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TIP PROJECT: B-5407

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

POLK COUNTY

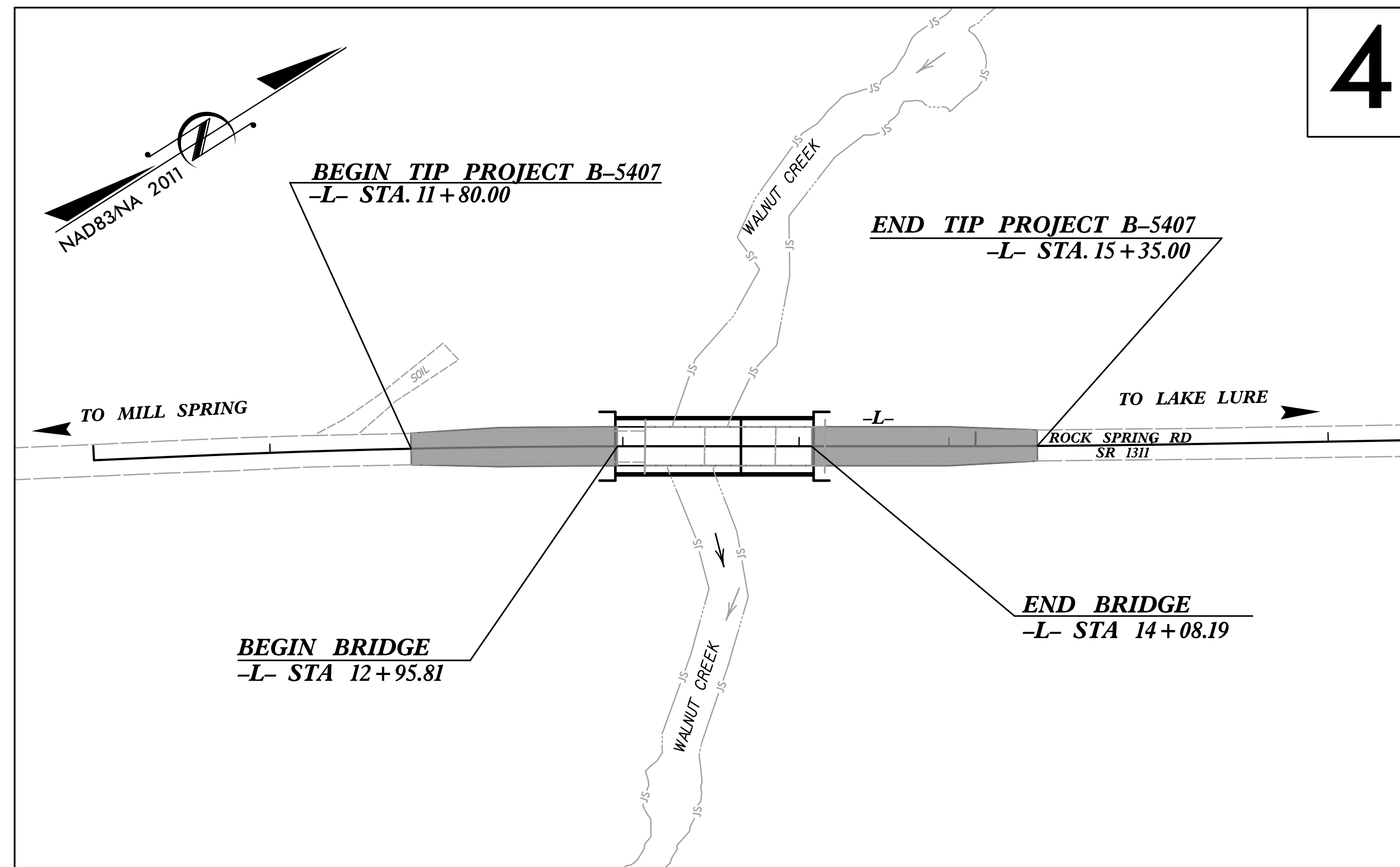
**LOCATION: REPLACE BRIDGE NO. 34 OVER WALNUT CREEK
ON SR 1311 (ROCK SPRING ROAD)**

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE

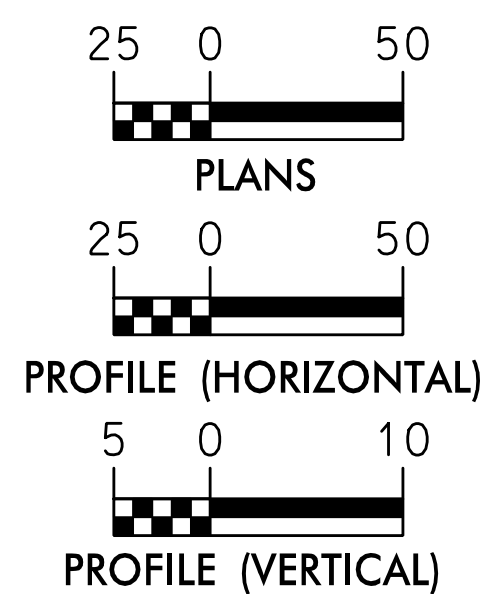
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5407	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Sed. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
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.**



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.



Prepared In the Office of:

NC FIRM LICENSE No: F-1148
1151 SE Cary Parkway
Suite 101
Cary, NC 27518
(919) 557-0929

Designed by:

BRANDON BARHAM, PE
NAME

3368
LEVEL III CERTIFICATION NO.

Reviewed In the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:

JENNIFER PARISH

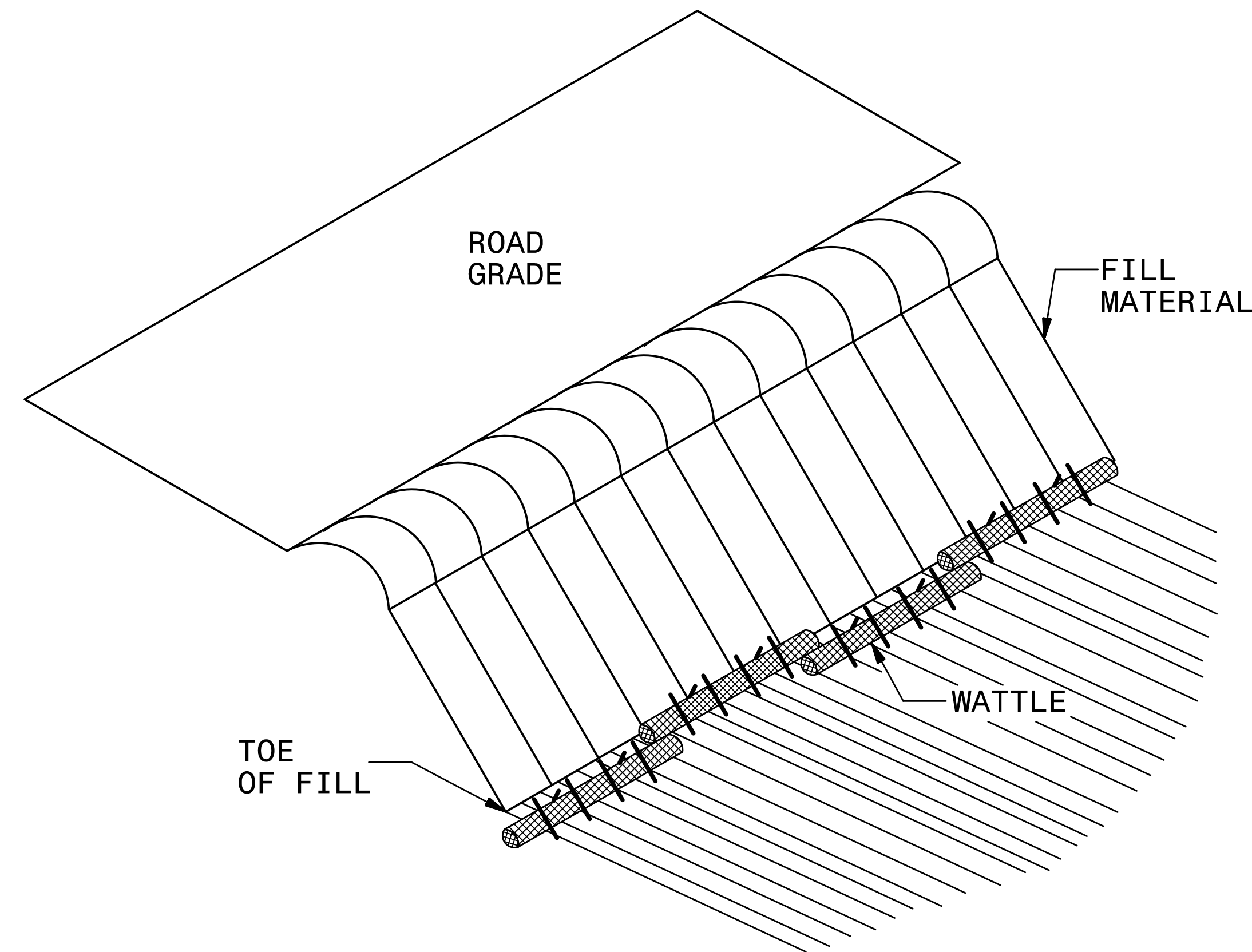
Roadway Standard Drawings

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

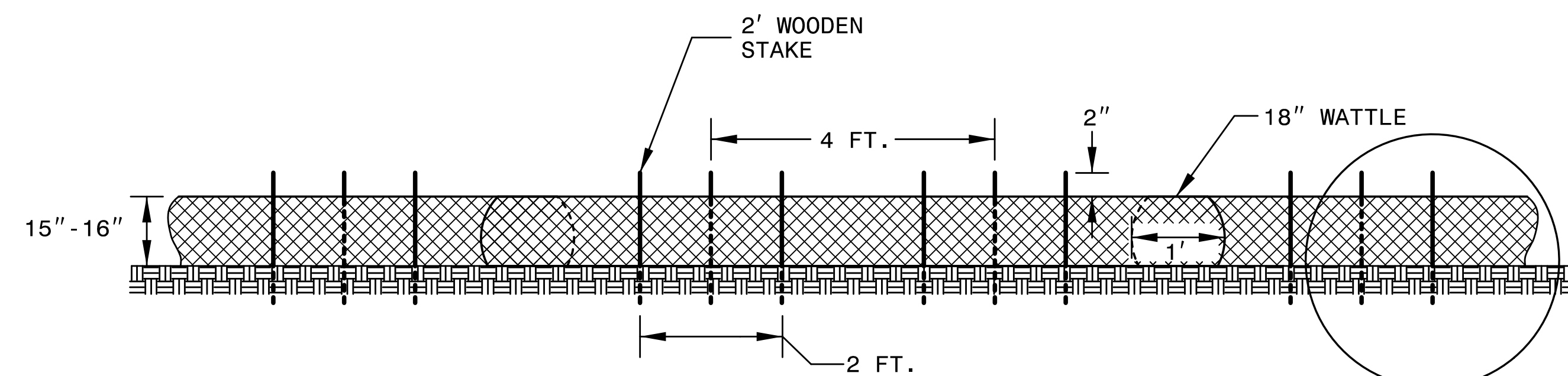
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type 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 Wattle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

PROJECT REFERENCE NO. B-5407	SHEET NO. EC-02
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



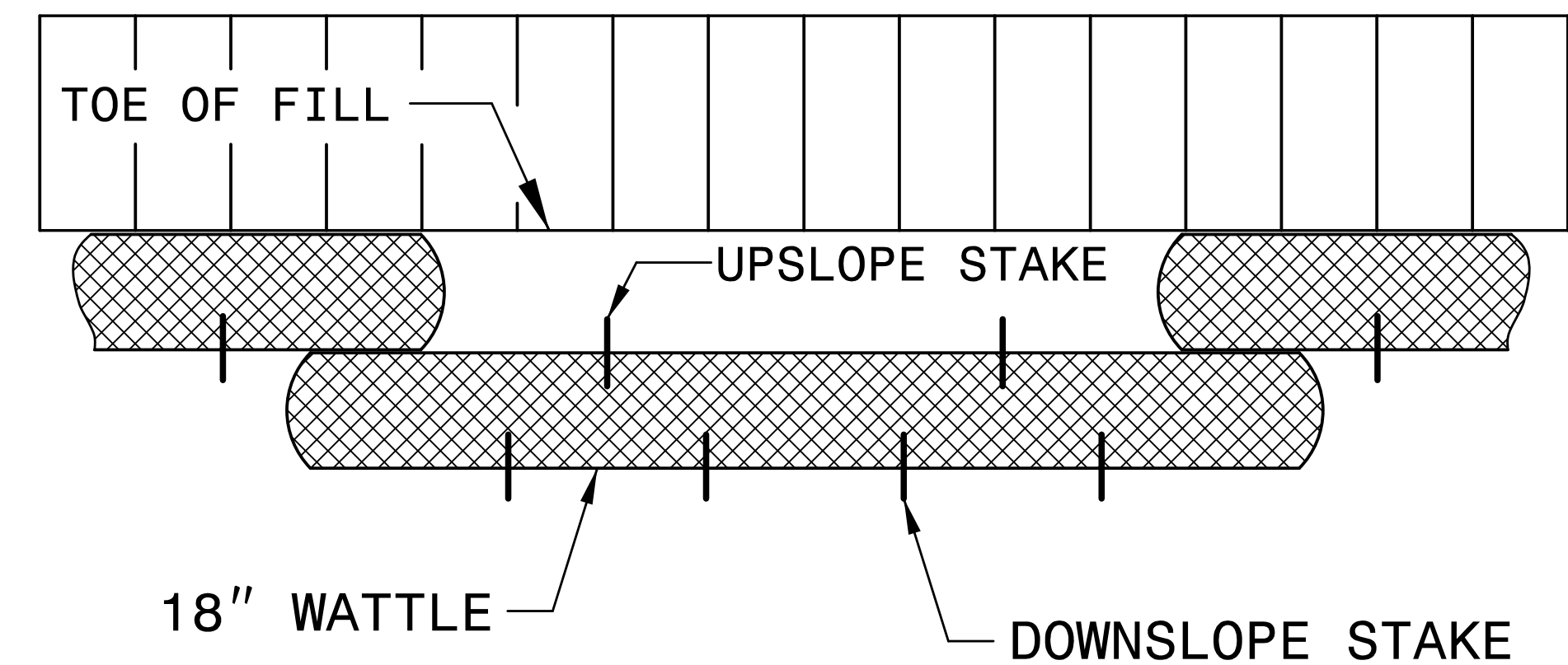
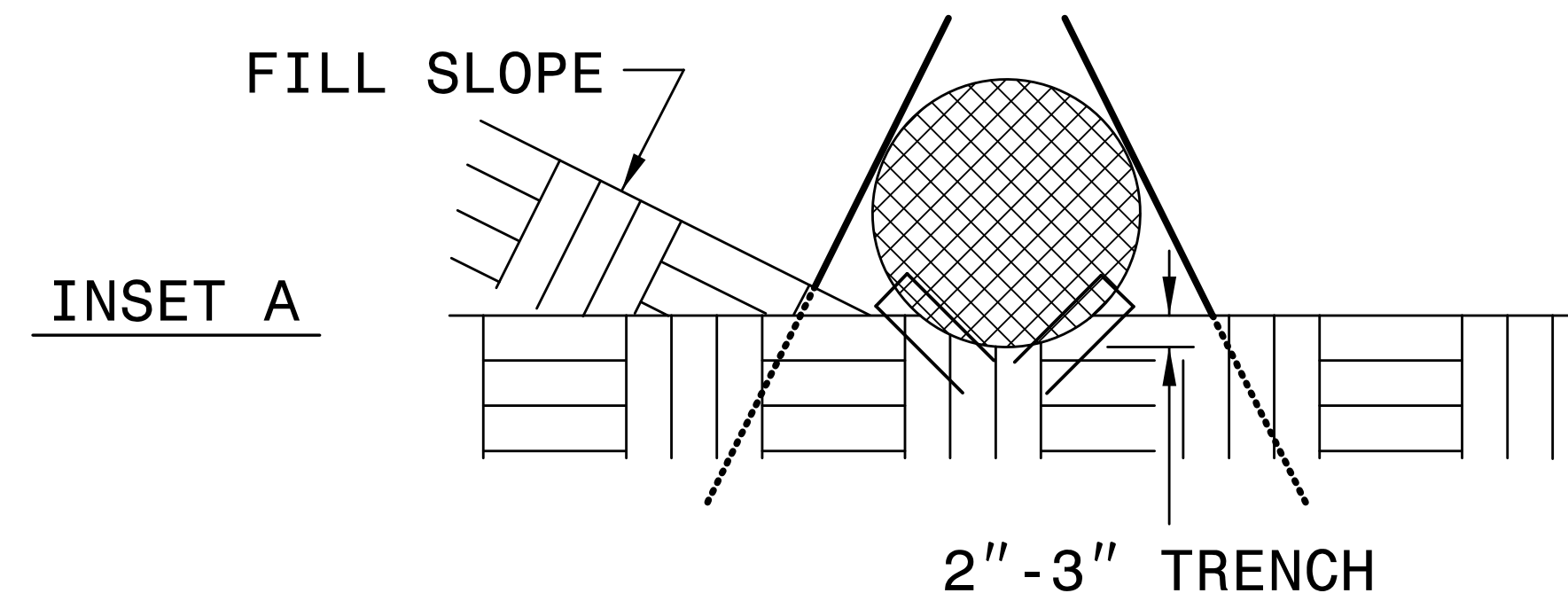
ISOMETRIC VIEW



FRONT 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.



TOP VIEW

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-5407</i>	SHEET NO. <i>EC-03</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

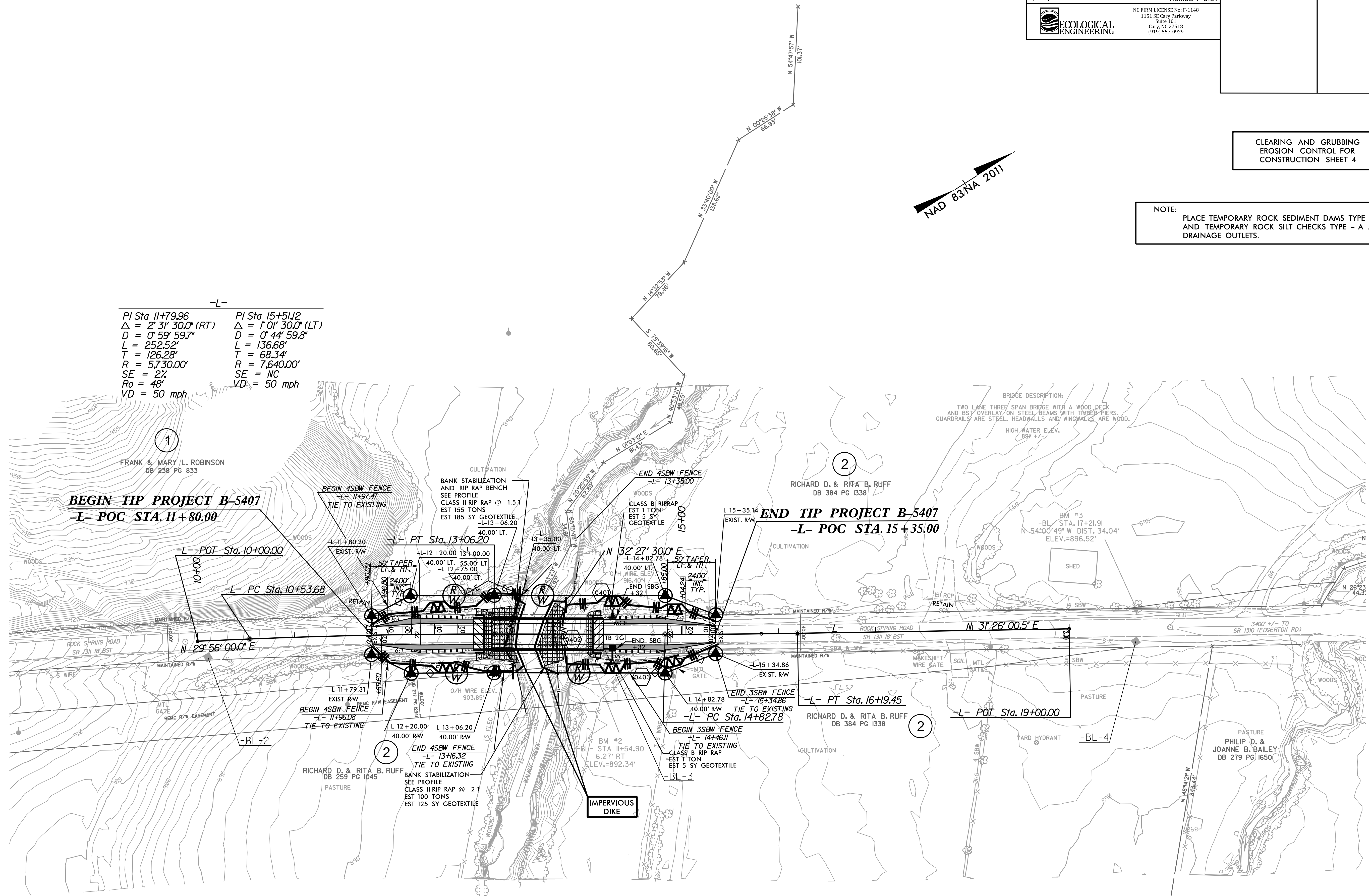
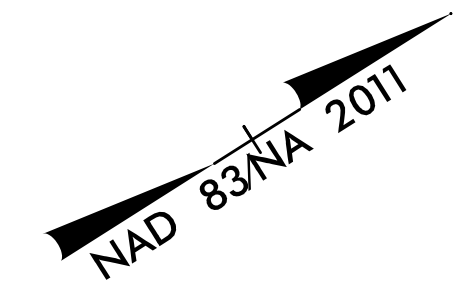
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 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. B-5407		SHEET NO. EC-04/CONST.04	
RW 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.



-L-

PI Sta 11+79.96	PI Sta 15+51.12
$\Delta = 2^\circ 31' 30.0''$ (RT)	$\Delta = 1^\circ 01' 30.0''$ (LT)
D = 0' 59' 59.7"	D = 0' 44' 59.8"
L = 252.52'	L = 136.68'
T = 126.28'	T = 68.34'
R = 5,730.00'	R = 7,640.00'
SE = 2%	SE = NC
Ro = 48'	VD = 50 mph

BEGIN TIP PROJECT B-5407
-L- POC STA. 11+80.00

END TIP PROJECT B-5407
-L- POC STA. 15+35.00

BANK STABILIZATION AND RIP RAP BENCH
SEE PROFILE
CLASS II RIP RAP @ 1.5:1
EST 155 TONS
EST 185 SY GEOTEXTILE

BANK STABILIZATION
SEE PROFILE
CLASS II RIP RAP @ 2:1
EST 100 TONS
EST 125 SY GEOTEXTILE

BRIDGE DESCRIPTION:
TWO LANE THREE SPAN BRIDGE WITH A WOOD DECK
AND BSY OVERLAY ON STEEL BEAMS WITH TIMBER PIERS.
GUARDRAILS ARE STEEL. HEADWALLS AND WINGWALKS ARE WOOD.
HIGH WATER ELEV.
89' +/-

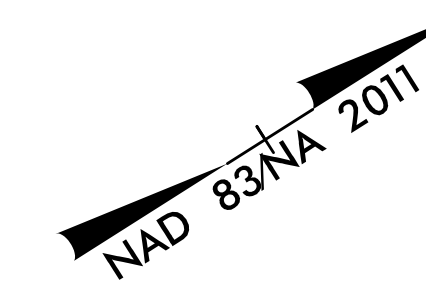
BM #3
-BL- STA. 17+21.91
N 54°00'49" W DIST. 34.04'
ELEV.=896.52'

PAVED SHOULDER

SEE SHEET 5 FOR -L- PROFILE



PROJECT REFERENCE NO. <i>B-5407</i>		SHEET NO. <i>EC-05/CONST.04</i>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



-L-

PI Sta 11+79.96	PI Sta 15+51.12
$\Delta = 2^\circ 31' 30.0''$ (RT)	$\Delta = 1^\circ 01' 30.0''$ (LT)
$D = 0^\circ 59' 59.7''$	$D = 0^\circ 44' 59.8''$
$L = 252.52'$	$L = 136.68'$
$T = 126.28'$	$T = 68.34'$
$R = 5,730.00'$	$R = 7,640.00'$
$SE = 2\%$	$SE = NC$
$Ro = 48'$	$VD = 50$ mph

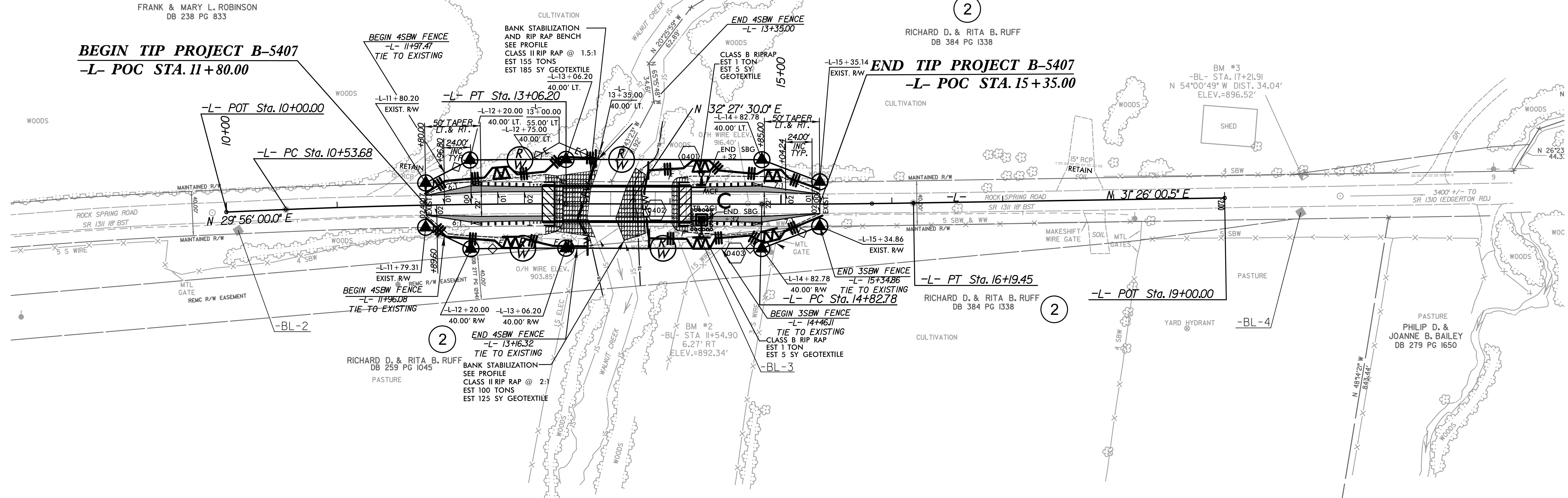
BRIDGE DESCRIPTION:
TWO LANE THREE SPAN BRIDGE WITH A WOOD DECK
AND BST OVERLAY ON STEEL BEAMS WITH TIMBER PIERS.
GUARDRAILS ARE STEEL. HEADWALLS AND WINGWALLS ARE WOOD.
HIGH WATER ELEV. 89' +/-

FRANK & MARY L. ROBINSON
DB 238 PG 833

BEGIN TIP PROJECT B-5407
-L- POC STA. 11+80.00

RICHARD D. & RITA B. RUFF
DB 384 PG 1338

END TIP PROJECT B-5407
-L- POC STA. 15+35.00



PAVED SHOULDER

SEE SHEET 5 FOR -L- PROFILE