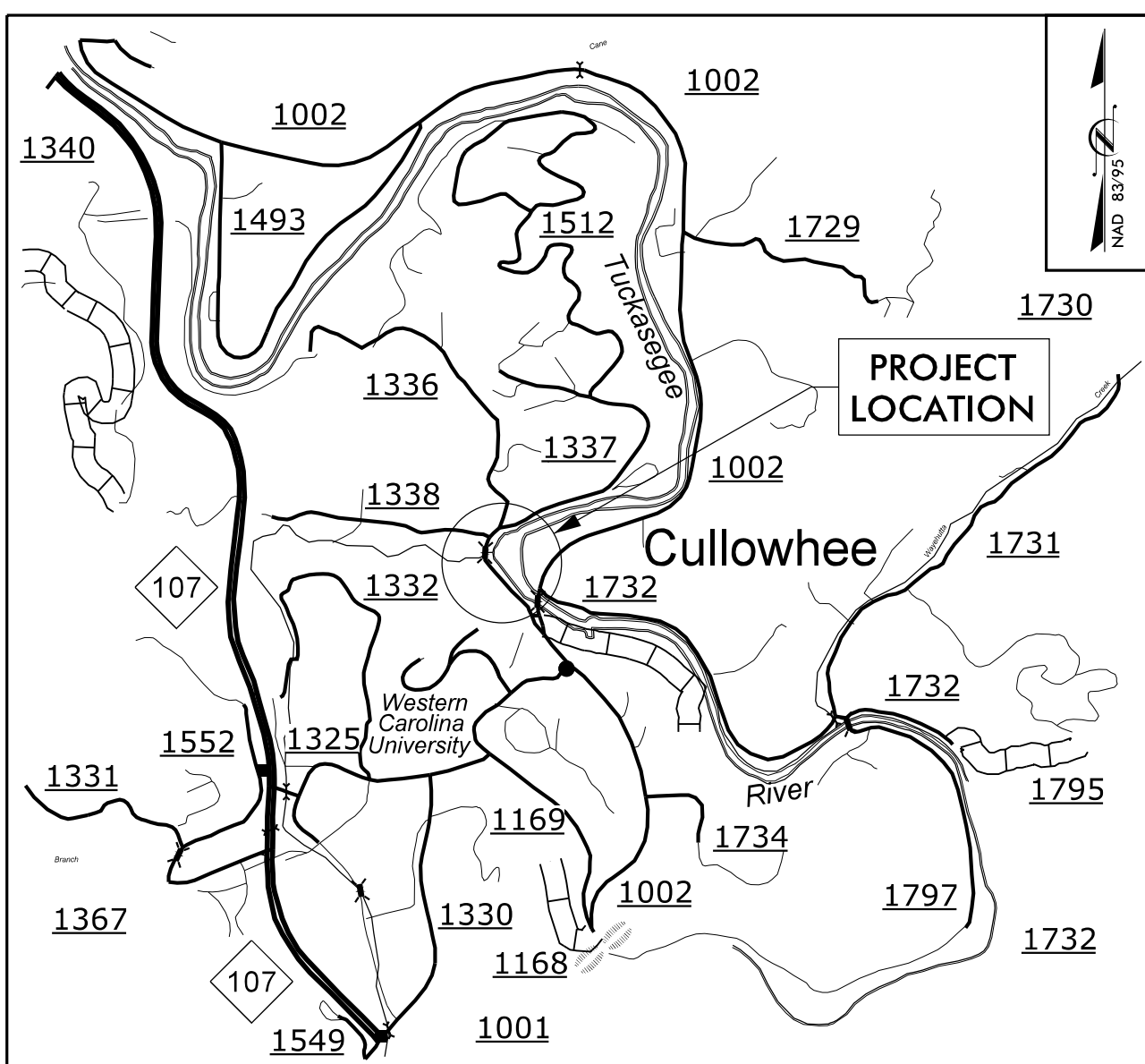


**STATE PROJECT: 17BP.14.R.212**

**CONTRACT: C204715**



**VICINITY MAP (NOT TO SCALE)**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

---

PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

---

# JACKSON COUNTY

**LOCATION: SR 1336 (MONTEITH GAP ROAD) FROM NORTH OF  
SR 1002 (OLD CULLOWHEE ROAD) TO NORTH OF  
SR 1337 (LEDBETTER ROAD)**

**TYPE OF WORK: ROADWAY WIDENING, BIKE LANE/SIDEWALK  
CONSTRUCTION, GRADING, PAVING, DRAINAGE,  
AND STRUCTURES**

BEGIN STATE PROJECT 17BP.14.R.212  
-L- PCC Sta. 11+14.45  
TIE TO TIP PROJECT  
B-4159 -Y1- POC Sta. 11+20.00

BEGIN CONSTRUCTION  
-L- STA. POT 9+97.97  
26.82' RT

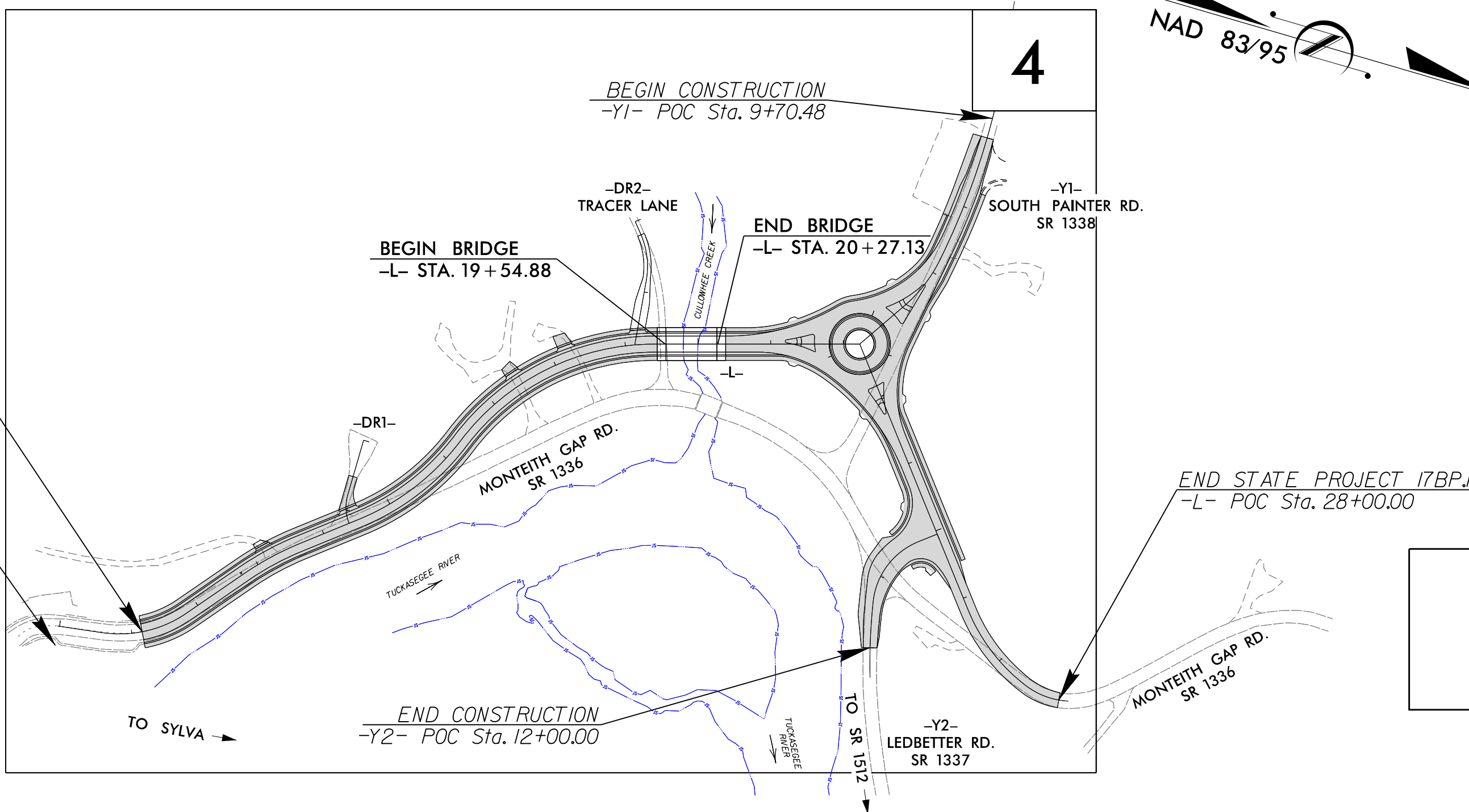
BEGIN CONSTRUCTION  
-Y1- POC Sta. 9+70.48

BEGIN BRIDGE  
-L- STA. 19+54.88

END BRIDGE  
-L- STA. 20+27.13

END CONSTRUCTION  
-Y2- POC Sta. 12+00.00

END STATE PROJECT 17BP.14.R.212  
-L- POC Sta. 28+00.00



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.14.R.212	EC-1	9
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.14.PE.212	N/A	P.E.	
17BP.14.ROW.212	N/A	ROW	
17BP.14.R.212	N/A	BRIDGE CONST.	
44983	N/A	BIKE LANES SIDEWALK ROADWAY	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	---
1630.05	Temporary Diversion	---
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	---X---
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	---
	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	---

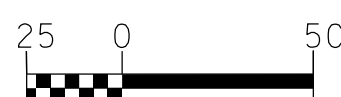
**THIS PROJECT CONTAINS  
EROSION CONTROL PLANS  
FOR CLEARING AND  
GRUBBING PHASE OF  
CONSTRUCTION.**

**THIS PROJECT HAS  
BEEN DESIGNED TO  
SENSITIVE WATERSHED  
STANDARDS.**

**ENVIRONMENTALLY  
SENSITIVE AREA(S) EXIST  
ON THIS PROJECT**  
*Refer To E. C. Special Provisions  
for Special Considerations.*

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

**GRAPHIC SCALE**



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.**



Prepared in the Office of:

**HDR Engineering, Inc. of the Carolinas**  
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601  
N.C.B.E.L.S. License Number: F-0116

Designed by:

**David R. Wagner II, PE**      **4286**

NAME

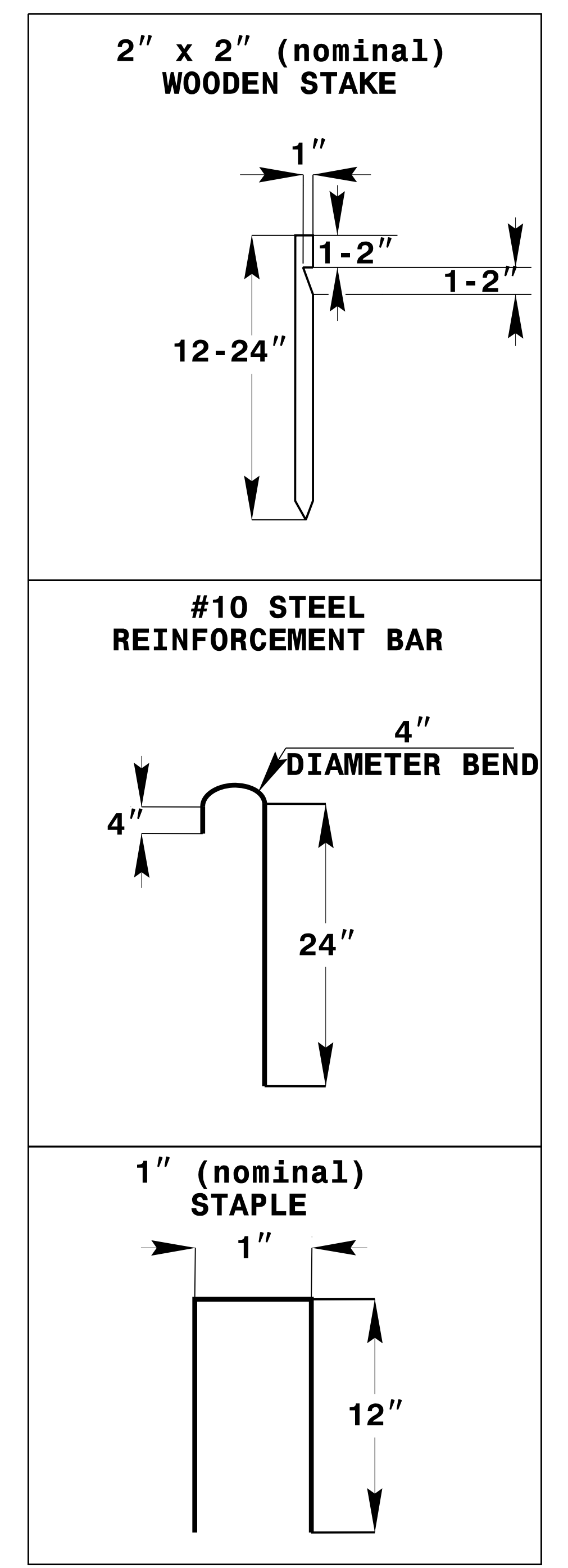
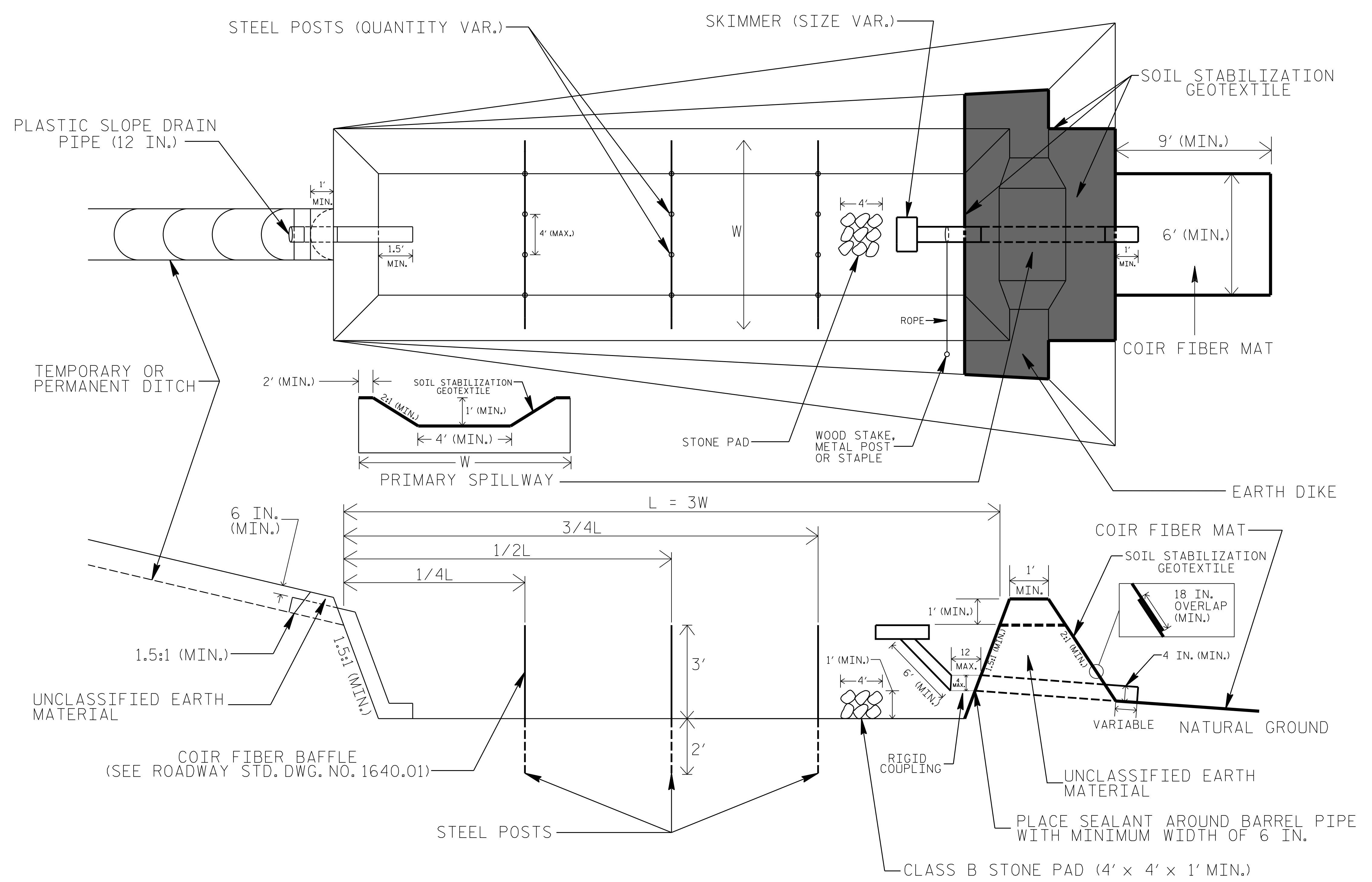
LEVEL III CERTIFICATION NO.

**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 revision 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 A	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 Wattle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

# SKIMMER BASIN WITH BAFFLES DETAIL

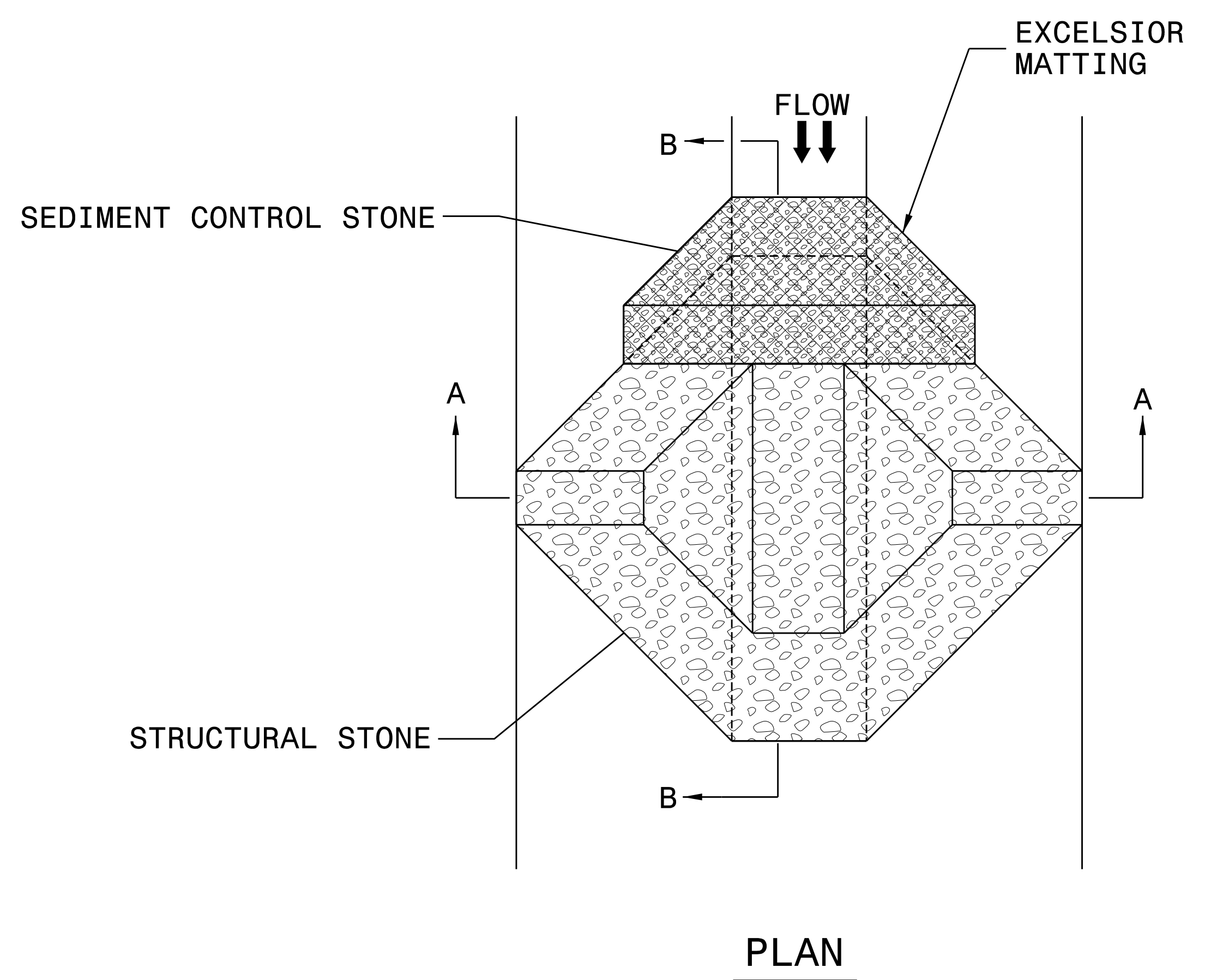


## NOTES

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. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

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



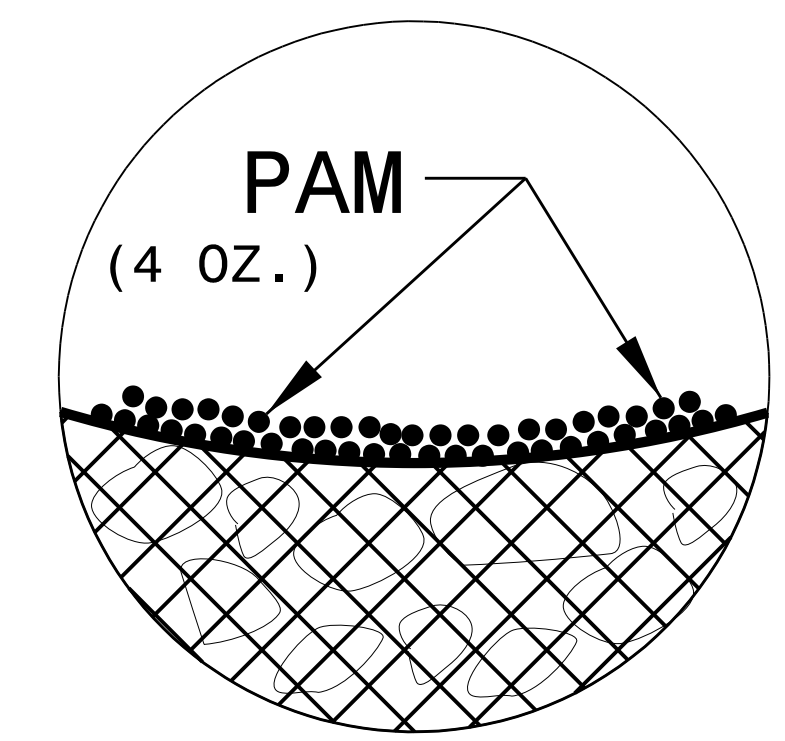
**NOTES:**

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

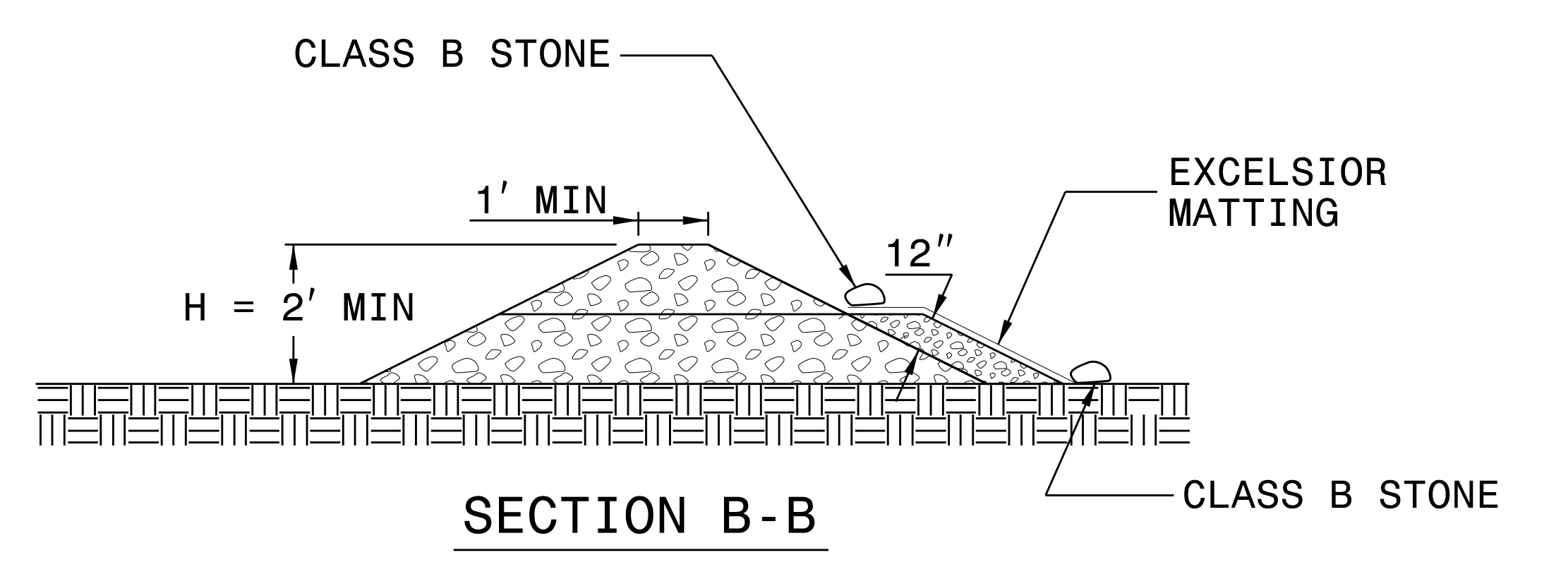
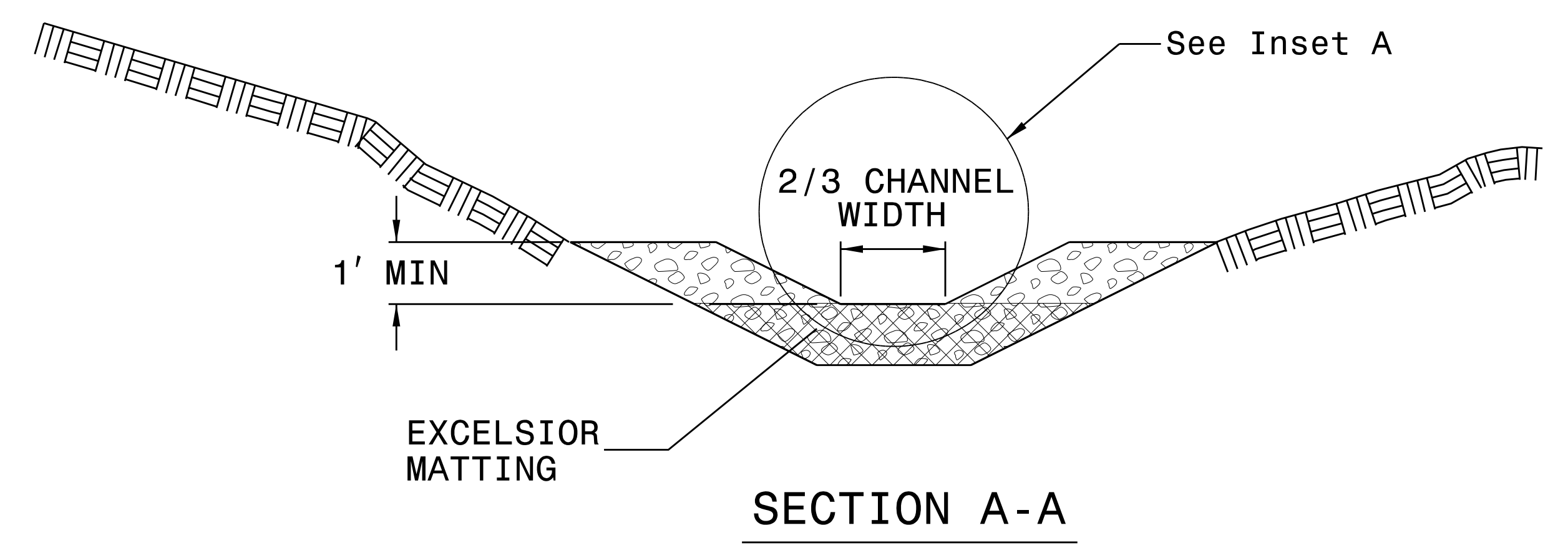
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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**



NOT TO SCALE

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

**SOIL STABILIZATION SUMMARY SHEET**

**MATTING FOR EROSION CONTROL (DITCHES)**

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	22+43	23+10	LT	50
4	-L-	23+10	25+45	LT	170
4	-Y1-	10+20	11+00	LT	60
4	-Y2-	11+40	12+20	LT	60
			DITCH TOTAL		340
<b>MATTING FOR EROSION CONTROL (SLOPES)</b>					
4	-L-	12+25	14+00	LT	675
4	-L-	19+20	19+30	LT	50
4	-L-	19+00	19+55	RT	50
4	-L-	20+27	22+50	LT	235
4	-L-	20+27	23+00	RT	335
4	-Y2-	11+25	12+00	RT	55
4	-Y2-	11+50	12+00	LT	145
			SLOPE TOTAL		1545
			DITCH TOTAL		340
			SLOPE TOTAL		1545
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				25000
			TOTAL		26885

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
<b>900 GRAM COIR FIBER MATTING</b>					
4	-L-	19+50	20+50	LT	200
4	-L-	19+50	20+50	RT	450
			COIR FIBER MATTING TOTAL		650
	MISC. COIR FIBER MATTING TO BE INSTALLED AS DIRECTED BY ENGINEER				510
			TOTAL		1160

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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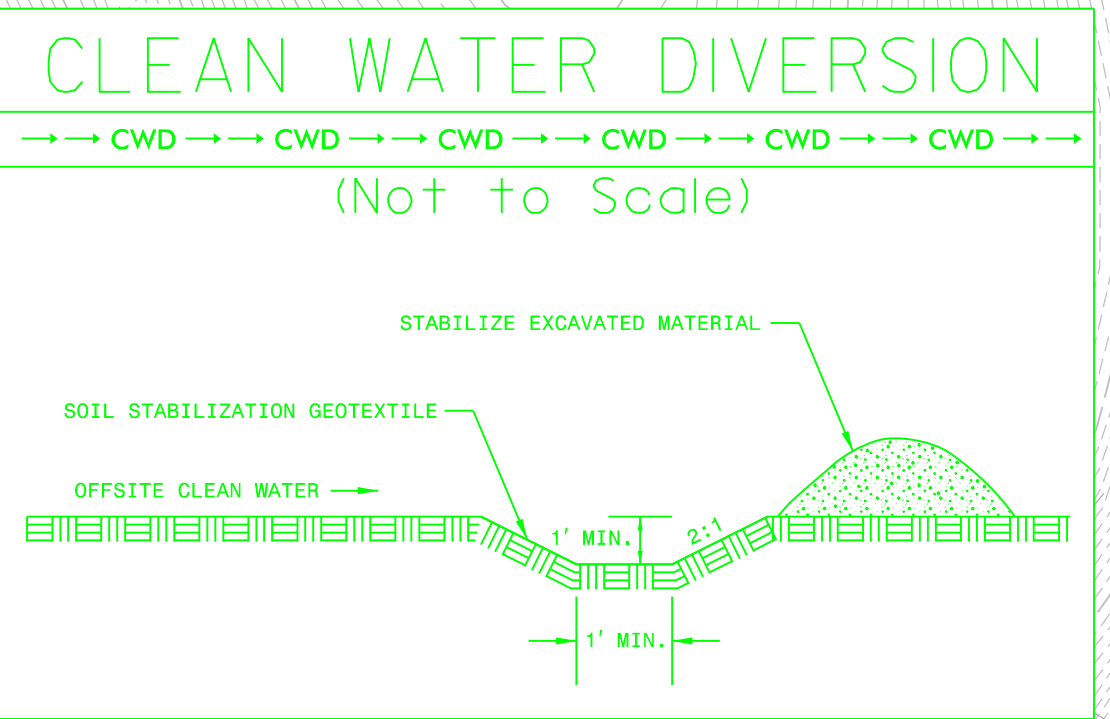
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## ***SOIL STABILIZATION TIMEFRAMES***

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
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.

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.



ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

60 x 30 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
7 ft. weir  
ID 4.1 B

REVISIONS

PLOT DRIVER: NCDOT\_pdf\_color\_eng\_100.plt  
USER: DWAGNER  
FILE: NCDOT\NCDOT\_Western\_Div\_Or-Coll\_M\_NCDOT-17BP.14.R.212\_Cullowhee\6.0\_CAD\_BIM\6.2\_Work\_In\_Progress\17BP.14.R.212\Erosion Control\17BP.14.R.212\_EC\_PSH.dgn  
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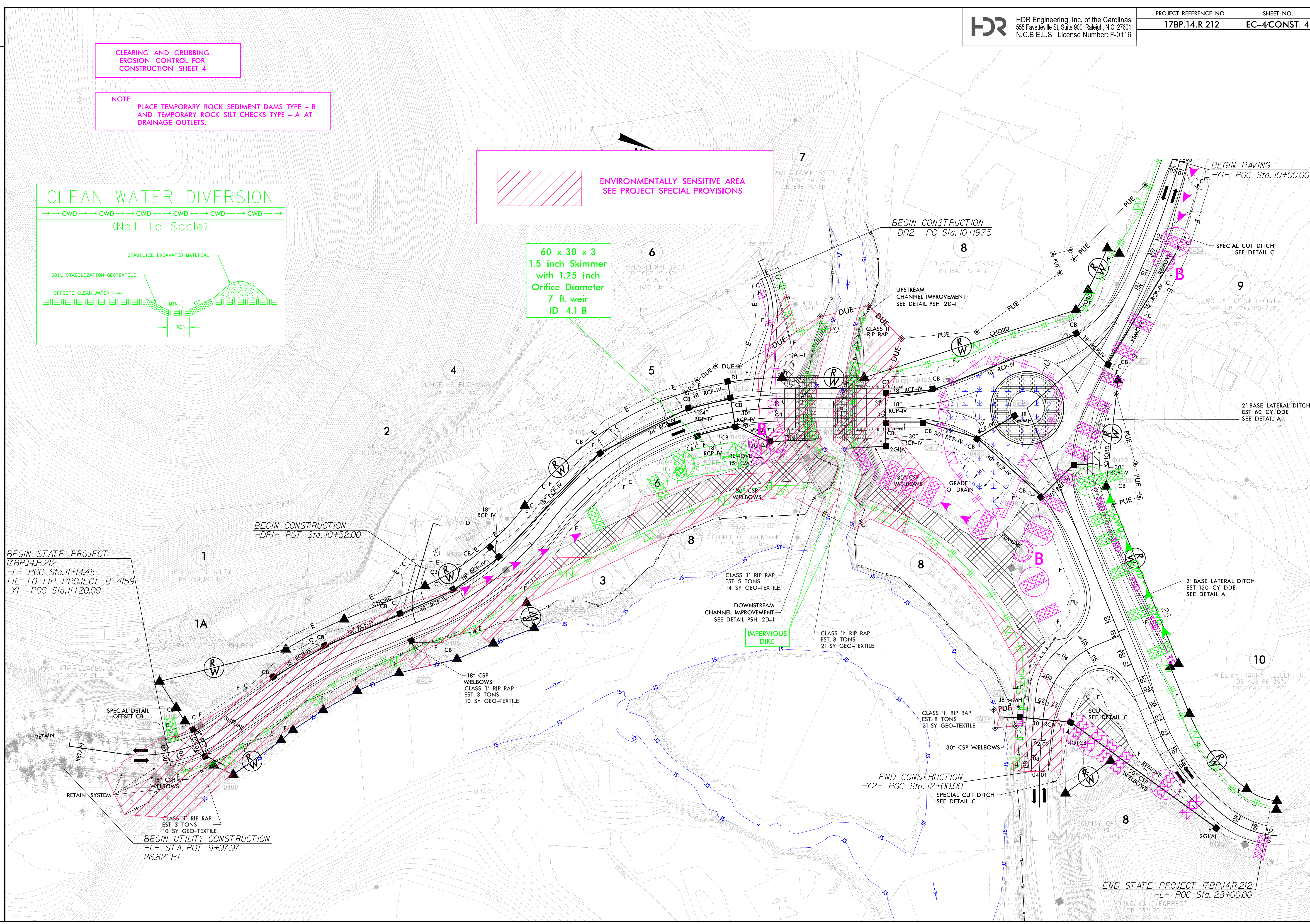
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17BP.14.R.212  
-L- POC Sta. 11+4.45  
TIE TO TIP PROJECT B-4159  
-Y1- POC Sta. 11+20.00

BEGIN CONSTRUCTION  
-DRI- POT Sta. 10+52.00

BEGIN UTILITY CONSTRUCTION  
-L- STA. POT 9+97.97  
26.82' RT

END CONSTRUCTION  
-Y2- POC Sta. 12+00.00

END STATE PROJECT 17BP.14.R.212  
-L- POC Sta. 28+00.00



2' BASE LATERAL DITCH  
EST 60 CY DDE  
SEE DETAIL A

2' BASE LATERAL DITCH  
EST 120 CY DDE  
SEE DETAIL A

SPECIAL CUT DITCH  
SEE DETAIL C

SPECIAL CUT DITCH  
SEE DETAIL C

SPECIAL CUT DITCH  
SEE DETAIL C

BEGIN PAVING  
-Y1- POC Sta. 10+00.00

WCU STUDENT HOUSING LLC  
DB 2247 PG 793

WILLIAM HARRY KELLER, JR.  
DB 406 PG 387  
IDB 2043 PG 852

DOUGLAS C. FORREST  
DB 533 PG 587  
IDB 851 PG 612

COUNTY OF JACKSON  
DB 1846 PG 477

COUNTY OF JACKSON  
DB 2035 PG 62

COUNTY OF JACKSON  
DB 2163 PG 68

COUNTY OF JACKSON  
DB 2163 PG 68

COUNTY OF JACKSON  
DB 2163 PG 68

JAMES EDWIN BYER  
DB 1965 PG 34  
IDB 898 PG 61

JAMES EDWIN BYER  
DB 2002 PG 305  
PG 20 SL 47  
TRACT B

MICHAEL R. BUCHANAN  
DB 75 PG 86

AMTA, LLC  
DB 1587 PG 44

JED ALLEN HALEY  
DB 754 PG 437

MOUNTAIN VILLAGES, LLC  
DB 208 PG 61  
IDB 176 PG 243

ST. JOSEPH'S CATHOLIC CHURCH

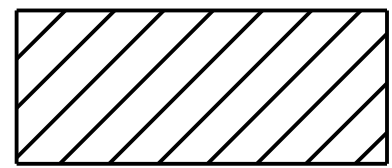
COUNTY OF JACKSON  
DB 2163 PG 68

COUNTY OF JACKSON  
DB 2163 PG 68

COUNTY OF JACKSON  
DB 2163 PG 68

COUNTY OF JACKSON  
DB 2163 PG 68

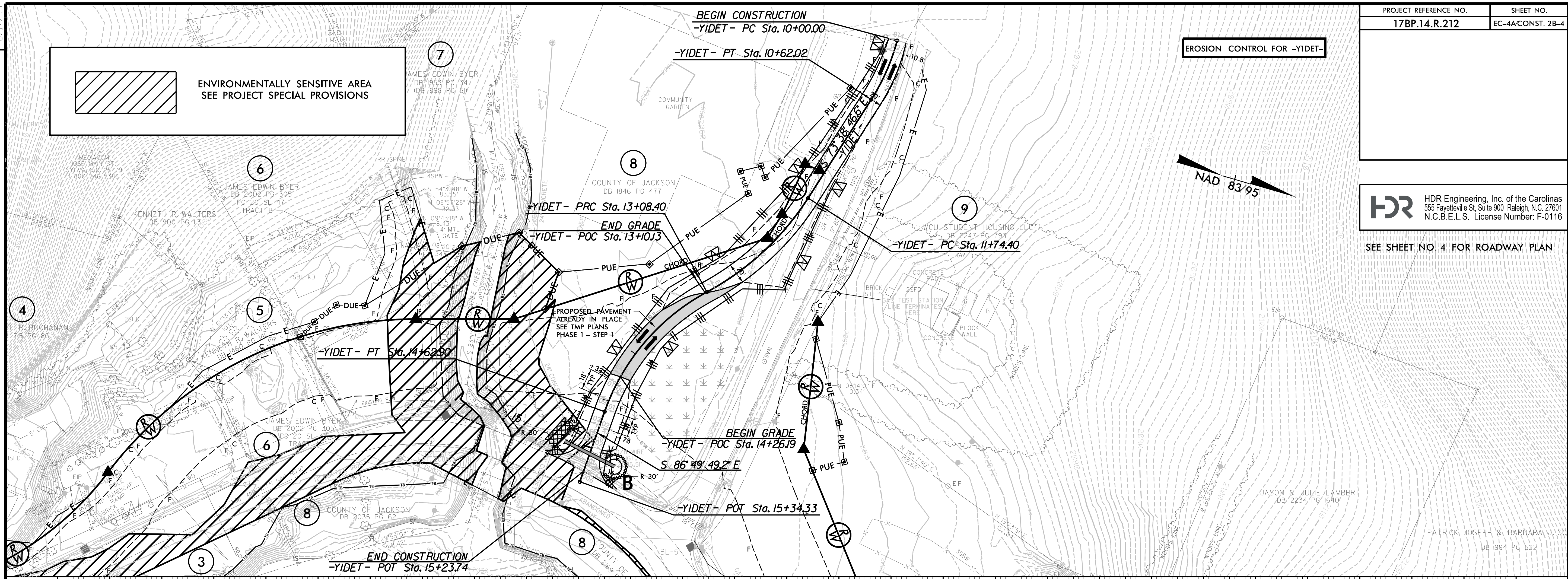
COUNTY OF JACKSON  
DB 2163 PG 68

 ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

EROSION CONTROL FOR -YIDET-

 HDR Engineering, Inc. of the Carolinas  
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601  
N.C.B.E.L.S. License Number: F-0116

SEE SHEET NO. 4 FOR ROADWAY PLAN



# -YIDET-

BEGIN GRADE  
BEGIN CONSTRUCTION  
-YIDET- STA. 10+00.00  
EL. 2,065.38  
TIE TO EXISTING

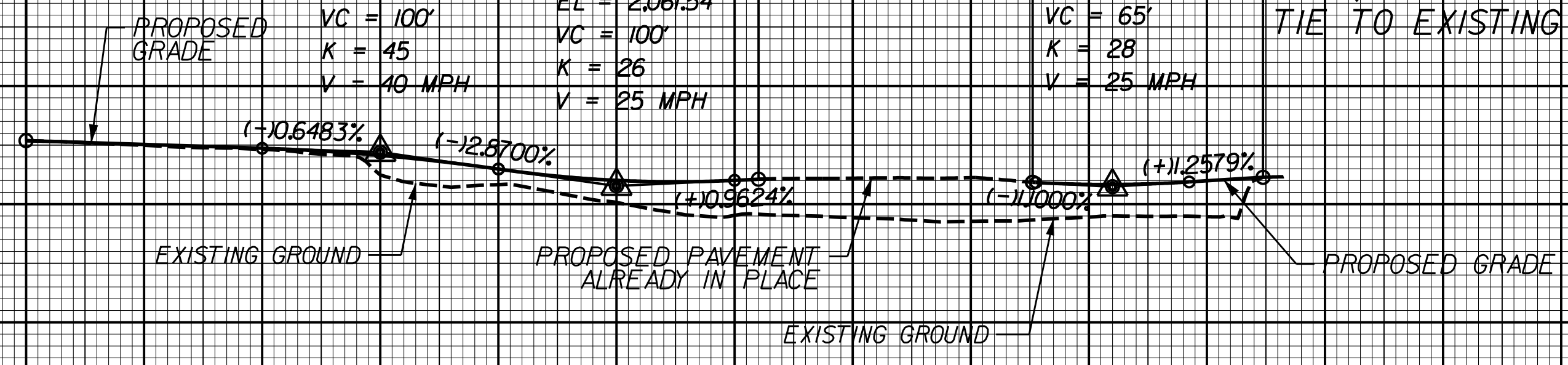
END GRADE  
-YIDET- STA. 13+10.13 =  
-RAB WEST - STA. 11+31.28  
EL. 2,062.12

PI = 11+50.00	PI = 12+50.00
EL = 2,064.41	EL = 2,061.54
VC = 100'	VC = 100'
K = 45	K = 26
V = 40 MPH	V = 25 MPH

BEGIN GRADE  
-YIDET- STA. 14+26.19 =  
-RAB EAST - STA. 10+25.71  
EL. 2,061.85

END GRADE  
END CONSTRUCTION  
-YIDET- STA. 15+23.74  
EL. 2,062.28  
TIE TO EXISTING

PI = 14+60.00	EL = 2,061.48
VC = 65'	K = 28
	V = 25 MPH



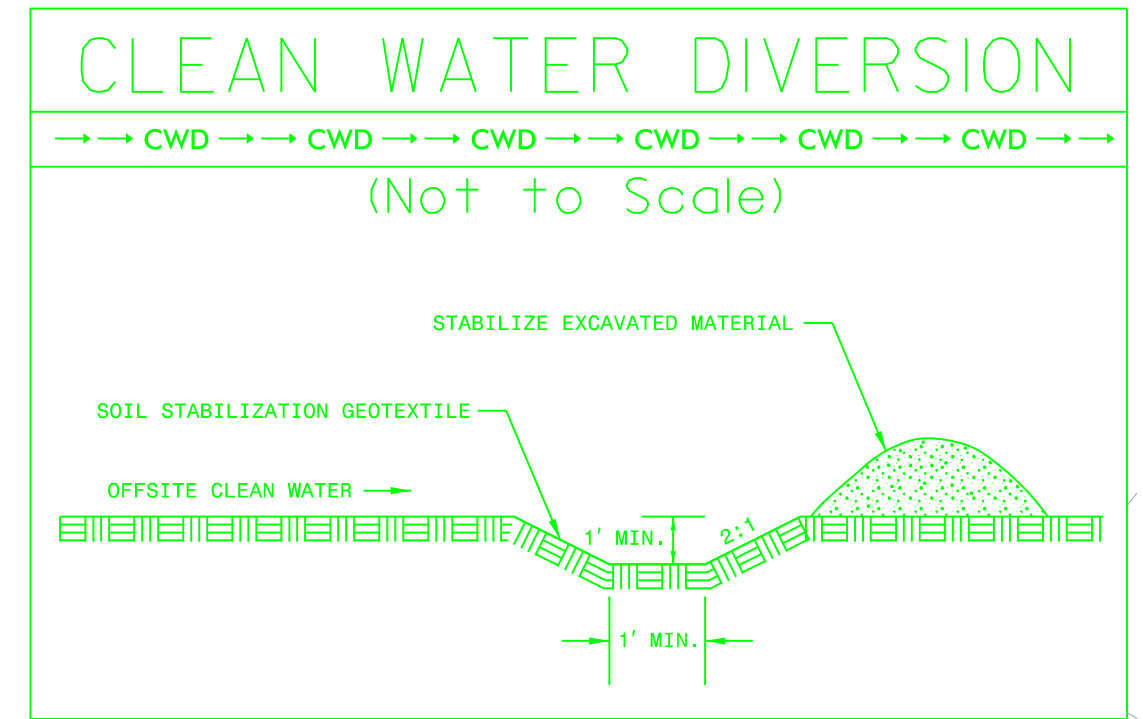
10 11 12 13 14 15

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 USER: DWAGNER  
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 REVISIONS

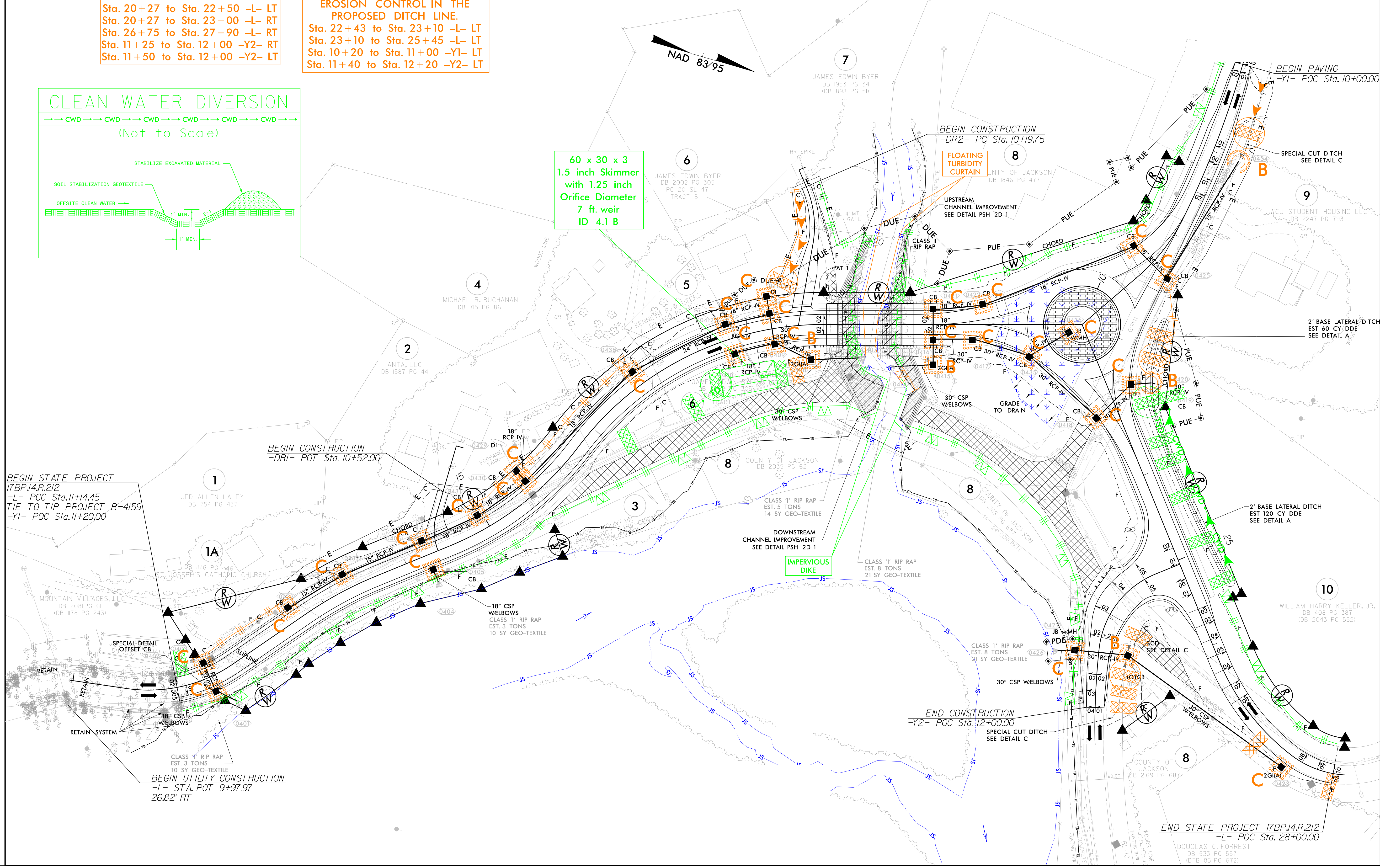
Place Matting for Erosion Control on Slopes as Work Allows.  
Sta. 12+25 to Sta. 14+00 -L- LT  
Sta. 19+20 to Sta. 19+30 -L- LT  
Sta. 19+00 to Sta. 19+55 -L- RT  
Sta. 20+27 to Sta. 22+50 -L- LT  
Sta. 20+27 to Sta. 23+00 -L- RT  
Sta. 26+75 to Sta. 27+90 -L- RT  
Sta. 11+25 to Sta. 12+00 -Y2- RT  
Sta. 11+50 to Sta. 12+00 -Y2- LT

Install Coir Fiber Matting for Erosion Control 900 Grams per Square Meter on Floodplains as Work Allows.

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.  
Sta. 22+43 to Sta. 23+10 -L- LT  
Sta. 23+10 to Sta. 25+45 -L- LT  
Sta. 10+20 to Sta. 11+00 -Y1- LT  
Sta. 11+40 to Sta. 12+20 -Y2- LT



60 x 30 x 3  
1.5 inch Skimmer  
with 1.25 inch  
Orifice Diameter  
7 ft. weir  
ID 4.1 B



REVISIONS

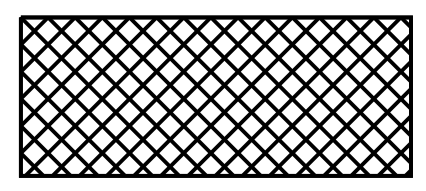
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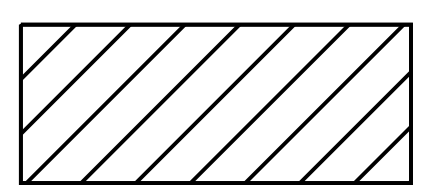


# 0.6 ACRE STREAMBANK REFORESTATION

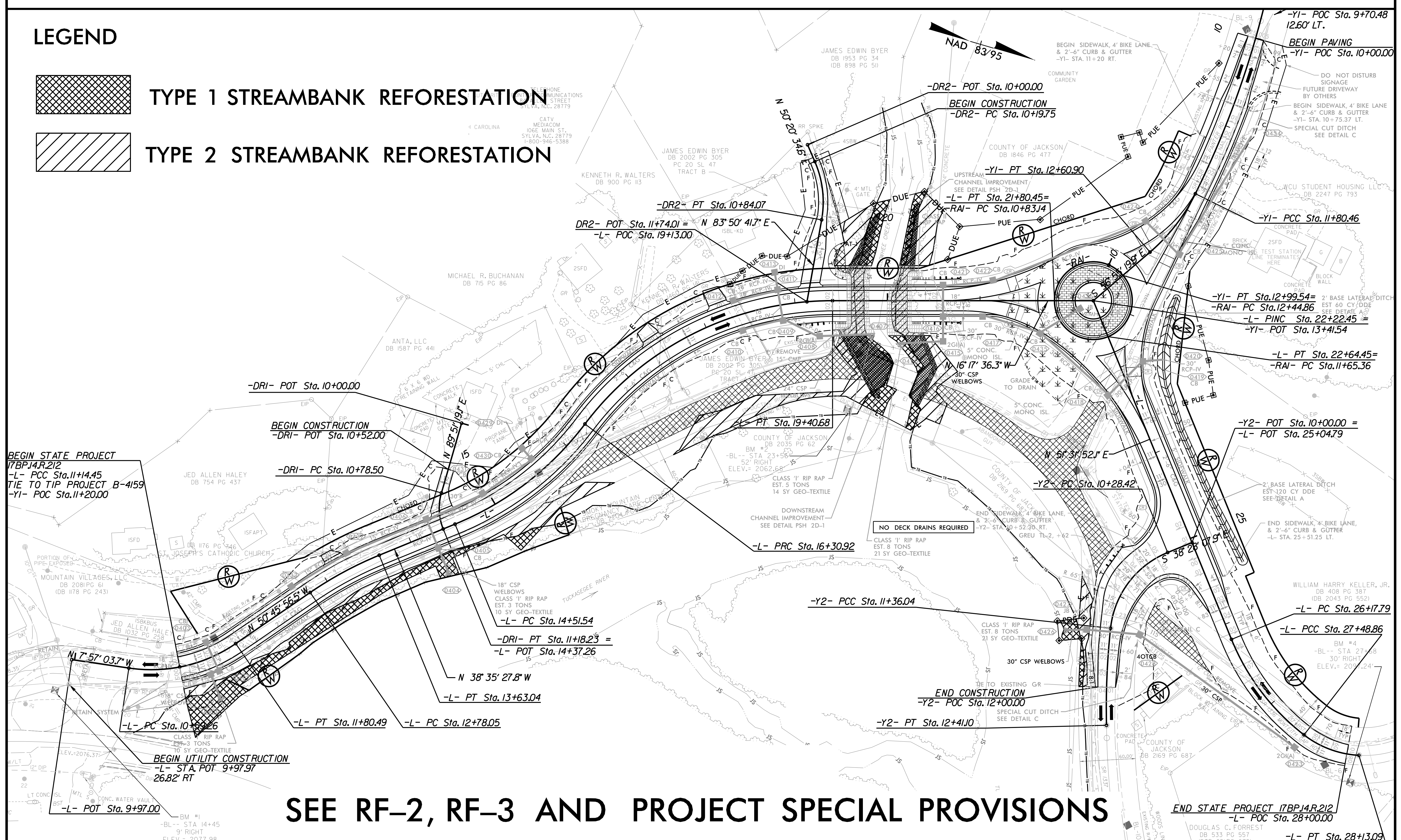
## LEGEND



TYPE 1 STREAMBANK REFORESTATION



TYPE 2 STREAMBANK REFORESTATION



SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS