TIP PROJECT: B-4265

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4265	EC-1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	

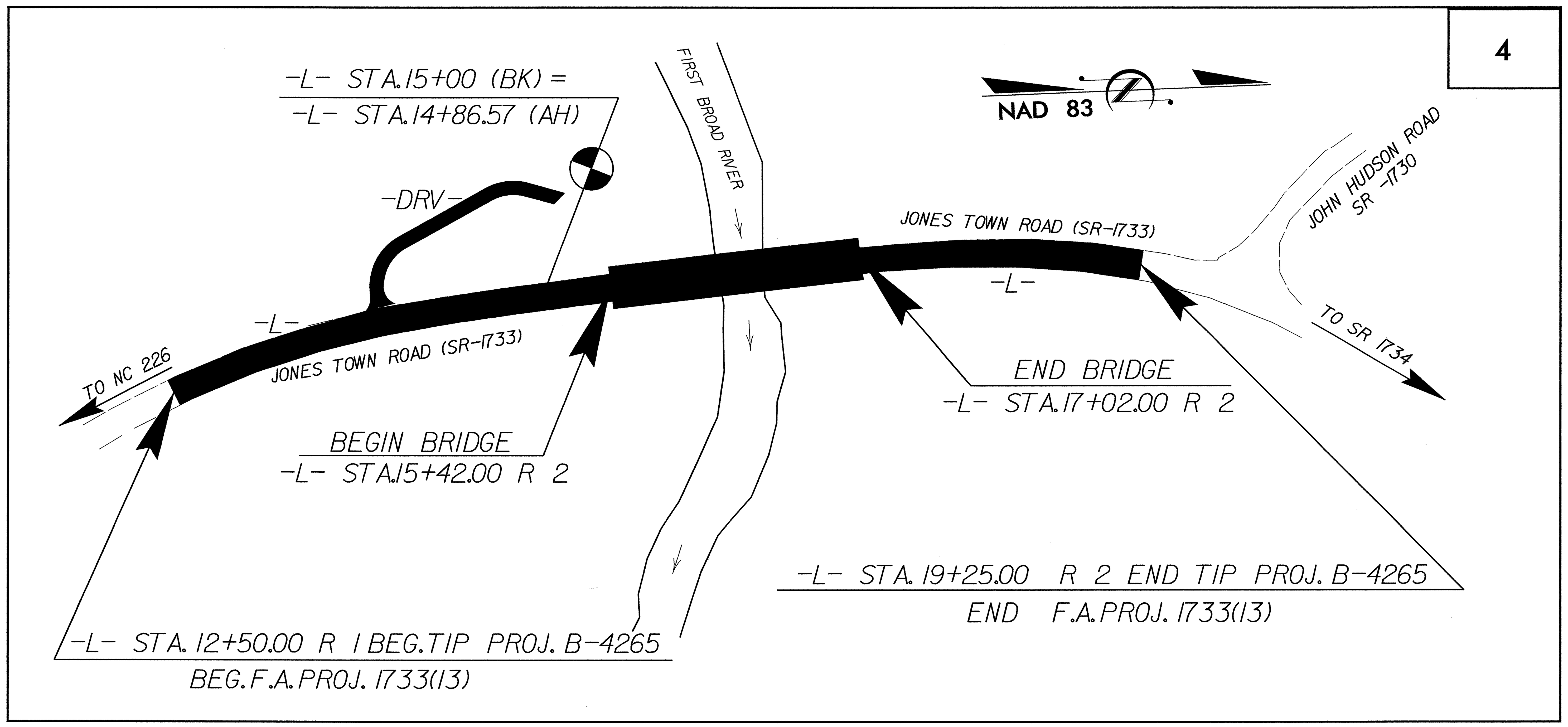
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

RUTHERFORD COUNTY

LOCATION: REPLACEMENT OF BRIDGE NO. 202 ON SR 1733 (JONES TOWN ROAD) OVER FIRST BROAD RIVER

TYPE OF WORK: RESURFACING, PAVING, GRADING, DRAINAGE STRUCTURE, STRUCTURE REMOVAL AND GUARDRAIL



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
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	
	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	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.

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

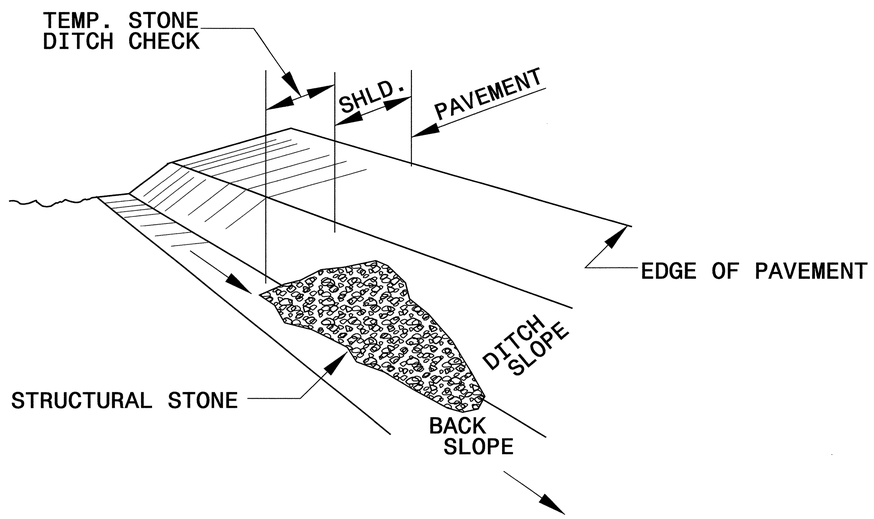
Roadway Standard Drawings

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.

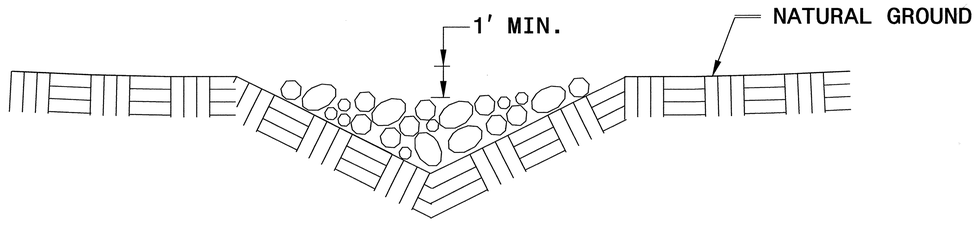
1605.01 Temporary Silt Fence
1607.01 Gravel Construction Entrance
1630.05 Temporary Diversion
1630.06 Special Stilling Basin
1632.03 Rock Inlet Sediment Trap Type C
1633.01 Temporary Rock Silt Check Type A

PROJECT REFERENCE NO.	SHEET NO.
B-4265	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

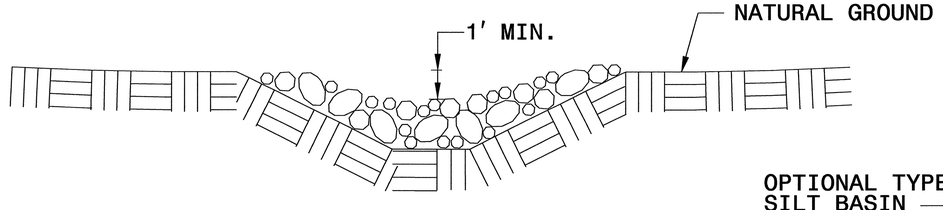
TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH

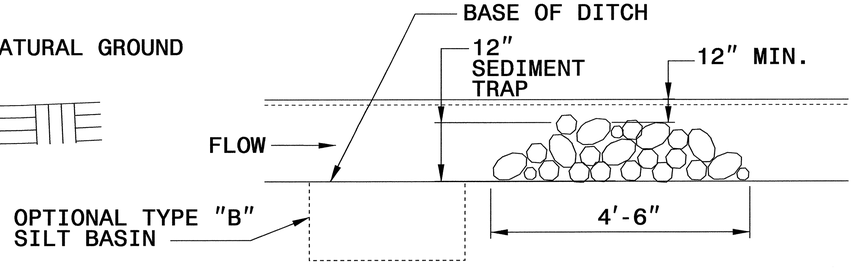


CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

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

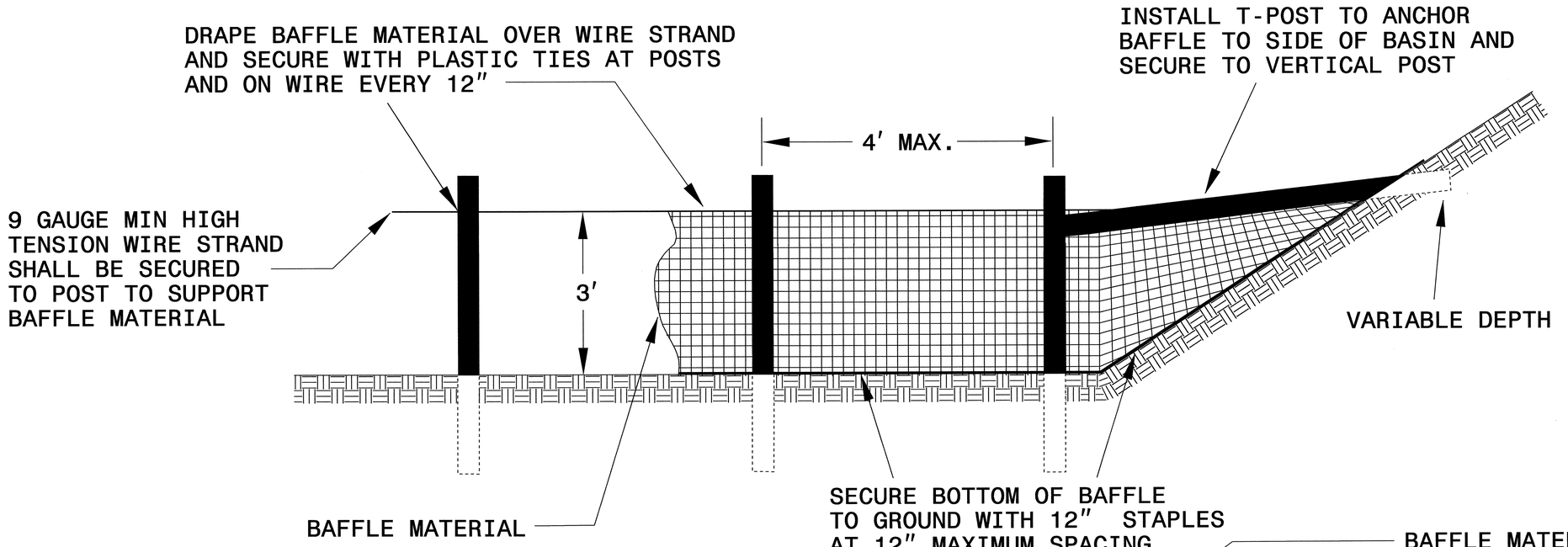
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.

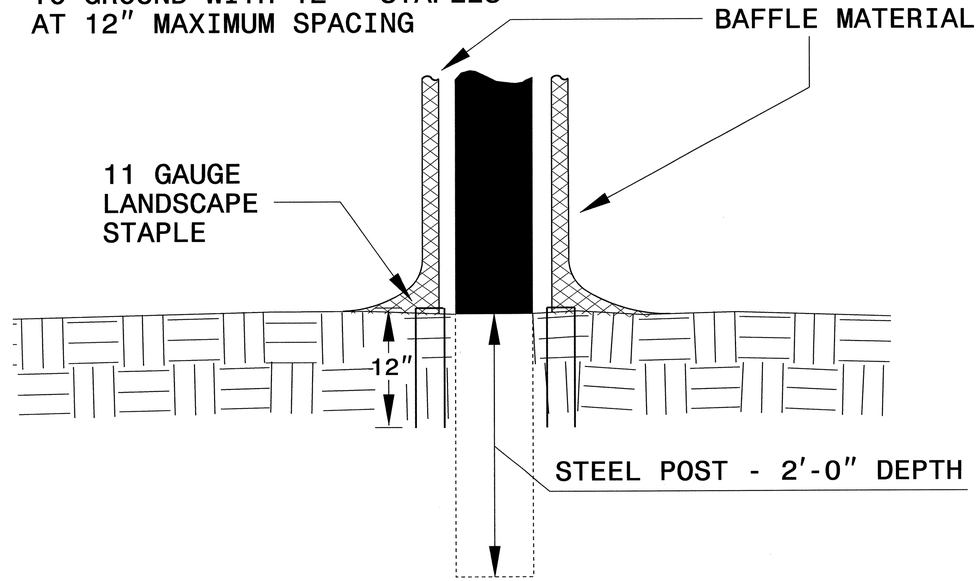


ELEVATION VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-4265	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



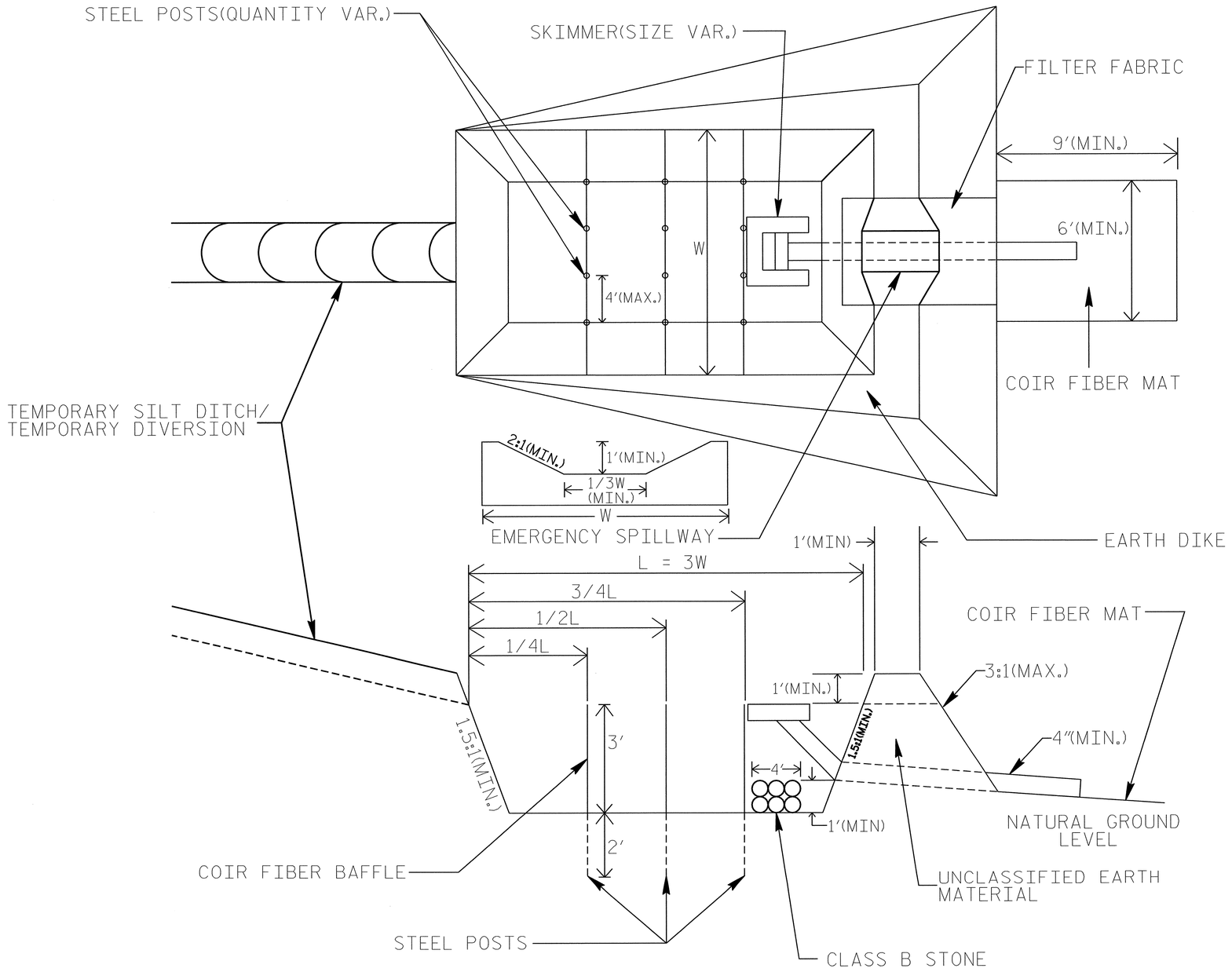


BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12″ LANDSCAPE STAPLES

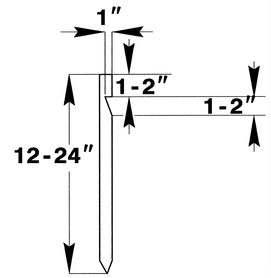
NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.

PROJECT REFERENCE NO.	SHEET NO.
B-4265	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

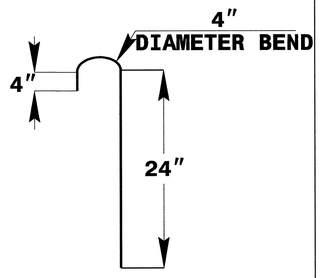
SKIMMER BASIN WITH BAFFLES DETAIL



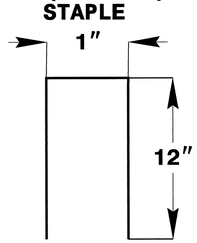
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

NOTES:
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.

PROJECT REFERENCE NO.	SHEET NO.
B-4265	EC-3

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	13+00	15+00	RT	100
4	-L-	13+00	15+00	LT	100
				SUBTOTAL	200
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					1225
				TOTAL	1425
				SAY	1500

MATTING FOR EROSION CONTROL

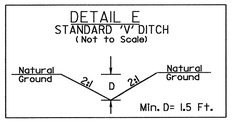
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)

PROJECT REFERENCE NO. B-4265
SHEET NO. EC-4/CONST.4
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DETAIL E
STANDARD 'V' DITCH
(Not to Scale)
Natural Ground
Min. D= 1.5 Ft.
L
PI Sta 13+31.69
△ = 26° 02' 56.2" (RT)
D = 8° 21' 51.7"
L = 311.43'
T = 158.45'
R = 685.00'
SE = SEE PLANS
RO = SEE PLANS
PI Sta 19+28.71
△ = 42° 40' 26.6" (RT)
D = 11° 56' 11.8"
L = 357.51'
T = 187.50'
R = 480.00'
SE = SEE PLANS
RO = SEE PLANS
35 x 17 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
10 ft. weir
ID 4.3B
DETAIL A
LATERAL BASE DITCH
(Not to Scale)
Type of Liner= CLASS 'I' Rip-Rap
FROM -L- STA.16+67 TO STA.18+00 LT
DETAIL B
RIP RAP AT EMBANKMENT
(Not to Scale)
Est. 20 Tons
Type of Liner= CLASS 'I' Rip-Rap
DETAIL D
SPECIAL CUT DITCH
(Not to Scale)
Min. D= 1.5 Ft.
FROM -L- STA.13+00 TO STA.14+00 LT.
FROM -L- STA.13+00 TO STA.14+00 RT
24 x 11 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 4.1C
NAD 83
DETAIL C
STANDARD BASE DITCH
(Not to Scale)
Type of Liner= PSRM
FROM -L- STA.18+00 TO STA.19+00 LT.
DRV
PI Sta 10+39.98
△ = 74° 50' 50.1" (RT)
D = 190° 59' 09.4"
L = 39.19'
T = 22.96'
R = 30.00'
SE = NC
RO = SEE PLANS
PI Sta 11+25.16
△ = 44° 37' 10.8" (RT)
D = 190° 59' 09.4"
L = 23.36'
T = 12.31'
R = 30.00'
SE = NC
RO = SEE PLANS
-L- STA.12+50.00
BEGIN STATE PROJECT B-4265
BEGIN F.A.PROJECT BRZ - 1733(13)
-L- STA.19+25.00 R2
END STATE PROJECT B-4265
END F.A.PROJECT BRZ - 1733(13)
-DRV- STA.11+55.73
END DRIVEWAY
END BRIDGE
-L- STA.17+02.00 R 2
BEGIN GRADE
-L- STA.14+50.00 R 1
END GRADE
-L- STA.17+40.00 R 2
BEGIN BRIDGE
-L- STA.15+42.00 R 2
-L- POT Sta. 10+00.00
-L- POT Sta. 23+90.25
EQUATION:
-L- Sta 15+00.00 BK =
-L- Sta 14+86.57 AH
24 x 12 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 4.2B
24 x 12 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 4.4B
NOTE: UTILIZE SPECIAL STILLING BASIN WHERE APPLICABLE.
ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS
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.
PROP APPROACH SLAB
SEE SHEET 5 FOR -DRV- PROFILE
FIRST BROAD RIVER
JONES TOWN ROAD (SR-1733)

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4265	EC-5/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL E
STANDARD 'V' DITCH
(Not to Scale)

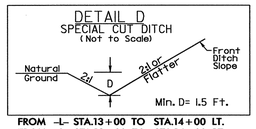


L

PI Sta 13+31.69
△ = 26° 02' 56.2" (RT)
D = 8° 21' 51.7"
L = 311.43'
T = 158.45'
R = 685.00'
SE = SEE PLANS
RO = SEE PLANS

PI Sta 19+28.71
△ = 42° 40' 26.6" (RT)
D = 11° 56' 11.8"
L = 357.51'
T = 187.50'
R = 480.00'
SE = SEE PLANS
RO = SEE PLANS

DETAIL D
SPECIAL CUT DITCH
(Not to Scale)



FROM -L- STA.13+00 TO STA.14+00 LT.
FROM -L- STA.13+00 TO STA.14+00 RT

DRV

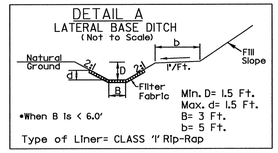
PI Sta 10+39.98
△ = 74° 50' 50.1" (RT)
D = 190° 59' 09.4"
L = 39.19'
T = 22.96'
R = 30.00'
SE = NC
RO = SEE PLANS

PI Sta 11+25.16
△ = 44° 37' 10.8" (RT)
D = 190° 59' 09.4"
L = 23.36'
T = 12.31'
R = 30.00'
SE = NC
RO = SEE PLANS

35 x 17 x 3 1.5 inch Skimmer with 0.875 inch Orifice Diameter 10 ft. weir ID 4.3B

24 x 12 x 3 1.5 inch Skimmer with 0.5 inch Orifice Diameter 4 ft. weir ID 4.5F

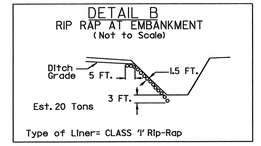
DETAIL A
LATERAL BASE DITCH
(Not to Scale)



•When B Is < 6.0'
Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 3 Ft.
b= 5 Ft.
Type of Liner= CLASS 'I' Rip-Rap

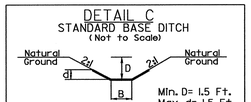
FROM -L- STA.16+67 TO STA.18+00 LT

DETAIL B
RIP RAP AT EMBANKMENT
(Not to Scale)



Est. 20 Tons
Type of Liner= CLASS 'I' Rip-Rap

DETAIL C
STANDARD BASE DITCH
(Not to Scale)



Min. D= 1.5 Ft.
Max. d= 1.5 Ft.
B= 3 Ft.
•When B Is < 6.0'
Type of Liner= PSRM

FROM -L- STA.18+00 TO STA.19+00 LT.

NAD 83

-L- STA.12+50.00
BEGIN STATE PROJECT B-4265
BEGIN F.A.PROJECT BRZ - 1733(13)

-L- STA.19+25.00 R2
END STATE PROJECT B-4265
END F.A.PROJECT BRZ - 1733(13)

-DRV- STA.11+55.73
END DRIVEWAY

-DRV- PTSta. 11+36.21

-DRV- PCSta. 11+12.85

-DRV- PTSta. 10+56.21

-DRV- PCSta. 10+17.02

-DRV- POTSta. 10+00.00

-L- POCSta.13+94.07

-L- POTSta. 10+00.00

SPECIAL CUT DITCH GRASS LINED SEE DETAIL 'D'

3 FT. LATERAL BASEDITCH CLASS 'I' RIP RAP SEE DETAIL 'A'

RIP RAP @ EMBANKMENT SEE DETAIL 'B'

STANDARD BASE DITCH PSRM LINED SEE DETAIL 'C' @ 30 CY EXC. @ 100 SY FABRIC

END BRIDGE
-L- STA.17+02.00 R 2

+84.67 -L- 55.00'

+41.21 R2 -L- 45.00'

+50.00 -L- EXIST R/W, 45.00'

+84.67 -L- 45.00'

+41.21 R2 -L- 45.00'

CLASS 'II' RIP RAP @200 TONS @ 50.2

CLASS 'II' RIP RAP 0.95 @200 TONS @ 50.2

CLASS 'II' RIP RAP 1 TON 5 SY FABRIC

STANDARD 'V' DITCH GRASS LINED SEE DETAIL 'E' @ 5 CY EXC.

2 ELBOWS -L- PTSta. 14+84.67

-L- POCSta. 14+73.24

-L- POTSta. 20+98.21

-L- POTSta. 23+90.25

BEGIN GRADE
-L- STA.14+50.00 R 1

END GRADE
-L- STA.17+40.00 R 2

BEGIN BRIDGE
-L- STA.15+42.00 R 2

EQUATION:
-L- Sta 15+00.00 BK =
-L- Sta 14+86.57 AH

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

24 x 12 x 3 1.5 inch Skimmer with 0.5 inch Orifice Diameter 4 ft. weir ID 4.4B

NOTE:
UTILIZE SPECIAL STILLING BASIN WHERE APPLICABLE.

PROP APPROACH SLAB

SEE SHEET 5 FOR -DRV- PROFILE

FIRST BROAD RIVER

JOHN HUDSON ROAD (SR-1730)

JONES TOWN ROAD (SR-1731)

POND

ISFD

WELL

18-AUG-2008 13:12
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Robin AT RENVISED