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TIP PROJECT: B-5371

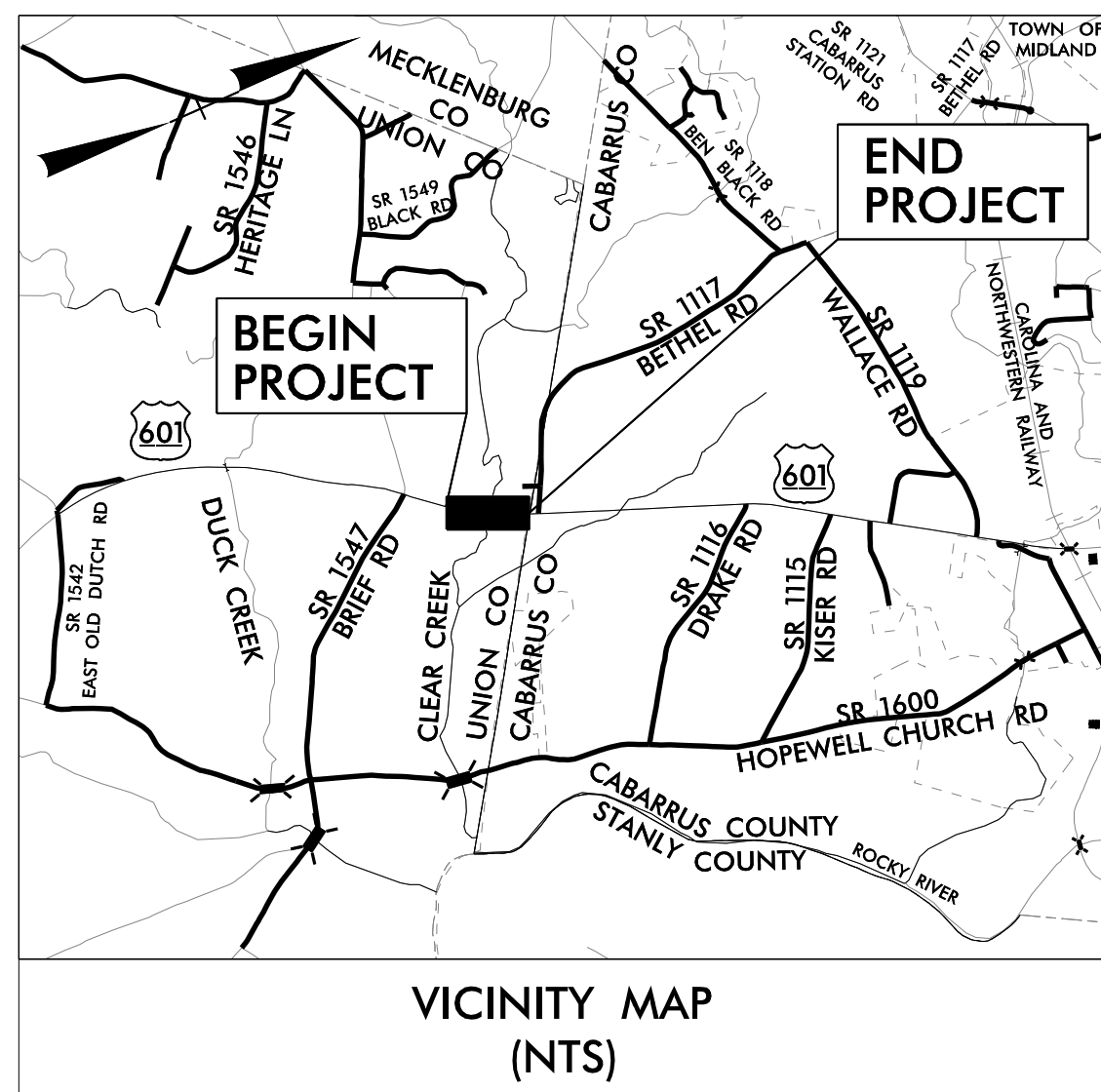
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UNION COUNTY

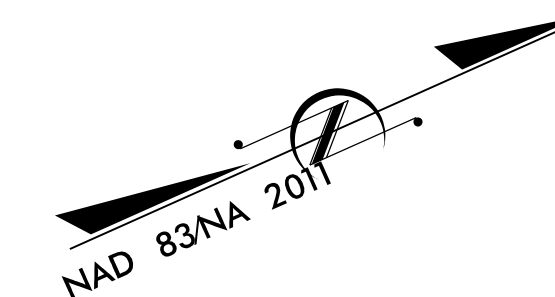
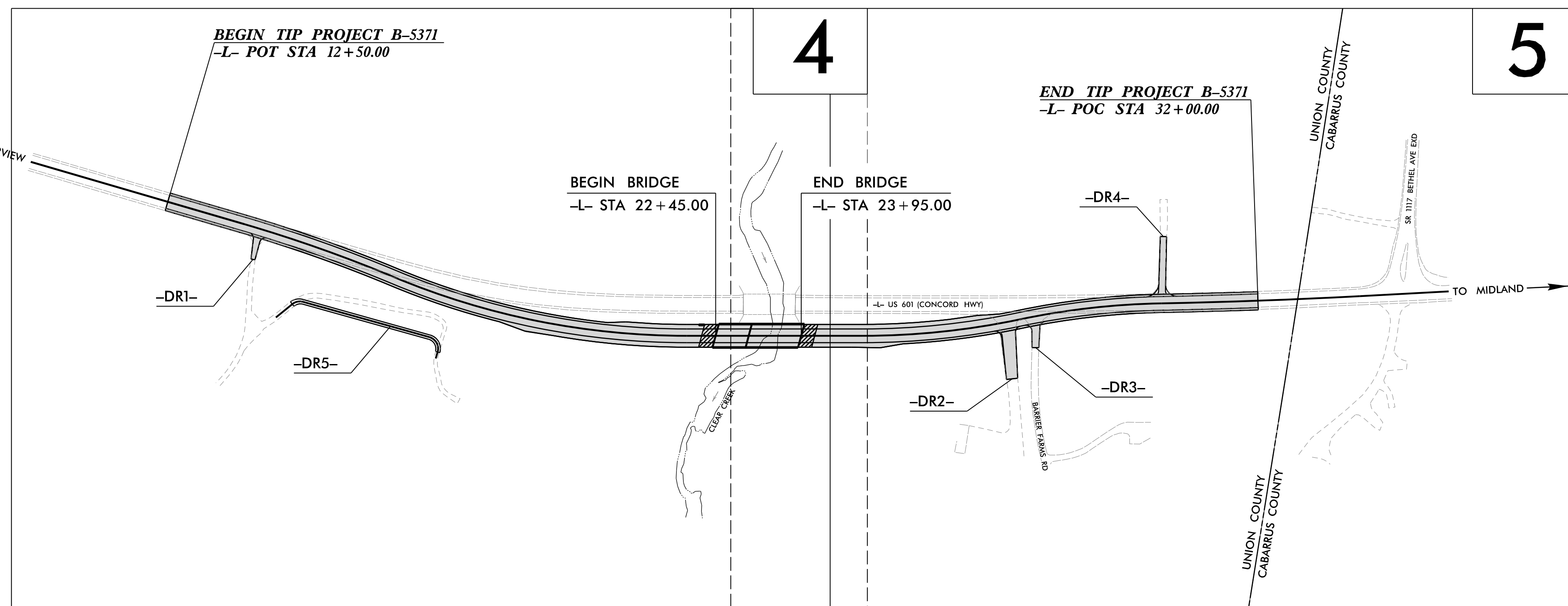
**LOCATION: REPLACE BRIDGE NO. 71
OVER CLEAR CREEK ON US 601**

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL



VICINITY MAP
(NTS)

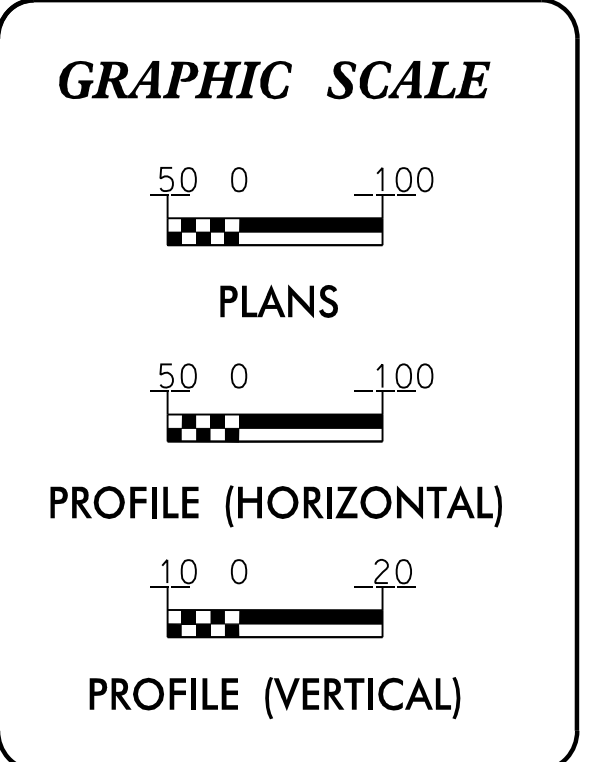


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5371	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46086.1.1	BRSTP-0601 (21)	PE	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
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	W
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	W
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	U
1635.02	Rock Pipe Inlet Sediment Trap Type-B	U
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.**



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 and Nichol
4700 Falls of Neuse Rd.
Suite 300
Raleigh, NC 27609
NC License NO.: F-0105

Designed by:
Andrew Hayes 3943
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, PE

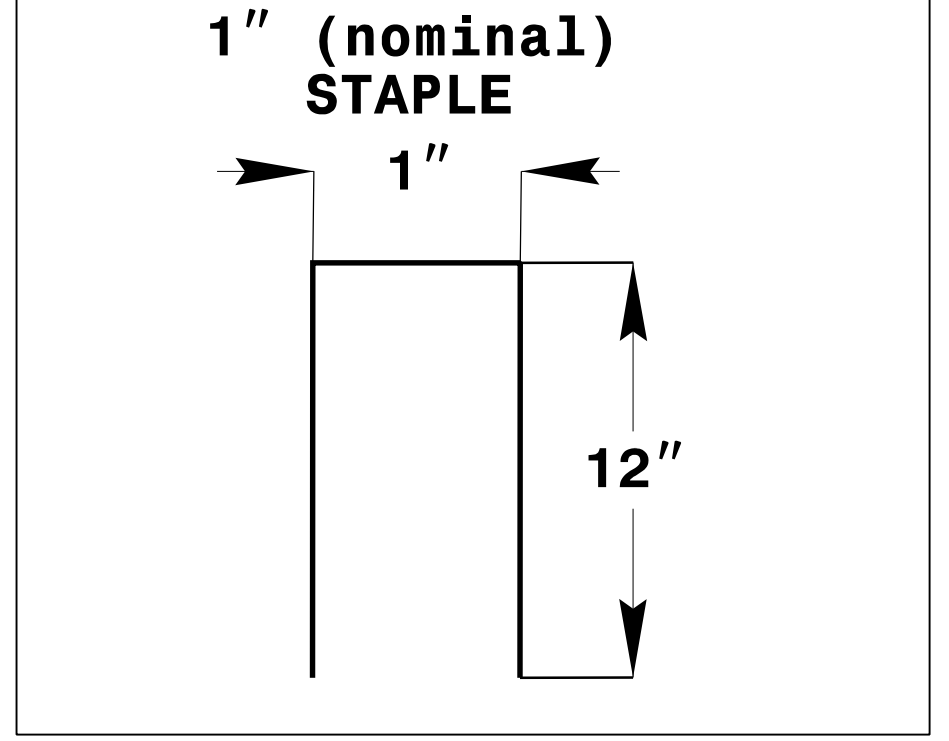
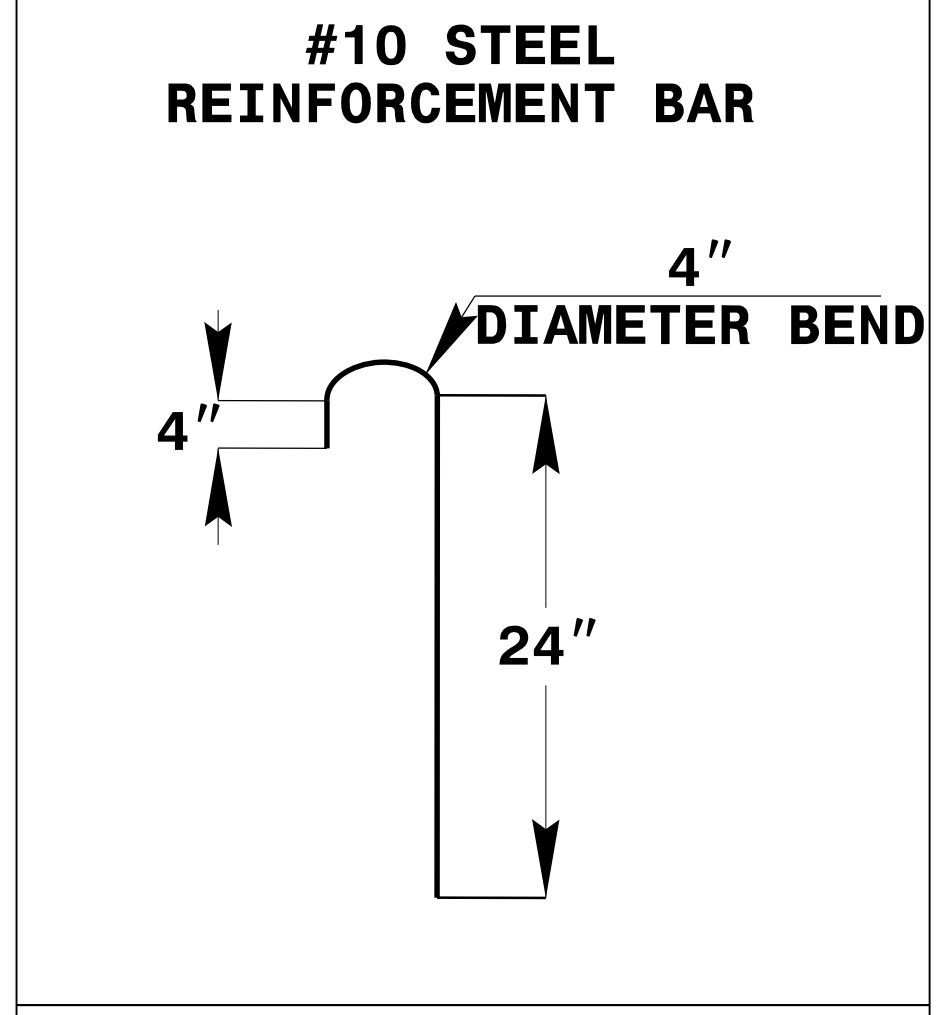
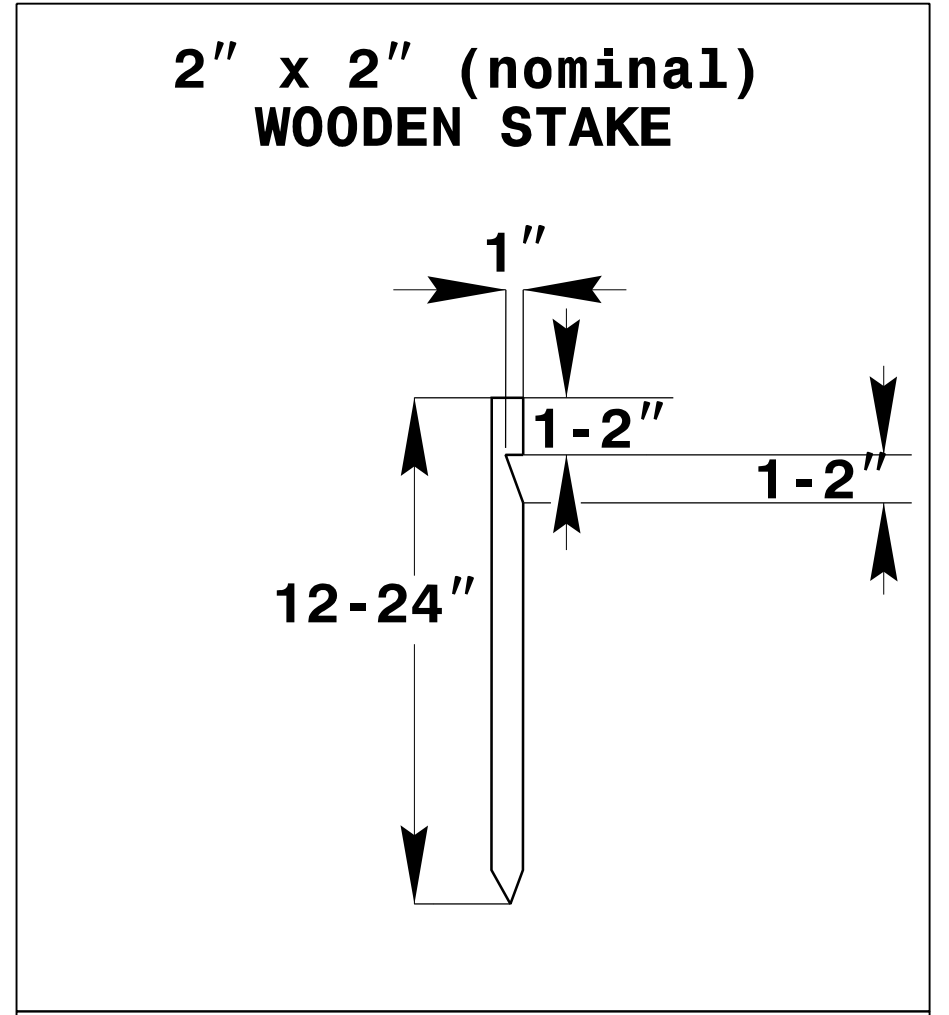
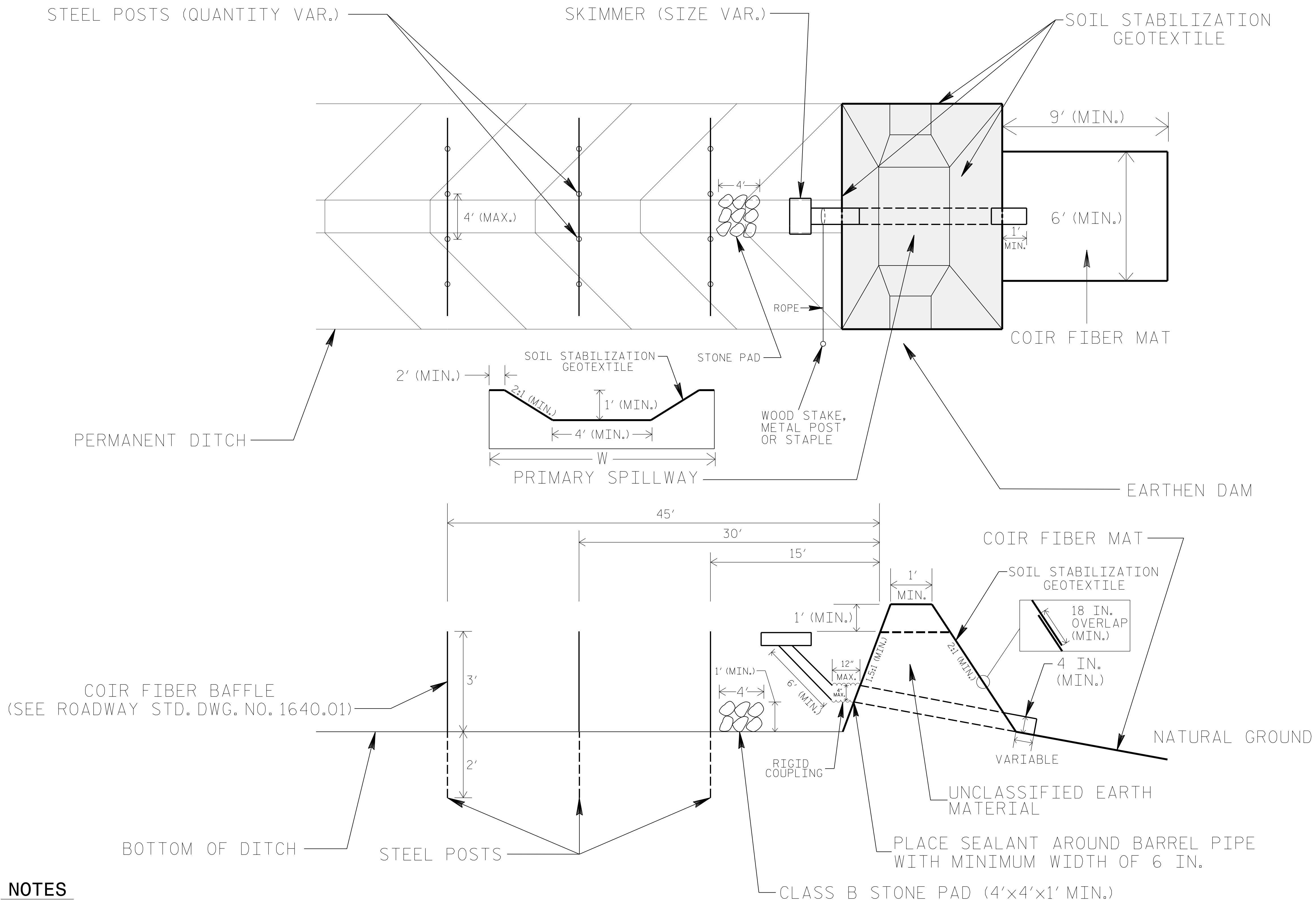
Roadway Standard Drawings

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 Silt 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	

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EARTHEN DAM WITH SKIMMER



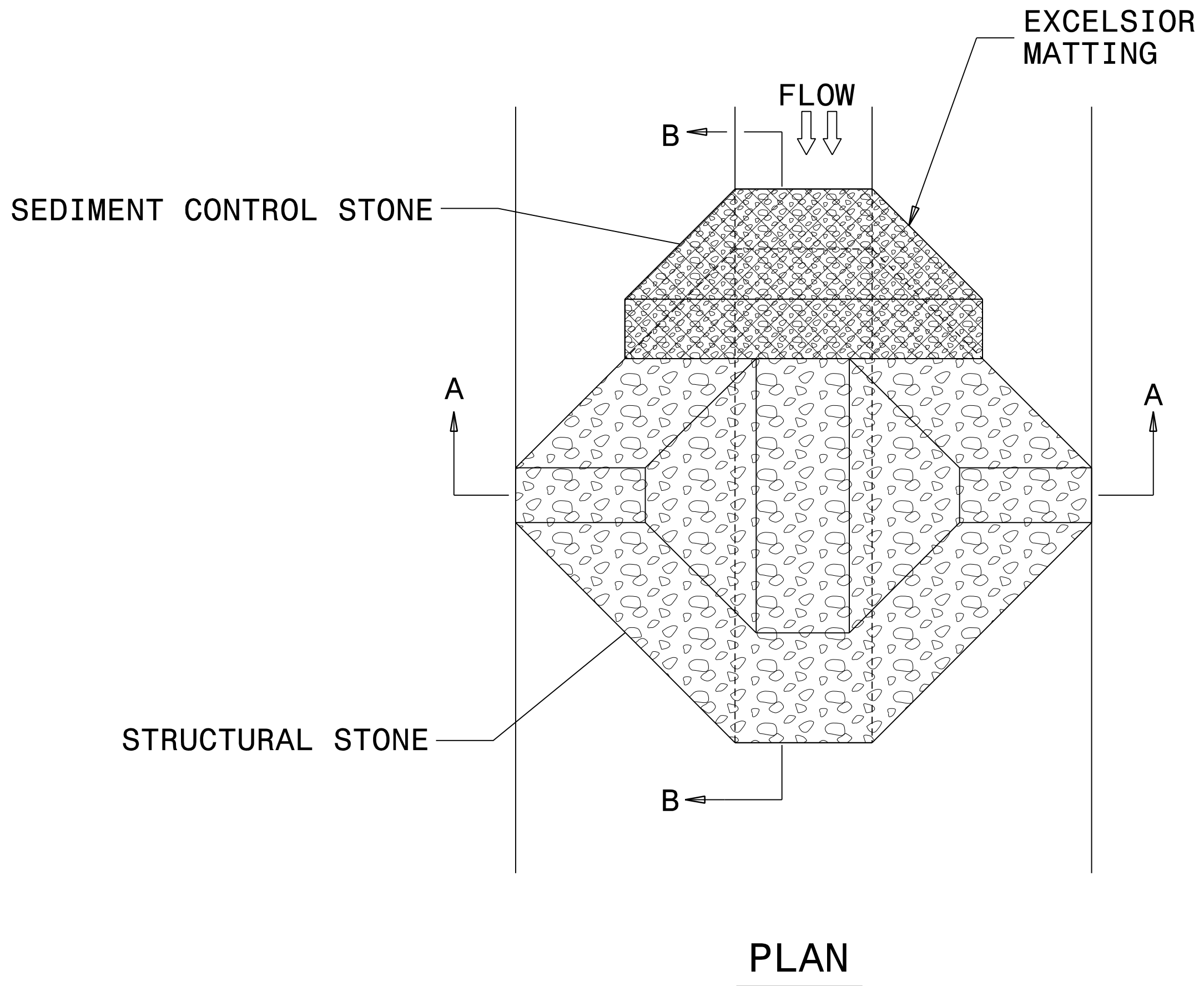
COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. LIMIT EARTHEN DAM HEIGHT TO 5 FT.
2. DETERMINE PRIMARY SPILLWAY LENGTH (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
3. 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)



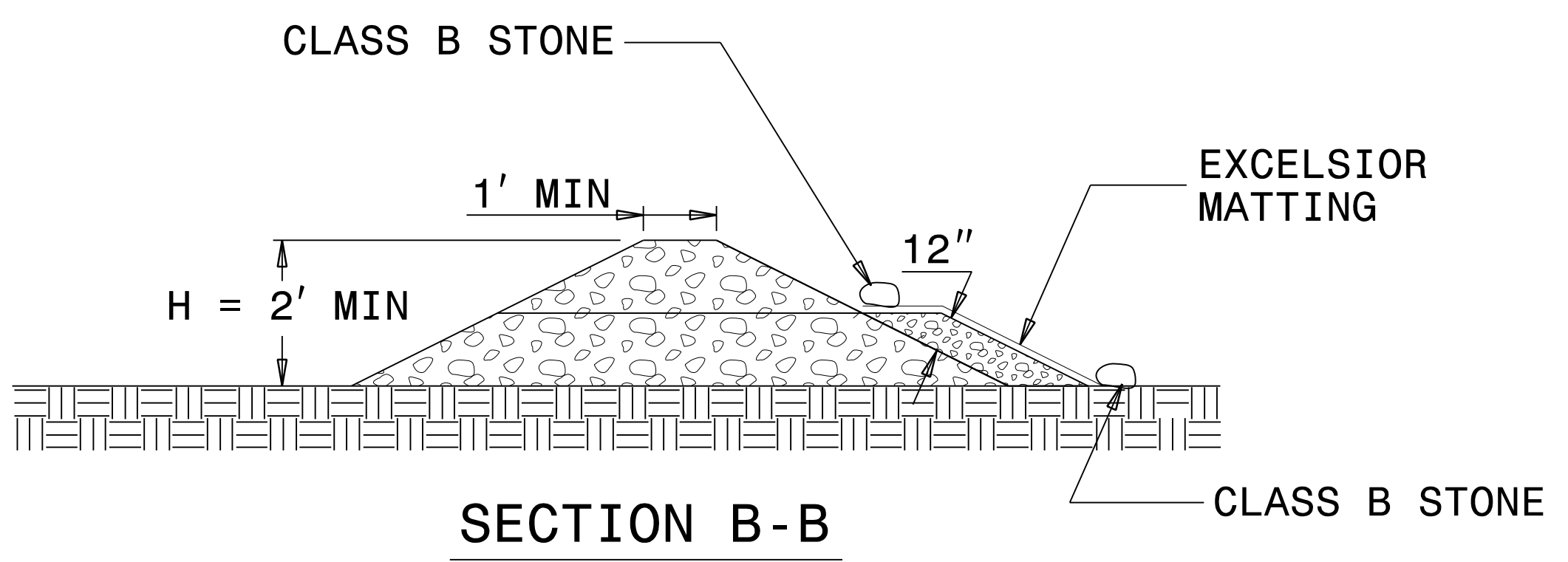
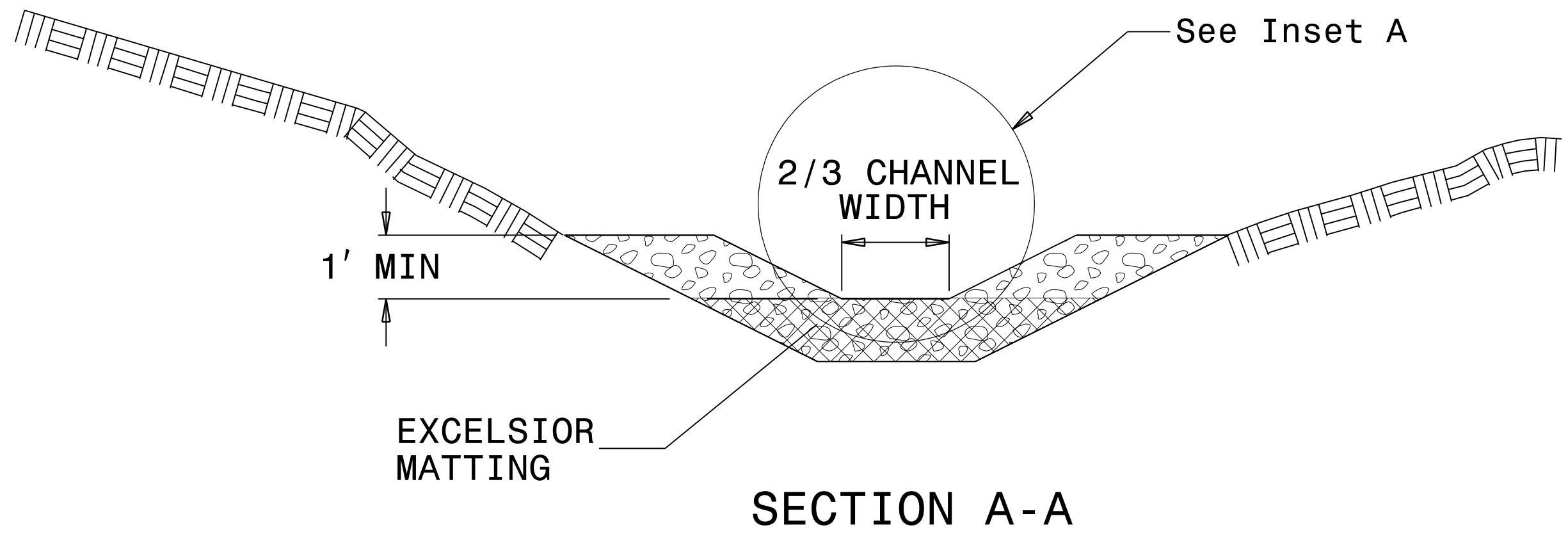
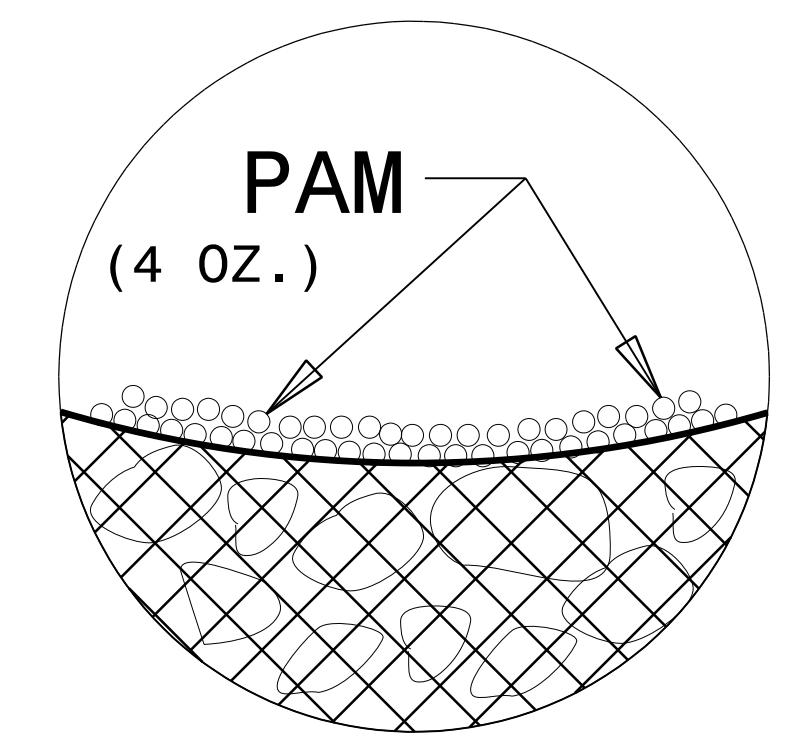
NOTES:

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.

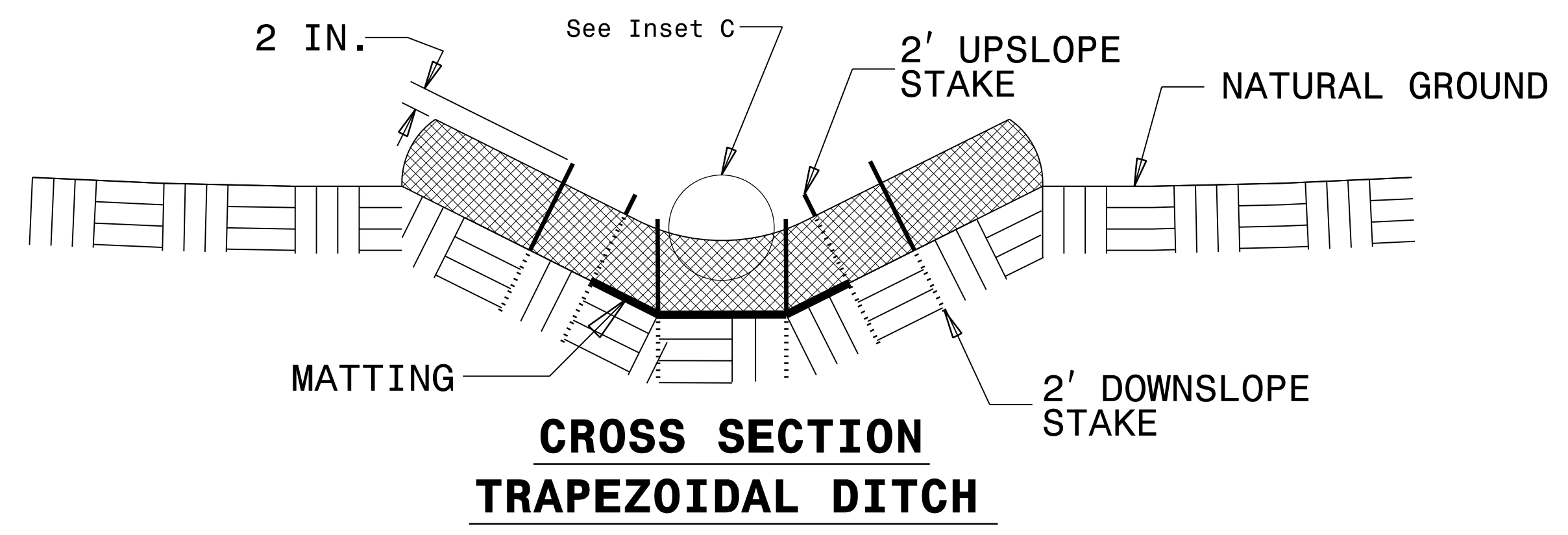
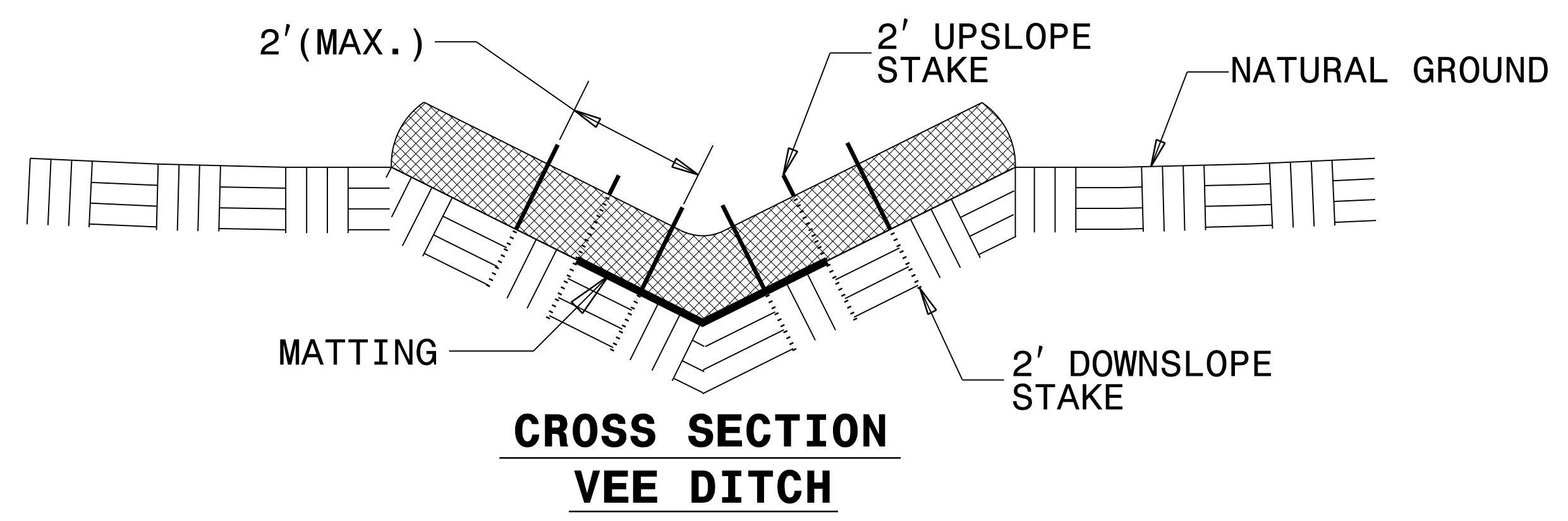
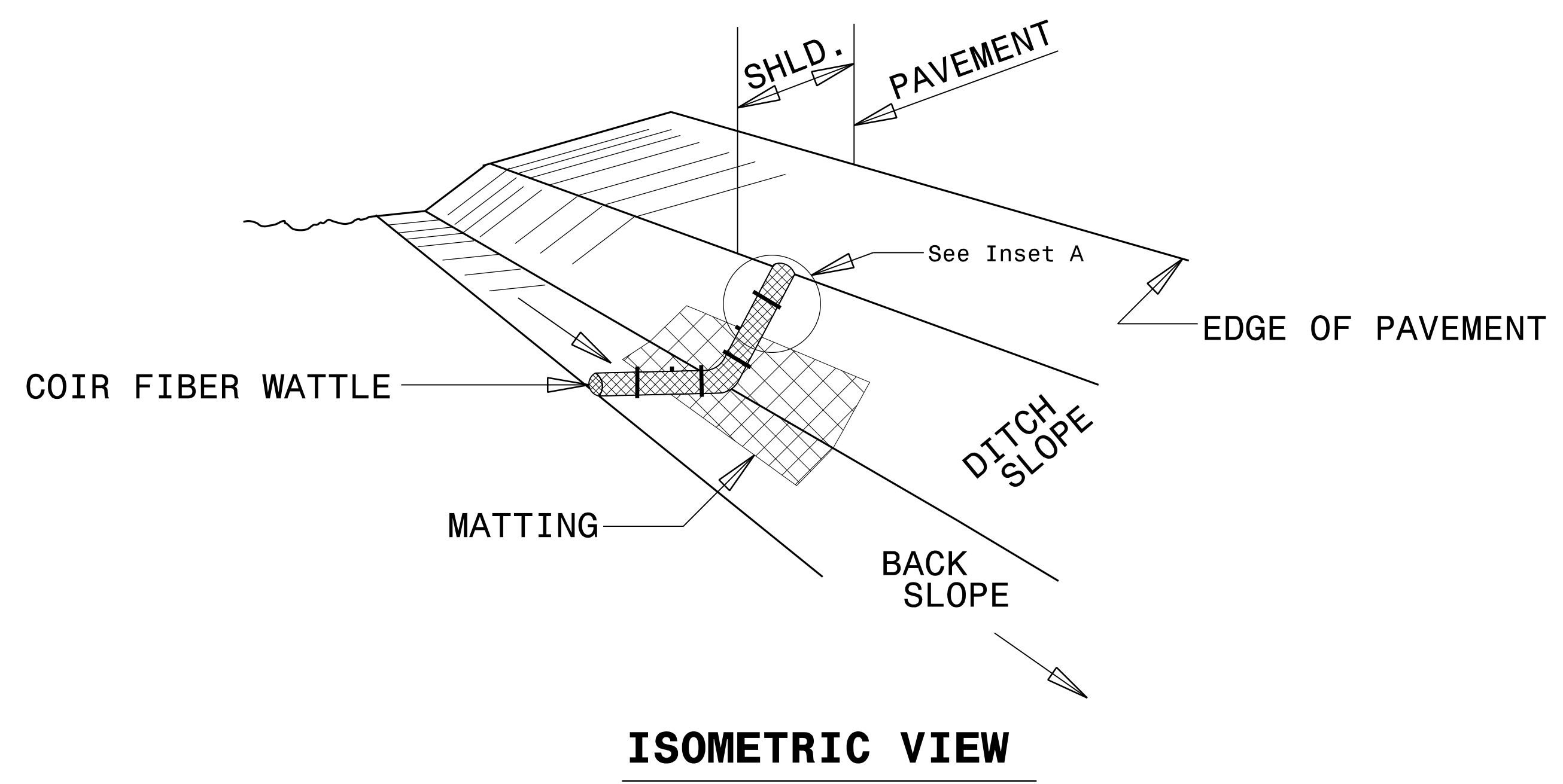
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

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

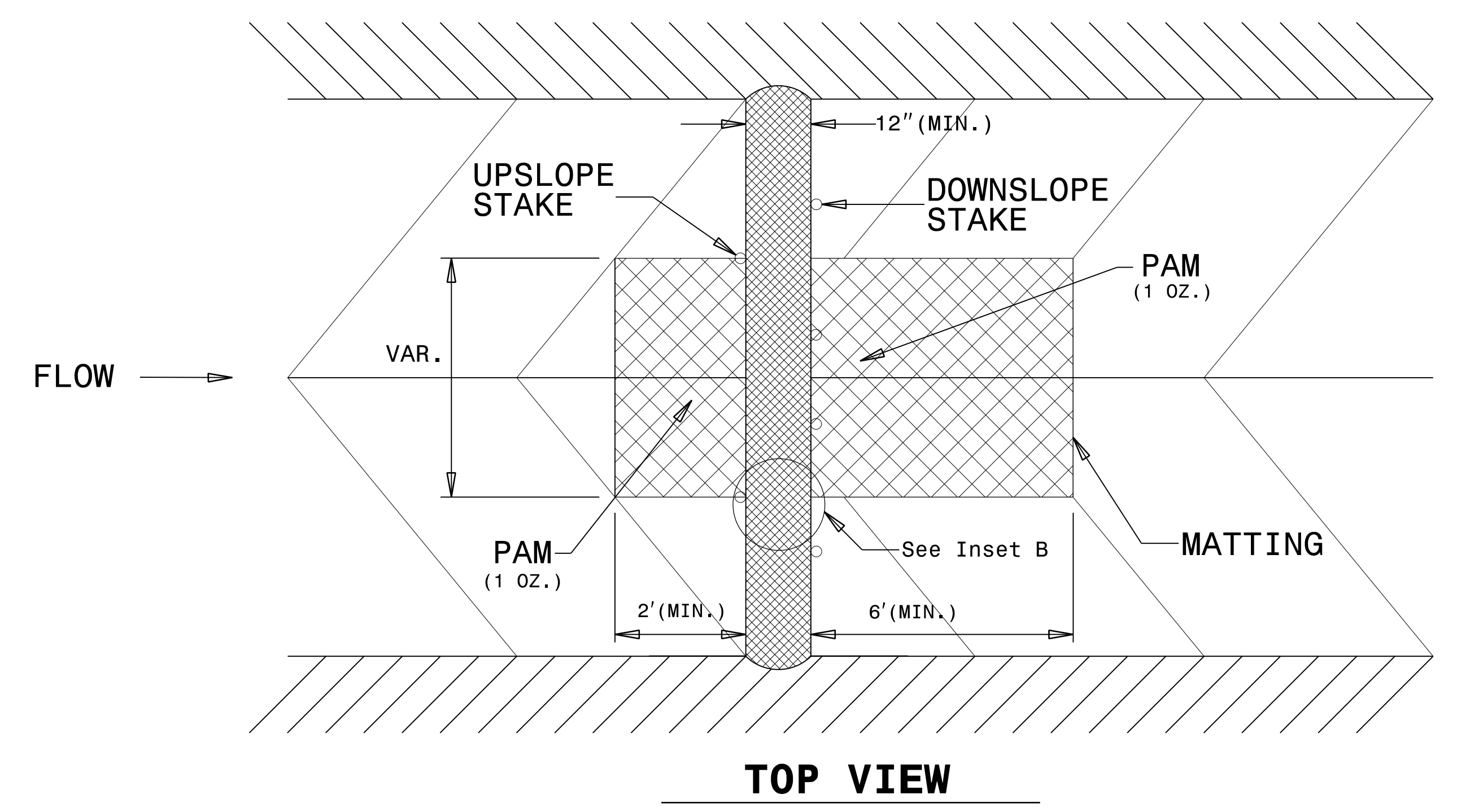
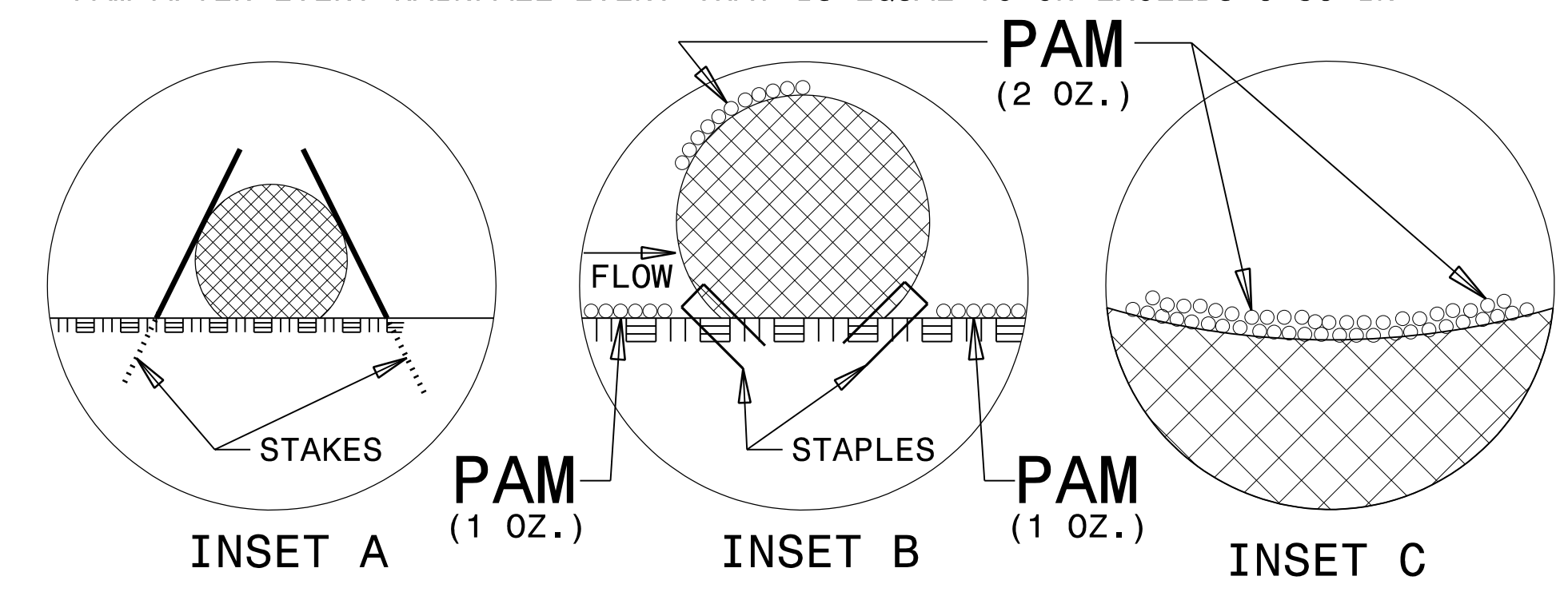


NOT TO SCALE

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



- 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.



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

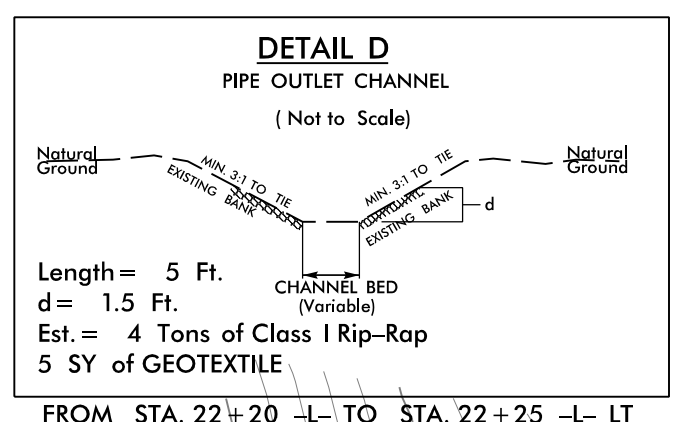
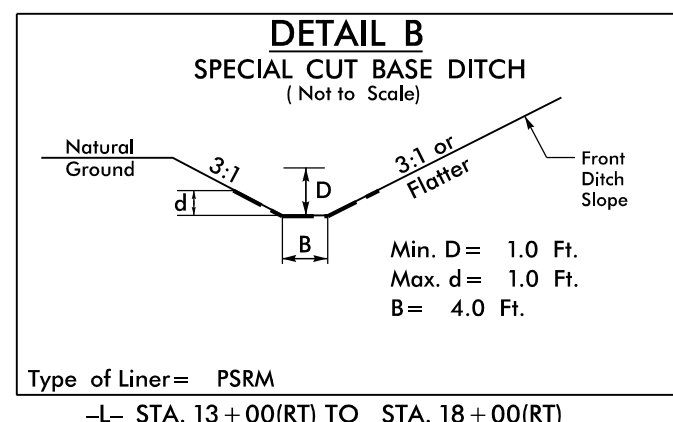
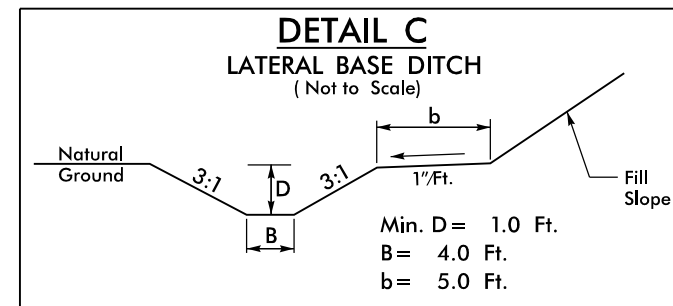
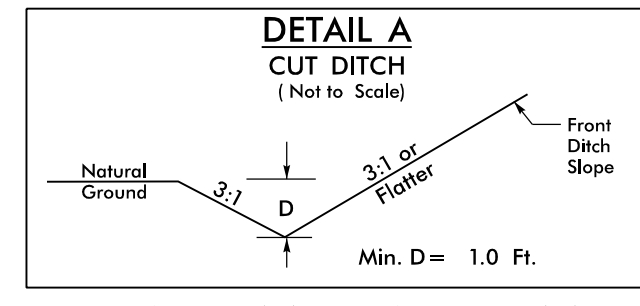
SOIL STABILIZATION TIMEFRAMES

<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.

8/17/99

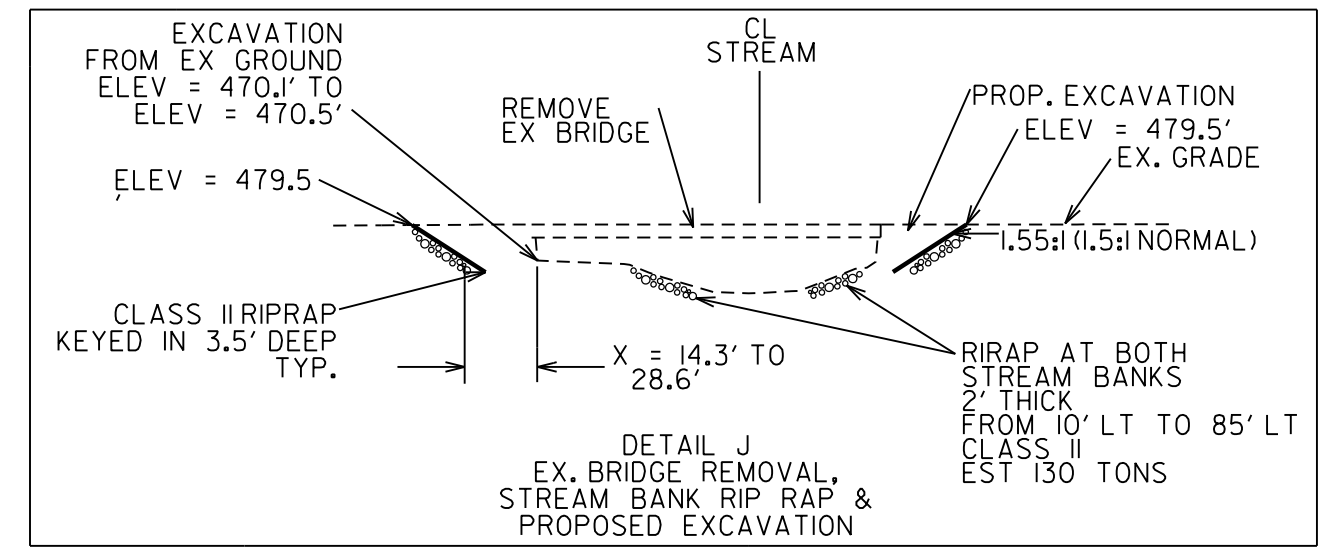
REVISIONS

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 10/26/2007 10:56:32 AM
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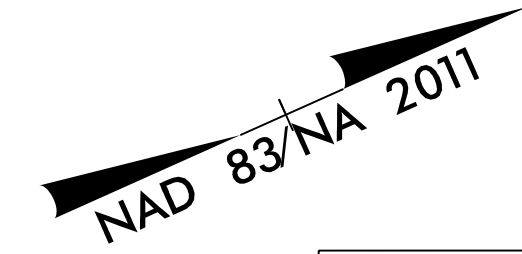
-L-

PI Sta 15+29.51 PI Sta 19+35.20
 $\Delta = 6' 23' 16.6''$ (RT) $\Delta = 22' 39' 32.2''$ (LT)
 $D = 2' 17' 30.6''$ $D = 4' 18' 28.6''$
 $L = 278.73'$ $L = 525.98'$
 $T = 139.5'$ $T = 266.47'$
 $SE = 05$ $SE = 06$
 $Ro = 135'$ $Ro = 162'$

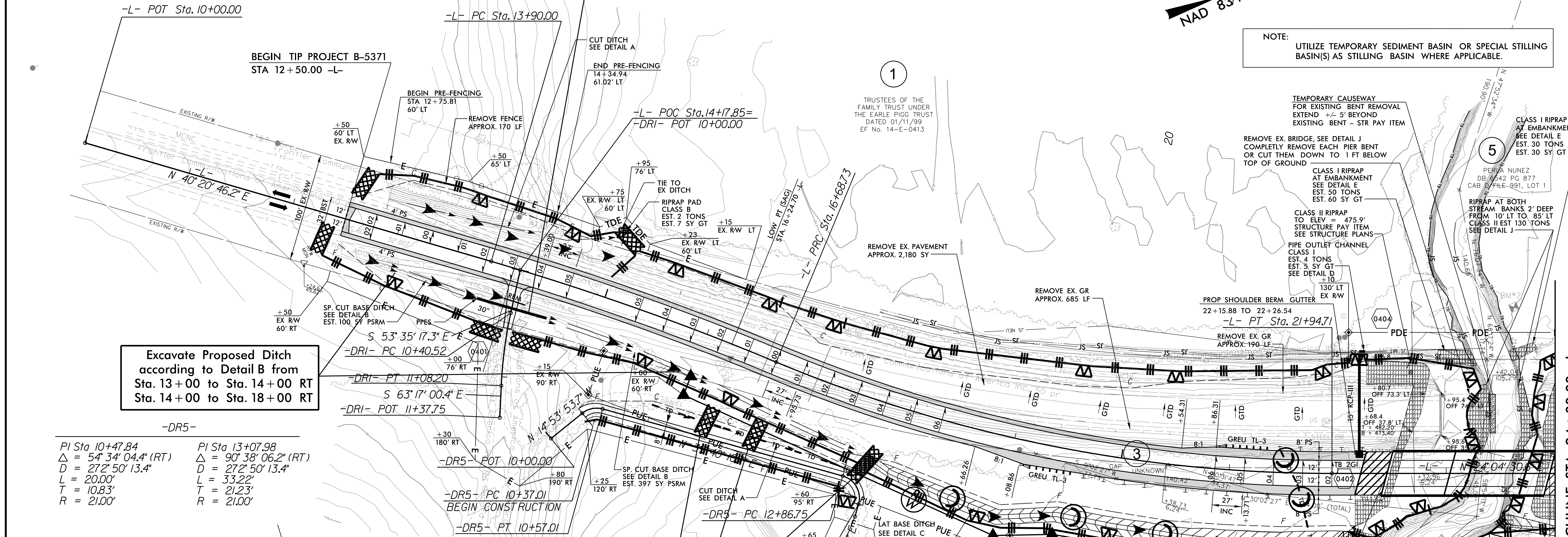


-DRI-

PI Sta 10+74.44
 $\Delta = 9' 41' 43.2''$ (LT)
 $D = 14' 19' 26.2''$
 $L = 67.69'$
 $T = 33.92'$
 $R = 400.00'$

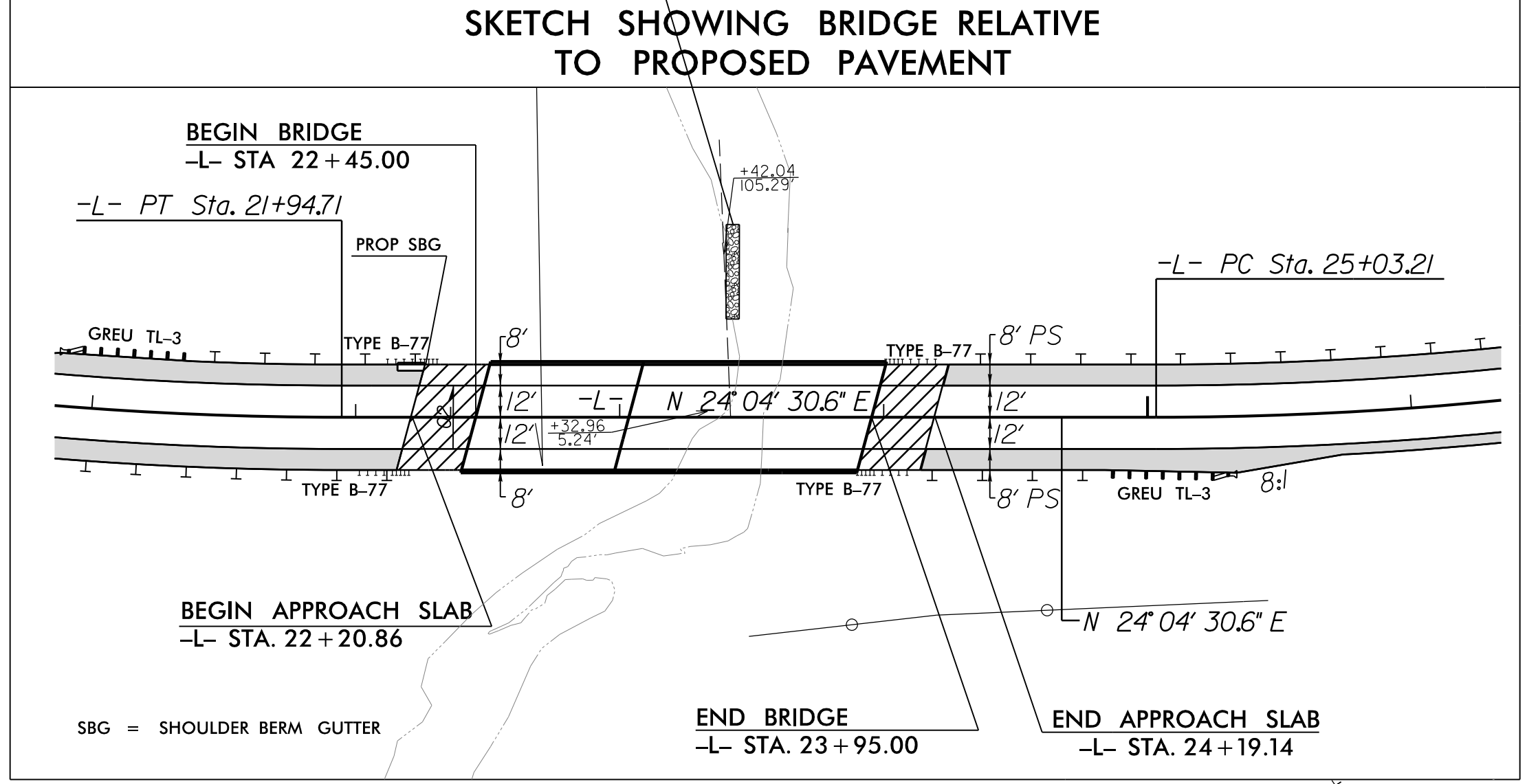


NOTE:
 UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.



Excavate Proposed Ditch according to Detail B from Sta. 13+00 to Sta. 14+00 RT Sta. 14+00 to Sta. 18+00 RT

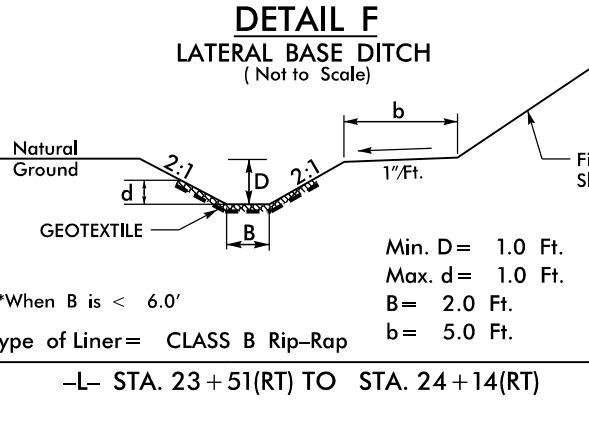
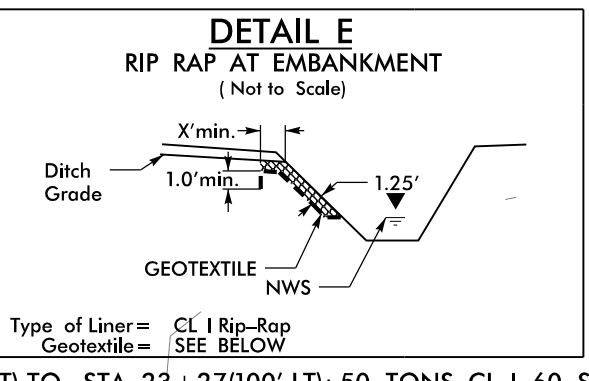
Excavate Proposed Ditch according to Detail C from Sta. 18+00 to Sta. 22+16 RT



CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 04

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

USE MINIMUM WEIR HEIGHT ON TEMPORARY ROCK SILT CHECKS TYPE - A UNLESS OTHERWISE SPECIFIED



1.5 inch Skimmer with 1.5 inch Orifice Diameter 19 ft. weir with 3.75 ft. weir height ID 4.1 B (See Earthen Dam with Skimmer Detail)

150 x 26 x 3 2.0 inch Skimmer with 1.625 inch Orifice Diameter 15 ft. weir ID 5.1 B

FOR L PROFILE SEE SHEET 6 FOR DRI AND DR5 PROFILE SEE SHEET 7 FOR STRUCTURE PLANS SEE S-1 THRU S-

REVISIONS
 R/W REVISION 8/8/17 (TEH) - PARCELS 2, REVISED PUE
 1/3/2017
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MATCHLINE STA 24+00.00 -L- SEE SHEET 5

NAD 83/NA 2011

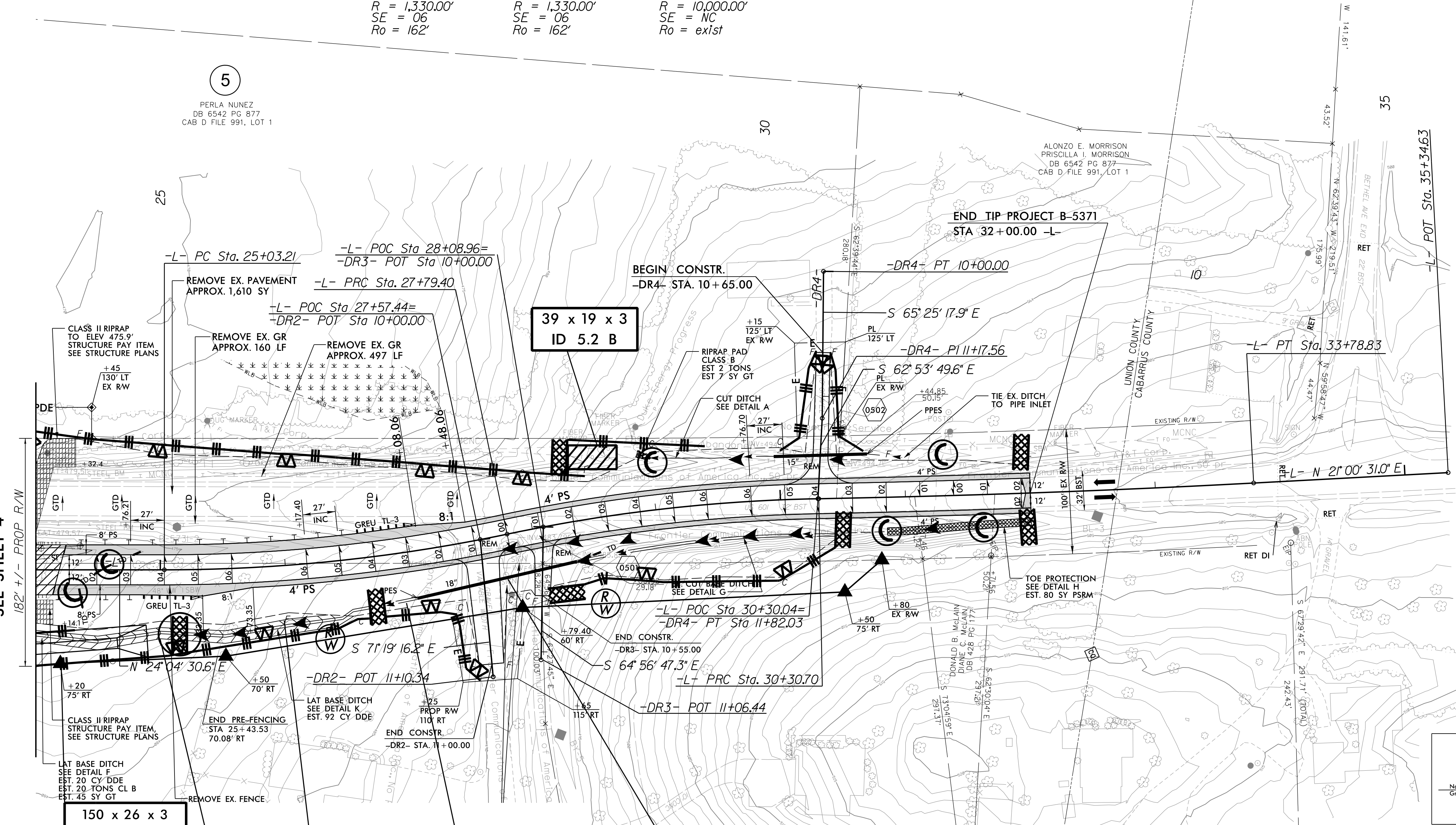
-L-

PI Sta 26+41.80 Δ = 11° 53' 53.2" (LT) D = 4' 18" 28.6" L = 276.19' T = 138.59' R = 1,330.00' SE = 06' Ro = 162'	PI Sta 29+05.42 Δ = 10° 49' 34.3" (RT) D = 4' 18" 28.6" L = 251.31' T = 126.03' R = 1,330.00' SE = 06' Ro = 162'	PI Sta 32+04.78 Δ = 1° 59' 40.6" (LT) D = 0' 34" 22.6" L = 348.13' T = 174.08' R = 10,000.00' SE = NC Ro = exist
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5

PERLA NUNEZ
DB 6542 PG 877
CAB D FILE 991, LOT 1

MATCHLINE STA 24 + 00.00 -L-
SEE SHEET 4



150 x 26 x 3
2.0 inch Skimmer
with 1.625 inch
Orifice Diameter
15 ft. weir
ID 5.1 B

Excavate Proposed Ditch
according to Detail G from
Sta. 24 + 90 to Sta. 26 + 50 RT

Excavate Proposed Ditch
according to Detail F from
Sta. 23 + 51 to Sta. 24 + 14 RT

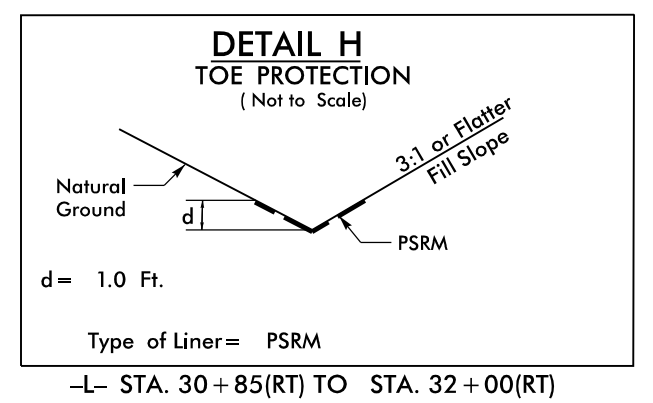
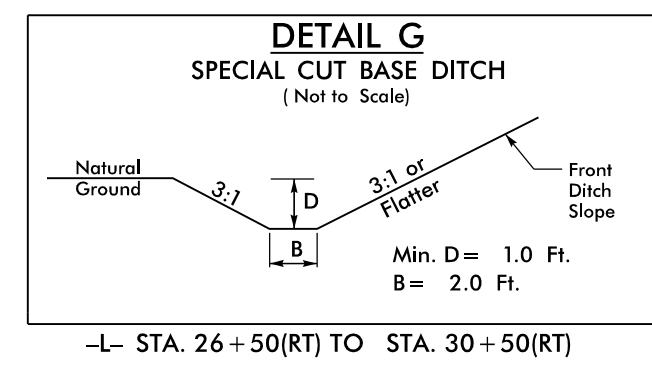
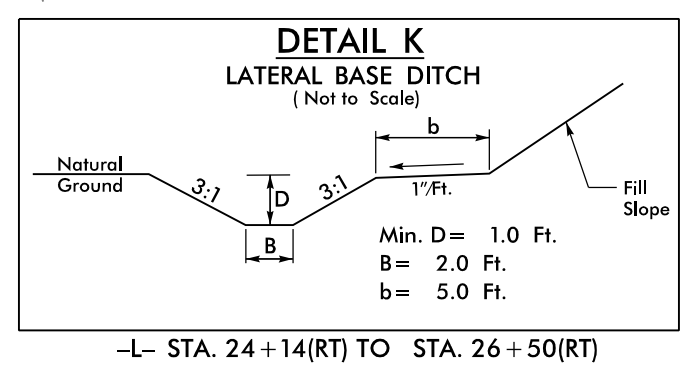
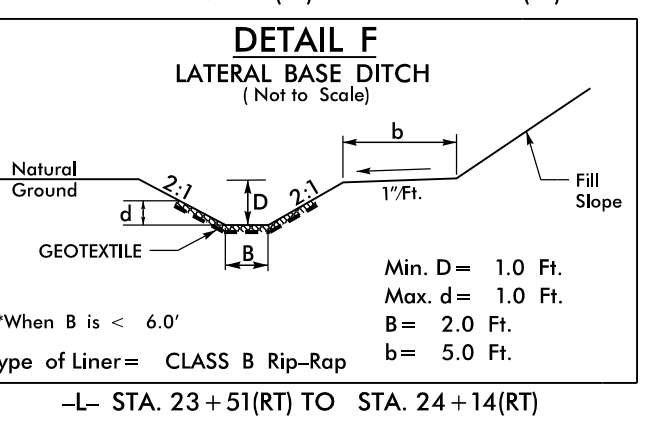
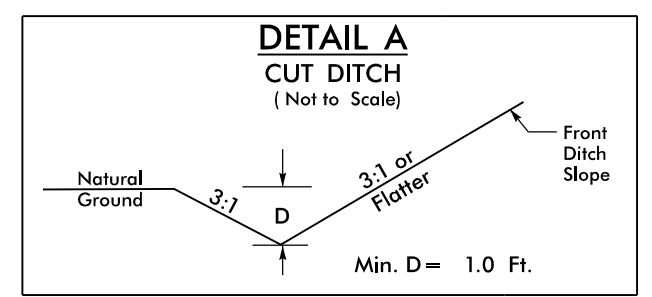
Excavate Proposed Ditch
according to Detail D from
Sta. 26 + 50 to Sta. 27 + 00 RT

INSTALL DRIVEWAY PIPE DURING
CLEARING & GRUBBING PHASE

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

USE MINIMUM WEIR
HEIGHT ON TEMPORARY
ROCK SILT CHECKS TYPE - A
UNLESS OTHERWISE SPECIFIED

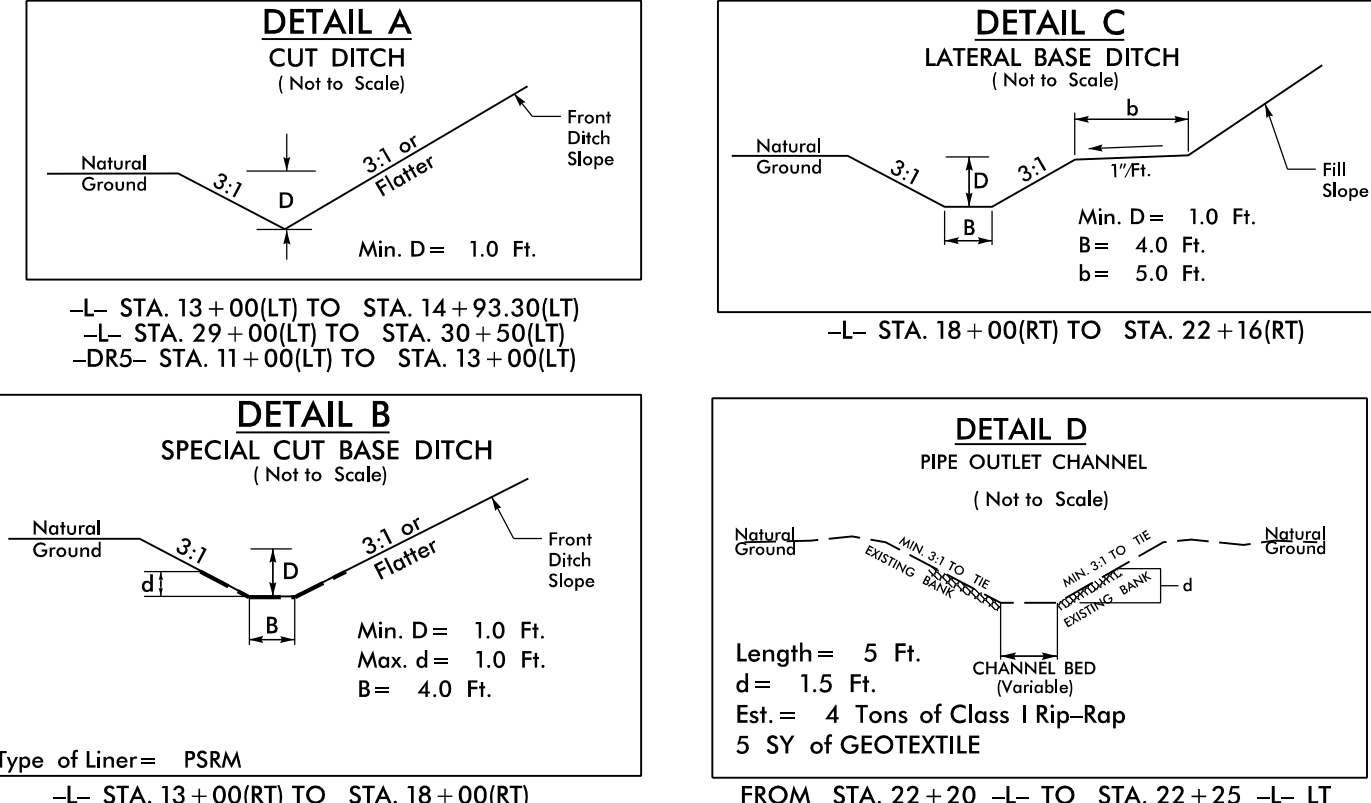
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 05



FOR L PROFILE SEE SHEET 6
FOR DR2 PROFILE SEE SHEET 7
FOR DR3 PROFILE SEE SHEET 7
FOR DR4 PROFILE SEE SHEET 7
FOR STRUCTURE PLANS SEE S-1 THRU S-

REVISIONS

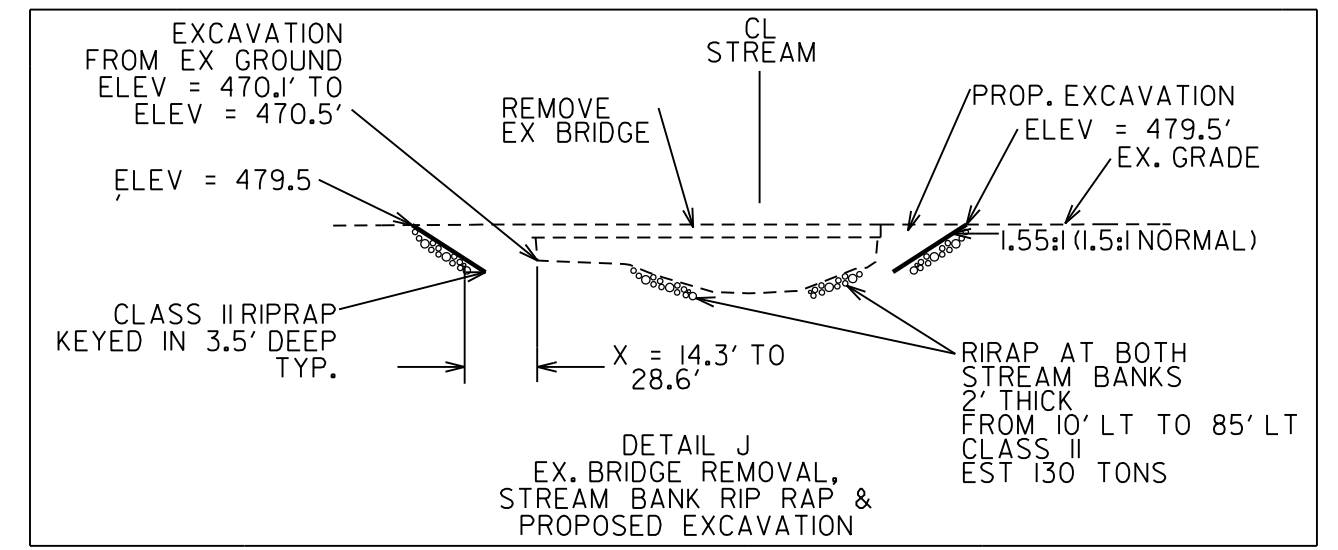
8/17/99
10/26/00
05/26/02
04/CA000\B5371\Roadside\B5371_REU_PSH_05.dgn



-L-

PI Sta 15+29.51
 $\Delta = 6'23''16.6''$ (RT)
 $D = 2'17''30.6''$
 $L = 278.73'$
 $T = 139.5'$
 $R = 2,500.00'$
 $SE = 05$
 $Ro = 135'$

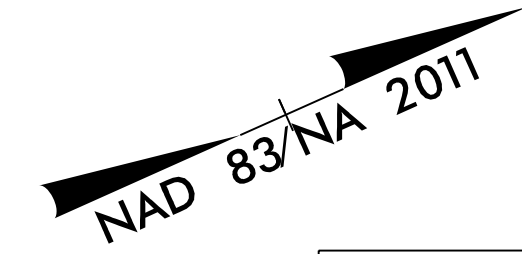
PI Sta 19+35.20
 $\Delta = 22'39''32.2''$ (LT)
 $D = 4'18''28.6''$
 $L = 525.98'$
 $T = 266.47'$
 $R = 1,330.00'$
 $SE = 06$
 $Ro = 162'$



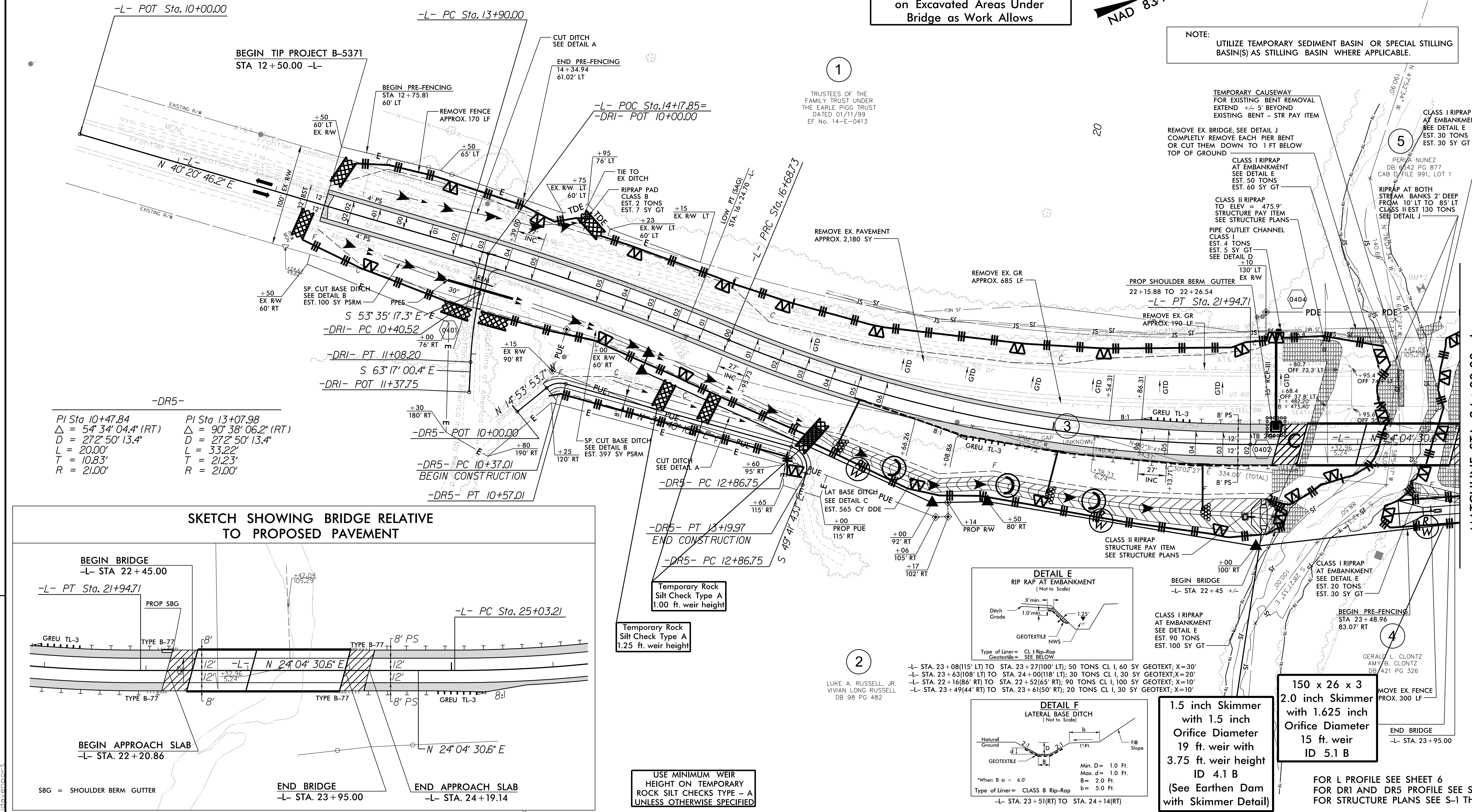
-DRI-

PI Sta 10+74.44
 $\Delta = 9'4''43.2''$ (LT)
 $D = 14'19''26.2''$
 $L = 67.69'$
 $T = 33.92'$
 $R = 400.00'$

Place Coir Fiber Matting on Excavated Areas Under Bridge as Work Allows



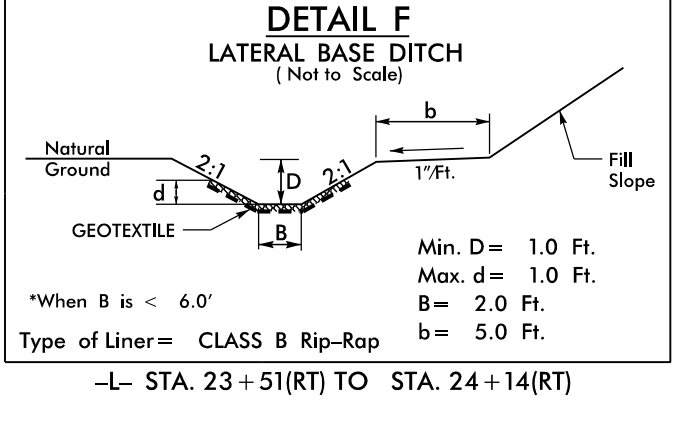
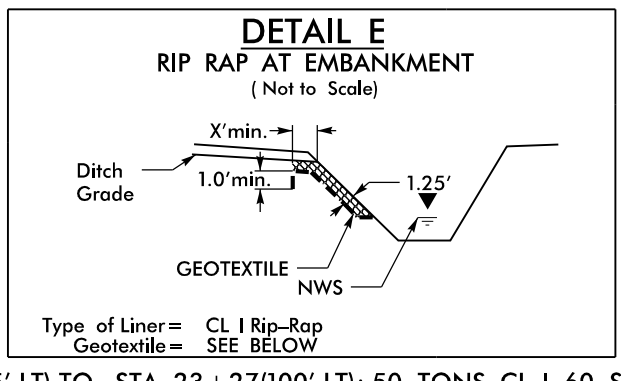
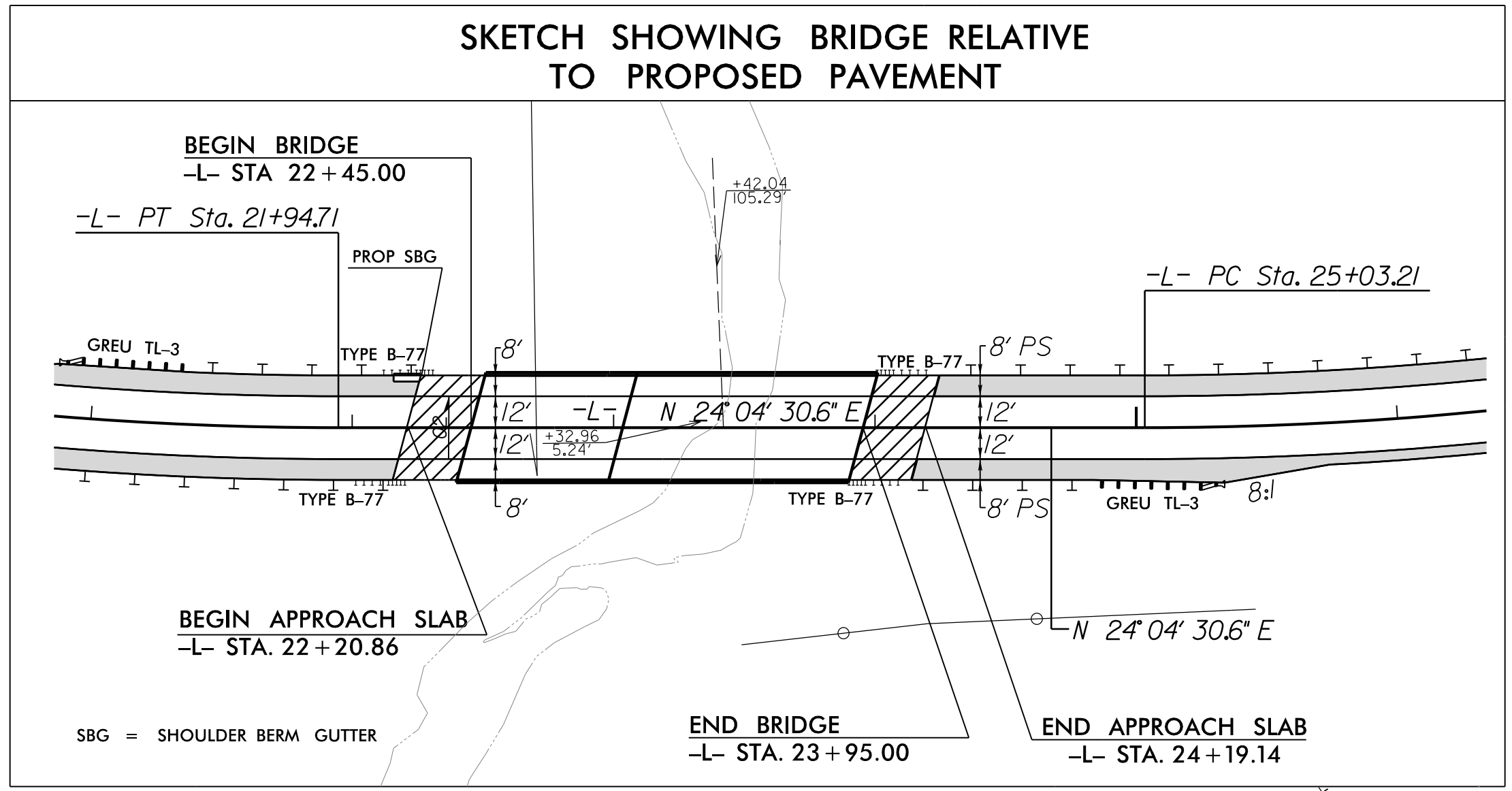
NOTE:
 UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.



-DR5-

PI Sta 10+47.84
 $\Delta = 54'34''04.4''$ (RT)
 $D = 272'50''13.4''$
 $L = 20.00'$
 $T = 10.83'$
 $R = 21.00'$

PI Sta 13+07.98
 $\Delta = 90'38''06.2''$ (RT)
 $D = 272'50''13.4''$
 $L = 33.22'$
 $T = 21.23'$
 $R = 21.00'$



1.5 inch Skimmer with 1.5 inch Orifice Diameter 19 ft. weir with 3.75 ft. weir height ID 4.1 B (See Earthen Dam with Skimmer Detail)

150 x 26 x 3 2.0 inch Skimmer with 1.625 inch Orifice Diameter 15 ft. weir ID 5.1 B

FOR L PROFILE SEE SHEET 6
 FOR DRI AND DR5 PROFILE SEE SHEET 7
 FOR STRUCTURE PLANS SEE S-1 THRU S-

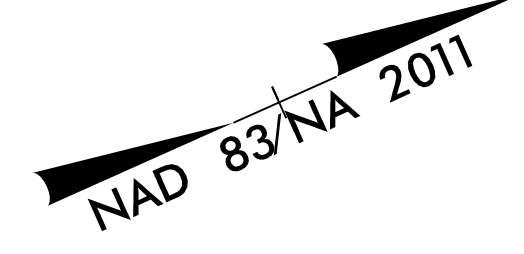
USE MINIMUM WEIR HEIGHT ON TEMPORARY ROCK SILT CHECKS TYPE - A UNLESS OTHERWISE SPECIFIED

REVISIONS

R/W REVISION 8/8/17 (TEH) - PARCELS 2, REVISED PUE

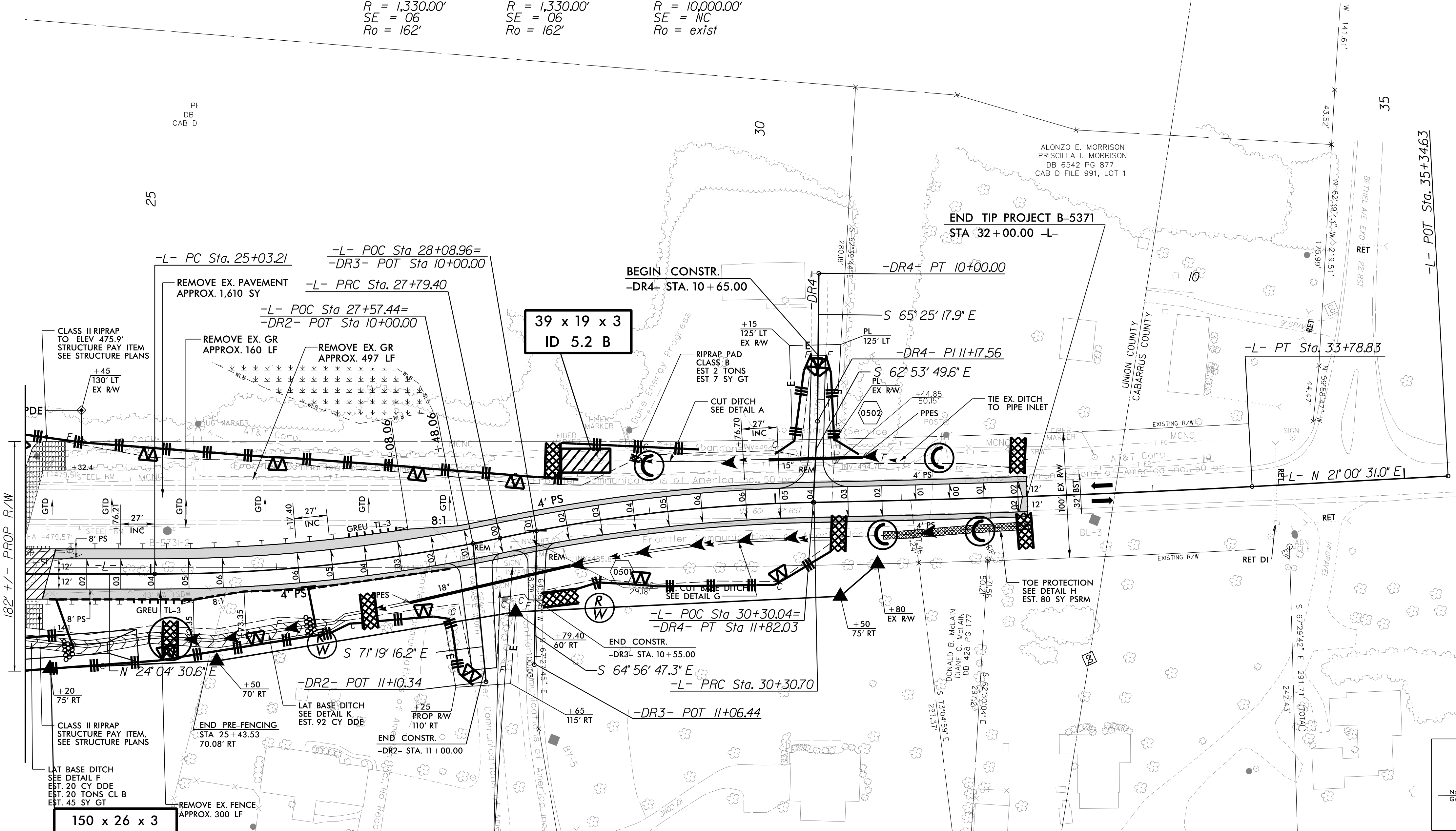
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MATCHLINE STA 24+00.00 -L- SEE SHEET 5



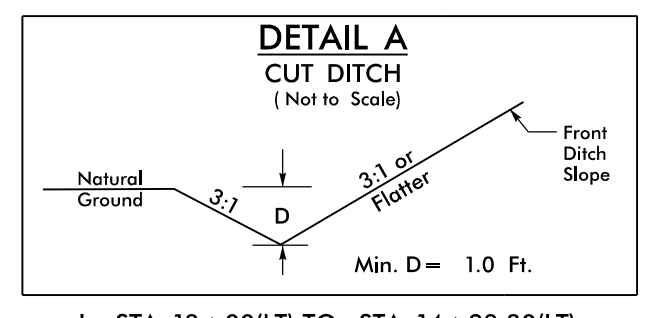
-L-		
PI Sta 26+41.80	PI Sta 29+05.42	PI Sta 32+04.78
$\Delta = 11' 53' 53.2''$ (LT)	$\Delta = 10' 49' 34.3''$ (RT)	$\Delta = 1' 59' 40.6''$ (LT)
D = 4' 18' 28.6"	D = 4' 18' 28.6"	D = 0' 34' 22.6"
L = 276.19'	L = 251.31'	L = 348.13'
T = 138.59'	T = 126.03'	T = 174.08'
R = 1,330.00'	R = 1,330.00'	R = 10,000.00'
SE = 06	SE = 06	SE = NC
Ro = 162'	Ro = 162'	Ro = exist

MATCHLINE STA 24+00.00 -L-
SEE SHEET 4

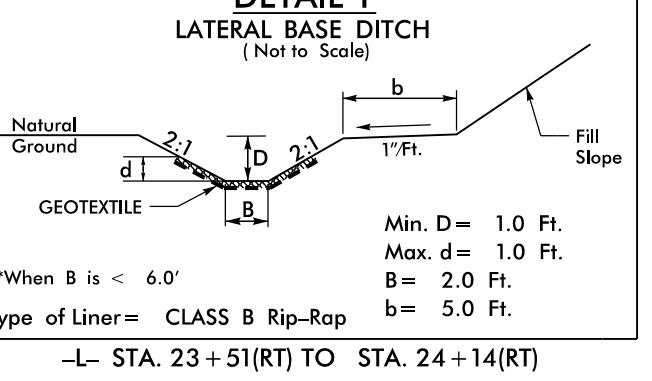


150 x 26 x 3
2.0 inch Skimmer
 with 1.625 inch
 Orifice Diameter
15 ft. weir
ID 5.1 B

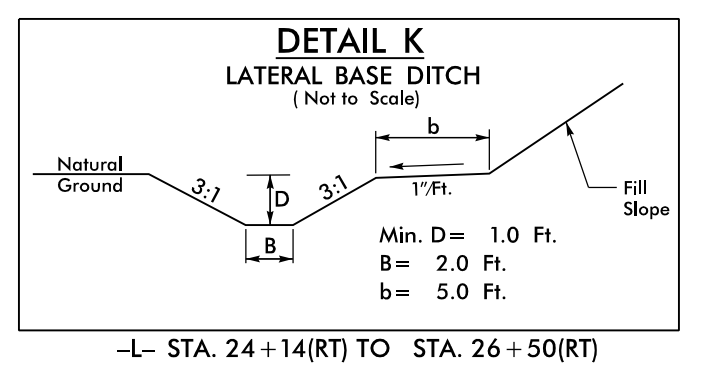
USE MINIMUM WEIR
 HEIGHT ON TEMPORARY
 ROCK SILT CHECKS TYPE - A
 UNLESS OTHERWISE SPECIFIED



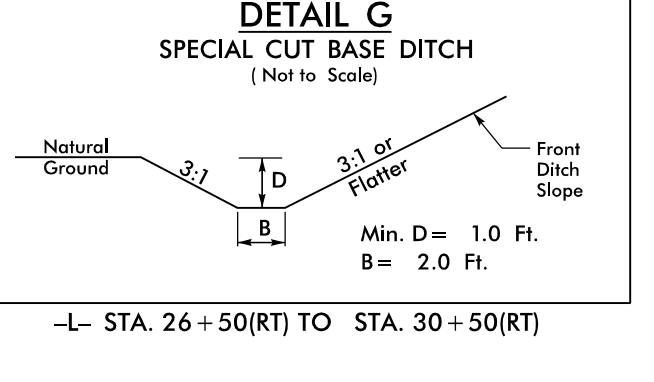
-L- STA. 13+00(LT) TO STA. 14+93.30(LT)
 -L- STA. 29+00(LT) TO STA. 30+50(LT)



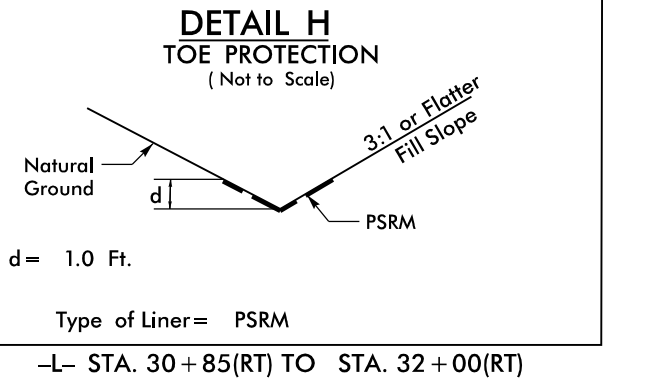
-L- STA. 23+51(RT) TO STA. 24+14(RT)



-L- STA. 24+14(RT) TO STA. 26+50(RT)



-L- STA. 26+50(RT) TO STA. 30+50(RT)



-L- STA. 30+85(RT) TO STA. 32+00(RT)

FOR L PROFILE SEE SHEET 6
 FOR DR2 PROFILE SEE SHEET 7
 FOR DR3 PROFILE SEE SHEET 7
 FOR DR4 PROFILE SEE SHEET 7
 FOR STRUCTURE PLANS SEE S-1 THRU S-

REVISIONS

8/17/99
 10:26:00
 05:26:00
 04:00:00
 B5371\Roadside\B5371_REU_PSH_07.dgn
 10/26/07