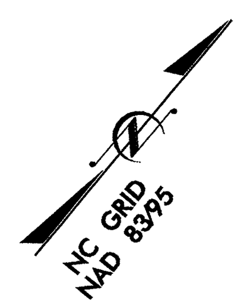
TIP PROJECT: B-4144

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4144	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

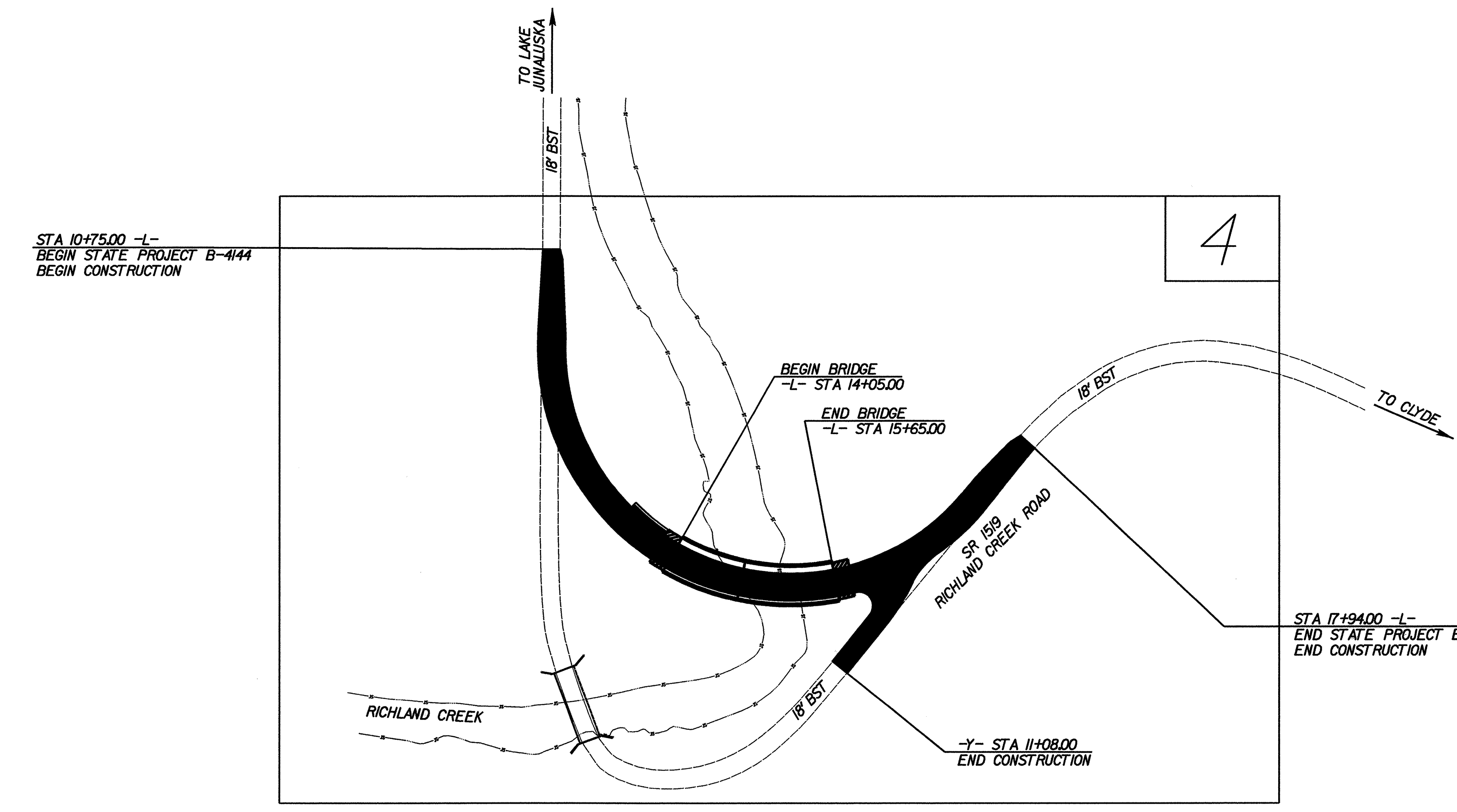
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL



HAYWOOD COUNTY

LOCATION: BRIDGE NO. 211 OVER RICHLAND CREEK ON SR 1519 (RICHLAND CREEK ROAD)

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



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
	Streambank Reforestation	
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.01	Riser Basin	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
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	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	

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.

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

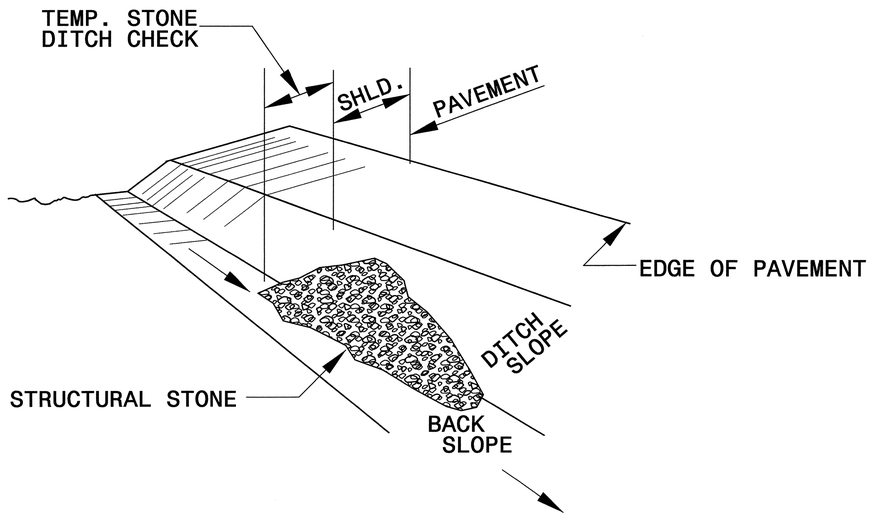
Roadway Standard Drawings

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 revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01	Temporary Silt 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
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.05	Temporary Diversion	1635.01	Rock Pipe Inlet Sediment Trap Type A

PROJECT REFERENCE NO.	SHEET NO.
B-4144	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

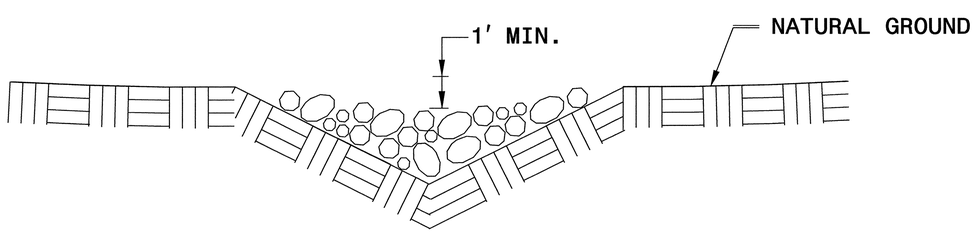


ISOMETRIC VIEW

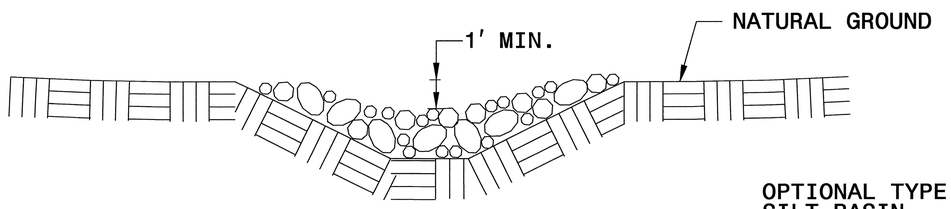
NOTES:

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

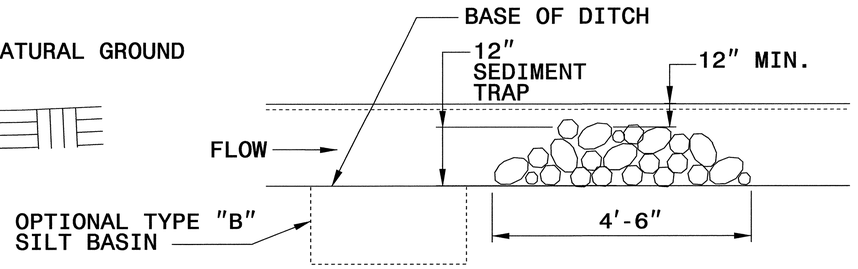
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



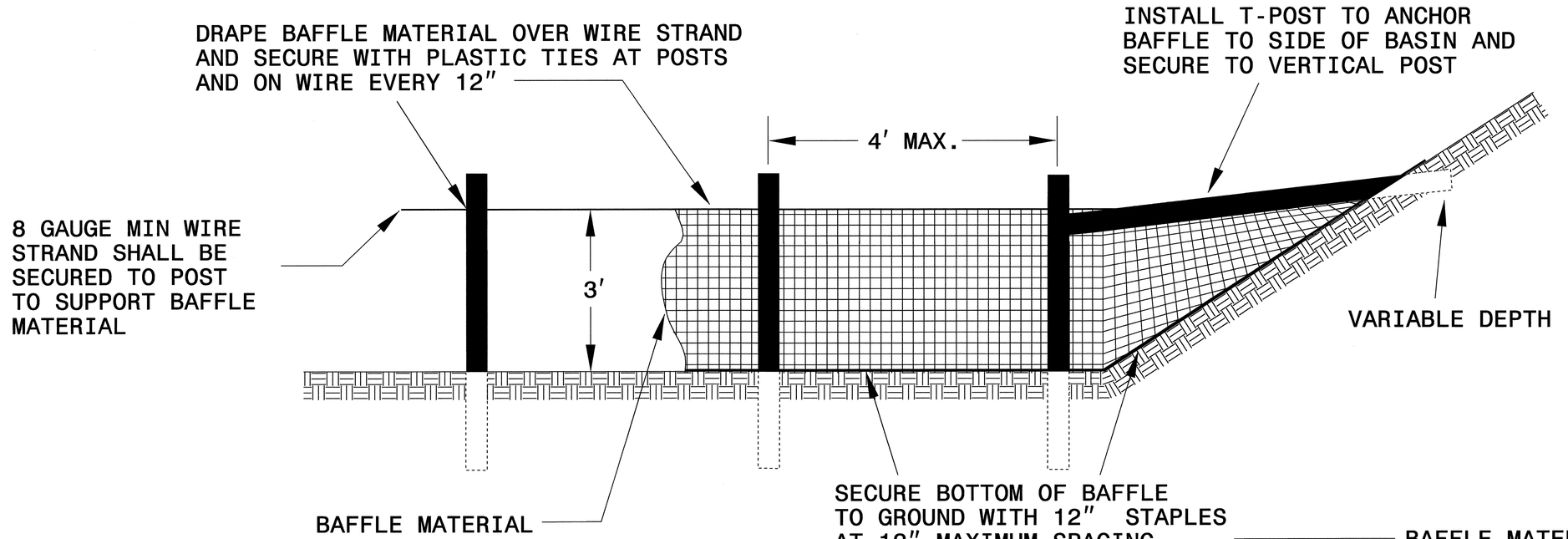
CROSS SECTION TRAPEZOIDAL DITCH

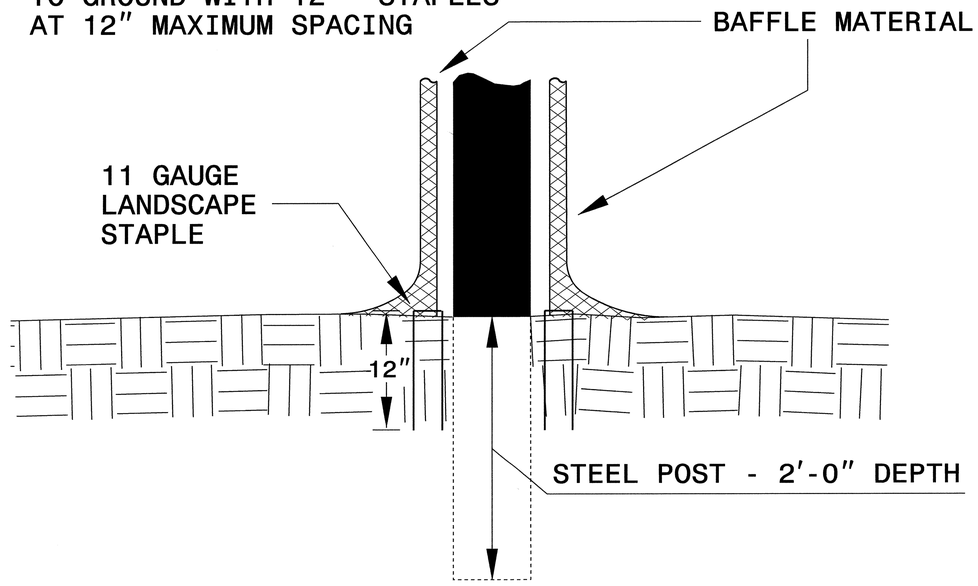


ELEVATION VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-4144	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



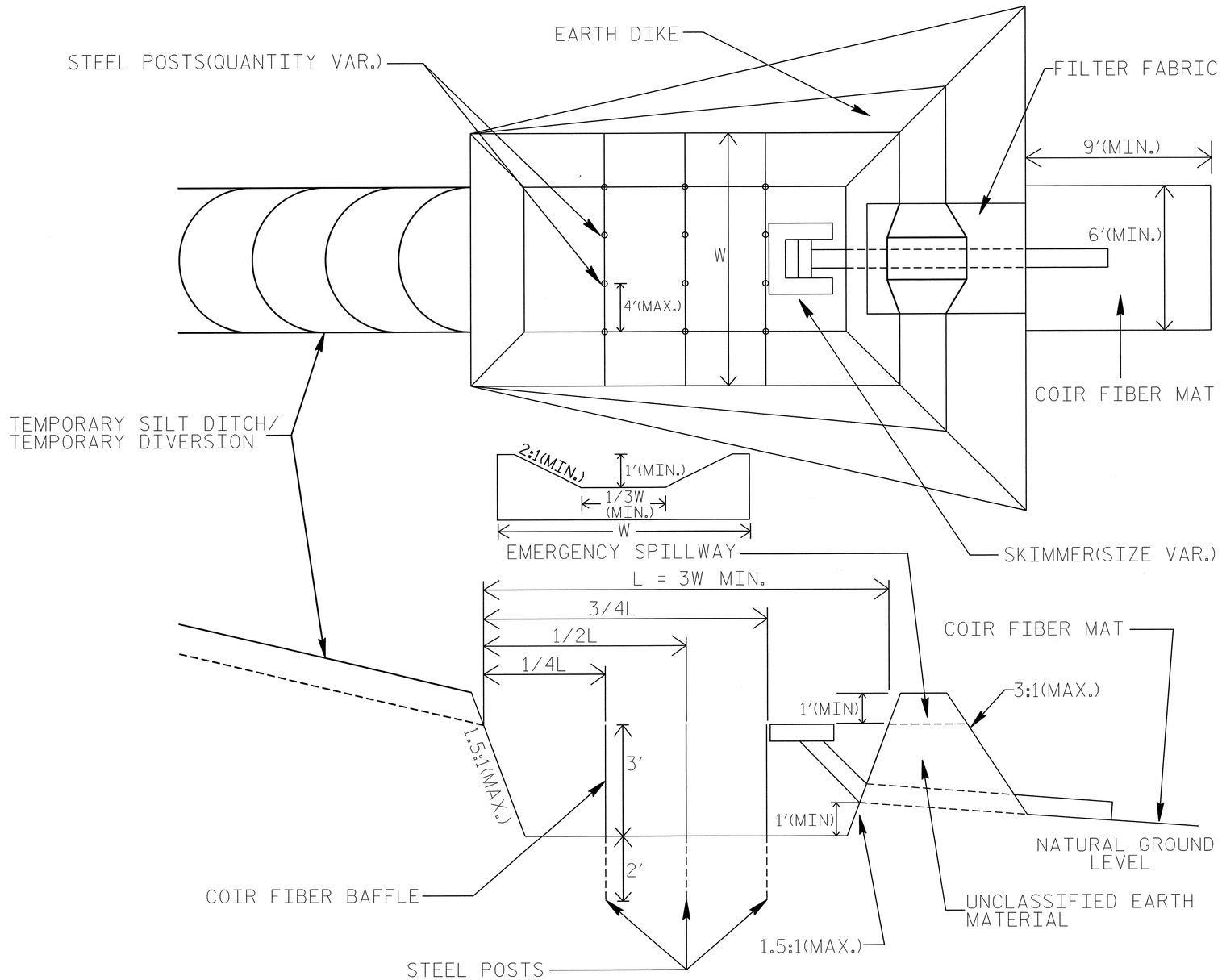


BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12″ LANDSCAPE STAPLES

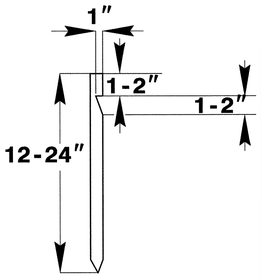
NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.

SKIMMER BASIN WITH BAFFLES DETAIL

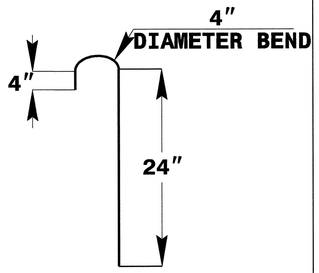
PROJECT REFERENCE NO.	SHEET NO.
B-4144	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



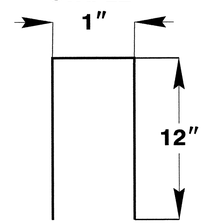
2" x 2" (nominal)
WOODEN STAKE



#10 STEEL
REINFORCEMENT BAR



1" (nominal)
STAPLE



COIR FIBER MAT ANCHOR OPTIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4144	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

PERMANENT SOIL REINFORCEMNT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	17+50	18+70	LT	85
			SUBTOTAL		85
	ADDITIONAL PSRM TO BE INSTALLED				95
				TOTAL	180
				SAY	180

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4144	EC-4/CONST.4
R/W 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

ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

NOTE: UTILIZE TEMPORARY ROCK SILT CHECK TYPE – A, SPECIAL STILLING BASIN, AND SKIMMER BASIN WITH BAFFLES AS STILLING BASIN WHERE APPLICABLE.

10 x 36 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
12 ft. weir
ID 4.2CG

22 x 10 x 3
4' weir
ID 4.4F

30 x 5.5 x 3
4' weir
ID 4.8CG

35 x 10 x 3
ID 4.1CG

50 x 10 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
6 ft. weir
ID 4.1F

70 x 12 x 3
ID 4.4CG

-L-

PI Sta 18+06.37
Δ = 141° 12' 09.0" (LT)
D = 25° 27' 53.2"
L = 554.50'
T = 638.97'
R = 225.00'
SE = 0.045
R0 = 74.25'

PI Sta 17+64.45
Δ = 4° 52' 23.2" (RT)
D = 5° 43' 46.5"
L = 85.05'
T = 42.55'
R = 1,000.00'
SE = 0.060
R0 = 99'

PI Sta 18+49.75
Δ = 16° 14' 21.3" (RT)
D = 19° 05' 54.9"
L = 85.03'
T = 42.80'
R = 300.00'
SE = EXISTING
R0 = EXISTING

PI Sta 19+65.75
Δ = 44° 34' 08.5" (RT)
D = 31° 49' 51.6"
L = 140.02'
T = 73.77'
R = 180.00'
SE = EXISTING
R0 = EXISTING

-Y-

PI Sta 10+29.75
Δ = 61° 13' 25.8" (RT)
D = 190° 59' 09.4"
L = 32.06'
T = 17.75'
R = 30.00'
SE = 0.025
R0 = 30'

NC GRID
NAD 83-95

SKETCH SHOWING BRIDGE /PAVEMENT RELATIONSHIP

$FILE$

$DATE$

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4144	EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE TEMPORARY ROCK SILT CHECK TYPE – A, SPECIAL STILLING BASIN, AND SKIMMER BASIN WITH BAFFLES AS STILLING BASIN WHERE APPLICABLE.

10 x 36 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
12 ft. weir
ID 4.2CG

22 x 10 x 3
4' weir
ID 4.4F

28 x 5 x 3
4' weir
ID 4.3F

50 x 10 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
6 ft. weir
ID 4.1F

70 x 12 x 3
ID 4.6F

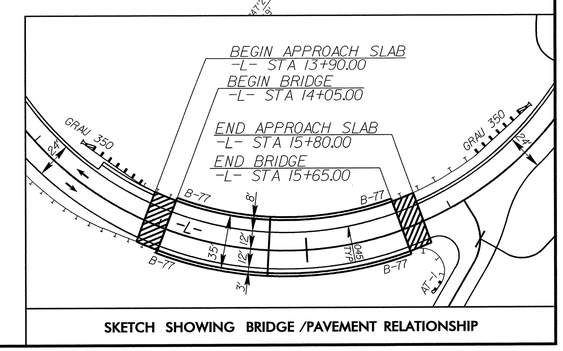
25 x 8 x 3
ID 4.5F

-L-

PI Sta 18+06.37	PI Sta 17+64.45
△ = 141° 12' 09.0" (LT)	△ = 4° 52' 23.2" (RT)
D = 25° 27' 53.2"	D = 5° 43' 46.5"
L = 554.50'	L = 85.05'
T = 638.97'	T = 42.55'
R = 225.00'	R = 1,000.00'
SE = 0.045	SE = 0.060
RO = 74.25'	RO = 99'
PI Sta 18+49.75	PI Sta 19+65.75
△ = 16° 14' 21.3" (RT)	△ = 44° 34' 08.5" (RT)
D = 19° 05' 54.9"	D = 3° 49' 51.6"
L = 85.03'	L = 140.02'
T = 42.80'	T = 73.77'
R = 300.00'	R = 180.00'
SE = EXISTING	SE = EXISTING
RO = EXISTING	RO = EXISTING

-Y-

PI Sta 10+29.75
△ = 6° 13' 25.8" (RT)
D = 190° 59' 09.4"
L = 32.06'
T = 17.75'
R = 30.00'
SE = 0.025
RO = 30'



SKETCH SHOWING BRIDGE /PAVEMENT RELATIONSHIP

$FILE$

$DATE$