

**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

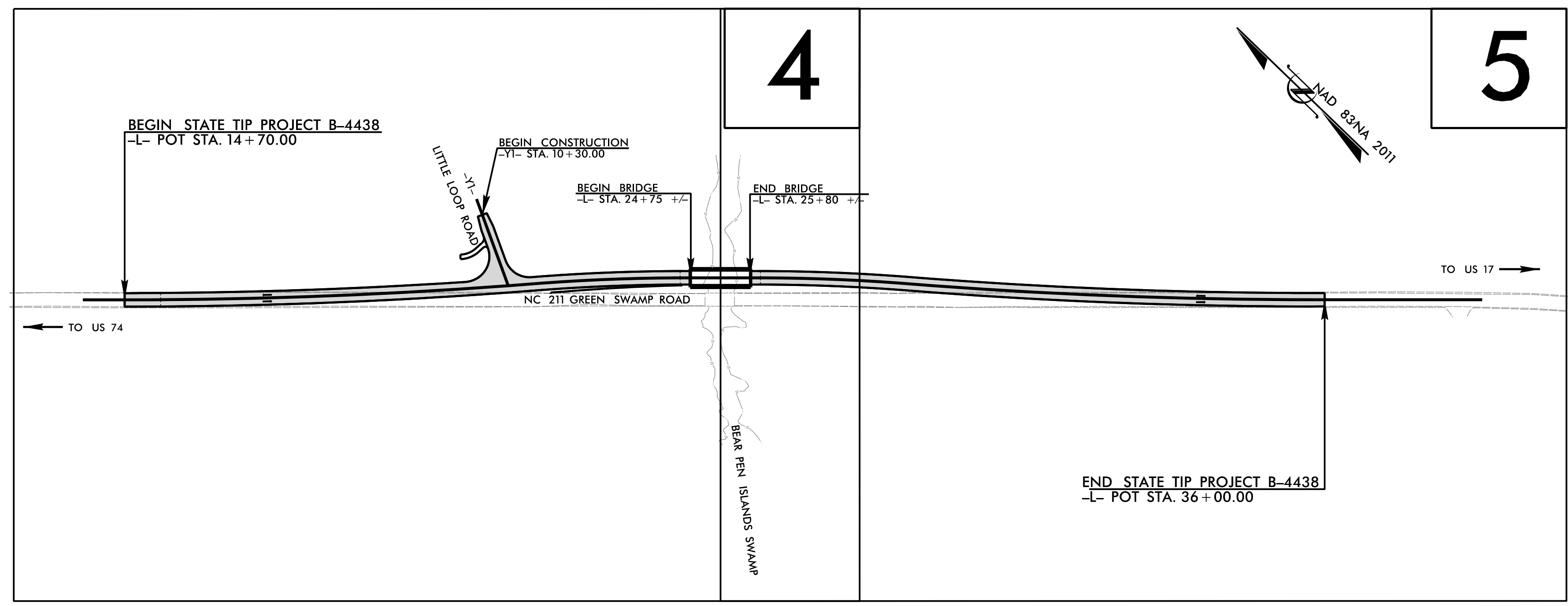
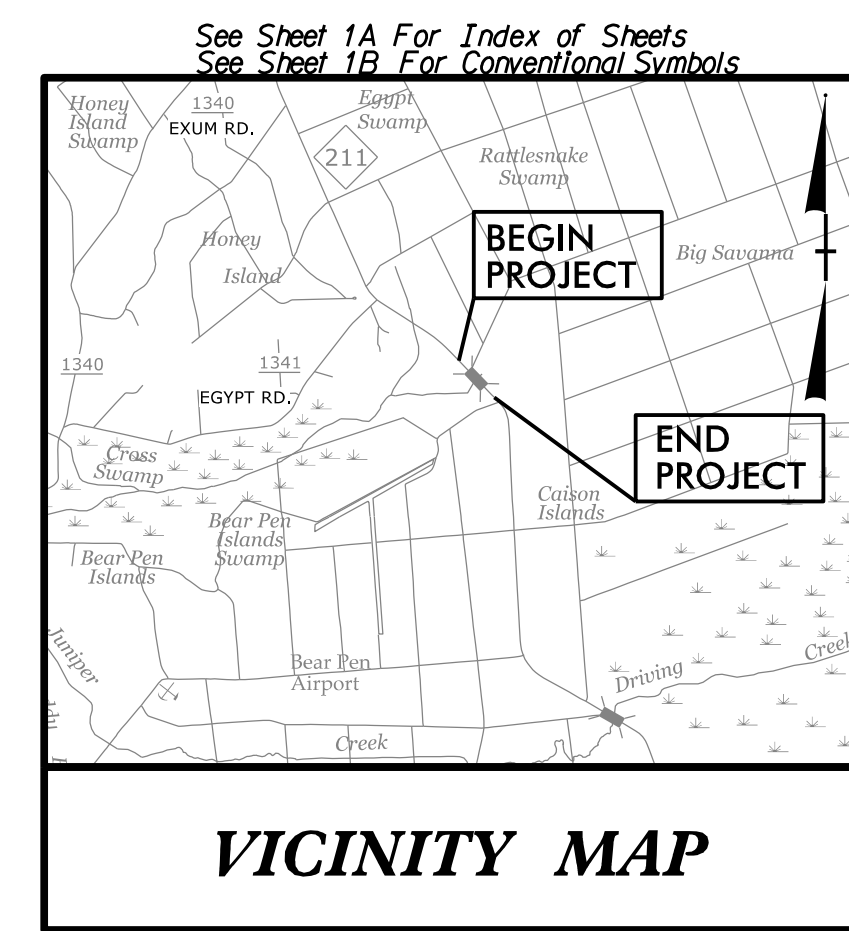
**This file or an individual page
shall not be considered a certified document.**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4438	EC-1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
38365.1.2		P.E.	
38365.2.2		R/W, UTIL.	
38365.3.2		CONST.	

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
BRUNSWICK COUNTY

**LOCATION: REPLACE BRIDGE NO. 47. OVER
 BEAR PEN ISLANDS SWAMP ON NC 211
 (GREEN SWAMP ROAD)**

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE



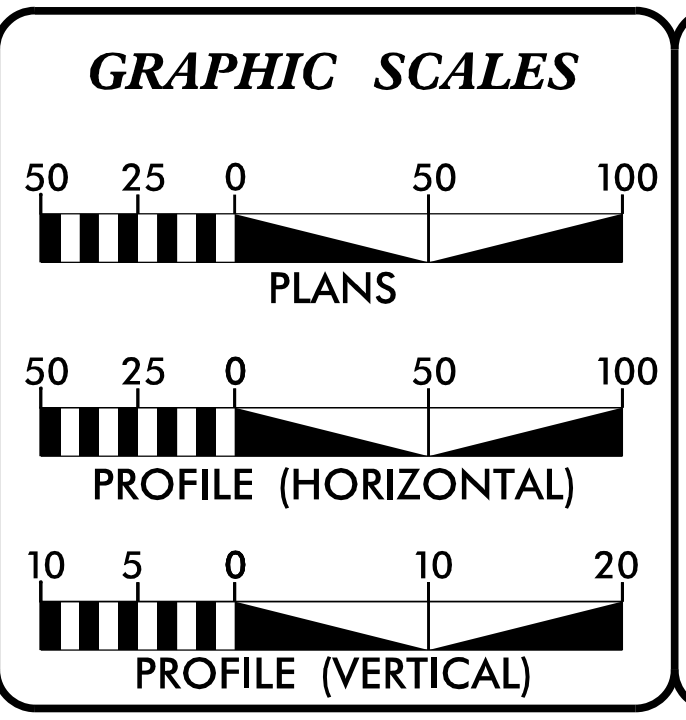
EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SSCF
1622.01	Temporary Berms and Slope Drains	TBSD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA-PAM
	Temporary Rock Silt Check Type-B	TRSCB
	Wattle/ Coir Fiber Wattle	WCFW
	Wattle/ Coir Fiber Wattle with Polyacrylamide (PAM)	WCFW-PAM
1654.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDA-B
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB

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

NCDOT CONTACT: MARK STALEY, EI
 ROADSIDE ENVIRONMENTAL UNIT - NCDOT DIVISION 3

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY MODIFIED METHOD III



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared In the Office of:
MOFFATT & NICHOL
 4700 FALLS OF THE NEUSE ROAD, SUITE 300
 RALEIGH, NORTH CAROLINA 27609
 (919)781-4626 PHONE (919)781-4869 FAX

Designed by:
 JEFFERY RECK, P.E. #3585
 NAME LEVEL III CERTIFICATION NO.

Reviewed In the Office of:
ROADSIDE ENVIRONMENTAL UNIT
 1 South Wilmington St.
 Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:
 WES CHANDLER, P.E.

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.

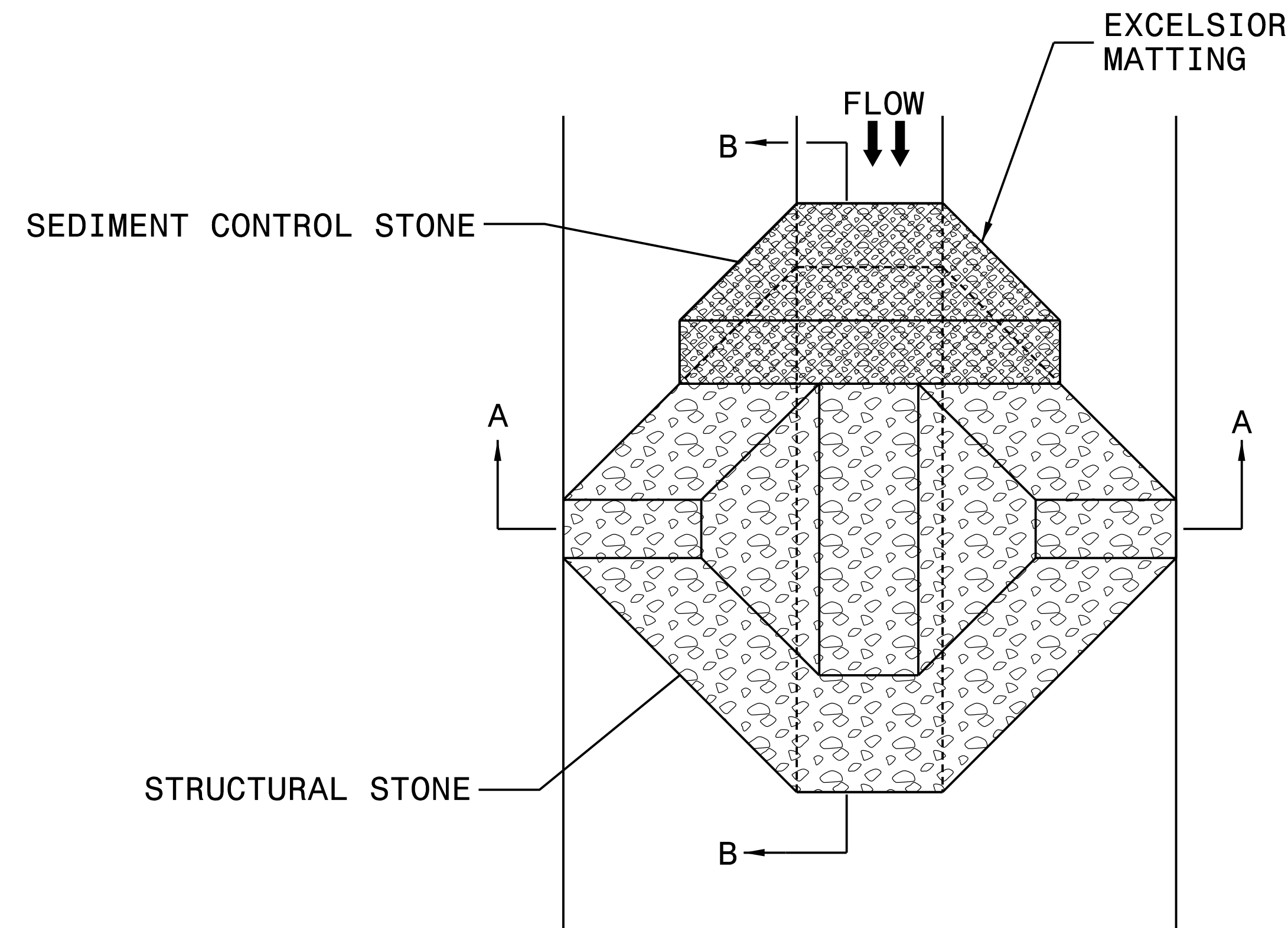
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type 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 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 Jaffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

TIP PROJECT: B-4438

CONTRACT:

09/08/19
 10/1/2018
 C:\NRA\9729-01\CADD\B4438\Roadside\B4438_reu_tsh.dgn

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



PLAN

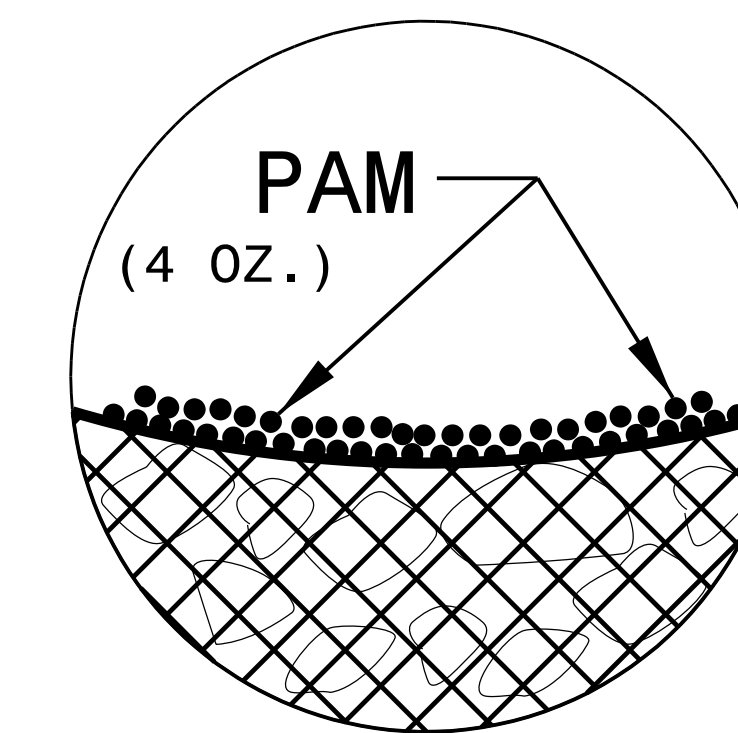
NOTES:

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

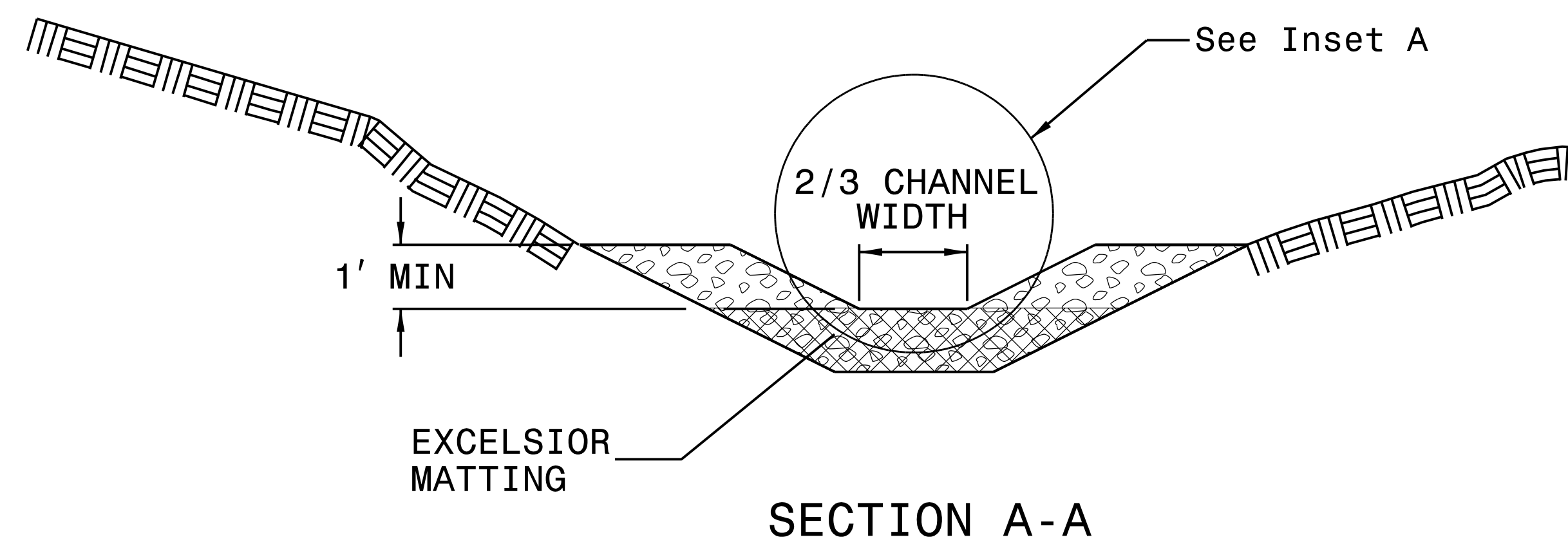
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

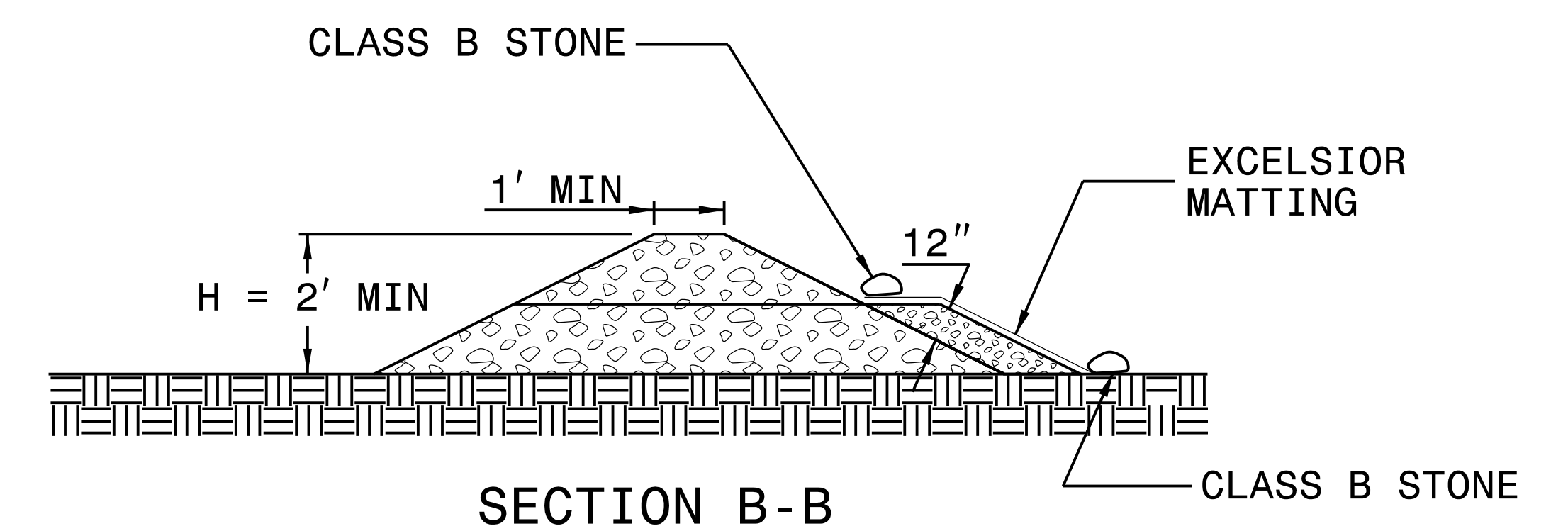
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



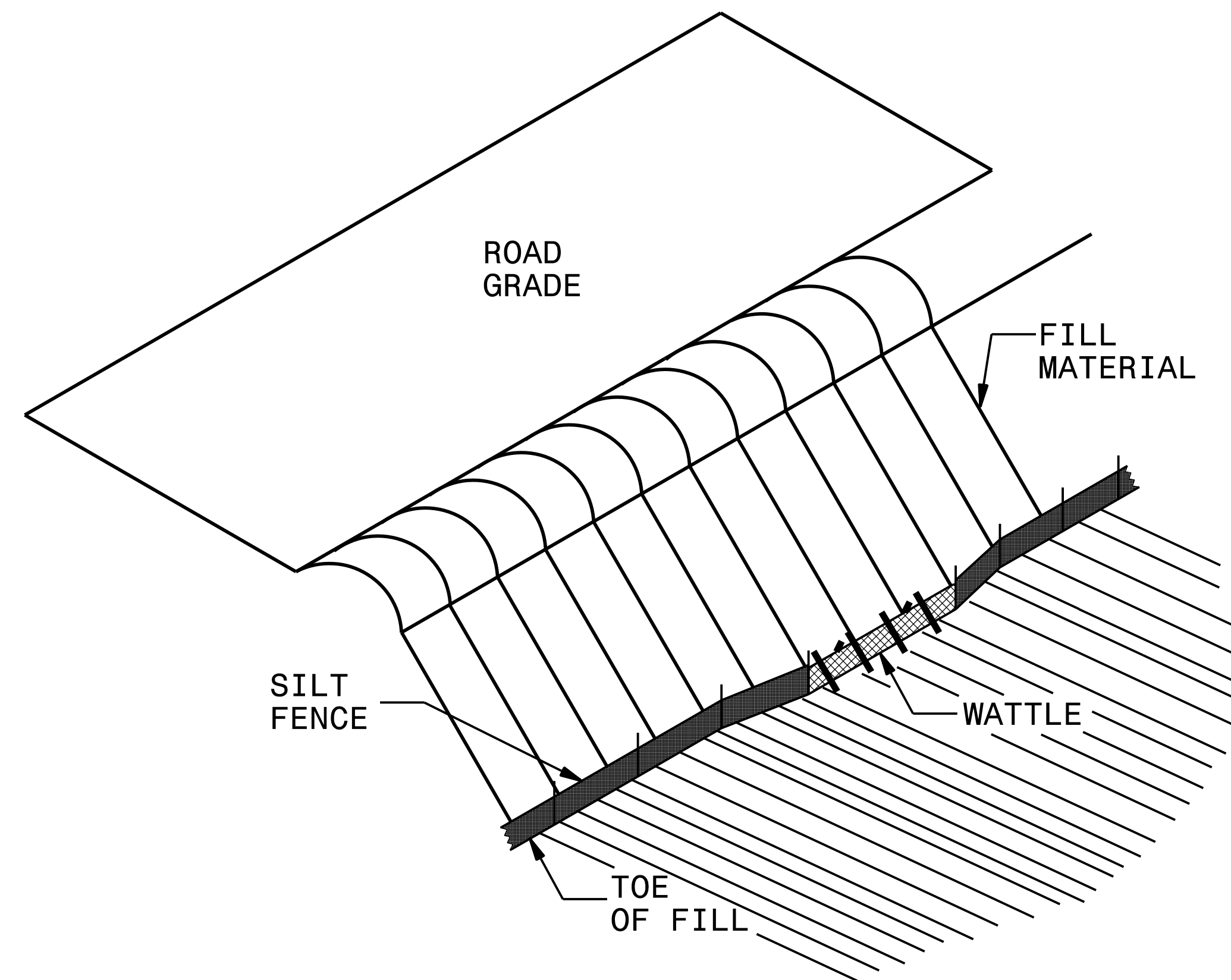
SECTION A-A



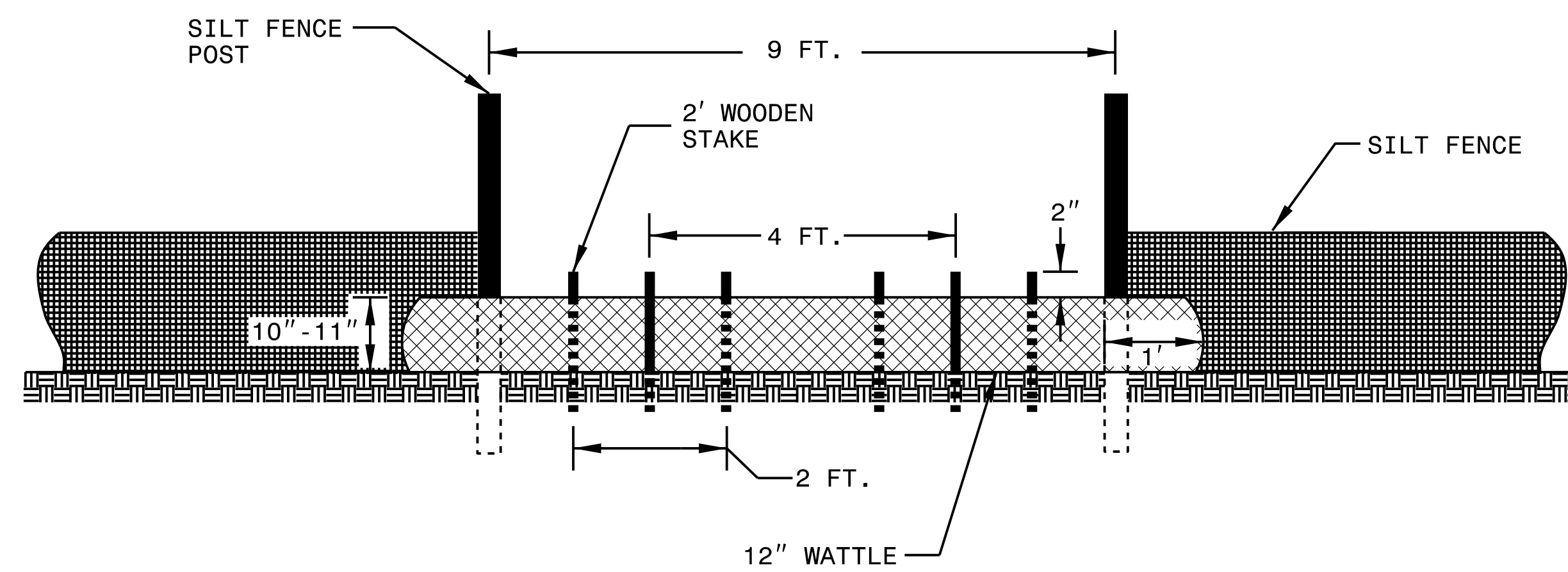
SECTION B-B

NOT TO SCALE

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW



VIEW FROM SLOPE

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.

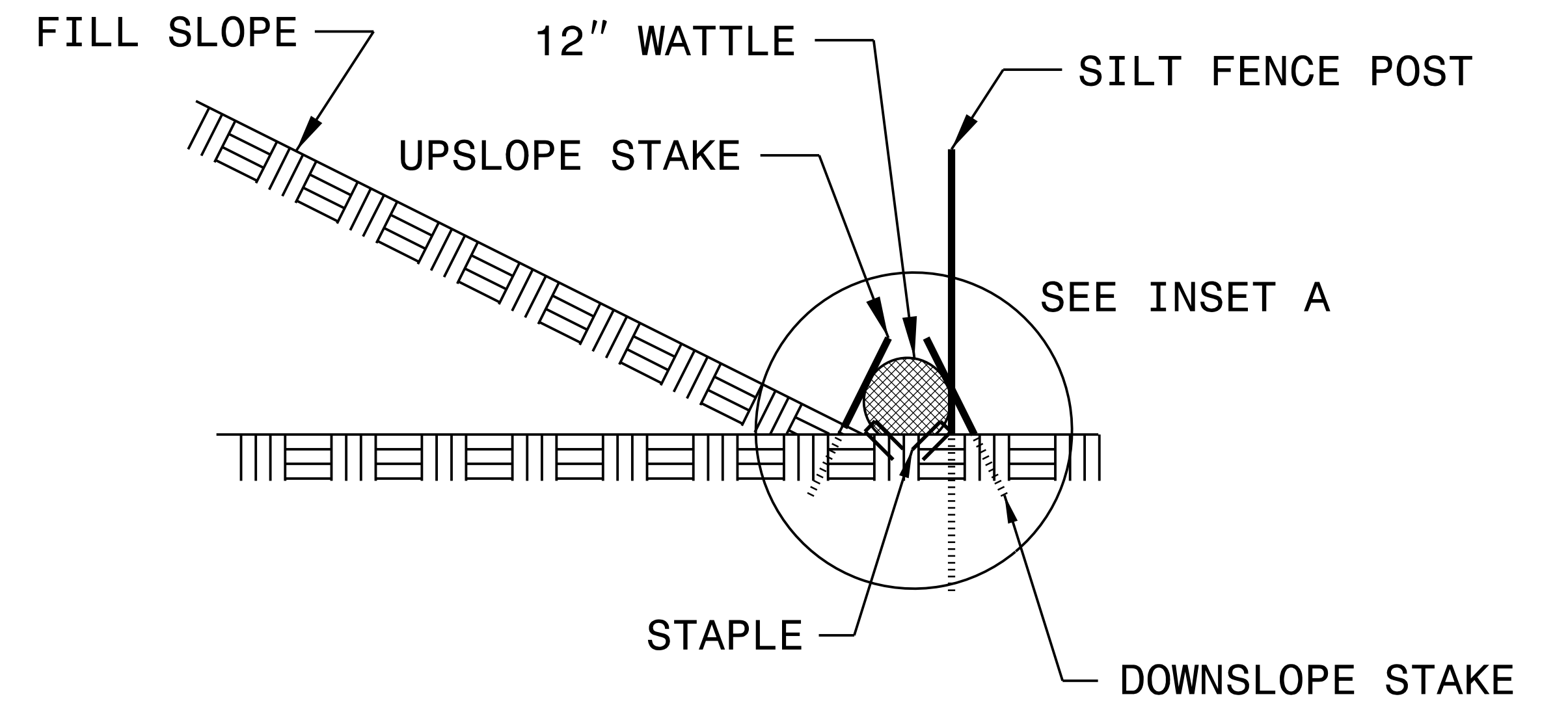
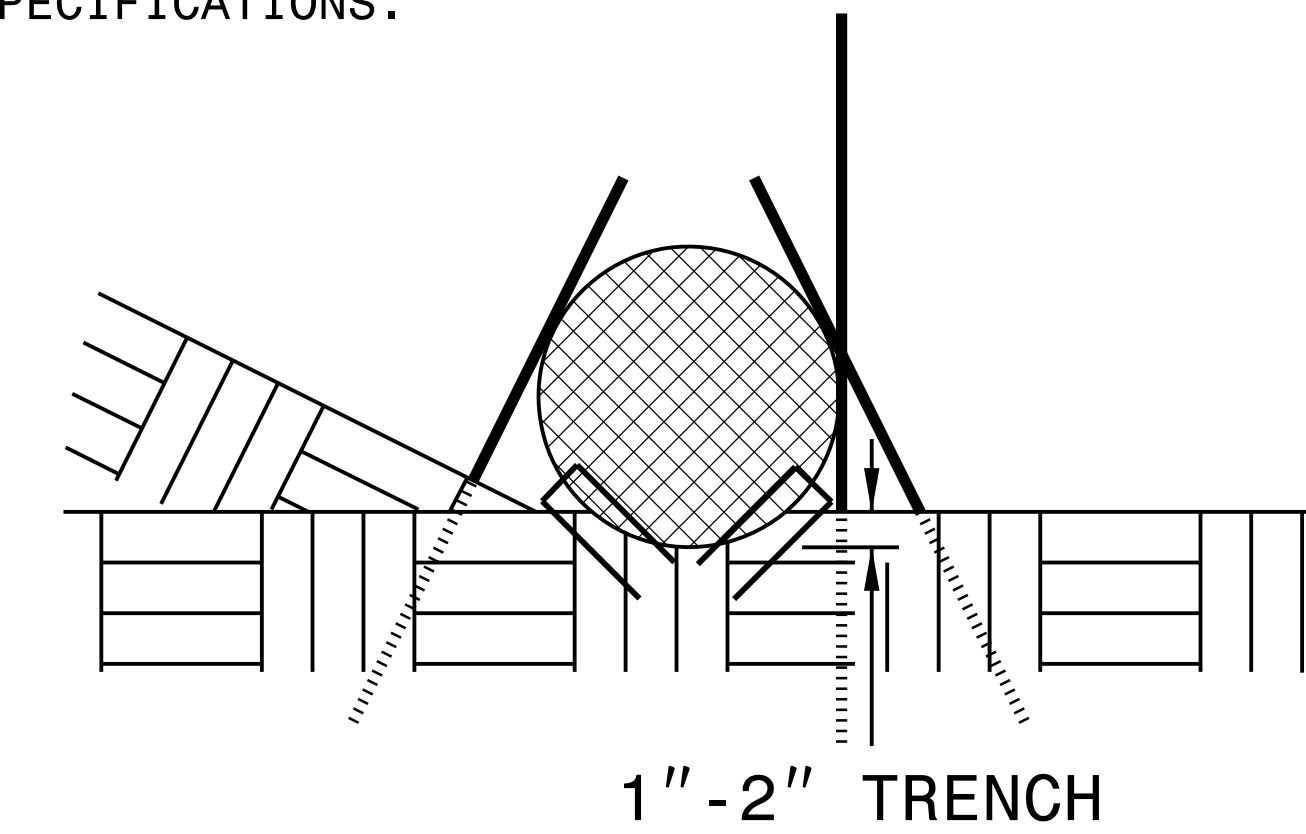
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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



SIDE VIEW

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

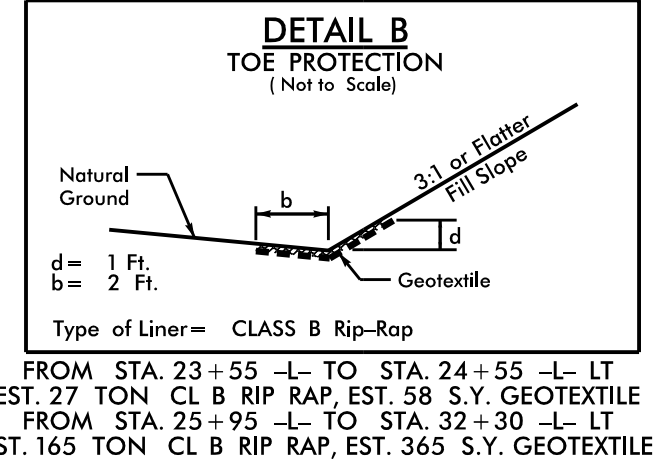
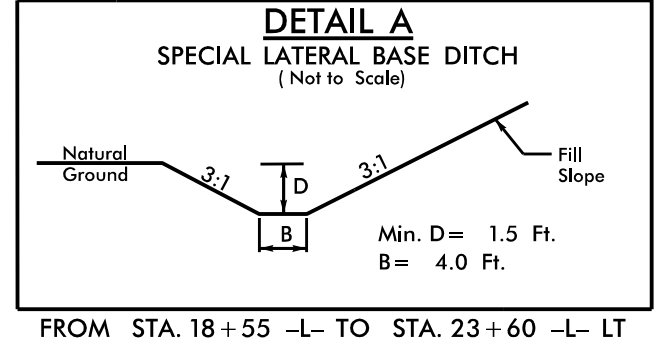
SOIL STABILIZATION TIMEFRAMES

<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.

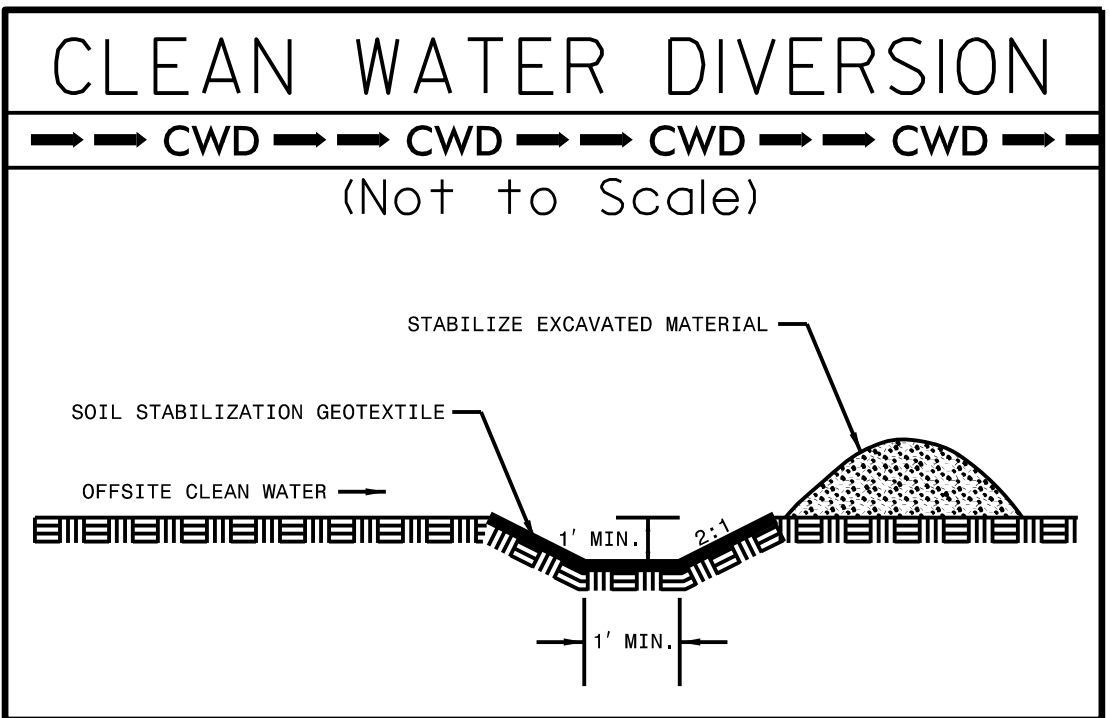
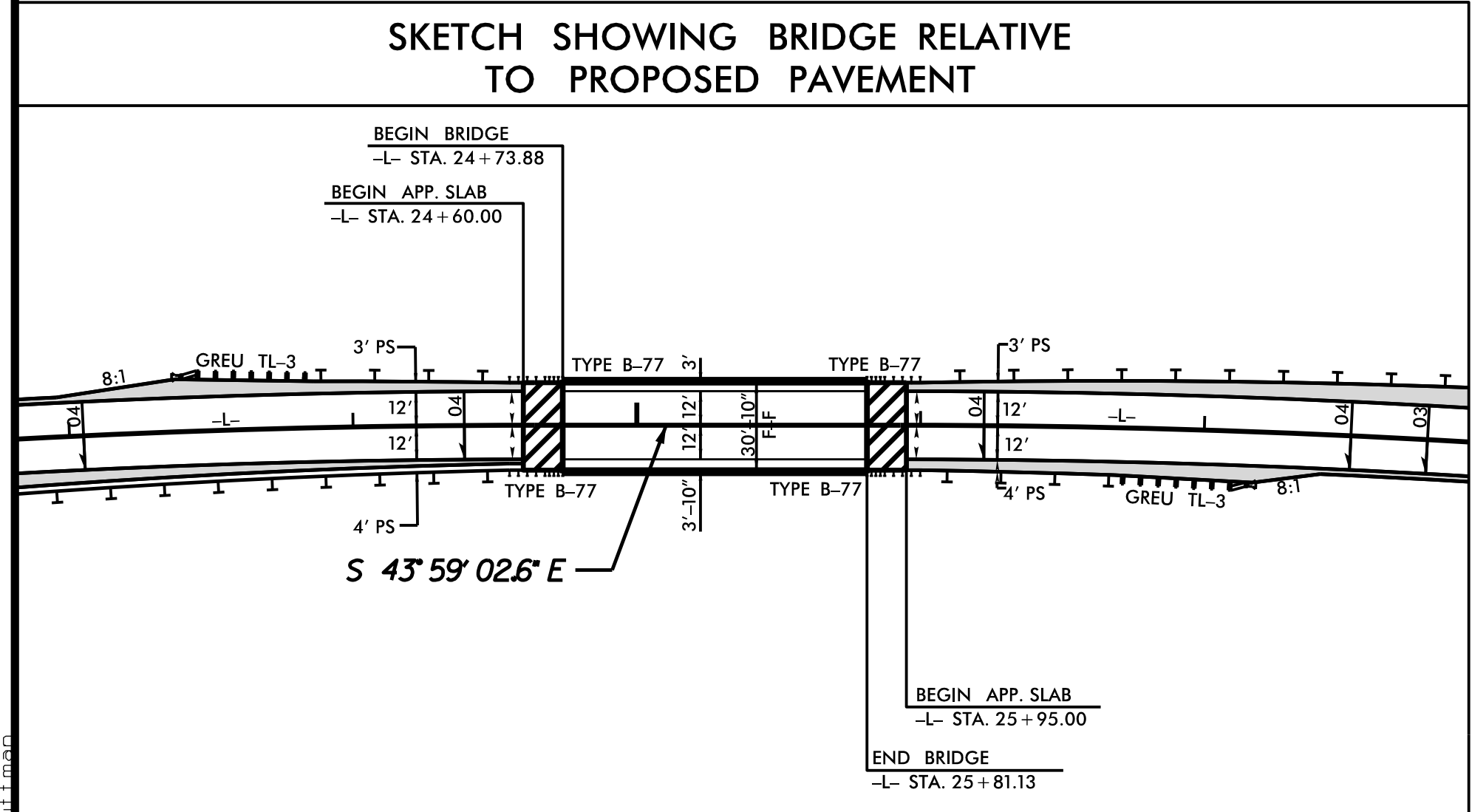
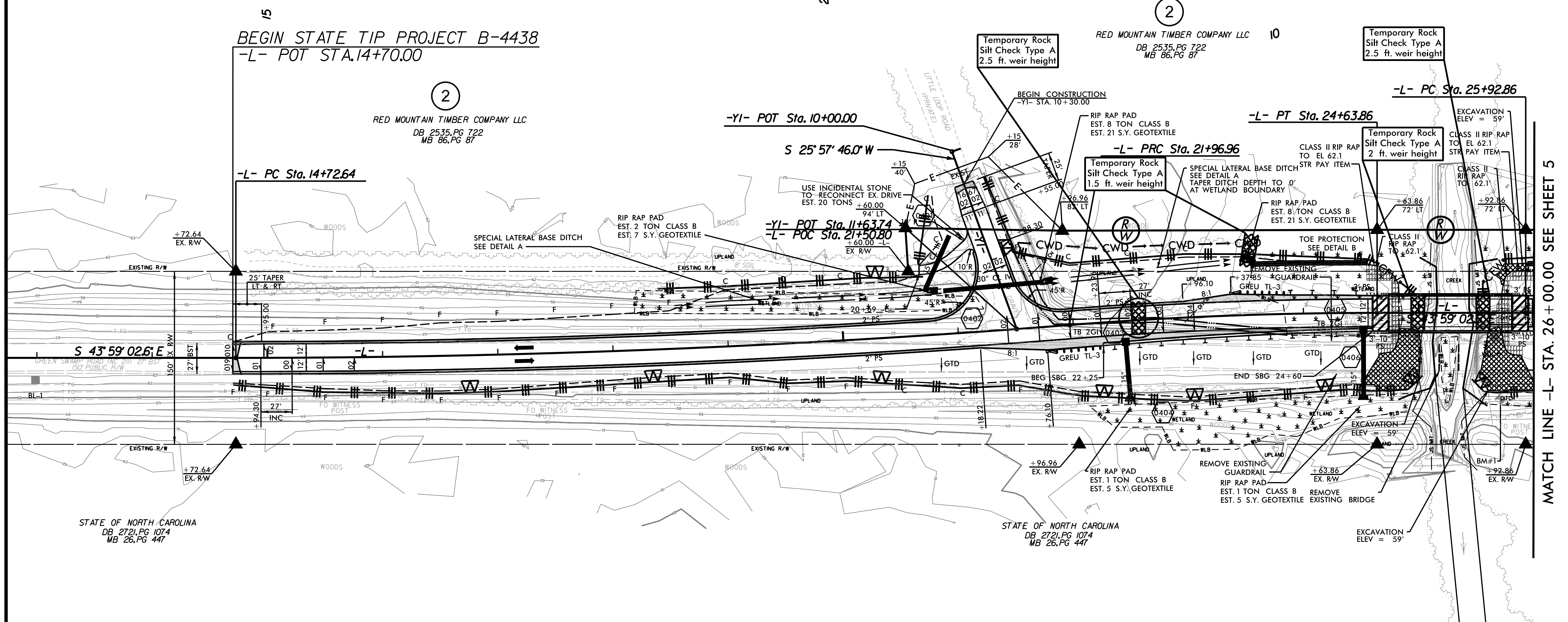
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 04

NOTE:
REFORESTATION IS NOT REQUIRED ON THIS
PROJECT UNLESS AREAS ARE DISTURBED
OUTSIDE OF SEDIMENT CONTROL MEASURES.

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



-L-
 PI Sta 18+34.99 Δ = 4° 30' 39.5" (LT) Δ = 4° 30' 39.5" (RT)
 D = 0° 37' 22.0" D = 1° 41' 24.5"
 L = 724.33' L = 266.90'
 T = 362.35' T = 133.52'
 R = 9,200.00' R = 3,390.00'
 SE = RC SE = 04
 RO = 54.00' RO = 108.00'

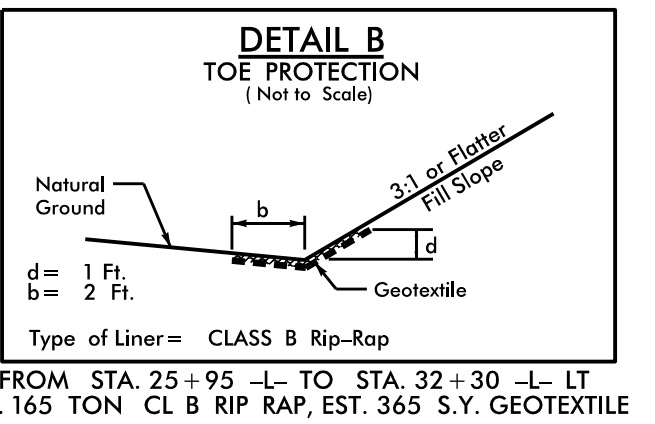
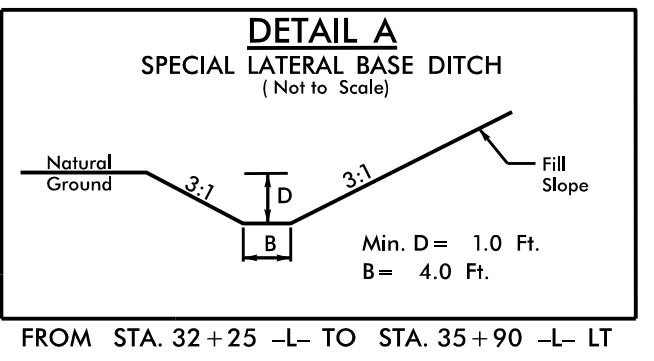


8/17/99
 12/1/2018
 C:\CADD\B4438\Roadside\B4438_reu.psh_04.dgn

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 05

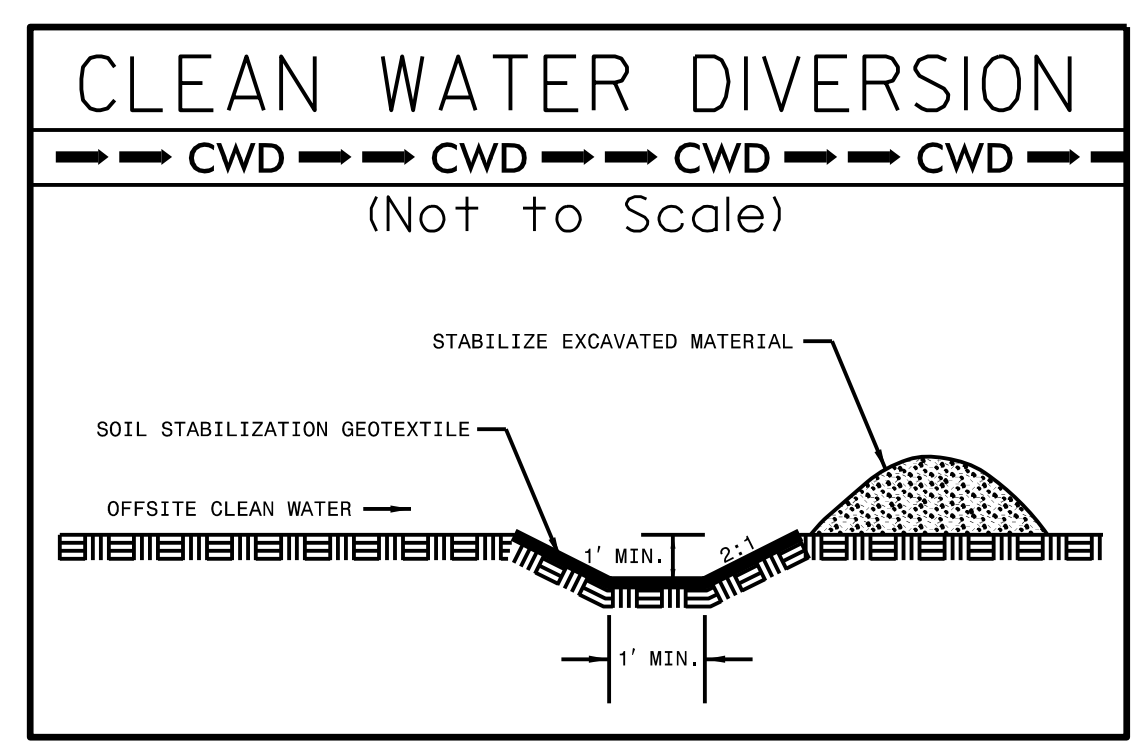
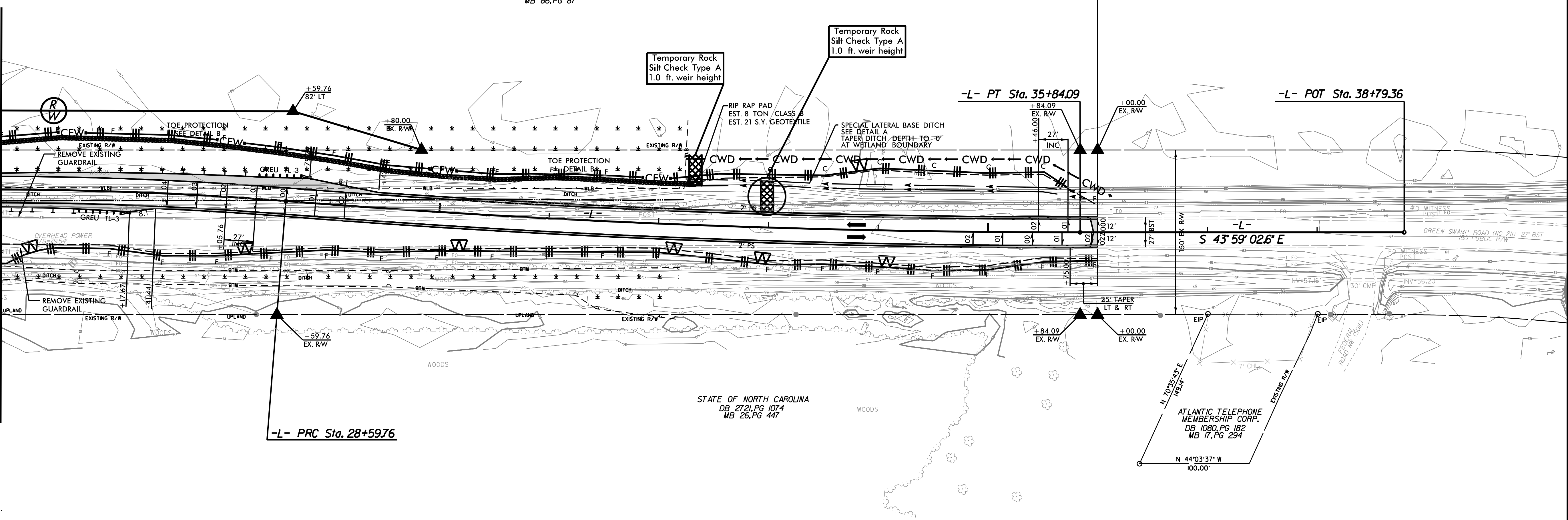
NOTE:
REFORESTATION IS NOT REQUIRED ON THIS
PROJECT UNLESS AREAS ARE DISTURBED
OUTSIDE OF SEDIMENT CONTROL MEASURES.

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



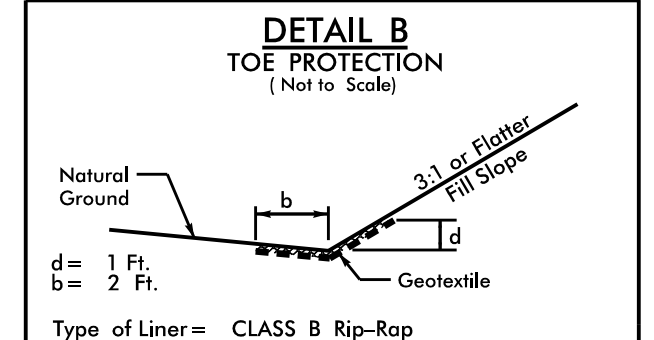
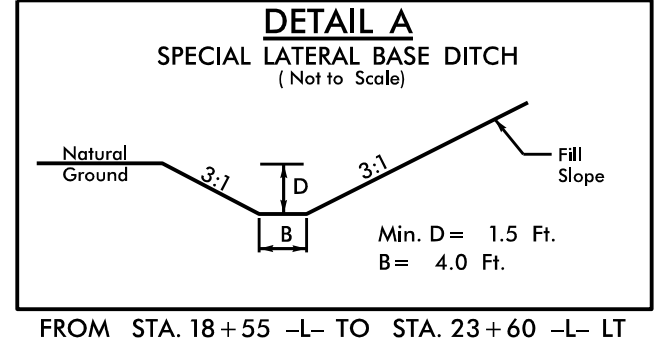
-L-
 PI Sta 27+26.38 PI Sta 32+22.11
 $\Delta = 4' 30' 39.5''$ (RT) $\Delta = 4' 30' 39.5''$ (LT)
 $D = 1' 41' 24.5''$ $D = 0' 37' 22.0''$
 $L = 266.90'$ $L = 724.33'$
 $T = 133.52'$ $T = 362.35'$
 $R = 3,390.00'$ $R = 9,200.00'$
 $SE = .04$ $SE = RC$
 $RO = 108.00'$ $RO = 54.00'$

MATCH LINE -L- STA. 26+00.00 SEE SHEET 4



8/17/09
 I:\12\09\12\09\29-01\CADD\B4438\Roadside\B4438_reu.psh_05.dgn

NOTE:
 REFORESTATION IS NOT REQUIRED ON THIS PROJECT UNLESS AREAS ARE DISTURBED OUTSIDE OF SEDIMENT CONTROL MEASURES.

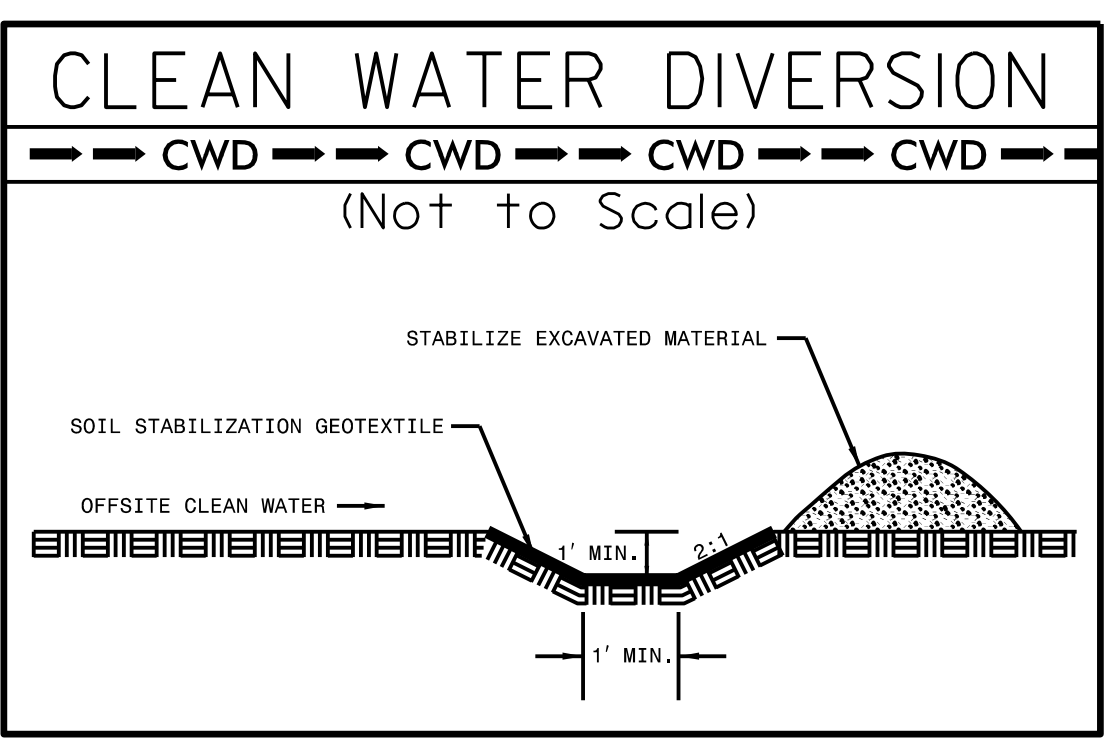
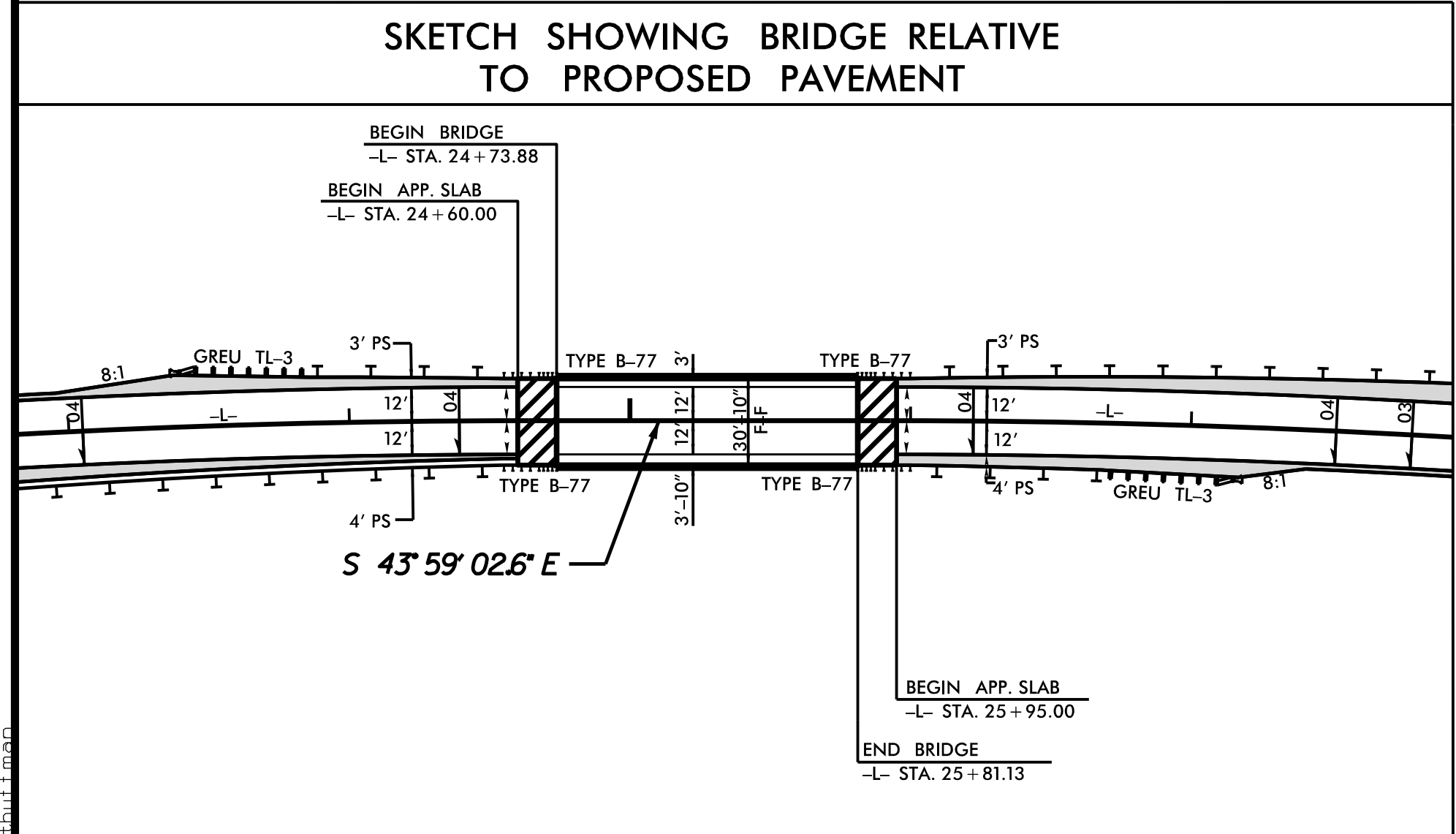
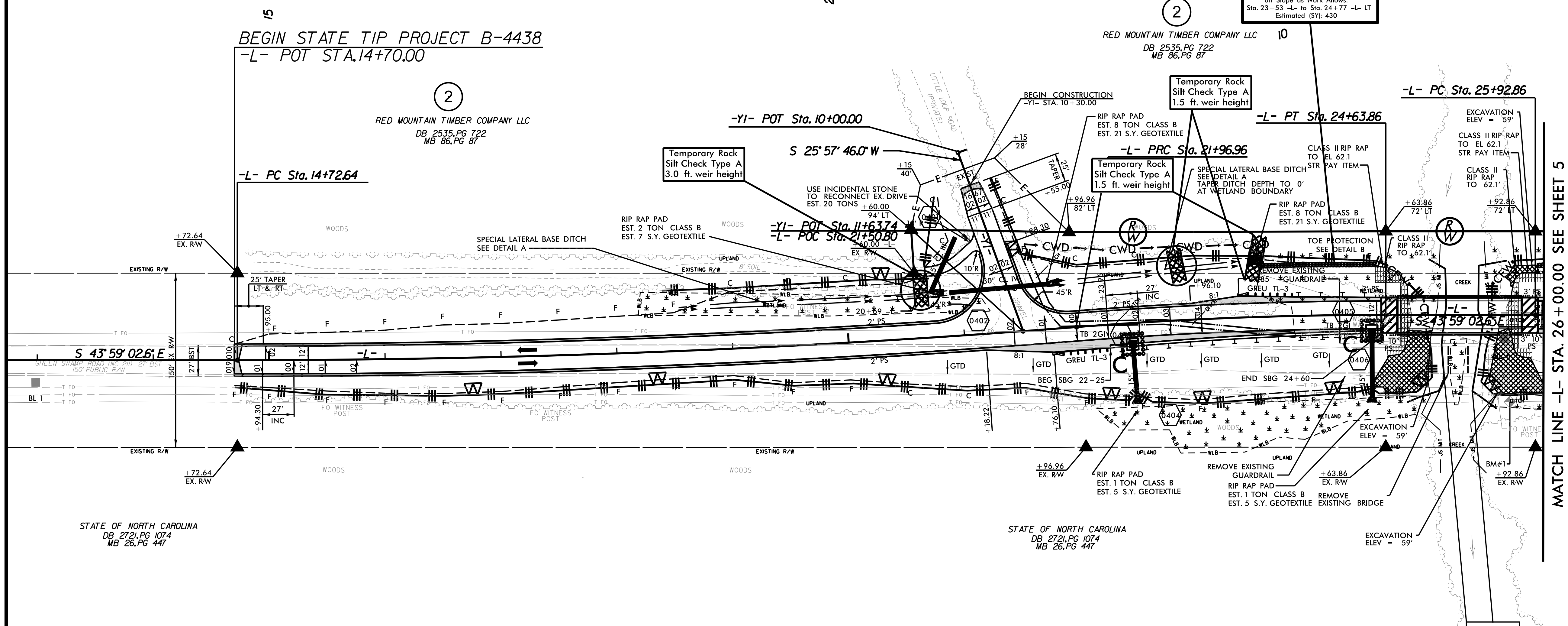


NAD NC GRID
 83 NA 2011

-L-
 PI Sta 18+34.99 PI Sta 23+30.48
 $\Delta = 4' 30'' 39.5''$ (LT) $\Delta = 4' 30'' 39.5''$ (RT)
 $D = 0' 37'' 22.0''$ $D = 1' 41'' 24.5''$
 $L = 724.33'$ $L = 266.90'$
 $T = 362.35'$ $T = 133.52'$
 $R = 9,200.00'$ $R = 3,390.00'$
 $SE = RC$ $SE = 04$
 $RO = 54.00'$ $RO = 108.00'$

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

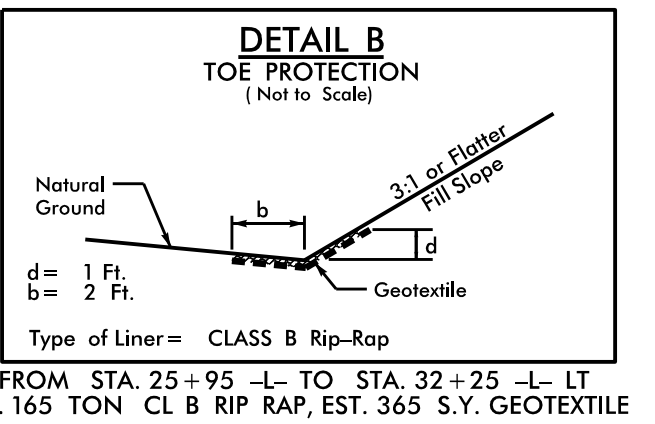
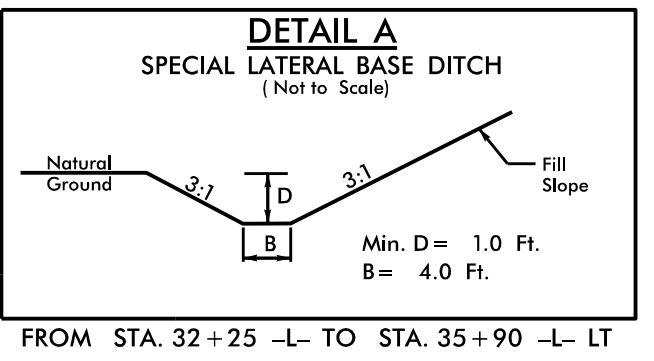
FROM STA. 23+55 -L- TO STA. 24+55 -L- LT
 EST. 27 TON CL B RIP RAP, EST. 58 S.Y. GEOTEXTILE
 FROM STA. 25+95 -L- TO STA. 32+30 -L- LT
 EST. 165 TON CL B RIP RAP, EST. 365 S.Y. GEOTEXTILE



MATCH LINE -L- STA. 26 + 00.00 SEE SHEET 5

8.17.7.99
 12/14/2016
 C:\CADD\B4438\Roadside\B4438_reu.psh.06.dgn

NAD NC GRID
83 / NA 2011



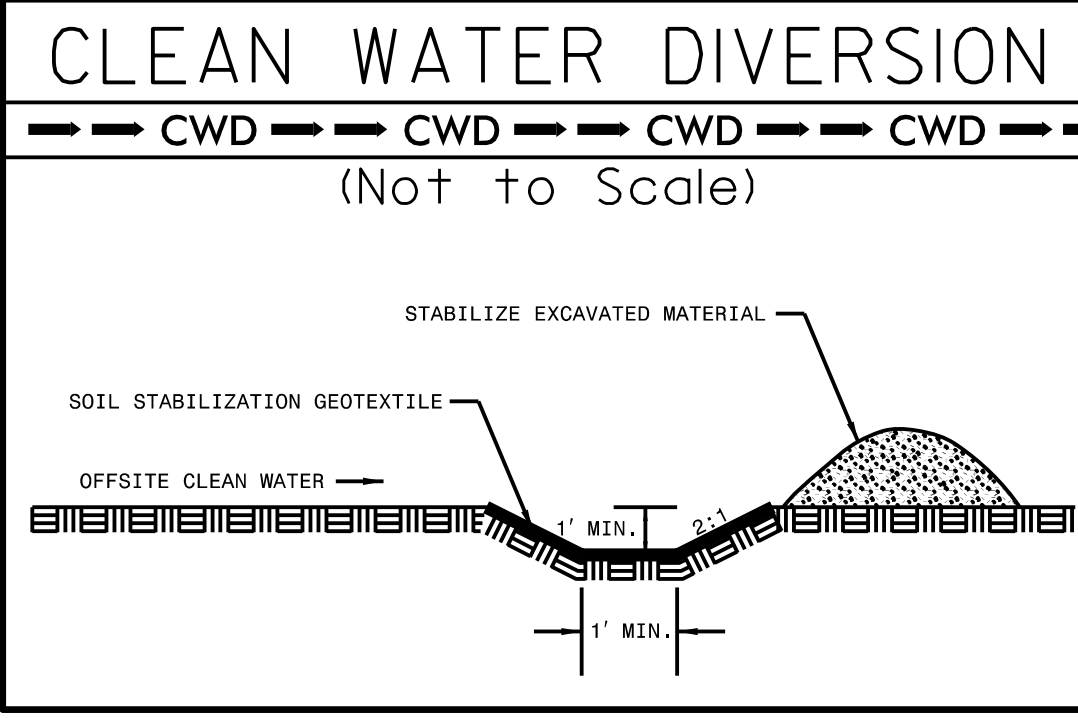
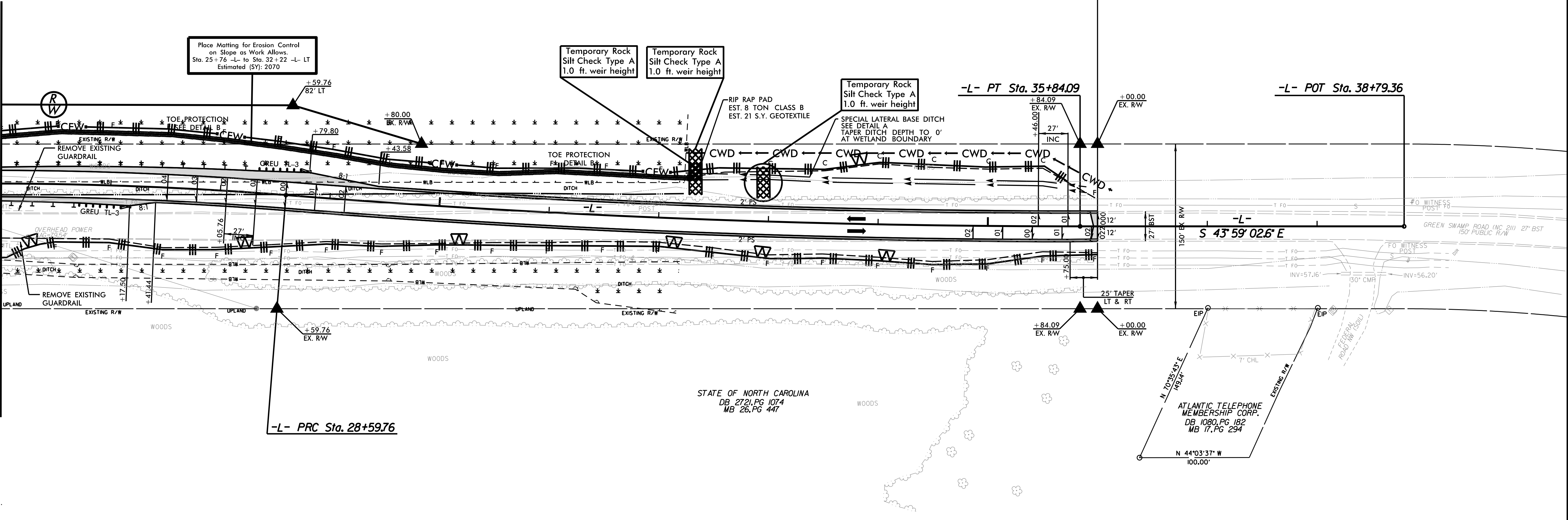
-L-

PI Sta 27+26.38	PI Sta 32+22.11
$\Delta = 4' 30'' 39.5''$ (RT)	$\Delta = 4' 30'' 39.5''$ (LT)
D = 1' 41'' 24.5''	D = 0' 37'' 22.0''
L = 266.90'	L = 724.33'
T = 133.52'	T = 362.35'
R = 3,390.00'	R = 9,200.00'
SE = .04	SE = RC
RO = 108.00'	RO = 54.00'

NOTE:
REFORESTATION IS NOT REQUIRED ON THIS PROJECT UNLESS AREAS ARE DISTURBED OUTSIDE OF SEDIMENT CONTROL MEASURES.

END STATE TIP PROJECT B-4438
-L- STA. POT 36+00.00

MATCH LINE -L- STA. 26+00.00 SEE SHEET 4



8/17/99
 E:\RAY\729-01\CADD\B4438\Roadside\B4438_reu.psh_07.dgn
 8/17/99