TIP PROJECT: B-4588

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4588	EC-1	

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

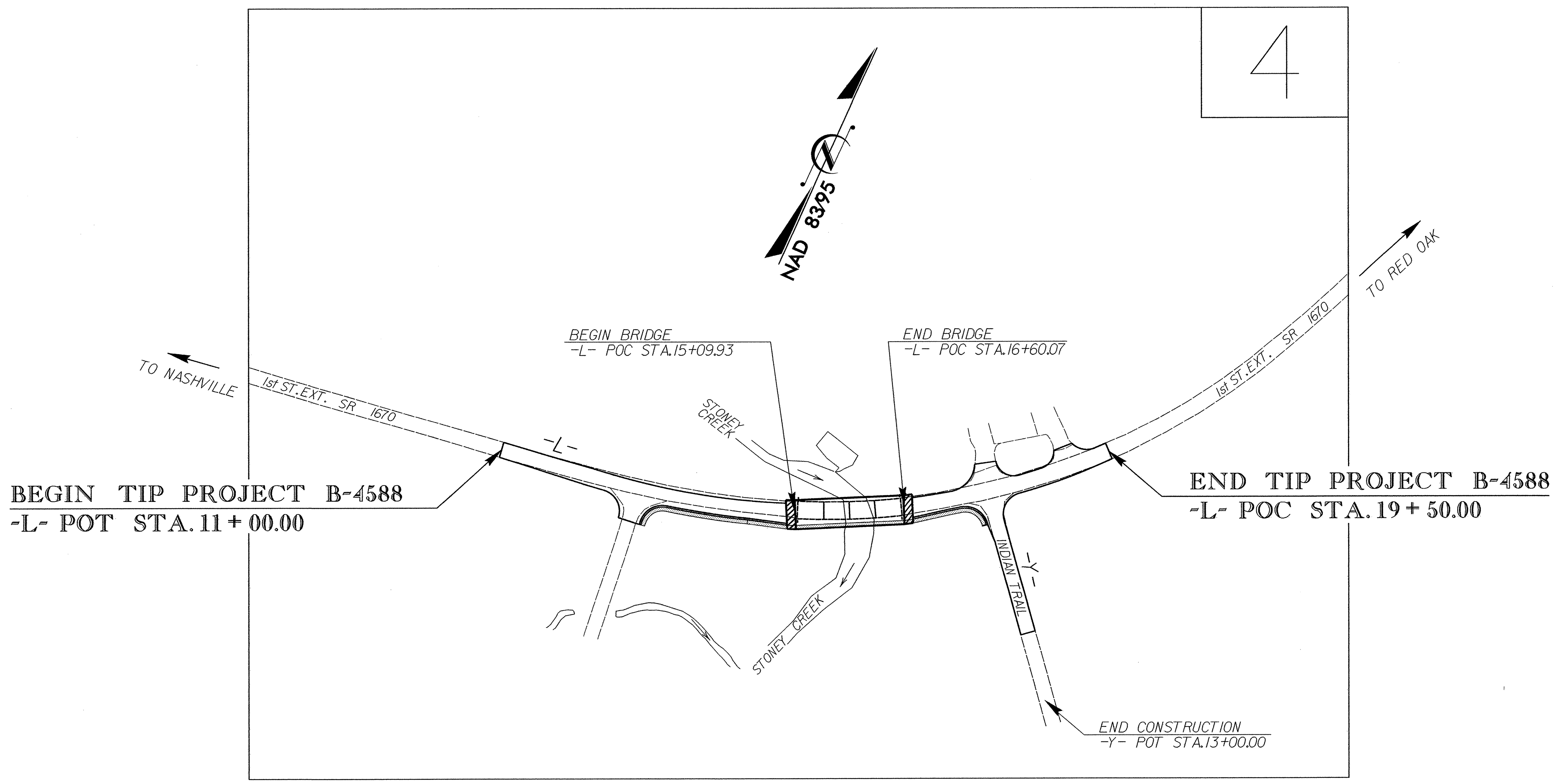
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

NASH COUNTY

LOCATION: BRIDGE NO. 1 OVER STONEY CREEK ON SR 1670

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



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	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	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.

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

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

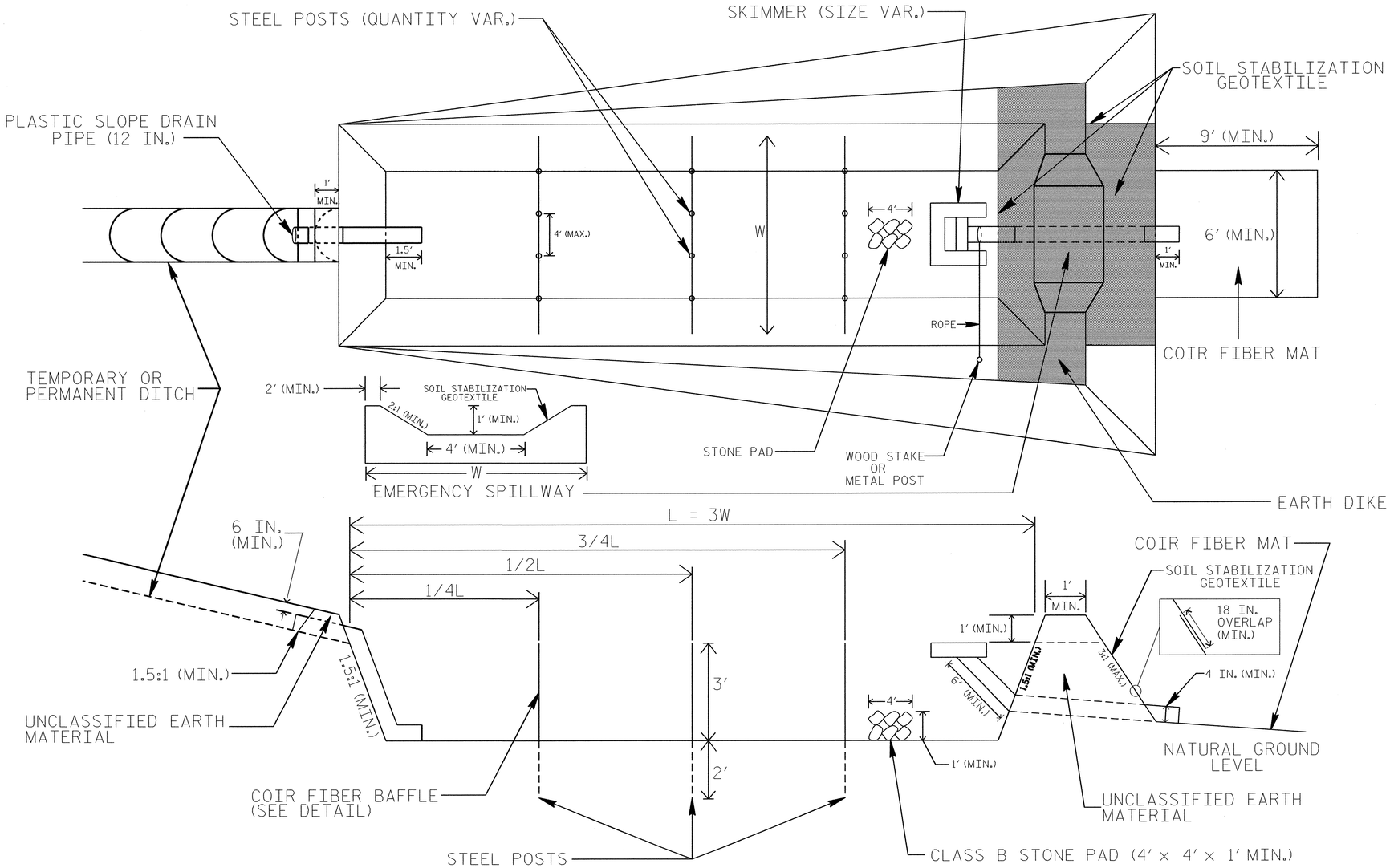
Roadway Standard Drawings

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

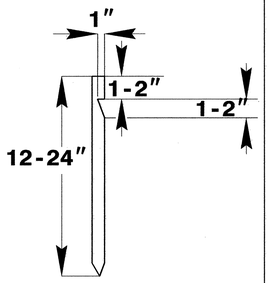
1604.01	Railroad Erosion Control Detail
1605.01	Temporary Silt Fence
1606.01	Special Sediment Control Fence
1607.01	Gravel Construction Entrance
1622.01	Temporary Berms and Slope Drains
1630.01	Riser Basin
1630.02	Silt Basin Type B
1630.03	Temporary Silt Ditch
1630.04	Stilling Basin
1630.05	Temporary Diversion
1630.06	Special Stilling Basin
1631.01	Matting Installation
1632.01	Rock Inlet Sediment Trap Type A
1632.02	Rock Inlet Sediment Trap Type B
1632.03	Rock Inlet Sediment Trap Type C
1633.01	Temporary Rock Silt Check Type A
1633.02	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
1640.01	Coir Fiber Baffle
1645.01	Temporary Stream Crossing

PROJECT REFERENCE NO.	SHEET NO.
B-4588	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

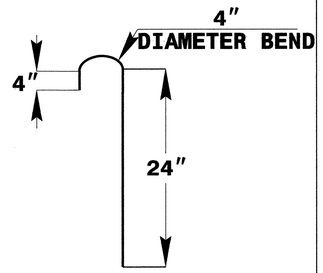
SKIMMER BASIN WITH BAFFLES DETAIL



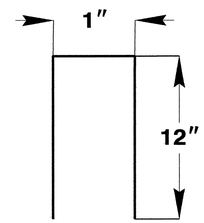
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



COIR FIBER MAT ANCHOR OPTIONS

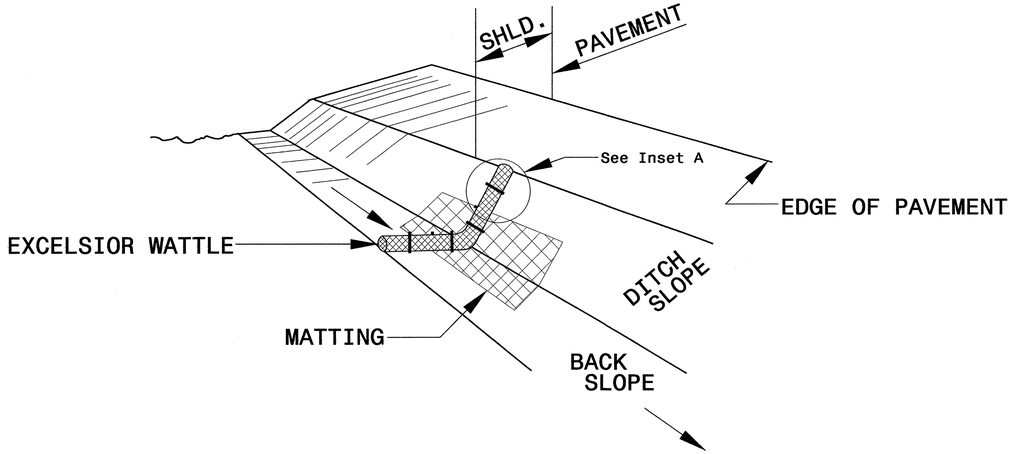
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON 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 FILTRATION GEOTEXTILE AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.)

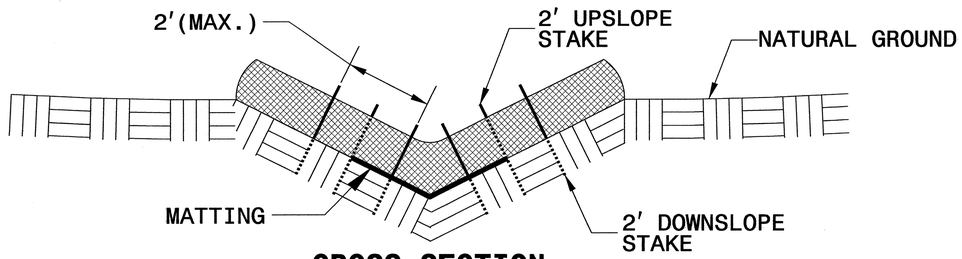
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-4588	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

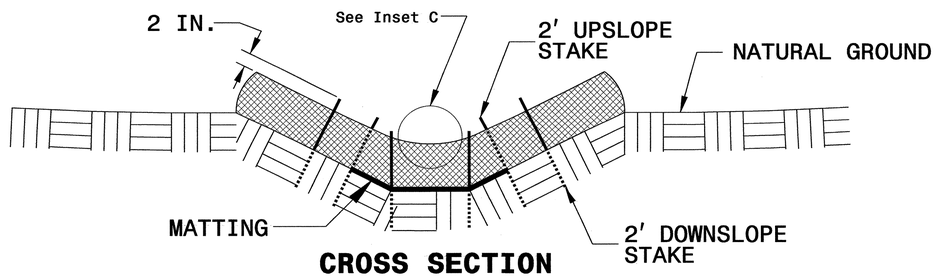
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

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.

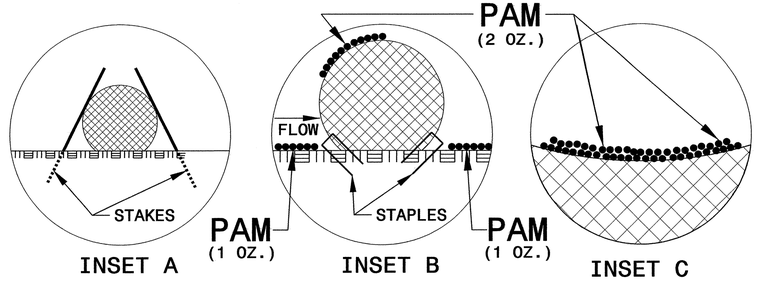
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

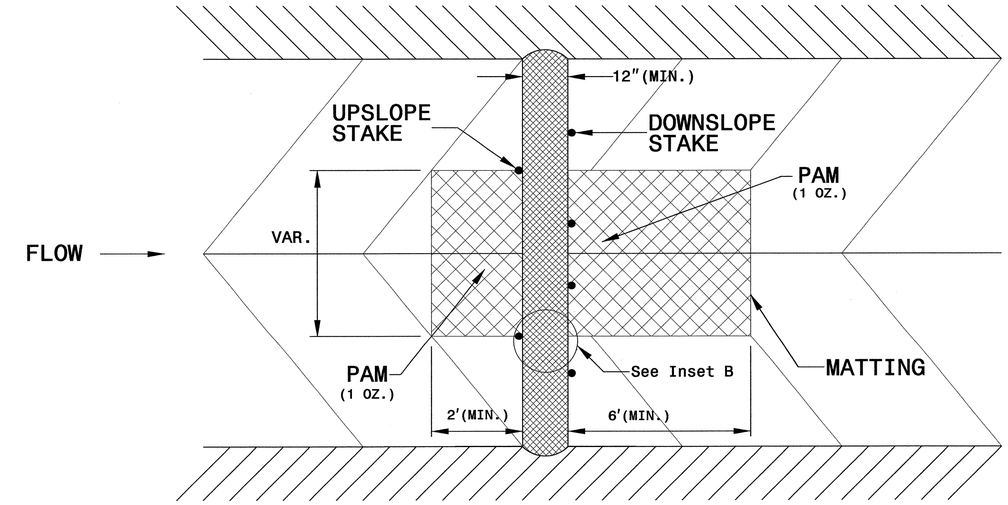
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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.





TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-4588	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
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.

PROJECT REFERENCE NO.	SHEET NO.
B-4588	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

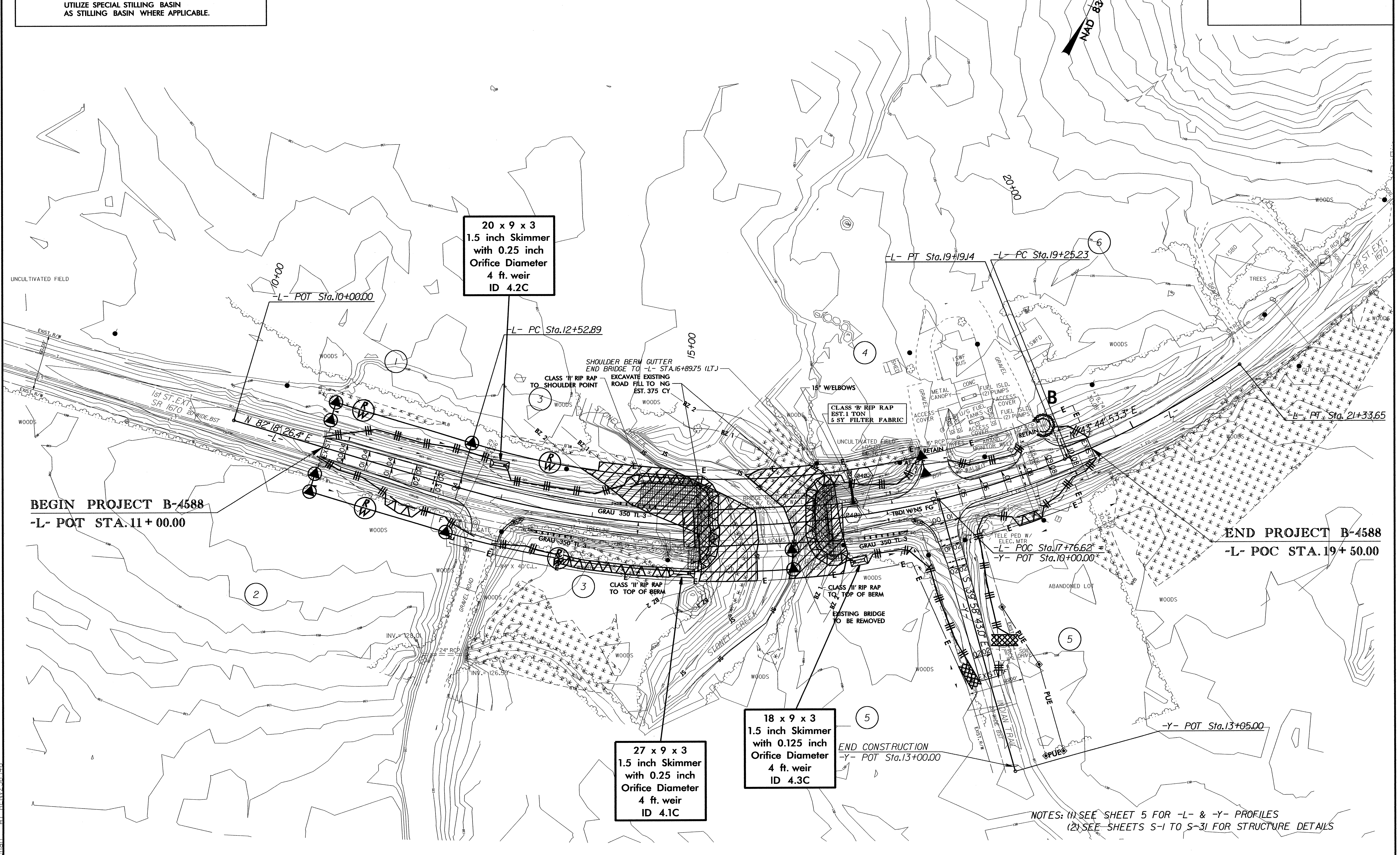
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

-L- CURVE DATA

PI Sta 15+99.18	PI Sta 20+29.90
Δ = 38° 33' 33.1" (LT)	Δ = 13° 10' 02.1" (LT)
D = 5° 47' 14.8"	D = 6° 19' 02.7"
L = 666.26'	L = 208.43'
T = 346.30'	T = 104.67'
R = 990.00'	R = 906.95'
SE = SEE PLAN	SE = SEE PLAN



NAD 83/95
20 x 9 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 4.2C
-L- POT Sta.10+00.00
-L- PC Sta.12+52.89
-L- PT Sta.19+19.14
-L- PC Sta.19+25.23
SHOULDER BERM GUTTER
END BRIDGE TO -L- STA.16+89.75 (LT)
CLASS 'II' RIP RAP TO SHOULDER POINT
EXCAVATE EXISTING ROAD FILL TO NG
EST. 375 CY
CLASS 'B' RIP RAP
EST. 1 TON
5 SY FILTER FABRIC
15" W/ELBOWS
UNCULTIVATED FIELD
WOODS
N 82° 18' 26.4" E
1st ST. EXT.
SR 1670
BEGIN PROJECT B-4588
-L- POT STA. 11 + 00.00
GRAU 350 TL-3
CLASS 'II' RIP RAP TO TOP OF BERM
EXISTING BRIDGE TO BE REMOVED
STONEY CREEK
INV. 128.01
INV. 126.99
24" RCP
GRAVEL ROAD
TELE PED W/ ELEC. MTR
-L- POC Sta.17+76.62
-Y- POT Sta.10+00.00
-L- PT Sta. 21+33.65
END PROJECT B-4588
-L- POC STA. 19 + 50.00
ABANDONED LOT
TREES
INDIAN TRAIL
PUE
-Y- POT Sta.13+05.00
END CONSTRUCTION
-Y- POT Sta.13+00.00
27 x 9 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 4.1C
18 x 9 x 3
1.5 inch Skimmer
with 0.125 inch
Orifice Diameter
4 ft. weir
ID 4.3C
NOTES: (1) SEE SHEET 5 FOR -L- & -Y- PROFILES
(2) SEE SHEETS S-1 TO S-31 FOR STRUCTURE DETAILS

12-OCT-2011 11:00
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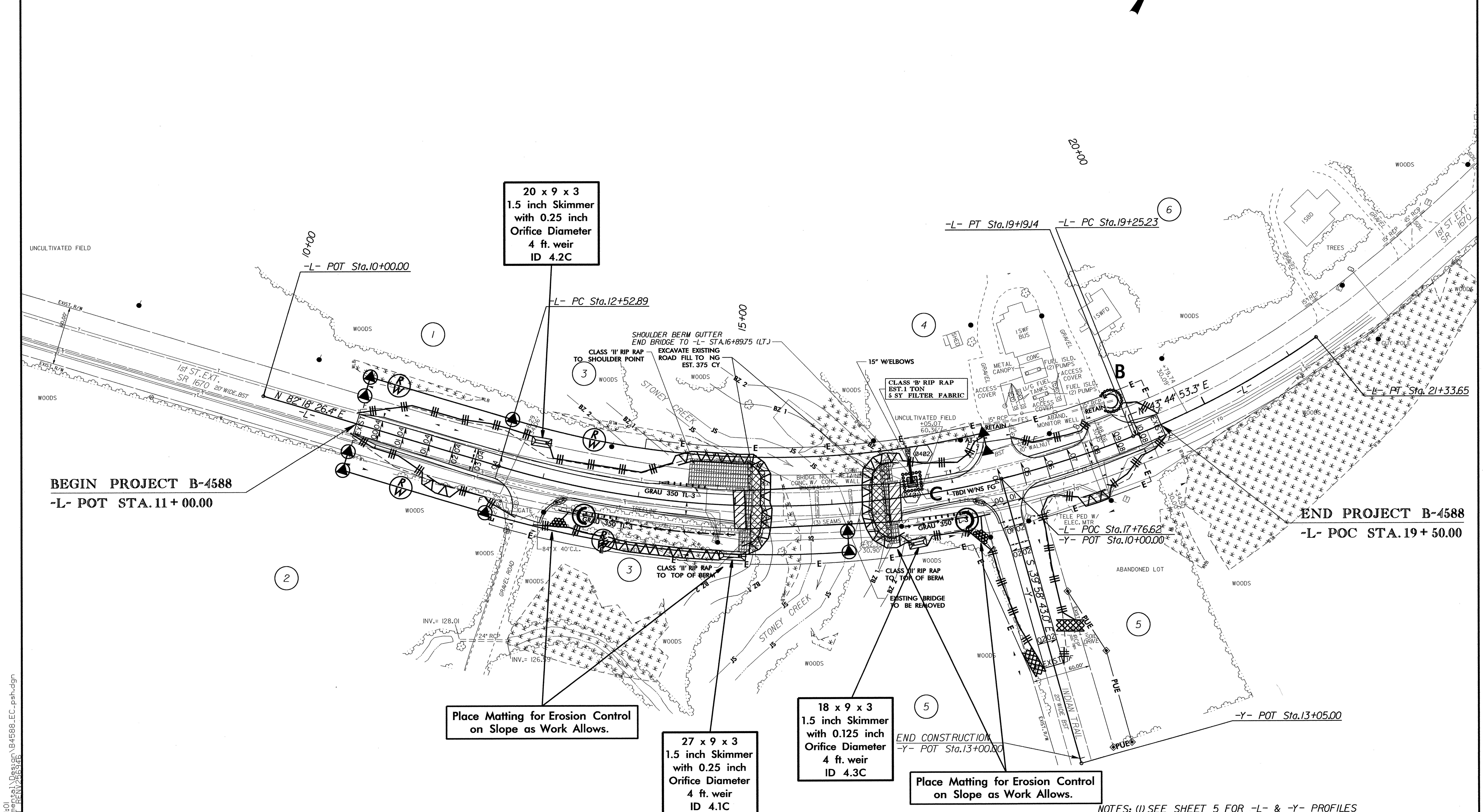
PROJECT REFERENCE NO.	SHEET NO.
B-4588	EC-5/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE SPECIAL STILLING BASIN
AS STILLING BASIN WHERE APPLICABLE.

-L- CURVE DATA

PI Sta 15+99.18	PI Sta 20+29.90
Δ = 38° 33' 33.1" (LT)	Δ = 13° 10' 02.1" (LT)
D = 5° 47' 14.8"	D = 6° 19' 02.7"
L = 666.26'	L = 208.43'
T = 346.30'	T = 104.67'
R = 990.00'	R = 906.95'
SE = SEE PLAN	SE = SEE PLAN



NAD 83/95
BEGIN PROJECT B-4588
-L- POT STA. 11 + 00.00
END PROJECT B-4588
-L- POC STA. 19 + 50.00
-L- POT Sta.10+00.00
-L- PC Sta.12+52.89
-L- PT Sta.19+19.14
-L- PC Sta.19+25.23
-L- PT Sta. 21+33.65
-L- POC Sta.17+76.62
-Y- POT Sta.10+00.00
-Y- POT Sta.13+05.00
END CONSTRUCTION
-Y- POT Sta.13+00.00
N 82° 18' 26.4" E
N 43° 44' 53.3" E
S 39° 58' 43.0" E
20 x 9 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 4.2C
27 x 9 x 3
1.5 inch Skimmer
with 0.25 inch
Orifice Diameter
4 ft. weir
ID 4.1C
18 x 9 x 3
1.5 inch Skimmer
with 0.125 inch
Orifice Diameter
4 ft. weir
ID 4.3C
Place Matting for Erosion Control on Slope as Work Allows.
Place Matting for Erosion Control on Slope as Work Allows.
SHOULDER BERM GUTTER
END BRIDGE TO -L- STA.16+89.75 (LT)
CLASS 'II' RIP RAP TO SHOULDER POINT
EXCAVATE EXISTING ROAD FILL TO NG EST. 375 CY
15" W/ELBOWS
CLASS 'B' RIP RAP
EST.1 TON
5 SY FILTER FABRIC
CLASS 'II' RIP RAP TO TOP OF BERM
CLASS 'II' RIP RAP TO TOP OF BERM
EXISTING BRIDGE TO BE REMOVED
1st ST. EXT. SR 1670
STONEY CREEK
INDIAN TRAIL
UNCULTIVATED FIELD
WOODS
ABANDONED LOT
TREES
GRAVEL ROAD
INV.= 128.01
INV.= 126.39
24" RCP
GRAU 350 TL-3
TBDI W/NS FG
1 SWF BUS
METAL CANOPY
FUEL ISLD. (2) PUMPS
ACCESS COVER
U/G FUEL TANKS
ABAND. MONITOR WELL
TELE PED W/ ELEC. MTR
10+00
15+00
20+00

NOTES: (1) SEE SHEET 5 FOR -L- & -Y- PROFILES
(2) SEE SHEETS S-1 TO S-31 FOR STRUCTURE DETAILS