

**TIP PROJECT: B-4810**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

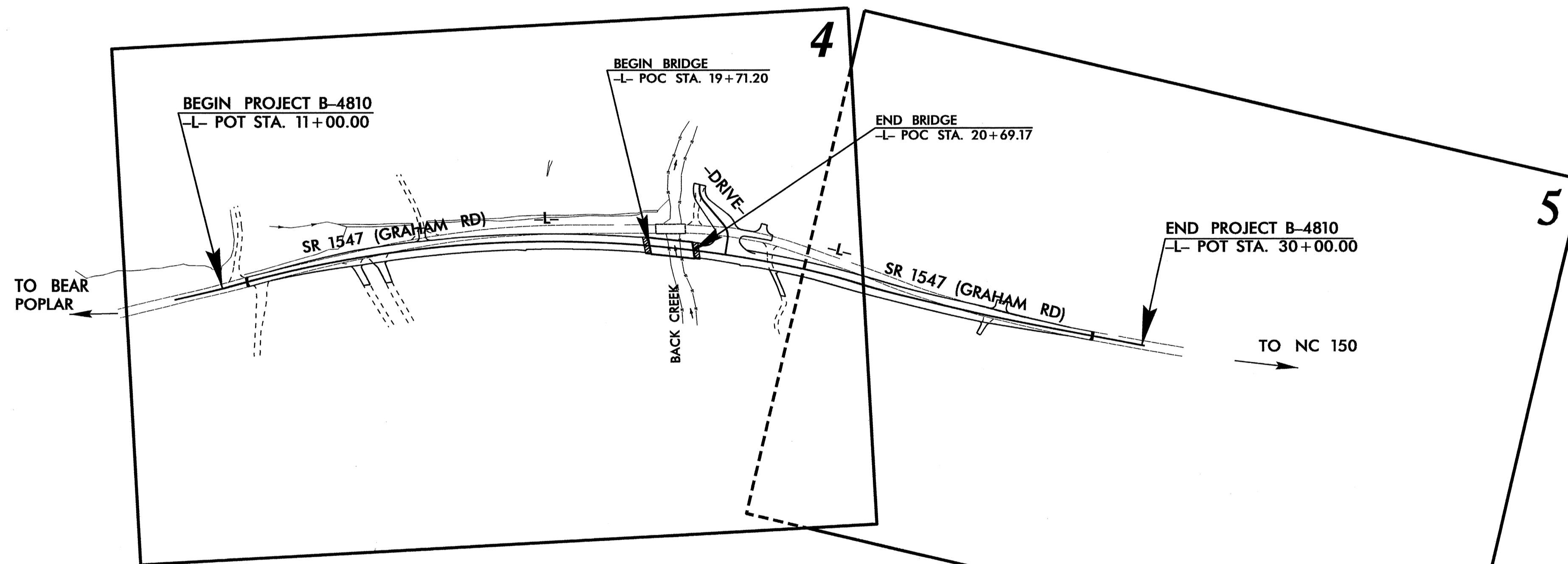
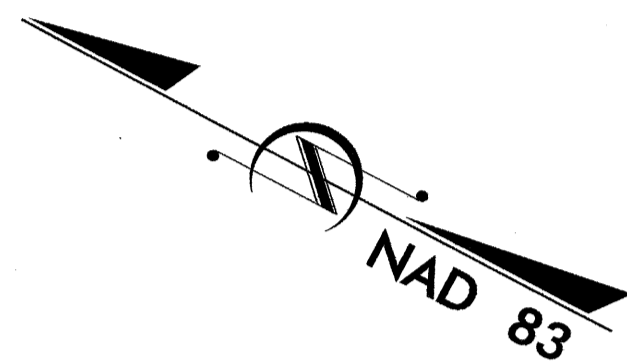
---

PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

---

**ROWAN COUNTY**

**LOCATION: BRIDGE NO. 12 OVER BACK CREEK ON SR 1547**  
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4810	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

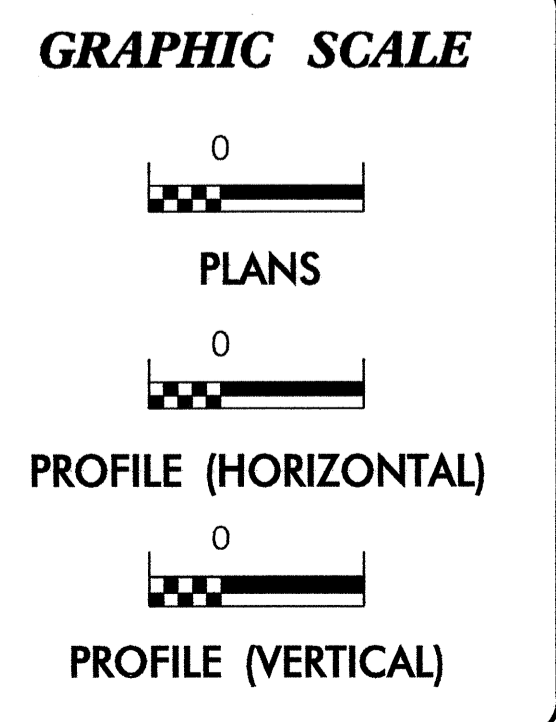
Std. #	Description	Symbol
1630.05	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SSCF
1622.01	Temporary Berms and Slope Drains	TBSD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	TRSCA
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	TRSCA-PAM
1633.02	Temporary Rock Silt Check Type-B	TRSCB
	Wattle / Coir Fiber Wattle	WCFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	WCFW-PAM
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDB
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.**

**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.

**HIGH QUALITY WATER(S) EXIST ON THIS PROJECT**  
High Quality Water Zone(s) Exist From Sta. Beginning to Sta. End Refer To E. C. Special Provisions for Special Considerations.



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

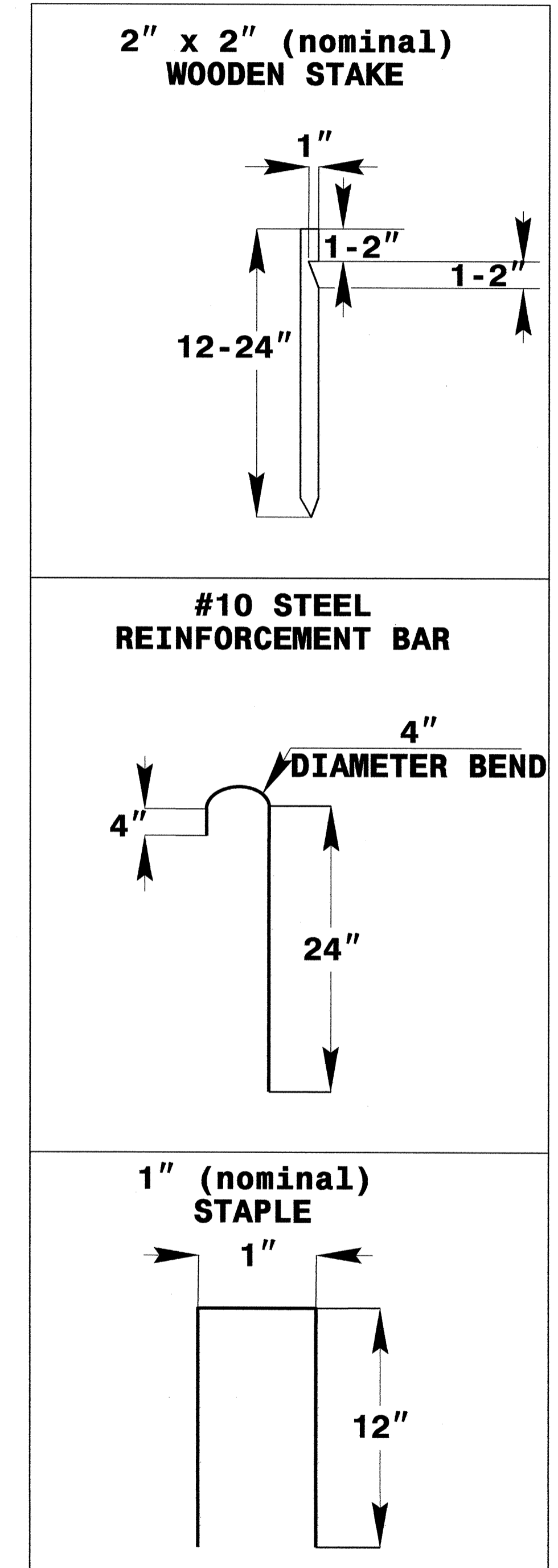
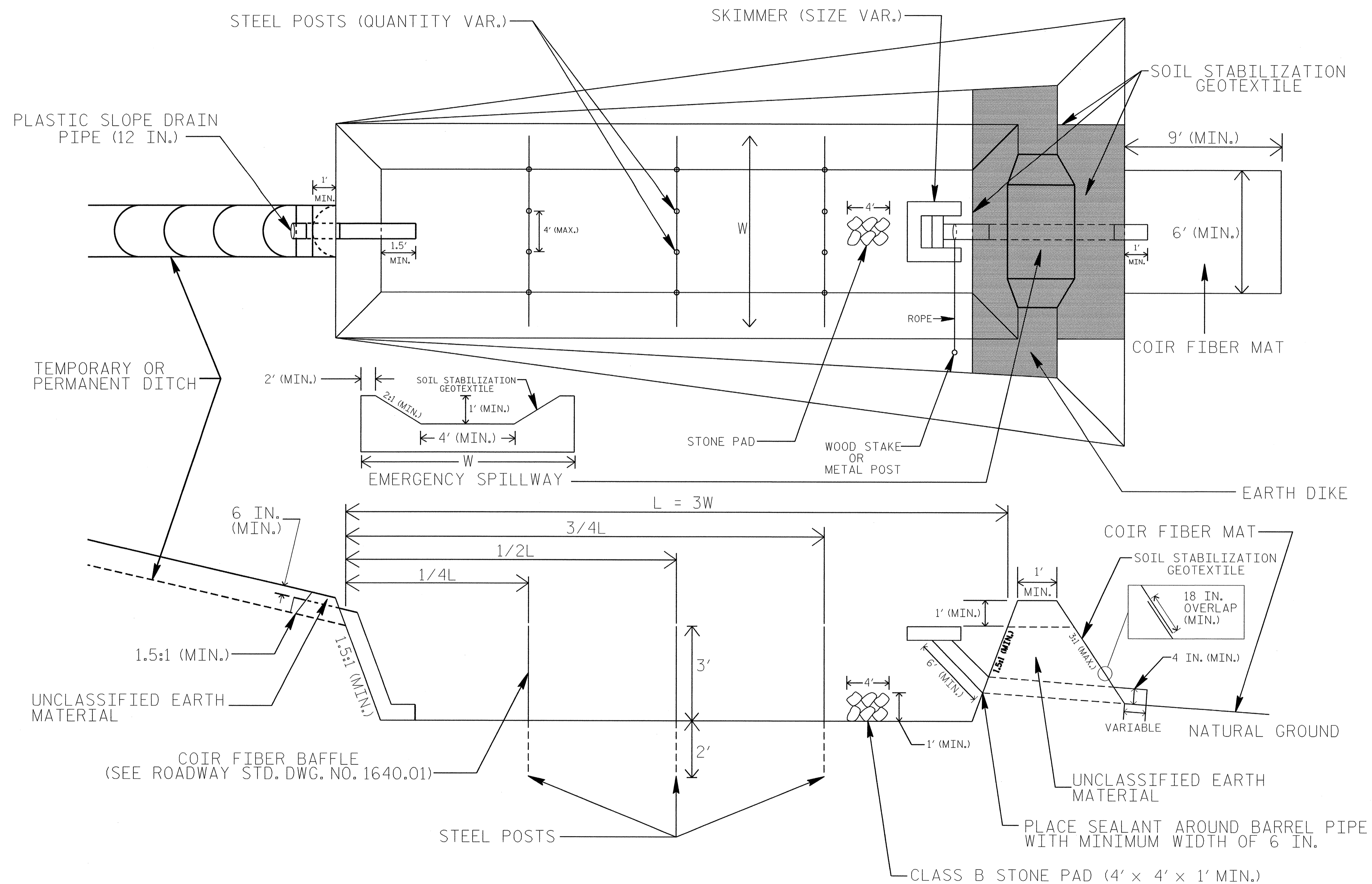
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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	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	

06-SEP-2010 15:44 R:\Environment\B4810\B4810\_EC\_tsh.dgn nchan AT PREN288448

PROJECT REFERENCE NO. B-4810	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SKIMMER BASIN WITH BAFFLES DETAIL



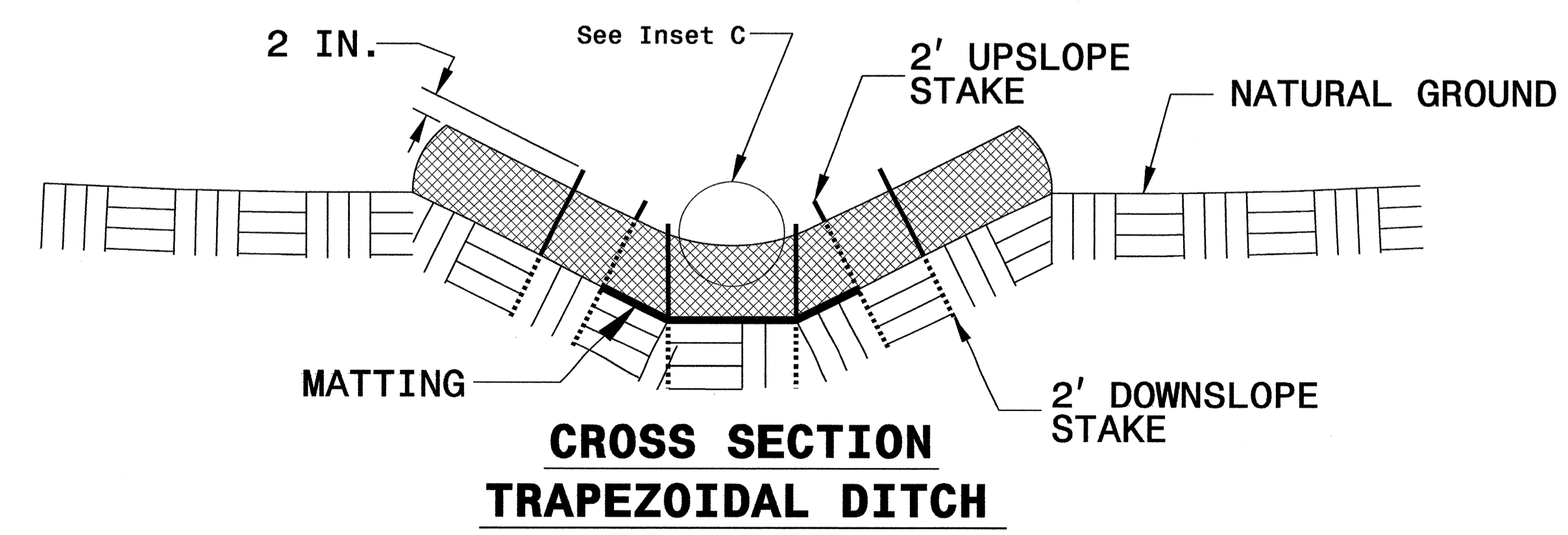
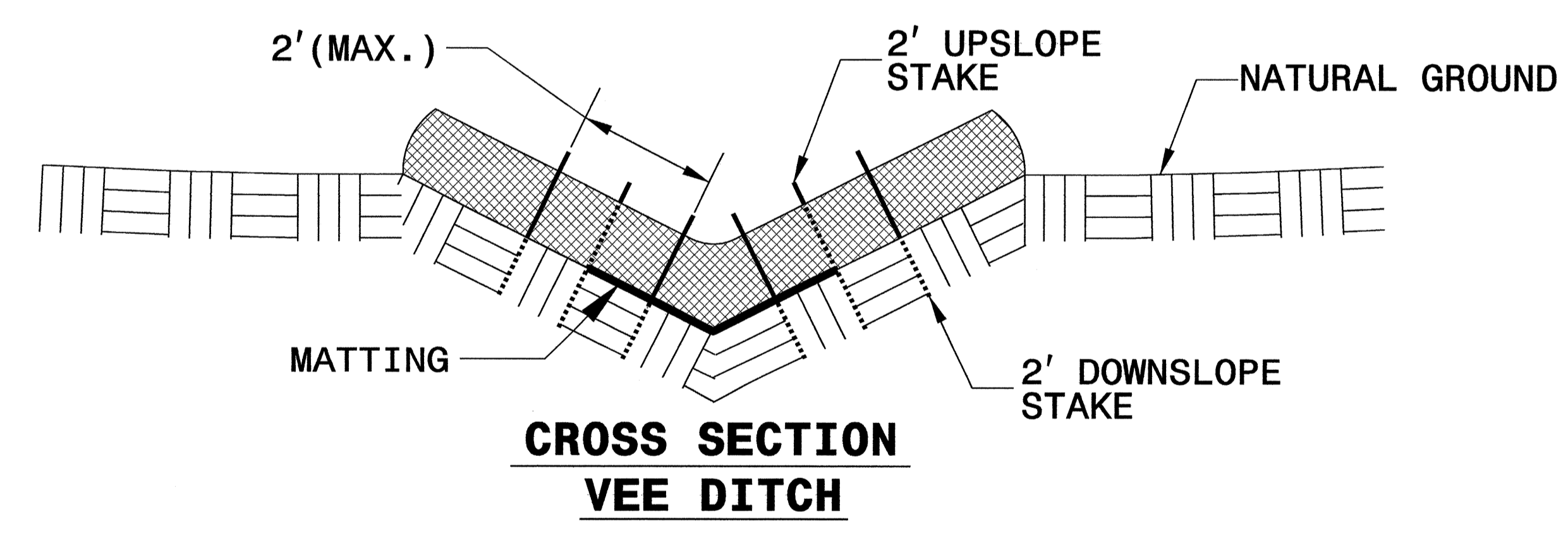
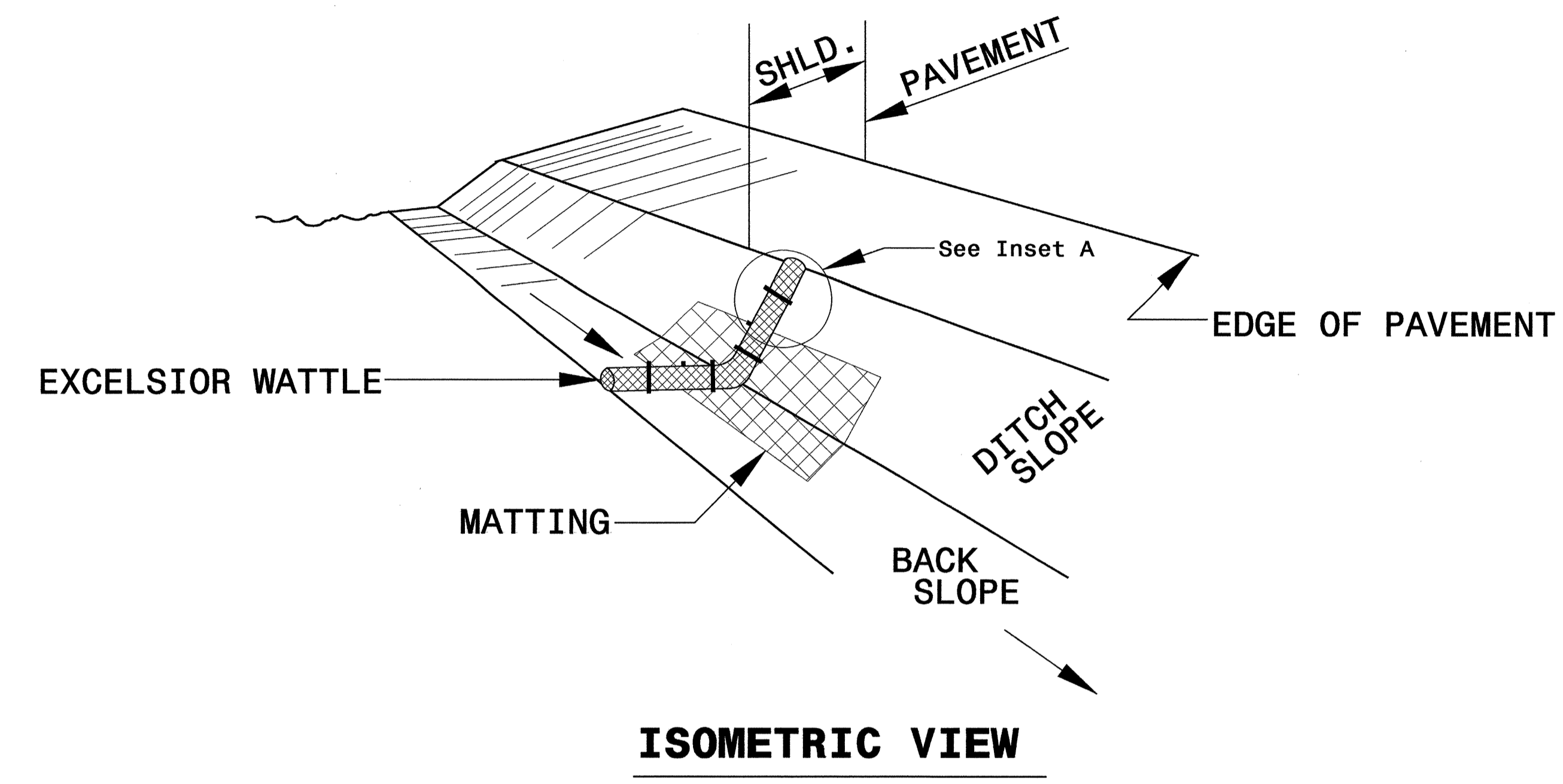
## NOTES

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 EMERGENCY 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 EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

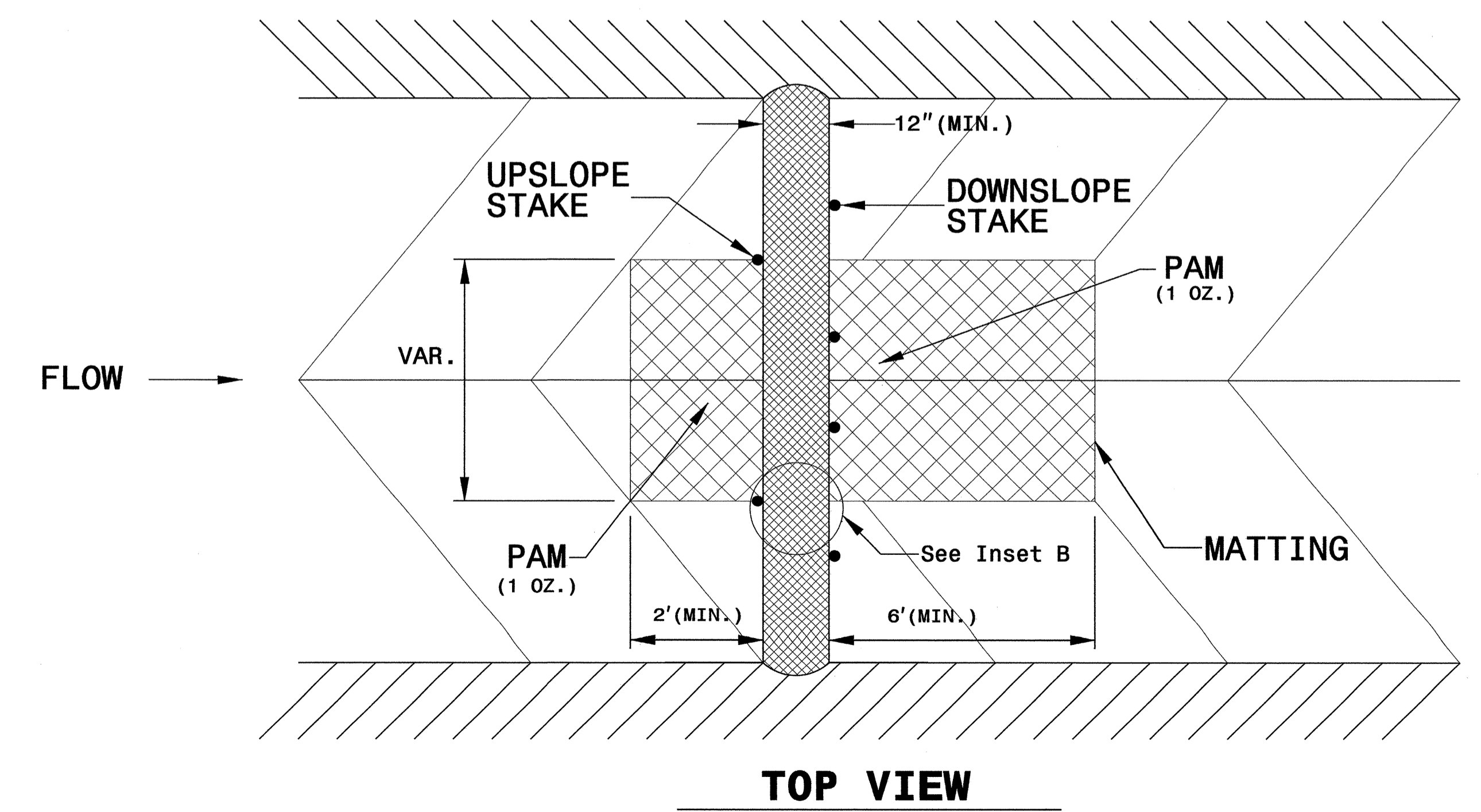
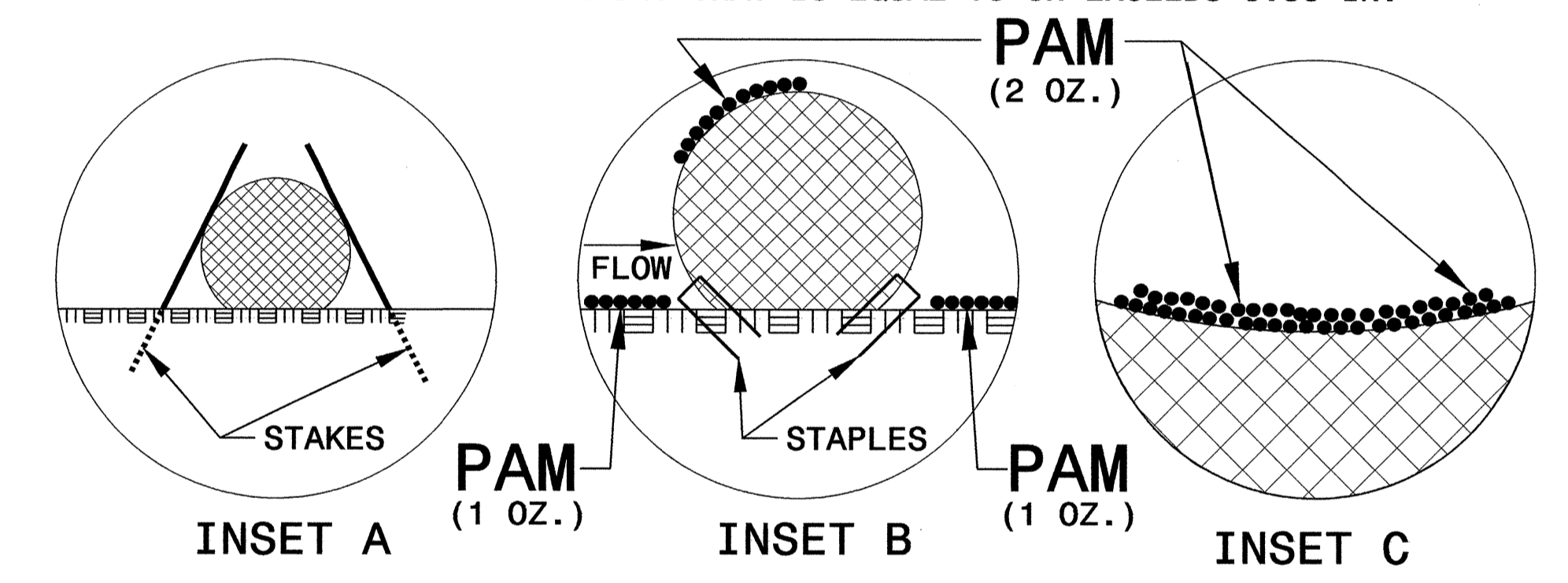
NOT TO SCALE

PROJECT REFERENCE NO. B-4810	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

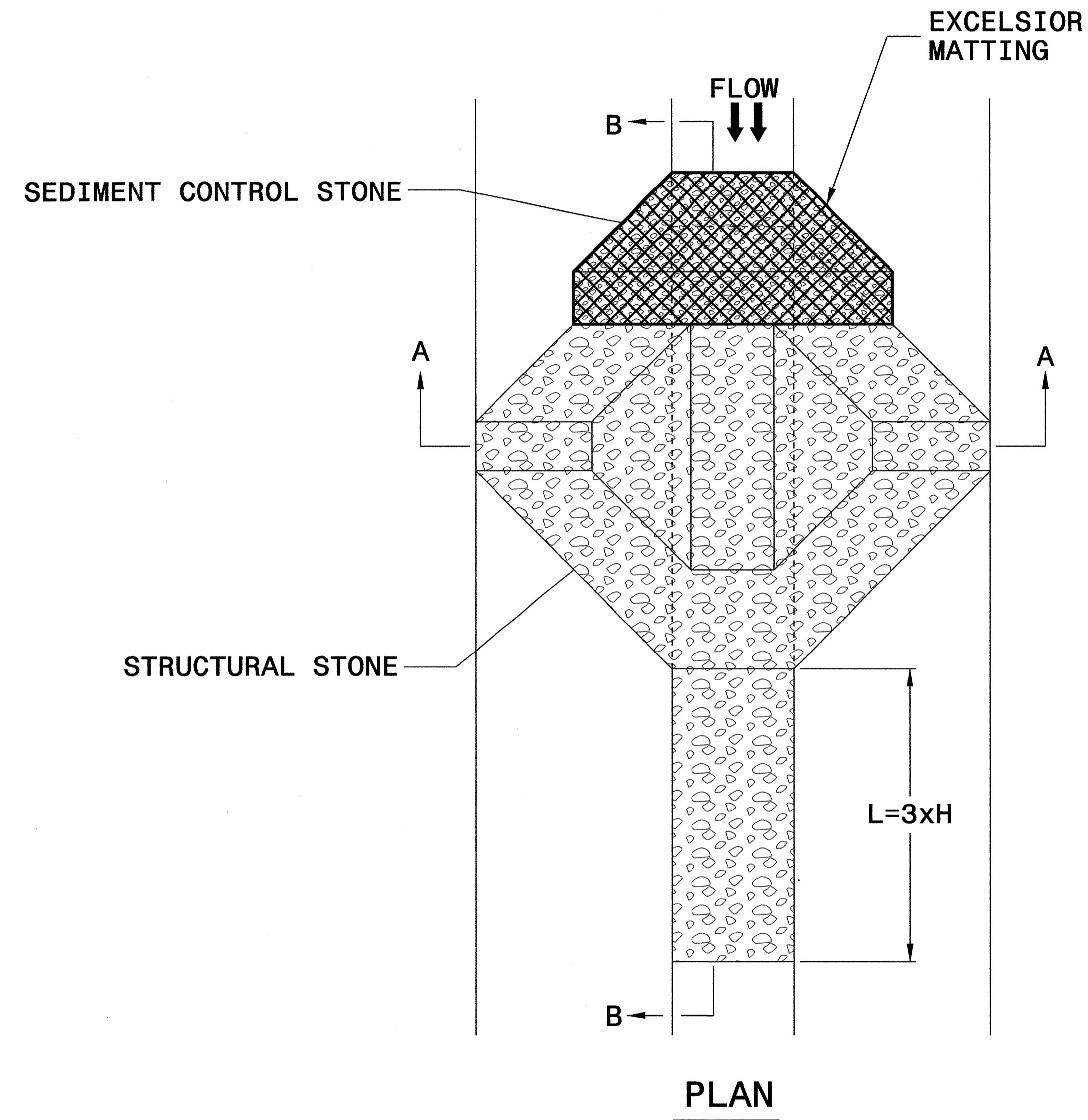


- NOTES:
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
  - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
  - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
  - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 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 EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



PROJECT REFERENCE NO. B-4810	SHEET NO. EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

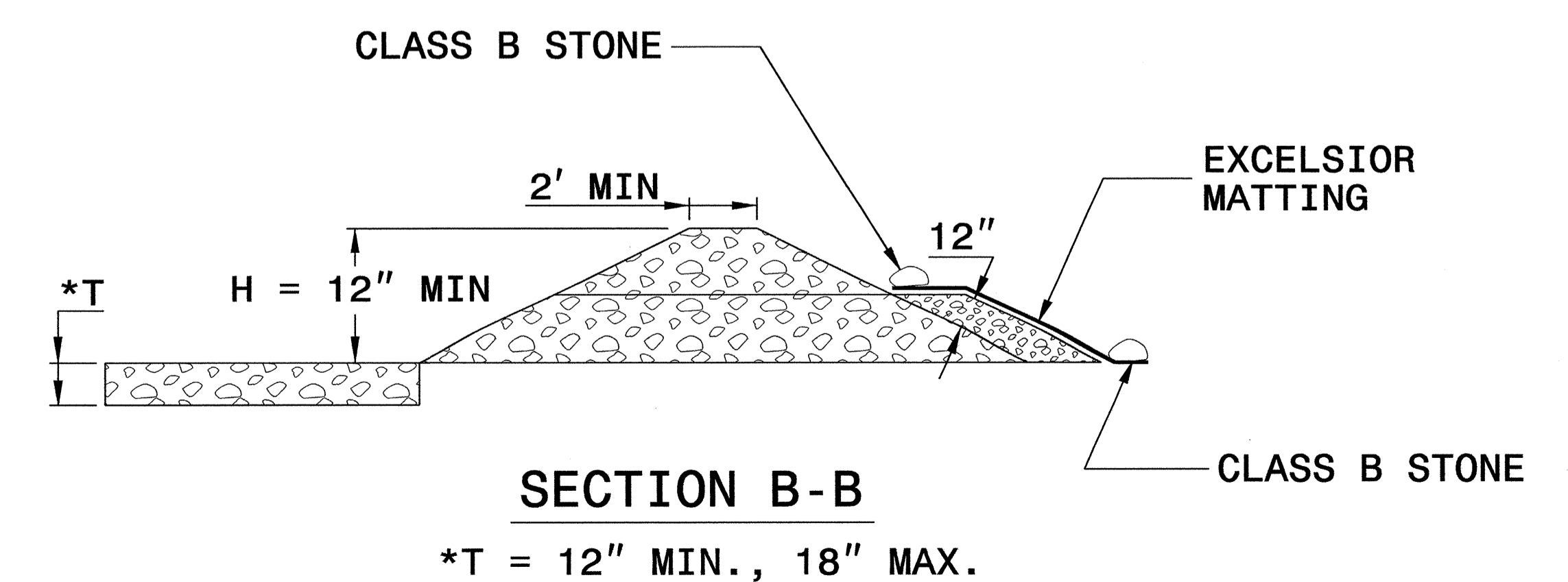
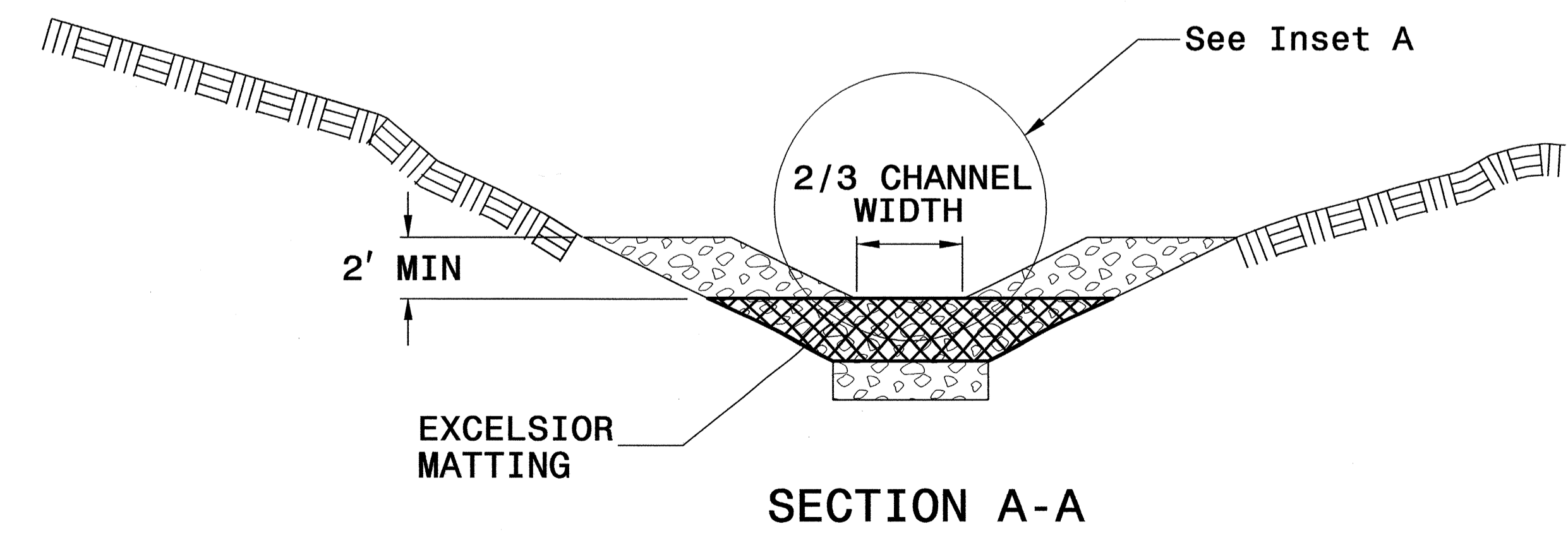
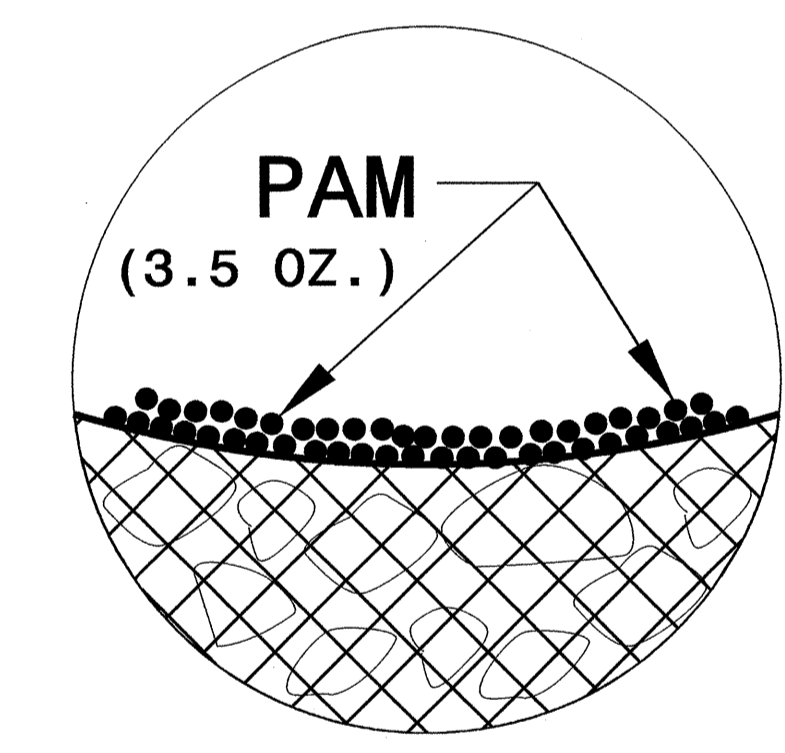


## NOTES

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.



NOT TO SCALE



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

---



---

PROJECT REFERENCE NO. <i>B-4810</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# ***SOIL STABILIZATION TIMEFRAMES***

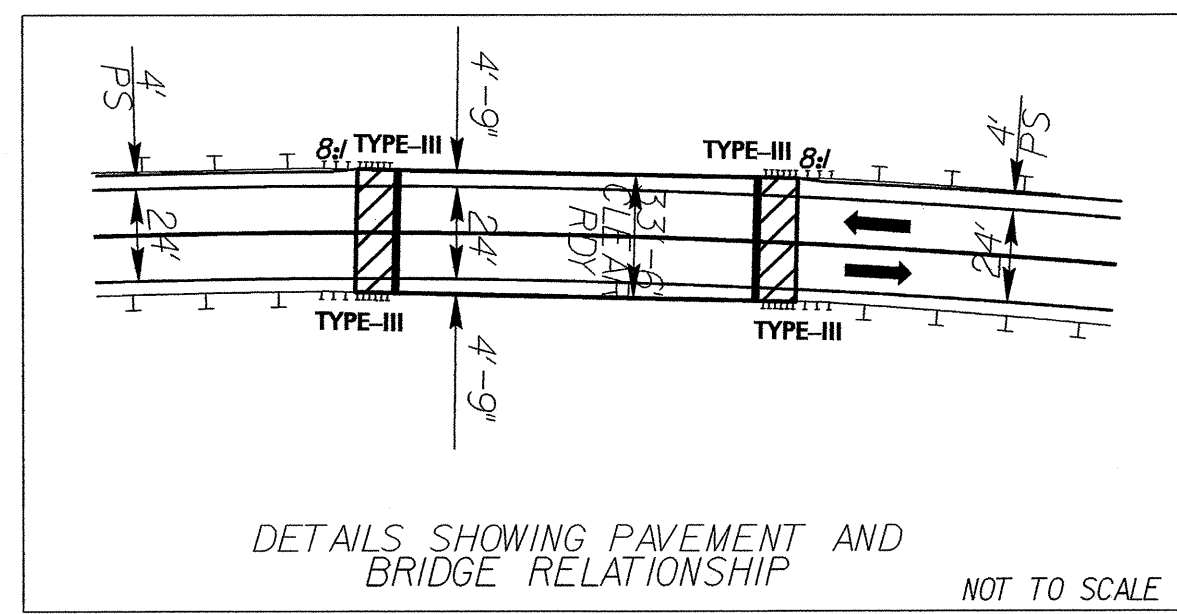
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 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.

8/17/99

PROJECT REFERENCE NO. <b>B-4810</b>	SHEET NO. EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4



**-L-**  
 PI Sta 18+27.35  
 $\Delta = 28' 52'' 19.7''$  (RT)  
 $D = 2' 27'' 32.6''$   
 $L = 1,741.2'$   
 $T = 599.8'$   
 $R = 2,330.00'$   
 $SE = 04$

**-DRIVE-**  
 PI Sta 10+19.50  
 $\Delta = 53' 07'' 36.0''$  (LT)  
 $D = 146' 54'' 44.1''$   
 $L = 36.16'$   
 $T = 19.50'$   
 $R = 39.00'$

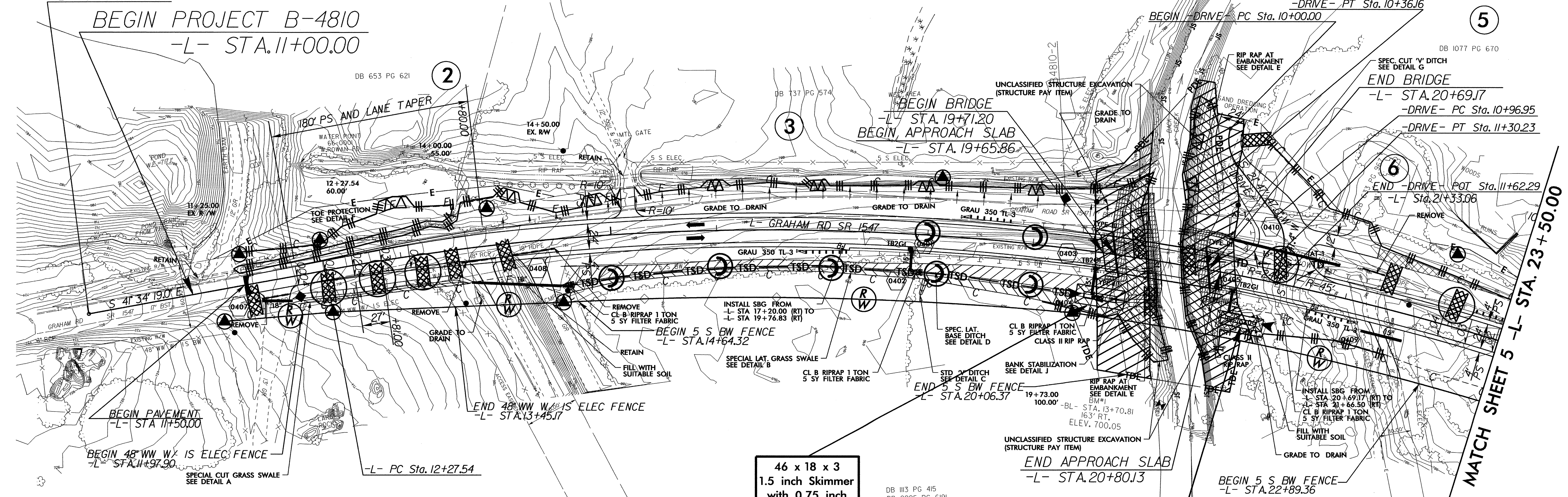
PI Sta 11+14.68  
 $\Delta = 48' 53'' 54.4''$  (RT)  
 $D = 146' 54'' 44.1''$   
 $L = 33.28'$   
 $T = 17.73'$   
 $R = 39.00'$

DB 737 PG 574

20

-L- POT Sta. 10+00.00  
**BEGIN PROJECT B-4810**  
 -L- STA. 11+00.00

NO DECK DRAIN REQUIRED



DB 653 PG 621

DB 737 PG 574

DB 1077 PG 670

2

3

5

6

BEGIN PAVEMENT -L- STA 11+50.00

BEGIN 48" WW W/ 15 ELEC FENCE -L- STA 11+97.90

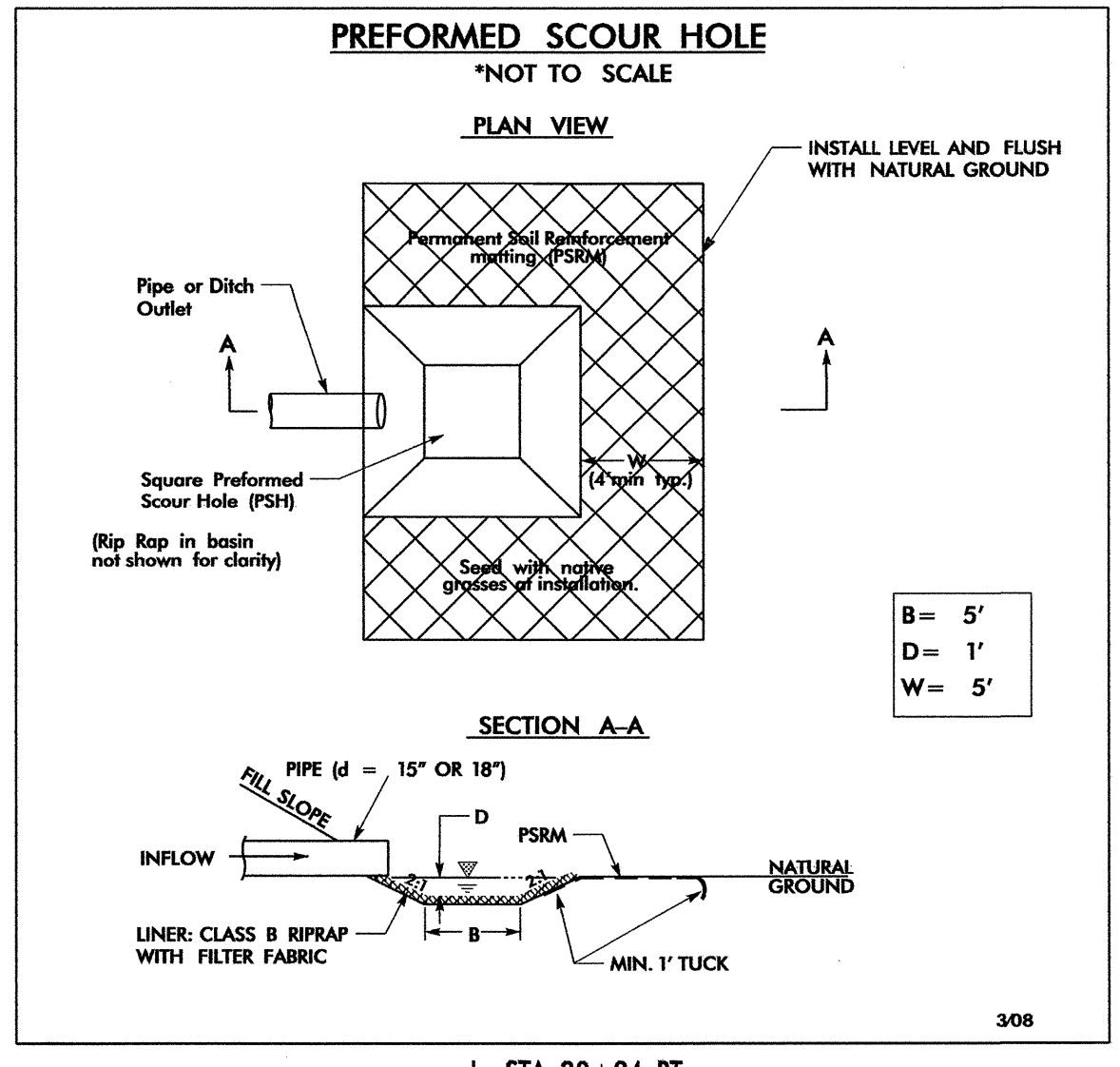
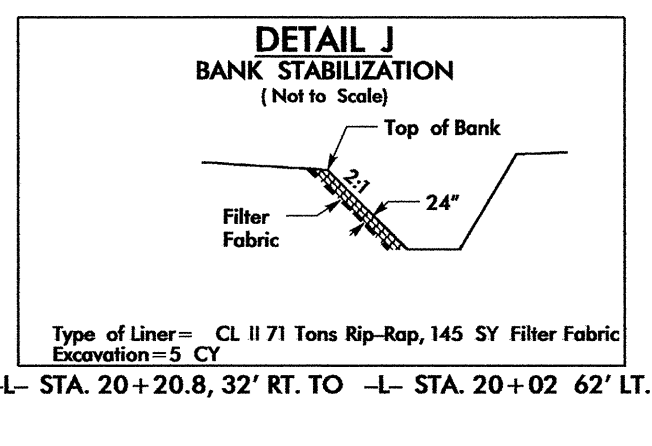
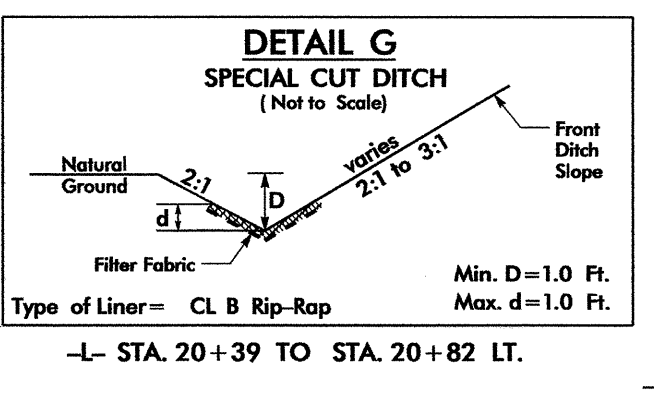
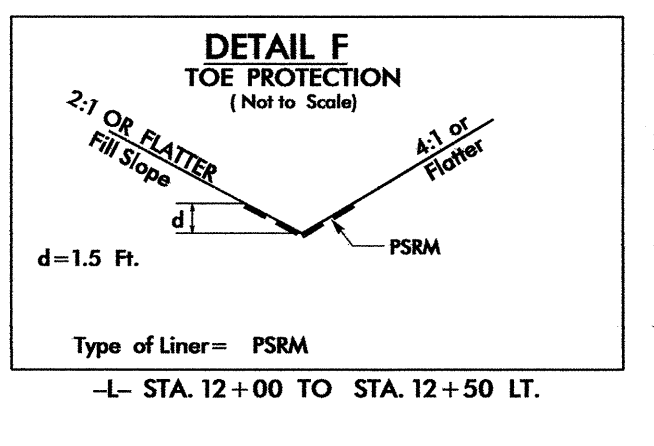
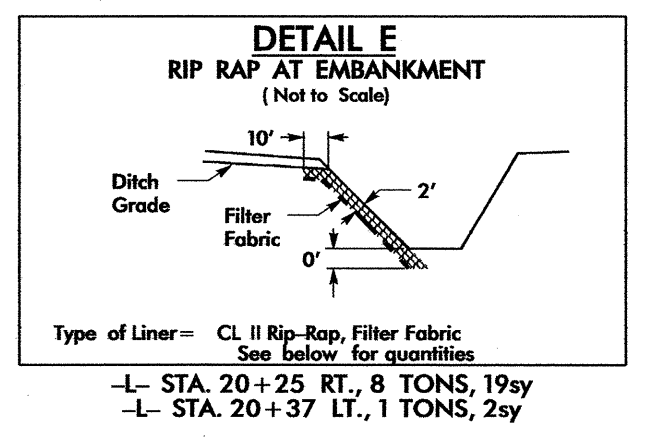
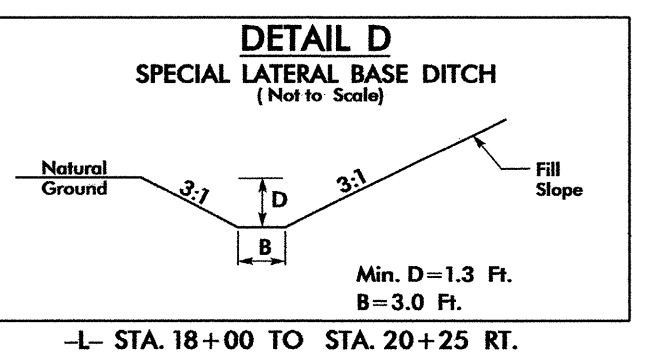
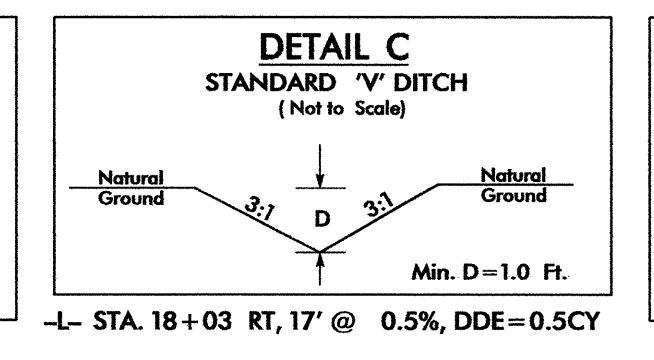
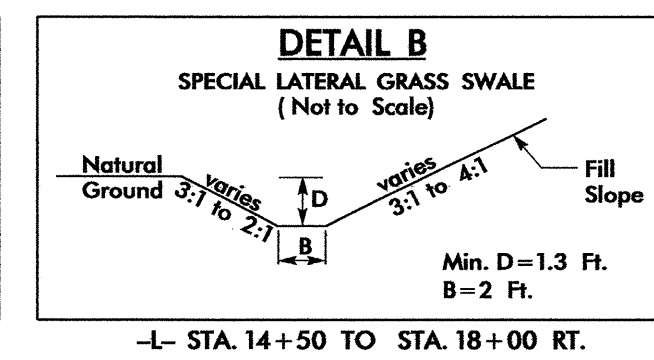
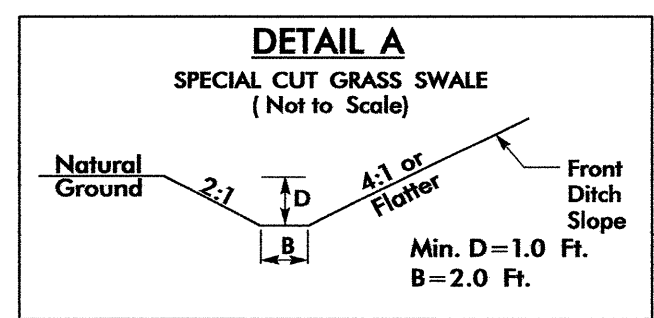
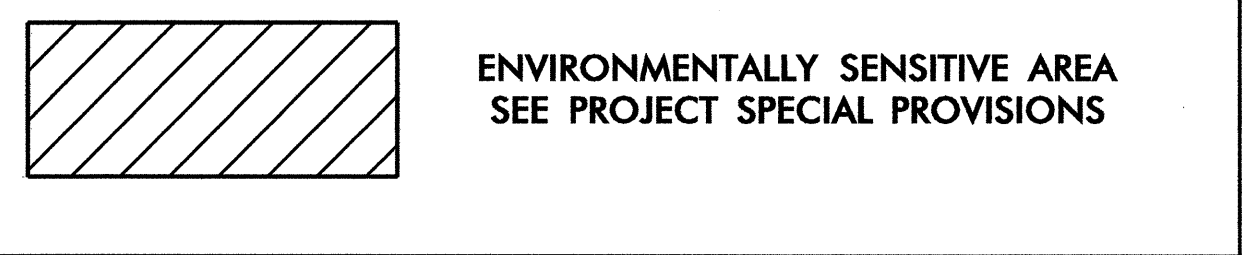
END 48" WW W/ 15 ELEC FENCE -L- STA 13+45.17

-L- PC Sta. 12+27.54

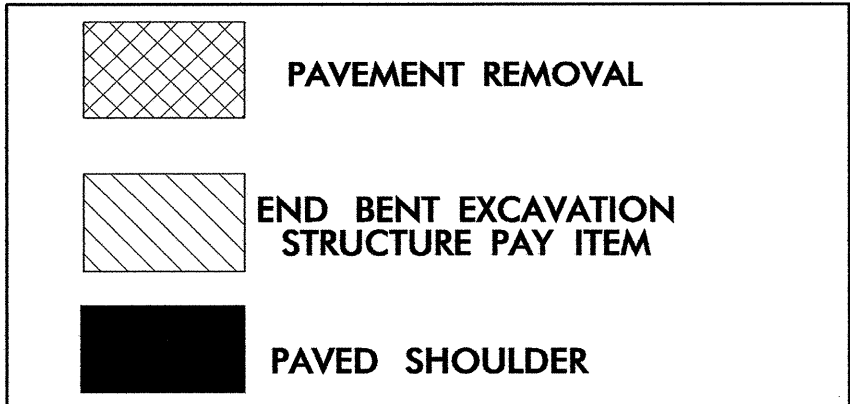
46 x 18 x 3  
 1.5 inch Skimmer  
 with 0.75 inch  
 Orifice Diameter  
 10 ft. weir  
 ID 4.1B

END APPROACH SLAB  
 -L- STA. 20+80.13

BEGIN 5 S BW FENCE -L- STA. 22+89.36



40 x 12 x 3  
 1.5 inch Skimmer  
 with 0.5 inch  
 Orifice Diameter  
 4 ft. weir  
 ID 4.2B



NOTES:  
 SEE SHEET 6 FOR -L- PROFILE  
 SEE SHEET 6 FOR -DRIVE- PROFILE  
 SEE SHEETS S-1 THRU S-20 FOR  
 STRUCTURE PLANS

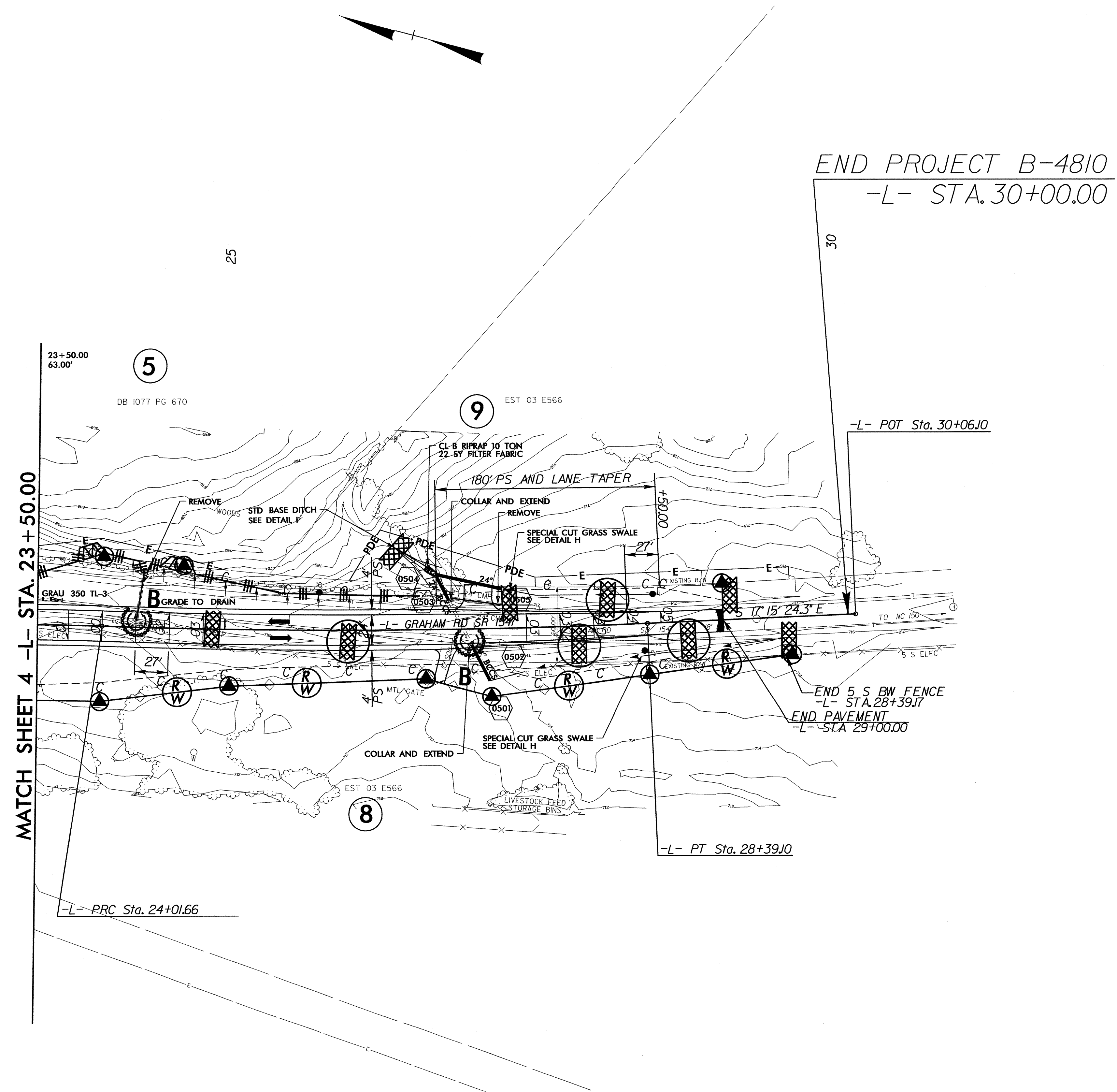
26-SEP-2012 16:48  
 R:\Environmental\Bogdan\B-4810\_EC\_psh\_1\_04.dgn  
 AT: BDN25958

8/17/99

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 5

PROJECT REFERENCE NO. <b>B-4810</b>	SHEET NO. EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



END PROJECT B-4810  
-L- STA. 30+00.00

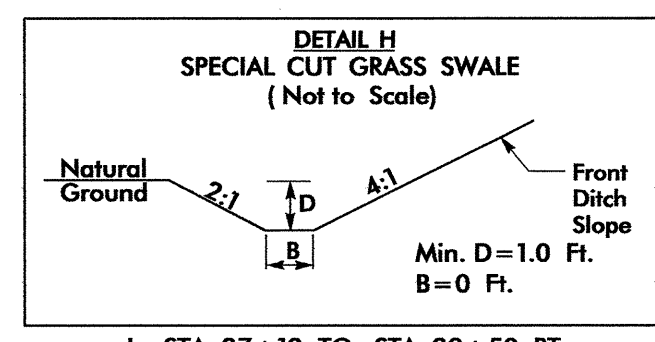
MATCH SHEET 4 -L- STA. 23+50.00

-L- POT Sta. 30+06.10

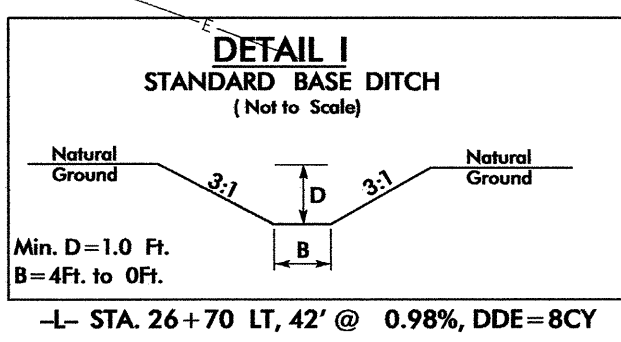
-L- PT Sta. 28+39.10

-L- PRC Sta. 24+01.66

B4810-1E  
BM#2



-L- STA. 27+12 TO STA. 29+50 RT.  
-L- STA. 27+22 TO STA. 28+50 LT.



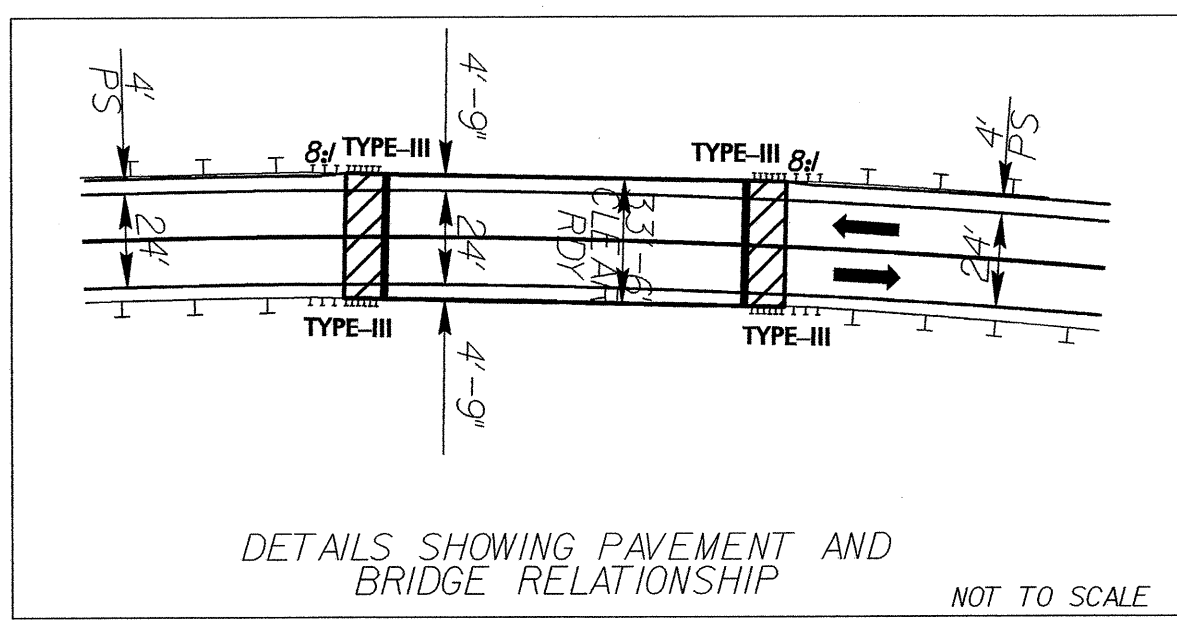
-L- STA. 26+70 LT, 42' @ 0.98%, DDE=8CY

PAVED SHOULDER  
NOTE:  
SEE SHEET 6 FOR PROFILE

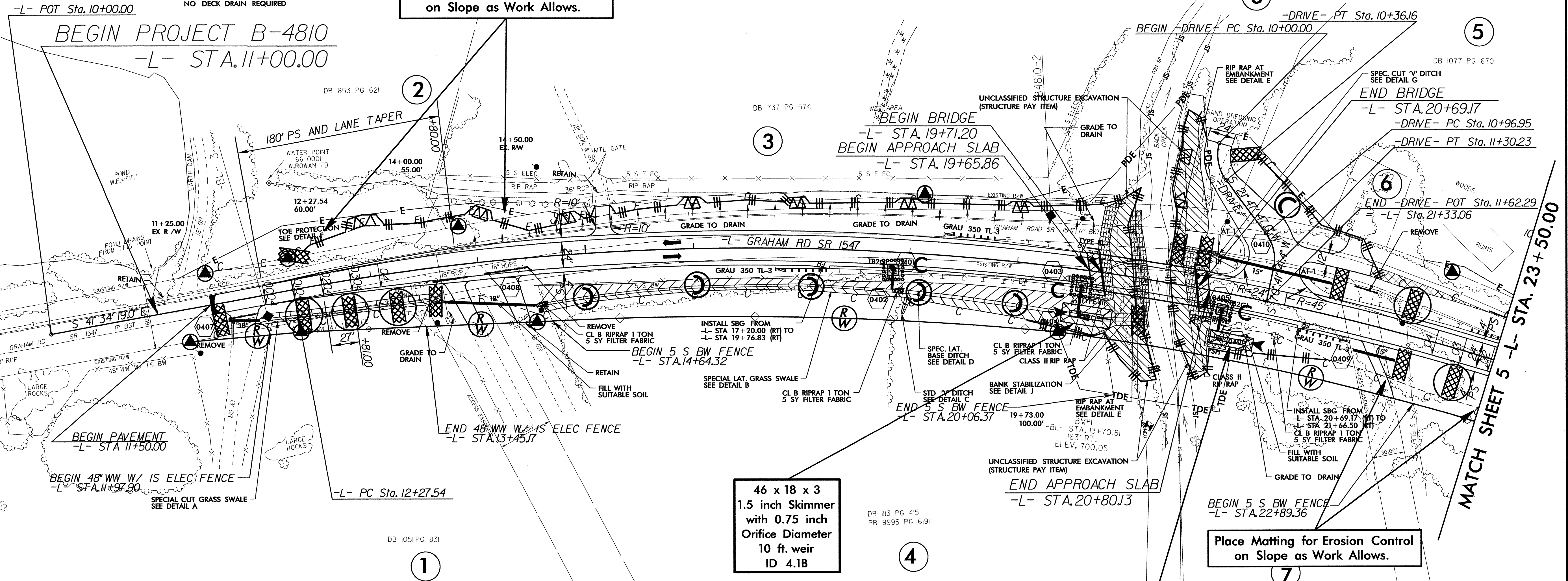
26-SEP-2012 16:50  
R:\Environmental\Design\B4810-EC.psh\_1.05.dgn  
checked BY: BENV26346



PROJECT REFERENCE NO.	SHEET NO.
B-4810	EC-6/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L-	-DRIVE-
PI Sta 18+27.35	PI Sta 10+9.50
$\Delta = 28' 52'' 19.7''$ (RT)	$\Delta = 53' 07'' 36.0''$ (LT)
$D = 2' 27'' 32.6''$	$D = 146' 54'' 44.1''$
$L = 1,774.12'$	$L = 36.16'$
$T = 599.81'$	$T = 19.50'$
$R = 2,330.00'$	$R = 39.00'$
$SE = 04$	

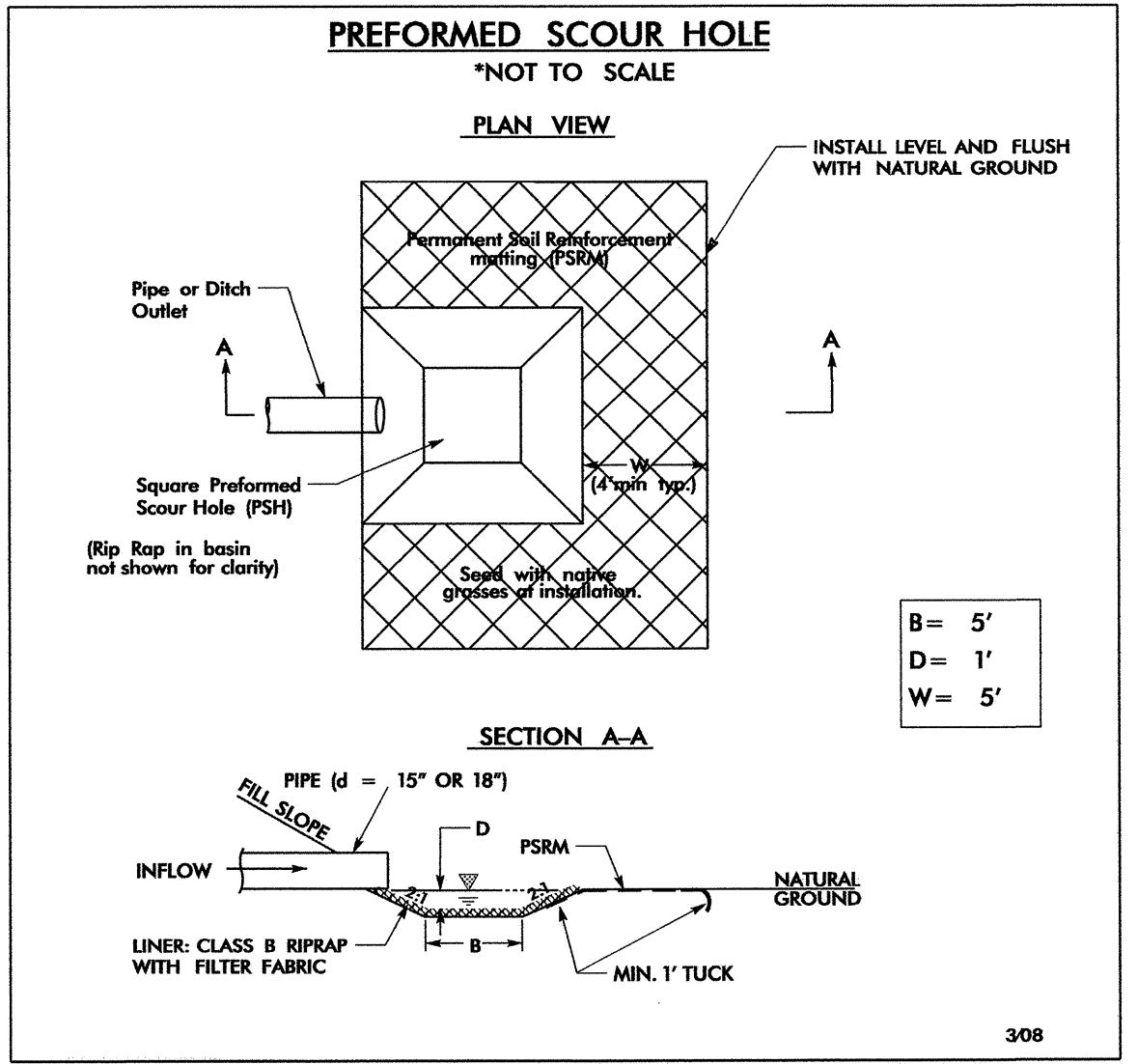
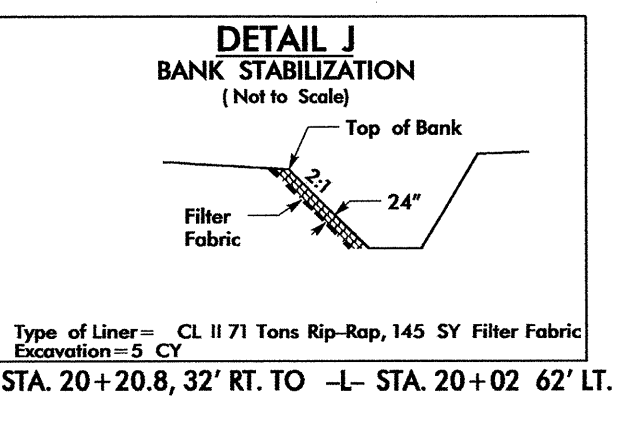
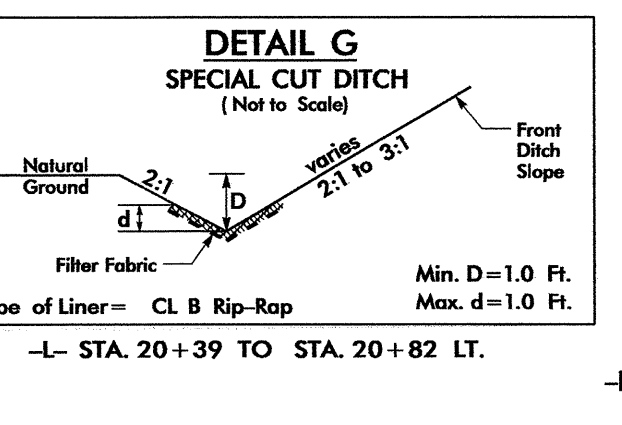
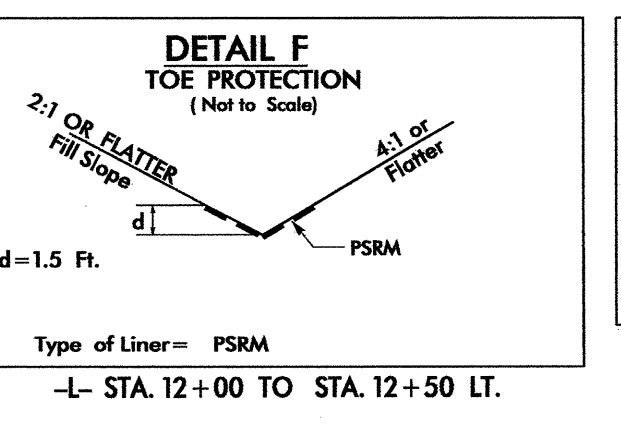
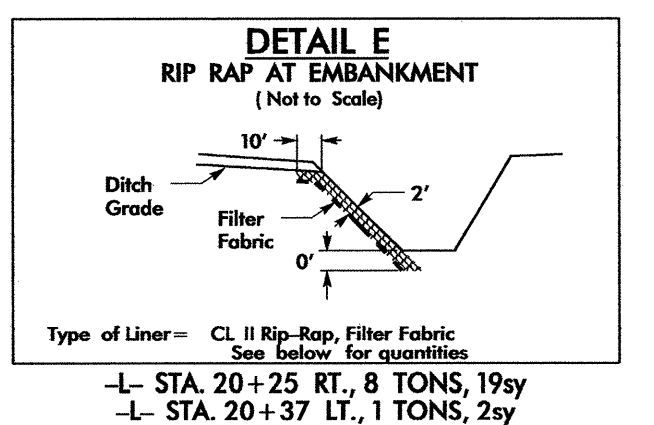
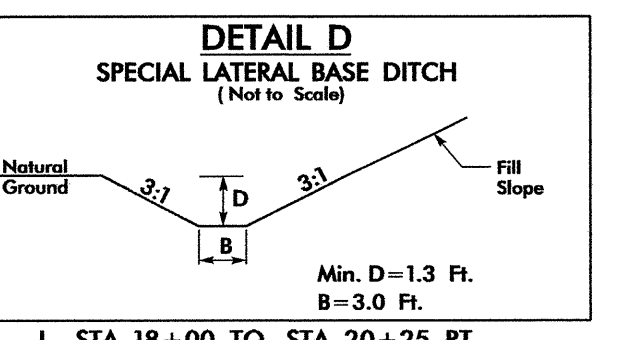
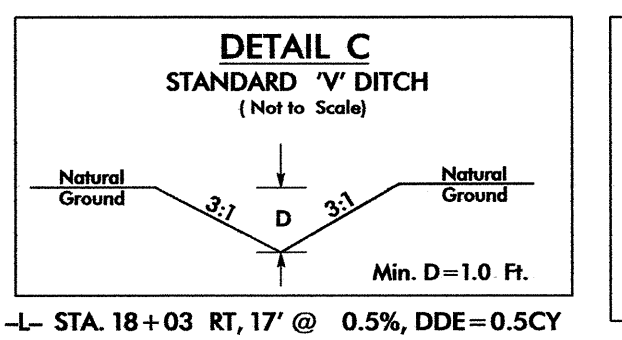
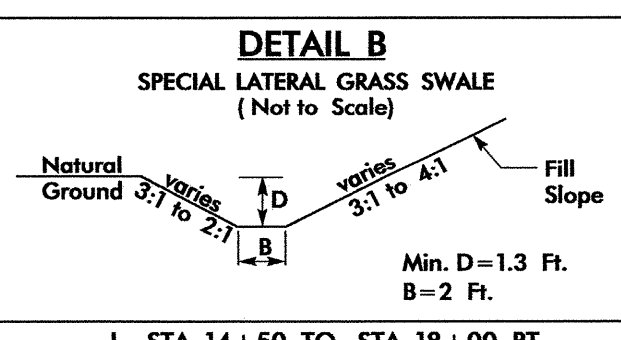
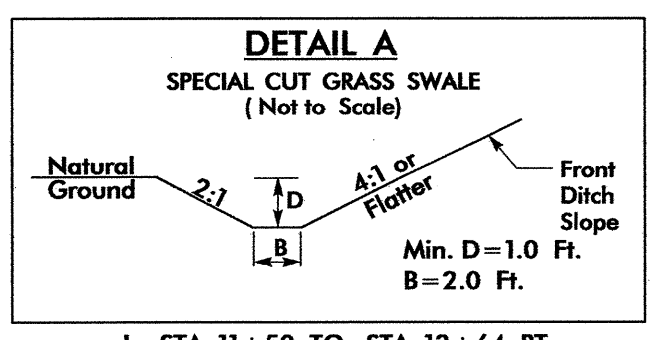


Place Matting for Erosion Control on Slope as Work Allows.

Place Matting for Erosion Control on Slope as Work Allows.

46 x 18 x 3  
1.5 inch Skimmer  
with 0.75 inch  
Orifice Diameter  
10 ft. weir  
ID 4.1B

40 x 12 x 3  
1.5 inch Skimmer  
with 0.5 inch  
Orifice Diameter  
4 ft. weir  
ID 4.2B

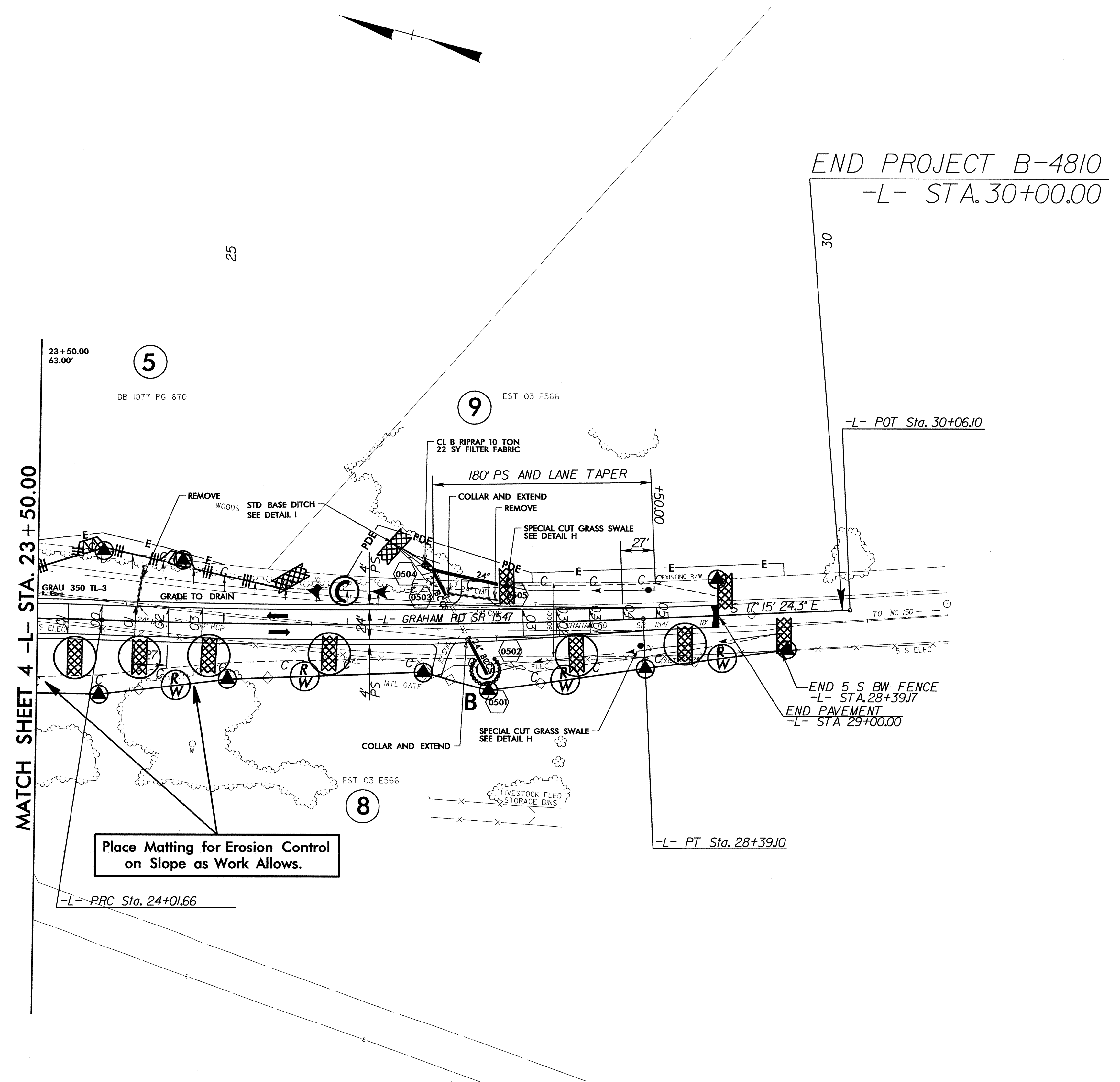


- PAVEMENT REMOVAL
  - END BENT EXCAVATION STRUCTURE PAY ITEM
  - PAVED SHOULDER
- NOTES:  
SEE SHEET 6 FOR -L- PROFILE  
SEE SHEET 6 FOR -DRIVE- PROFILE  
SEE SHEETS S-1 THRU S-20 FOR STRUCTURE PLANS

8/17/99  
26-SEP-2012 16:48  
R:\enviro\mpe\ec\164810-EC.psh\_1.04.dgn

PROJECT REFERENCE NO.	SHEET NO.
B-4810	EC-7/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

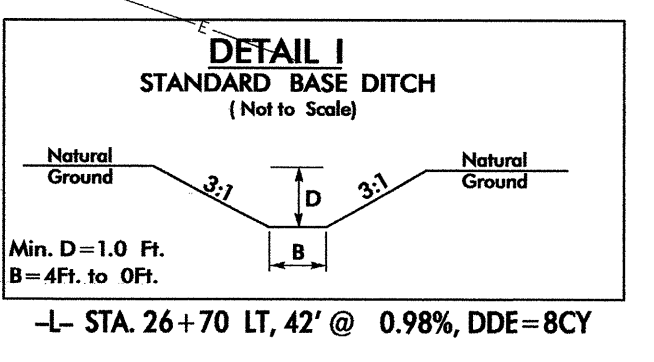
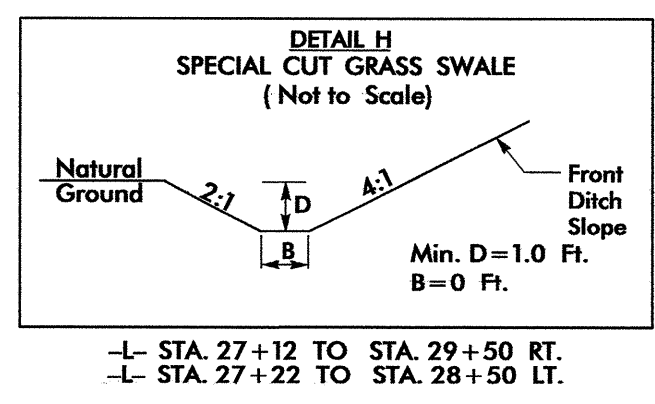
8/17/99  
26-SEP-2012 16:50  
R:\Environment\B4810\Drawings\B4810\_EC.psh\_1.05.dgn  
Author: BT



END PROJECT B-4810  
-L- STA. 30+00.00

MATCH SHEET 4 -L- STA. 23+50.00

Place Matting for Erosion Control on Slope as Work Allows.



PAVED SHOULDER

NOTE:  
SEE SHEET 6 FOR PROFILE