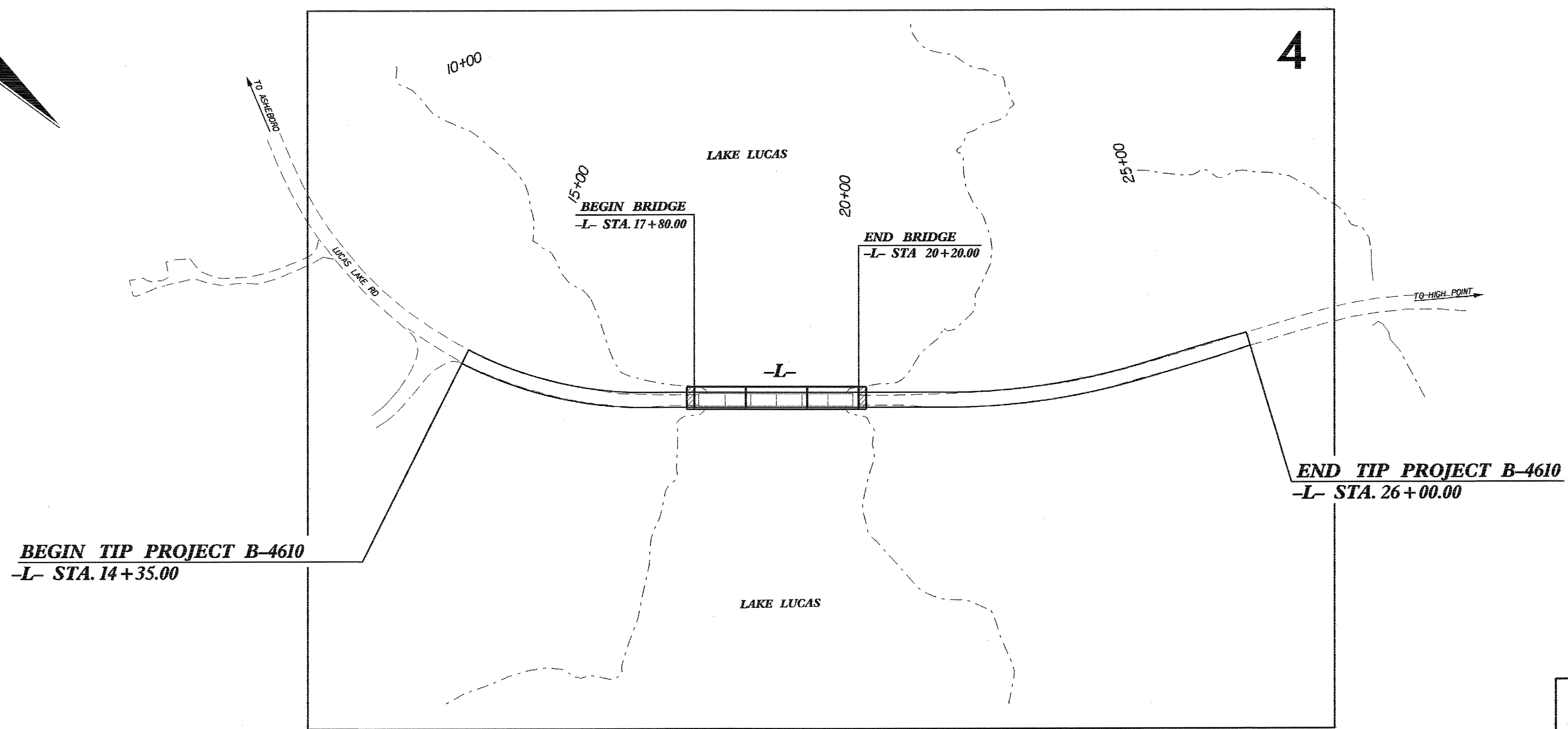
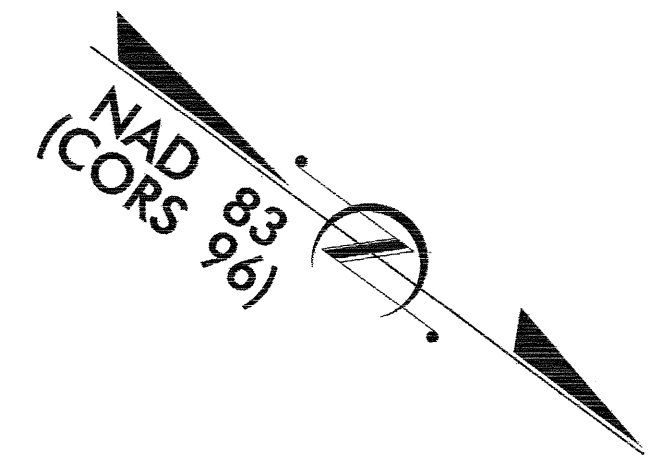


TIP PROJECT: B-4610

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

LOCATION: BRIDGE NO. 73 OVER LAKE LUCAS ON SR 1518
TYPE OF WORK: GRADING, DRAINAGE, PAVING, & STRUCTURE



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4610	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
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	—
	Silt Basin Type B	□
1633.01	Temporary Rock Silt Check Type-A	□
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	□
	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	□

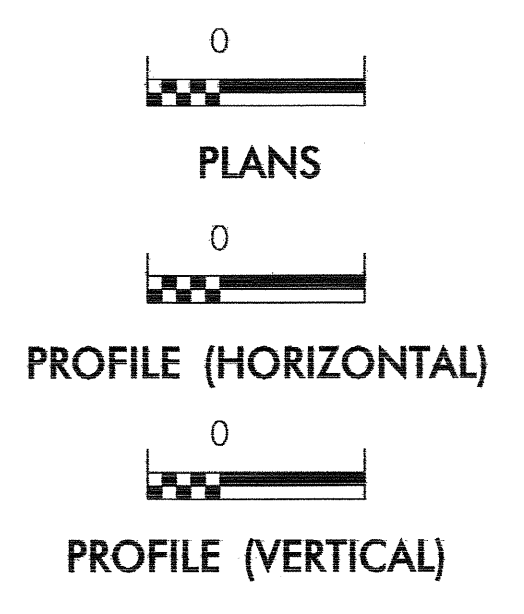
THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

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

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

GRAPHIC SCALE



ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

Prepared in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
 1 South Wilmington St.
 Raleigh, NC 27611
2006 STANDARD SPECIFICATIONS

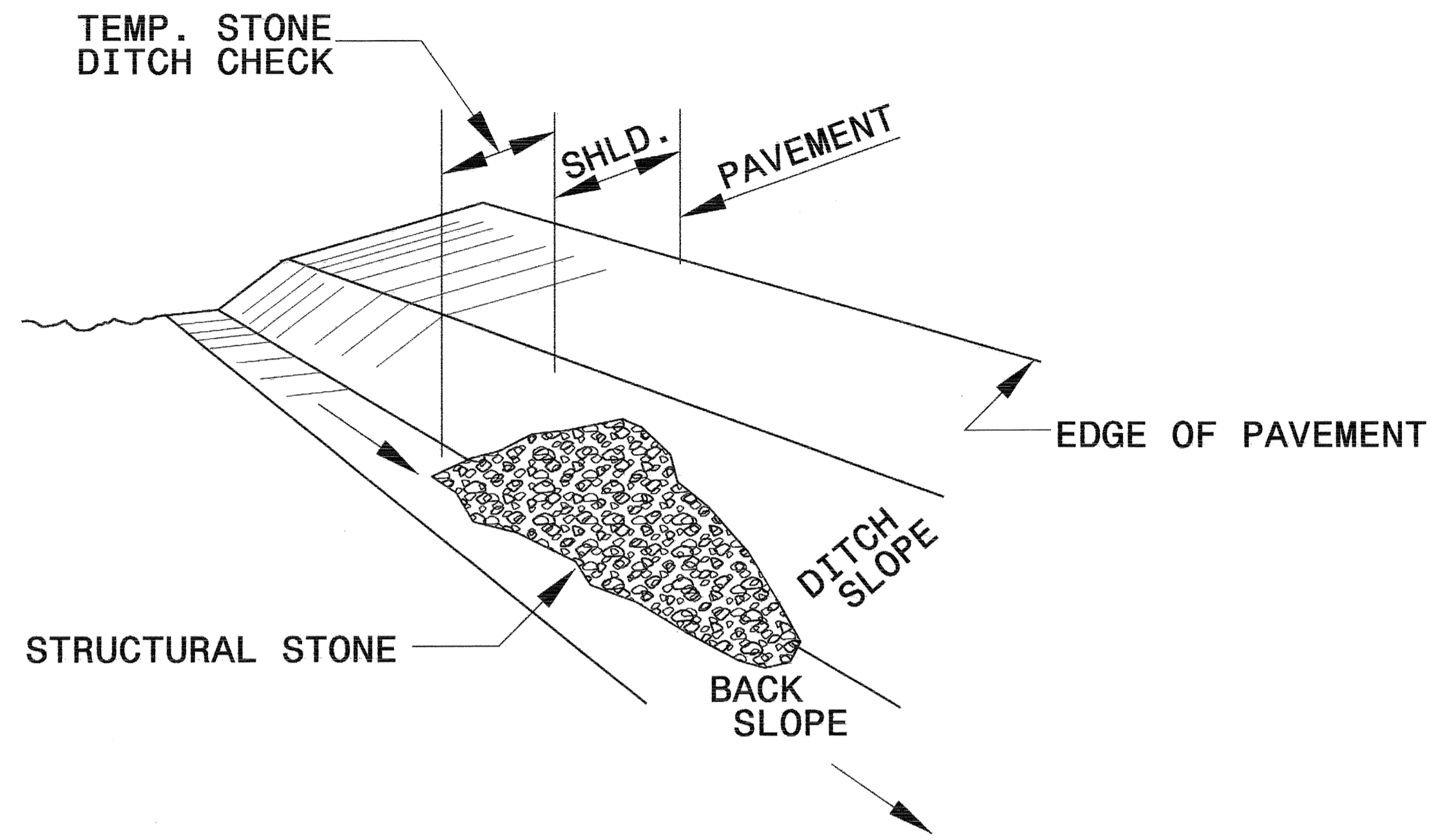
Roadway Standard Drawings
 The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1630.05 Temporary Diversion
1606.01 Special Sediment Control Fence	1630.06 Special Stilling Basin
1607.01 Gravel Construction Entrance	1632.03 Rock Inlet Sediment Trap Type C
1622.01 Temporary Berms and Slope Drains	1633.01 Temporary Rock Silt Check Type A

25-FEB-2006 13:38 P:\ENR\PROJECTS\B-4610\EC.tsh.dgn

PROJECT REFERENCE NO. B-4610	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

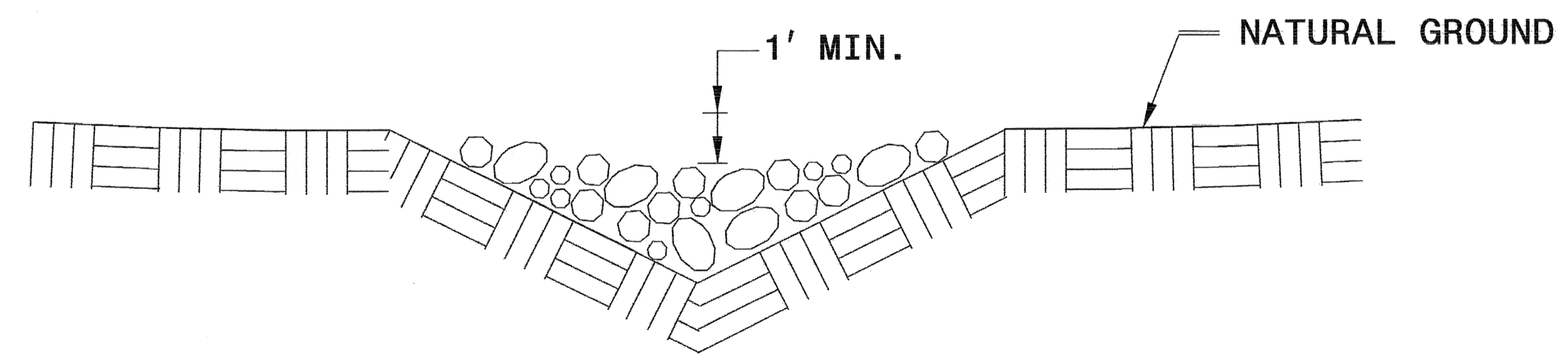


ISOMETRIC VIEW

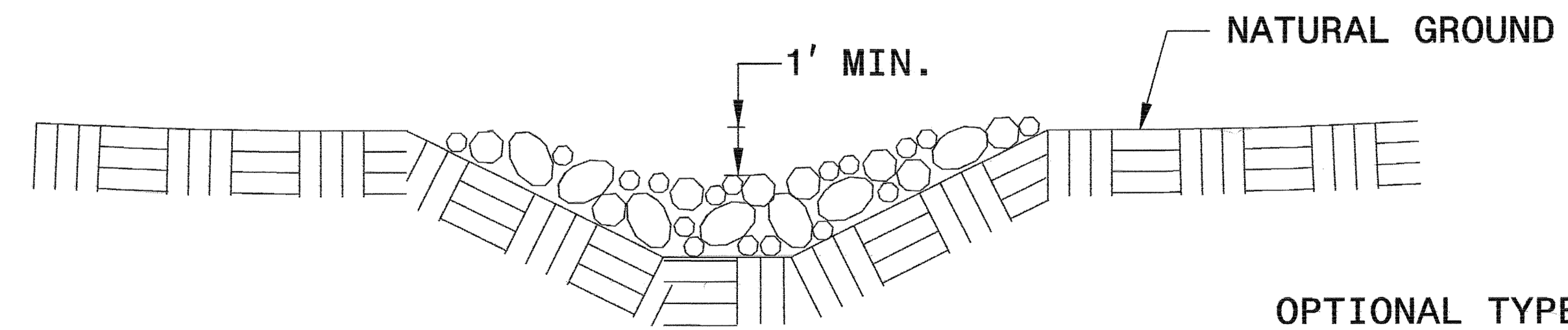
NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

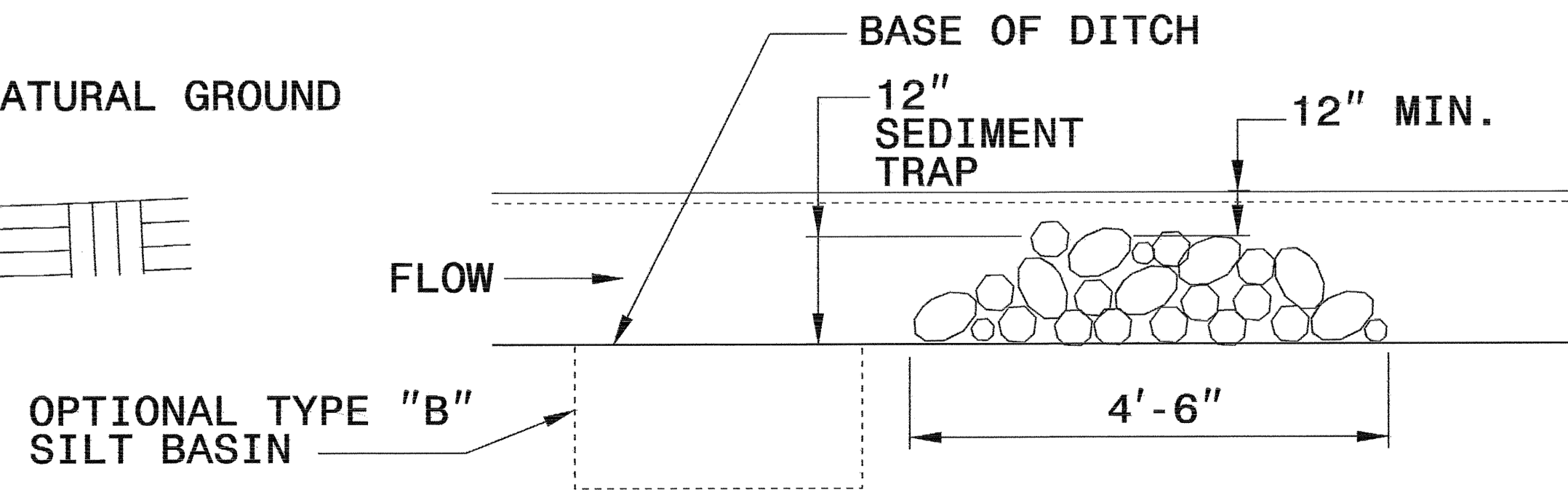
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



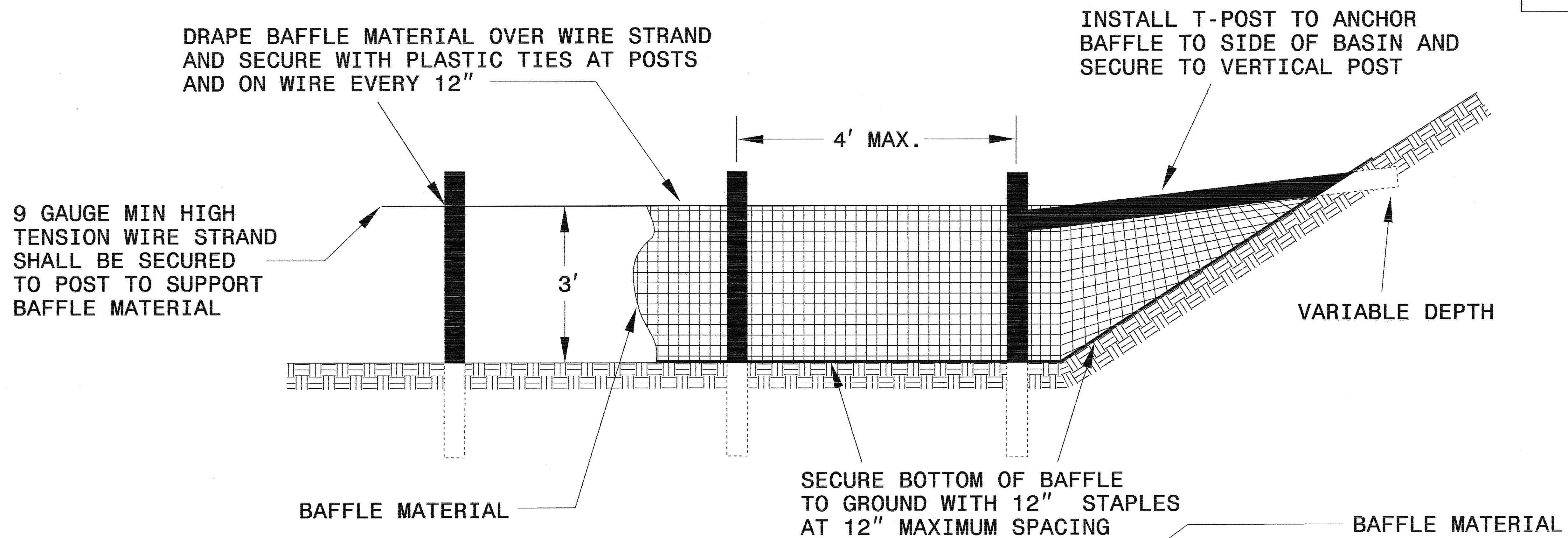
CROSS SECTION TRAPEZOIDAL DITCH



ELEVATION VIEW

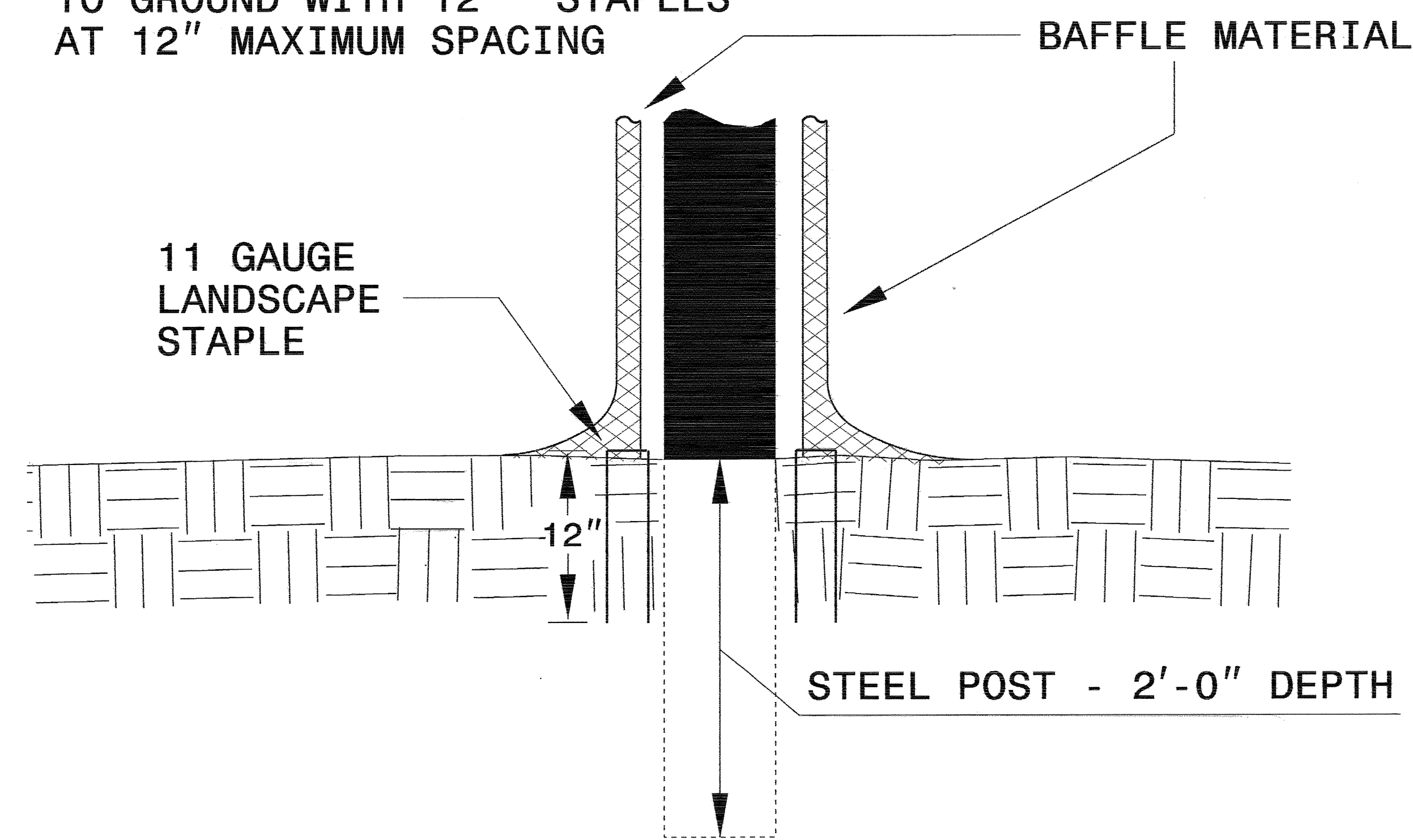
PROJECT REFERENCE NO. B-4610	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



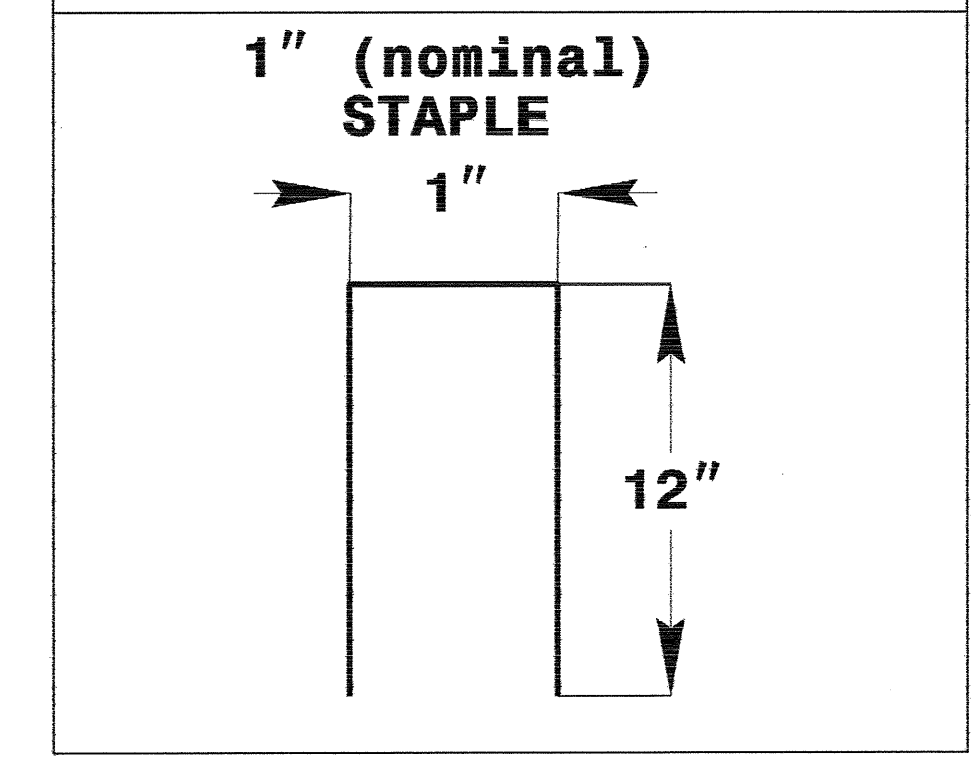
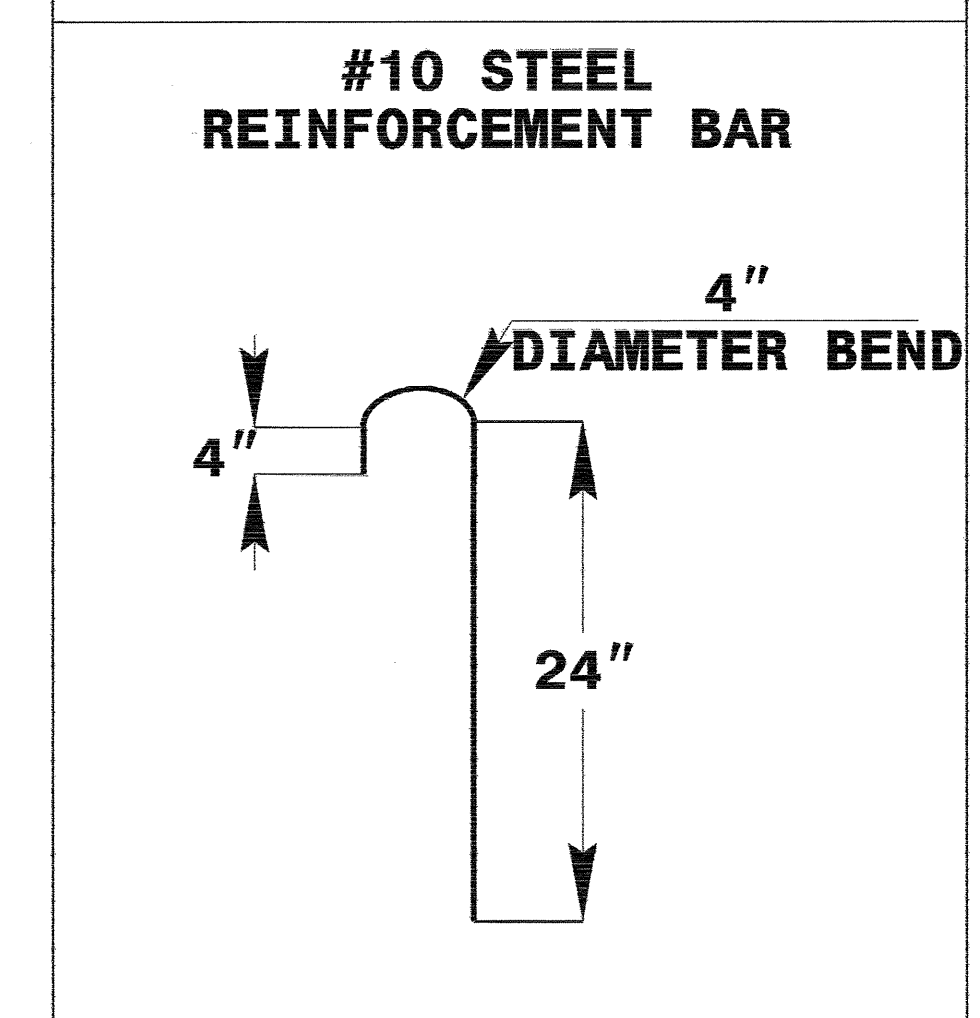
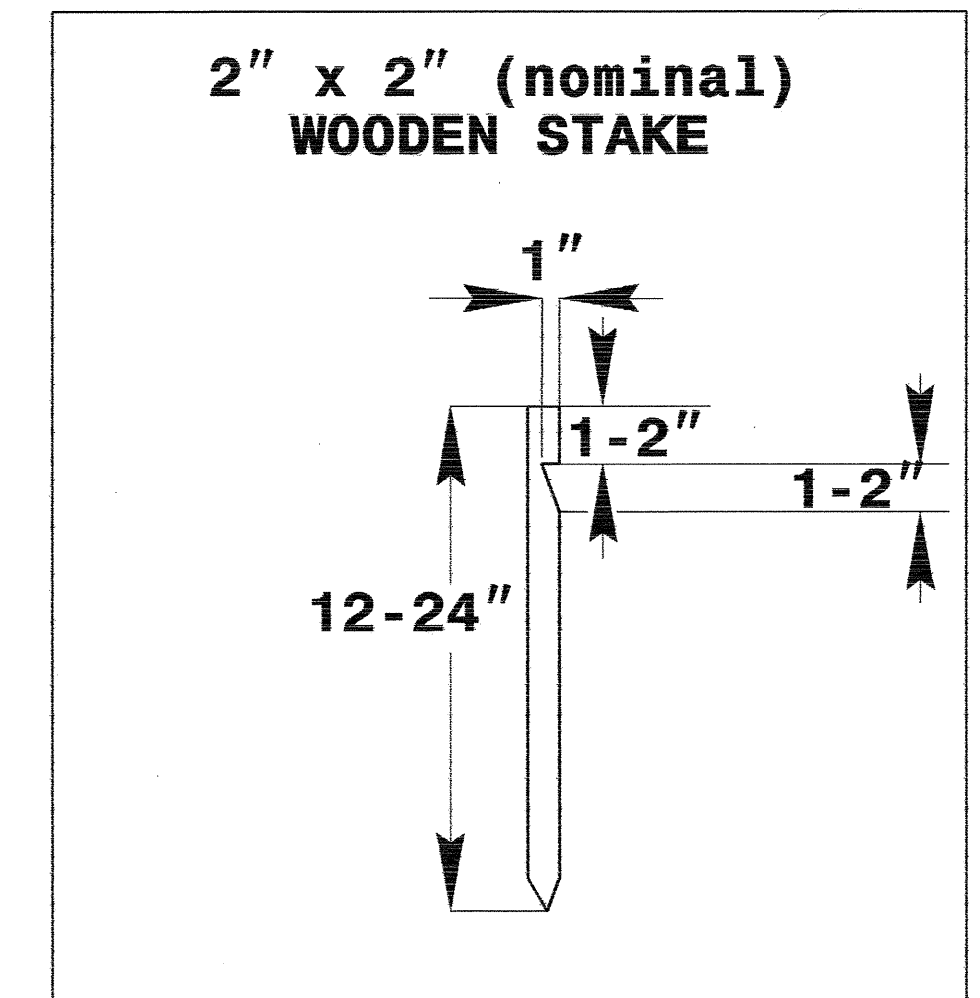
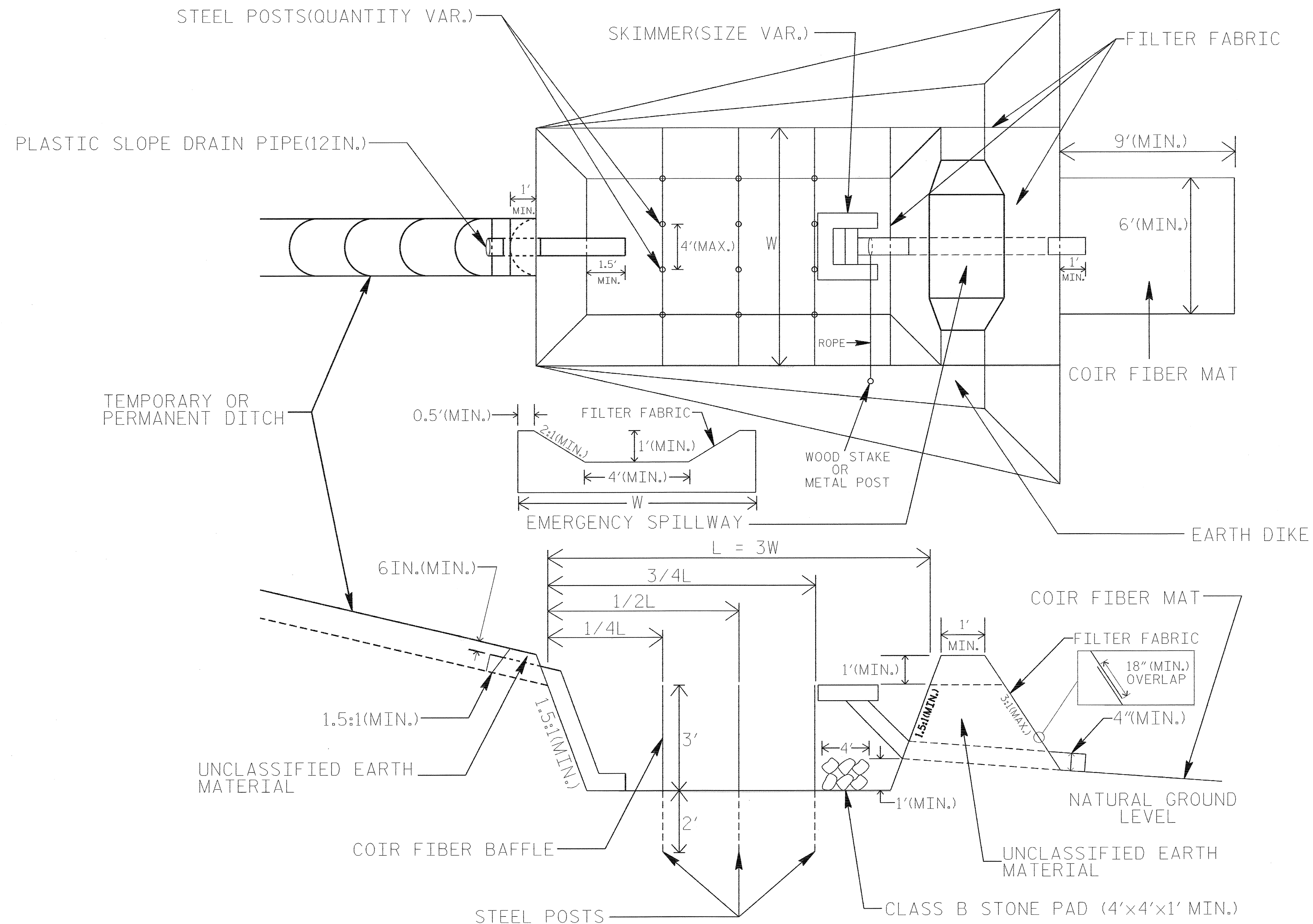
NOTES:

1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF $\frac{1}{4}$ THE BASIN LENGTH.
2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF $\frac{1}{3}$ THE BASIN LENGTH.
3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.



SKIMMER BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. B-4610	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



COIR FIBER MAT ANCHOR OPTIONS

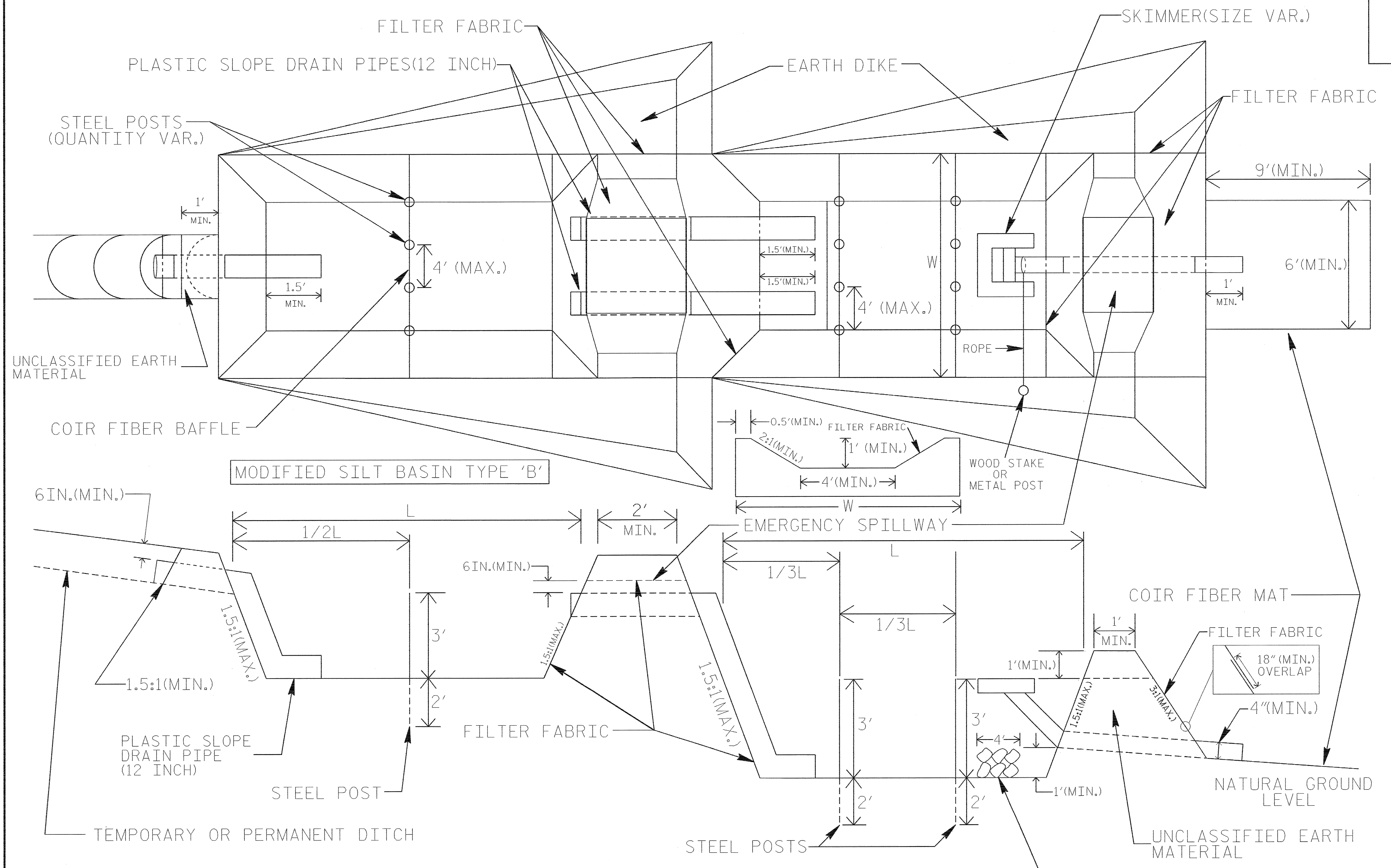
NOTES

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 FILTER FABRIC AS DIRECTED.
6. FILTER FABRIC FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18" (MIN.) AS SHOWN.

NOT TO SCALE

PROJECT REFERENCE NO. B-4610	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TIERED SKIMMER BASIN DETAIL



2" x 2" (nominal) WOODEN STAKE

#10 STEEL REINFORCEMENT BAR

1" (nominal) STAPLE

COIR FIBER MAT ANCHOR OPTIONS

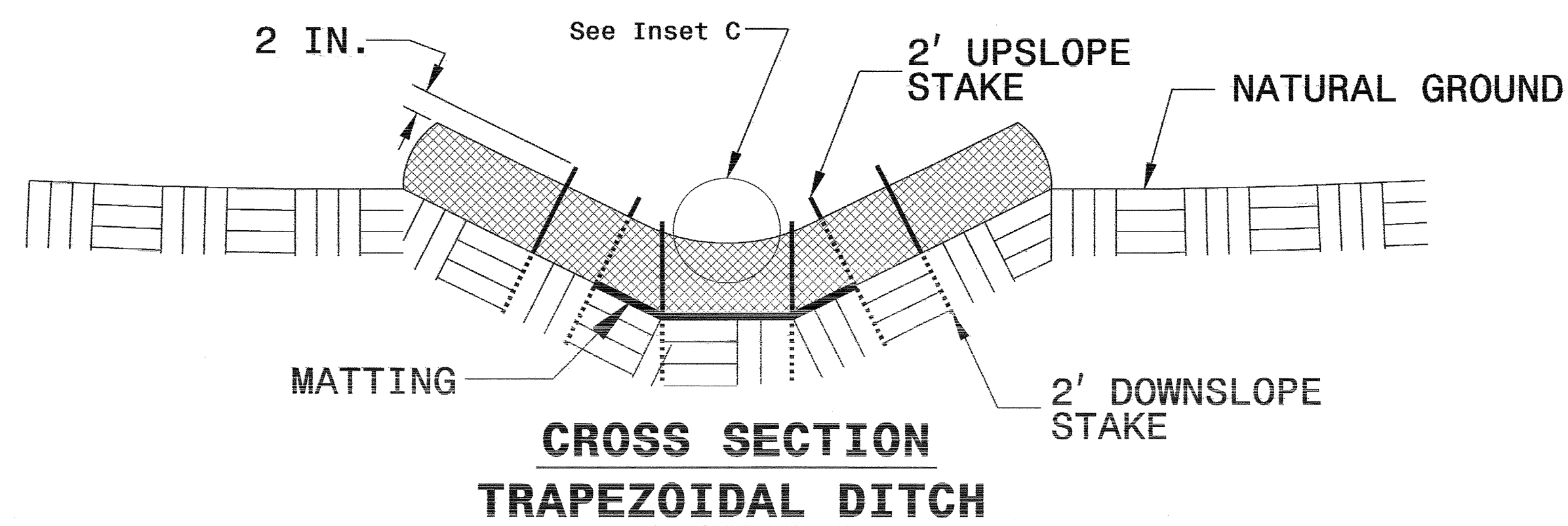
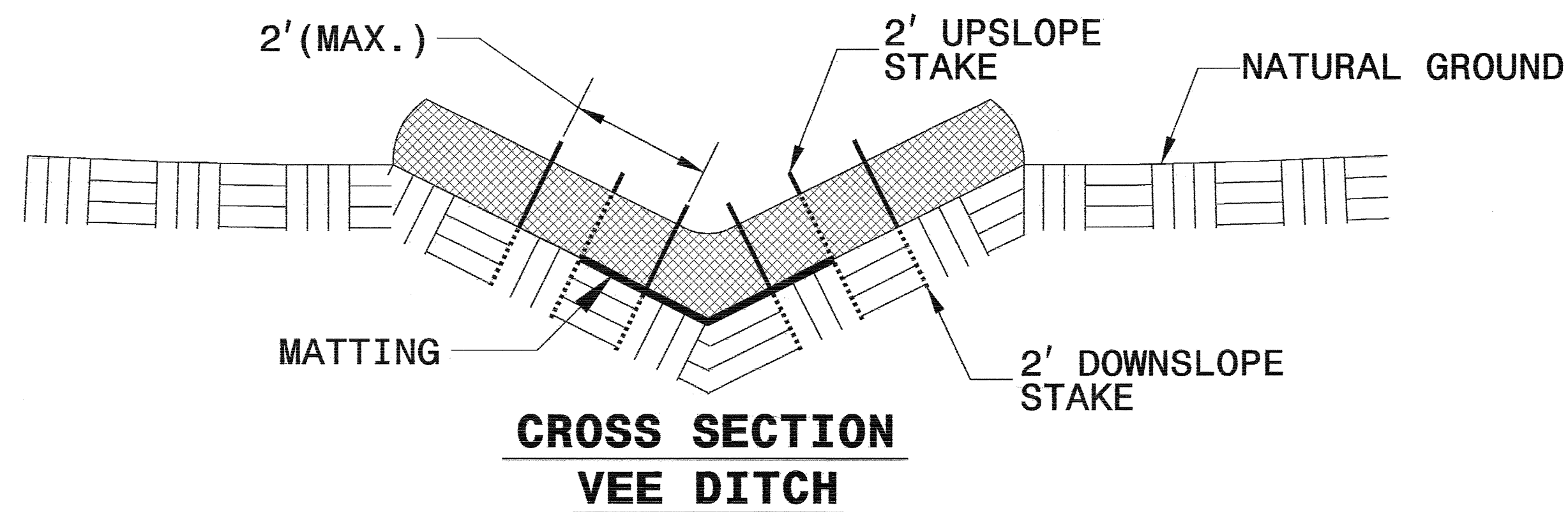
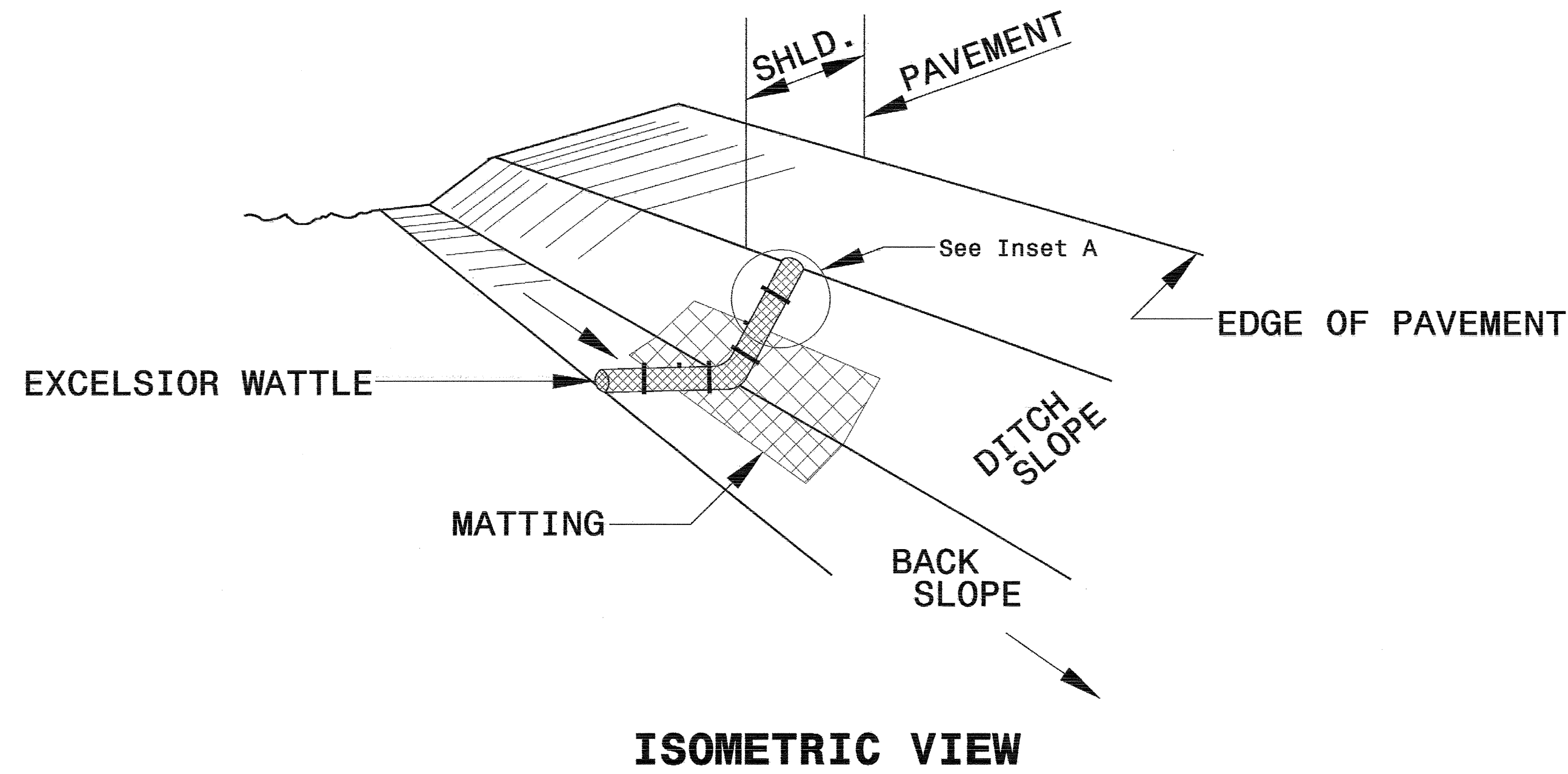
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. FOR BASIN DEPTHS OF 3 FT., THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTHS (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
6. FILTER FABRIC FOR EMERGENCY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18" (MIN.) AS SHOWN.

NOT TO SCALE

PROJECT REFERENCE NO. B-4610	SHEET NO. EC-2D
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.

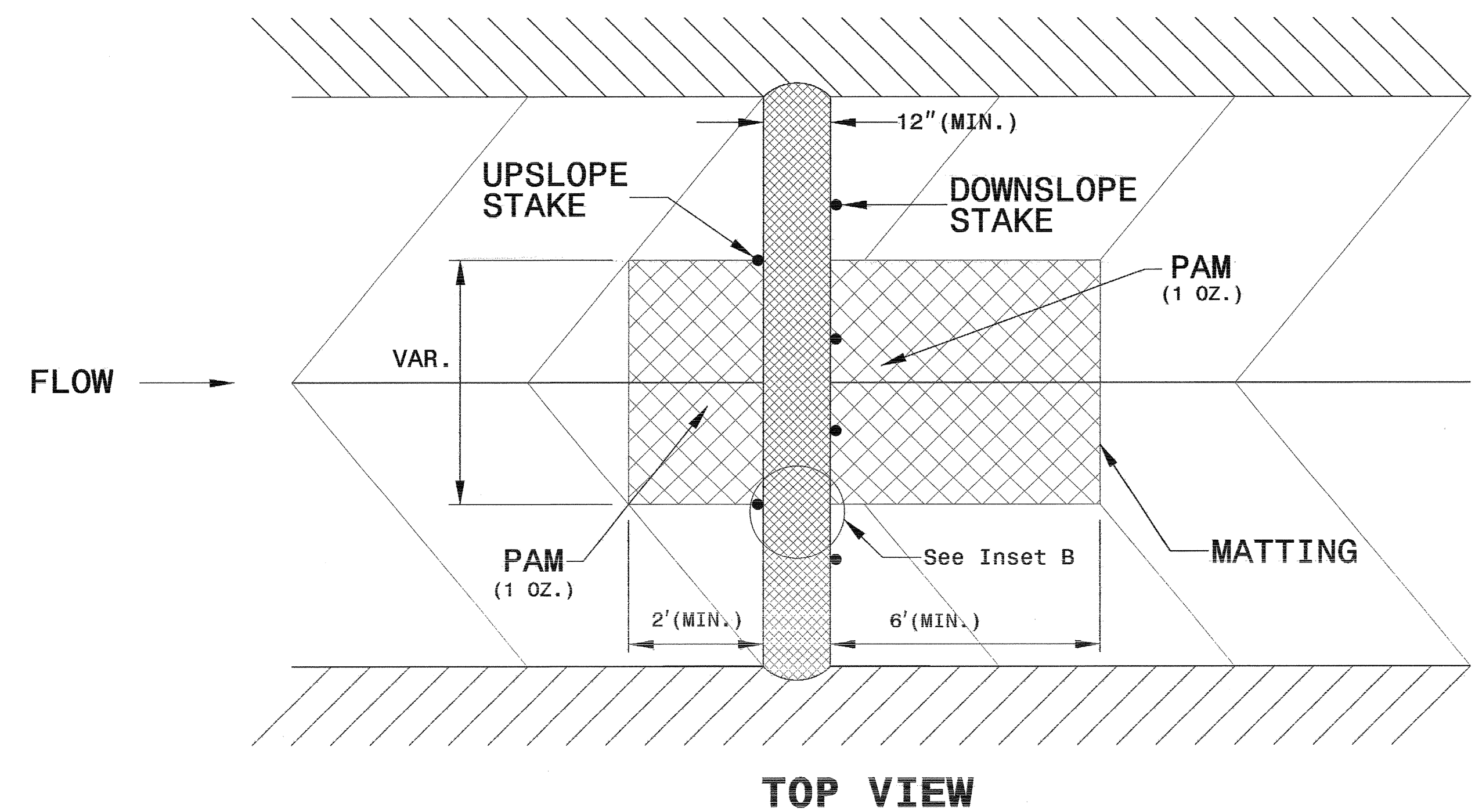
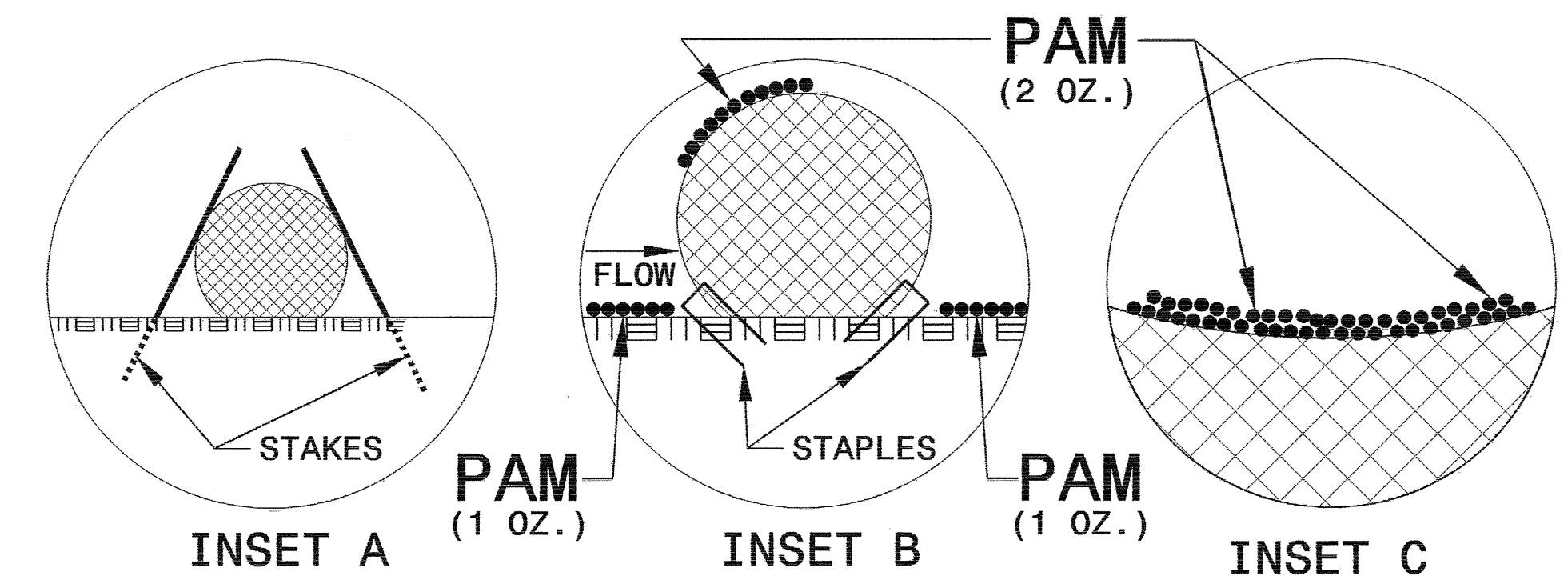
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

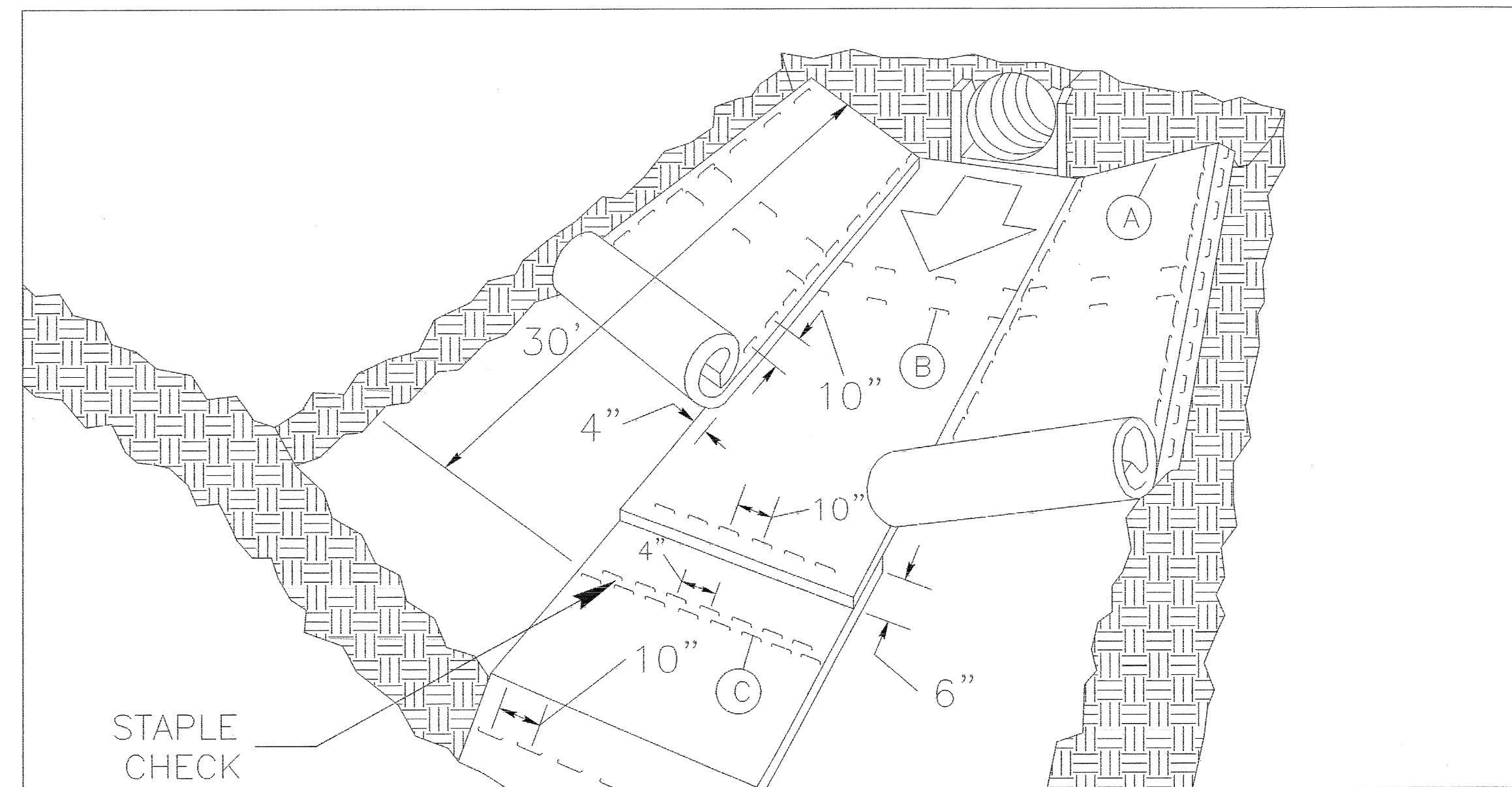
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

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-4610	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

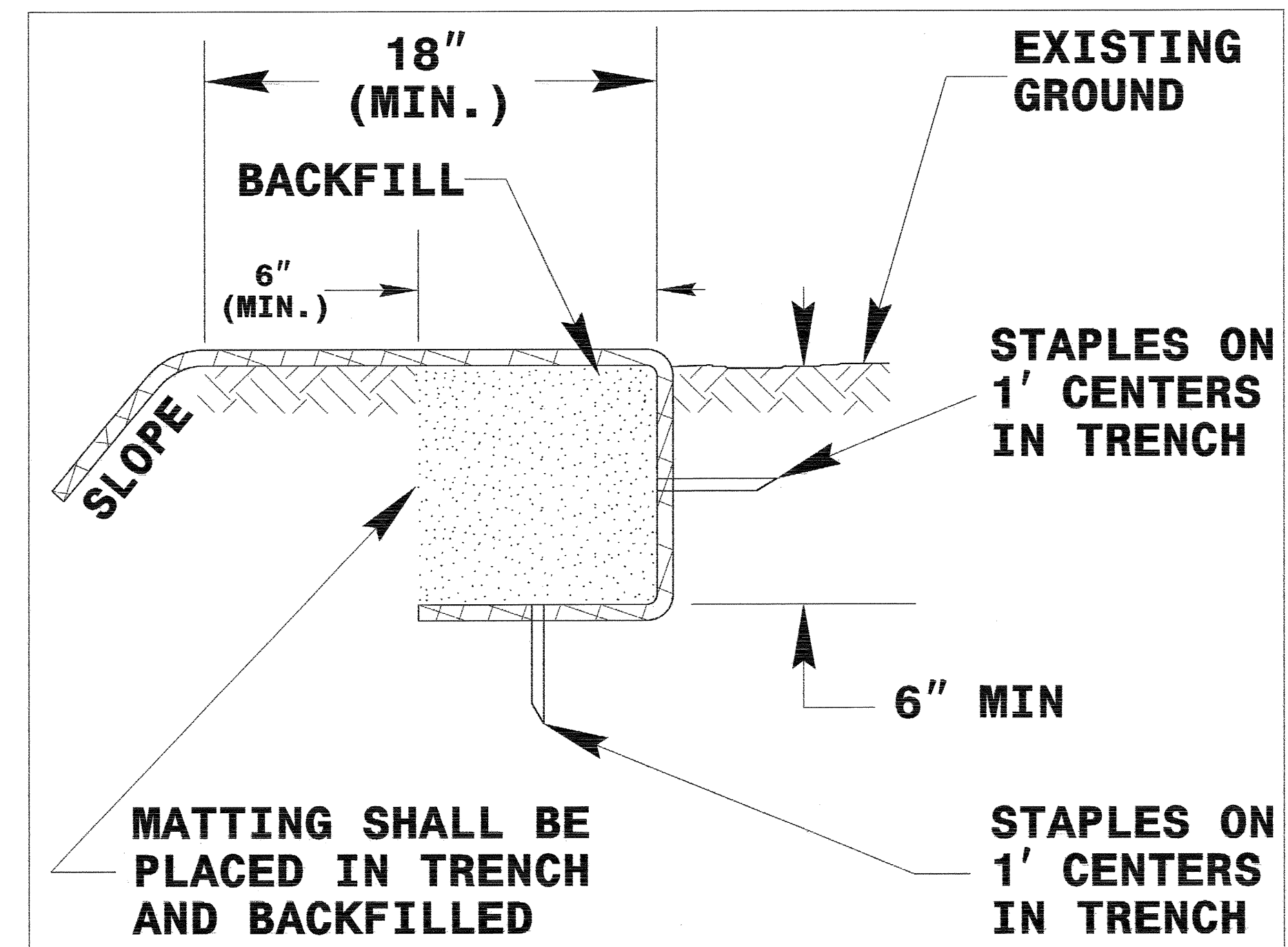
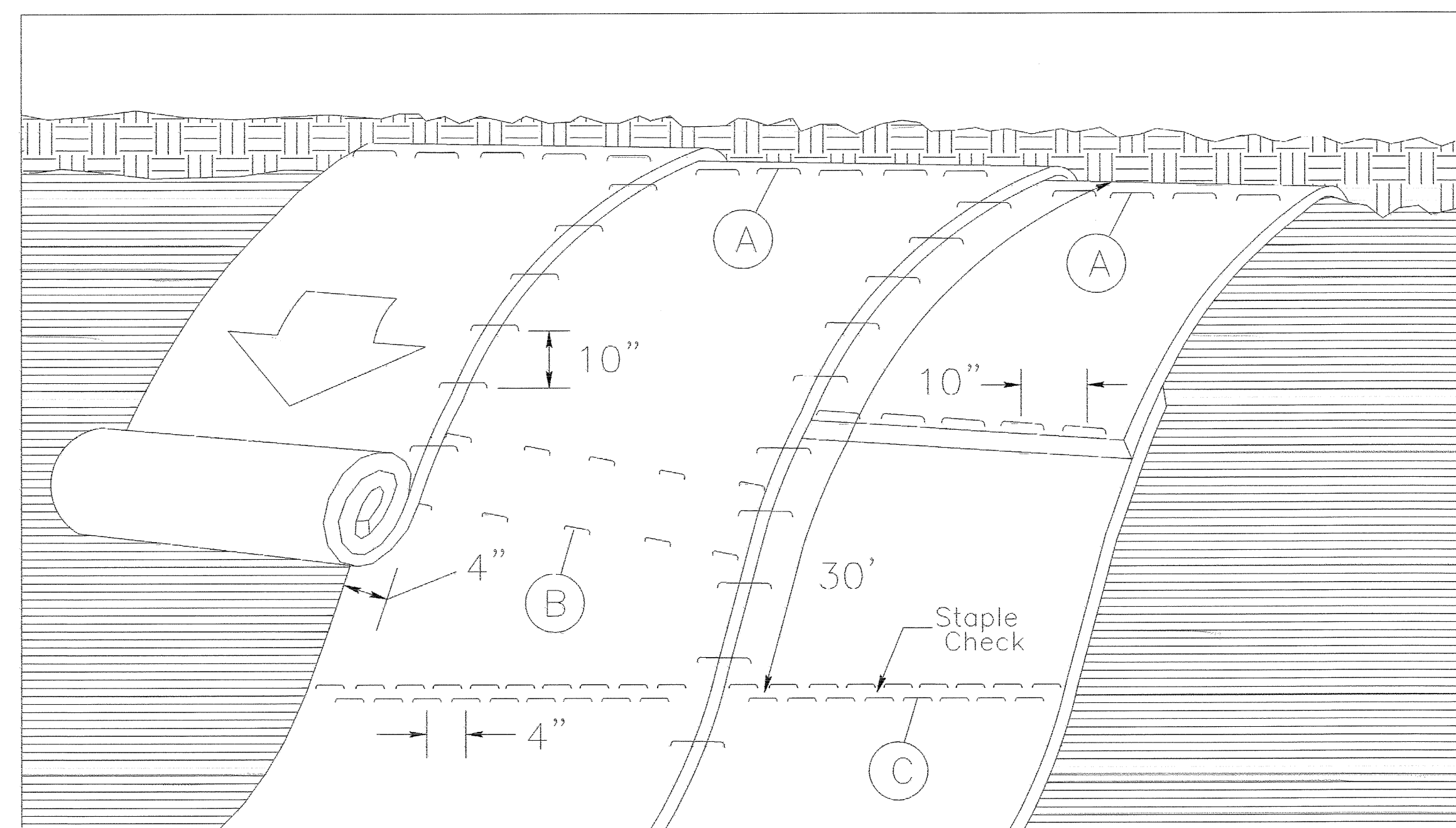


DIAGRAM (A)



MATTING ON SLOPES

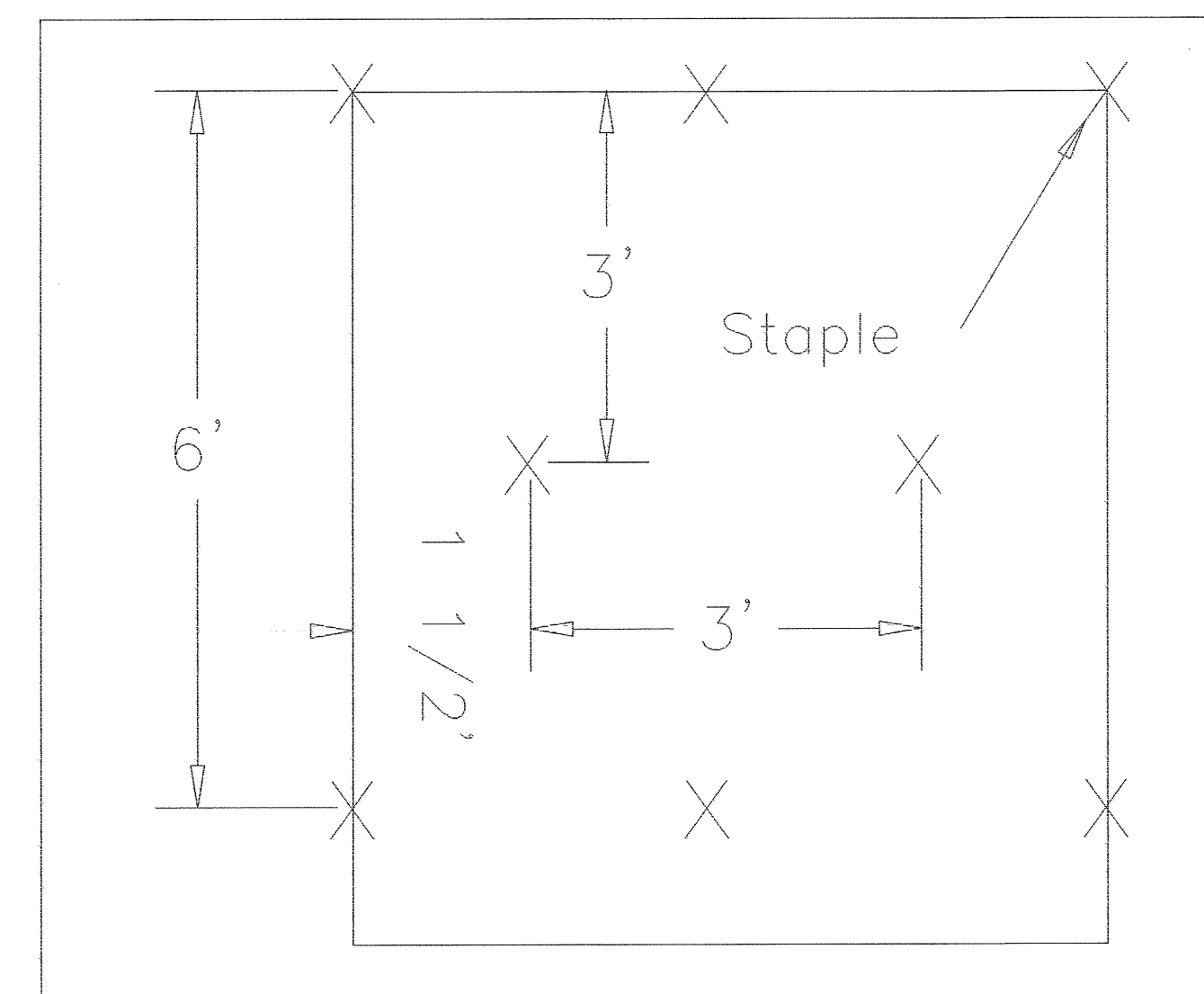


DIAGRAM (B)

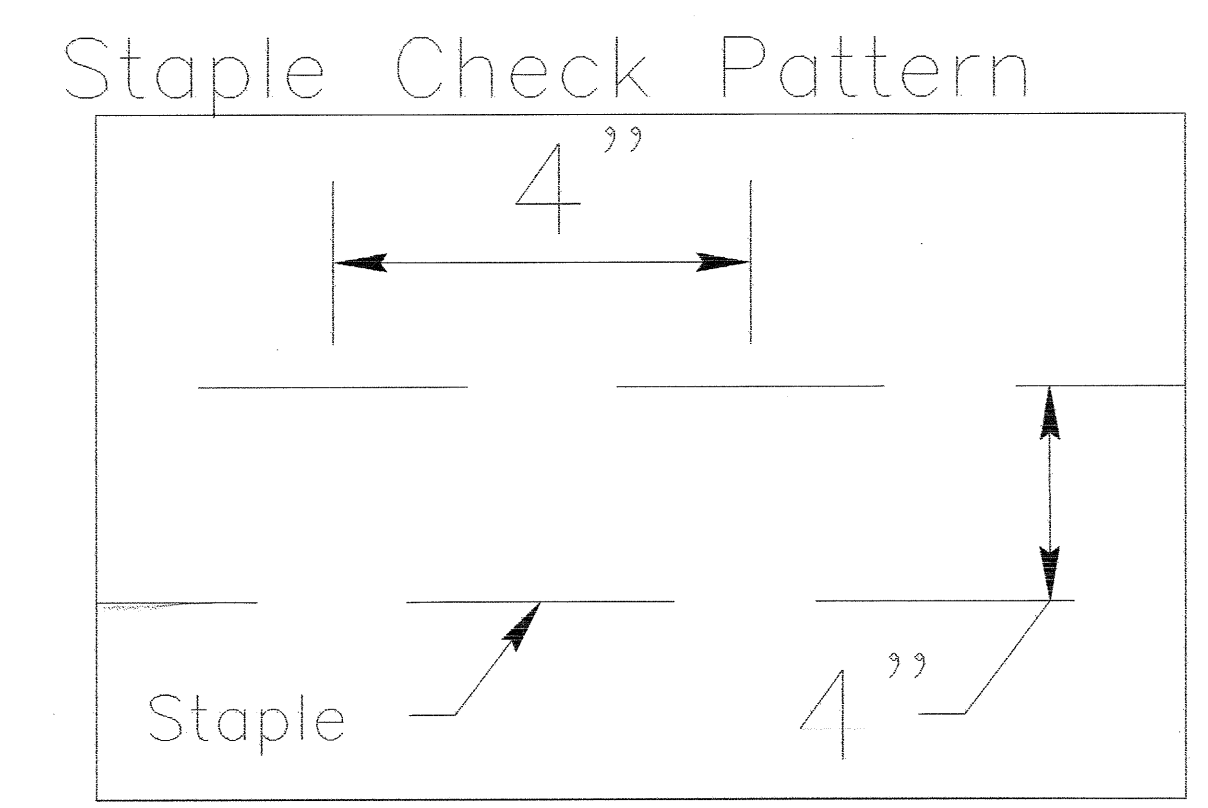


DIAGRAM (C)

NOTES:

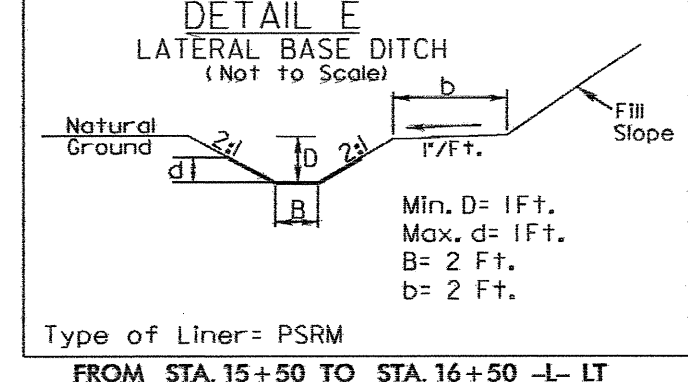
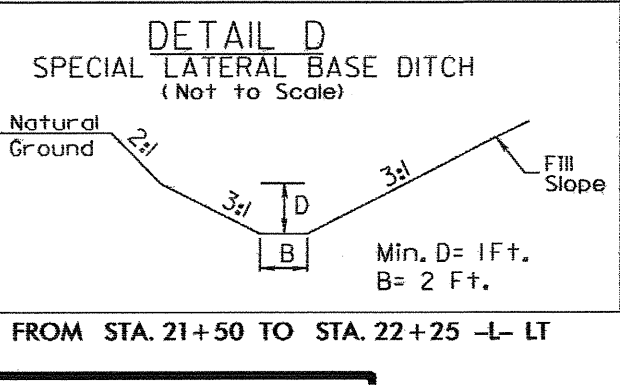
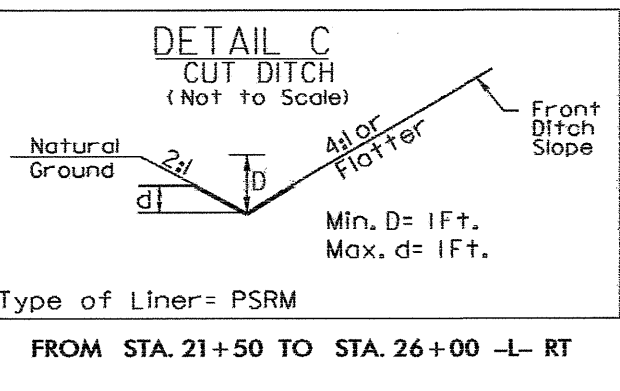
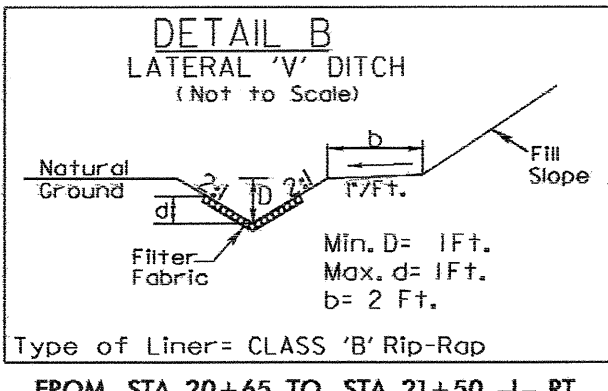
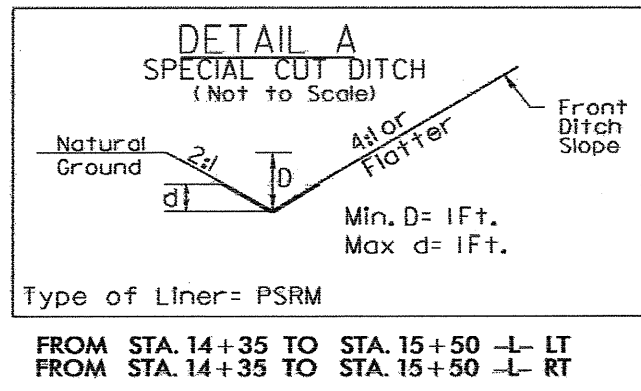
THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.
 STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

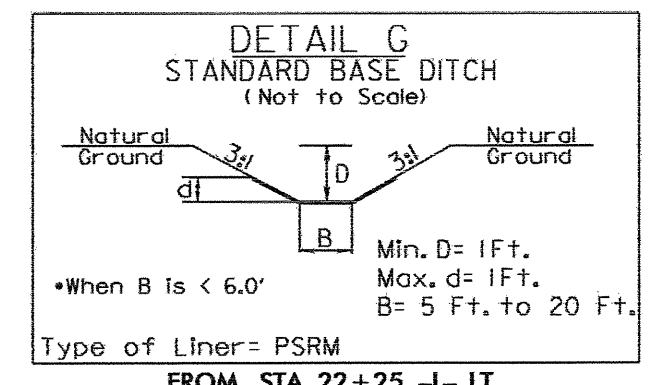
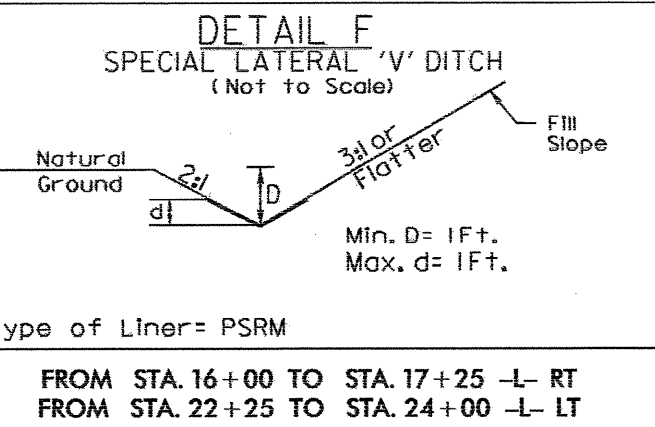
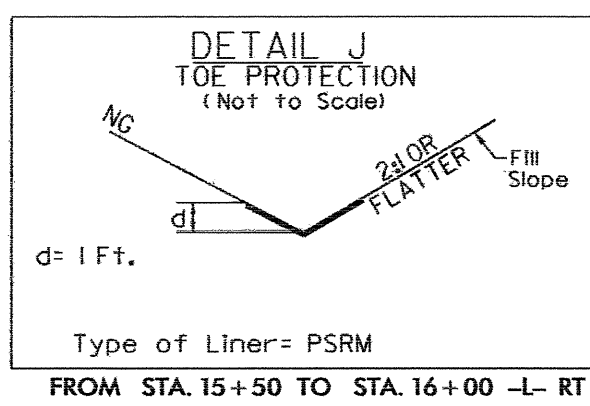
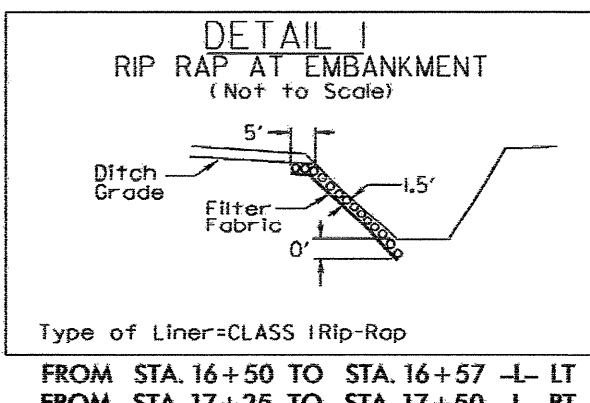
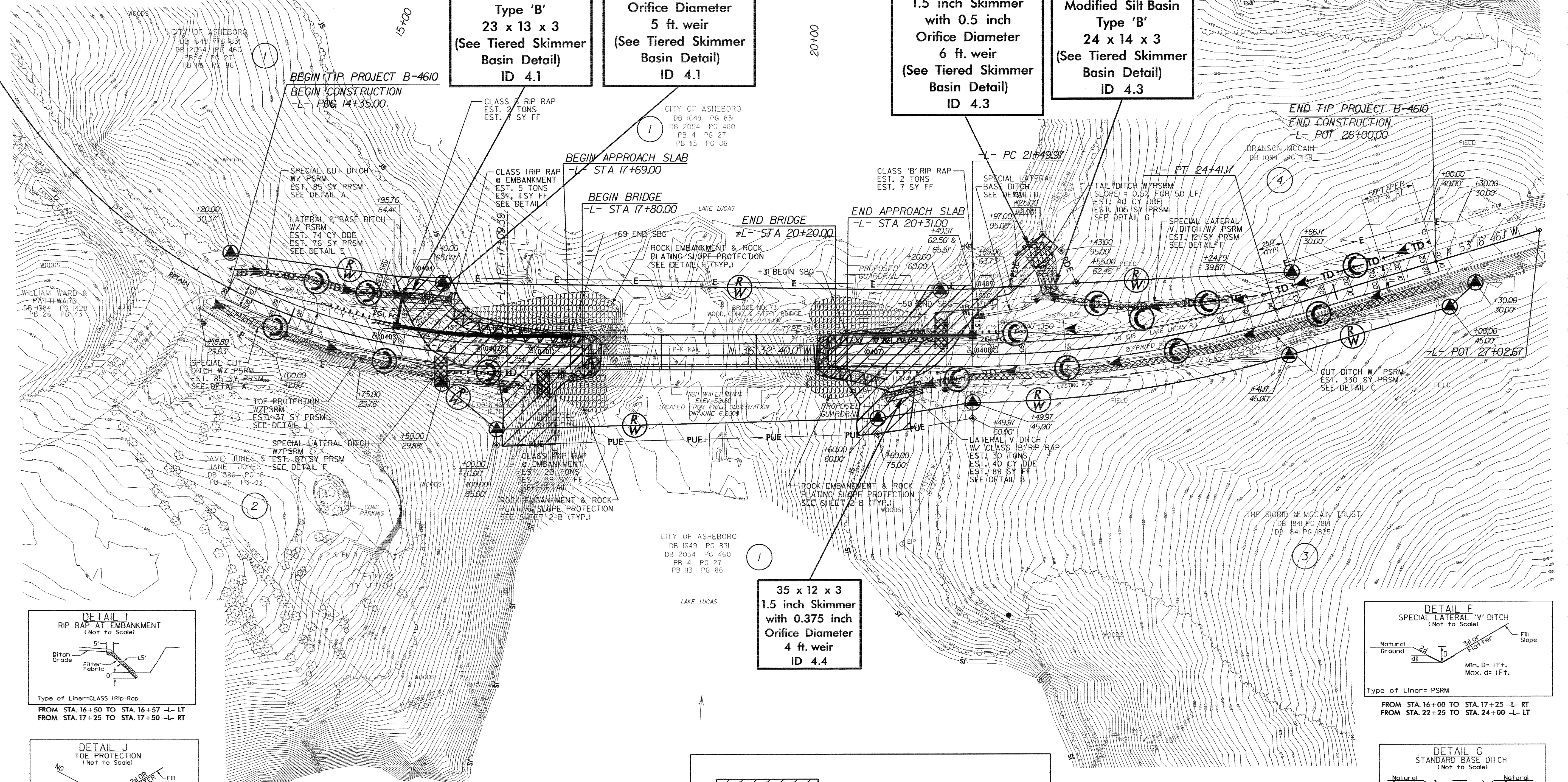
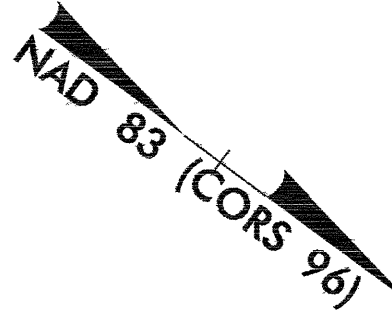
PROJECT REFERENCE NO.	SHEET NO.
B-4610	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

FOR -L- PROFILE, SEE SHEET 5



NOTE:
UTILIZE SPECIAL STILLING BASIN WHERE APPLICABLE.



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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

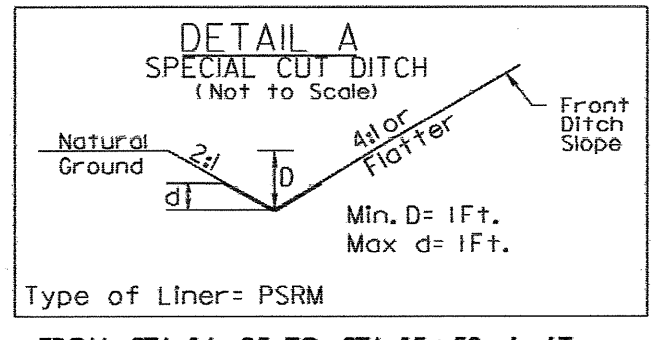
REVISIONS

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A-REVISED

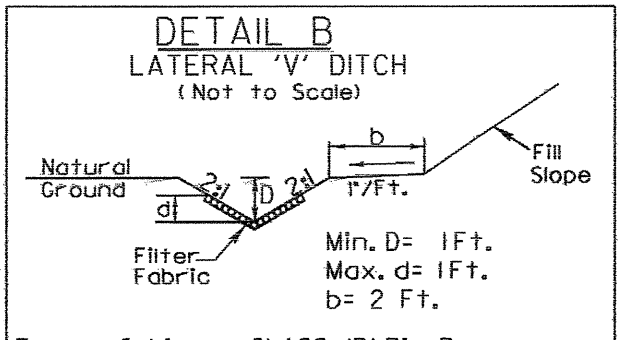
PROJECT REFERENCE NO. B-4610	SHEET NO. EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR -L- PROFILE, SEE SHEET 5

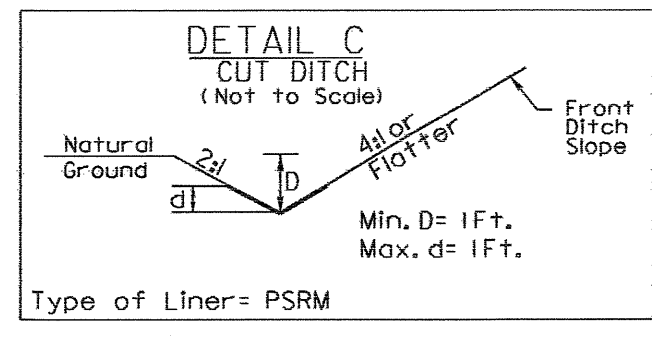
NOTE:
UTILIZE SPECIAL STILLING BASIN WHERE APPLICABLE.



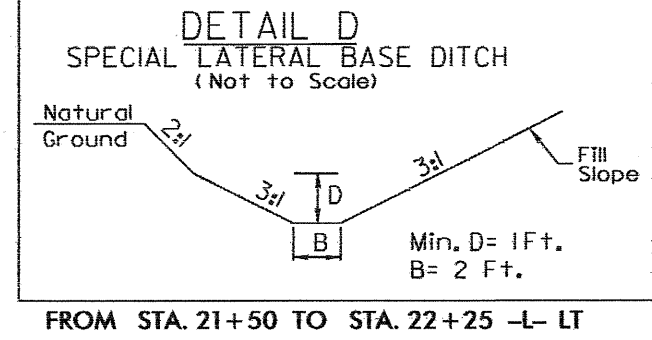
Type of Liner= PSRM
FROM STA. 14+35 TO STA. 15+50 -L- LT
FROM STA. 14+35 TO STA. 15+50 -L- RT



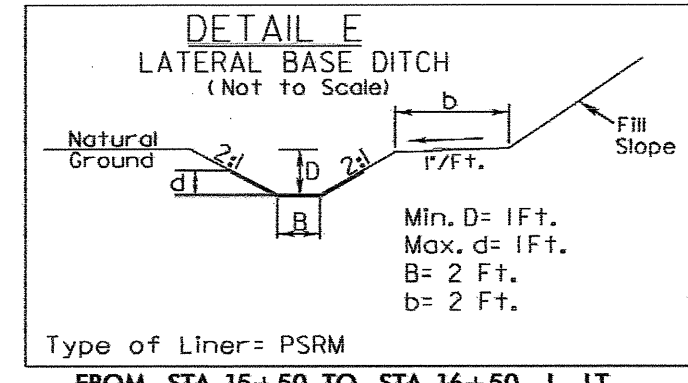
Type of Liner= CLASS 'B' Rip-Rap
FROM STA. 20+65 TO STA. 21+50 -L- RT



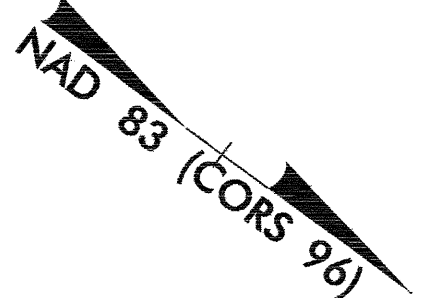
Type of Liner= PSRM
FROM STA. 21+50 TO STA. 26+00 -L- RT



FROM STA. 21+50 TO STA. 22+25 -L- LT



Type of Liner= PSRM
FROM STA. 15+50 TO STA. 16+50 -L- LT



Modified Silt Basin Type 'B'
23 x 13 x 3
(See Tiered Skimmer Basin Detail)
ID 4.1

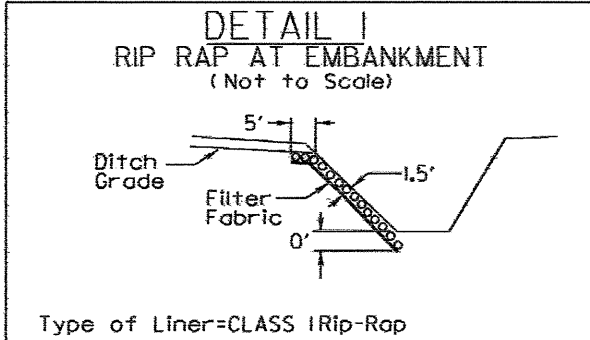
23 x 13 x 3
1.5 inch Skimmer
with 0.5 inch Orifice Diameter
5 ft. weir
(See Tiered Skimmer Basin Detail)
ID 4.1

24 x 14 x 3
1.5 inch Skimmer
with 0.5 inch Orifice Diameter
6 ft. weir
(See Tiered Skimmer Basin Detail)
ID 4.3

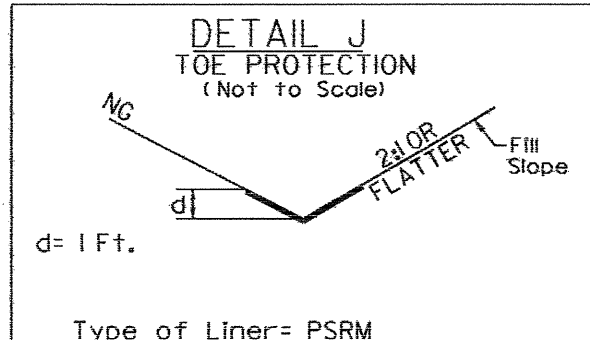
Modified Silt Basin Type 'B'
24 x 14 x 3
(See Tiered Skimmer Basin Detail)
ID 4.3

40 x 10 x 3
1.5 inch Skimmer
with 0.375 inch Orifice Diameter
4 ft. weir
ID 4.2F

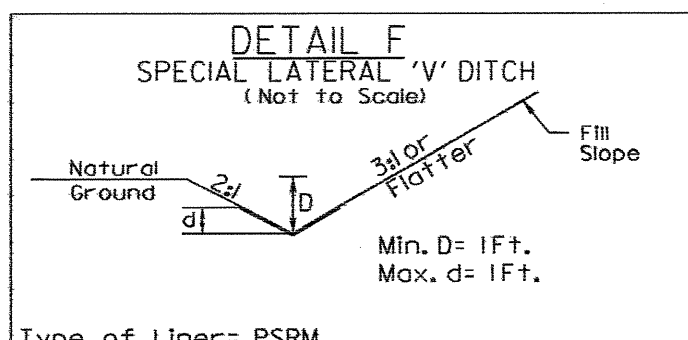
35 x 12 x 3
1.5 inch Skimmer
with 0.375 inch Orifice Diameter
4 ft. weir
ID 4.4



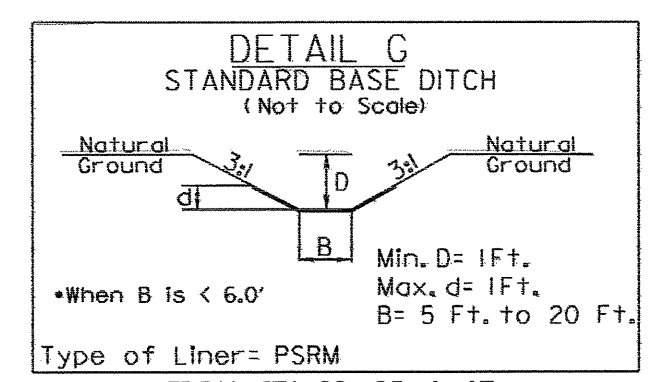
Type of Liner= CLASS 'B' Rip-Rap
FROM STA. 16+50 TO STA. 16+57 -L- LT
FROM STA. 17+25 TO STA. 17+50 -L- RT



Type of Liner= PSRM
FROM STA. 15+50 TO STA. 16+00 -L- RT



Type of Liner= PSRM
FROM STA. 16+00 TO STA. 17+25 -L- LT
FROM STA. 22+25 TO STA. 24+00 -L- RT



Type of Liner= PSRM
FROM STA. 22+25 -L- LT.

REVISIONS

25-FEB-2010 13:36 R:\Environmental\Design\B4610_EC_psh_4.dgn
 01/17/99
 25 FEB 2010 13:36 R:\Environmental\Design\B4610_EC_psh_4.dgn
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