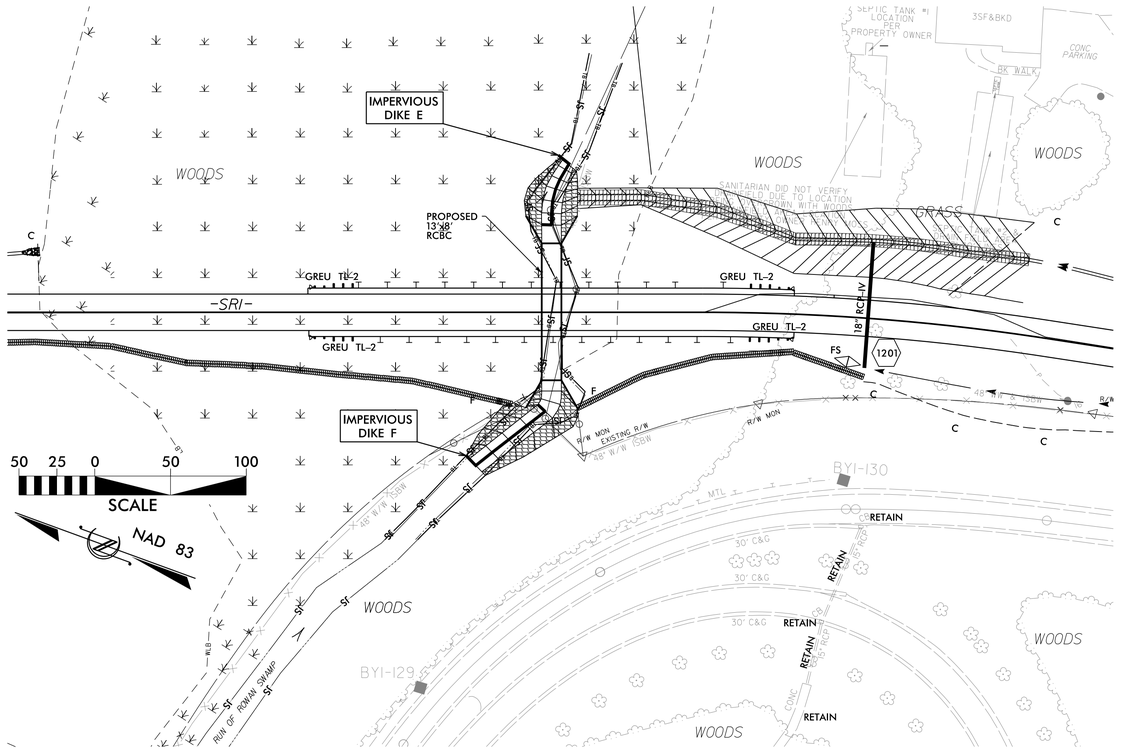
INSTALL DIKES /DIVERSON CHANNEL IN JURISDICTIONAL AREAS W/O IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



CULVERT CONSTRUCTION SEQUENCE

1. REMOVE IMPERVIOUS DIKES A AND B AND INSTALL IMPERVIOUS DIKES C AND D TO A TOP ELEVATION = 124.0′
2. CONSTRUCT PROPOSED CHANNEL IMPROVEMENTS AND RIPRAP ON THE RIGHT SIDE OF THE CHANNEL ENCLOSED BY THE DIKES.
3. REMOVE THE IMPERVIOUS DIKES C AND D.

PHASE III



CULVERT CONSTRUCTION SEQUENCE

4. REMOVE THE POLY–FABRIC LINER. BACKFILL DIVERSION CHANNEL WITH NATIVE SOIL.
5. INSTALL THE IMPERVIOUS DIKES E AND F AS SHOWN.
6. CONSTRUCT PROPOSED CHANNEL IMPROVEMENTS AND RIPRAP ON THE LEFT SIDE OF THE CHANNEL ENCLOSED BY THE DIKES.
7. REMOVE ANY REMAINING SPECIAL STILLING BASIN(S).
8. COMPLETE CONSTRUCTION OF PROPOSED ROADWAY ALIGNMENT.

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-13/CONST13

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NOTE:
PPES – PARALLEL PIPE END SECTION

8/17/99

11/5/2019
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PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-14/CONSTJ4

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14

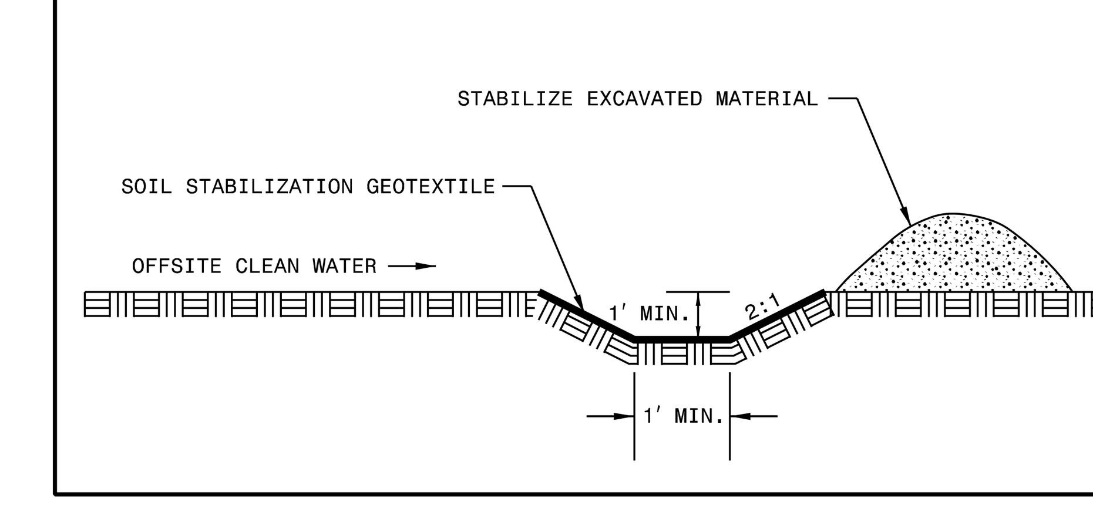
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NOTE: UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.

CLEAN WATER DIVERSION

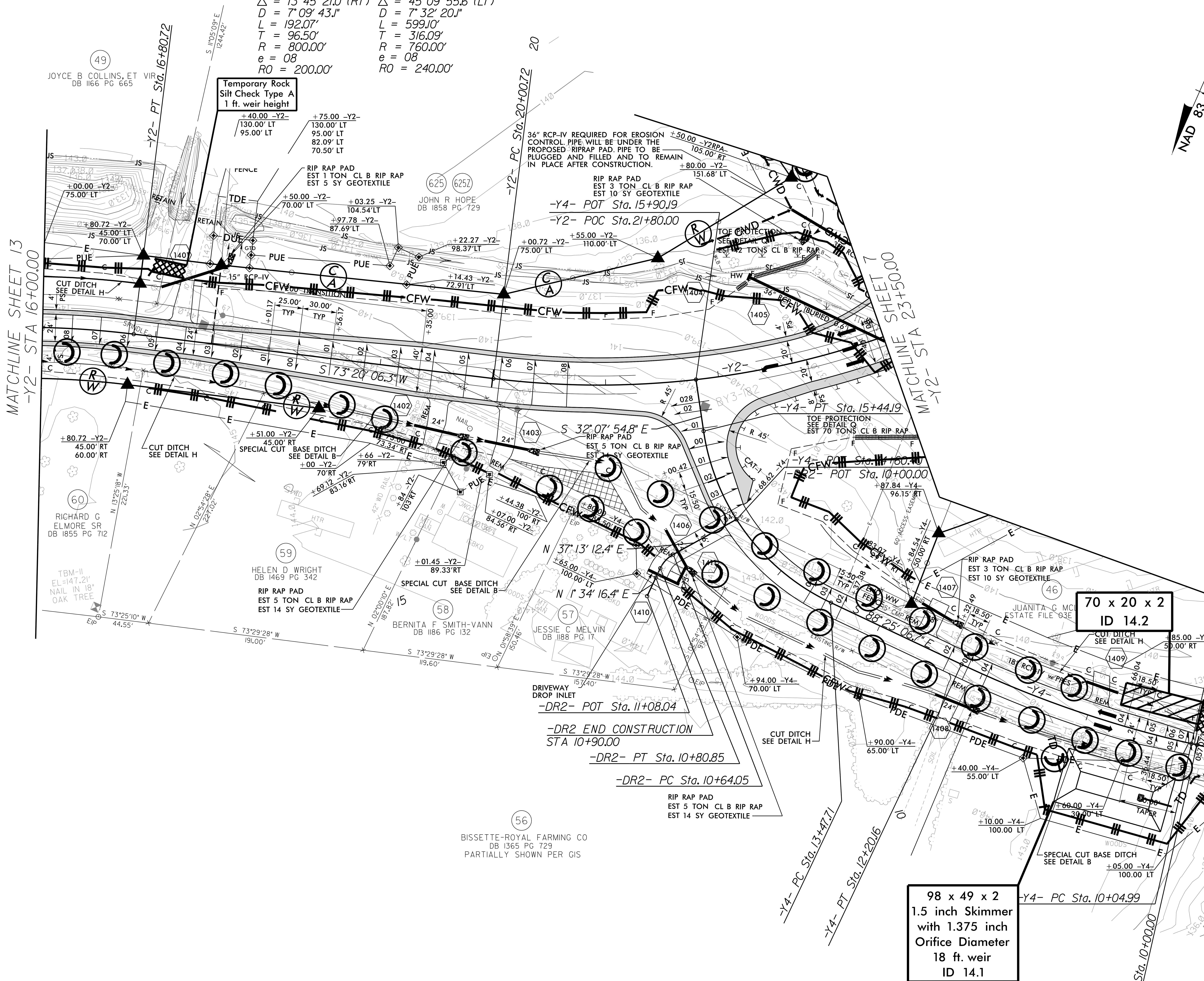
→ CWD → CWD → CWD → CWD →

(Not to Scale)



-Y2-

PI Sta 15+85.15	PI Sta 23+16.81
Δ = 13° 45' 21.0" (RT)	Δ = 45° 09' 55.6" (LT)
D = 7° 09' 43.1"	D = 7° 32' 20.1"
L = 192.07'	L = 599.10'
T = 96.50'	T = 316.09'
R = 800.00'	R = 760.00'
e = .08	e = .08
RO = 200.00'	RO = 240.00'



NAD 83 NA 2011
MATCHLINE SHEET 13 -Y2- STA 16+00.00
MATCHLINE SHEET 7 -Y2- STA 23+50.00
MATCHLINE SHEET 7
JOYCE B COLLINS, ET VIR DB 1166 PG 665
JOHN R HOPE DB 1858 PG 729
RICHARD G ELMORE SR DB 1855 PG 712
HELEN D WRIGHT DB 1469 PG 342
BERNITA F SMITH-VANN DB 1186 PG 132
JESSIE C MELVIN DB 1188 PG 17
JUANITA G MC... ESTATE FILE 03E
BISSETTE-ROYAL FARMING CO DB 1365 PG 729 PARTIALLY SHOWN PER GIS
Temporary Rock Silt Check Type A 1 ft. weir height
36" RCP-IV REQUIRED FOR EROSION CONTROL PIPE WILL BE UNDER THE PROPOSED RIPRAP PAD. PIPE TO BE PLUGGED AND FILLED AND TO REMAIN IN PLACE AFTER CONSTRUCTION.
RIP RAP PAD EST 1 TON CL B RIP RAP EST 5 SY GEOTEXTILE
RIP RAP PAD EST 3 TON CL B RIP RAP EST 10 SY GEOTEXTILE
RIP RAP PAD EST 5 TON CL B RIP RAP EST 14 SY GEOTEXTILE
TOE PROTECTION SEE DETAIL Q EST 2 TONS CL B RIP RAP
TOE PROTECTION SEE DETAIL Q EST 70 TONS CL B RIP RAP
-Y2- PT Sta. 16+80.72
-Y2- PC Sta. 20+00.72
-Y4- POT Sta. 15+90.19
-Y2- POC Sta. 21+80.00
-Y4- PT Sta. 15+44.19
-Y2- POT Sta. 10+00.00
S 73° 20' 06.3" W
S 32° 07' 54.8" E
N 37° 13' 12.4" E
N 1° 34' 16.4" E
N 73° 55' 28.4" E
CUT DITCH SEE DETAIL H
SPECIAL CUT BASE DITCH SEE DETAIL B
TBM-11 EL=147.21' NAIL IN 18" OAK TREE
DRIVEWAY DROP INLET
-DR2- POT Sta. 11+08.04
-DR2- END CONSTRUCTION STA 10+90.00
-DR2- PT Sta. 10+80.85
-DR2- PC Sta. 10+64.05
70 x 20 x 2 ID 14.2
BEGIN CONSTRUCTION -Y4- STA 10+04.99
98 x 49 x 2 1.5 inch Skimmer with 1.375 inch Orifice Diameter 18 ft. weir ID 14.1
-Y4- PC Sta. 10+04.99
-Y4- PC Sta. 13+47.71
-Y4- PT Sta. 12+20.16
-Y4- PT Sta. 10+00.00
-Y4- PC Sta. 9+32.94
-Y4- POT Sta. 9+25.55

-DR2-

PI Sta 10+72.73
Δ = 35° 39' 16.2" (LT)
D = 212° 12' 23.7"
L = 16.80'
T = 8.68'
R = 27.00'

-Y4-

PI Sta 9+66.49	PI Sta 14+54.69	PI Sta 11+13.01
Δ = 5° 07' 23.1" (RT)	Δ = 56° 17' 11.9" (RT)	Δ = 12° 32' 01.9" (RT)
D = 7° 38' 22.0"	D = 28° 38' 52.4"	D = 5° 49' 29.5"
L = 67.06'	L = 196.48'	L = 215.18'
T = 33.55'	T = 106.98'	T = 108.02'
R = 750.00'	R = 200.00'	R = 983.64'
	e = .04	e = .04
	RO = 62.00'	RO = 74.00'
	DS = 15 mph	

NOTE: PPES – PARALLEL PIPE END SECTION

REMOVE ASPHALT PAVEMENT

REMOVE ASPHALT PAVEMENT

FOR -Y2- PROFILE, SEE SHEET NO. 22
FOR -Y4- PROFILE, SEE SHEET NO. 27
FOR -DR2- PROFILE, SEE SHEET NO. 33
FOR DITCH DETAILS SEE SHEET 2D-1

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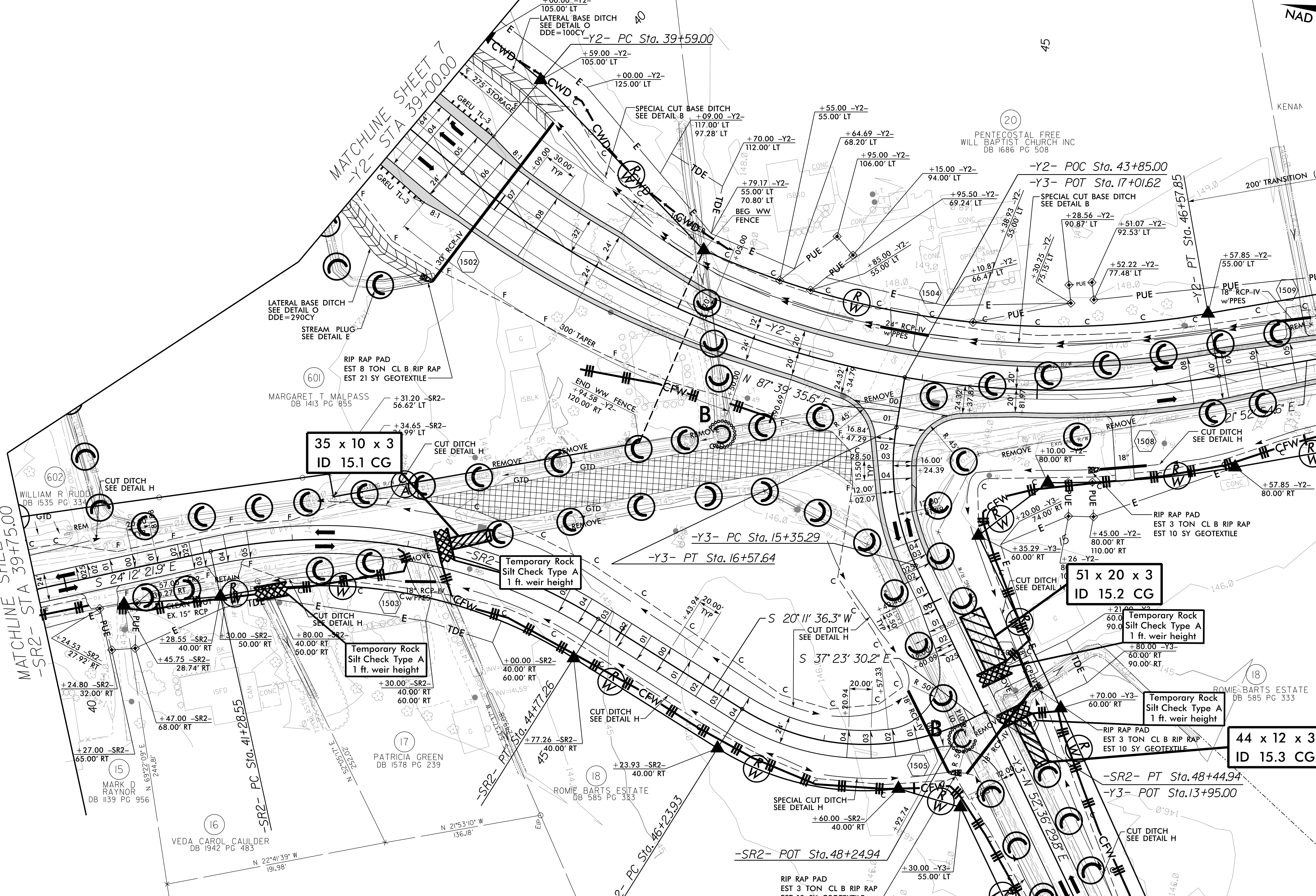
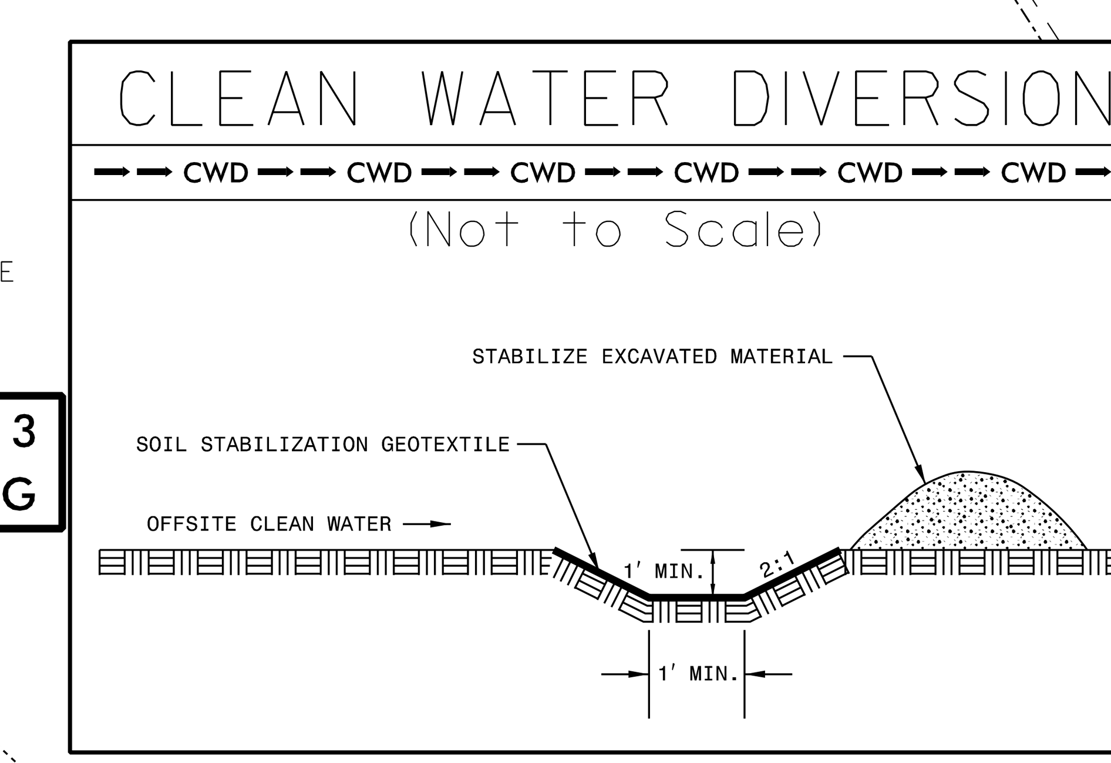
PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-15/CONST15

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 15

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.





-Y2-

PI Sta 43+32.49
Δ = 50° 03' 05.3" (LT)
D = 7° 09' 43.1"
L = 698.85'
T = 373.48'
R = 800.00'
e = 08
RO = 240.00'

-Y3-

PI Sta 15+98.45
Δ = 35° 03' 05.8" (RT)
D = 28° 38' 52.4"
L = 122.35'
T = 63.16'
R = 200.00'
e = 04
RO = 62.00'
DS = 15 mph

-SR2-

PI Sta 43+12.19
Δ = 44° 23' 58.2" (RT)
D = 12° 43' 56.6"
L = 348.71'
T = 183.64'
R = 450.00'
e = 05
RO = 100.00'

PI Sta 47+33.85
Δ = 57° 35' 06.5" (LT)
D = 28° 38' 52.4"
L = 201.01'
T = 109.92'
R = 200.00'
e = 04
RO = 80.00'
DS = 25 mph

-Y2- 800/13600; -Y2- 7200/12800; 1000/1200; 200/400; -Y3- 1200/1600; ADT 2019/2040

BYRD YANCEY RD (-Y2-) AT
PEARSON RD (-Y3-)

REMOVE ASPHALT PAVEMENT

NOTE: PPES – PARALLEL PIPE END SECTION

FOR -Y2- PROFILE, SEE SHEET NO. 23
FOR -Y3- PROFILE, SEE SHEET NO. 27
FOR -SR2- PROFILE, SEE SHEET NO. 31
FOR DITCH DETAILS SEE SHEET 2D-1

8/17/99

11/5/2019
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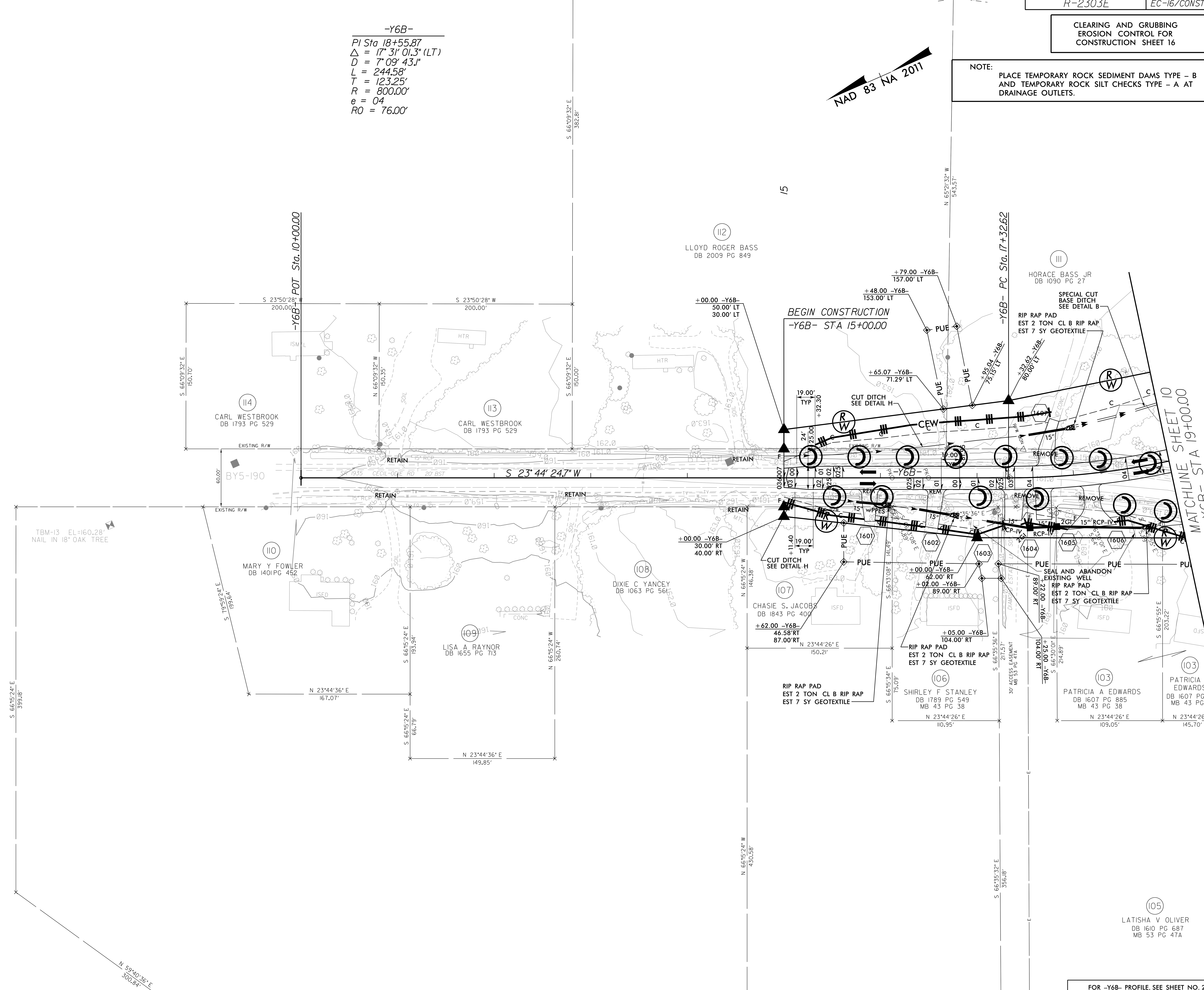
PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-16/CONSTJ6

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 16

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.



FOR -Y6B- PROFILE, SEE SHEET NO. 29
FOR DITCH DETAILS SEE SHEET 2D-1

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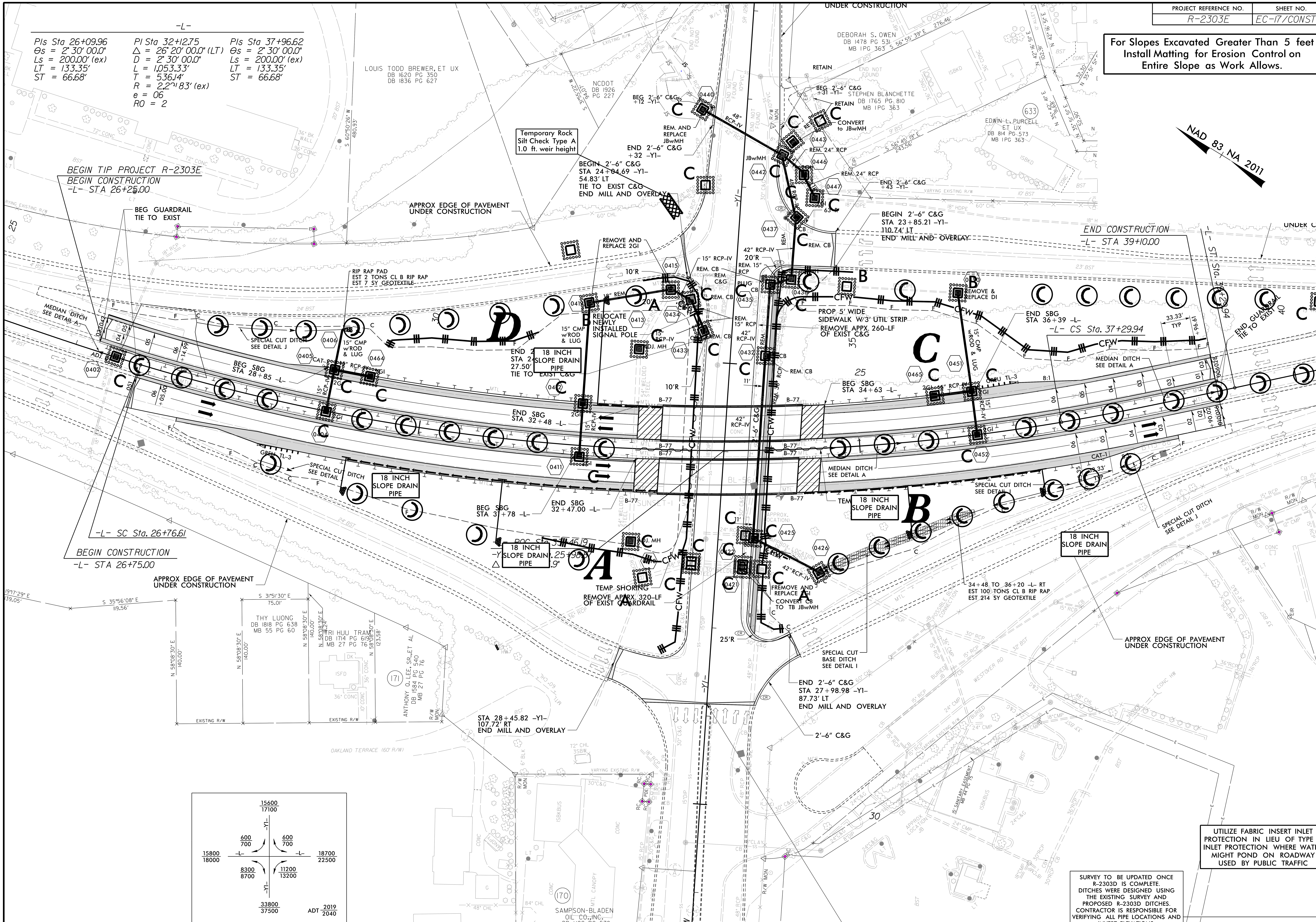
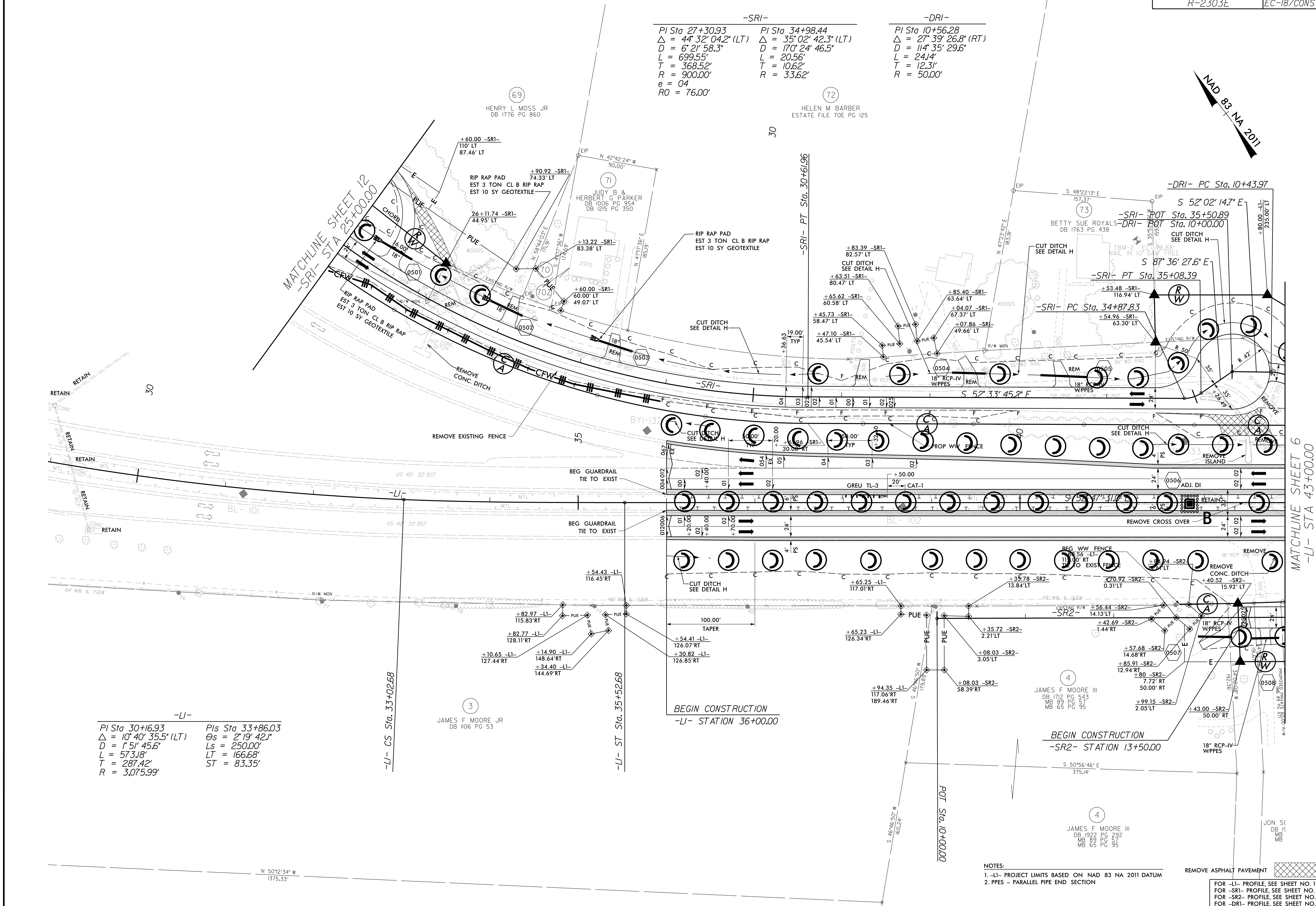

PROJECT REFERENCE NO.
SHEET NO.
R-2303E
EC-17/CONST.4
For Slopes Excavated Greater Than 5 feet Install Matting for Erosion Control on Entire Slope as Work Allows.
-L-
PIs Sta 26+09.96
Θs = 2° 30' 00.0"
Ls = 200.00' (ex)
LT = 133.35'
ST = 66.68'
PI Sta 32+12.75
Δ = 26° 20' 00.0" (LT)
D = 2° 30' 00.0"
L = 1,053.33'
T = 536.14'
R = 2,291.83' (ex)
e = 06
RO = 2
PIs Sta 37+96.62
Θs = 2° 30' 00.0"
Ls = 200.00' (ex)
LT = 133.35'
ST = 66.68'
NAD 83/NA 2011
BEGIN TIP PROJECT R-2303E
BEGIN CONSTRUCTION
-L- STA 26+25.00
BEGIN CONSTRUCTION
-L- STA 26+75.00
END CONSTRUCTION
-L- STA 39+10.00
Temporary Rock Silt Check Type A 1.0 ft. weir height
APPROX EDGE OF PAVEMENT UNDER CONSTRUCTION
LOUIS TODD BREWER, ET UX DB 1620 PG 350 DB 1836 PG 627
DEBORAH S. OWEN DB 1478 PG 531 MB 1 PG 363
STEPHEN BLANCHETTE DB 1765 PG 810 MB 1 PG 363
EDWIN L. PURCELL ET UX DB 814 PG 573 MB 1 PG 363
THY LUONG DB 1818 PG 638 MB 55 PG 60
SAMPSON-BLADEN OIL CO., INC.
RIP RAP PAD EST 2 TONS CL B RIP RAP EST 7 SY GEOTEXTILE
18 INCH SLOPE DRAIN PIPE
PROP 5' WIDE SIDEWALK W/3' UTIL STRIP
REMOVE APPX. 260-LF OF EXIST C&G
TEMP SHORING
REMOVE APPX. 320-LF OF EXIST GUARDRAIL
34+48 TO 36+20 -L- RT EST 100 TONS CL B RIP RAP EST 214 SY GEOTEXTILE
END 2'-6" C&G STA 27+98.98 -Y1- 87.73' LT END MILL AND OVERLAY
STA 28+45.82 -Y1- 107.72' RT END MILL AND OVERLAY
STA 28+86.36 -Y1-
UTILIZE FABRIC INSERT INLET PROTECTION IN LIEU OF TYPE C INLET PROTECTION WHERE WATER MIGHT POND ON ROADWAY USED BY PUBLIC TRAFFIC
SURVEY TO BE UPDATED ONCE R-2303D IS COMPLETE. DITCHES WERE DESIGNED USING THE EXISTING SURVEY AND PROPOSED R-2303D DITCHES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PIPE LOCATIONS AND INVERT ELEVATIONS.
ADT 2019/2040

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-18/CONST.5

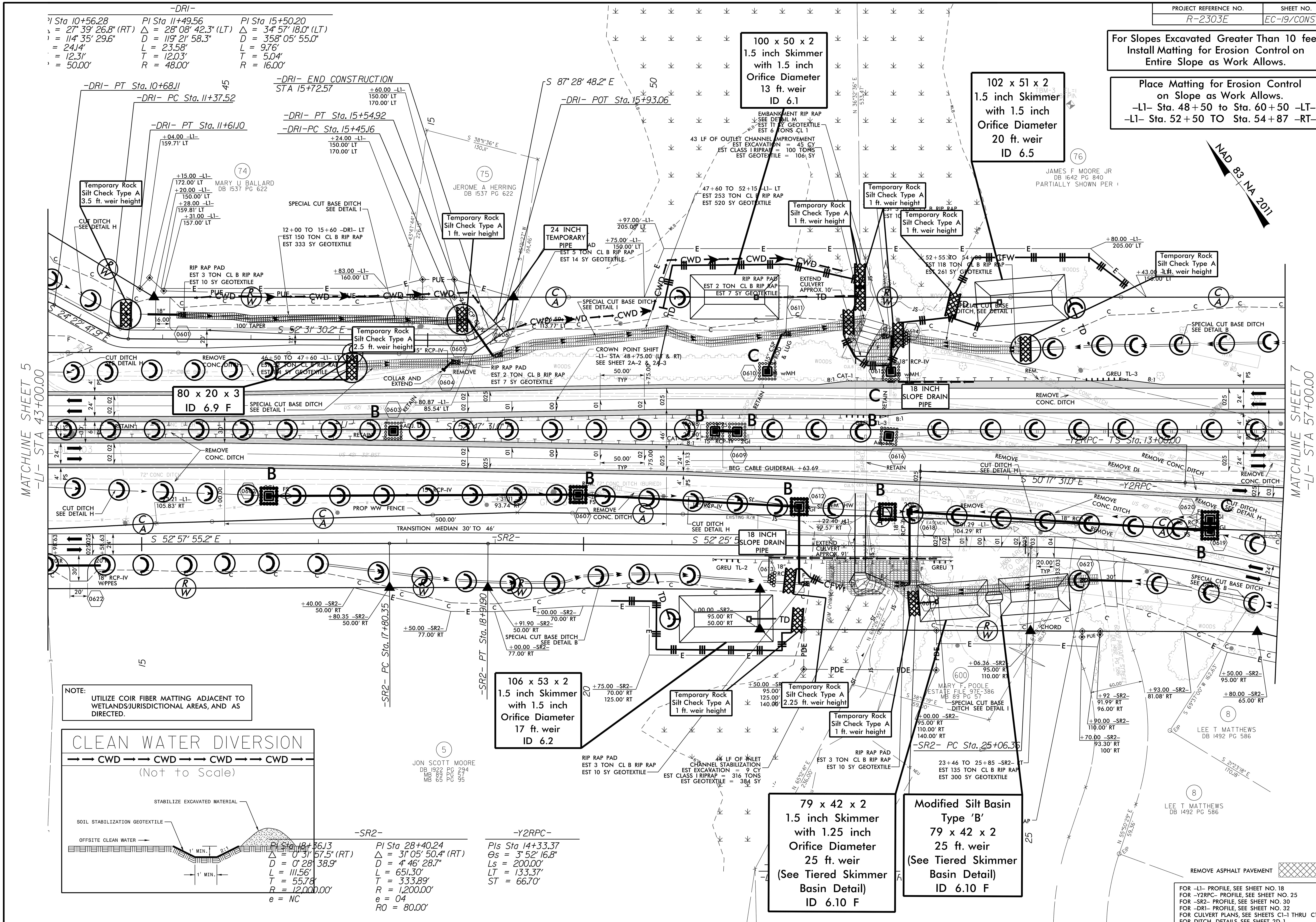


-SR1-
PI Sta 27+30.93
△ = 44° 32' 04.2" (LT)
D = 6° 21' 58.3"
L = 699.55'
T = 368.52'
R = 900.00'
e = .04
RO = 76.00'
PI Sta 34+98.44
△ = 35° 02' 42.3" (LT)
D = 170° 24' 46.5"
L = 20.56'
T = 10.62'
R = 33.62'
-DR1-
PI Sta 10+56.28
△ = 27° 39' 26.8" (RT)
D = 114° 35' 29.6"
L = 24.14'
T = 12.31'
R = 50.00'
NAD 83 / NA 2011
69
HENRY L MOSS JR
DB 1776 PG 860
72
HELEN M BARBER
ESTATE FILE 70E PG 125
71
JUDY B &
HERBERT G PARKER
DB 1006 PG 954
DB 1215 PG 350
73
BETTY SUE ROYALS
DB 1763 PG 438
MATCHLINE SHEET 12
-SR1- STA 25+00.00
MATCHLINE SHEET 6
-L1- STA 43+00.00
RIP RAP PAD
EST 3 TON CL B RIP RAP
EST 10 SY GEOTEXTILE
-SR1- PT Sta. 30+61.96
-DR1- PC Sta. 10+43.97
S 52° 02' 14.7" E
-SR1- POT Sta. 35+50.89
-DR1- POT Sta. 10+00.00
CUT DITCH
SEE DETAIL H
S 87° 36' 27.6" E
-SR1- PT Sta. 35+08.39
-SR1- PC Sta. 34+87.83
S 52° 33' 45.2" E
REMOVE CONC. DITCH
REMOVE EXISTING FENCE
BEG GUARDRAIL
TIE TO EXIST
GREU TL-3
PROP WW FENCE
REMOVE CROSS OVER
REMOVE ISLAND
ADJ. DI
BEG WW FENCE
TIE TO EXIST. FENCE
100.00'
TAPER
-L1-
PI Sta 30+16.93
△ = 10° 40' 35.5" (LT)
D = 1° 51' 45.6"
L = 573.18'
T = 287.42'
R = 3,075.99'
PIs Sta 33+86.03
θs = 2° 19' 42.1"
Ls = 250.00'
LT = 166.68'
ST = 83.35'
-L1- CS Sta. 33+02.68
-L1- ST Sta. 35+52.68
3
JAMES F MOORE JR
DB 1106 PG 53
BEGIN CONSTRUCTION
-L1- STATION 36+00.00
4
JAMES F MOORE III
DB 1712 PG 543
MB 89 PG 57
MB 65 PG 95
BEGIN CONSTRUCTION
-SR2- STATION 13+50.00
POT Sta. 10+00.00
4
JAMES F MOORE III
DB 1922 PG 292
MB 89 PG 57
MB 65 PG 95
N 50°12'34" W
1375.33'
S 50°56'46" E
375.14'
18" RCP-IV
W/PPES

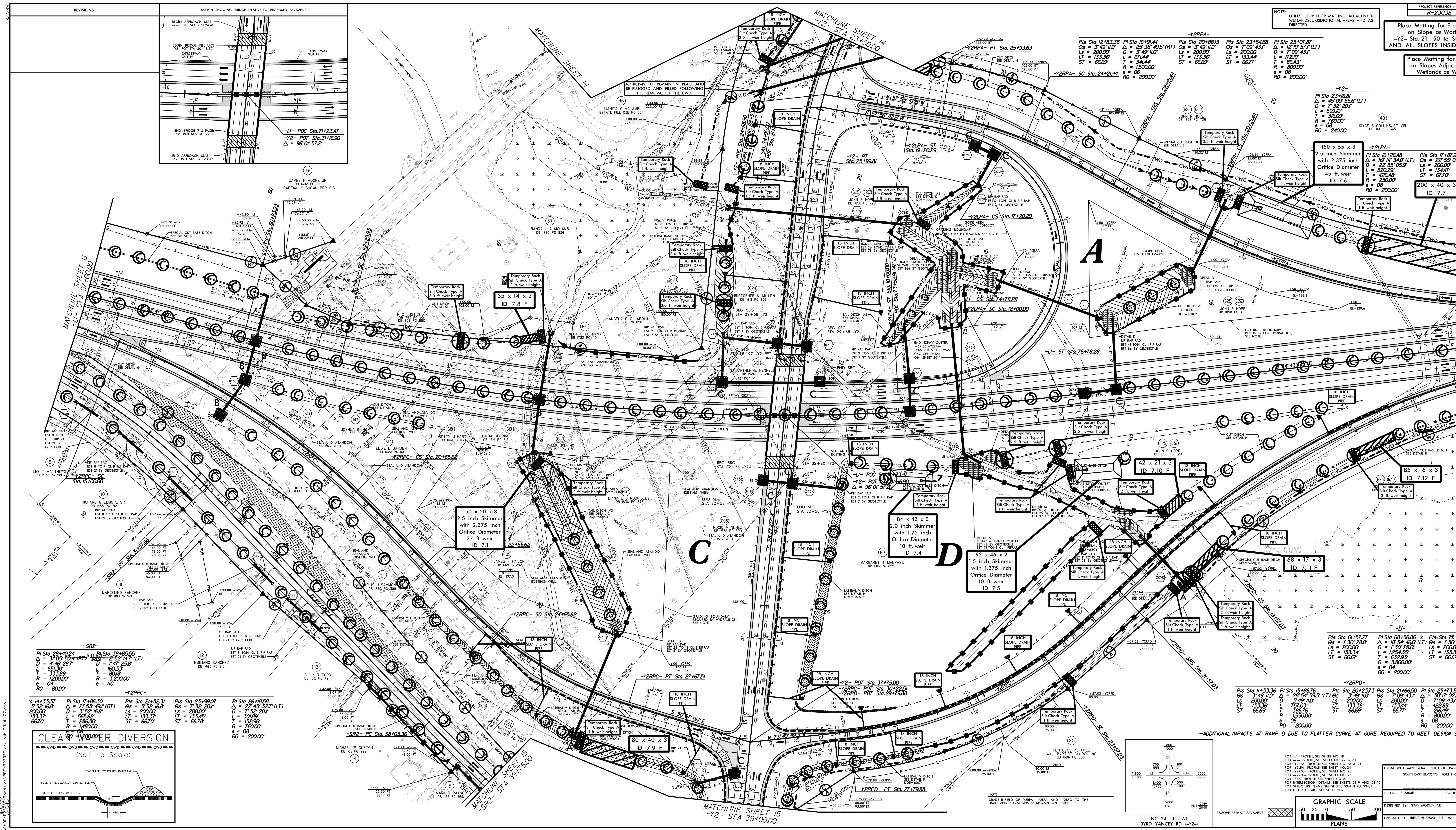
NOTES:
1. -L1- PROJECT LIMITS BASED ON NAD 83 NA 2011 DATUM
2. PPES - PARALLEL PIPE END SECTION

REMOVE ASPHALT PAVEMENT

FOR -L1- PROFILE, SEE SHEET NO. 18
FOR -SR1- PROFILE, SEE SHEET NO. 30
FOR -SR2- PROFILE, SEE SHEET NO. 30
FOR -DR1- PROFILE, SEE SHEET NO. 32
FOR DITCH DETAILS SEE SHEET 2D-1



PROJECT REFERENCE NO. R-2303E
SHEET NO. EC-19/CONST.6
For Slopes Excavated Greater Than 10 feet Install Matting for Erosion Control on Entire Slope as Work Allows.
Place Matting for Erosion Control on Slope as Work Allows. -L1- Sta. 48+50 to Sta. 60+50 -LT- -L1- Sta. 52+50 TO Sta. 54+87 -RT-
NAD 83 / NA 2011
-DRI-
PI Sta 10+56.28
Δ = 27° 39' 26.8" (RT)
D = 114° 35' 29.6"
L = 24.14'
T = 12.31'
R = 50.00'
PI Sta 11+49.56
Δ = 28° 08' 42.3" (LT)
D = 119° 21' 58.3"
L = 23.58'
T = 12.03'
R = 48.00'
PI Sta 15+50.20
Δ = 34° 57' 18.0" (LT)
D = 358° 05' 55.0"
L = 9.76'
T = 5.04'
R = 16.00'
-DRI- PT Sta. 10+68.11
-DRI- PC Sta. 11+37.52
-DRI- PT Sta. 11+61.10
-DRI- END CONSTRUCTION STA 15+72.57
-DRI- PT Sta. 15+54.92
-DRI-PC Sta. 15+45.16
-DRI- POT Sta. 15+93.06
100 x 50 x 2 1.5 inch Skimmer with 1.5 inch Orifice Diameter 13 ft. weir ID 6.1
102 x 51 x 2 1.5 inch Skimmer with 1.5 inch Orifice Diameter 20 ft. weir ID 6.5
80 x 20 x 3 ID 6.9 F
24 INCH TEMPORARY PIPE
18 INCH SLOPE DRAIN PIPE
Temporary Rock Silt Check Type A 3.5 ft. weir height
Temporary Rock Silt Check Type A 1 ft. weir height
Temporary Rock Silt Check Type A 2.5 ft. weir height
Temporary Rock Silt Check Type A 2.25 ft. weir height
MARY U BALLARD DB 1537 PG 622
JEROME A HERRING DB 1537 PG 622
JAMES F MOORE JR DB 1642 PG 840 PARTIALLY SHOWN PER
JON SCOTT MOORE DB 1922 PG 294 MB 89 PG 57 MB 65 PG 95
MARY F. POOLE ESTATE FILE 97E-386 MB 89 PG 57
LEE T MATTHEWS DB 1492 PG 586
MATCHLINE SHEET 5 -L1- STA 43+00.00
MATCHLINE SHEET 7 -L1- STA 57+00.00
-Y2RPC- TS Sta. 13+00.00
-SR2- PC Sta. 17+80.35
-SR2- PT Sta. 18+19.90
-SR2- PC Sta. 25+06.35
CROWN POINT SHIFT -L1- STA 48+75.00 (LT & RT) SEE SHEET 2A-2 & 2A-3
43 LF OF OUTLET CHANNEL IMPROVEMENT EST EXCAVATION = 45 CY EST CLASS I RIPRAP = 100 TONS EST GEOTEXTILE = 106 SY
106 x 53 x 2 1.5 inch Skimmer with 1.5 inch Orifice Diameter 17 ft. weir ID 6.2
79 x 42 x 2 1.5 inch Skimmer with 1.25 inch Orifice Diameter 25 ft. weir (See Tiered Skimmer Basin Detail) ID 6.10 F
Modified Silt Basin Type 'B' 79 x 42 x 2 25 ft. weir (See Tiered Skimmer Basin Detail) ID 6.10 F
NOTE: UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.
CLEAN WATER DIVERSION
→ → CWD → → CWD → → CWD → → CWD
(Not to Scale)
STABILIZE EXCAVATED MATERIAL
SOIL STABILIZATION GEOTEXTILE
OFFSITE CLEAN WATER
1' MIN.
-SR2-
PI Sta 18+36.13
Δ = 0° 31' 57.5" (RT)
D = 0° 28' 38.9"
L = 111.56'
T = 55.78'
R = 12,000.00'
e = NC
PI Sta 28+40.24
Δ = 31° 05' 50.4" (RT)
D = 4° 46' 28.7"
L = 651.30'
T = 333.89'
R = 1,200.00'
e = 04
RO = 80.00'
-Y2RPC-
PIs Sta 14+33.37
θs = 3° 52' 16.8"
Ls = 200.00'
LT = 133.37'
ST = 66.70'
REMOVE ASPHALT PAVEMENT
FOR -L1- PROFILE, SEE SHEET NO. 18
FOR -Y2RPC- PROFILE, SEE SHEET NO. 25
FOR -SR2- PROFILE, SEE SHEET NO. 30
FOR -DR1- PROFILE, SEE SHEET NO. 32
FOR CULVERT PLANS, SEE SHEETS C1-1 THRU C1-7
FOR DITCH DETAILS SEE SHEET 2D-1



PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-20/CONST.

NOTE:
UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.

Place Matting for Erosion Control on Slope as Work Allows. -Y2- Sta. 21+50 to Sta. 30+50 RT AND ALL SLOPES INSIDE GORE AREAS

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

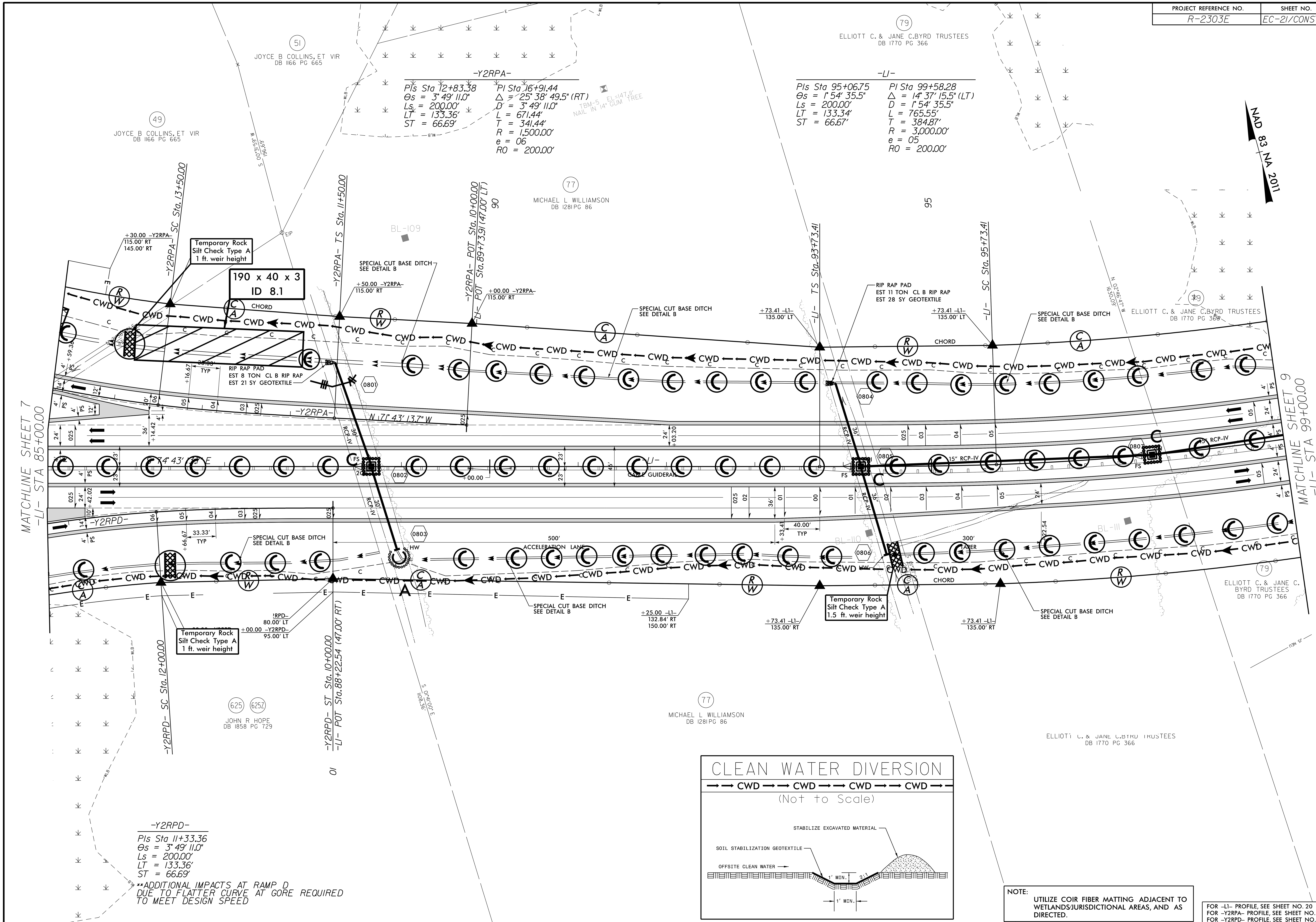
**ADDITIONAL IMPACTS AT RAMP D DUE TO FLATTER CURVE AT GORE REQUIRED TO MEET DESIGN SPEED

FOR -L1- PROFILE, SEE SHEET NO. 19
FOR -Y2- PROFILE, SEE SHEET NO. 22 & 23
FOR -Y2RPA- PROFILE, SEE SHEET NO. 23 & 24
FOR -Y2LPA- PROFILE, SEE SHEET NO. 24
FOR -Y2RPC- PROFILE, SEE SHEET NO. 25
FOR -Y2RPD- PROFILE, SEE SHEET NO. 26
FOR -SR2- PROFILE, SEE SHEET NO. 31
FOR INTERSECTION DETAILS, SEE SHEETS 2B-9 AND 2B-10
FOR STRUCTURE PLANS, SEE SHEETS S3-1 THRU S3-31
FOR DITCH DETAILS SEE SHEET 2D-1

LOCATION: US-421 FROM SOUTH OF US-701 (GARLAND HWY/SOUTHEAST BLVD) TO NORTH OF CECIL-ODIE RD

TIP NO.: R-2303E COUNTY: SAMPSON

DESIGNED BY: GRAY MODLIN, P.E.
CHECKED BY: TRENT HUFFMAN, P.E. DATE: 8/28/19



PROJECT REFERENCE NO.
R-2303E
SHEET NO.
EC-21/CONST.8
NAD 83 NA 2011
JOYCE B COLLINS, ET VIR DB 1166 PG 665
ELLIOTT C. & JANE C. BYRD TRUSTEES DB 1770 PG 366
MICHAEL L WILLIAMSON DB 1281 PG 86
JOHN R HOPE DB 1858 PG 729
-Y2RPA-
PIs Sta 12+83.38
Θs = 3° 49' 11.0"
Ls = 200.00'
LT = 133.36'
ST = 66.69'
PI Sta 16+91.44
Δ = 25° 38' 49.5" (RT)
D = 3° 49' 11.0"
L = 671.44'
T = 341.44'
R = 1,500.00'
e = 06
R0 = 200.00'
-L1-
PIs Sta 95+06.75
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'
PI Sta 99+58.28
Δ = 14° 37' 15.5" (LT)
D = 1° 54' 35.5"
L = 765.55'
T = 384.87'
R = 3,000.00'
e = 05
R0 = 200.00'
-Y2RPD-
PIs Sta 11+33.36
Θs = 3° 49' 11.0"
Ls = 200.00'
LT = 133.36'
ST = 66.69'
**ADDITIONAL IMPACTS AT RAMP D DUE TO FLATTER CURVE AT GORE REQUIRED TO MEET DESIGN SPEED
MATCHLINE SHEET 7 -L1- STA 85+00.00
MATCHLINE SHEET 9 -L1- STA 99+00.00
Temporary Rock Silt Check Type A 1 ft. weir height
Temporary Rock Silt Check Type A 1.5 ft. weir height
190 x 40 x 3 ID 8.1
RIP RAP PAD EST 8 TON CL B RIP RAP EST 21 SY GEOTEXTILE
RIP RAP PAD EST 11 TON CL B RIP RAP EST 28 SY GEOTEXTILE
SPECIAL CUT BASE DITCH SEE DETAIL B
CLEAN WATER DIVERSION
CWD
(Not to Scale)
STABILIZE EXCAVATED MATERIAL
SOIL STABILIZATION GEOTEXTILE
OFFSITE CLEAN WATER
1' MIN.
NOTE:
UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.
FOR -L1- PROFILE, SEE SHEET NO. 20
FOR -Y2RPA- PROFILE, SEE SHEET NO. 23
FOR -Y2RPD- PROFILE, SEE SHEET NO. 26
FOR DITCH DETAILS SEE SHEET 2D-1

PROJECT REFERENCE NO.	SHEET NO.
R-2303E	EC-22/CONST.9

NOTE:
UTILIZE COIR FIBER MATTING ADJACENT TO WETLANDS/JURISDICTIONAL AREAS, AND AS DIRECTED.

NAD 83 NA 2011

-LI-
PI Sta 99+58.28
Δ = 14° 37' 15.5" (LT)
D = 1° 54' 35.5"
L = 765.55'
T = 384.87'
R = 3,000.00'
e = 05
RO = 200.00'

PI Sta 104+05.64
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

PI Sta 112+06.98
Θs = 1° 54' 35.5"
Ls = 200.00'
LT = 133.34'
ST = 66.67'

MATCHLINE SHEET 8
-LI- STA 99+00.00

MATCHLINE SHEET 10
-LI- STA 113+00.00

-LI- CS Sta. 103+38.96

-LI- ST Sta. 105+38.96

-LI- TS Sta. 110+73.64

-LI- SC Sta. 112+73.64

-LI- POT Sta. 106+00.00

-Y6A- POT Sta.16+11.08

-Y6A- PT Sta. 15+13.40

-Y6A- PC Sta. 12+15.93

BEGIN CONSTRUCTION
-Y6A- STA 11+50.00

-Y6A- POT Sta. 10+00.00

-Y6A- POC Sta. 13+50.00
-SR3- PC Sta. 10+00.00

-SR3- PC Sta. 13+02.41

-SR3- PT Sta. 11+04.72

-SR3- PT Sta. 13+97.64

"DO NOT DISTURB"
-SR3- PC Sta. 16+01.99

-SR3-
PI Sta 10+54.60
Δ = 40° 00' 03.8" (LT)
D = 38° 11' 49.9"
L = 104.72'
T = 54.60'
R = 150.00'
e = 04
RO = 62.00'
DS = 15 mph

PI Sta 13+50.61
Δ = 21° 49' 34.8" (RT)
D = 22° 55' 05.9"
L = 95.24'
T = 48.20'
R = 250.00'
e = 04
RO = 68.00'

PI Sta 16+55.30
Δ = 24° 04' 22.4" (RT)
D = 22° 55' 05.9"
L = 105.04'
T = 53.31'
R = 250.00'
e = 04
RO = 56.00'

NC 24 (-L1-) AT
CECIL ODIE RD (-Y6A-)
ADT 2019 / 2040

CLEAN WATER DIVERSION
(Not to Scale)

REMOVE ASPHALT PAVEMENT

REMOVE ASPHALT PAVEMENT

ELLIOTT C. & JANE C.BYRD TRUSTEES DB 1770 PG 366

DAVID O. COLWELL DB 1687 PG 295

DAVID O. CALDWELL DB 906 PG 722

DAVID O. COLWELL DB 863 PG 260

DEPARTMENT OF TRANSPORTATION DB 1515 PG 962

NC REAL ESTATE SERVICE CORP DB 1742 PG 416

KIMBERLY D PETERSON DB 1153 PG 607

EVELYN JANE MATHIS DB 1357 PG 931

CHARLES S JACOBS DB 1331 PG 4 DB 1687 PG 295

FRANZ ERIC FREEMAN DB 1919 PG 840 DB 1919 PG 844

SHEILA S SULLIVAN DB 1984 PG 559 DB 1871 PG 758

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