

TIP PROJECT: B-4257

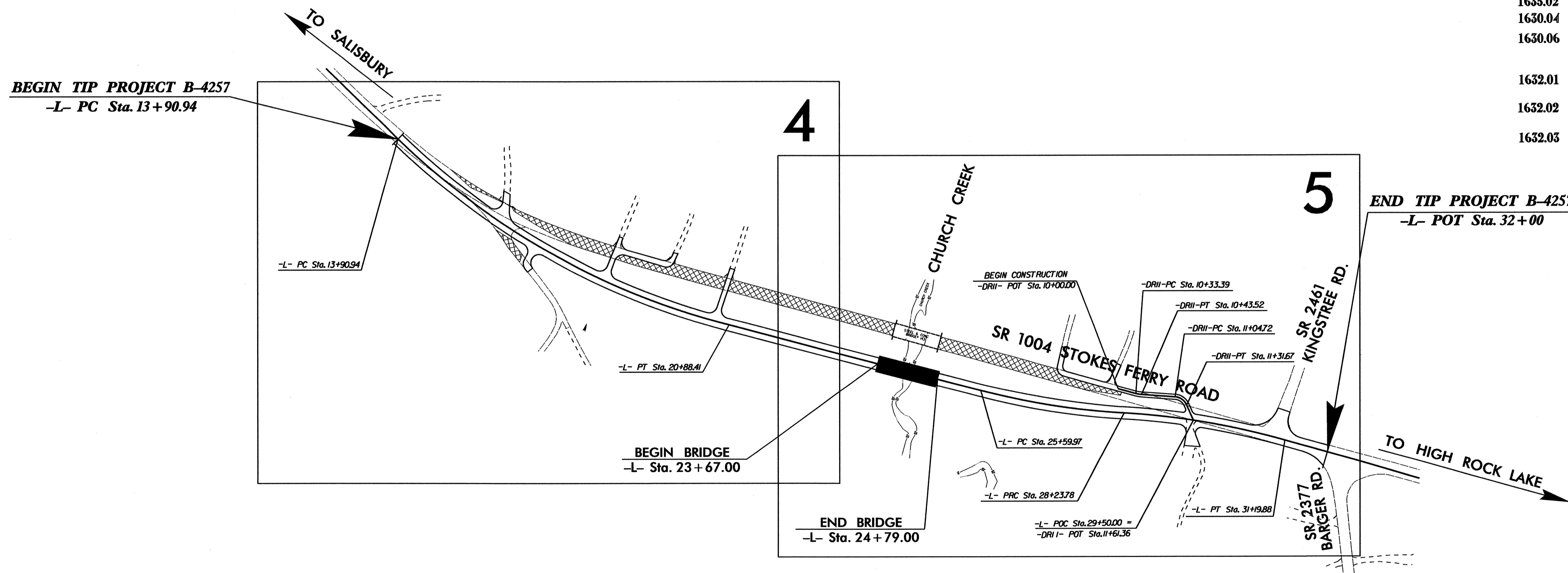
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

ROWAN COUNTY

**LOCATION: BRIDGE No. 143 ON SR 1004 (STOKES FERRY RD)
OVER CHURCH CREEK**

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



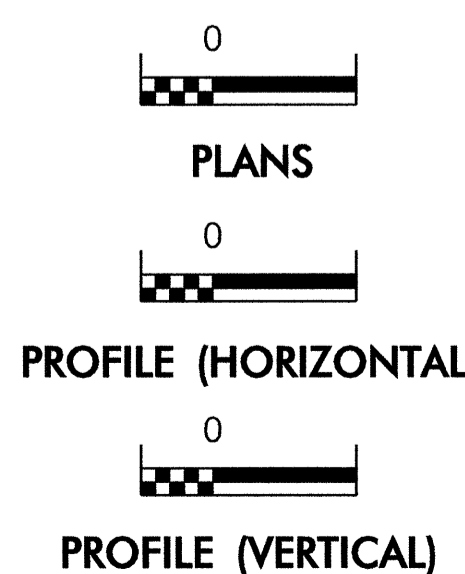
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4257	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

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

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

GRAPHIC SCALE



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared In the Office of:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611
2012 STANDARD SPECIFICATIONS

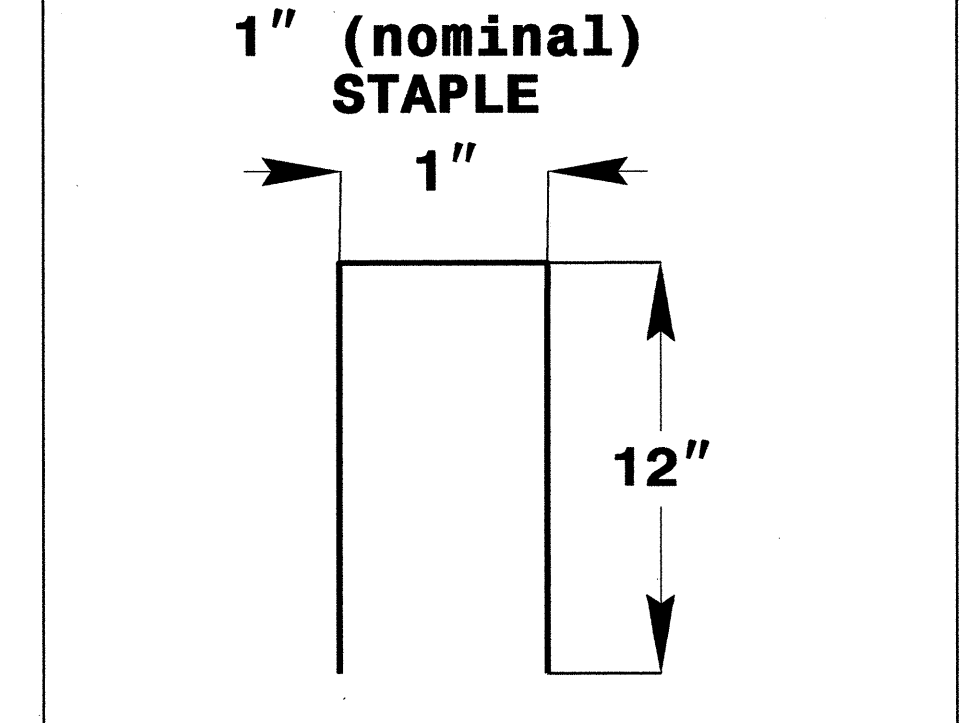
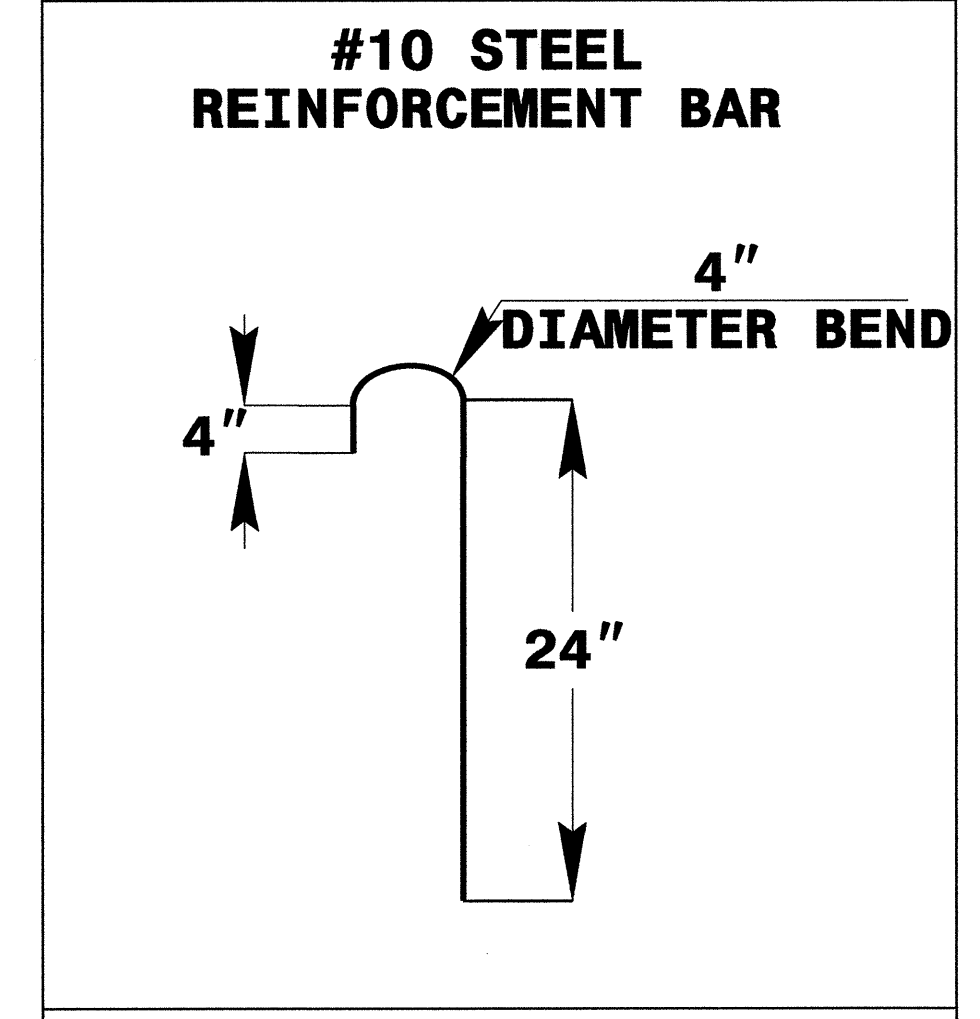
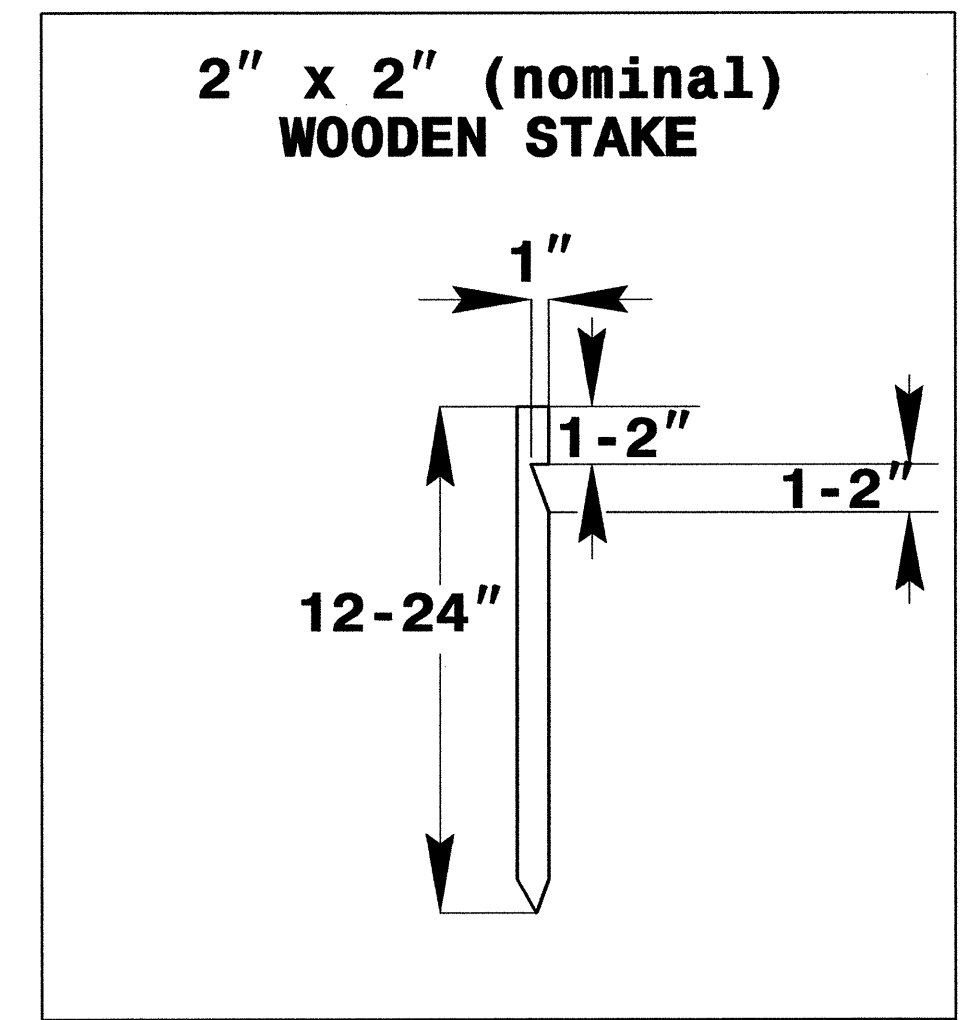
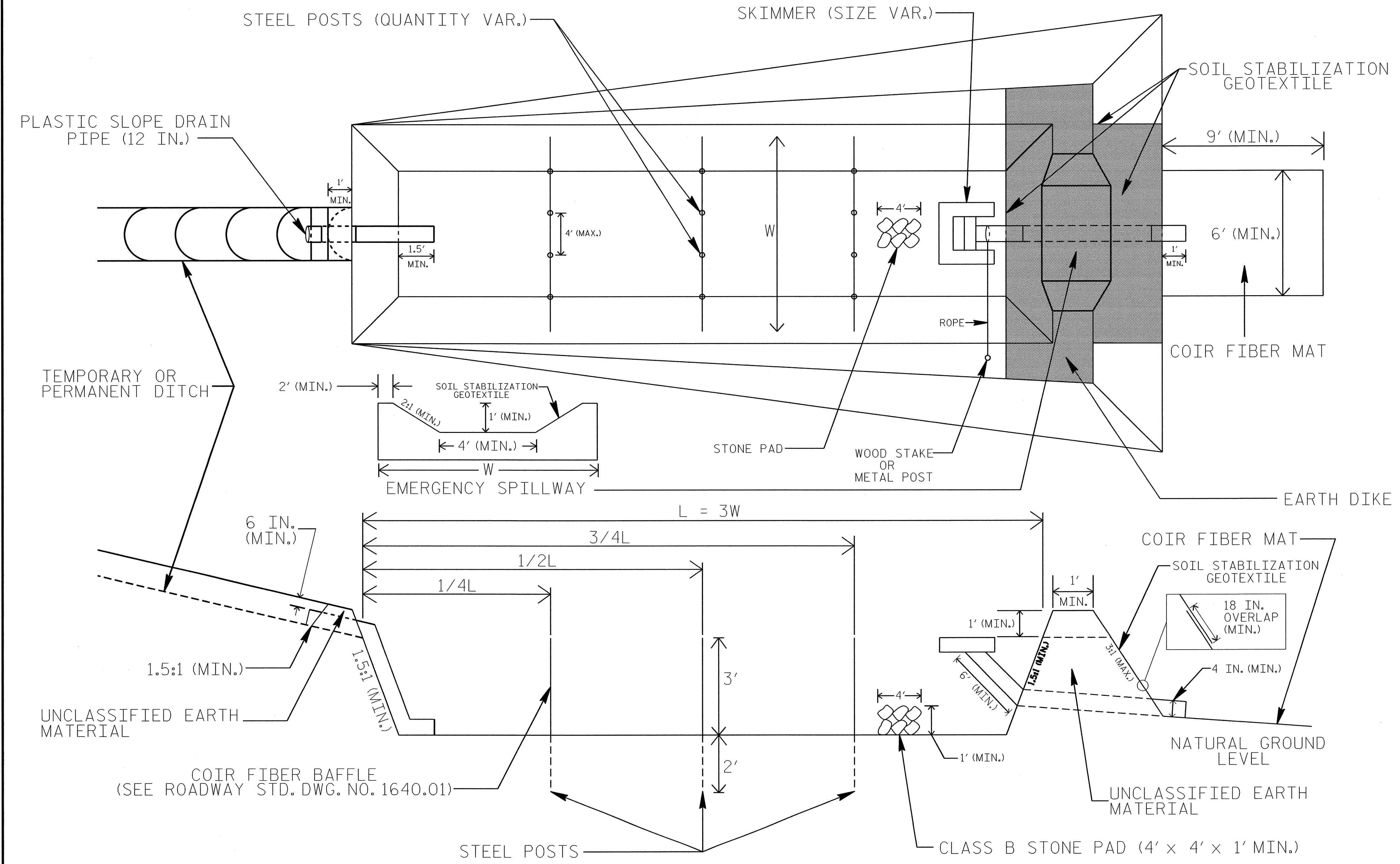
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 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	1633.03 Temporary Rock Silt Check Type C
1630.02 Silt Basin Type B	1634.01 Temporary Rock Sediment Dam Type A
1630.03 Temporary Silt Ditch	1634.02 Temporary Rock Sediment Dam Type B
1630.04 Stilling Basin	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.05 Temporary Diversion	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.06 Special Stilling Basin	1640.01 Coir Fiber Baffle
1631.01 Matting Installation	1645.01 Temporary Stream Crossing

PROJECT REFERENCE NO. B-4257	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL



COIR FIBER MAT ANCHOR OPTIONS

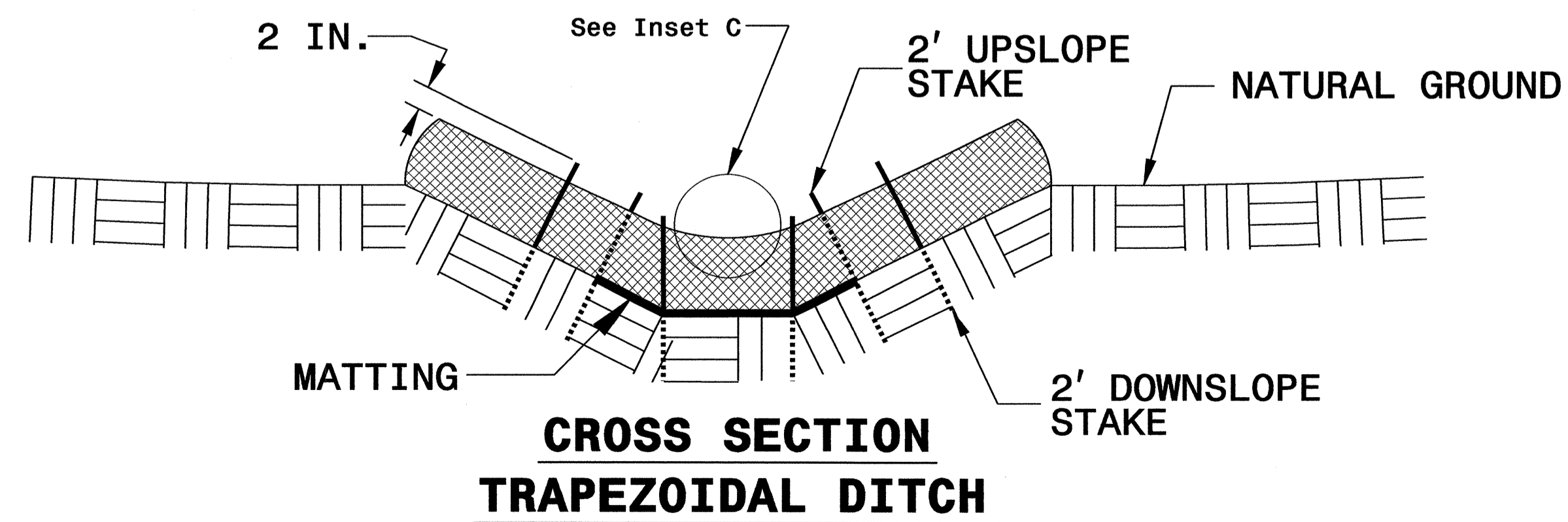
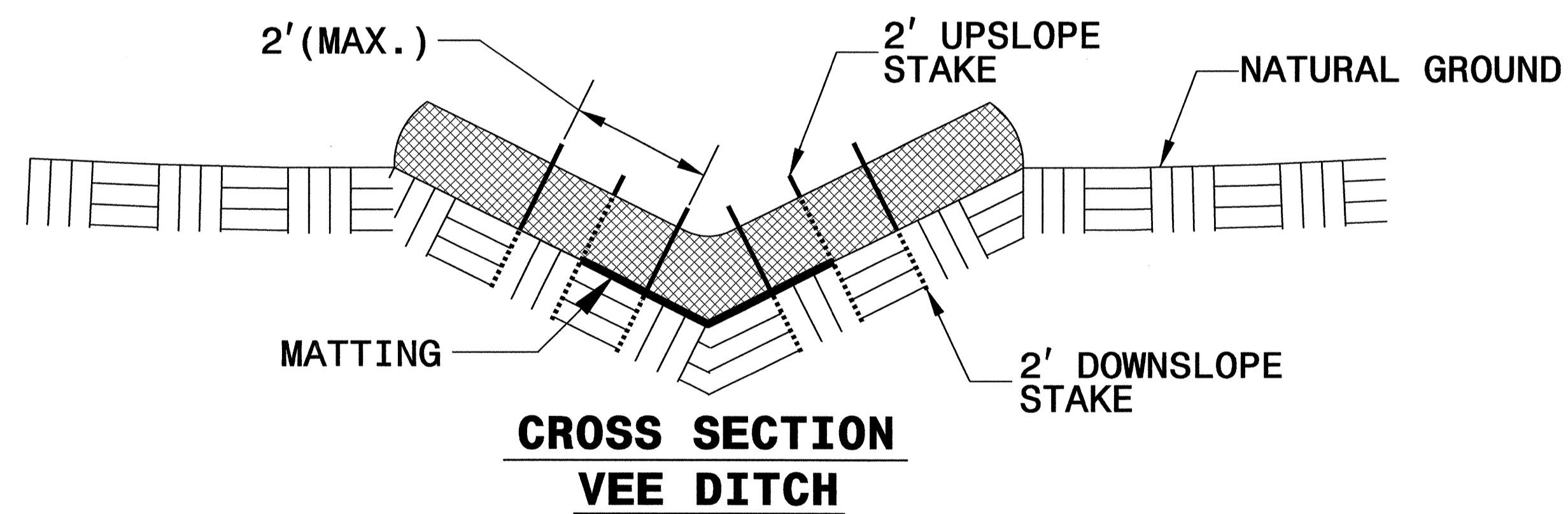
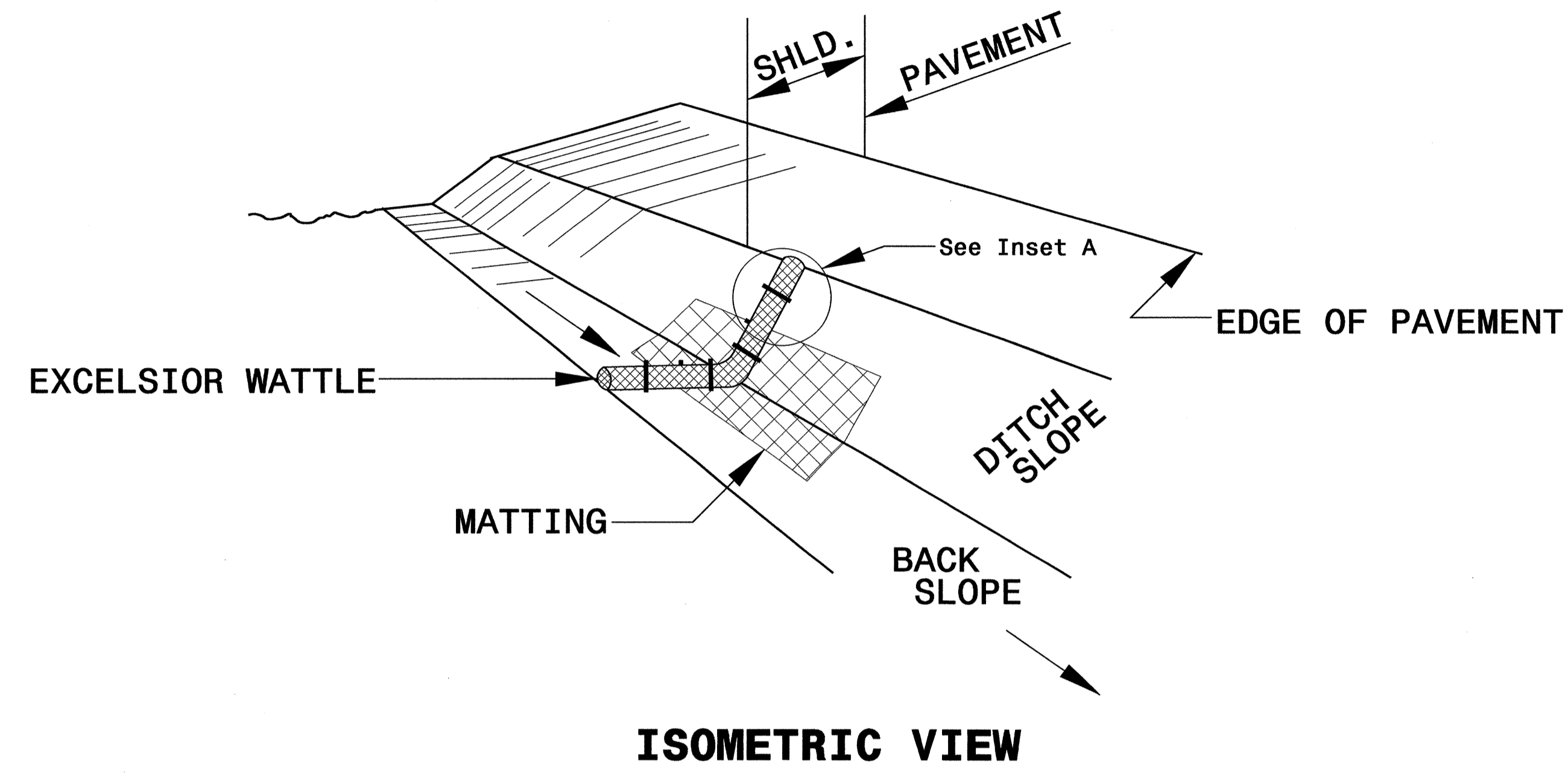
NOTES

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

NOT TO SCALE

PROJECT REFERENCE NO. B-4257	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR 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.

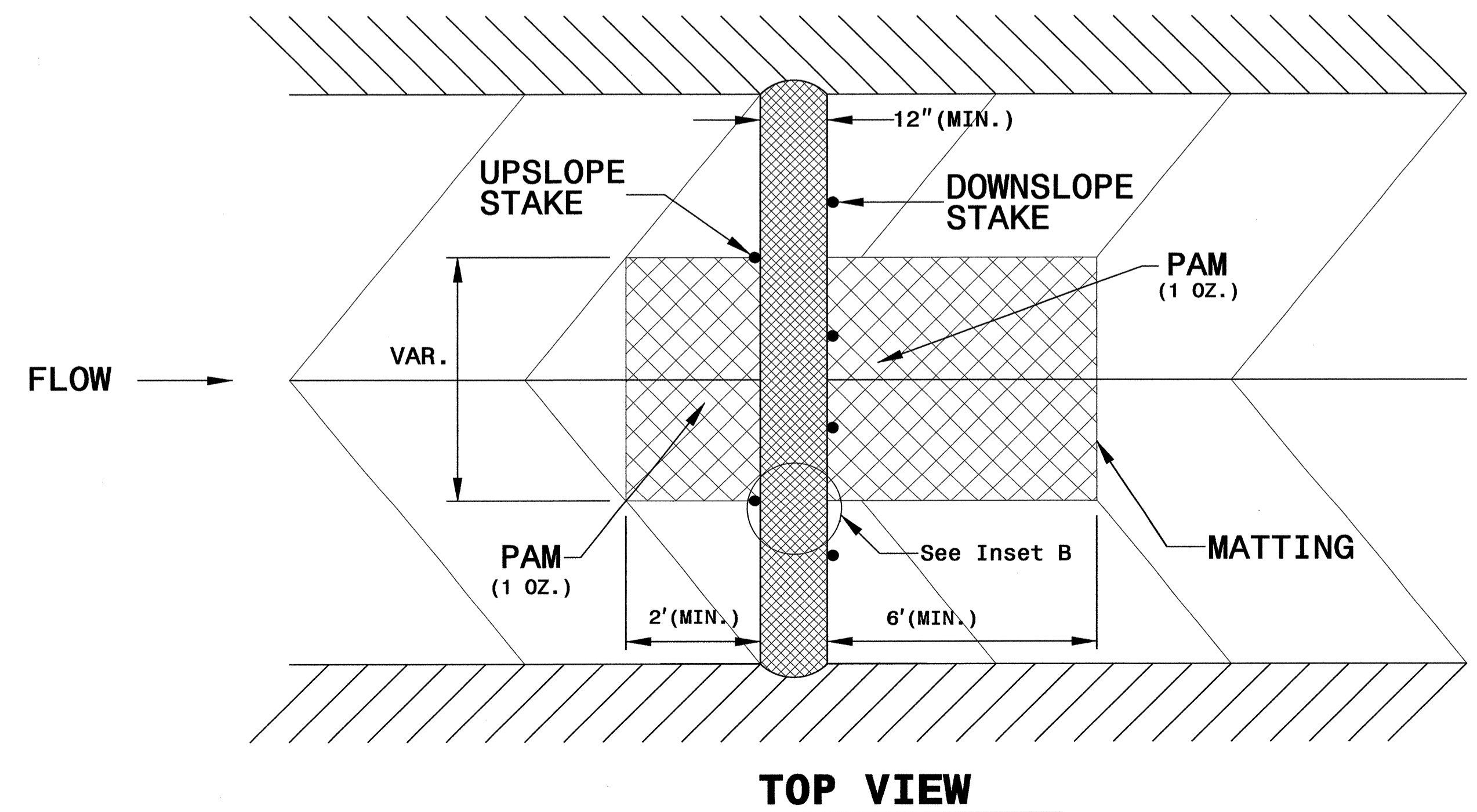
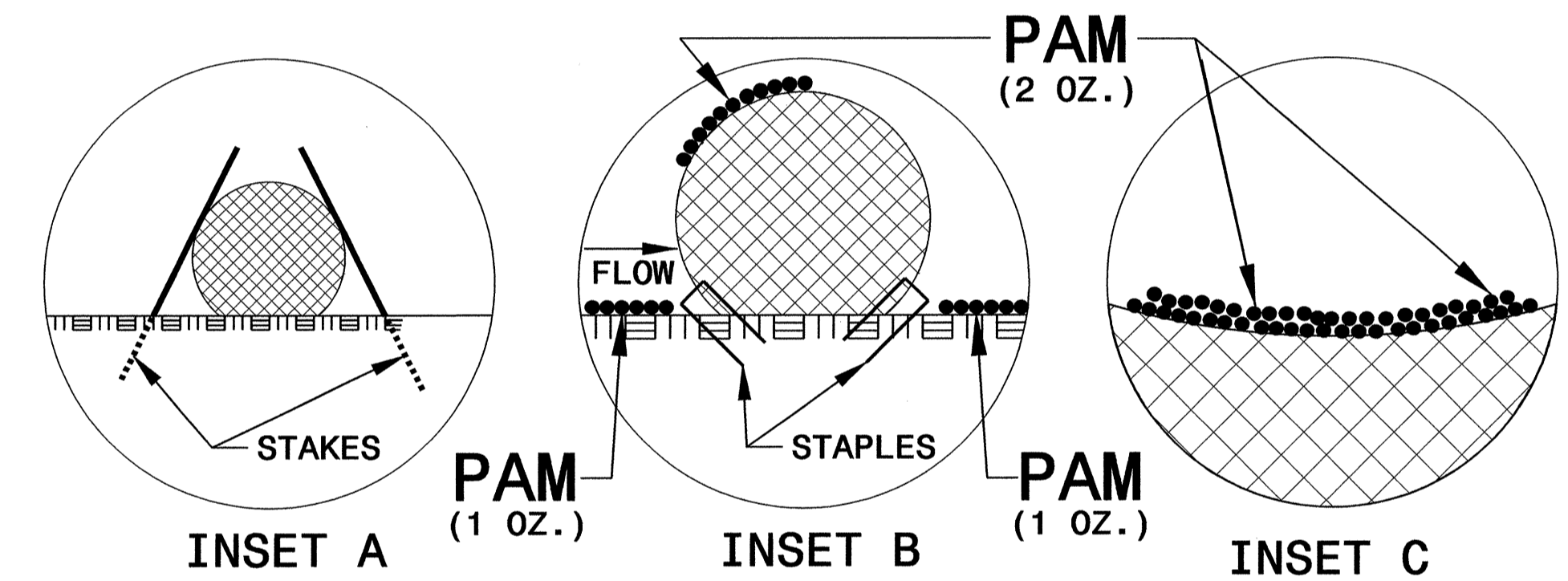
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

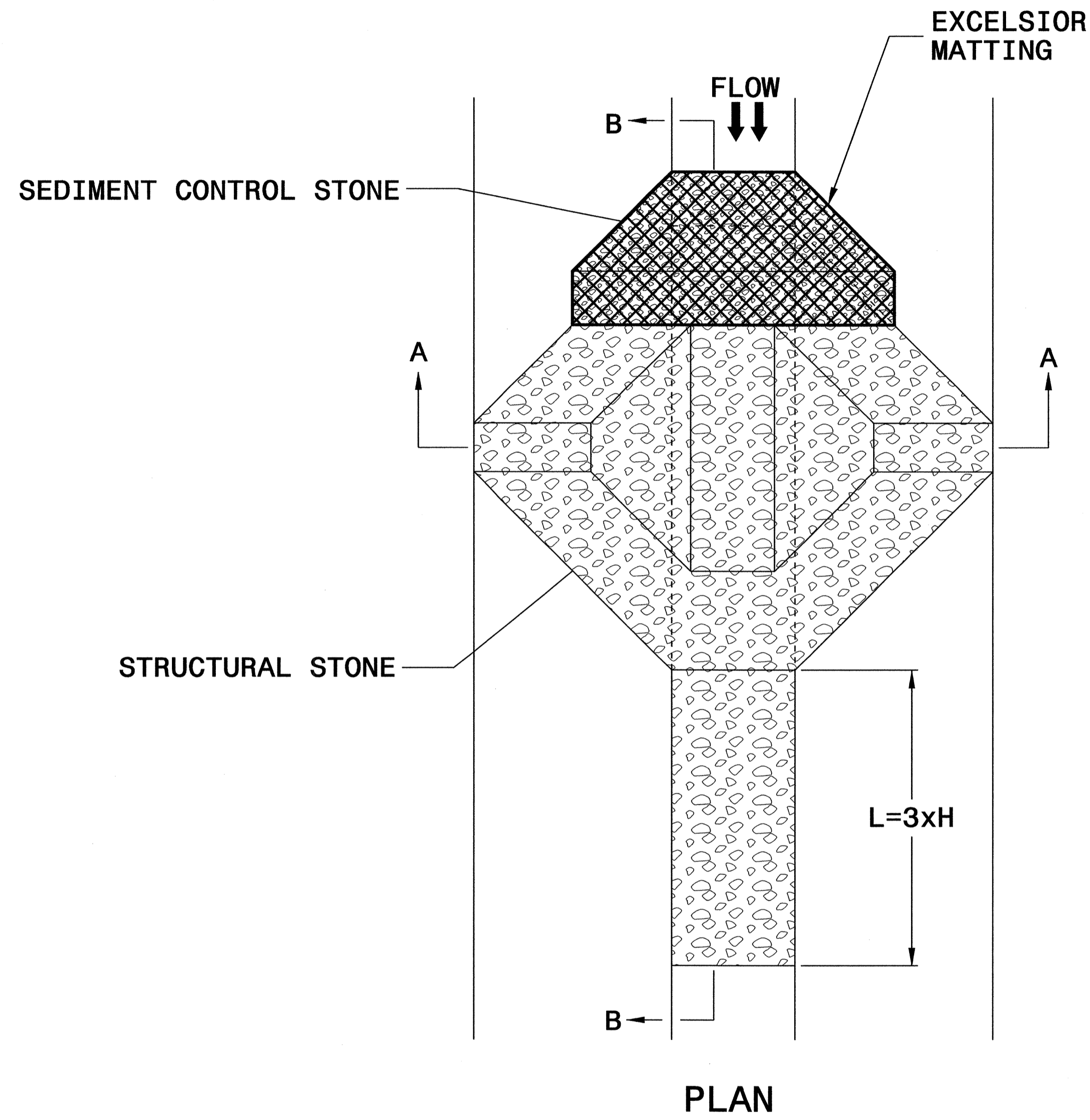
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

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.



PROJECT REFERENCE NO. B-4257	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

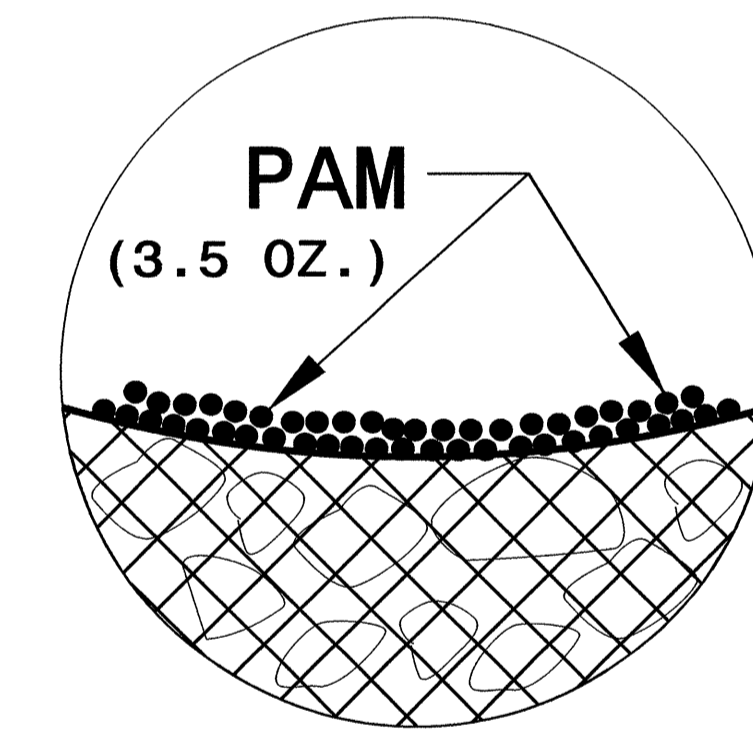


NOTES

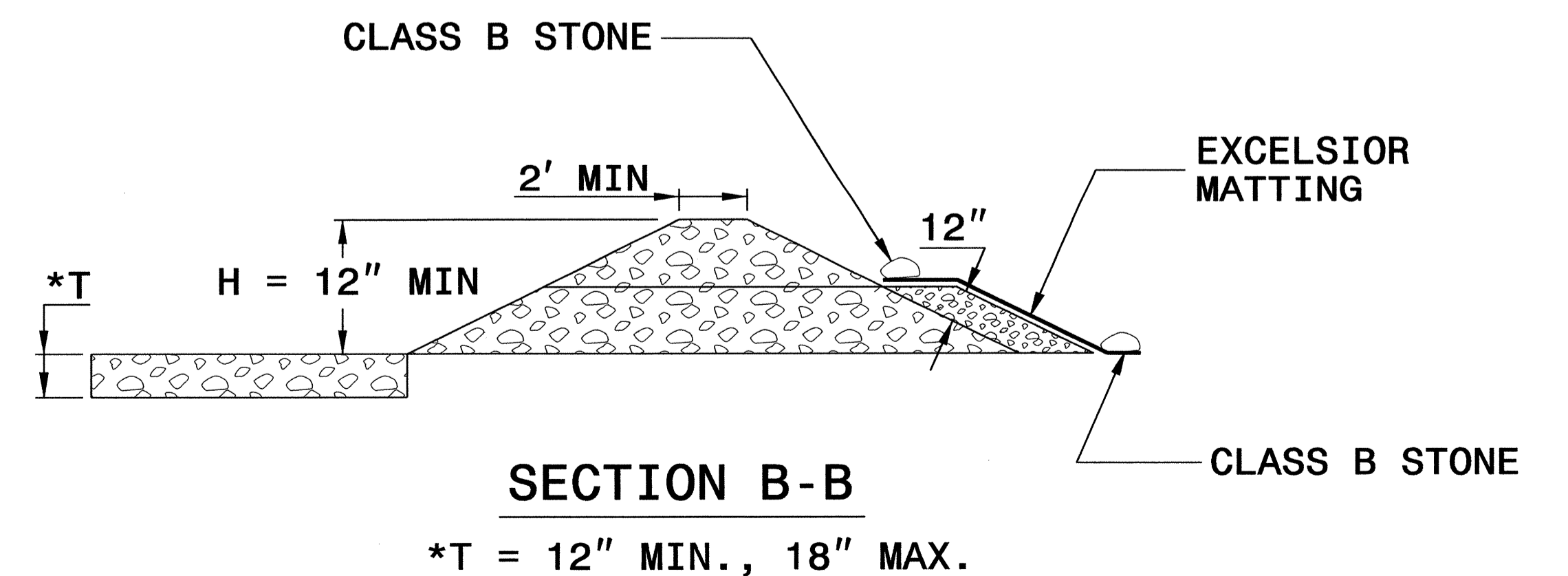
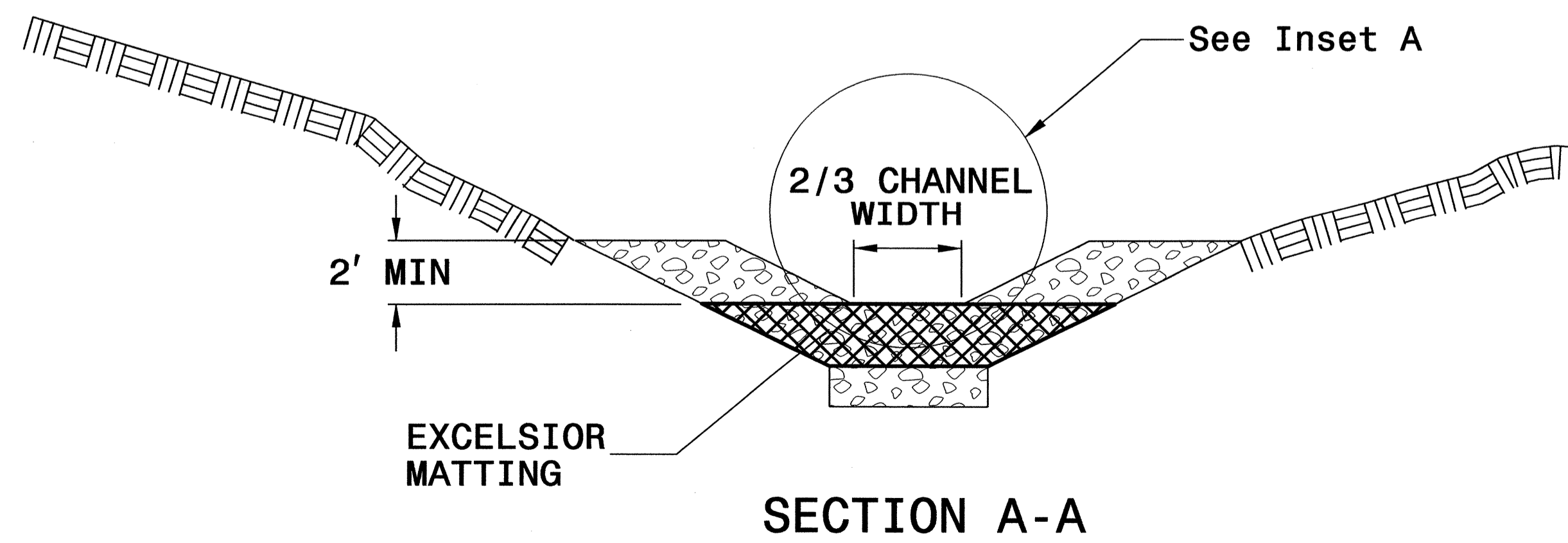
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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 3.5 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

PROJECT REFERENCE NO. <i>B-4257</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

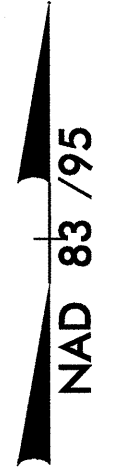
SOIL STABILIZATION TIMEFRAMES


<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.

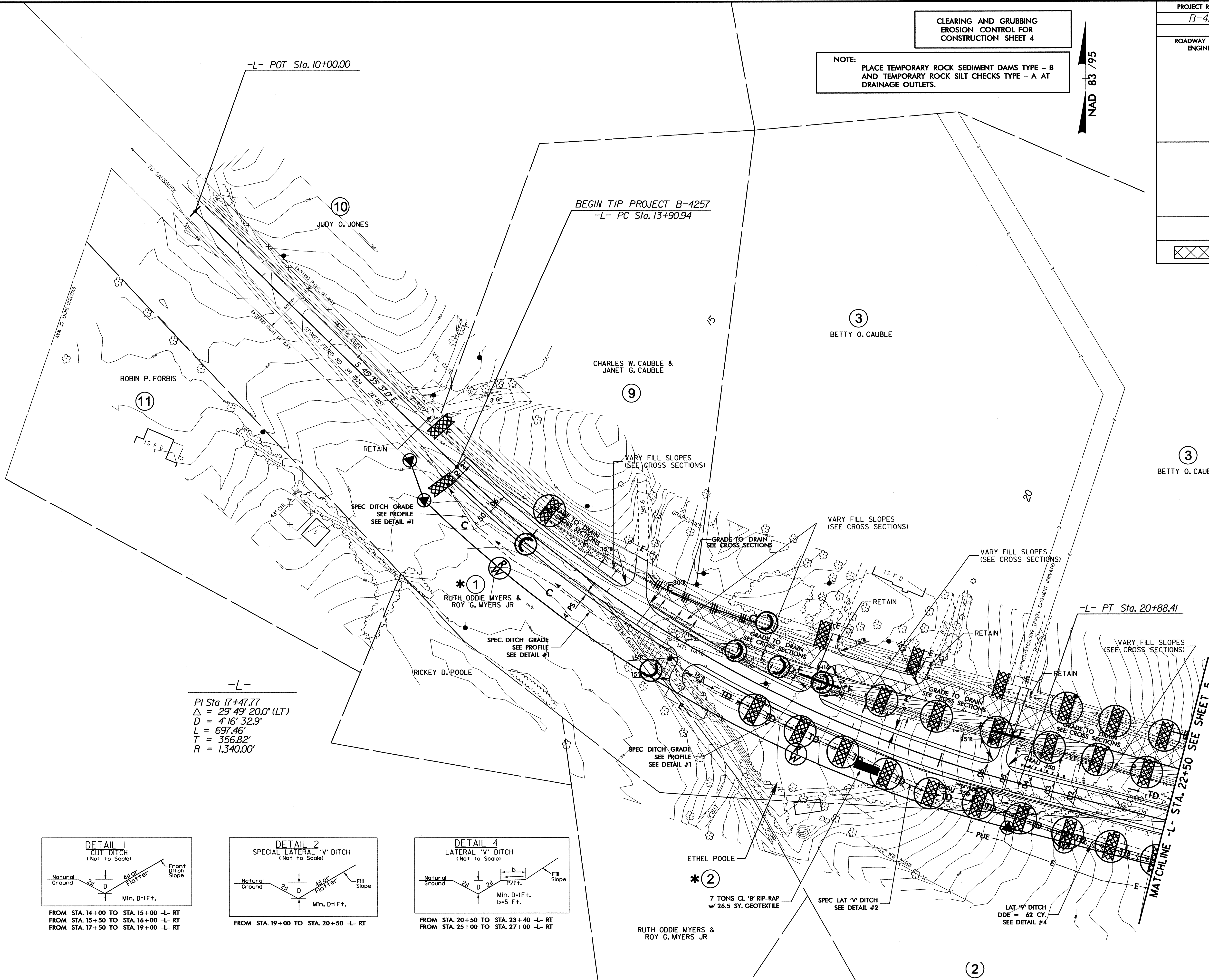
8/17/95

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.

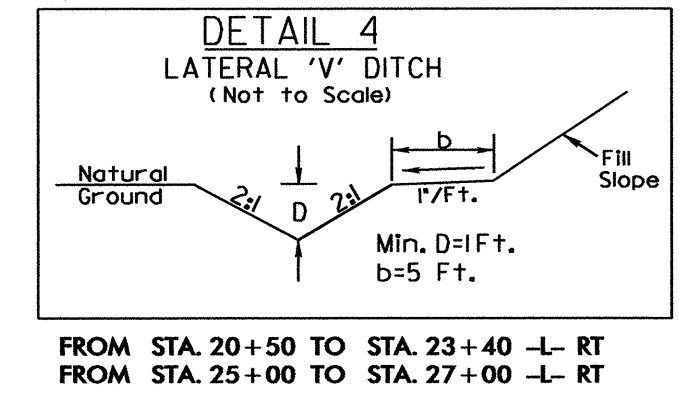
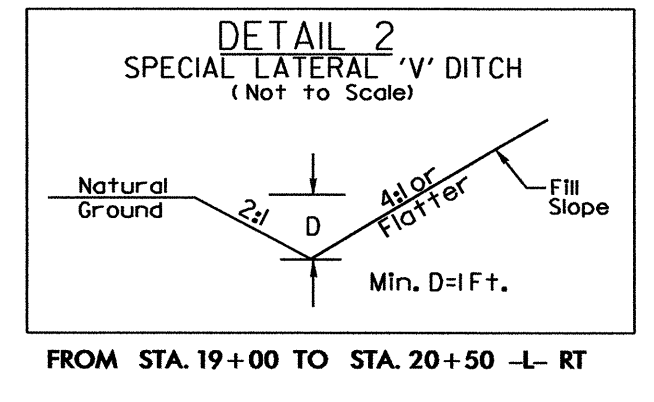
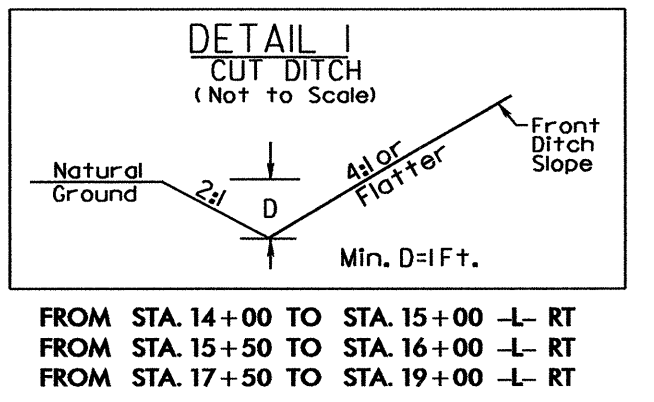


PROJECT REFERENCE NO. B-4257		SHEET NO. EC-4/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 PAVEMENT REMOVAL			



-L-

PI Sta. 17+47.77
 $\Delta = 29^\circ 49' 20.0''$ (LT)
 $D = 4' 16'' 32.9''$
 $L = 697.46'$
 $T = 356.82'$
 $R = 1,340.00'$



*2
7 TONS CL 'B' RIP-RAP
w/ 26.5 SY. GEOTEXTILE

(2)

MATCHLINE -L- STA. 22+50 SEE SHEET 5

14-MAY-2012 13:04
 R:\Environmental\Design\B4257-EC_psh04.dgn
 ncbn AT R:\ENV\255346

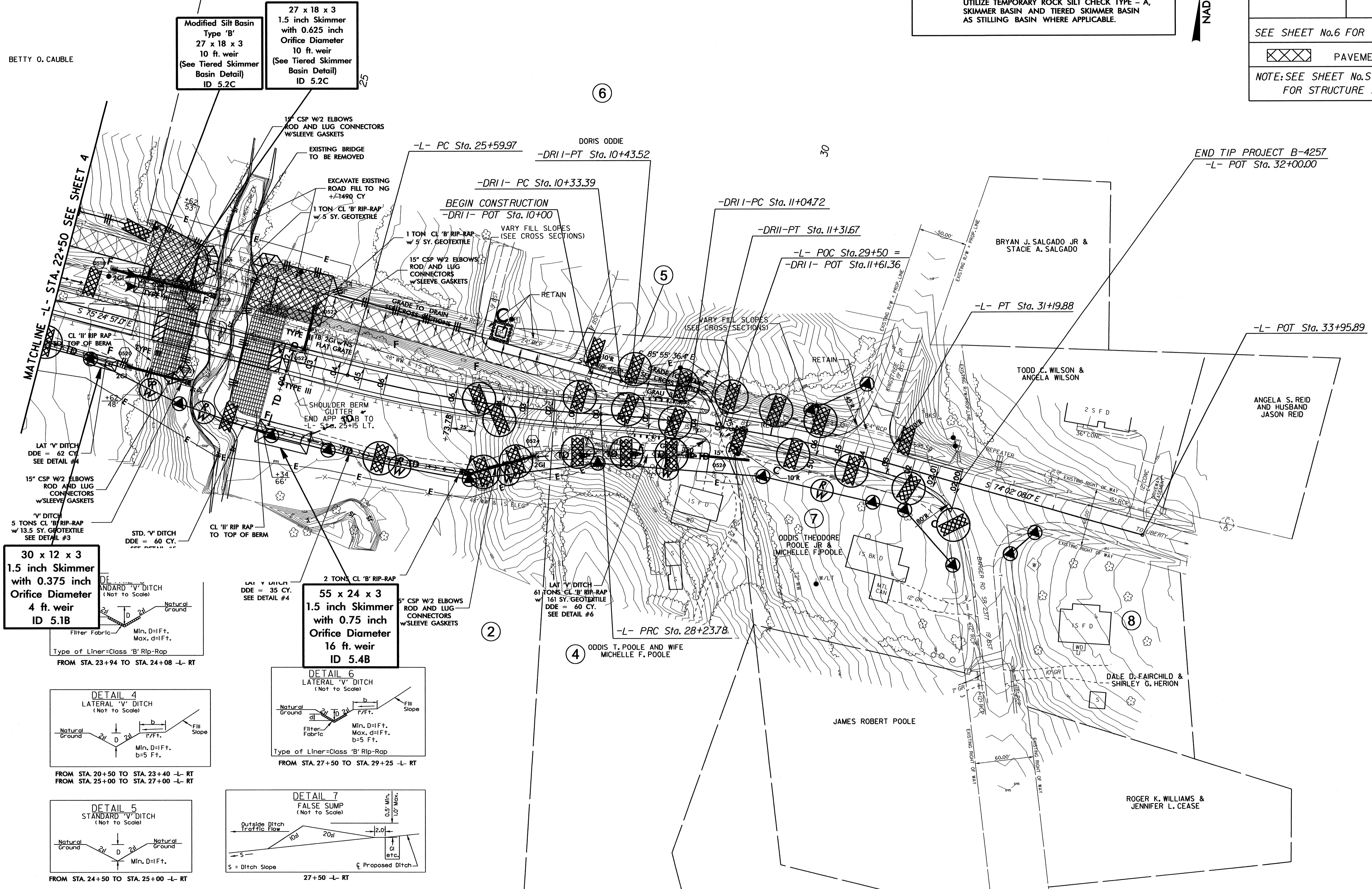
PROJECT REFERENCE NO. B-4257	SHEET NO. EC-5/CONST.5
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
SEE SHEET No.6 FOR -L- PROFILE.	
PAVEMENT REMOVAL	
NOTE: SEE SHEET No.S-1 thru S- FOR STRUCTURE DESIGN.	

**CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5**

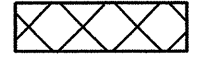
- NOTE:**
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.
- NOTE:**
UTILIZE TEMPORARY ROCK SILT CHECK TYPE - A, SKIMMER BASIN AND TIERED SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

NAD 83 / 95

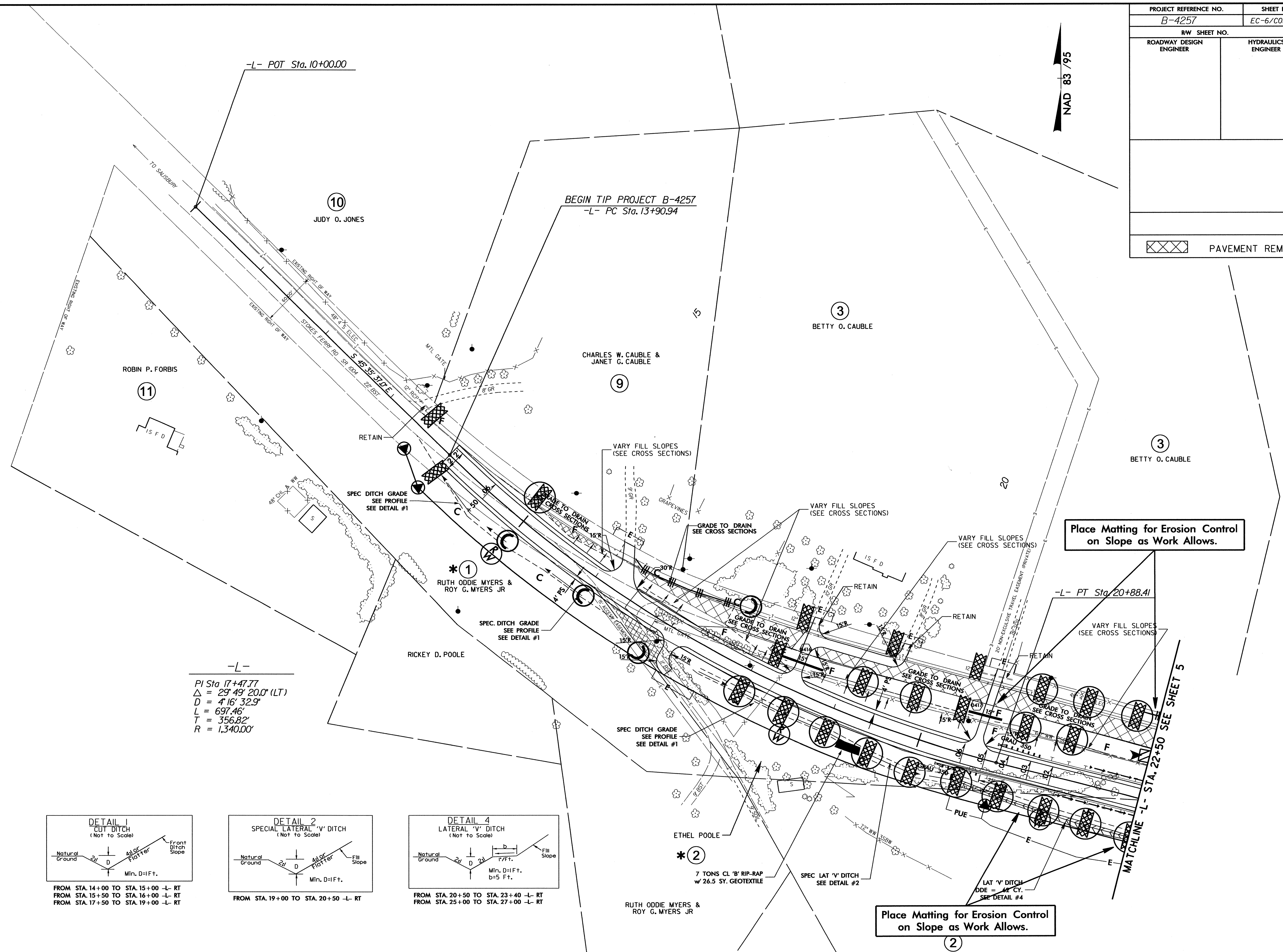
-L-		-DRI I-	
PI Sta 26+92.30 Δ = 11' 16" 49.0" (LT) D = 4' 16" 32.9" L = 263.82' T = 132.34' R = 1,340.00'	PI Sta 29+72.44 Δ = 12' 39" 38.0" (RT) D = 4' 16" 32.9" L = 296.10' T = 148.65' R = 1,340.00'	PI Sta 10+38.47 Δ = 11' 36" 50.6" (LT) D = 11' 35" 29.6" L = 10.14' T = 5.09' R = 50.00'	PI Sta 11+19.67 Δ = 6' 45" 00.6" (RT) D = 229' 10" 59.2" L = 26.94' T = 14.95' R = 25.00'



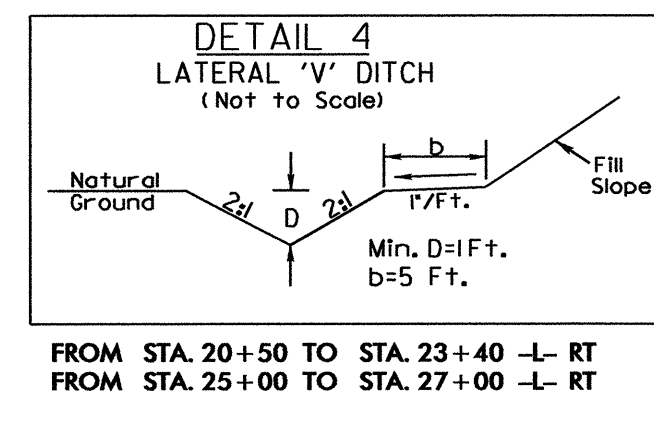
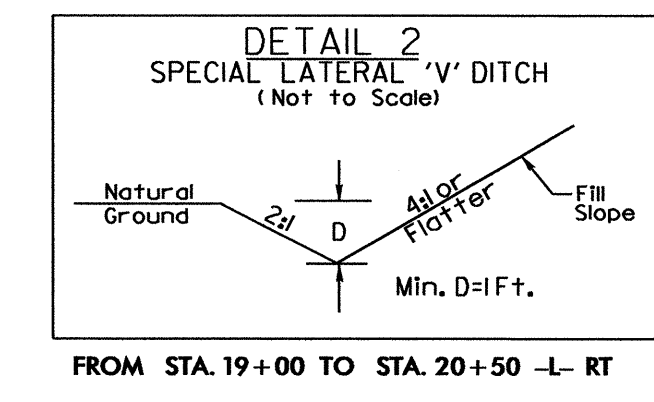
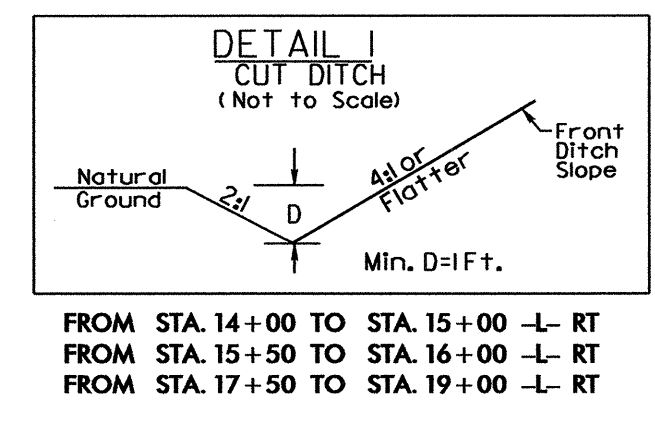
8/17/99
14-MAY-2012 13:07
R:\Environmental\Design\B4257-EC_psh05.dgn
Checked AT: HENRY258146

PROJECT REFERENCE NO. B-4257		SHEET NO. EC-6/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 PAVEMENT REMOVAL			

NAD 83 / 95



-L-
 PI Sta. 17+47.77
 $\Delta = 29^{\circ} 49' 20.0''$ (LT)
 $D = 4' 16'' 32.9''$
 $L = 697.46'$
 $T = 356.82'$
 $R = 1,340.00'$



Place Matting for Erosion Control on Slope as Work Allows.

8/17/99
 14-MAY-2012 13:04
 R:\Environment\B4257-EC.psh04.dgn
 AT: RENV25545

PROJECT REFERENCE NO. B-4257		SHEET NO. EC-7/CONST.5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
SEE SHEET No.6 FOR -L- PROFILE.			
PAVEMENT REMOVAL			
NOTE: SEE SHEET No.S-1 thru S- FOR STRUCTURE DESIGN.			

NAD 83 / 95

NOTE:
UTILIZE TEMPORARY ROCK SILT CHECK TYPE - A, SKIMMER BASIN AND TIERED SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

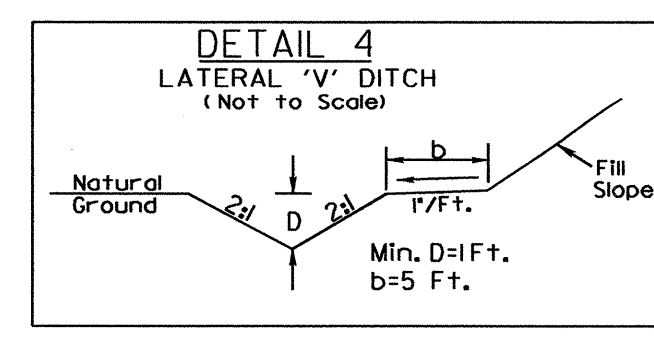
51 x 13 x 3
ID 5.3F

34 x 15 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
7 ft. weir
ID 5.5F

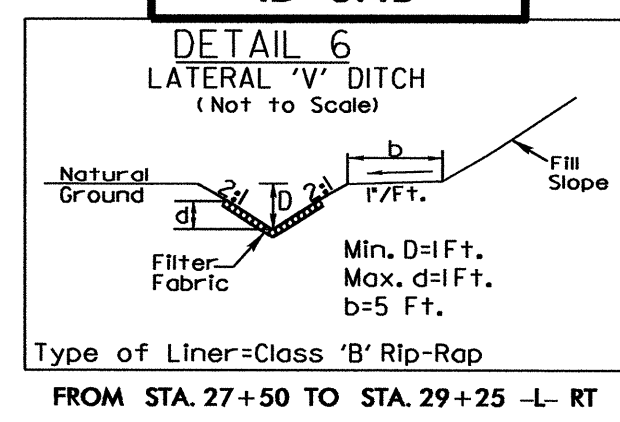
30 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 5.1B

Place Matting for Erosion Control
on Slope as Work Allows.

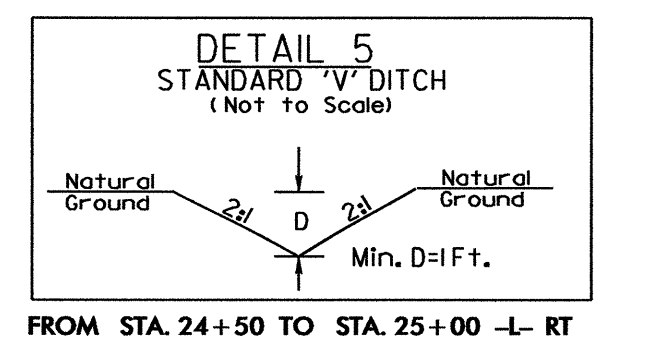
55 x 24 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
16 ft. weir
ID 5.4B



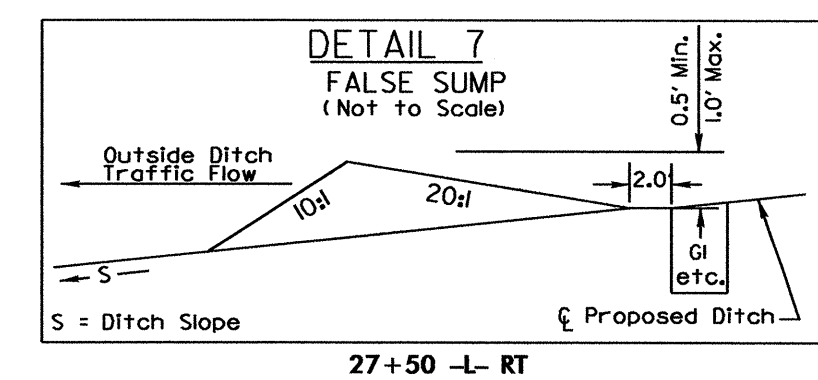
FROM STA. 20+50 TO STA. 23+40 -L- RT
FROM STA. 25+00 TO STA. 27+00 -L- RT



FROM STA. 27+50 TO STA. 29+25 -L- RT



FROM STA. 24+50 TO STA. 25+00 -L- RT



27+50 -L- RT

-L-
PI Sta 26+92.30
 $\Delta = 11' 16' 49.0''$ (LT)
 $D = 4' 16' 32.9''$
 $L = 263.82'$
 $T = 132.34'$
 $R = 1,340.00'$

PI Sta 29+72.44
 $\Delta = 12' 39' 38.0''$ (RT)
 $D = 4' 16' 32.9''$
 $L = 296.10'$
 $T = 148.65'$
 $R = 1,340.00'$

-DRI I-
PI Sta 10+38.47
 $\Delta = 11' 36' 50.6''$ (LT)
 $D = 11' 35' 29.6''$
 $L = 10.4'$
 $T = 5.09'$
 $R = 50.00'$

PI Sta 11+19.67
 $\Delta = 6' 45' 00.6''$ (RT)
 $D = 22' 16' 59.2''$
 $L = 26.94'$
 $T = 14.95'$
 $R = 25.00'$

8/17/99
14-MAY-2002 13:08
R:\Environmental\Bogor\B4257-EC.psh05.dgn
11/2/2005

