

**TIP PROJECT: B-4465**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

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PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

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**CHOWAN COUNTY**

**LOCATION: BRIDGE NO. 5 ON SR 1208 OVER  
PEMBROKE CREEK**

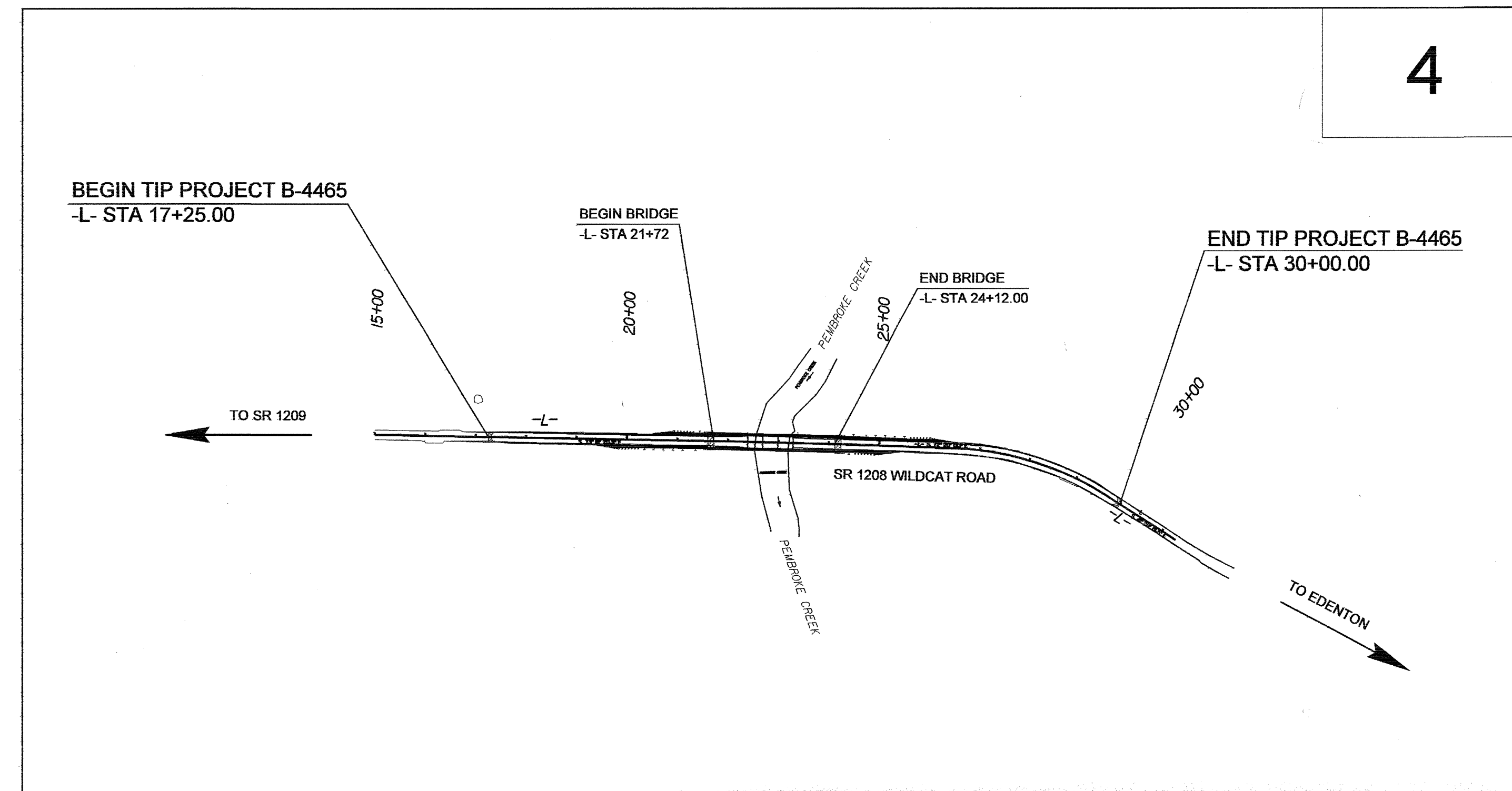
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4465	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.01	Riser Basin	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
	Wattle	
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	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

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



**GRAPHIC SCALE**

0

PLANS

0

PROFILE (HORIZONTAL)

0

PROFILE (VERTICAL)

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

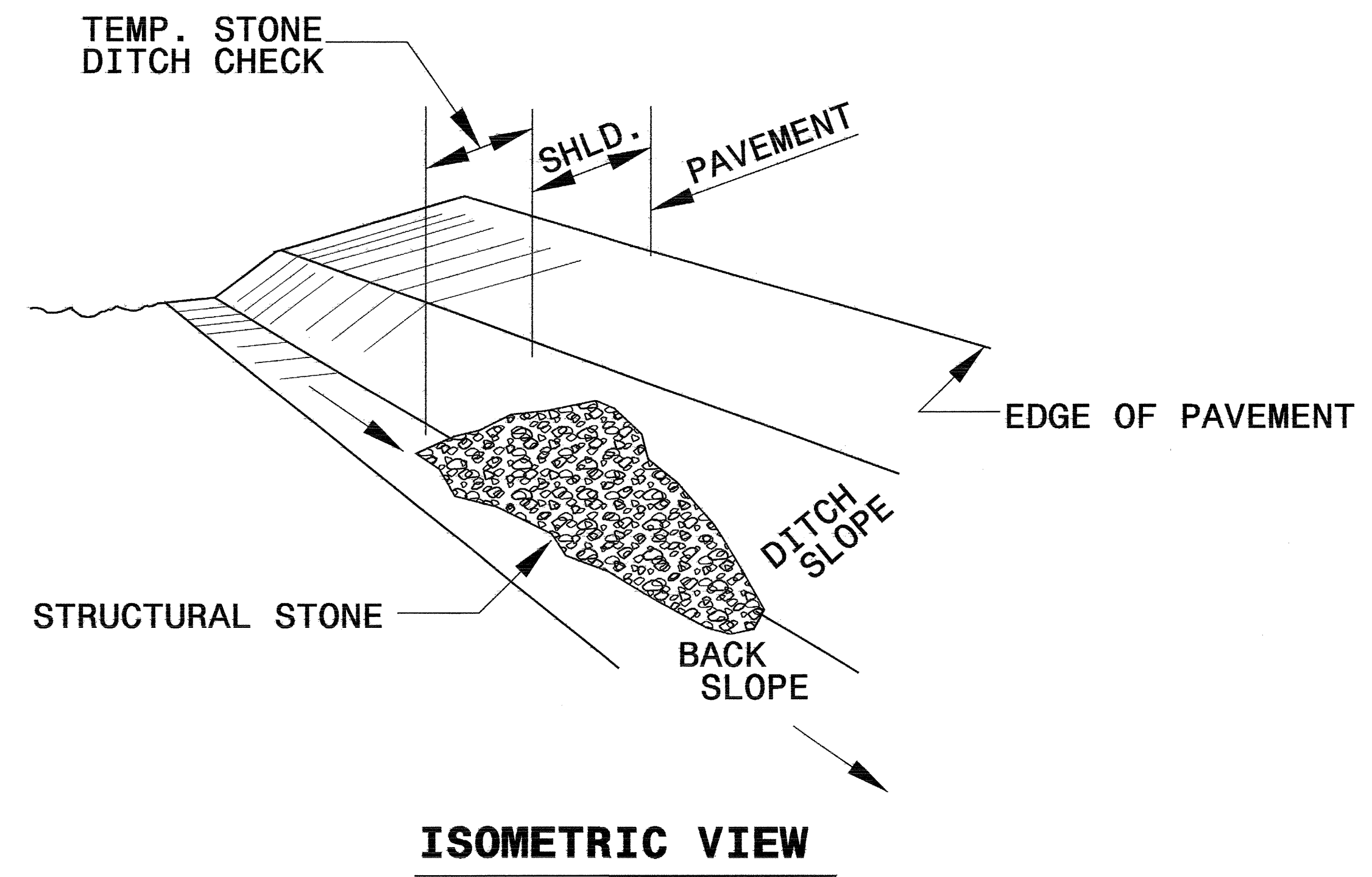
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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

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PROJECT REFERENCE NO. B-4465	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

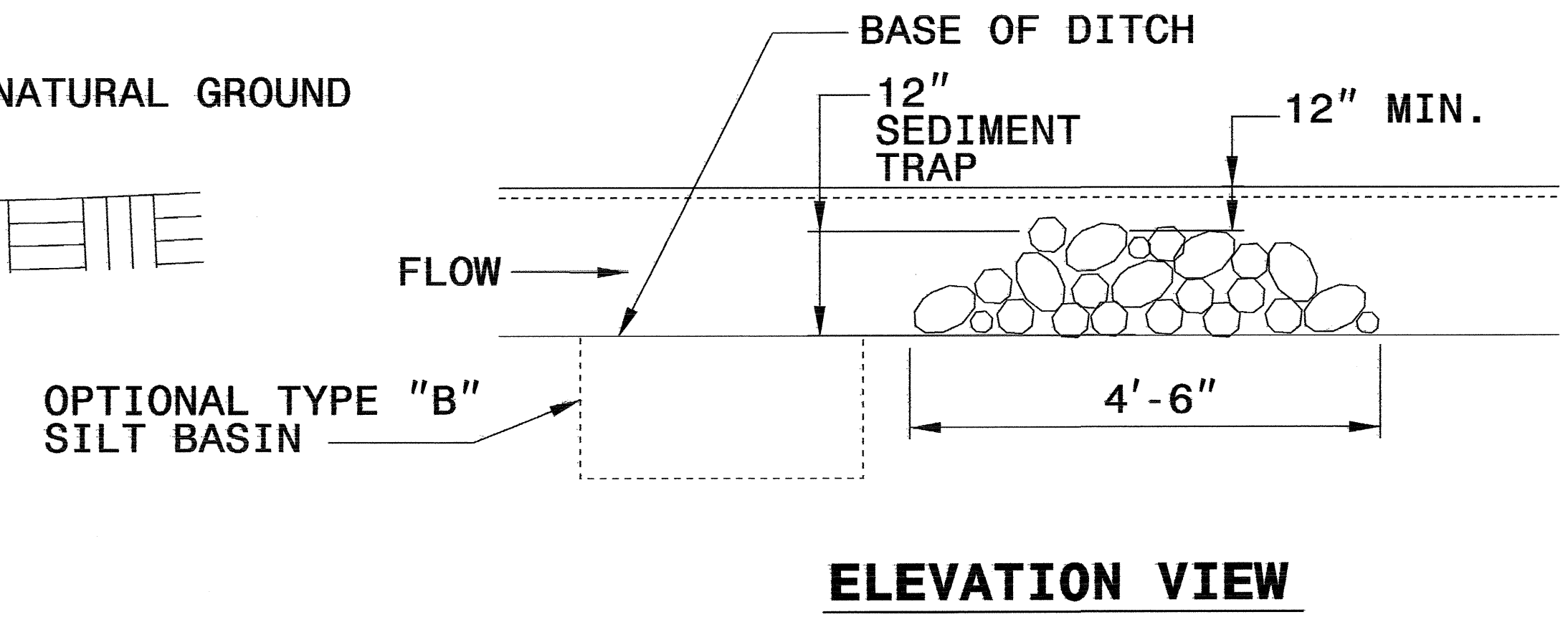
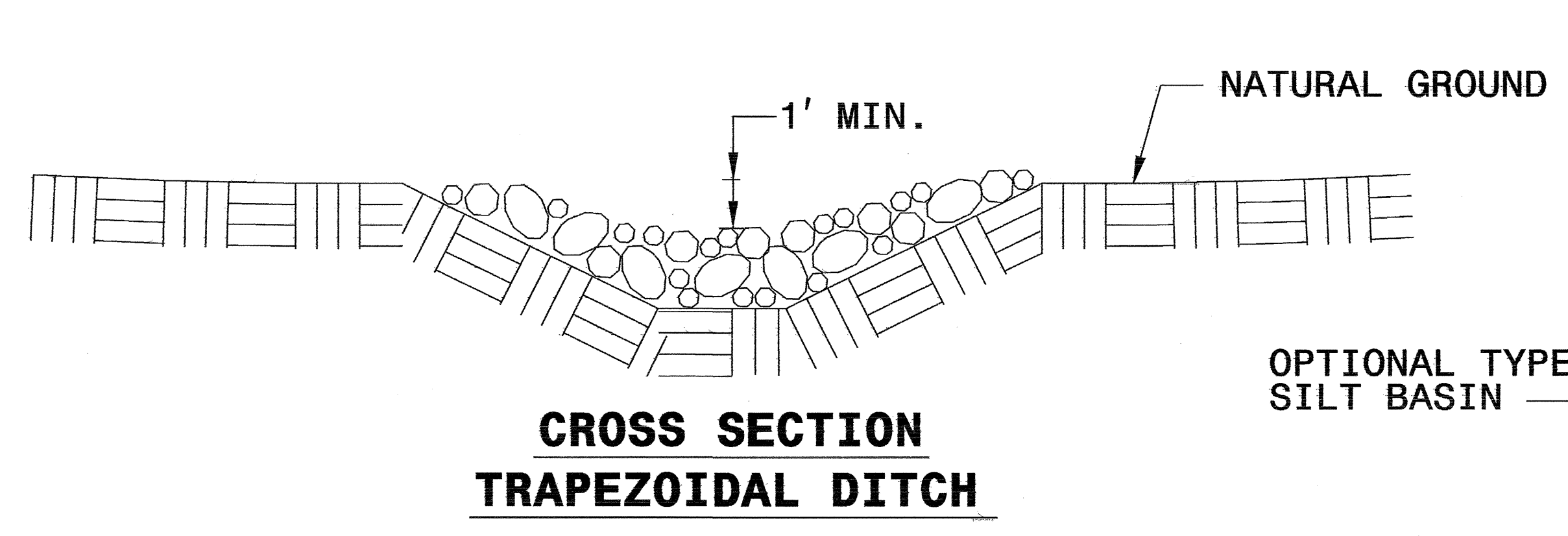
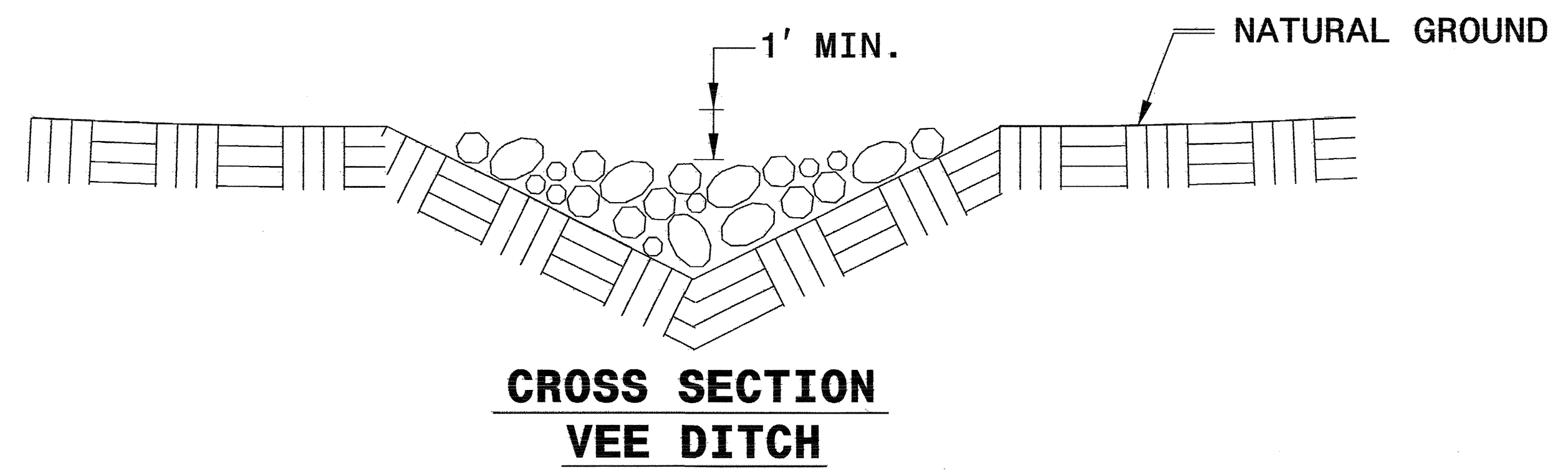
# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL



**NOTES:**

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

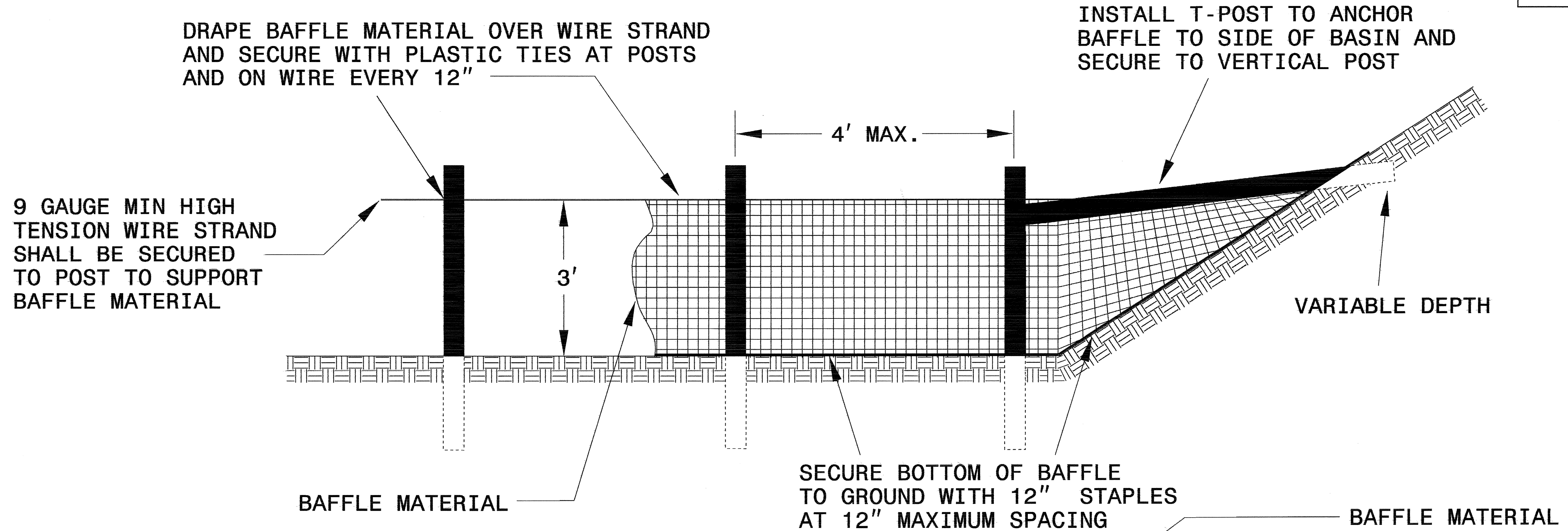
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.





PROJECT REFERENCE NO. B-4465	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# COIR FIBER BAFFLE DETAIL

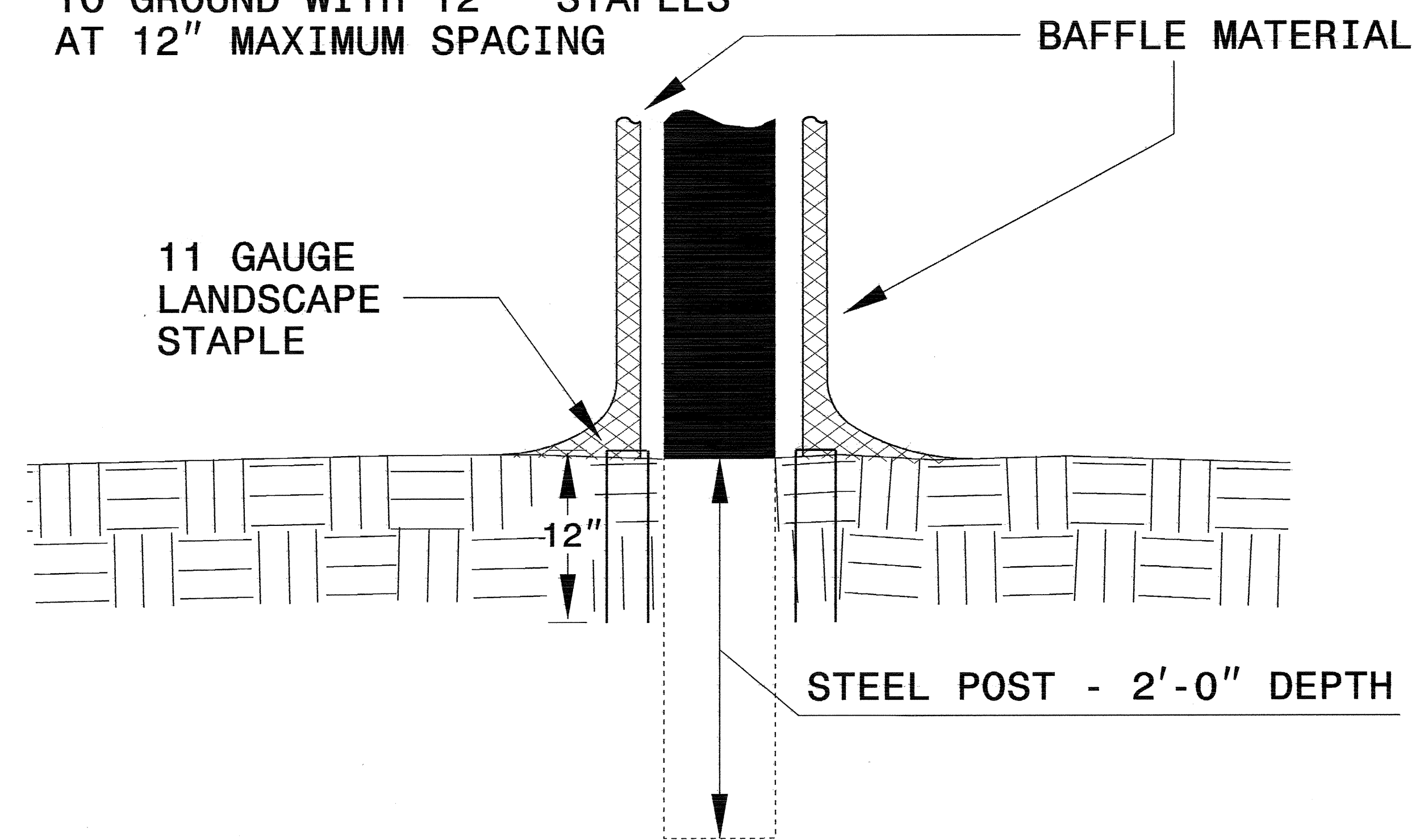


**NOTES:**

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.

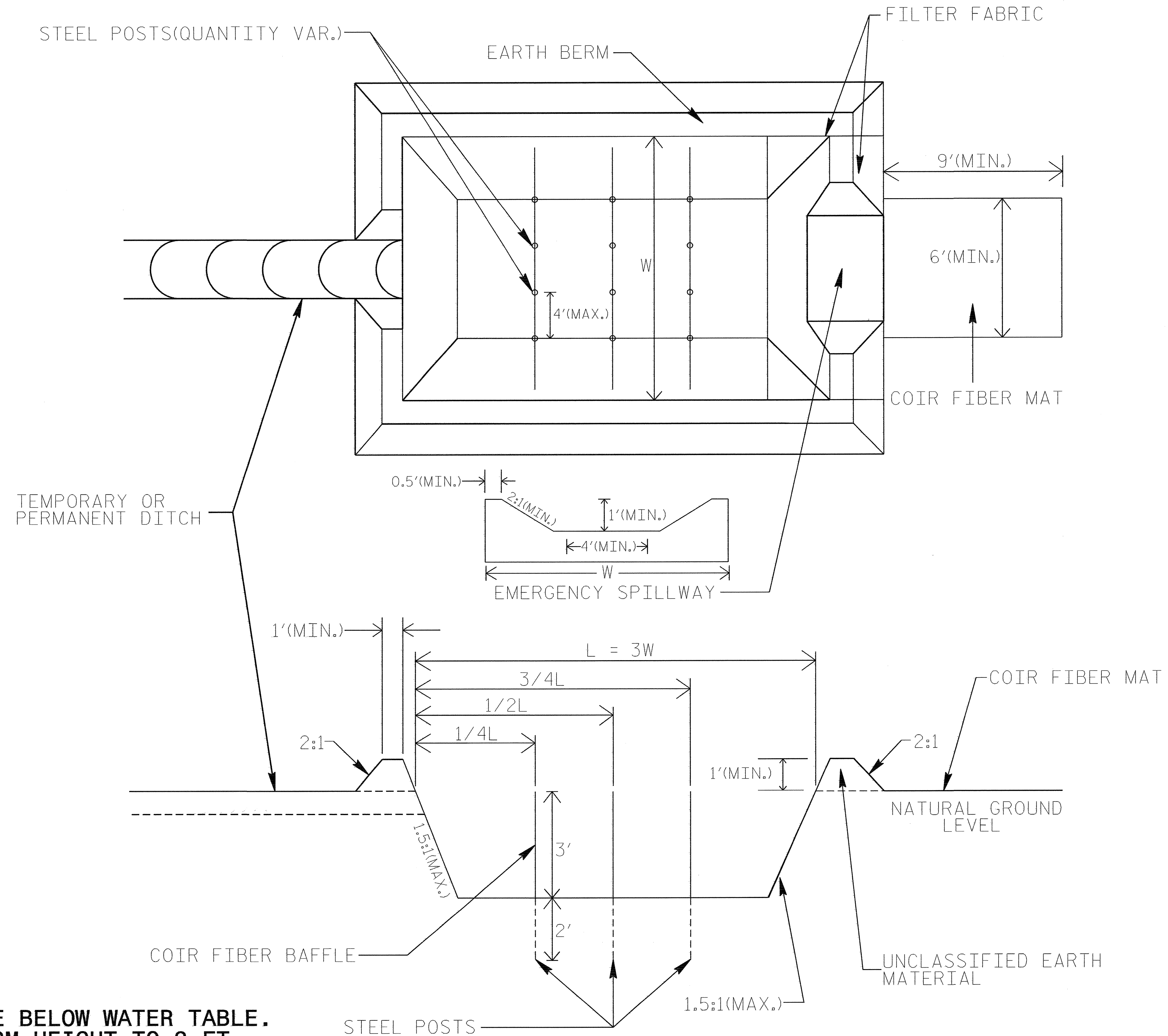
2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF  $\frac{1}{3}$  THE BASIN LENGTH.

3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.

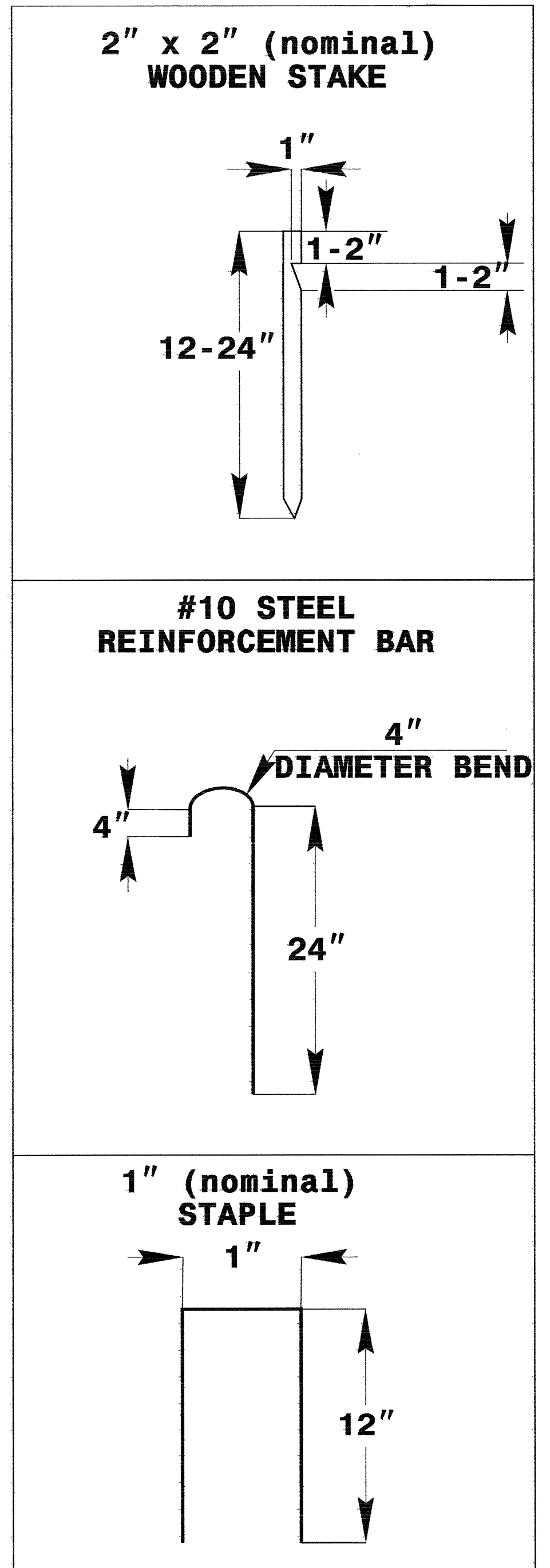


# INFILTRATION BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. <i>B-4465</i>	SHEET NO. <i>EC-2B</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



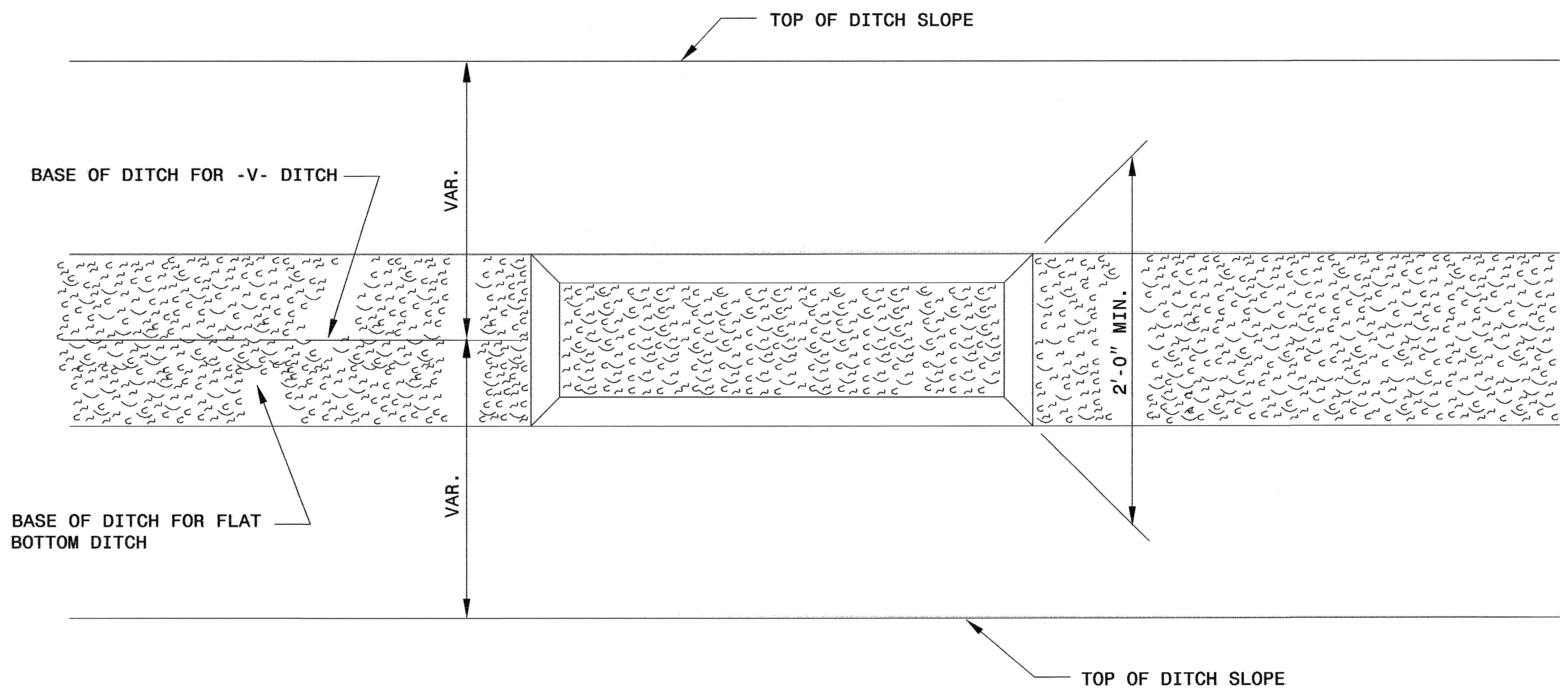
- NOTES:**
1. DO NOT EXCAVATE BELOW WATER TABLE.
  2. LIMIT EARTH BERM HEIGHT TO 3 FT.
  3. AVOID COMPACTING BOTTOM OF BASIN.
  4. THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
  5. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.



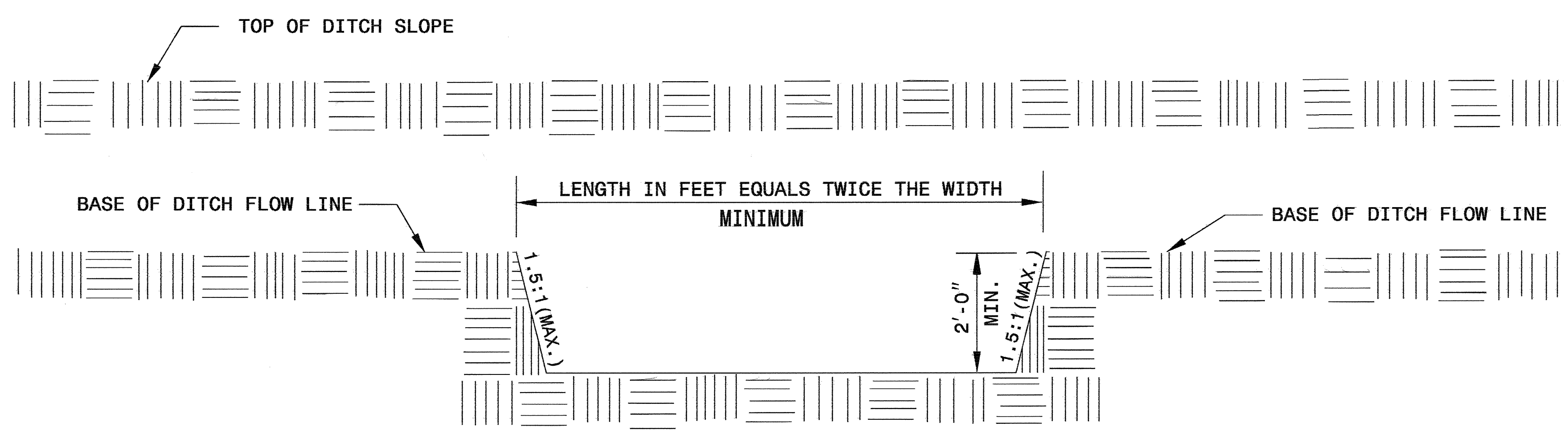
**COIR FIBER MAT ANCHOR OPTIONS**

PROJECT REFERENCE NO. B-4465	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SILT BASIN 'B' DETAIL



PLAN

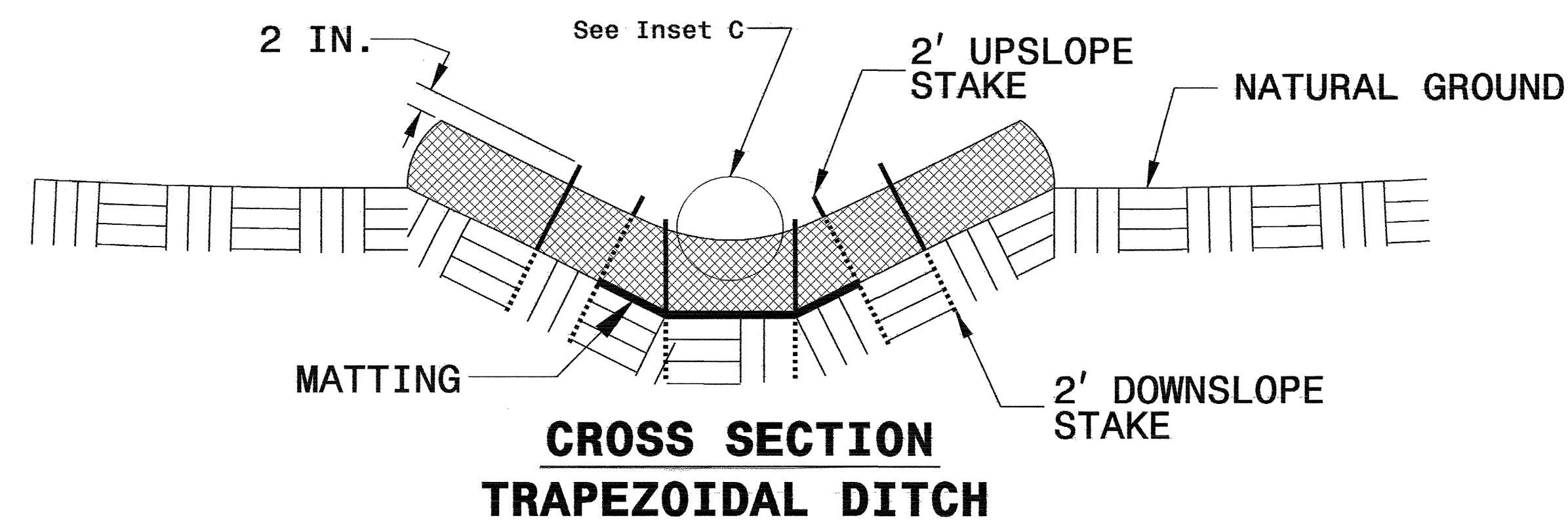
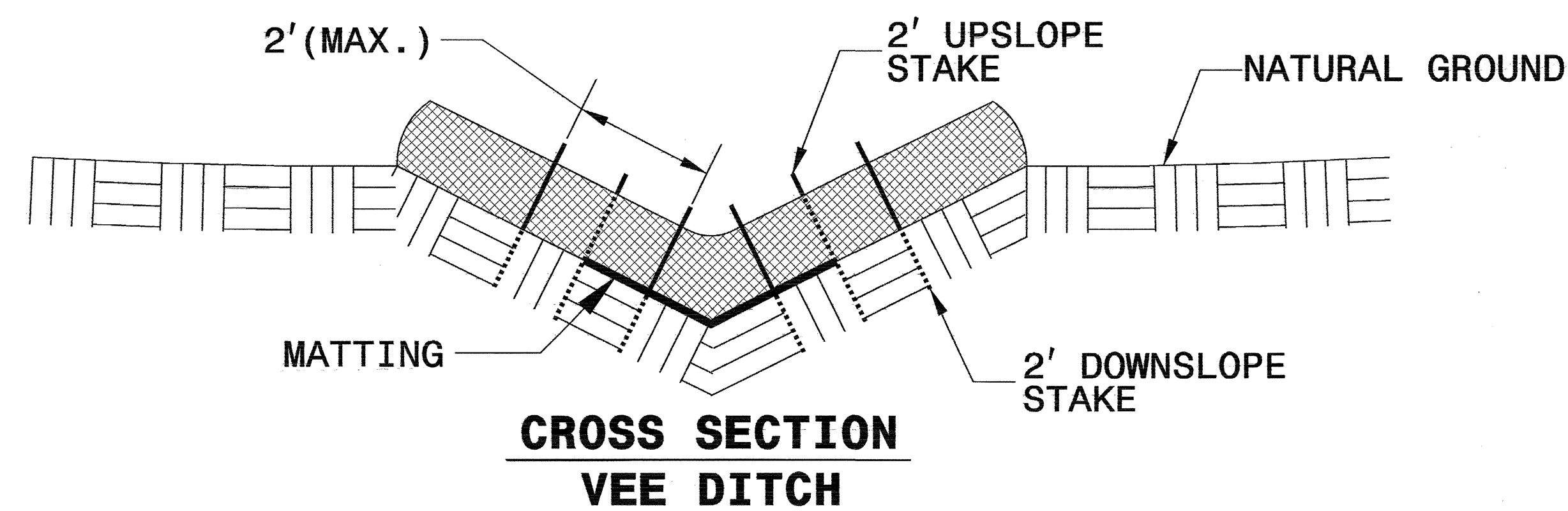
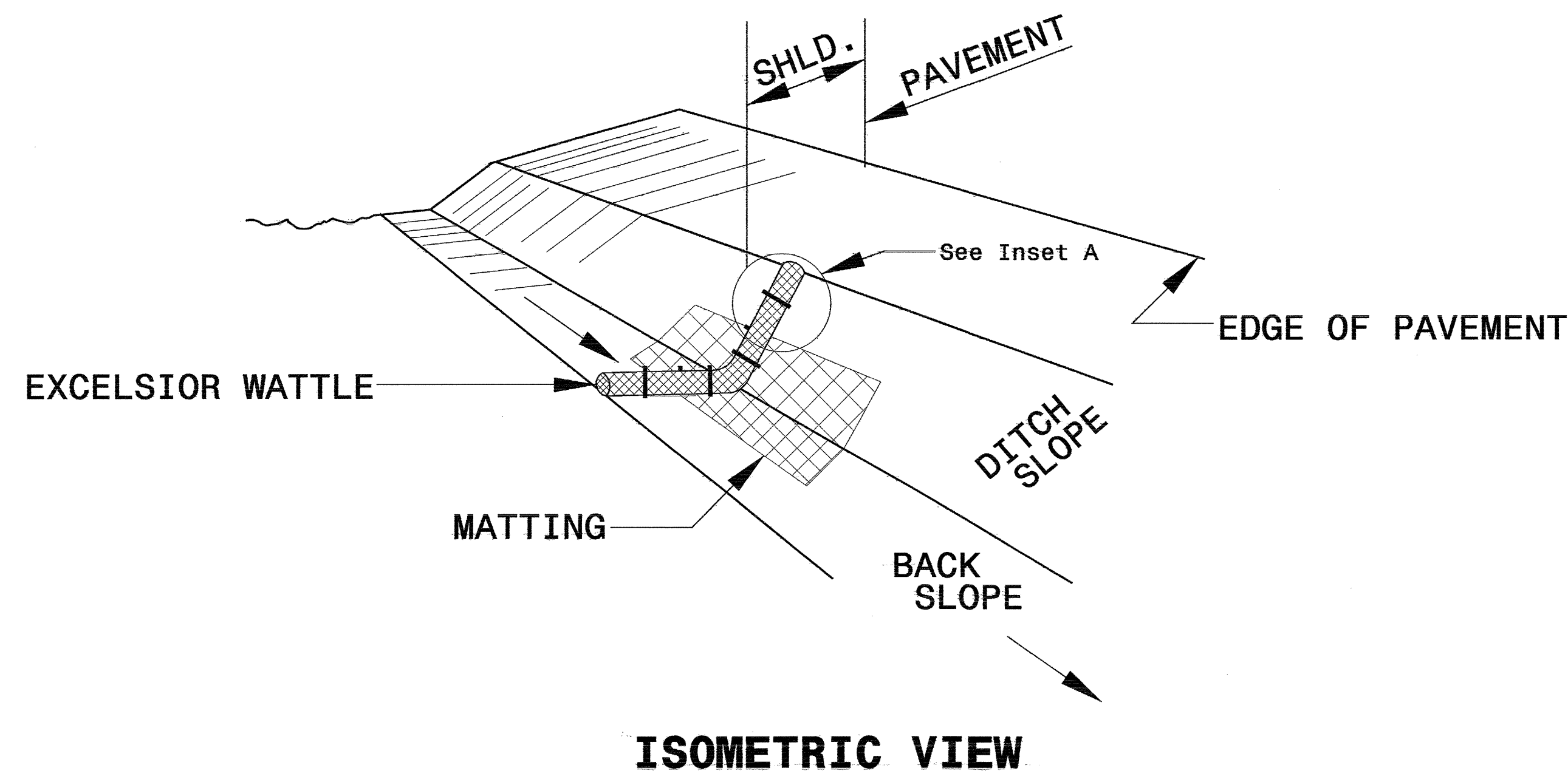


ELEVATION



PROJECT REFERENCE NO. B-4465	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE DETAIL



**NOTES:**

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. 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.

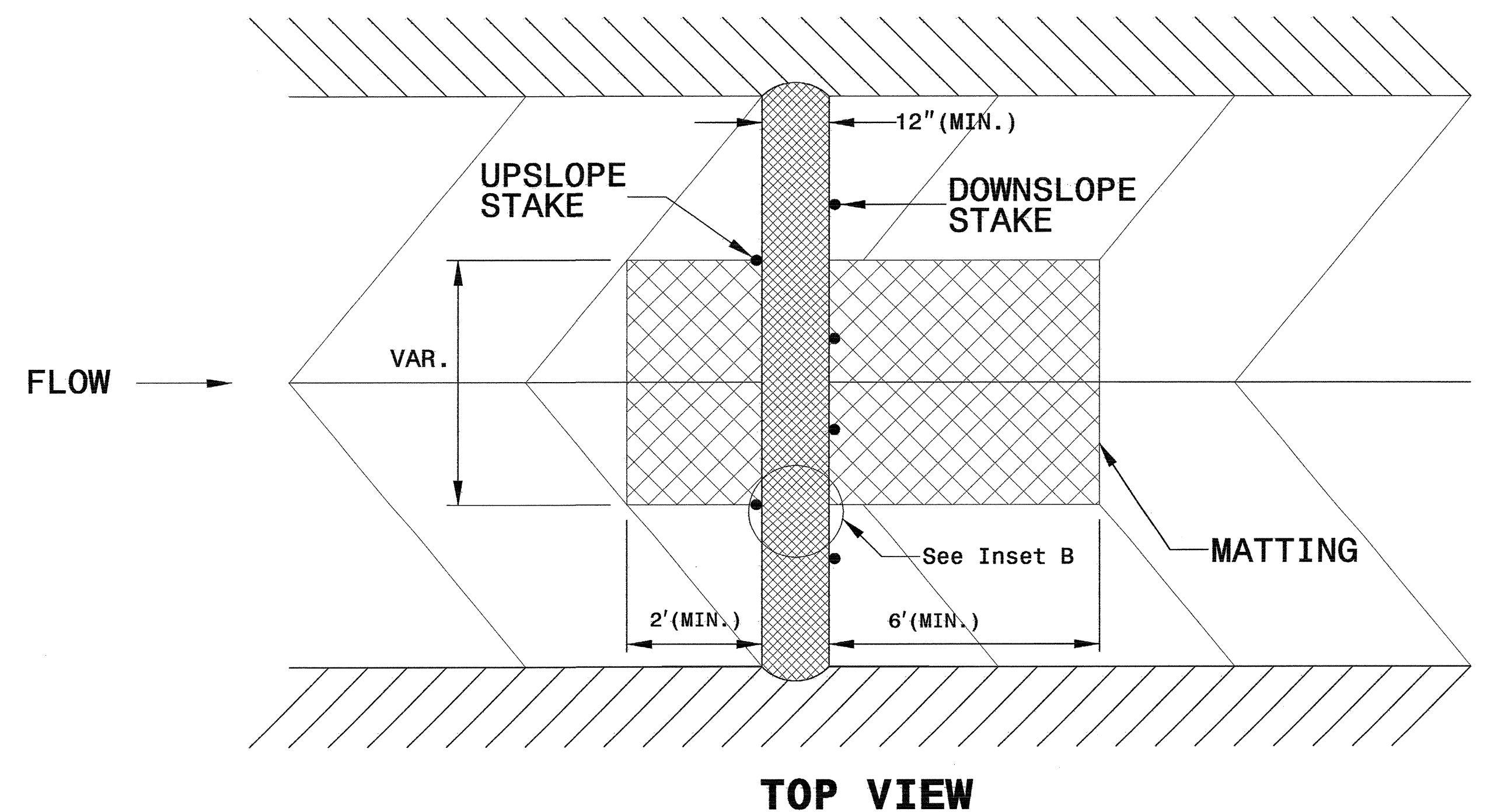
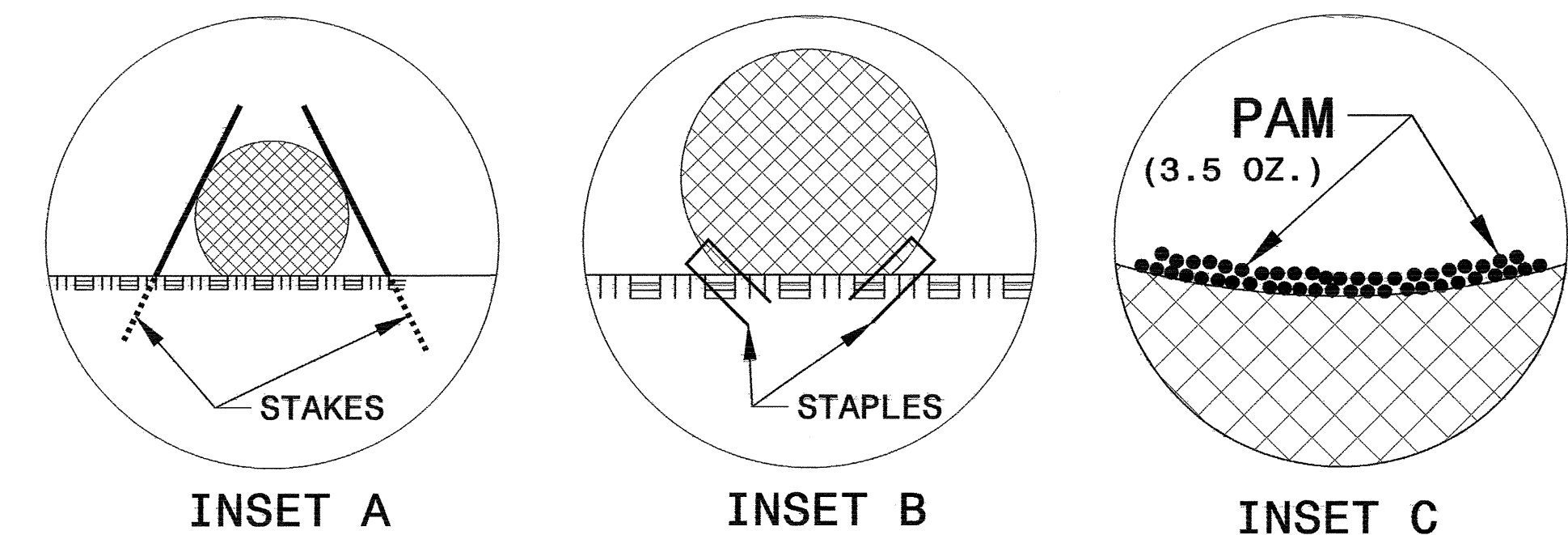
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



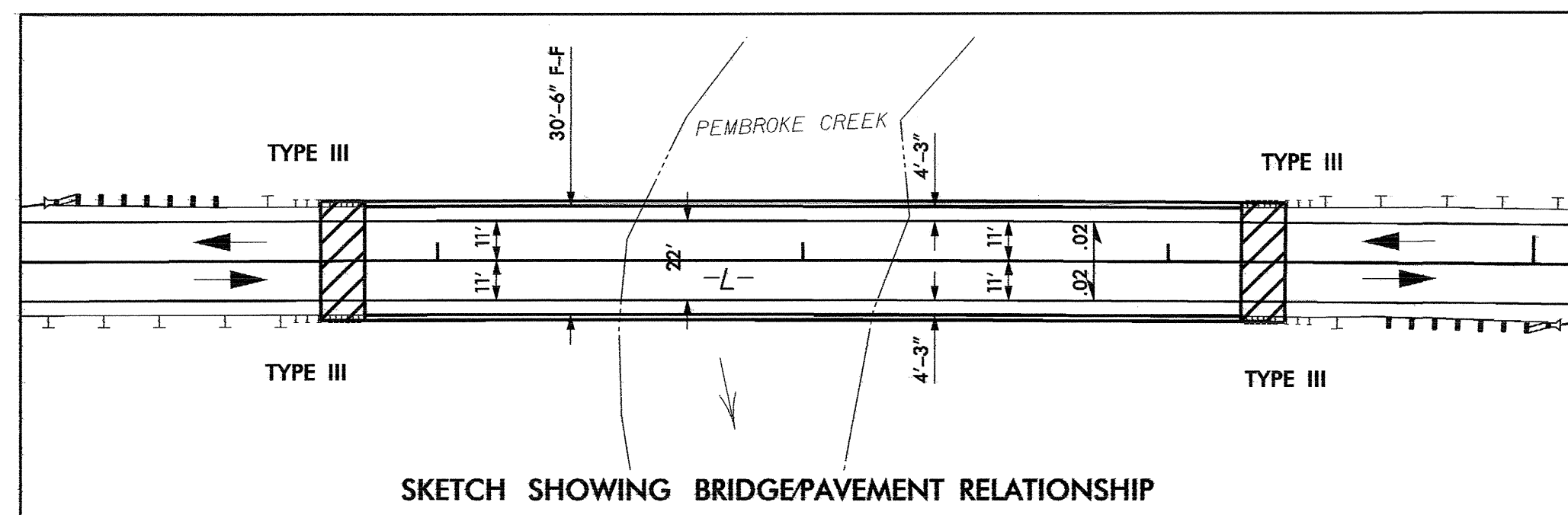




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CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4

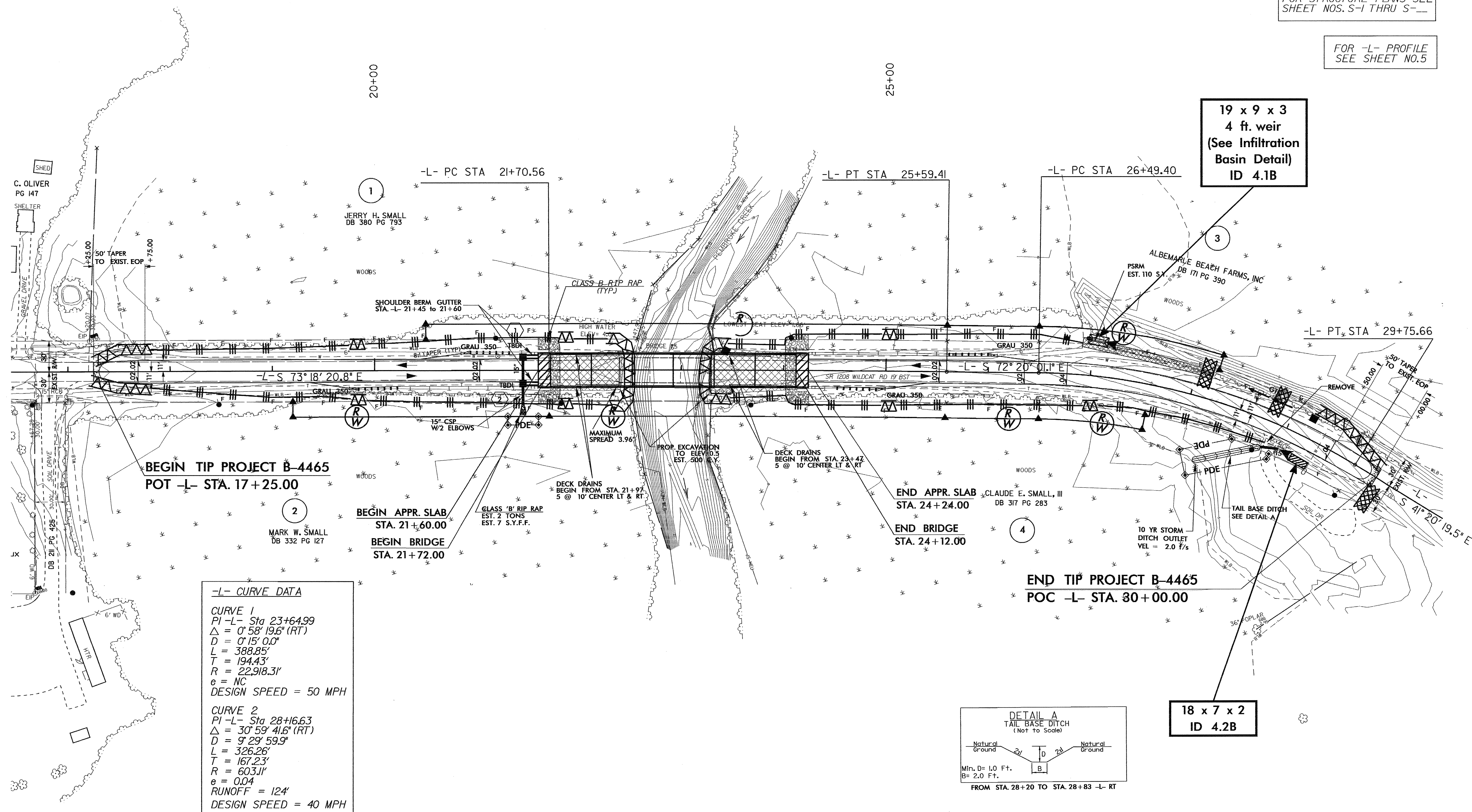
NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.



PROJECT REFERENCE NO. B-4465	SHEET NO. EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

FOR STRUCTURE PLANS SEE  
SHEET NOS. S-1 THRU S-\_\_\_

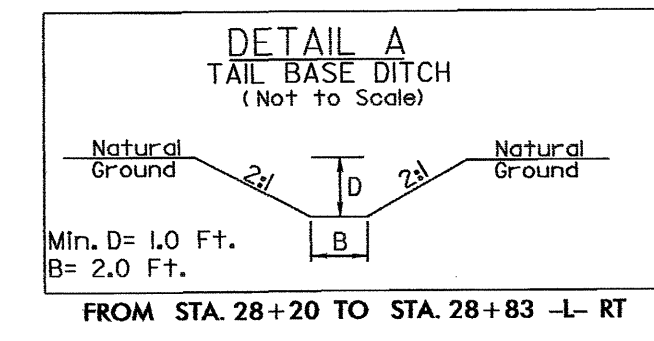
FOR -L- PROFILE  
SEE SHEET NO.5



**-L- CURVE DATA**

**CURVE 1**  
 PI -L- Sta 23+64.99  
 $\Delta = 0^\circ 58' 19.6''$  (RT)  
 $D = 0^\circ 15' 0.0''$   
 $L = 388.85'$   
 $T = 194.43'$   
 $R = 22,918.31'$   
 $e = NC$   
 DESIGN SPEED = 50 MPH

**CURVE 2**  
 PI -L- Sta 28+16.63  
 $\Delta = 30^\circ 59' 41.6''$  (RT)  
 $D = 9^\circ 29' 59.9''$   
 $L = 326.26'$   
 $T = 167.23'$   
 $R = 603.11'$   
 $e = 0.04$   
 RUNOFF = 124'  
 DESIGN SPEED = 40 MPH



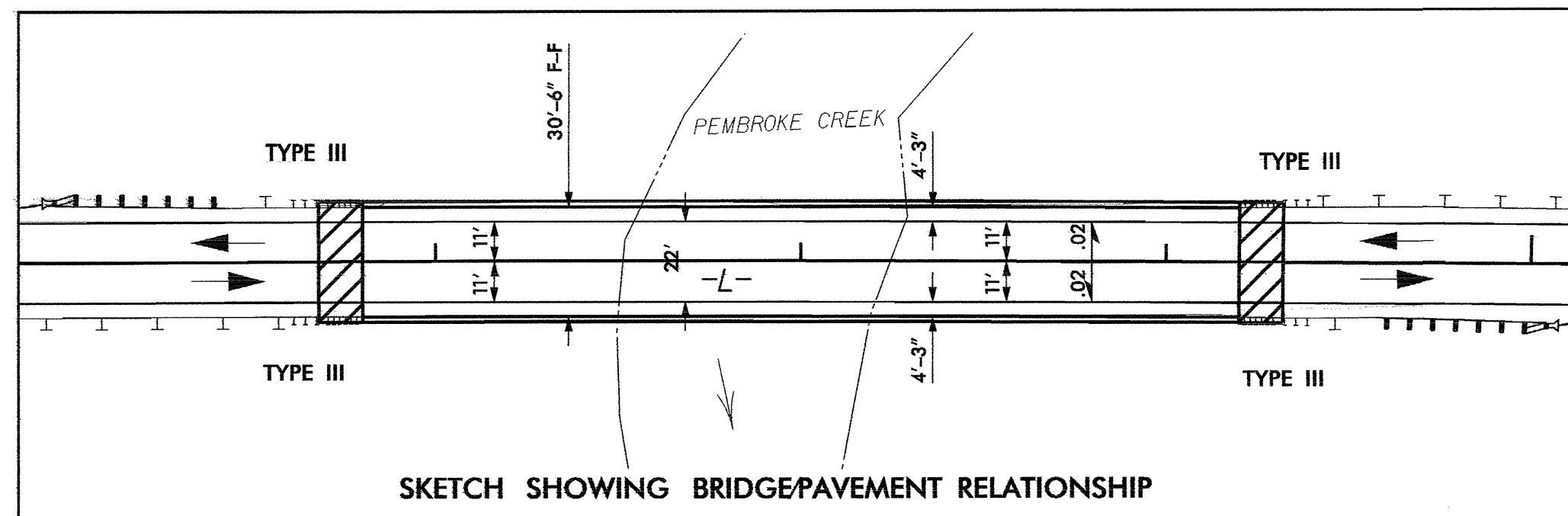
18 x 7 x 2  
ID 4.2B



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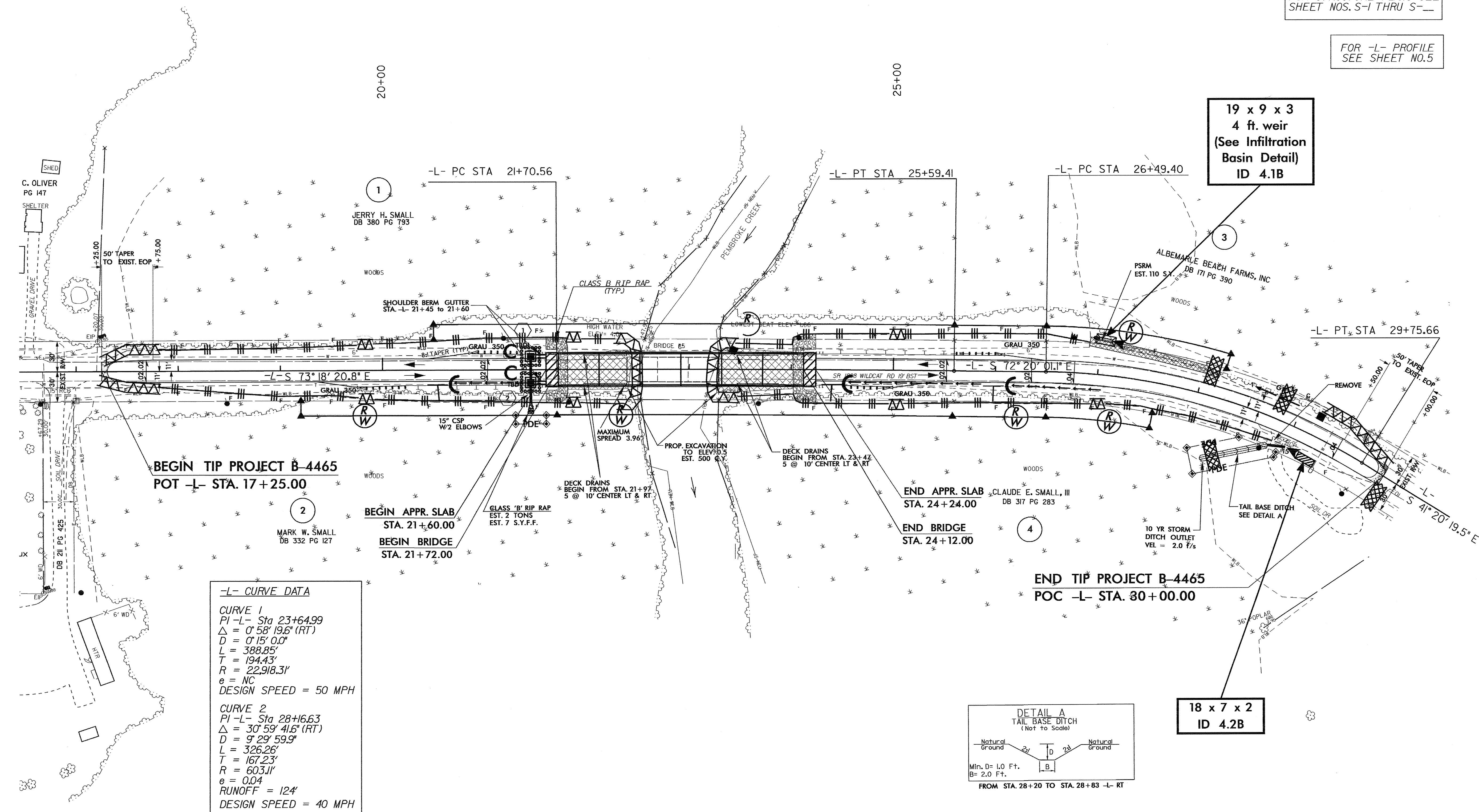
PROJECT REFERENCE NO. B-4465	SHEET NO. EC-5/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



Place Matting for Erosion Control on Slopes as Work Allows.

FOR STRUCTURE PLANS SEE SHEET NOS. S-1 THRU S-\_\_\_

FOR -L- PROFILE SEE SHEET NO.5



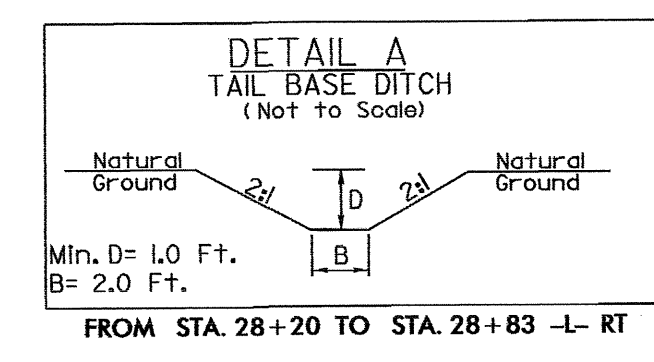
19 x 9 x 3  
4 ft. weir  
(See Infiltration Basin Detail)  
ID 4.1B

18 x 7 x 2  
ID 4.2B

**-L- CURVE DATA**

**CURVE 1**  
 PI -L- Sta 23+64.99  
 $\Delta = 0^\circ 58' 19.6''$  (RT)  
 D = 0' 15' 0.0"  
 L = 388.85'  
 T = 194.43'  
 R = 22,918.31'  
 e = NC  
 DESIGN SPEED = 50 MPH

**CURVE 2**  
 PI -L- Sta 28+16.63  
 $\Delta = 30^\circ 59' 41.6''$  (RT)  
 D = 9' 29' 59.9"  
 L = 326.26'  
 T = 167.23'  
 R = 603.11'  
 e = 0.04  
 RUNOFF = 124'  
 DESIGN SPEED = 40 MPH



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