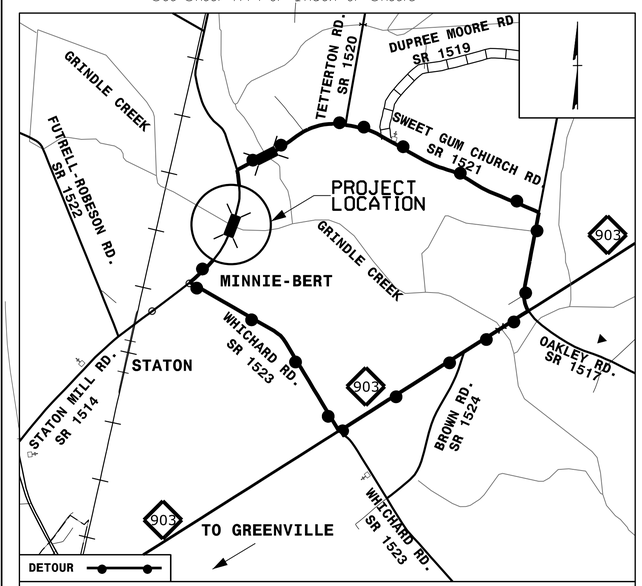
09/08/99

TIP PROJECT: BR-0119

See Sheet 1A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

PITT COUNTY

LOCATION: BRIDGE 730109 ON SR 1514 (STATON MILL RD) OVER GRINDLE CREEK

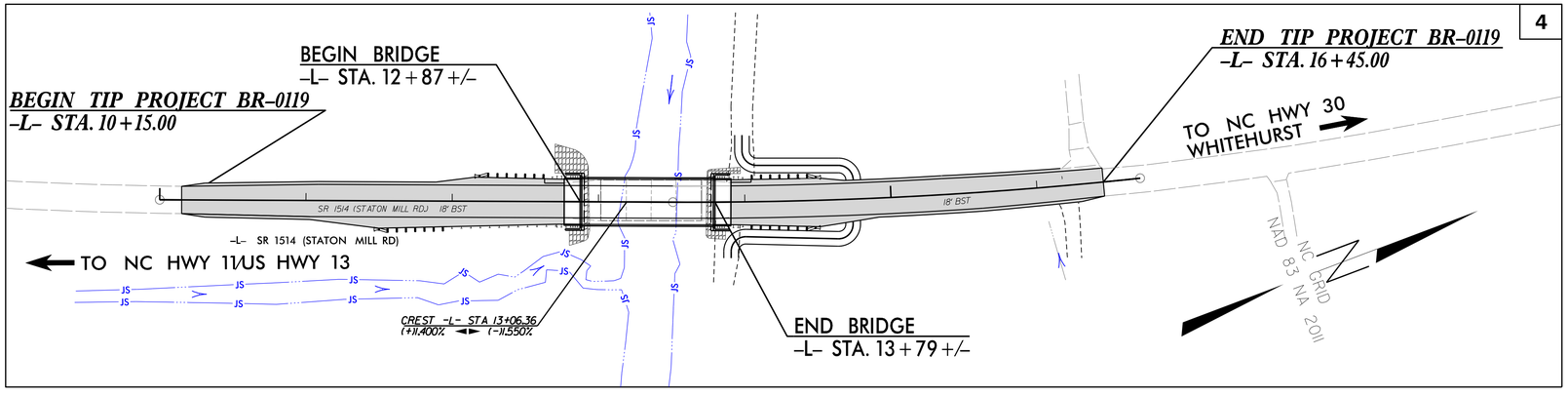
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0119	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
48828.1.1	TBD	PE
48828.2.1	TBD	R/W, UTILITIES
48828.3.1	2020001	CONSTRUCTION

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 GRUBBING PHASE OF CONSTRUCTION.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II
THIS PROJECT IS NOT LOCATED WITHIN MUNICIPAL BOUNDARIES.
THIS IS NOT A CONTROL OF ACCESS PROJECT.

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.

Prepared In the Office of:

KCA KISINGER CAMPO & ASSOCIATES

NC FIRM LICENSE No: C-1506
301 Fayettville St.,
Suite 1500
Raleigh, NC 27601
(919)882-7839

Designed by:

JOHN MCNULTY ***4263***

NAME *LEVEL III CERTIFICATION NO.*

Roadway Standard Drawings

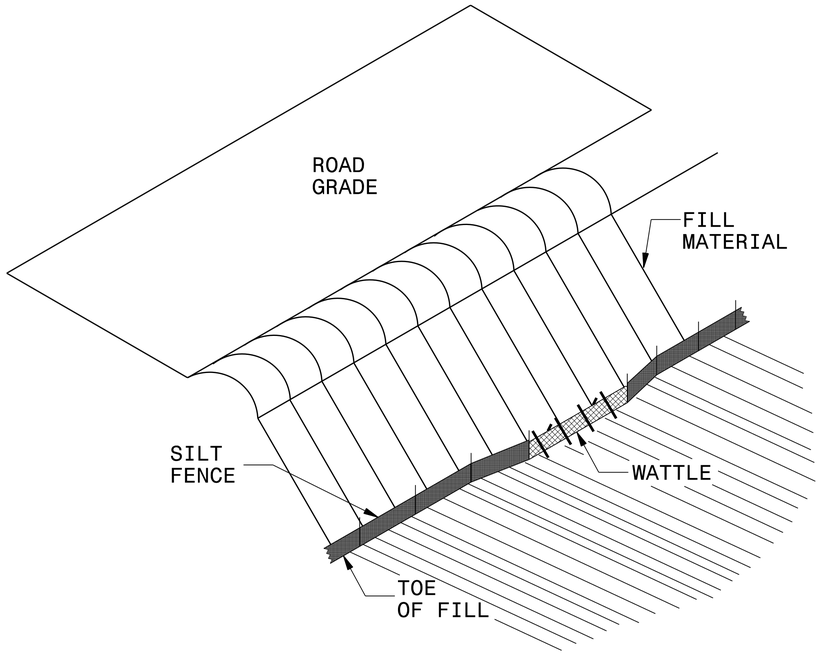
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

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 B
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 Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

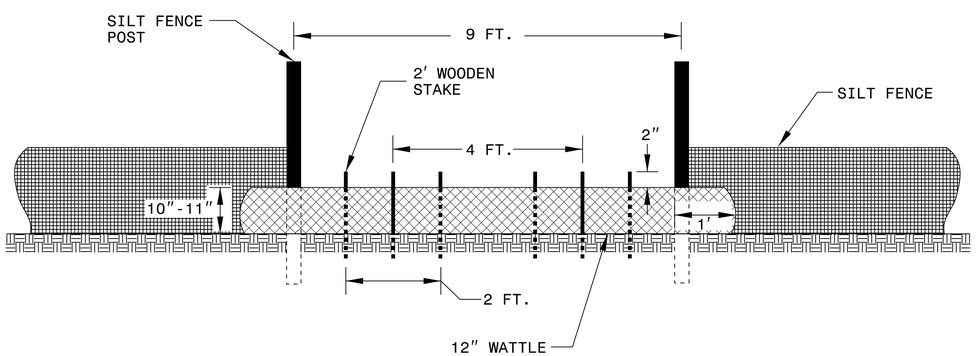
7/2/99

PROJECT REFERENCE NO.	SHEET NO.
BR-0119	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

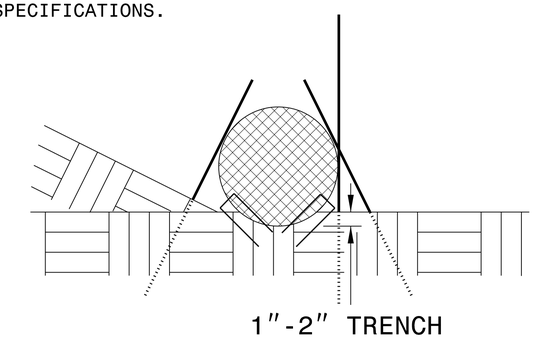
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

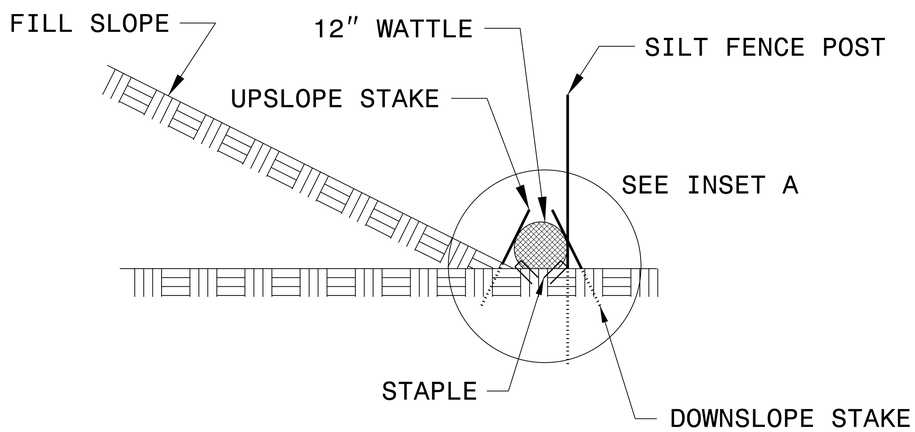
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A



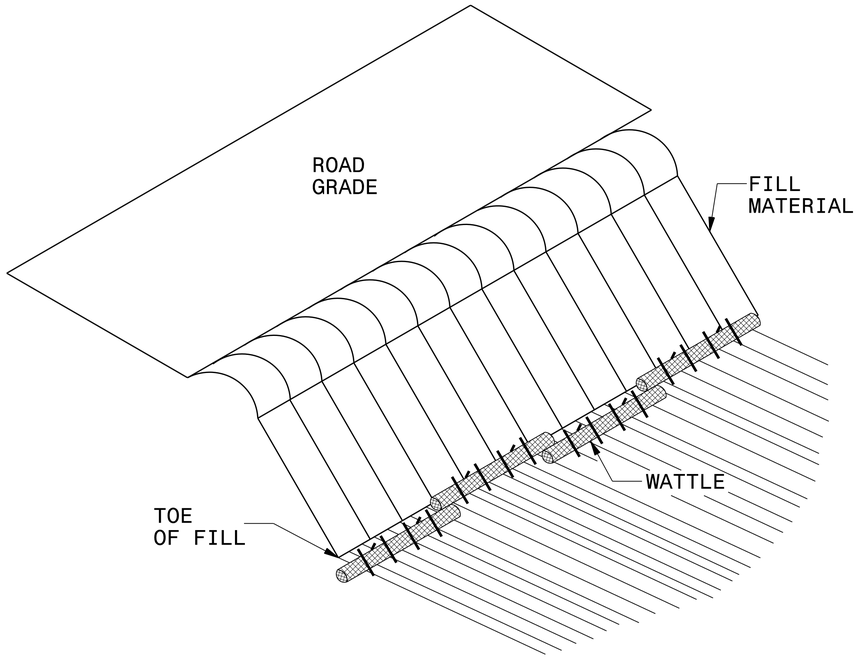


SIDE VIEW

7/2/99

PROJECT REFERENCE NO.	SHEET NO.
BR-0119	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 18 IN. NOMINAL DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

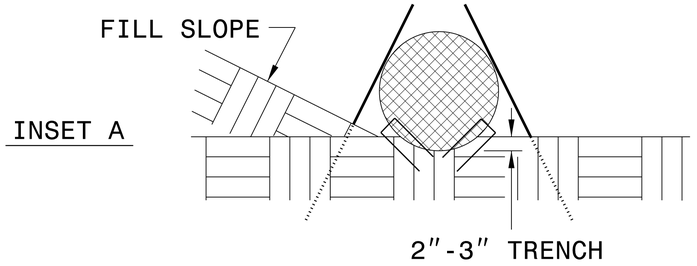
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

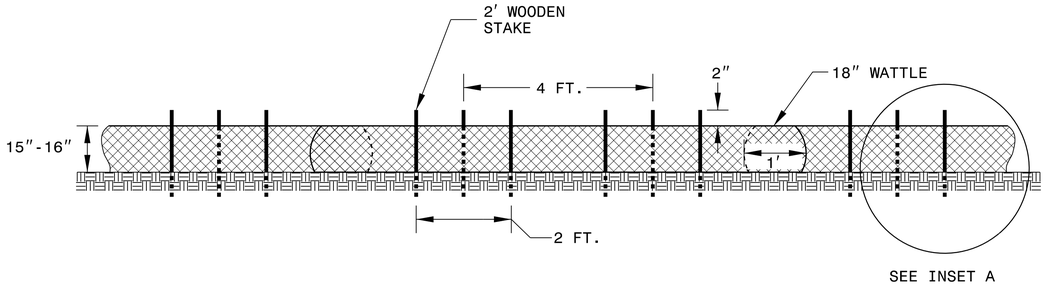
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

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

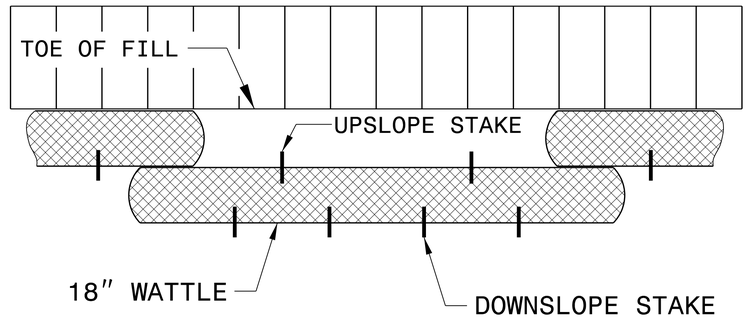
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.





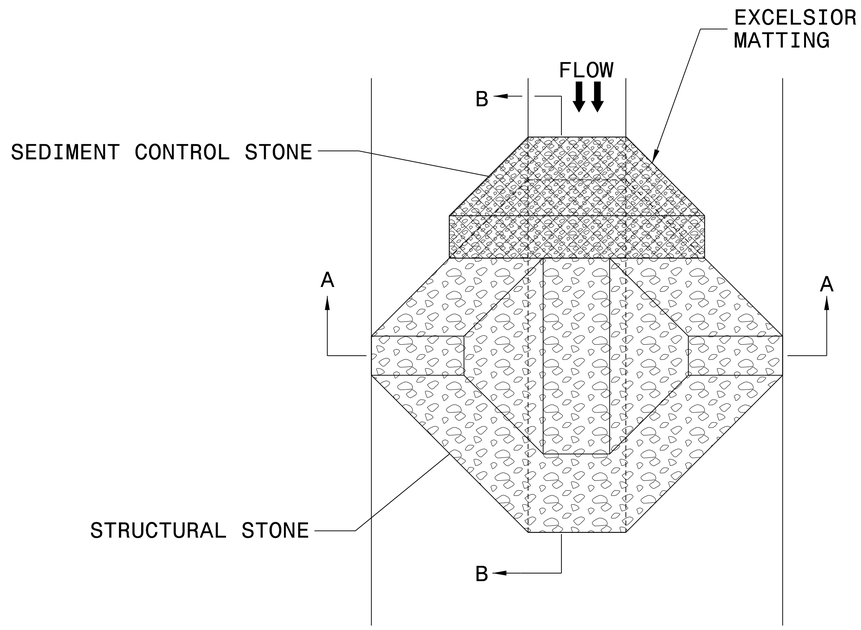
FRONT VIEW



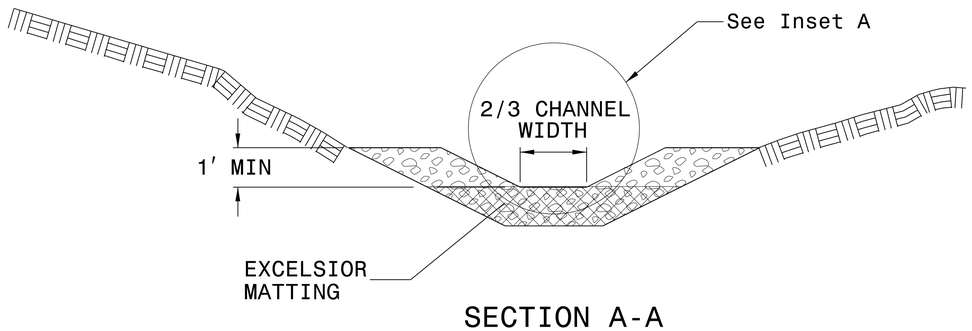
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
BR-0119	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



SECTION A-A

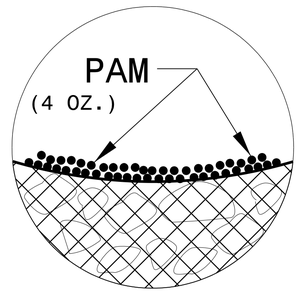
NOTES:

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

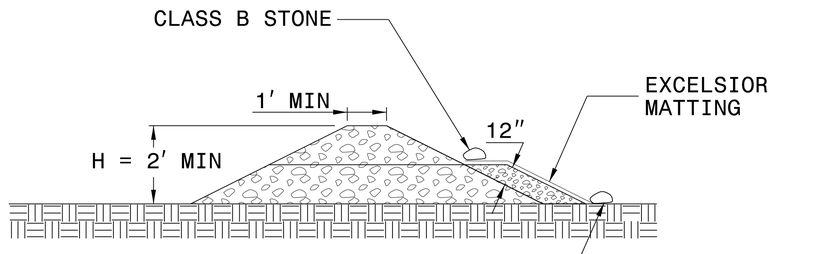
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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 B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
BR-0119	EC-3A
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-	10+79	11+21	RT	30
4	-L-	11+30	12+48	LT	195
4	-L-	14+20	15+00	LT	85
4	-L-	14+03	16+00	RT	210
			SUBTOTAL		520
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					1250
				TOTAL	1770

PERMANENT SOIL REINFORCEMNT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	12+48	13+00	LT	85
			SUBTOTAL		85
	ADDITIONAL PSRM TO BE INSTALLED				0
				TOTAL	85

7/2/99

PROJECT REFERENCE NO.	SHEET NO.
BR-0119	EC-3B
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.
BR-0119	EC-4/CONST.4
R/W SHEET NO.	

JOHN MCNULTY
EROSION CONTROL
LEVEL III
CERTIFICATION *4263

PREPARED IN THE OFFICE OF:
KCA KISINGER CAMPO & ASSOCIATES
NC FIRM LICENSE No: C-1506
301 Fayetteville St., Suite 1500
Raleigh, NC 27601
(919)882-7839

NOTES:
1. THE CONTRACTOR SHALL INSTALL SPECIAL SEDIMENT CONTROL FENCE OR COIR FIBER WATTLES IN LOW AREAS OF SILT FENCE AND UNDER THE BRIDGE, AS NEEDED OR DIRECTED BY THE ENGINEER.
2. THE OUTSIDE BUFFER, WETLAND OR WATER BOUNDARY SHALL BE CLEARLY MARKED BY HIGHLY VISIBLE FENCING (ORANGE SAFETY FENCE)

-L-
PI Sta 15+11.03
△ = 6° 24' 00.0" (LT)
D = 2° 00' 00.0"
L = 320.00'
T = 160.17'
R = 2,864.79'
SE = 4%
RO = 88'

NAD 83 NC GRID NA 2011

1 OSCAR L. HOLLOMAN & CAROL P. HOLLOMAN
DB 1122 PG 403
PB 46 PG 124

2 JOHN R. BORN & VICKY S. BORN
DB 2399 PG 101

2 JOHN R. BORN & VICKY S. BORN
DB 2826 PG 274
PB 43 PG 55

JESSE T. CAYTON, JR. & LINDA HARRELL CAYTON
DB 0511 PG 780
PB 0511 PG 783

3 EDWARD A. WHICHARD
DB 1748 PG 458
PB 42 PG 179

4 MARGARET C. SUMMERS
DB 2006 PG 568
PB 35 PG 43

5 EDWARD HARRELL, JR.
DB 3257 PG 174
PB D39 PG 150

6 ZACHARY J. HARRISON
DB 3441 PG 411
PB 52 PG 10

PC Sta. 13+50.86
PT Sta. 16+70.86
POT Sta. 10+00.00

REMOVE AND RESET FENCE AND GATE

93.5' TRANS. TO EXIST.
61.6' TRANS. TO EXIST.
22' INC.
88' TRANS. TO EXIST.
110' TRANS. TO EXIST.
22' INC.
19.8' TRANS. TO EXIST.
71.5' TRANS. TO EXIST.
22' INC.
83.6' TRANS. TO EXIST.

N 21°04'00.0" E -L- SR 1514 ISTATON MILL ROAD

TO NC HWY 11/US HWY 13
TO NC HWY 30 WHITEHURST
BL-3
BL-5
BMI

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

NOTE:
PLACE TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

-L- SR 1514 (OVER GRINDLE CREEK)

BMI*1
-BL- STA.30+48.00,14' RT
EL = 34.67'
NAIL SET IN POWER POLE

BEGIN GRADE
-L- STA.10+15.00
EL. = 35.08'

BEGIN BRIDGE
-L- STA.12+87.41
EL. = 35.82'

END BRIDGE
-L- STA.13+79.66
EL. = 35.88'

END GRADE
-L- STA.16+45.00
EL = 34.38'

PI = 10+80.00
EL = 35.27'
VC = 130'
K = 118
DS > 55

PI = 13+15.00
EL = 38.56'
VC = 340'
K = 115
DS > 55

PI = 15+70.00
EL = 34.61'
VC = 150'
K = 121
DS > 55

35.08
34.38
(+)10.3000%
(+)11.4000%
(+)11.4000%
(-)11.5500%
(-)11.5500%
(-)10.3100%
(-)0.595%
(-)0.356%
(-)4.000%
(+)0.305%
(+)0.325%
BENCH EL. 30.0'

BEGIN DITCH RT
STA.10+19 -L-
ELEV= 29.85'
END DITCH RT
STA.10+80 -L-
ELEV= 29.86'
BEGIN DITCH LT
STA.11+80 -L-
ELEV= 28.50'
PLOTCH LT
STA.12+48 -L-
ELEV= 26.58'
END DITCH LT
STA.13+00 -L-
ELEV= 26.00'
BEGIN DITCH RT
STA.14+00 -L-
ELEV= 29.10'
BEGIN DITCH LT
STA.14+20 -L-
ELEV= 27.44'
END DITCH LT
STA.15+00 -L-
ELEV= 27.70'
END DITCH RT
STA.16+00 -L-
ELEV= 30.30'

FOR STRUCTURE PLANS, SEE S-1 THRU S-15

STRUCTURE HYDRAULIC DATA TABLE

DESIGN DISCHARGE	= 2000	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 30.3	FT
BASE DISCHARGE	= 3397	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 32.9	FT
OVERTOPPING DISCHARGE	= 5200	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 34.4	FT

40 30 20 10 0

10 11 12 13 14 15 16

REVISIONS

8/17/99

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mcnulty AT KIS40787

PROJECT REFERENCE NO.	SHEET NO.
BR-0119	EC-5/CONST.4
R/W SHEET NO.	

JOHN MCNULTY
EROSION CONTROL
LEVEL III
CERTIFICATION #4263

PREPARED IN THE OFFICE OF: KCA KISINGER CAMPO & ASSOCIATES — NC FIRM LICENSE No: C-1506, 301 Fayetteville St., Suite 1500, Raleigh, NC 27601, (919)882-7839

NOTES: 1. THE CONTRACTOR SHALL INSTALL SPECIAL SEDIMENT CONTROL FENCE OR COIR FIBER WATTLES IN LOW AREAS OF SILT FENCE AND UNDER THE BRIDGE, AS NEEDED OR DIRECTED BY THE ENGINEER.
2. THE OUTSIDE BUFFER, WETLAND OR WATER BOUNDARY SHALL BE CLEARLY MARKED BY HIGHLY VISIBLE FENCING (ORANGE SAFETY FENCE)

-L-
PI Sta 15+11.03
△ = 6° 24' 00.0" (LT)
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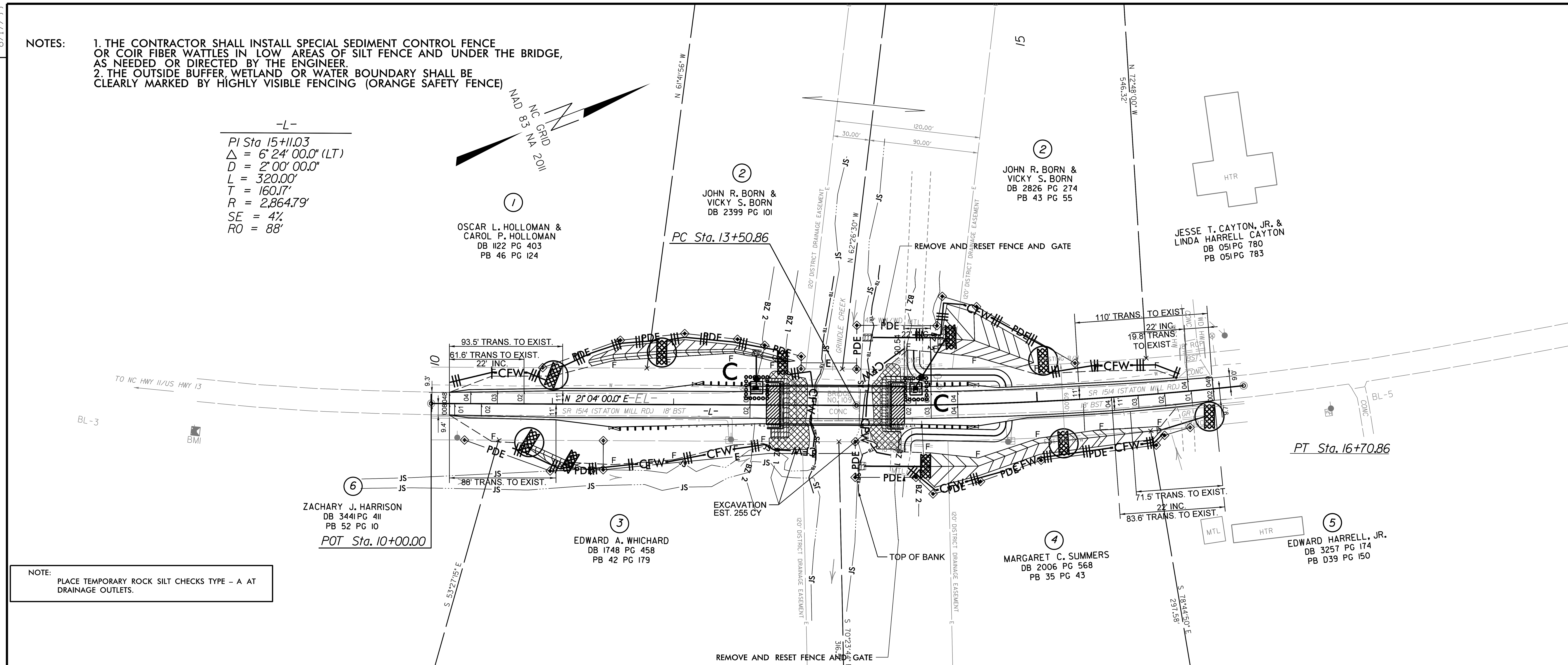


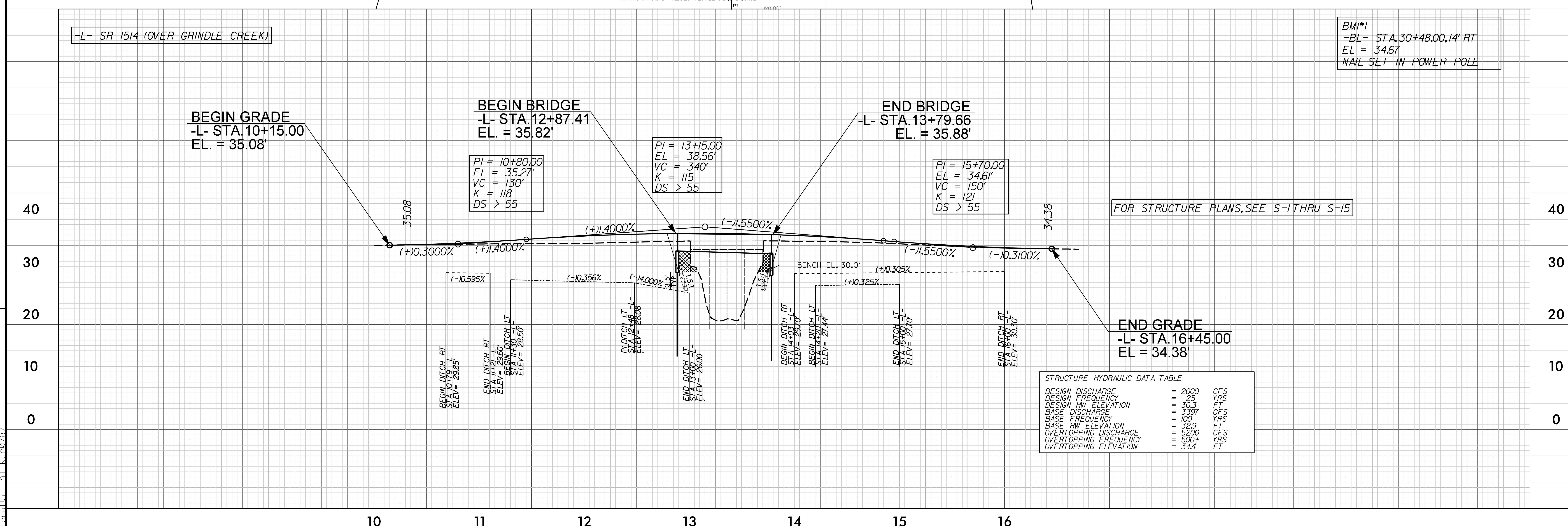
NC GRID NAD 83 NA 2011
OSCAR L. HOLLOMAN & CAROL P. HOLLOMAN DB 1122 PG 403 PB 46 PG 124
JOHN R. BORN & VICKY S. BORN DB 2399 PG 101
JOHN R. BORN & VICKY S. BORN DB 2826 PG 274 PB 43 PG 55
JESSE T. CAYTON, JR. & LINDA HARRELL CAYTON DB 051 PG 780 PB 051 PG 783
PC Sta. 13+50.86
REMOVE AND RESET FENCE AND GATE
110' TRANS. TO EXIST.
93.5' TRANS. TO EXIST.
61.6' TRANS TO EXIST.
22' INC.
TO NC HWY 11/US HWY 13
BL-3
BMI
BL-5
SR 1514 (STATON MILL RD) 18' BST
GRINDLE CREEK
EXCAVATION EST. 255 CY
86' TRANS. TO EXIST.
71.5' TRANS. TO EXIST.
83.6' TRANS. TO EXIST.
PT Sta. 16+70.86
ZACHARY J. HARRISON DB 3441 PG 411 PB 52 PG 10
POT Sta. 10+00.00
EDWARD A. WHICHARD DB 1748 PG 458 PB 42 PG 179
TOP OF BANK
MARGARET C. SUMMERS DB 2006 PG 568 PB 35 PG 43
EDWARD HARRELL, JR. DB 3257 PG 174 PB 039 PG 150
REMOVE AND RESET FENCE AND GATE

NOTE: PLACE TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.
-L-
10+79 – 11+21 RT
11+30 – 12+48 LT
14+20 – 15+00 LT
14+03 – 16+00 RT

INSTALL PRSM FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.
-L-
12+48 – 13+00 LT

REVISIONS



-L- SR 1514 (OVER GRINDLE CREEK)
BEGIN GRADE -L- STA.10+15.00 EL. = 35.08'
BEGIN BRIDGE -L- STA.12+87.41 EL. = 35.82'
END BRIDGE -L- STA.13+79.66 EL. = 35.88'
END GRADE -L- STA.16+45.00 EL = 34.38'
PI = 10+80.00 EL = 35.27' VC = 130' K = 118 DS > 55
PI = 13+15.00 EL = 38.56' VC = 340' K = 115 DS > 55
PI = 15+70.00 EL = 34.61' VC = 150' K = 121 DS > 55
BMI#1 -BL- STA.30+48.00, 14' RT EL = 34.67 NAIL SET IN POWER POLE
FOR STRUCTURE PLANS, SEE S-1 THRU S-15
(+)0.3000%
(+)1.4000%
(+)1.4000%
(-)1.5500%
(-)1.5500%
(-)0.3100%
BENCH EL. 30.0'
(-)0.595%
(-)0.356%
(-)4.000%
(+)0.305%
(+)0.325%

STRUCTURE HYDRAULIC DATA TABLE

DESIGN DISCHARGE	= 2000	CFS
DESIGN FREQUENCY	= 25	YRS
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BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 32.9	FT
OVERTOPPING DISCHARGE	= 5200	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 34.4	FT

8/17/99
17-DEC-2019 15:40