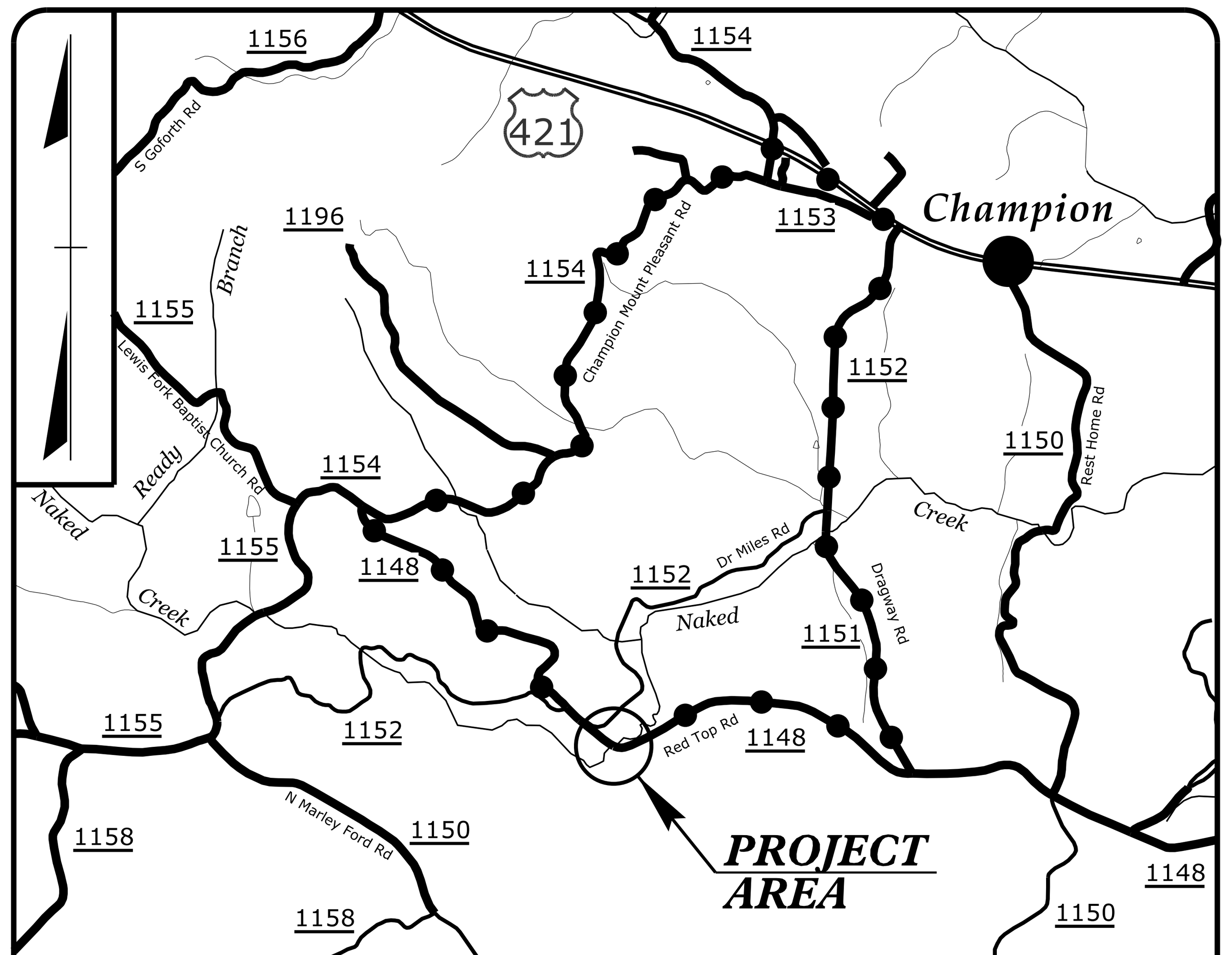
TIP PROJECT: 17BP.11.R.153



VICINITY MAP

DETOUR ROUTE NOT TO SCALE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.11.R.153	EC-1	

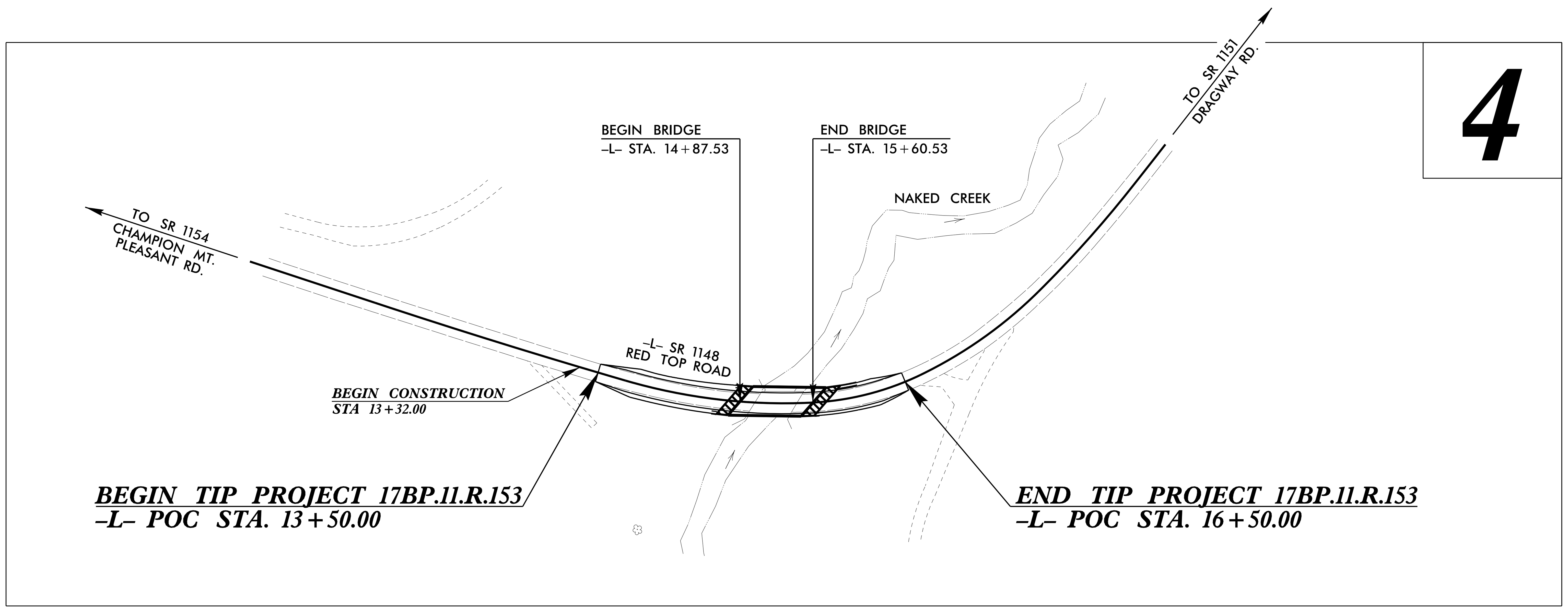
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
17BP.11.R.153		PE

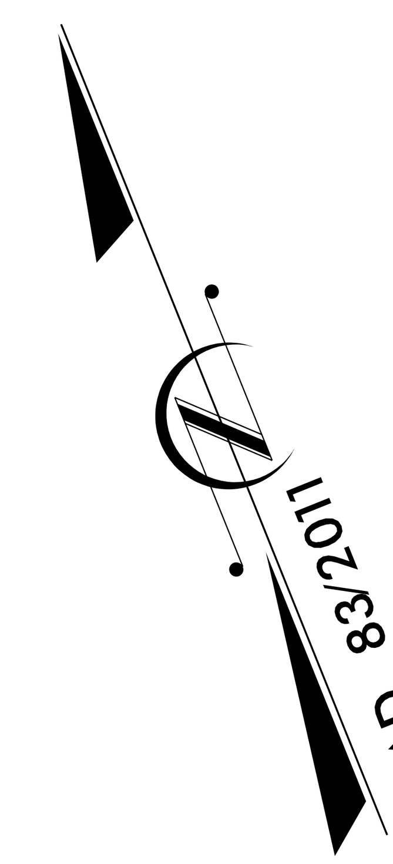
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
WILKES COUNTY

LOCATION: REPLACE BRIDGE NO. 419 ON SR 1148 (RED TOP ROAD) OVER NAKED CREEK

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND 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	EW / CFW
	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 GRU33ING PHASE OF CONSTRUCTION.

GRAPHIC SCALE

50 25 0 50 100

PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.

Dewberry

Prepared in the Office of:

DEWBERRY

2610 WYCLIFF ROAD, SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

Designed by:

STEVEN BONDOR, PE ***3077***

NAME *LEVEL III CERTIFICATION NO.*

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 2018 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	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type 3
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary 3erms and Slope Drains	1633.02	Temporary Rock Silt Check Type 3
1630.01	Riser 3asin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt 3asin Type 3	1634.02	Temporary Rock Sediment Dam Type 3
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling 3asin	1635.02	Rock Pipe Inlet Sediment Trap Type 3
1630.05	Temporary Diversion	1640.01	Coir Fiber 3affle
1630.06	Special Stilling 3asin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

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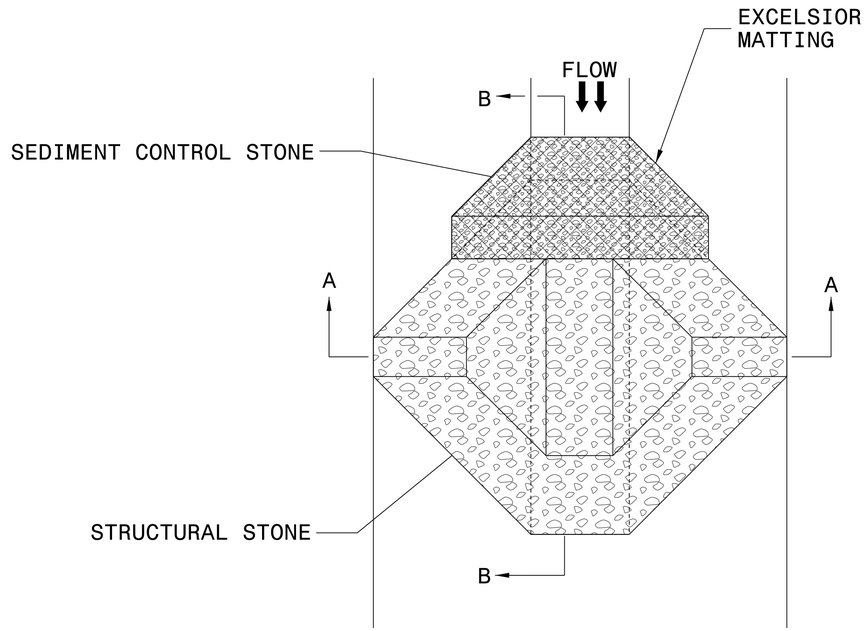
PROJECT REFERENCE NO.	SHEET NO.
17BP.11.R.153	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN

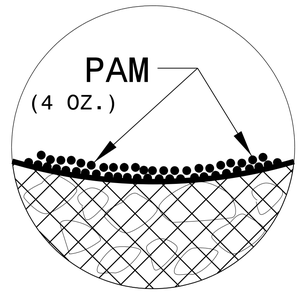
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

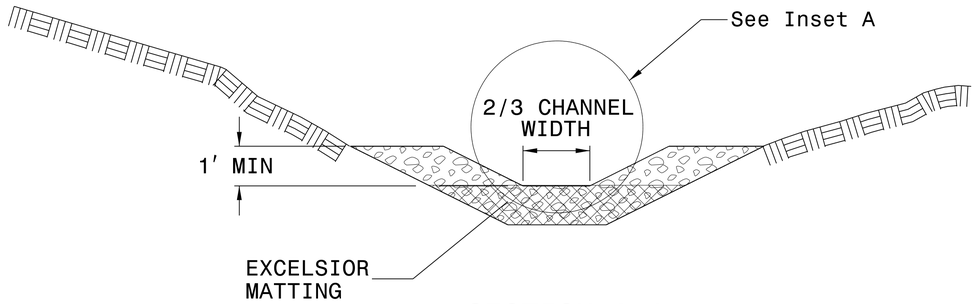
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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 ROCK SILT CHECK.

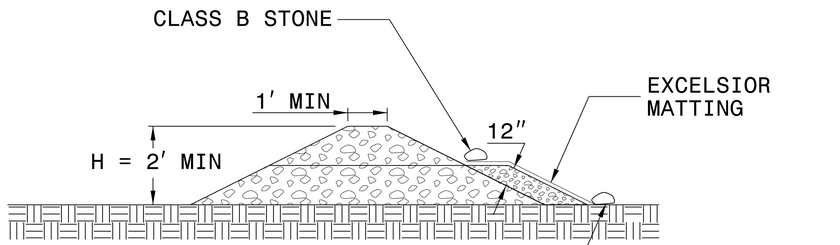
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
17BP.11.R.153	EC-3

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL ON SLOPES

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	13+75	14+60	RT	195
4	-L-	13+75	14+75	LT	140
				SUBTOTAL	335
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					6375
				TOTAL	6710
				SAY	6750

MATTING FOR EROSION CONTROL

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

PROJECT REFERENCE NO.	SHEET NO.
I7BP.II.RJ53	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

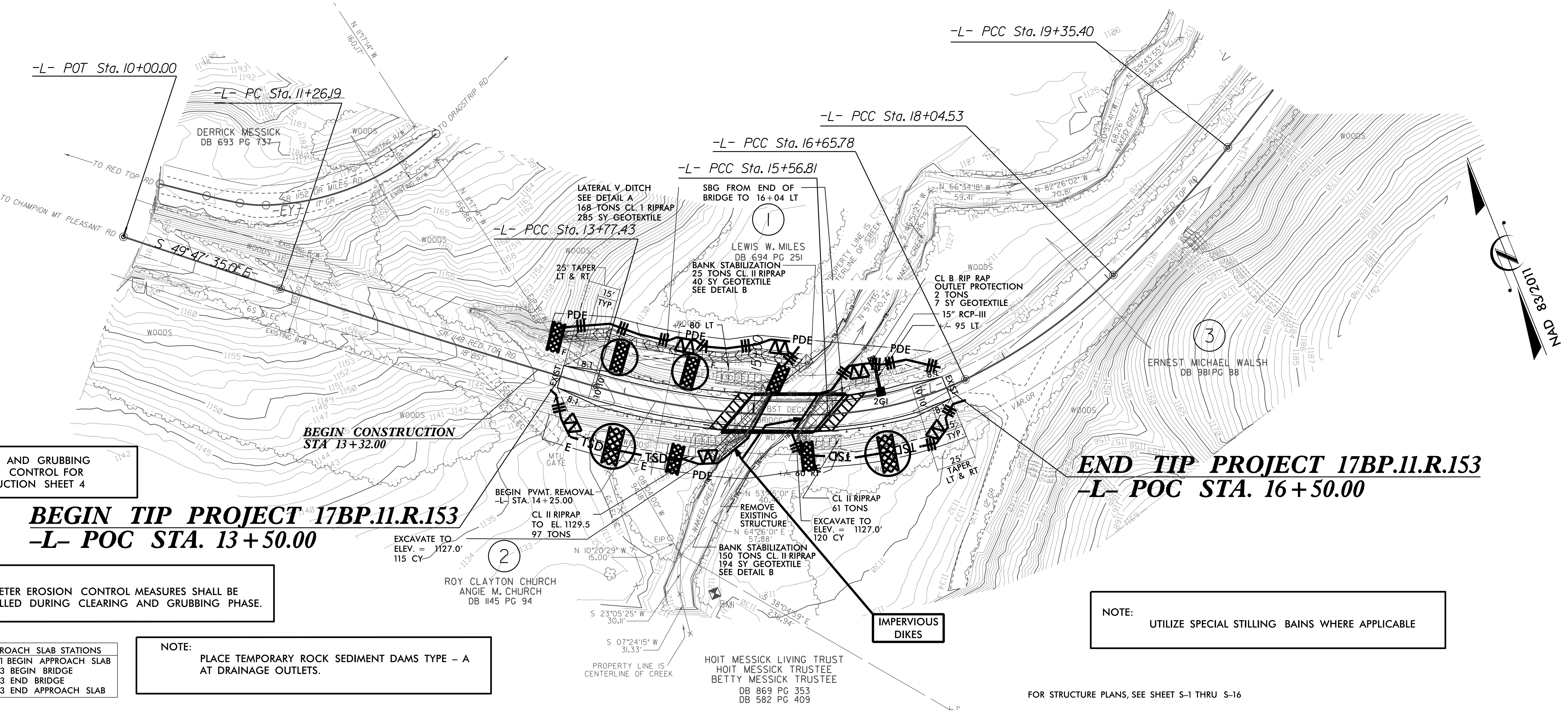
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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.
17BP.11.R.153	EC-04/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

BEGIN TIP PROJECT 17BP.11.R.153
-L- POC STA. 13+50.00

END TIP PROJECT 17BP.11.R.153
-L- POC STA. 16+50.00

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

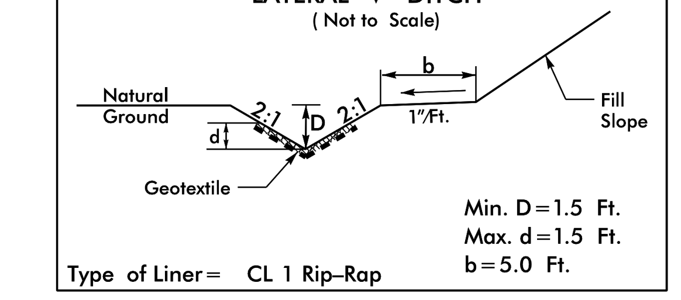
BRIDGE AND APPROACH SLAB STATIONS
-L- STA. 14+77.61 BEGIN APPROACH SLAB
-L- STA. 14+87.53 BEGIN BRIDGE
-L- STA. 15+60.53 END BRIDGE
-L- STA. 15+72.03 END APPROACH SLAB

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – A AT DRAINAGE OUTLETS.

NOTE:
UTILIZE SPECIAL STILLING BAINS WHERE APPLICABLE

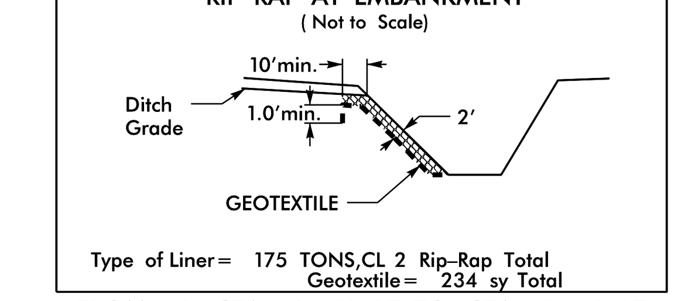
FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-16

DETAIL A
LATERAL 'V' DITCH
(Not to Scale)



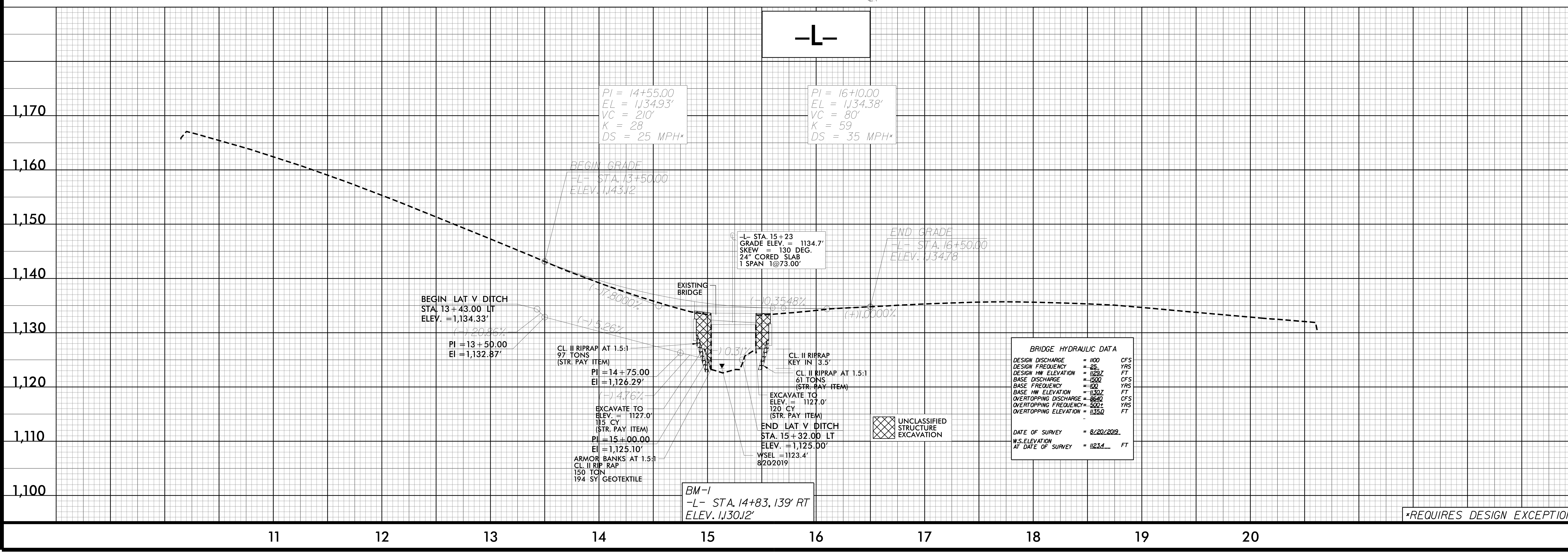
FROM -L STA. 13+43 TO STA. 15+32 LT

DETAIL B
RIP RAP AT EMBANKMENT
(Not to Scale)



FROM -L- STA. 14+70 RT TO STA. 15+10 LT
FROM -L- STA. 15+25 LT TO STA. 15+43 LT

-L-



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 1100	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 1129.7	FT
BASE DISCHARGE	= 1500	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1130.7	FT
OVERTOPPING DISCHARGE	= 8640	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 1135.0	FT
DATE OF SURVEY	= 8/20/2019	
W.S.ELEVATION AT DATE OF SURVEY	= 1123.4	FT

8/17/99

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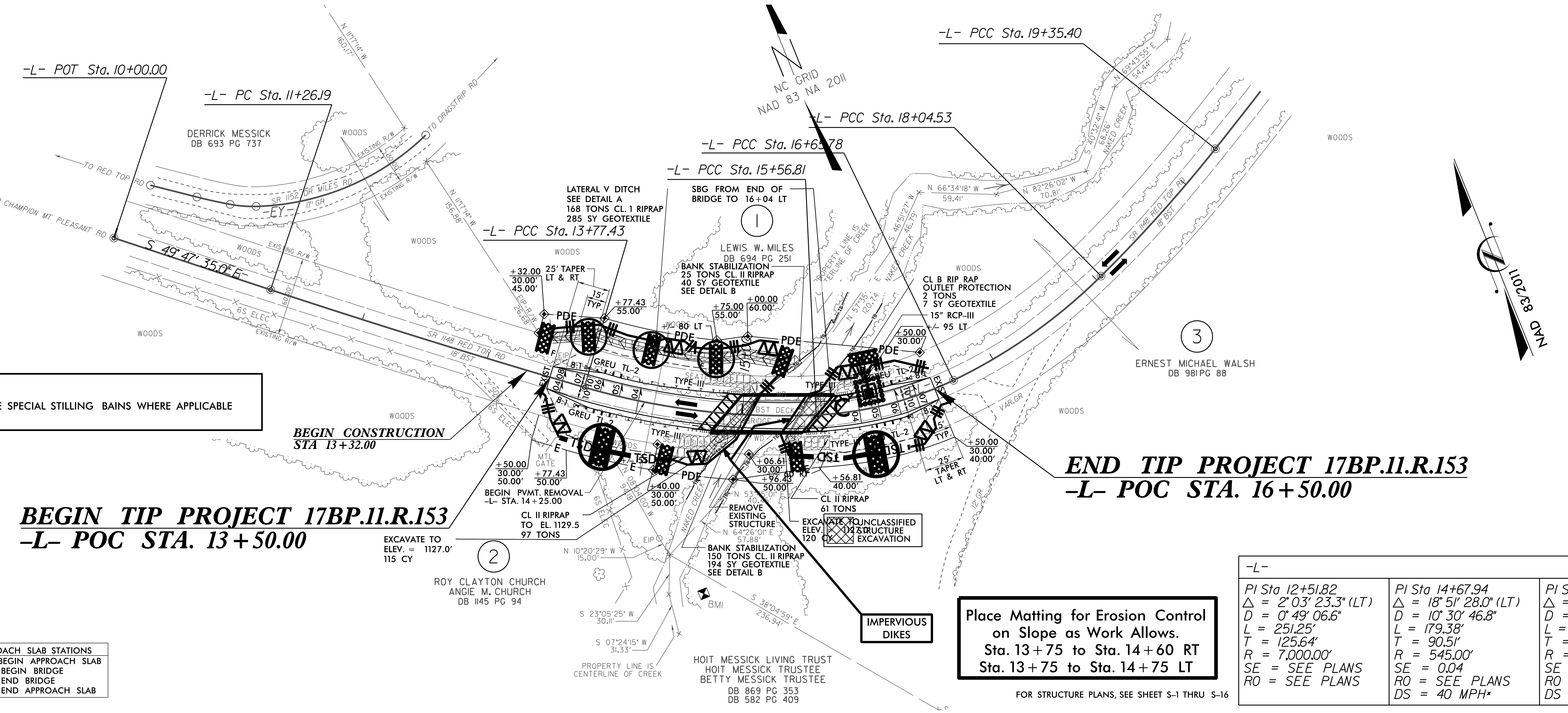
PROJECT REFERENCE NO.	SHEET NO.
17BP.11.R.153	EC-05/CONST.04
R/W SHEET NO.	____
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

NOTE:
UTILIZE SPECIAL STILLING BAINS WHERE APPLICABLE

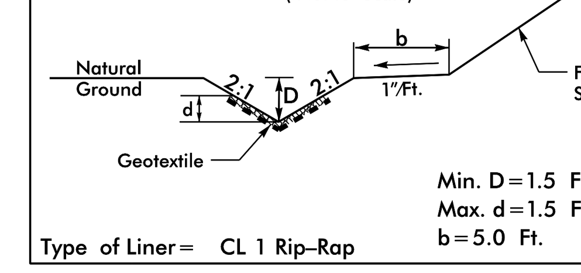


Place Matting for Erosion Control on Slope as Work Allows.
Sta. 13+75 to Sta. 14+60 RT
Sta. 13+75 to Sta. 14+75 LT

FOR STRUCTURE PLANS, SEE SHEET S–1 THRU S–16

BRIDGE AND APPROACH SLAB STATIONS
–L– STA. 14+77.61 BEGIN APPROACH SLAB
–L– STA. 14+87.53 BEGIN BRIDGE
–L– STA. 15+60.53 END BRIDGE
–L– STA. 15+72.03 END APPROACH SLAB

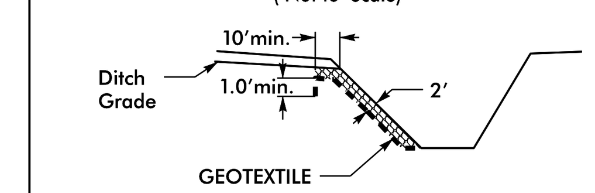
DETAIL A
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner = CL 1 Rip-Rap

FROM –L STA. 13+43 TO STA. 15+32 LT

DETAIL B
RIP RAP AT EMBANKMENT
(Not to Scale)

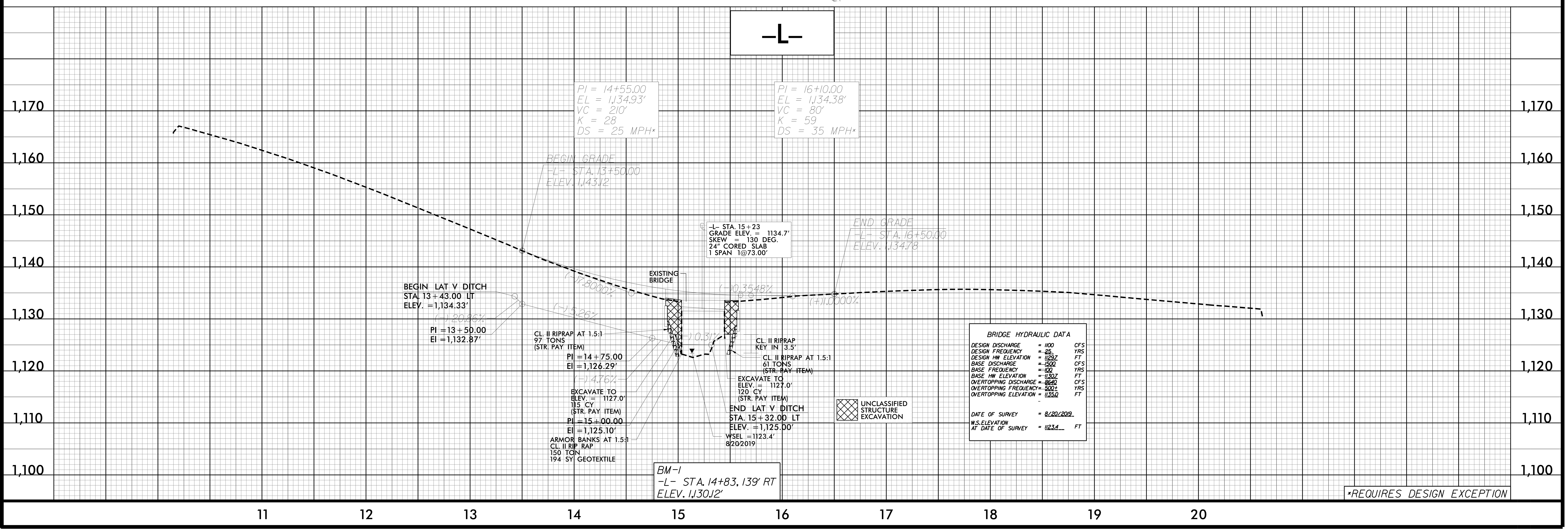


Type of Liner = 175 TONS,CL 2 Rip-Rap Total
Geotextile = 234 sy Total

FROM –L– STA. 14+70 RT TO STA. 15+10 LT
FROM –L– STA. 15+25 LT TO STA. 15+43 LT

-L-			
PI Sta 12+51.82	PI Sta 14+67.94	PI Sta 16+12.05	PI Sta 17+35.80
Δ = 2° 03' 23.3" (LT)	Δ = 18° 51' 28.0" (LT)	Δ = 23° 07' 26.6" (LT)	Δ = 18° 55' 43.6" (LT)
D = 0° 49' 06.6"	D = 10° 30' 46.8"	D = 21° 13' 14.4"	D = 13° 38' 30.7"
L = 251.25'	L = 179.38'	L = 108.97'	L = 138.76'
T = 125.64'	T = 90.51'	T = 55.24'	T = 70.02'
R = 7,000.00'	R = 545.00'	R = 270.00'	R = 420.00'
SE = SEE PLANS	SE = 0.04	SE = 0.04	
RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS	
	DS = 40 MPH*	DS = 30 MPH*	

–L–



BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 1100	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 1129.7	FT
BASE DISCHARGE	= 1500	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1130.7	FT
OVERTOPPING DISCHARGE	= 8640	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 1135.0	FT
DATE OF SURVEY	= 8/20/2019	
W.S.ELEVATION AT DATE OF SURVEY	= 1123.4	FT

BM-1
-L- STA. 14+83, 139' RT
ELEV. 1,130.12'

*REQUIRES DESIGN EXCEPTION

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