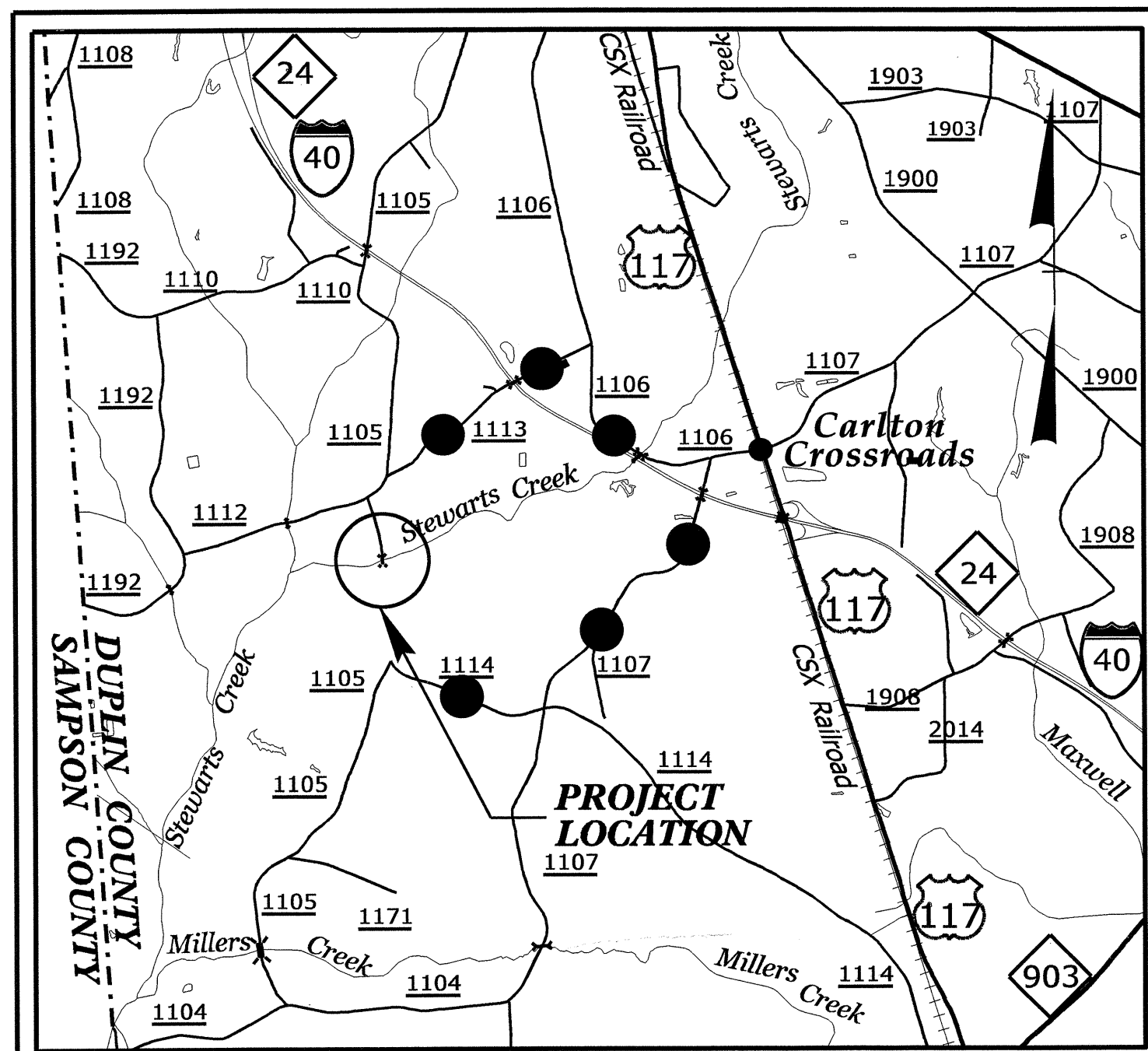


See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP

OFF-SITE DETOUR ●●●●

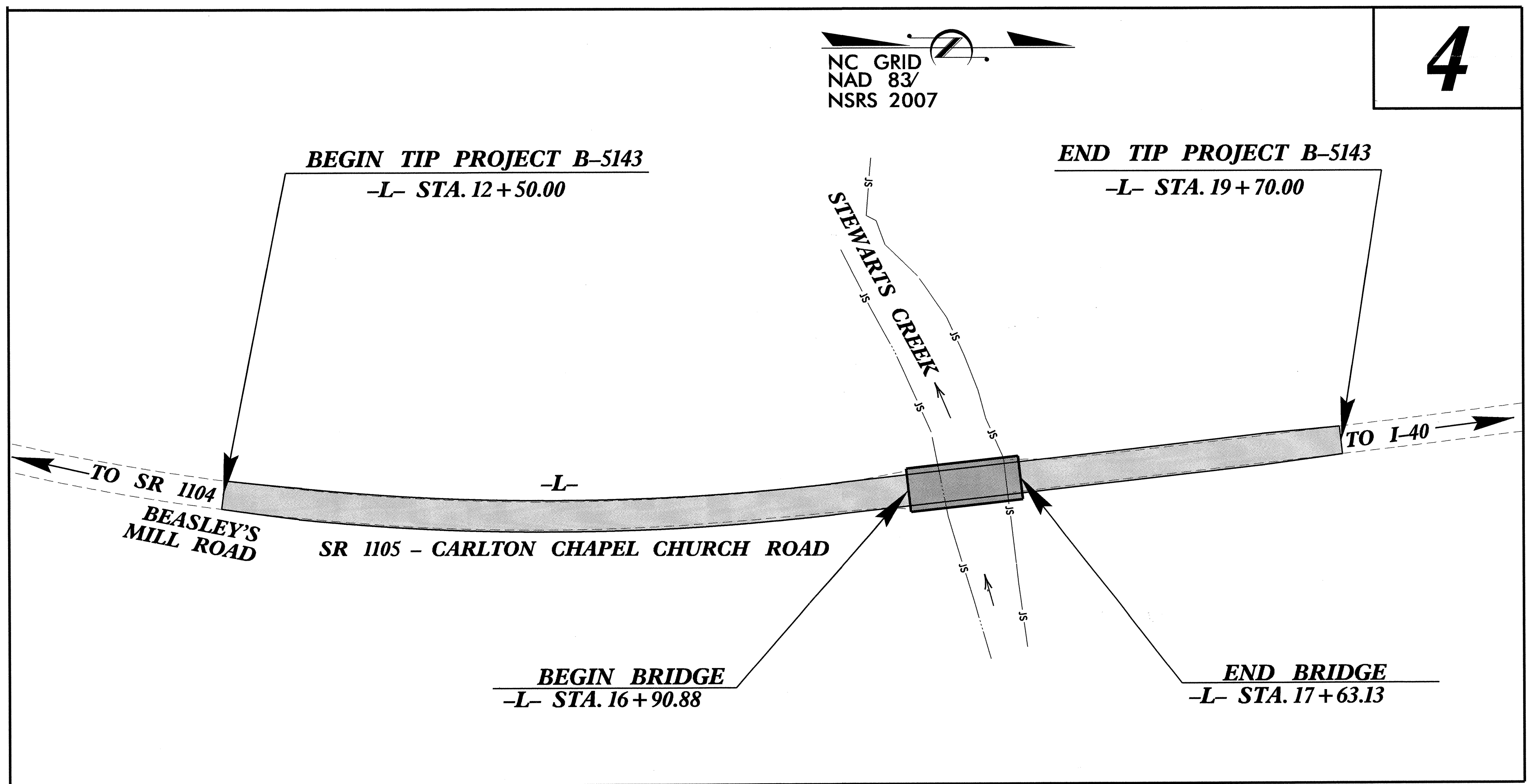
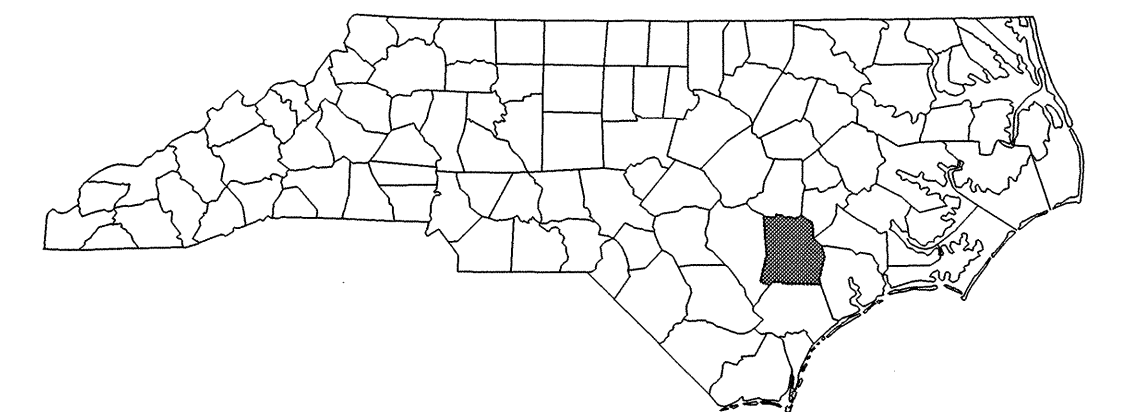
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DUPLIN COUNTY

LOCATION: BRIDGE NO. 408 OVER STEWARTS CREEK
ON SR 1105

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

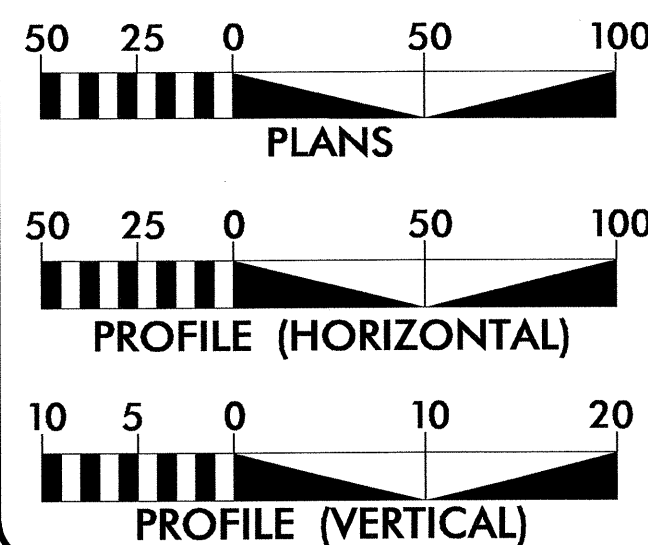
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5143	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42304.1.1	BRZ-1105(20)	P.E.	
42304.2.1	BRZ-1105(20)	RW & UTIL.	
42304.3.FD1	BRZ-1105(20)	CONST.	



TIP PROJECT: B-5143

CONTRACT: C203302

GRAPHIC SCALES



DESIGN DATA

ADT 2014 = 369 VPD
ADT 2035 = 450 VPD
K = 10 %
D = 60 %
* T = 5 %
V = 60 MPH
* (TTST 2% + DUALS 3%)
FUNC. CLASS. = RURAL LOCAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5143 = 0.123 MILE
LENGTH STRUCTURE TIP PROJECT B-5143 = 0.014 MILE
TOTAL LENGTH TIP PROJECT B-5143 = 0.137 MILE

Prepared In the Office of:
DIVISION OF HIGHWAYS

1000 Birch Ridge Dr., Raleigh, NC 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 20, 2012

LETTING DATE:
JANUARY 21, 2014

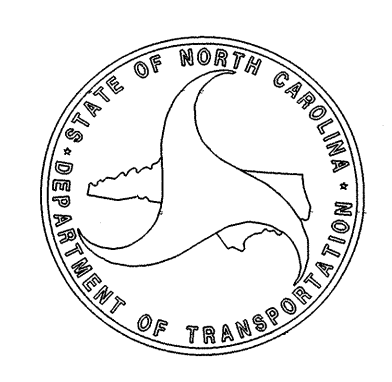
GARY LOVERING, PE
PROJECT ENGINEER

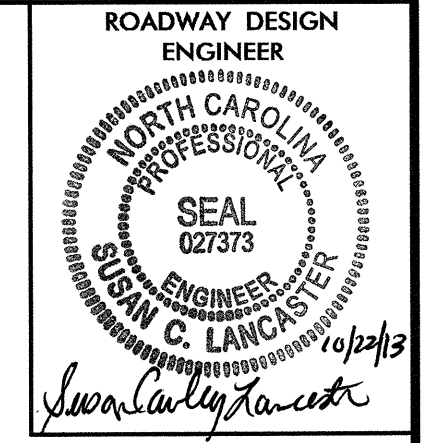
SUSAN C. LANCASTER, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

Professional Engineer Seal for Gary L. Overing, No. 022000.
Professional Engineer Seal for Susan C. Lancaster, No. 027373.
SIGNATURE: Susan C. Lancaster

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA





INDEX OF SHEETS

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARDS (2012 SPECIFICATIONS)
1-B	CONVENTIONAL SYMBOLS
1-C THROUGH 1-D	SURVEY CONTROL SHEETS
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, GUARDRAIL ANCHOR UNIT, TYPE III
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF DRAINAGE
3-B	SUMMARY OF EARTHWORK, PAVEMENT REMOVAL, SHOULDER BERM GUTTER, AND GUARDRAIL
4	PLAN SHEET
5	PROFILE SHEET
TMP-1 THROUGH TMP-3	TRANSPORTATION MANAGMENT PLANS
PMP-1	PAVEMENT MARKING PLANS
EC-1 THROUGH EC-5	EROSION CONTROL PLANS
SIGN-1	SIGNING PLANS
UC-1 THROUGH UC-5	UTILITY CONSTRUCTION PLANS
UO-1 THROUGH UO-2	UTILITIES BY OTHER PLANS
X-1A	CROSS-SECTION SUMMARY SHEET
X-1 THROUGH X-3	CROSS-SECTIONS
S-1 THROUGH S-16	STRUCTURE PLANS

2012 ROADWAY ENGLISH STANDARD DRAWINGS EFF. 01-17-2012
 REV. 10-30-2012

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
422.10	Reinforced Bridge Approach Fills
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.46	Traffic Bearing Precast Drainage Structure
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets

GENERAL NOTES: 2012 SPECIFICATIONS
 EFFECTIVE: 01-17-2012
 REVISED: 07-30-2012

GRADE LINE:
 GRADING AND SURFACING:
 THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUPERELEVATION:
 ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04
 SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
 ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH

SUBSURFACE DRAINS:
 SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL:
 THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:
 SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:
 NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:
 UTILITY OWNERS ON THIS PROJECT ARE
 CenturyLink (Telephone)
 Duplin County Water Department (Water)

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:
 ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

8/17/13

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

*S.U.E. = *Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	✕
Property Monument	□ EDM
Parcel/Sequence Number	②③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	?? ??

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	⊕
Small Mine	⊗
Foundation	□
Area Outline	□
Cemetery	⊕
Building	□
School	□
Church	⊕
Dam	▬

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	-JS-
Buffer Zone 1	-BZ 1-
Buffer Zone 2	-BZ 2-
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	⊕
Proposed Lateral, Tail, Head Ditch	▬
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	CSX TRANSPORTATION MILEPOST 35
Switch	SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	○
Proposed Right of Way Line with Iron Pin and Cap Marker	○
Proposed Right of Way Line with Concrete or Granite R/W Marker	▲
Proposed Control of Access Line with Concrete C/A Marker	○
Existing Control of Access	○
Proposed Control of Access	○
Existing Easement Line	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Drainage / Utility Easement	-DUE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
Proposed Aerial Utility Easement	-AUE-
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	CR
Existing Metal Guardrail	▬
Proposed Guardrail	▬
Existing Cable Guiderail	▬
Proposed Cable Guiderail	▬
Equality Symbol	⊕
Pavement Removal	▬
Single Tree	☼
Single Shrub	☼
Hedge	▬
Woods Line	▬

VEGETATION:

Orchard	☼ ☼ ☼ ☼
Vineyard	□ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	-S-

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	○
H-Frame Pole	●
Recorded U/G Power Line	-P-
Designated U/G Power Line (S.U.E.*)	-P-

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	□
Telephone Pedestal	⊕
Telephone Cell Tower	⊗
U/G Telephone Cable Hand Hole	○
Recorded U/G Telephone Cable	-T-
Designated U/G Telephone Cable (S.U.E.*)	-T-
Recorded U/G Telephone Conduit	-TC-
Designated U/G Telephone Conduit (S.U.E.*)	-TC-
Recorded U/G Fiber Optics Cable	-T FO-
Designated U/G Fiber Optics Cable (S.U.E.*)	-T FO-

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	-A/G Water-

TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊗
U/G TV Cable Hand Hole	○
Recorded U/G TV Cable	-TV-
Designated U/G TV Cable (S.U.E.*)	-TV-
Recorded U/G Fiber Optic Cable	-TV FO-
Designated U/G Fiber Optic Cable (S.U.E.*)	-TV FO-

GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded U/G Gas Line	-G-
Designated U/G Gas Line (S.U.E.*)	-G-
Above Ground Gas Line	-A/G Gas-

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-SS-
Above Ground Sanitary Sewer	-A/G Sanitary Sewer-
Recorded SS Forced Main Line	-FSS-
Designated SS Forced Main Line (S.U.E.*)	-FSS-

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	-TUL-
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

04/16/11

SURVEY CONTROL SHEET B-5143

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B5143-2" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 436393.820(ft) EASTING: 2264368.800(ft) ELEVATION: 94.84(ft)

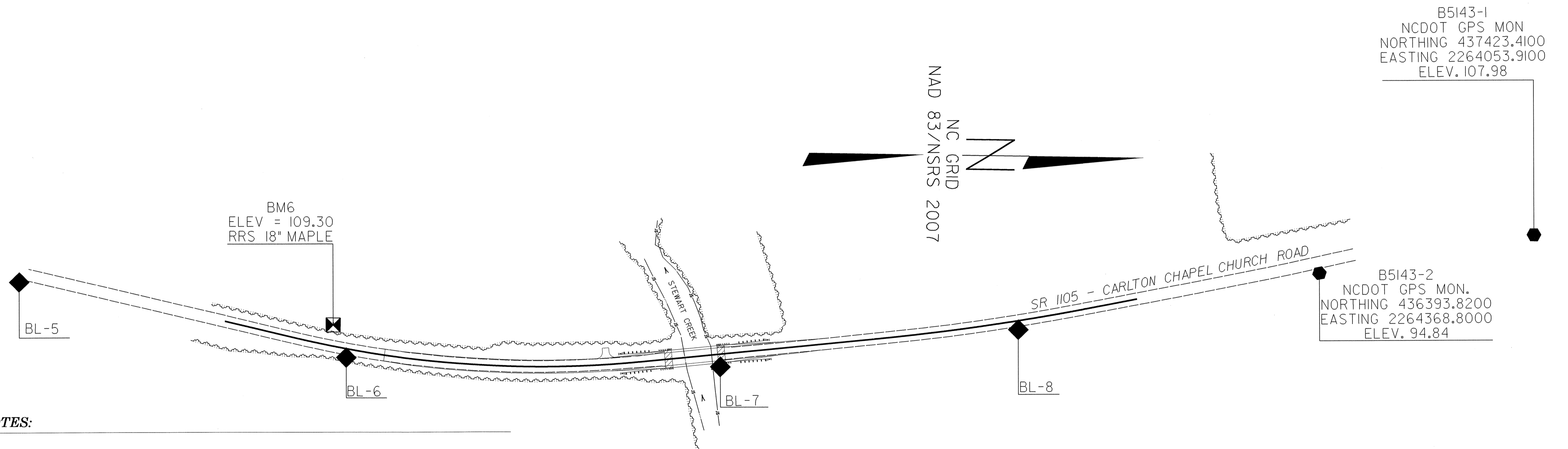
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: .999966271

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B5143-2" TO -L- STATION 10+00.00 IS
S 03° 25' 44" E 1680.51'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL5	BL-5	434399.7525	2264413.7590	119.06	OUTSIDE PROJECT LIMITS	
BL6	BL-6	434905.4922	2264523.3600	104.64	11+95.68	14.23 RT
BL7	BL-7	435476.9720	2264521.3364	92.41	17+65.61	14.10 RT
BL8	BL-8	435933.1682	2264462.4977	94.20	22+24.86	13.45 RT
B51432	B5143-2	436393.8200	2264368.8000	94.84	OUTSIDE PROJECT LIMITS	

 BM6 ELEVATION = 109.30
 N 434882 E 2264472
 L STATION 11+64.00 32 LEFT
 RRS 18" MAPLE



NOTES:

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/)

THE FILES TO BE FOUND ARE AS FOLLOWS:
 B-5143_LS_CONTROL.TXT

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

© INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM EXISTING HARN MONUMENTATION
 SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

NOTE: DRAWING NOT TO SCALE

SURVEY CONTROL SHEET B-5143

ROW MARKER CONCRETE OR GRANITE-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	16+41.84	-50.00	435346.7774	2264471.5515
L	16+41.84	-30.00	435349.0255	2264491.4248
L	18+00.00	-50.00	435503.9399	2264453.7730
L	18+00.00	-30.00	435506.1879	2264473.6463
L	16+41.84	30.00	435355.7698	2264551.0445
L	16+41.84	40.00	435356.8938	2264560.9811
L	18+00.00	30.00	435512.9322	2264533.2660
L	18+00.00	40.00	435514.0563	2264543.2027

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	434716.3241	2264469.3136
PC	11+15.75	434829.3823	2264494.1400
PT	16+41.84	435352.3976	2264521.2346
PC	20+03.79	435712.0619	2264480.5488
PT	23+57.42	436061.0513	2264424.3034
POT	24+12.17	436114.6404	2264413.0524

NOTE: DRAWING NOT TO SCALE

6/2/99

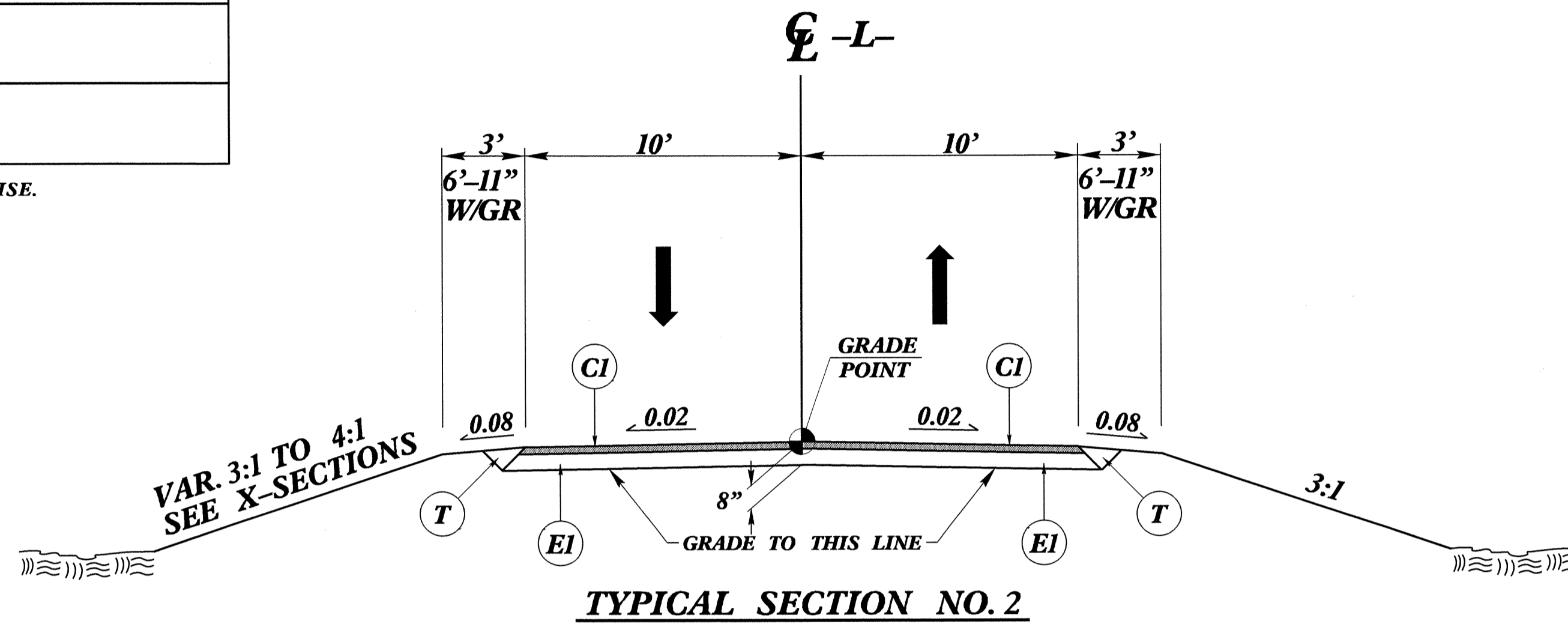
23-OCT-2013 10:41 AM \\S:\5143_1s_ID_131022 (3).dgn

6/2/09

PROJECT REFERENCE NO. B-5143	SHEET NO. 2
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027373 GUYIN C. LANCASTER 10/22/13	PAVEMENT DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22898 CLYDE S. MORRISON 10/19/13

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 1.5" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
RI	SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.

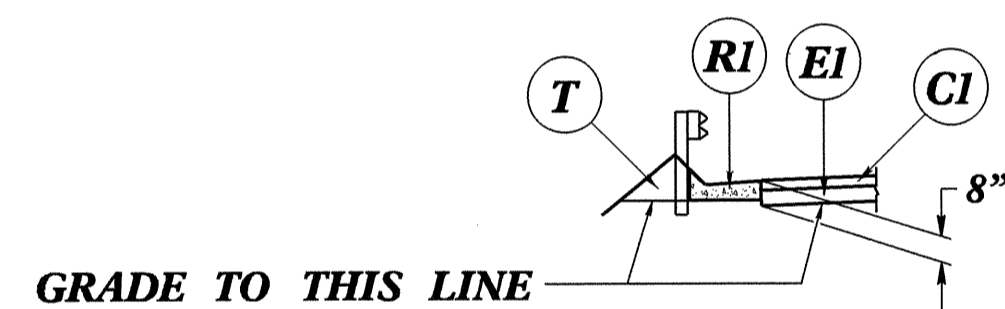
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



USE TYPICAL SECTION NO. 1 AT THE FOLLOWING LOCATIONS:

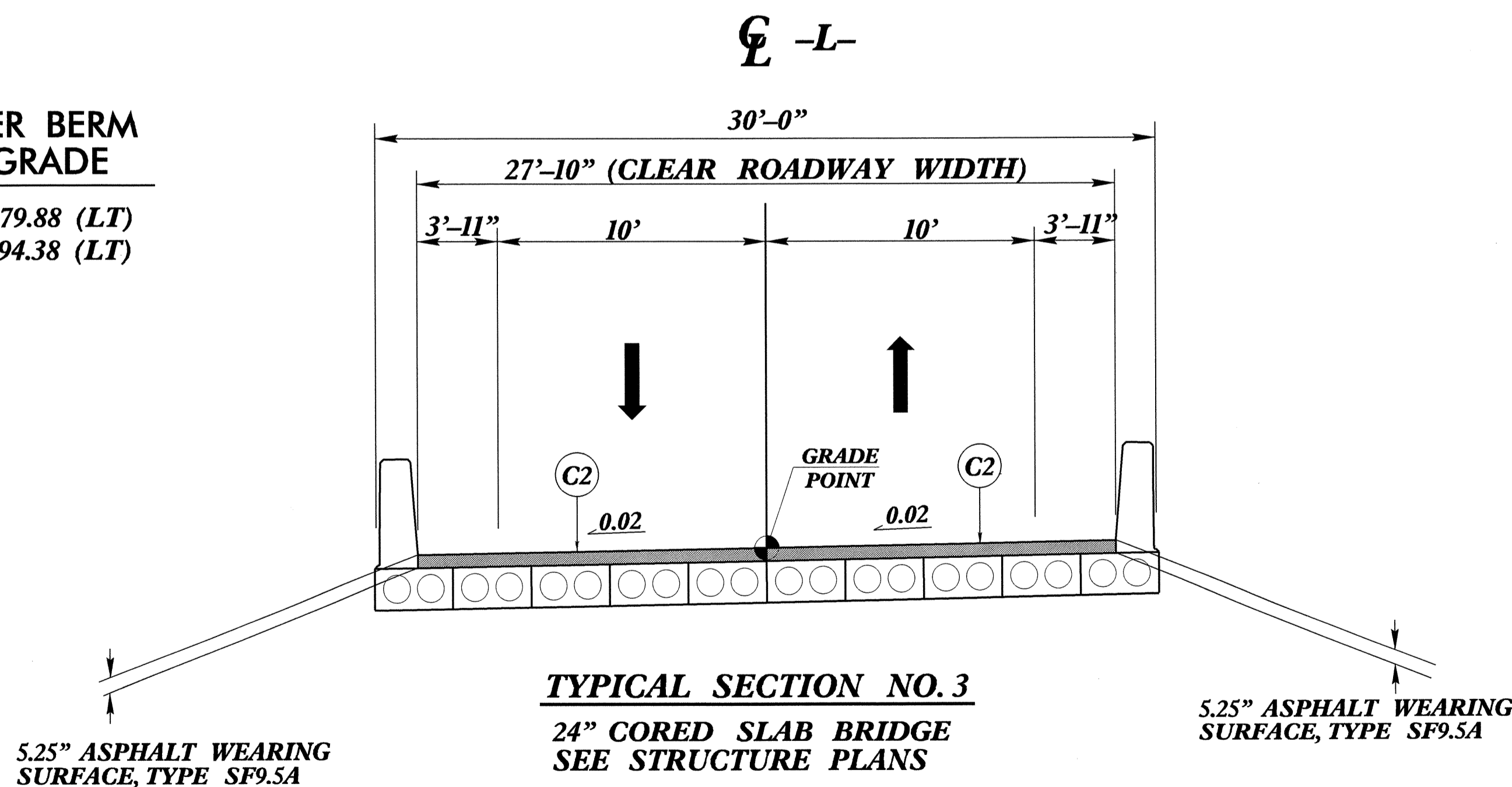
- L- STA. 12+50.00 TO 16+90.88 (BEGIN BRIDGE)
- L- STA. 17+63.13 (END BRIDGE) TO 19+70.00

NOTE: PAVE TO FACE OF GUARDRAIL



DETAIL SHOWING SHOULDER BERM GUTTER ON TOP OF SUBGRADE

- L- STA. 16+59.63 TO -L- STA. 16+79.88 (LT)
- L- STA. 17+74.13 TO -L- STA. 17+94.38 (LT)



USE TYPICAL SECTION NO. 3 AT THE FOLLOWING LOCATION:

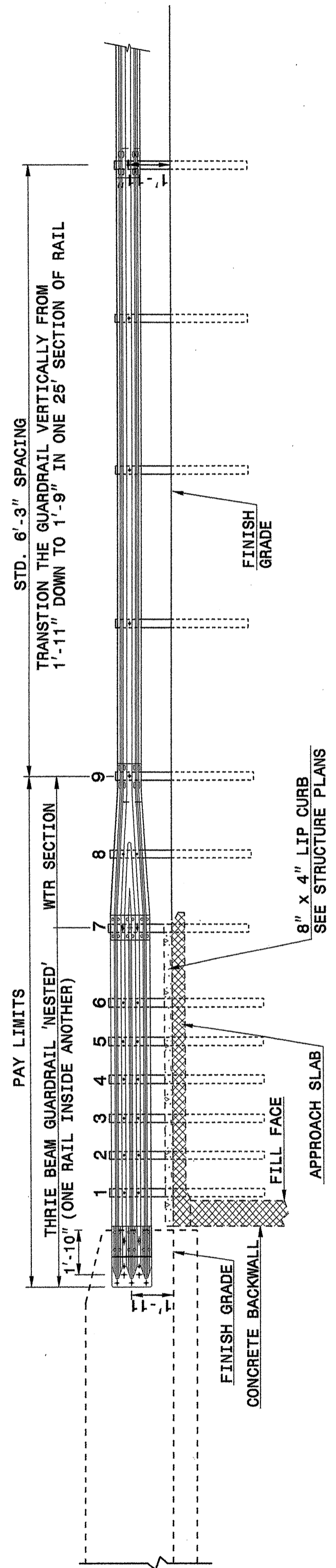
- L- STA. 16+90.88 (BEGIN BRIDGE) TO 17+63.13 (END BRIDGE)

16-OCT-2013 11:44 AM
C:\WORK\BID\5143\rdy_byp.dgn

STATE OF
 NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

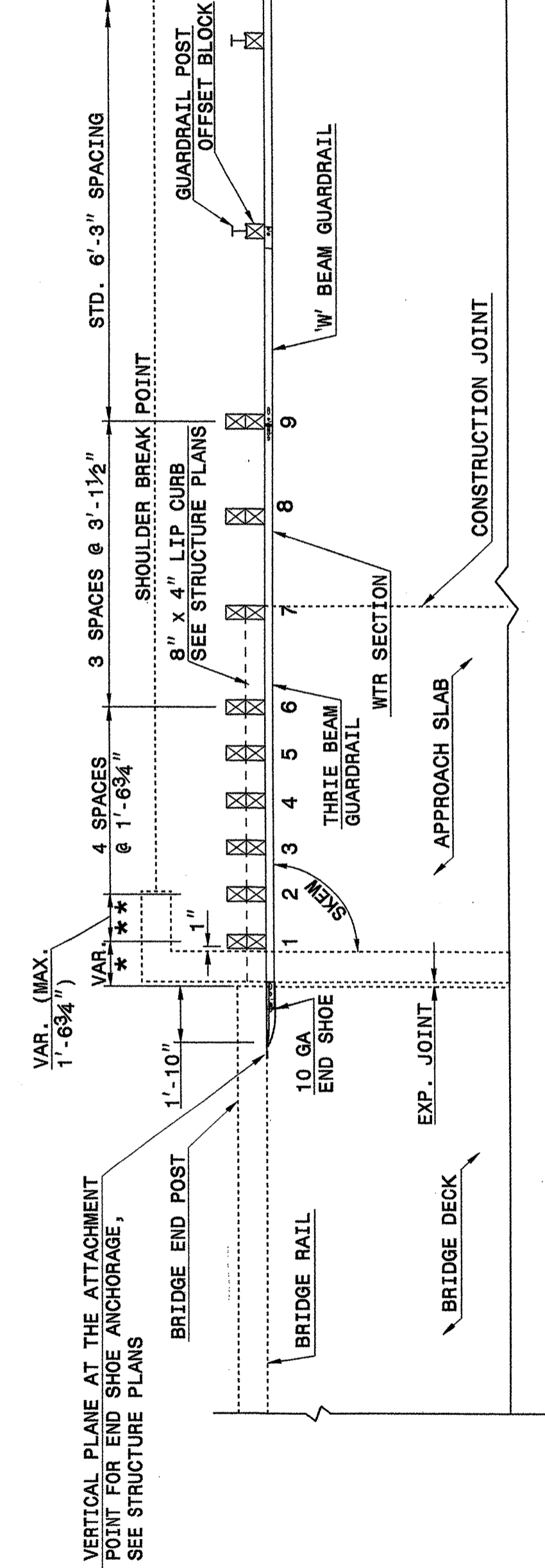
ENGLISH DETAIL DRAWING FOR
 STRUCTURE ANCHOR UNITS
 GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
 RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
 862d03



ELEVATION

NOTE:
 **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.
 -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
 -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
 -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
 -SEE SHEET 5 FOR POST SECTIONS 1 THRU 9.



PLAN VIEW

GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
 RAIL ON BRIDGE - SUB REGIONAL TIER

STATE OF
 NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
 STRUCTURE ANCHOR UNITS
 GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
 RAIL ON BRIDGE - SUB REGIONAL TIER

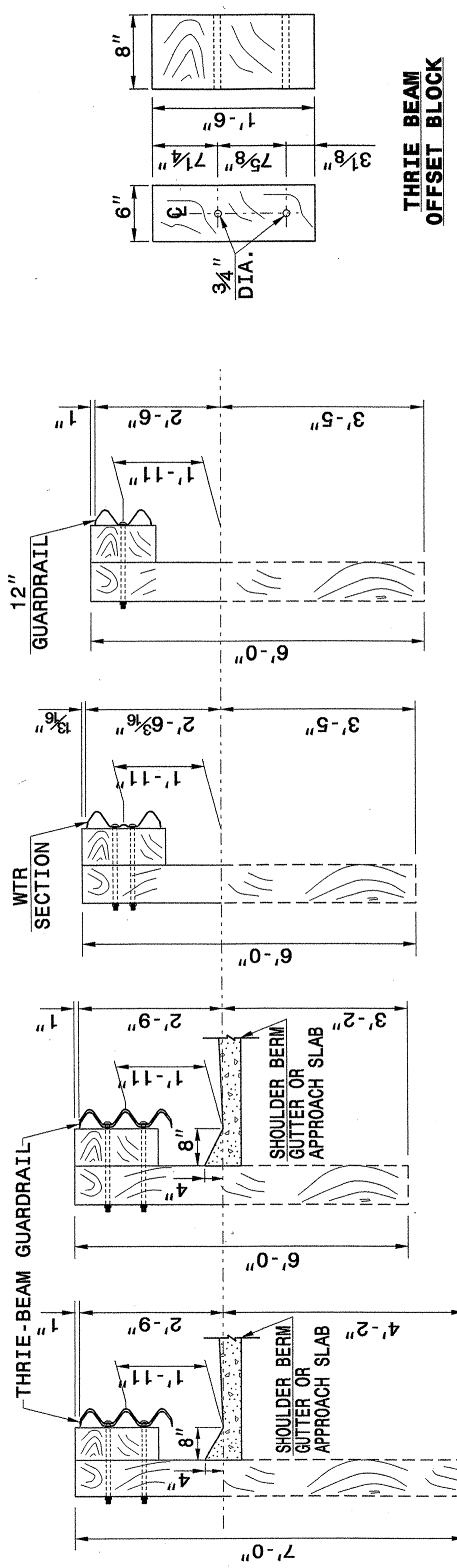
SHEET 2 OF 7
 862d03

SYSTEM *****
 DCDN *****
 USERNAME *****

STATE OF
 NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
 STRUCTURE ANCHOR UNITS
 GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 3 OF 7
 862d03



THRIE-BEAM SECTION

SECTION OF THRIE BEAM POSTS 1 THRU 6

SECTION OF THRIE BEAM POST 7

SECTION OF WTR BEAM POST 8

SECTION OF WTR BEAM POST 9

THRIE BEAM OFFSET BLOCK

WTR SECTION ELEVATION VIEW

END SHOE

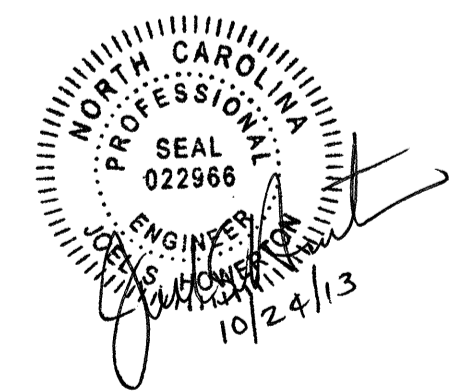
THRIE BEAM LINE POST

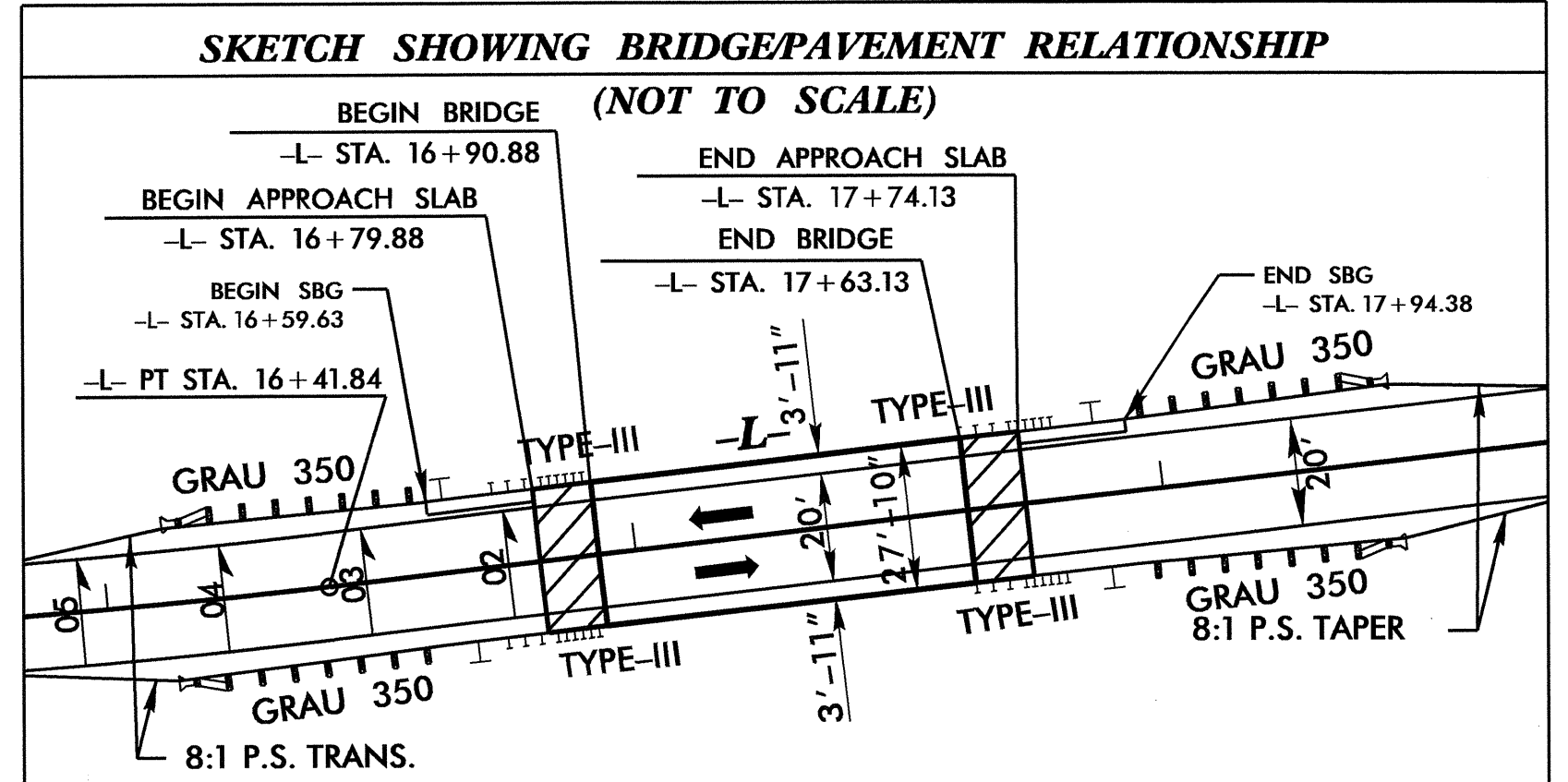
NOTE: THE MID POST AND OFFSET BLOCK OF THE WTR SECTION WILL REQUIRE SPECIAL BOLT HOLE DRILLING IN THE THRIE BEAM OFFSET BLOCK AND LINE POST.

CONTRACT STANDARDS
 AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

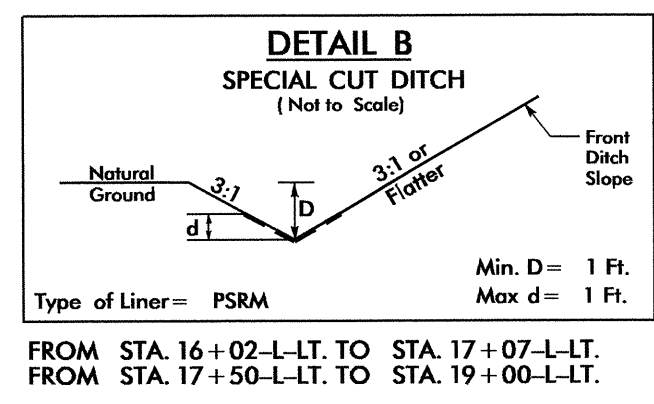
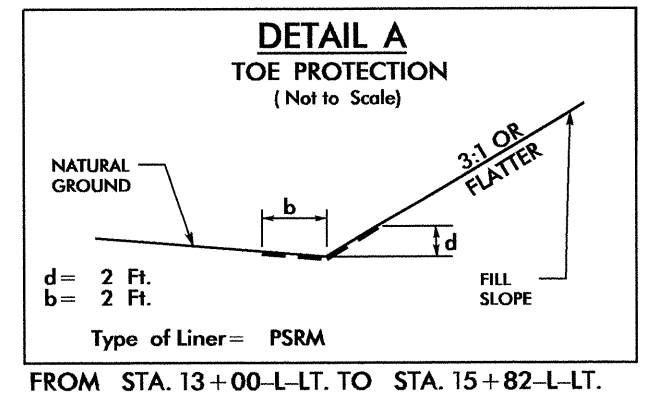
SEE TITLE BLOCK

ORIGINAL BY: J HOWERTON DATE: 06-22-12
 MODIFIED BY: JHS DATE: 11/13/12
 CHECKED BY: JHS DATE: 11/13/12
 FILE SPEC.:



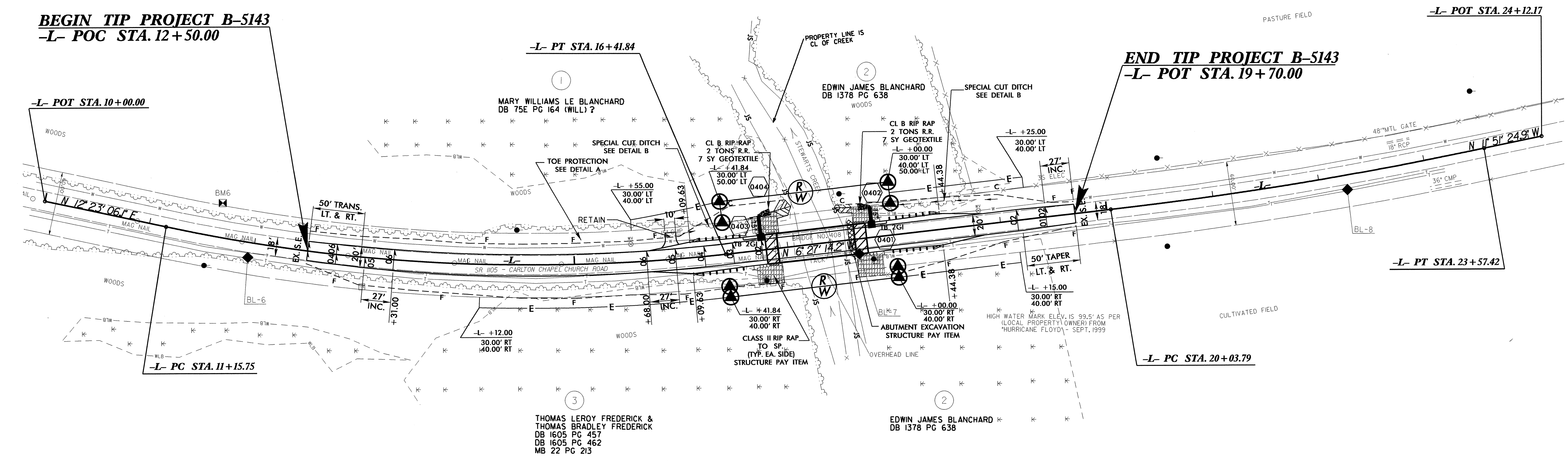


NAD 83/NSRS 2007
NC GRID



BEGIN TIP PROJECT B-5143
-L- POC STA. 12+50.00

END TIP PROJECT B-5143
-L- POT STA. 19+70.00



-L-	
PI Sta 13+81.9	PI Sta 21+80.74
$\Delta = 18^{\circ} 50' 20.3" (LT)$	$\Delta = 5^{\circ} 24' 10.7" (LT)$
$D = 3^{\circ} 34' 51.6"$	$D = 1^{\circ} 31' 40.4"$
$L = 526.08'$	$L = 353.62'$
$T = 265.44'$	$T = 176.94'$
$R = 1,600.00'$	$R = 3,750.00'$
$SE = 0.06$	
$RO = SEE PLANS$	

BRIDGE APPROACH SLAB

- NOTES:**
- 1.) FOR -L- PROFILE SEE SHEET 5.
 - 2.) ALL DRIVEWAY RADII ARE 10' UNLESS NOTED OTHERWISE ON PLANS.
 - 3.) FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-16.

REVISIONS

8/17/99
11-OCT-2013 11:21 AM
R:\Roadway\Projects\B-5143-rdy_psh-s04.dgn

5/28/13

DITCH LEGEND
LEFT DITCH - - - - -

PROJECT REFERENCE NO. B-5143	SHEET NO. 5
ROADWAY DESIGN ENGINEER SUSAN C. LANCASTER SEAL 027373	HYDRAULICS ENGINEER W. GALEN CARR SEAL 022000

BM #6 RAILROAD SPIKE SET IN BASE OF 18" MAPLE
-L- STA. 11+64.00 32' LT ELEV. = 109.30'
N 434882 E 2264472

-L-

24" CORED SLAB
SPAN = 1 @ 70'
CL -L- STA. 17+27.00
CL ELEV. = 94.36
SKEW = 90°

BEGIN GRADE -L- STA 12+50.00
ELEV. = 103.08'

PI = 14+03.00
EL = 96.48'
VC = 290'
K = 79
V_d = 45 mph

PI = 17+79.00
EL = 94.02'
VC = 80'
K = 171
V_d = 65 mph

PI = 18+89.00
EL = 92.79'
VC = 140'
K = 99
V_d = 50 mph

END GRADE -L- STA 19+70.00
ELEV. = 93.03'

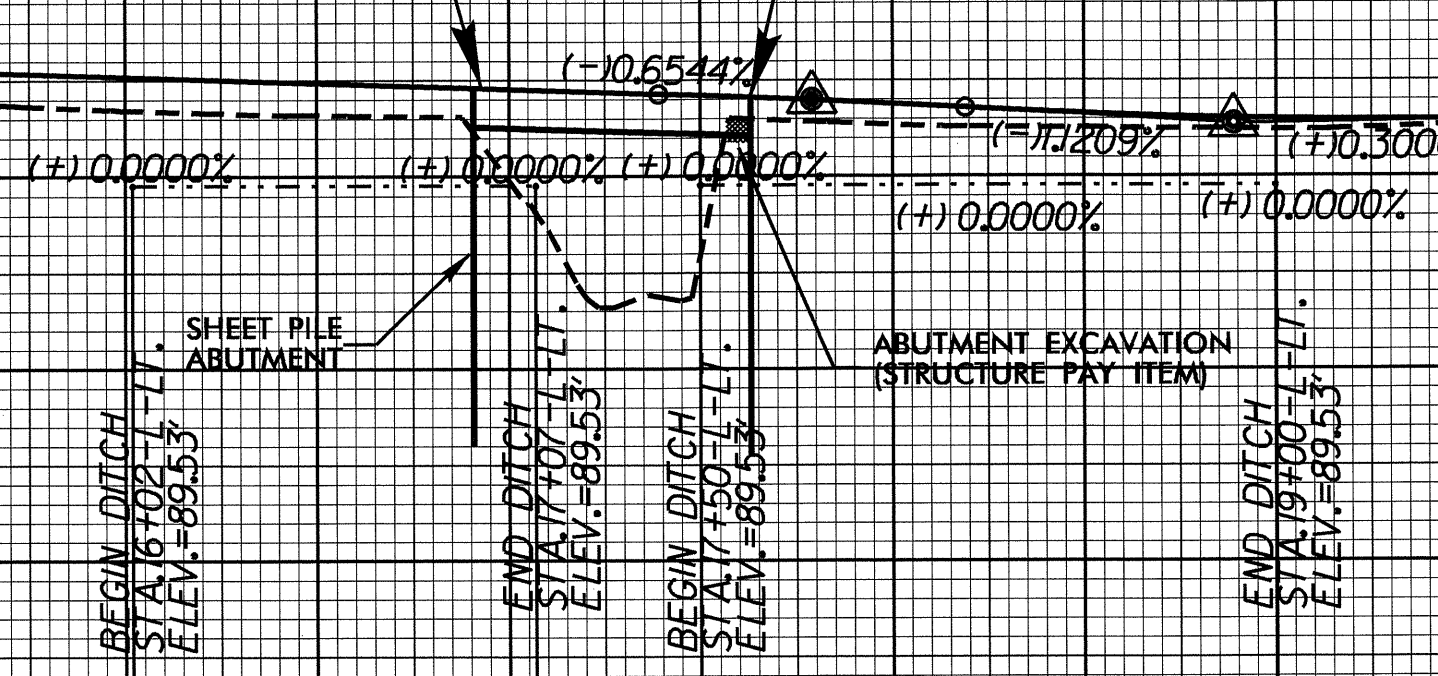
BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 1200	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 93.0	FT
BASE DISCHARGE	= 2075	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 94.19	FT
OVERTOPPING DISCHARGE	= 100	CFS
OVERTOPPING FREQUENCY	= +10	YRS
OVERTOPPING ELEVATION	= 92.7	FT

DATE OF SURVEY = 10/13/2011
W.S. ELEVATION AT DATE OF SURVEY = 90.0 FT

BEGIN BRIDGE
-L- STA. 16+90.88

END BRIDGE
-L- STA. 17+63.13



NOTES:
1.) FOR -L- PLAN VIEW SEE SHEET 4.
2.) FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-16.

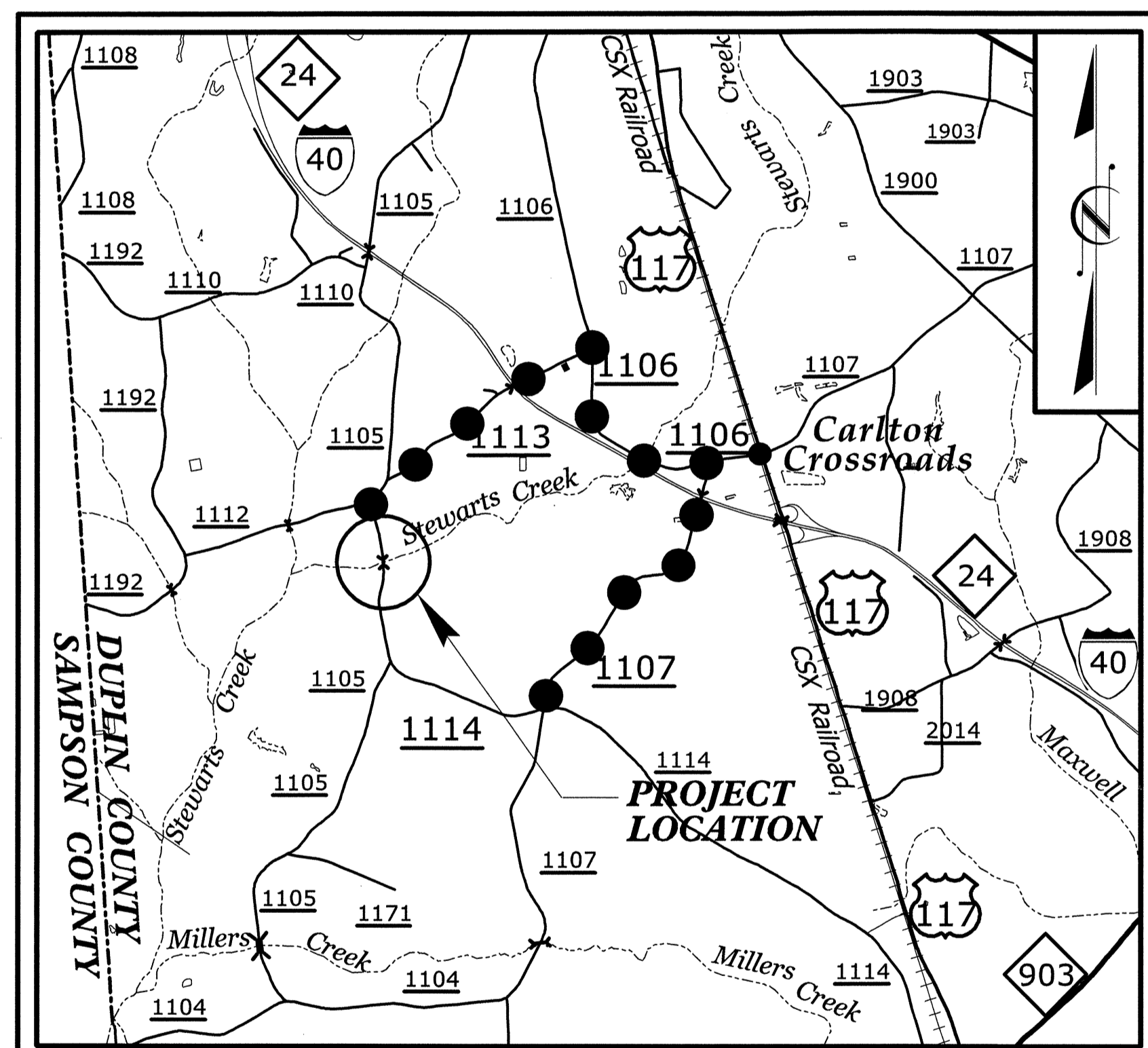
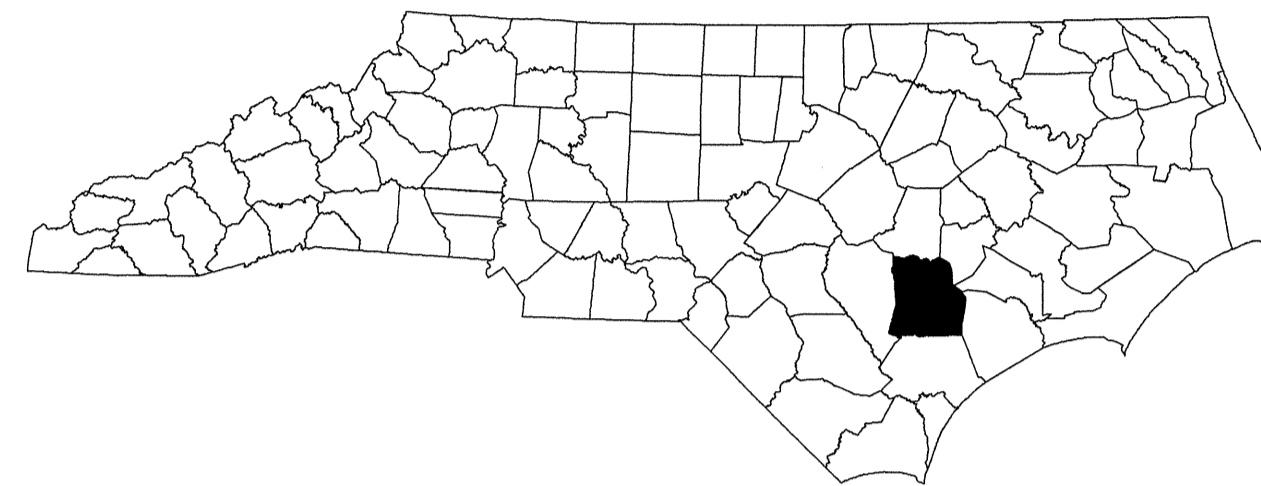
10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

10 OCT 2013 10:26 AM b5143_rdy-pl-1.s05.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

DUPLIN COUNTY



**LOCATION: BRIDGE NO. 408 OVER STEWARTS CREEK ON
SR 1105**

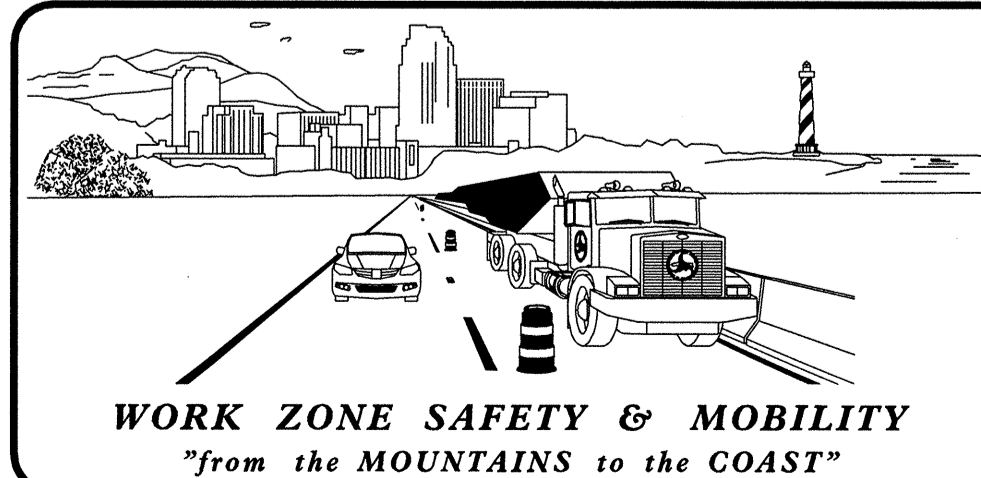
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND
STRUCTURE**

VICINITY MAP

OFF-SITE DETOUR ●●●●●

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

- J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
- J. S. KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
- D. W. BISSETTE, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
- TRAFFIC CONTROL DESIGN ENGINEER



INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, LOCAL NOTES, AND PHASING)
TMP-2	OFF-SITE DETOUR
TMP-3	ROAD CLOSURE

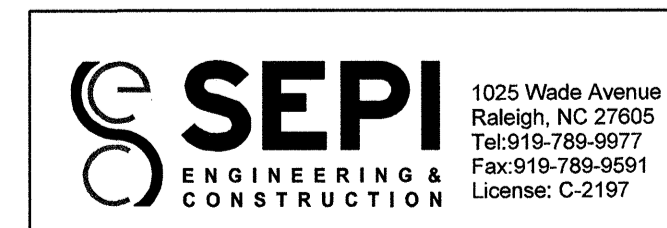
SHEET NO.
TMP-1

B-5143

TIP PROJECT:

APPROVED: *St. Miller*
DATE: 9-3-13

SEAL



\$\$\$\$\$SYCTIME\$\$\$\$\$
\$\$\$\$\$C:\MS04\JLN\$\$\$\$\$
\$\$\$\$\$SUBSERNAME\$\$\$\$\$






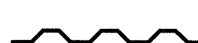
ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.03	TEMPORARY ROAD CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES-TYPE III

LEGEND

GENERAL

-  DIRECTION OF TRAFFIC FLOW
-  DIRECTION OF PEDESTRIAN TRAFFIC FLOW
-  EXIST. PVMT.
-  NORTH ARROW
-  PROPOSED PVMT.
-  TEMP. SHORING (LOCATION PURPOSES ONLY)




 WORK AREA

 REMOVAL

 USER DEFINED (IF NEEDED)

 USER DEFINED (IF NEEDED)










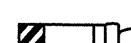

SIGNALS

-  EXISTING
-  PROPOSED
-  TEMPORARY




PAVEMENT MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES




TRAFFIC CONTROL DEVICES

-  BARRICADE (TYPE III)
-  CONE
-  DRUM
-  SKINNY DRUM
-  TUBULAR MARKER
-  TEMPORARY CRASH CUSHION
-  FLASHING ARROW BOARD
-  FLAGGER
-  LAW ENFORCEMENT
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

-  PORTABLE SIGN
-  STATIONARY SIGN
-  STATIONARY OR PORTABLE SIGN


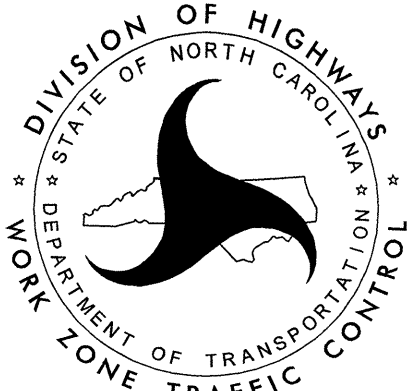

PAVEMENT MARKERS

-  CRYSTAL/CRYSTAL
-  CRYSTAL/RED
-  YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

-  PAVEMENT MARKING SYMBOLS

\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$\$\$\$DGN\$\$\$\$\$
 \$\$\$\$\$\$SERNAME\$\$\$\$\$

APPROVED:  DATE: 9-3-13		ROADWAY STANDARD DRAWINGS & LEGEND
		

MANAGEMENT STRATEGIES

-CLOSE SR 1105 (CARLTON CHAPEL CHURCH ROAD) AND SR 1114 (ISHAM FREDERICK RD) AT BEASLEYS MILL RD AND DETOUR TRAFFIC OFF-SITE

-LOCAL ACCESS TO ALL RESIDENCES AND BUSINESSES WILL BE MAINTAINED BETWEEN CLOSURE POINTS AT ALL TIMES DURING CONSTRUCTION

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

SIGNING

A) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC MANAGEMENT PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC MANAGEMENT PLANS.

B) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

C) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

LOCAL NOTES

1. NOTIFY THE ENGINEER AT LEAST ONE MONTH PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

PHASING

STEP 1 USING RSD 1101.03 SHEET 1 OF 9, CLOSE CARLTON CHAPEL CHURCH ROAD (SR 1105) AND DETOUR TRAFFIC OFF-SITE AS SHOWN ON TMP-2. MAINTAIN ACCESS TO ALL RESIDENCES AND BUSINESSES BETWEEN CLOSURE POINTS.


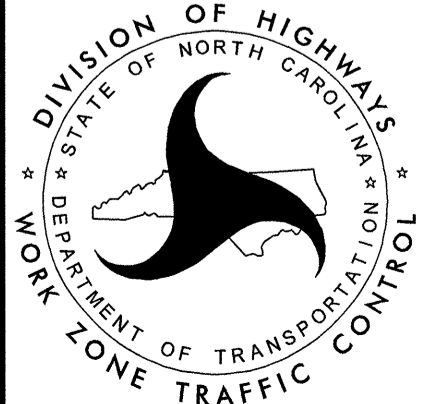
STEP 2 REMOVE THE EXISTING STRUCTURE.

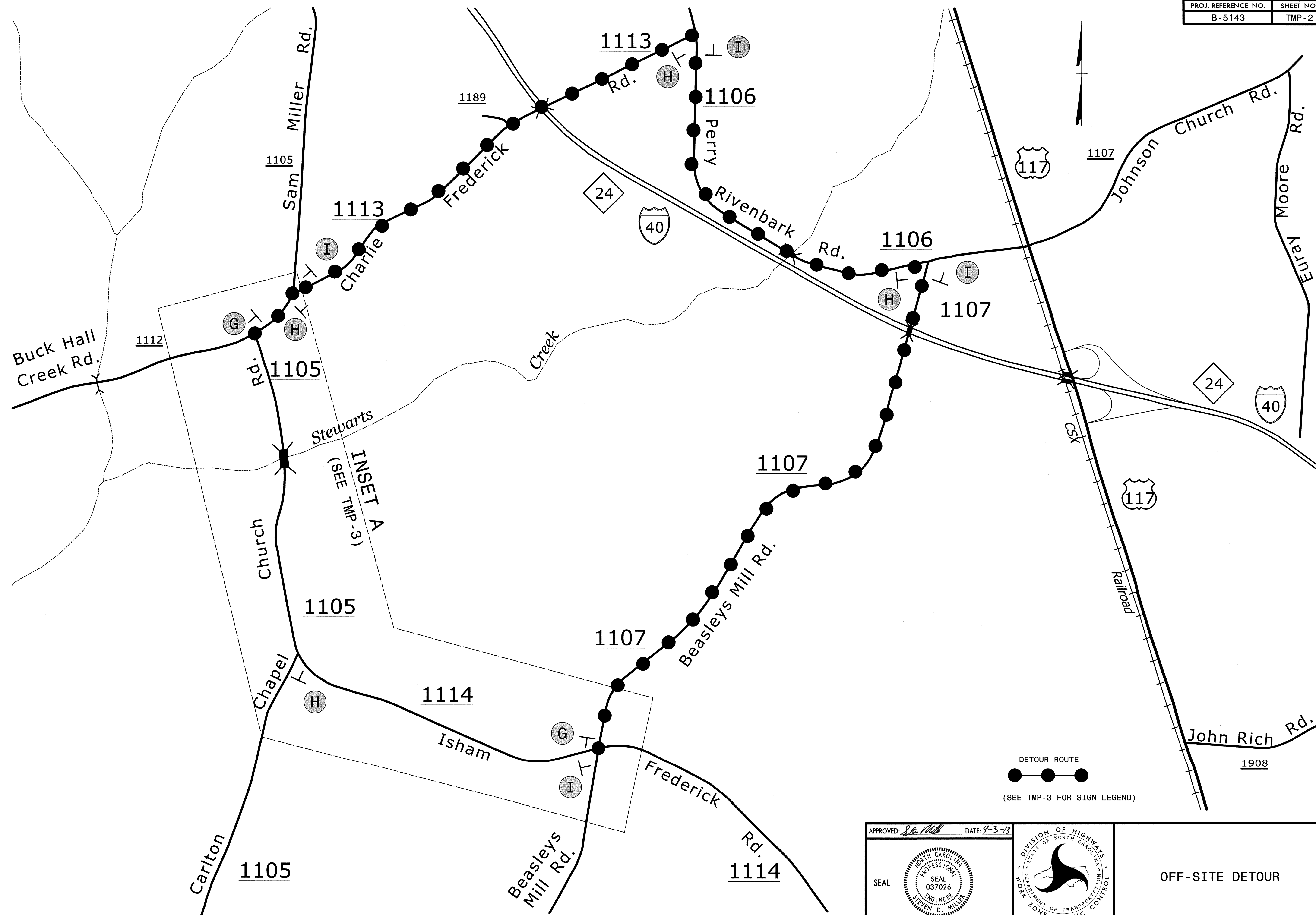
STEP 3 CONSTRUCT THE PROPOSED STRUCTURE AND ROADWAY.


STEP 4 PLACE FINAL PAVEMENT MARKINGS ACCORDING TO THE PAVEMENT MARKING PLANS.

STEP 5 OPEN CARLTON CHAPEL CHURCH ROAD (SR 1105) TO TRAFFIC AND REMOVE ALL TRAFFIC CONTROL DEVICES.

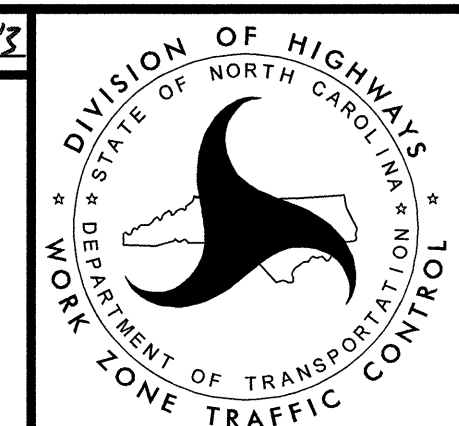
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 \$\$\$DDGN\$\$\$
 \$\$\$SERNAME\$\$\$

APPROVED: <i>[Signature]</i> DATE: 9-3-13			TRANSPORTATION OPERATIONS PLAN
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DETOUR ROUTE

 (SEE TMP-3 FOR SIGN LEGEND)

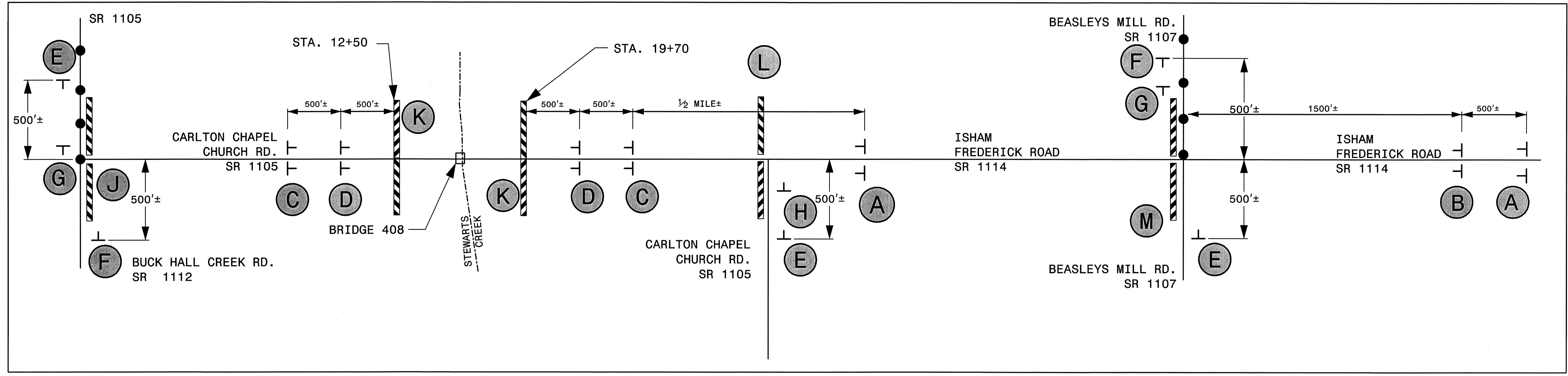
APPROVED: *St. Miller* DATE: 9-3-75



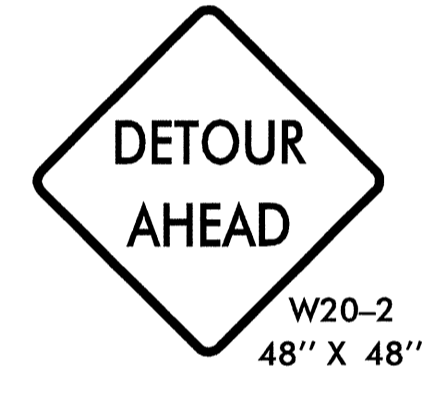
OFF-SITE DETOUR

\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$USERNAME\$\$\$

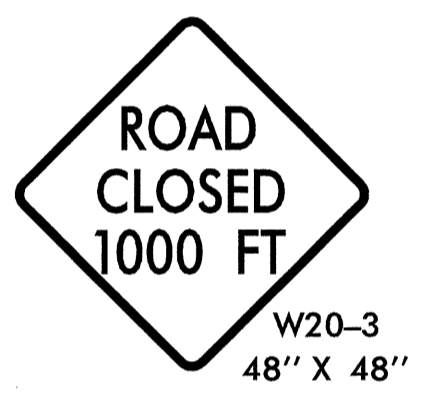
INSET A



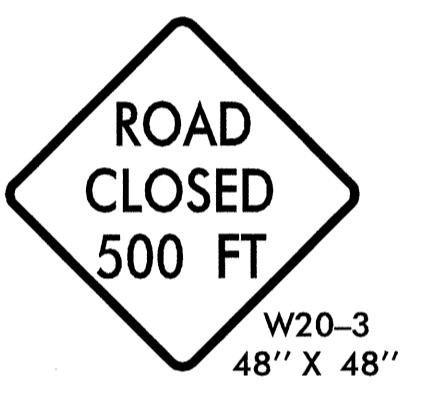
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B



C



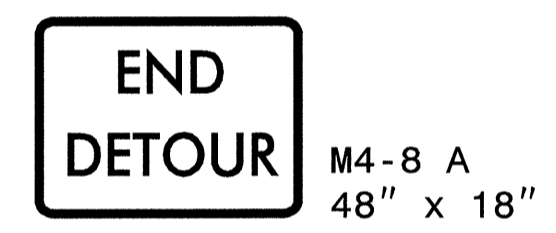
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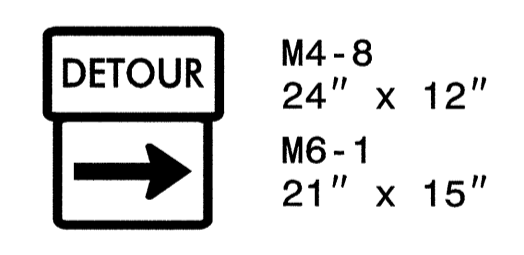
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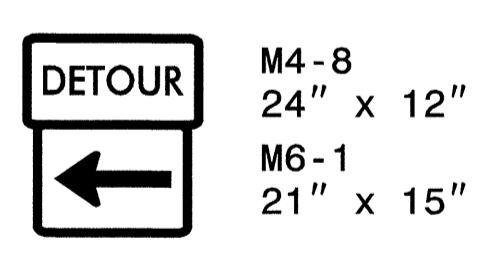
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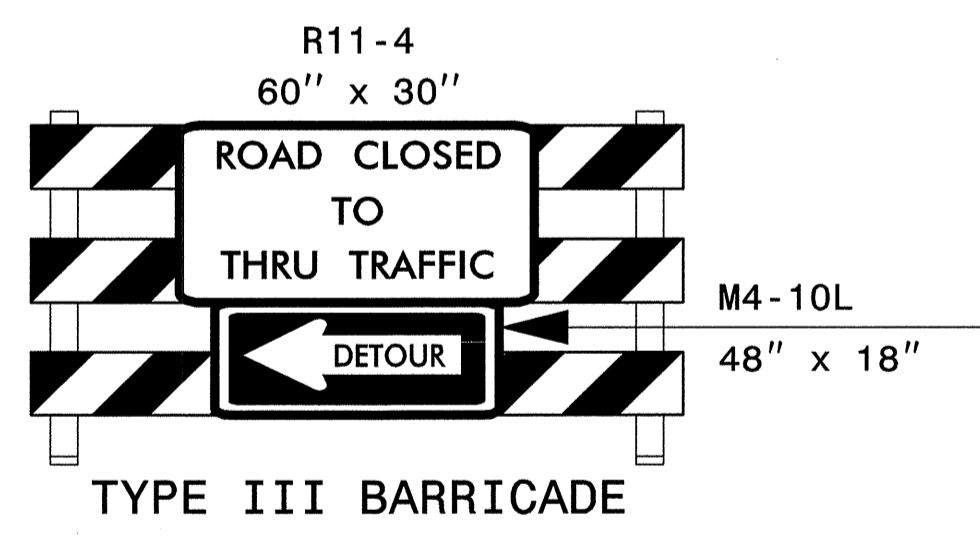
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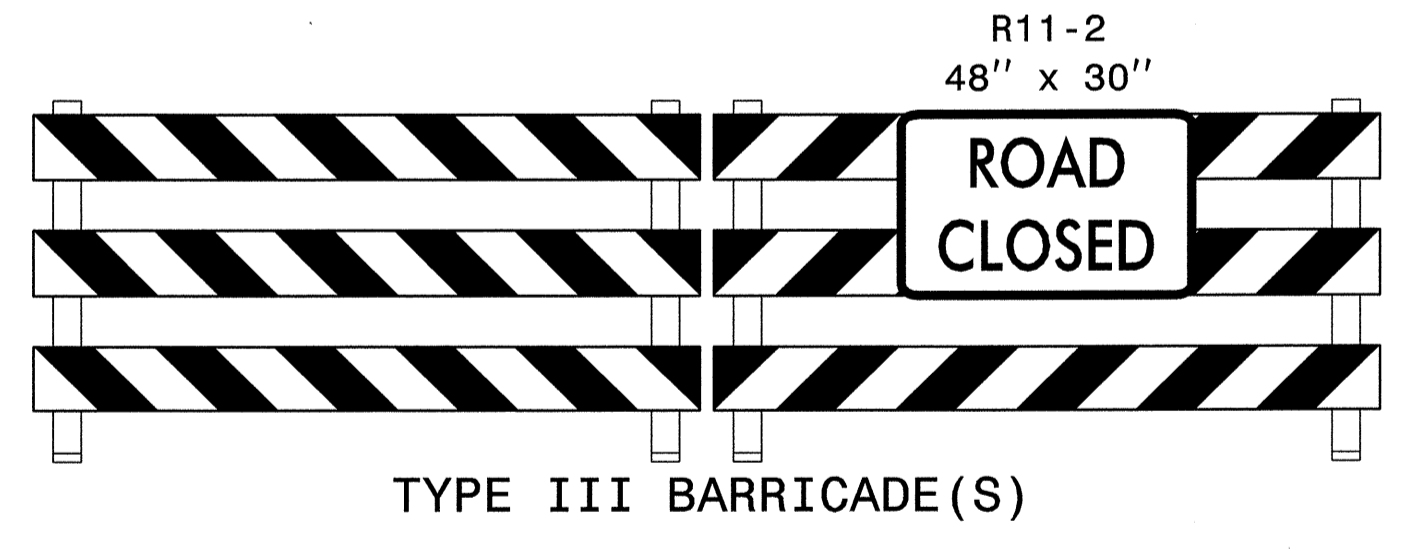
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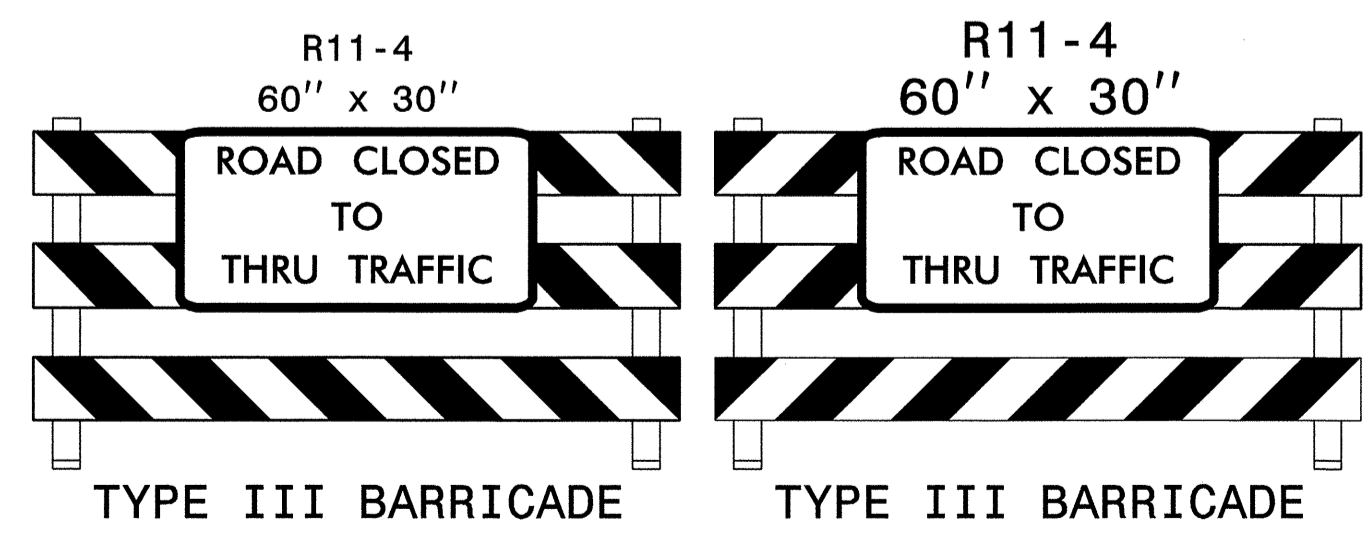
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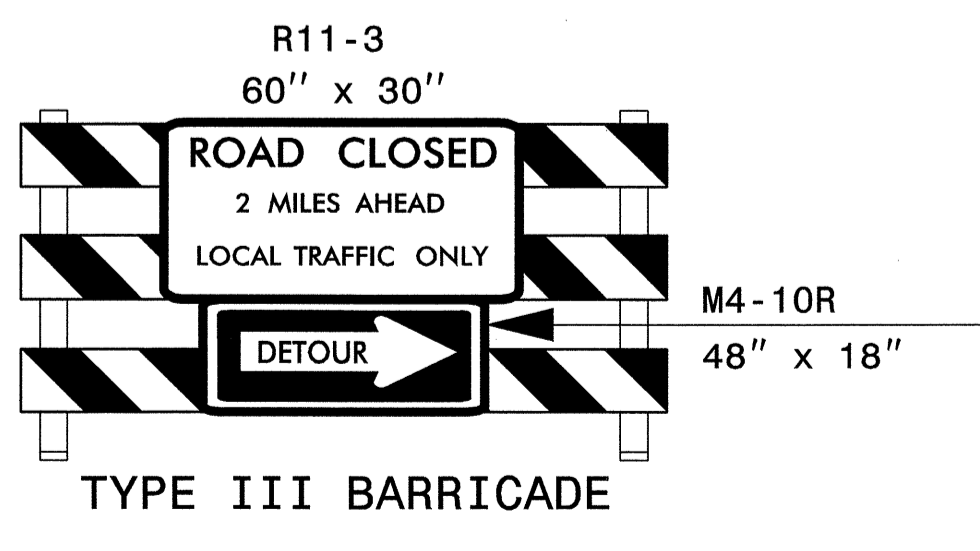
J



K



L



M

APPROVED: *Se Miller* DATE: 9-3-13

SEAL

ROAD CLOSURE

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DNDON\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

TIP NO.	SHEET NO.
B-5143	PMP-1
APPROVED: <i>Ahwan Alqudwah</i>	
DATE: 9-19-13	
SEAL	

PAVEMENT MARKING PLAN
DUPLIN COUNTY

LOCATION: BRIDGE NO. 408 OVER STEWARTS CREEK ON SR 1105

T.I.P.: B-5143

CONTRACT: C203302

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

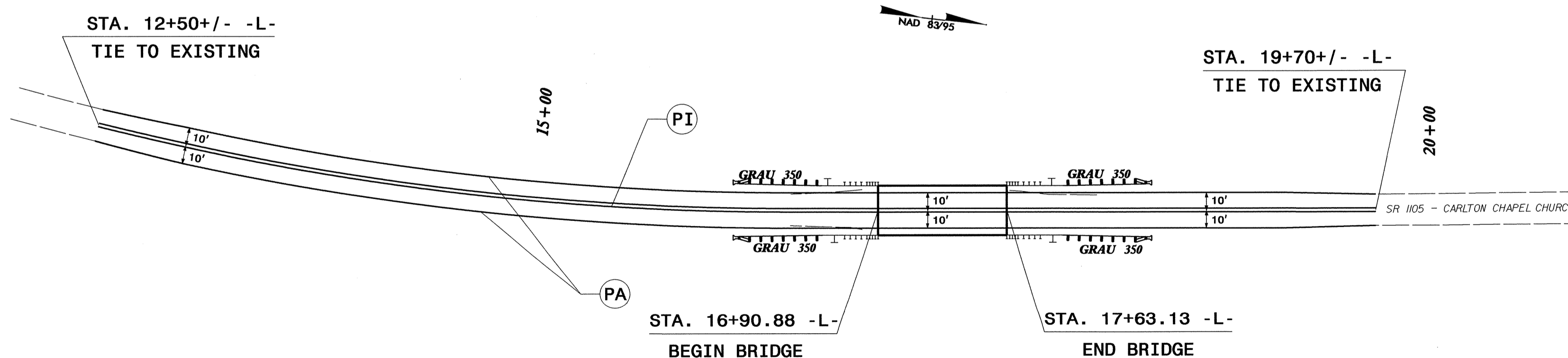
GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
-L- LINE	PAINT	NONE
BRIDGE DECK	PAINT	NONE
- B) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.
- C) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- D) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- E) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

PAVEMENT MARKING DETAIL



PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
PA	WHITE EDGELINE (4")
PI	YELLOW DOUBLE CENTER (4")

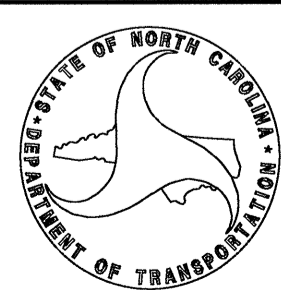
INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE, NOTES, DETAIL, AND SCHEDULE SHEET

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

A. I. ALQUDWAH, P.E. SIGNING & DELINEATION REGIONAL ENGINEER

D. M. EATON SIGNING & DELINEATION PROJECT DESIGN ENGINEER

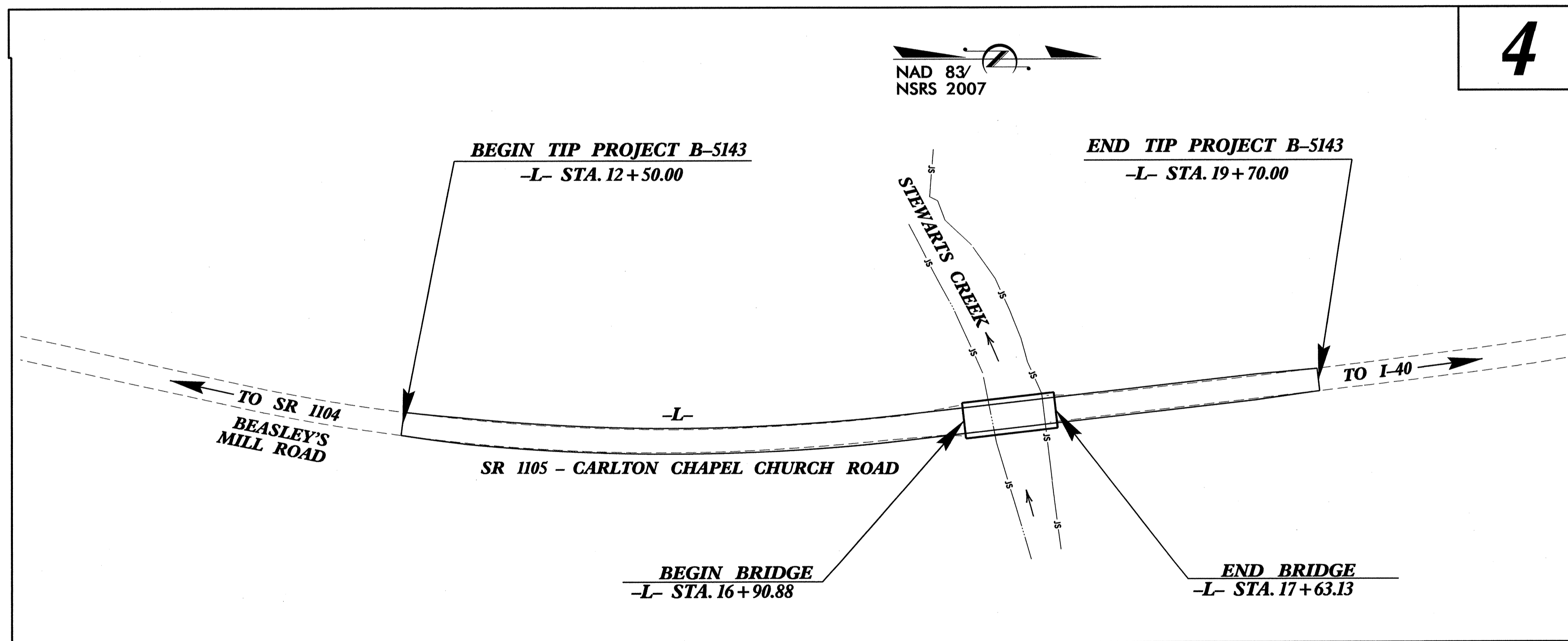


TIP PROJECT: B-5143

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
DUPLIN COUNTY

**LOCATION: BRIDGE NO. 408 OVER STEWARTS CREEK
 ON SR 1105**

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



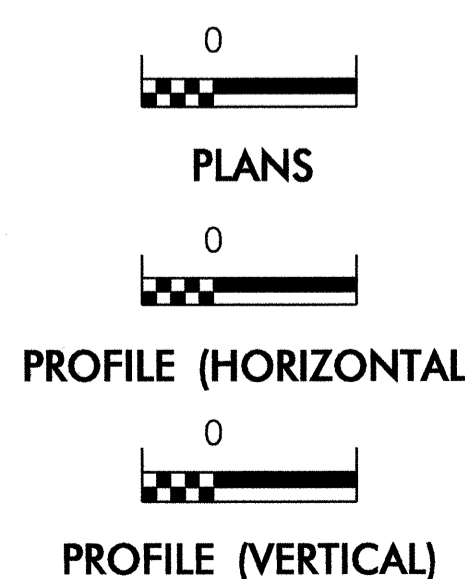
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5143	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	X X X X X X
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.**

GRAPHIC SCALE



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

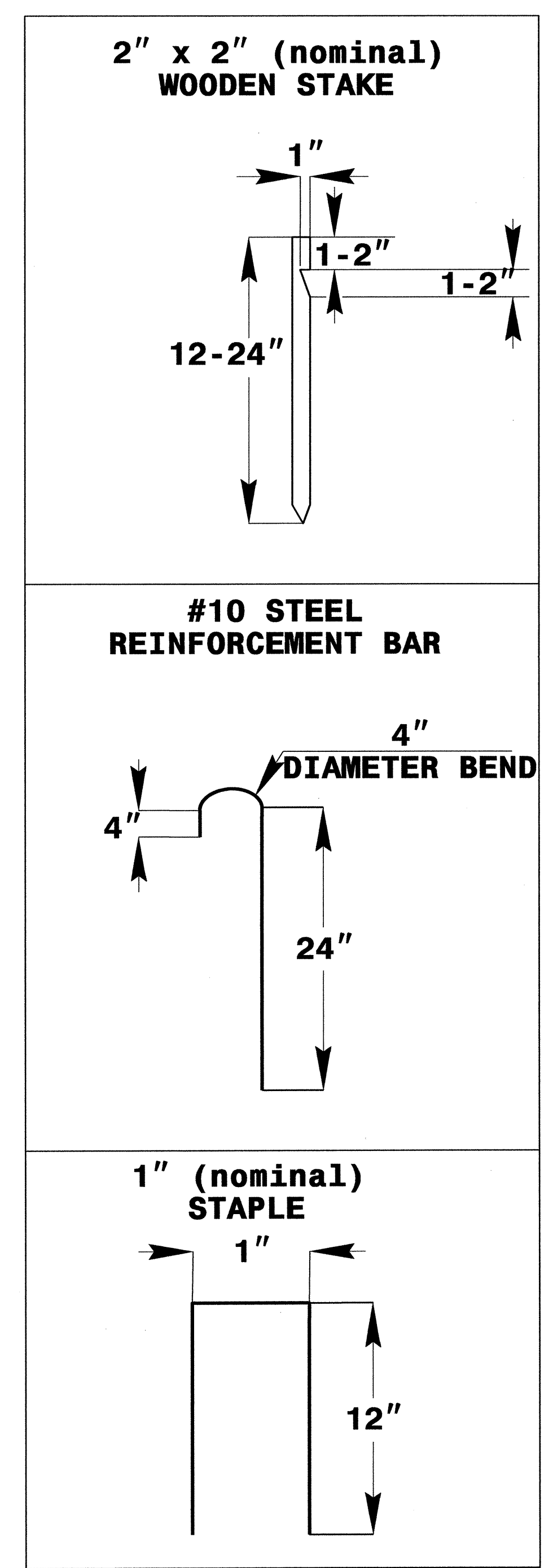
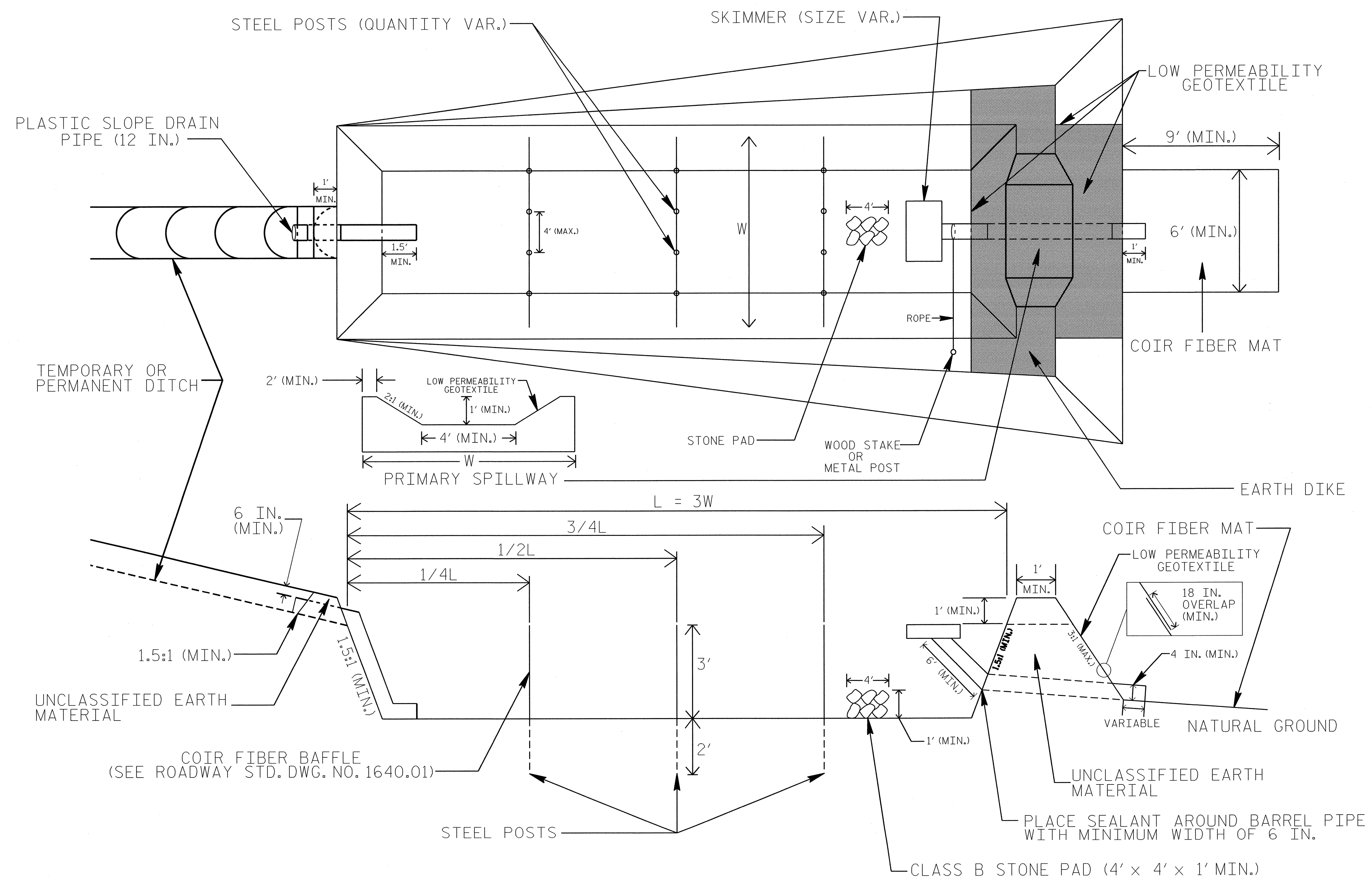
Roadway Standard Drawings

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 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 Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

PROJECT REFERENCE NO. B-5143	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL (EAST)



COIR FIBER MAT ANCHOR OPTIONS

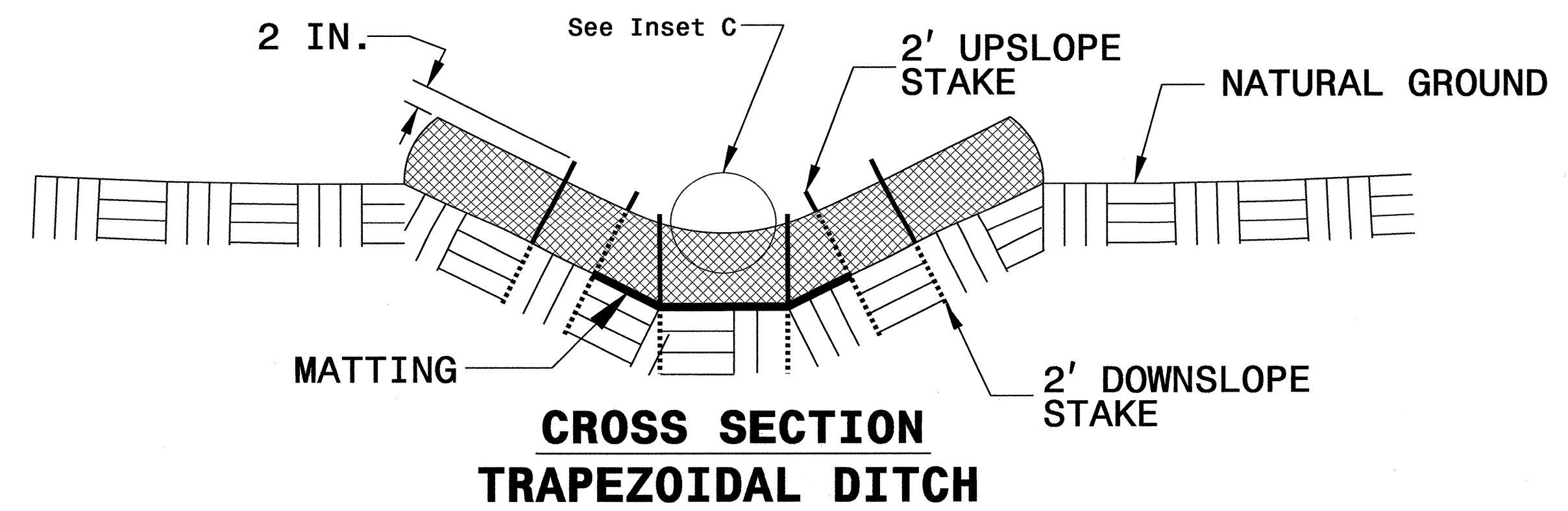
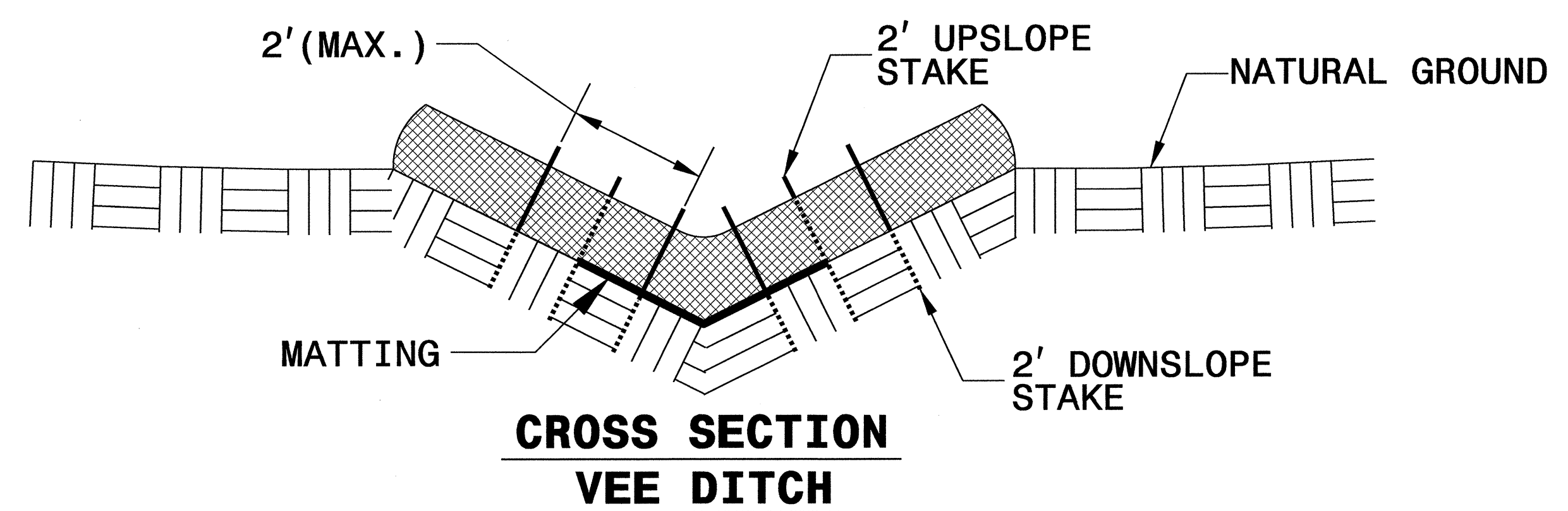
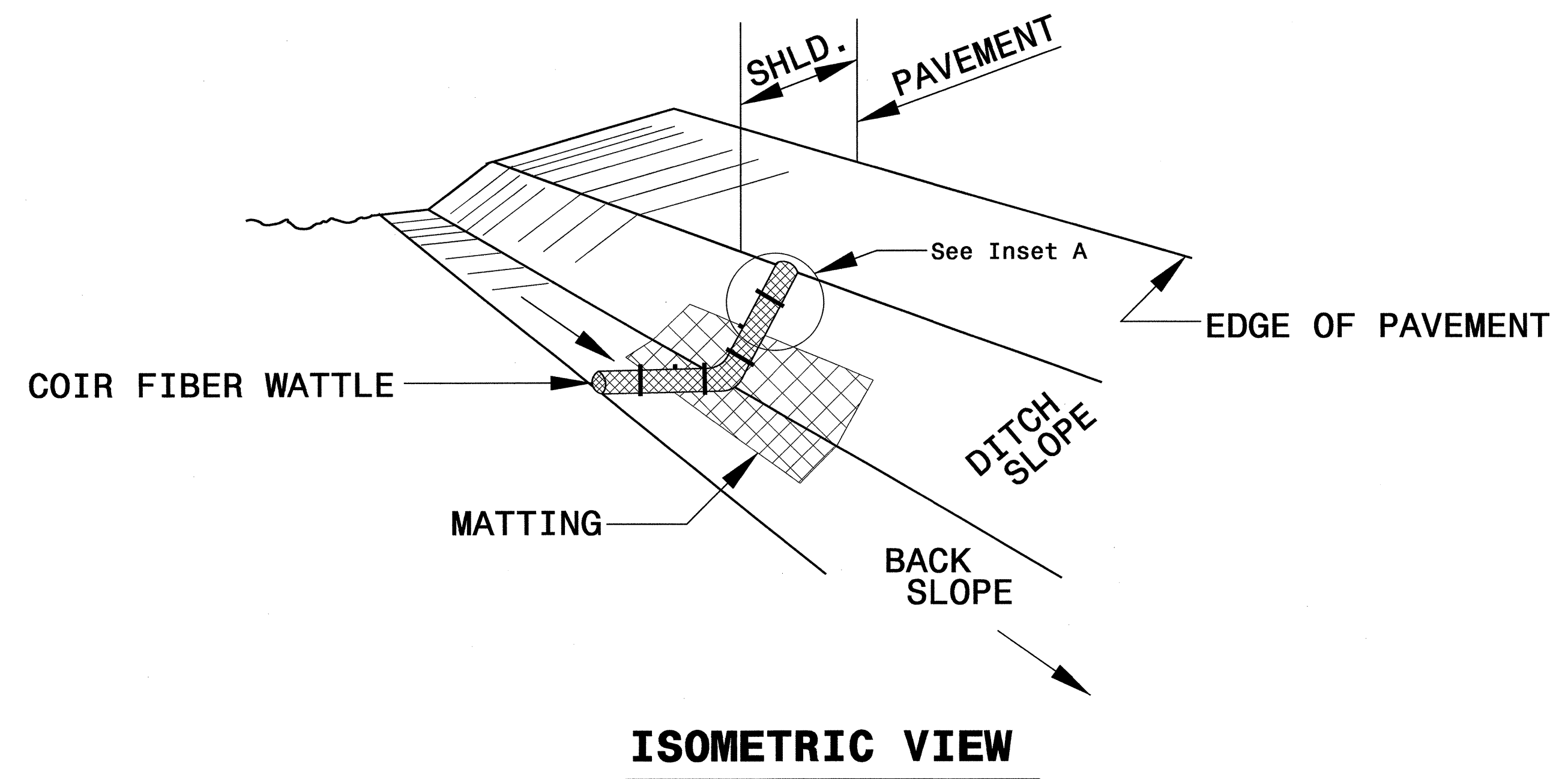
NOTES

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 PRIMARY SPILLWAY WEIR LENGTH (FT.) USING $Q/0.4$, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO. B-5143	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) 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.

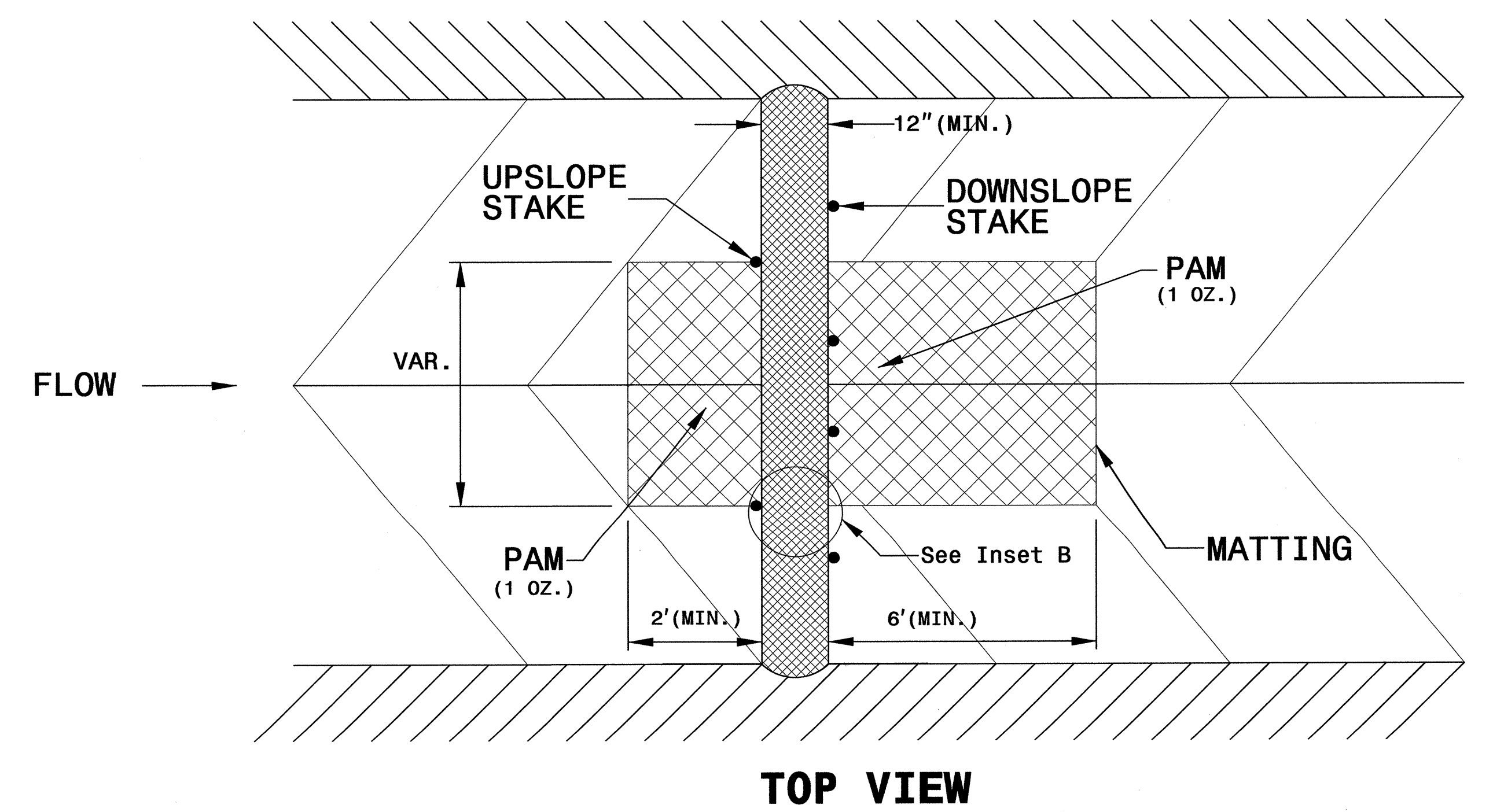
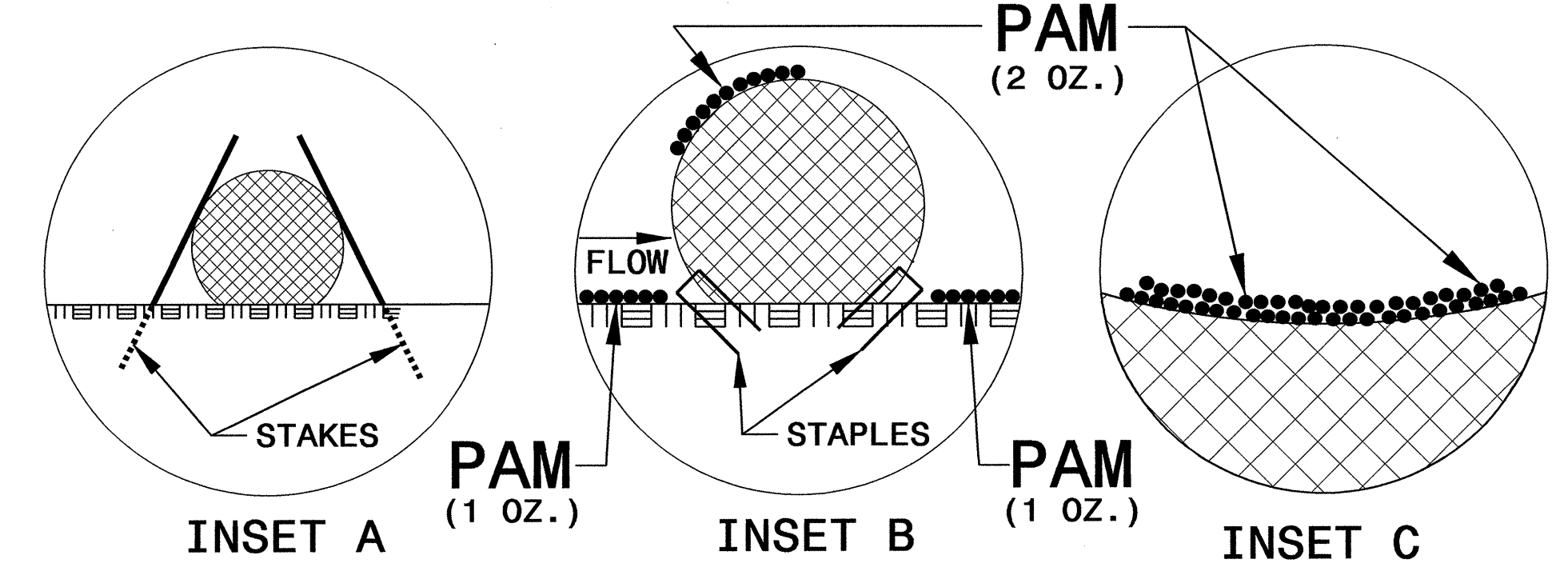
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

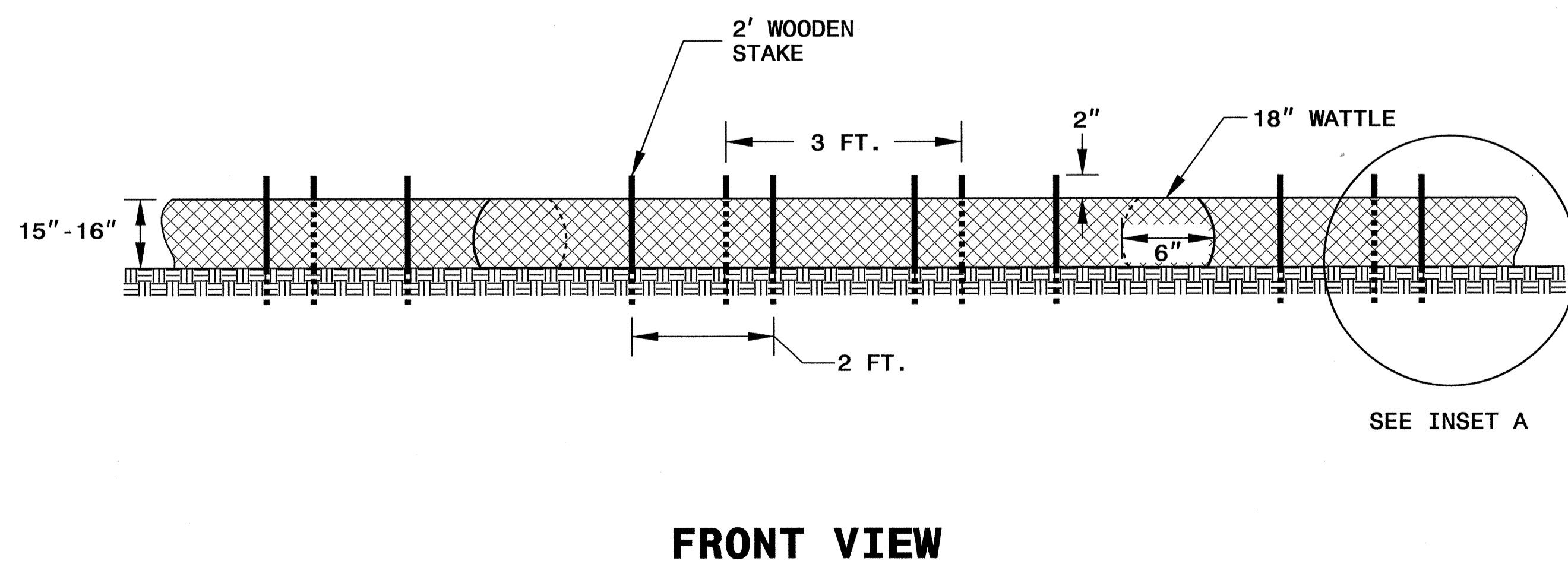
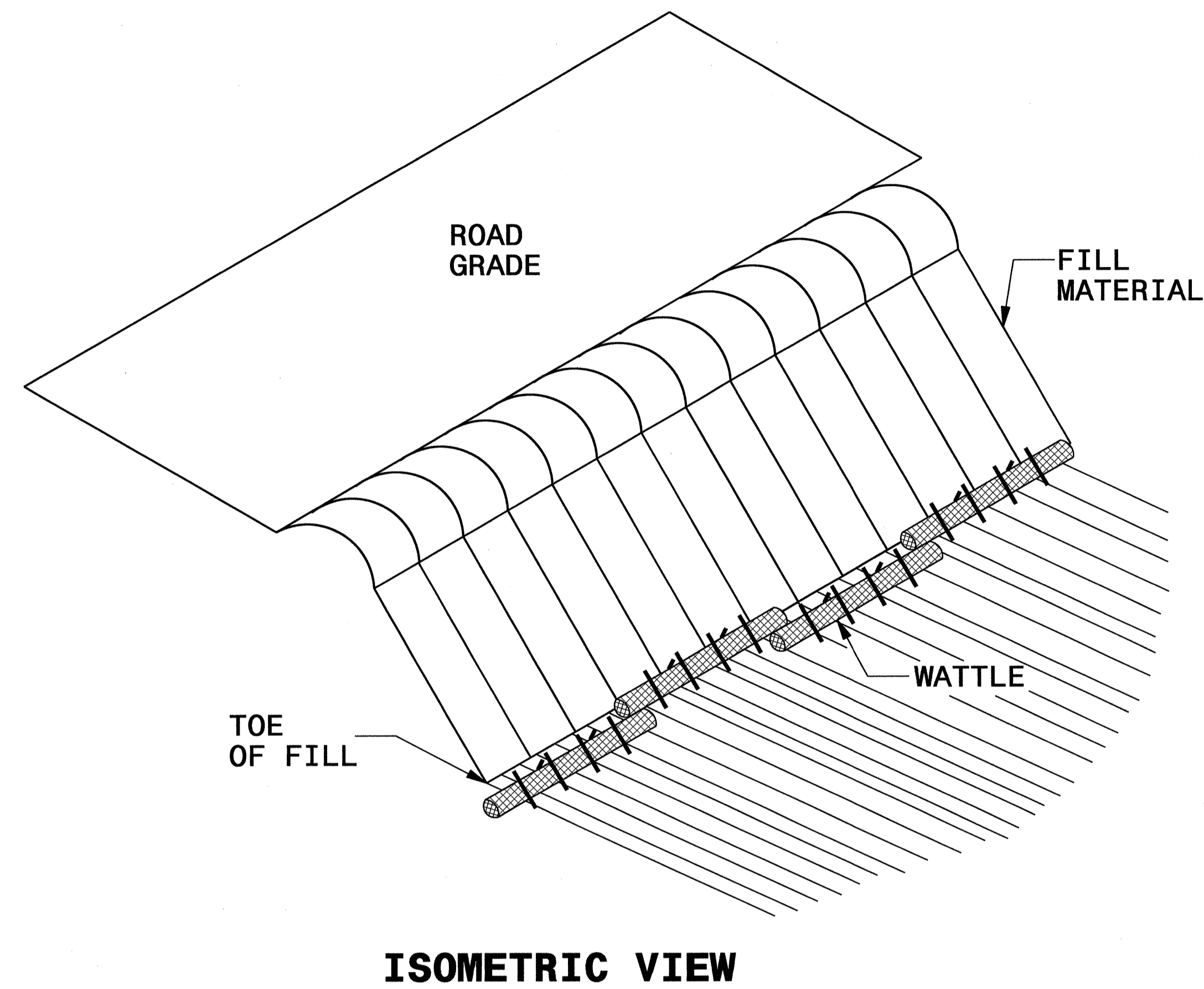
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

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.



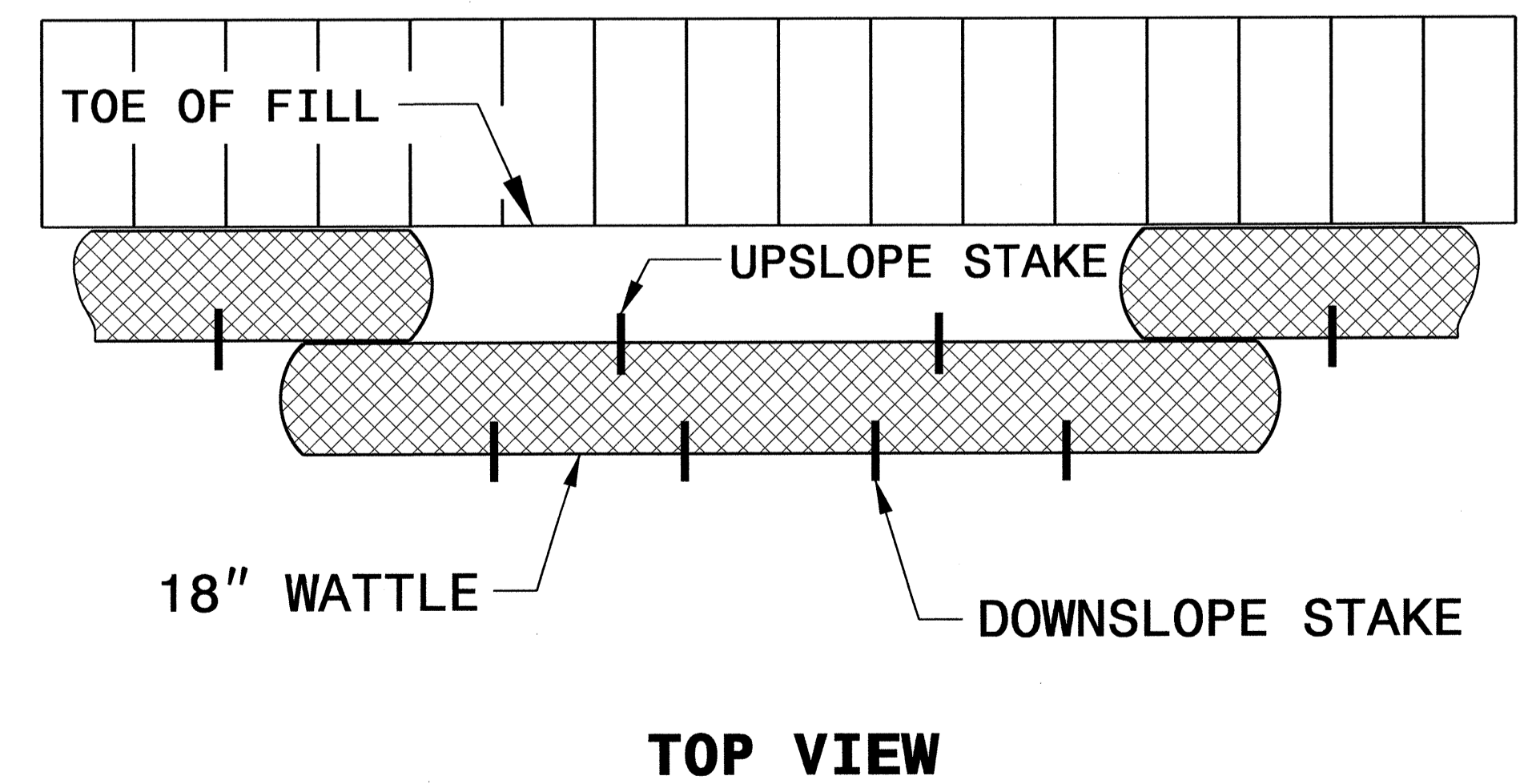
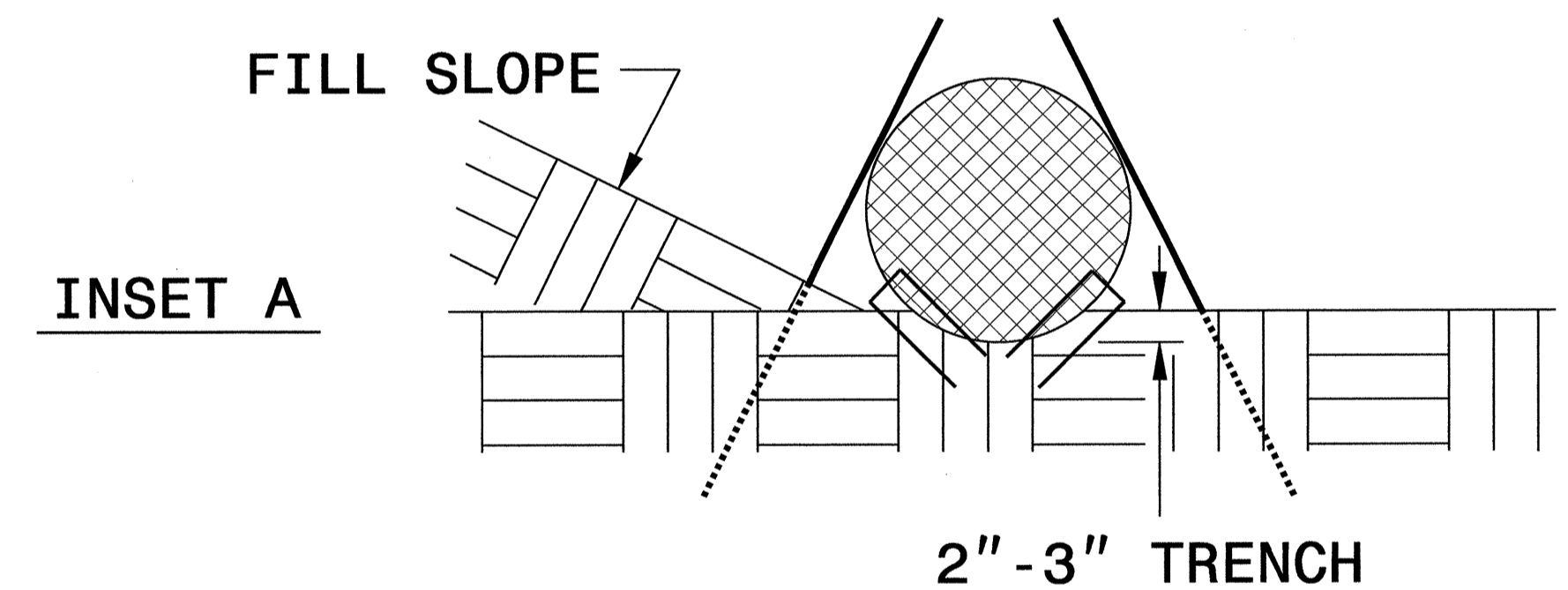
PROJECT REFERENCE NO. B-5143	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



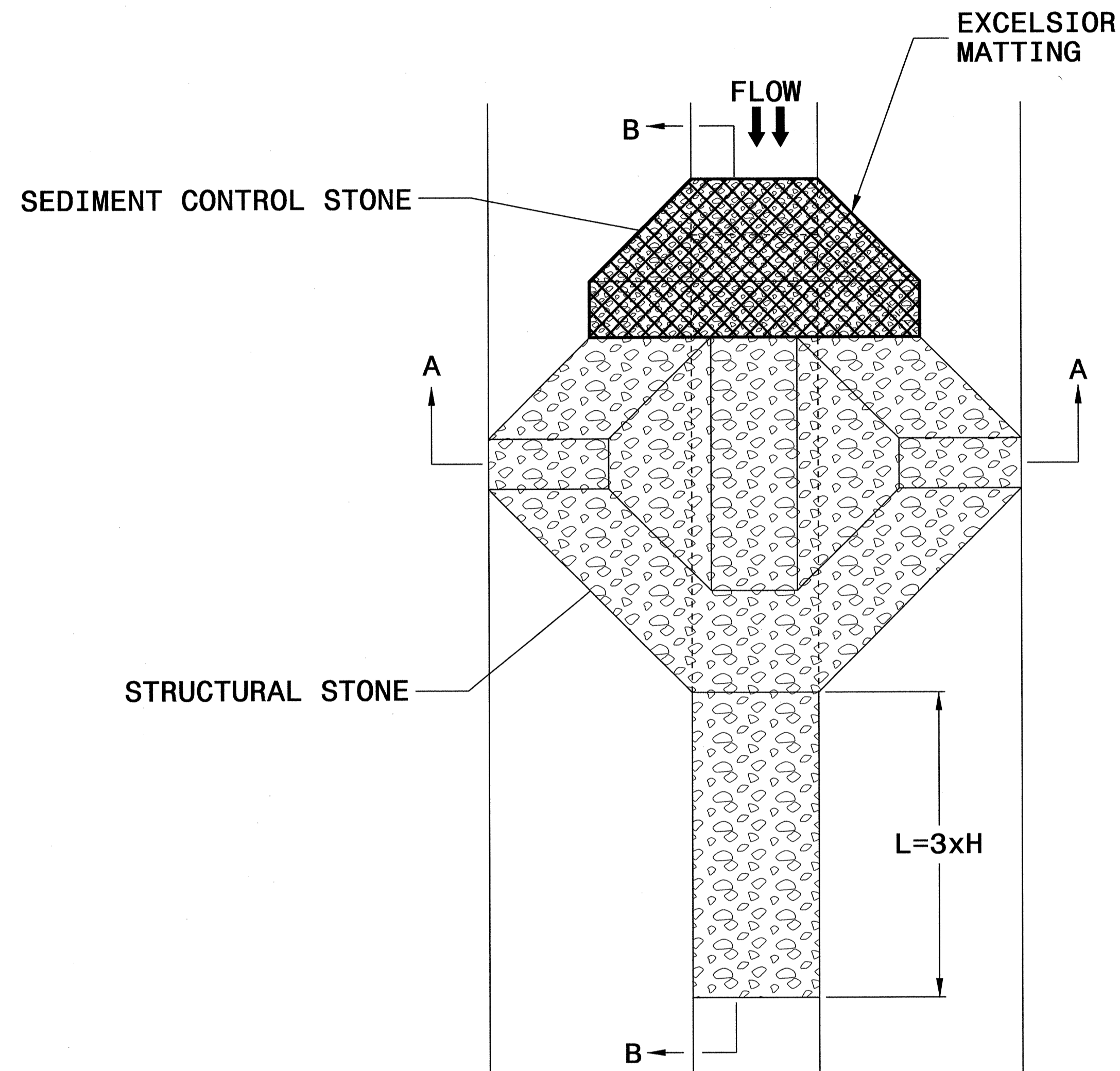
NOTES:

- 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 20 FT.



PROJECT REFERENCE NO. <i>B-5143</i>	SHEET NO. <i>EC-2C</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



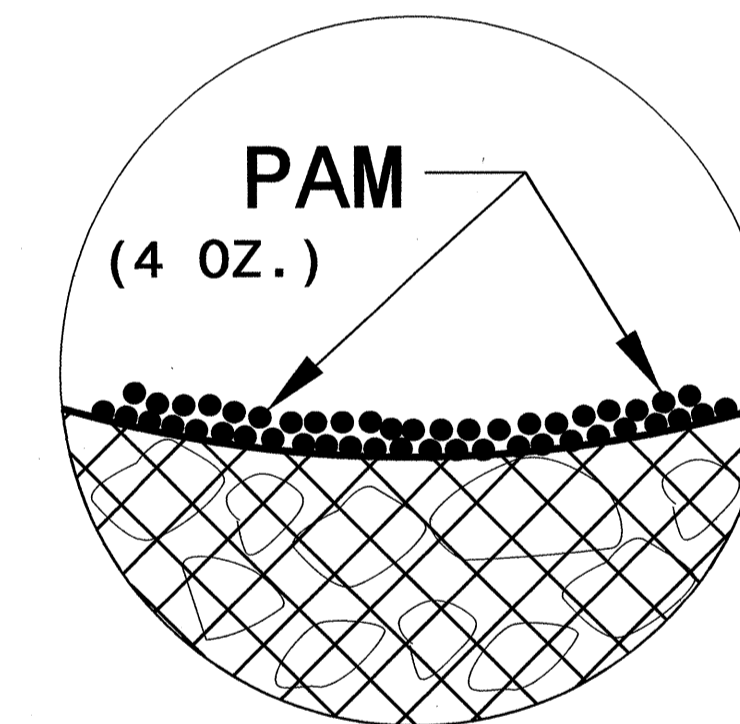
PLAN

NOTES

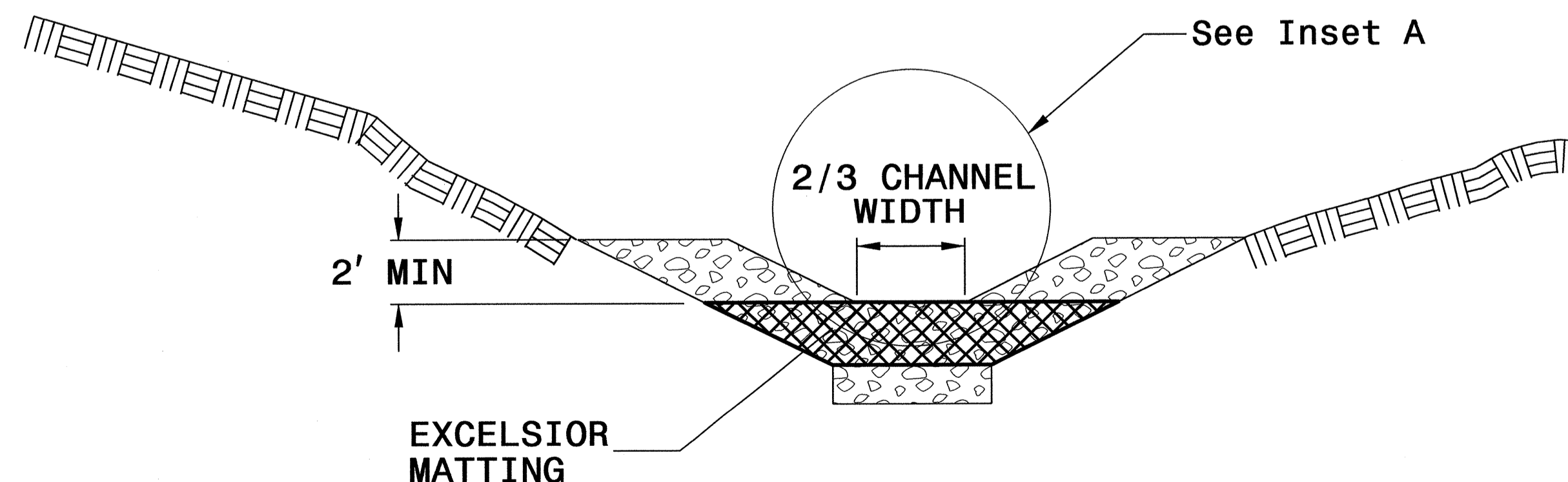
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

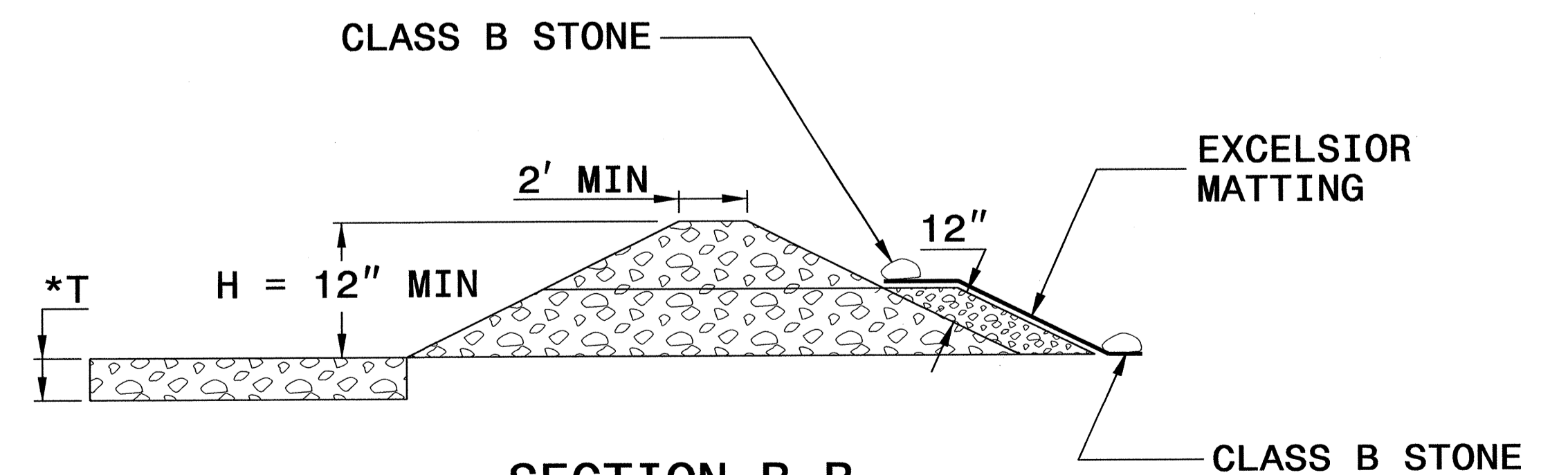
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

*T = 12" MIN., 18" MAX.

NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-5143</i>	SHEET NO. <i>EC-3</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.

8/17/99

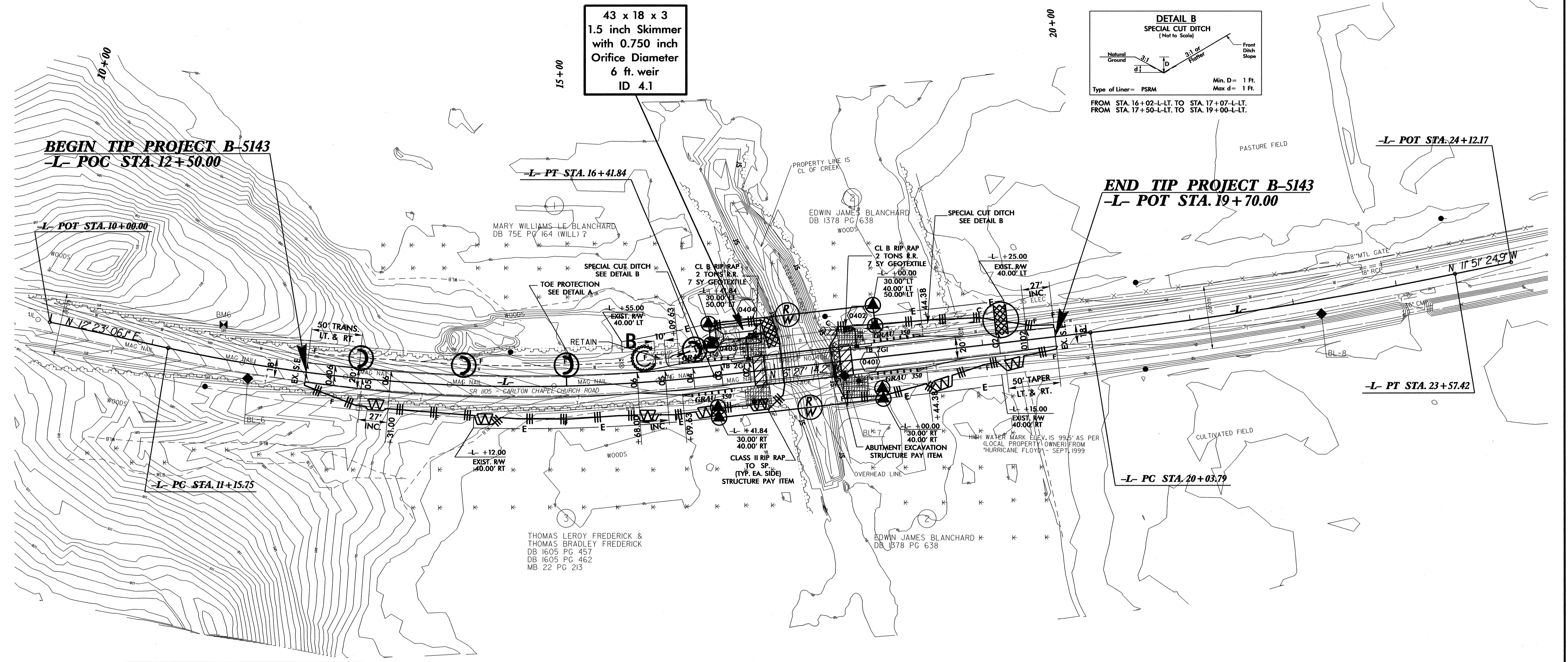
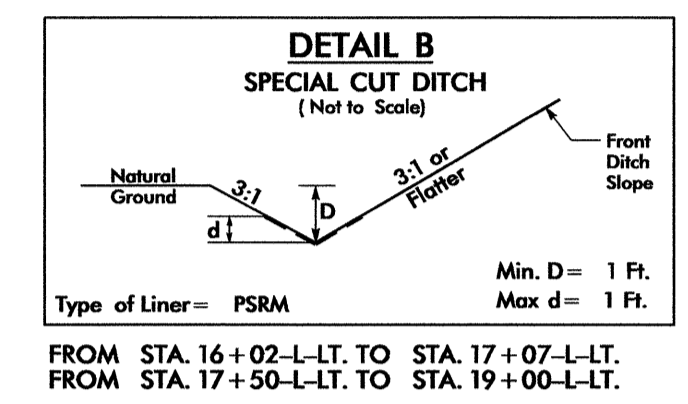
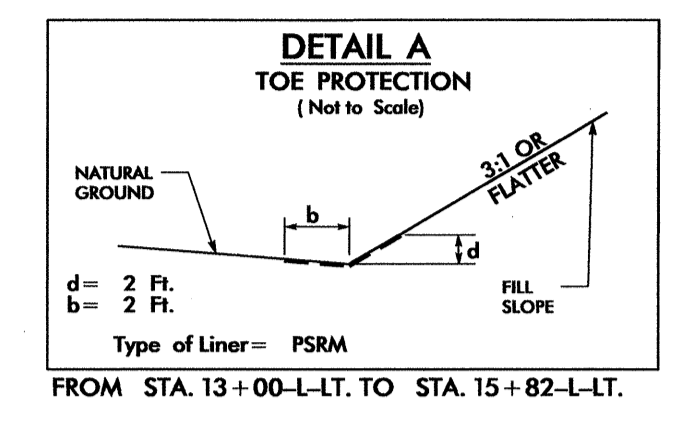
PROJECT REFERENCE NO.	SHEET NO.
B-5143	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE SPECIAL STILLING BASIN(S) WHERE APPLICABLE.

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

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

NAD 83/NSRS 2007



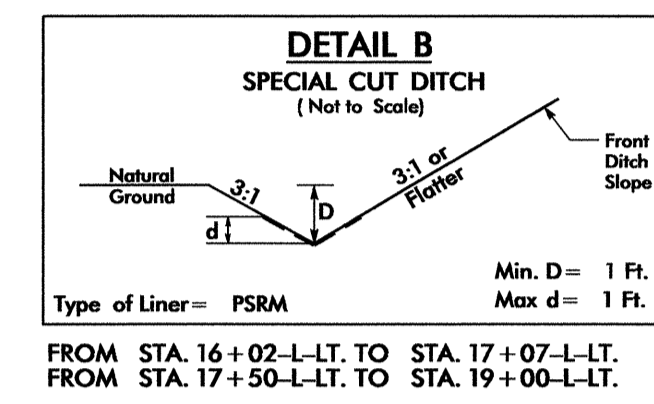
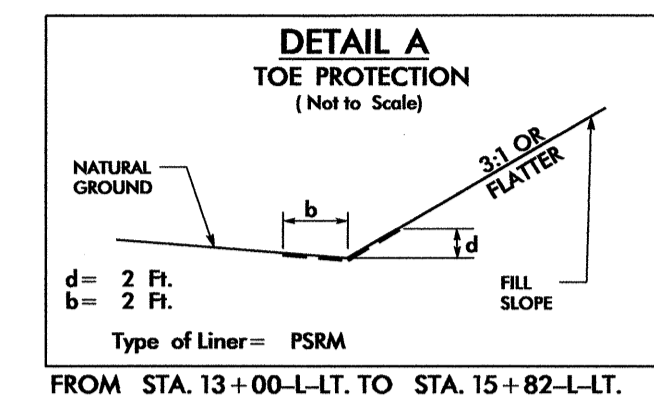
-L-	
PI Sta 13+81.9	PI Sta 21+80.74
$\Delta = 18^{\circ} 50' 20.3"$ (LT)	$\Delta = 5^{\circ} 24' 10.7"$ (LT)
D = 3' 34' 51.6"	D = 1' 31' 40.4"
L = 526.08'	L = 353.62'
T = 265.44'	T = 176.94'
R = 1,600.00'	R = 3,750.00'
SE = 0.06	
RO = SEE PLANS	

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PROJECT REFERENCE NO.	SHEET NO.
B-5143	EC-5/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE SPECIAL STILLING BASIN(S) WHERE APPLICABLE.

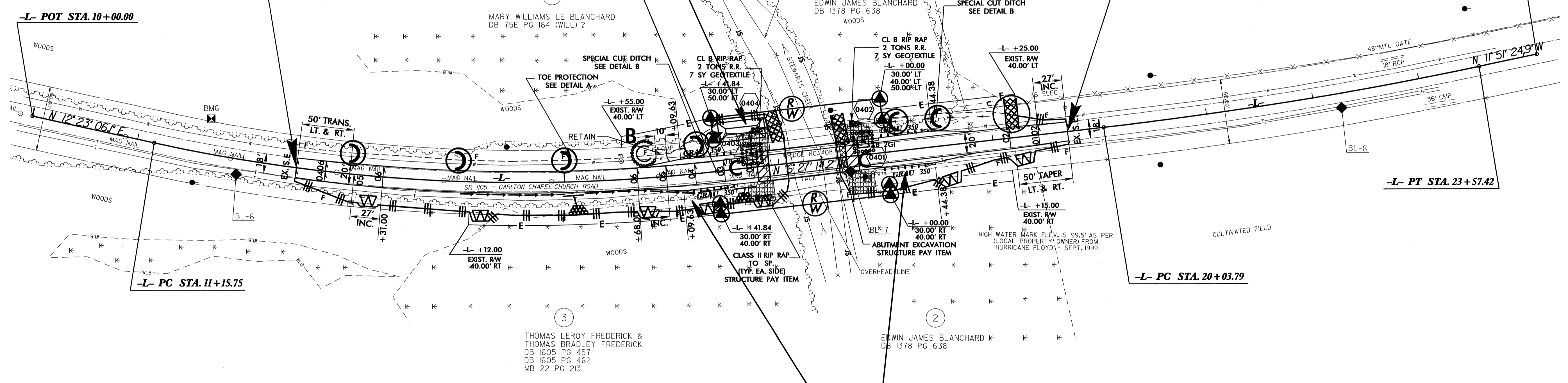
NAD 83/NSRS 2007



43 x 18 x 3
1.5 inch Skimmer
with 0.750 inch
Orifice Diameter
6 ft. weir
ID 4.1

BEGIN TIP PROJECT B-5143
-L- POC STA. 12+50.00

END TIP PROJECT B-5143
-L- POT STA. 19+70.00



-L-	
PI Sta 13+81.19	PI Sta 21+80.74
$\Delta = 18' 50'' 20.3''$ (LT)	$\Delta = 5' 24'' 10.7''$ (LT)
D = 3' 34' 51.6"	D = 1' 31' 40.4"
L = 526.08'	L = 353.62'
T = 265.44'	T = 176.94'
R = 1,600.00'	R = 3,750.00'
SE = 0.06	
RO = SEE PLANS	

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.


8/17/99
 23 SEP 2013 13:53
 R:\cur\com\5143.EC.psh_s04.dgn
 AT 265318

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
DUPLIN COUNTY

LOCATION: BRIDGE NO. 408 OVER STEWARTS CREEK ON SR 1105

TIP NO. B-5143	SHEET NO. SIGN-1
APPROVED: <i>[Signature]</i>	
DATE: 9-19-13	
SEAL	



T.I.P.: B-5143

CONTRACT: C203302

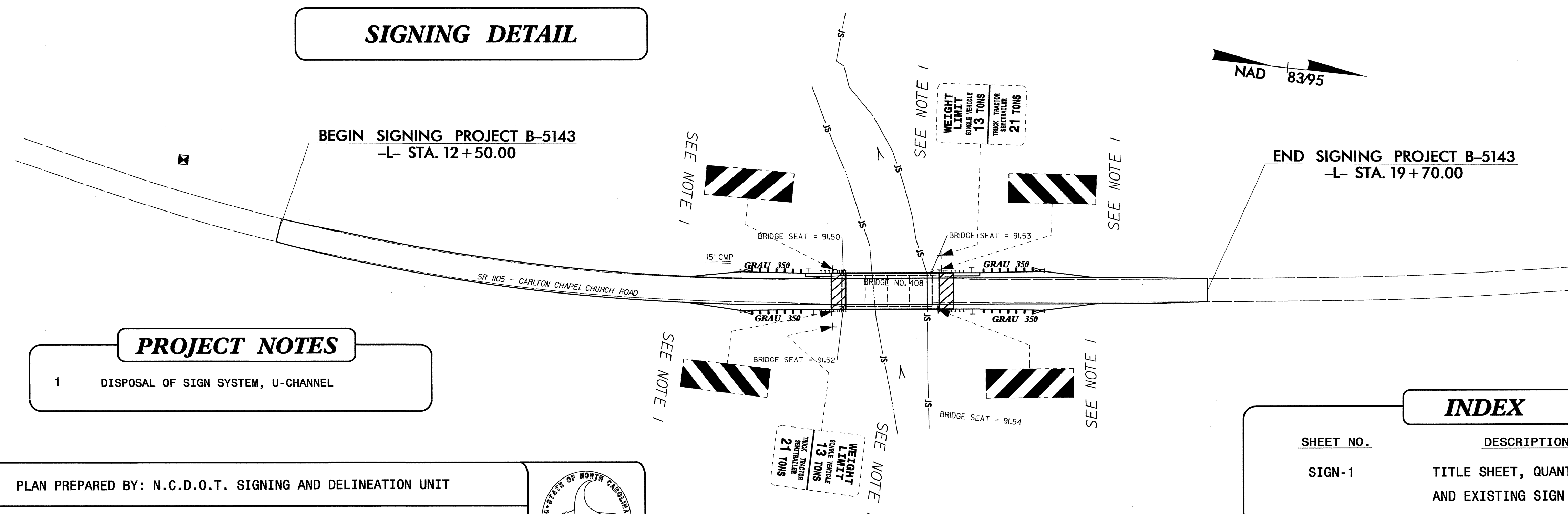
SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
415500000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	6	EA.

GENERAL NOTES

- IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- SIGNING PLANS DO NOT INCLUDE TEMPORARY CONSTRUCTION SIGNING OR PAVEMENT MARKINGS. SEE TRAFFIC CONTROL PLANS.
- ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

SIGNING DETAIL



PROJECT NOTES

- DISPOSAL OF SIGN SYSTEM, U-CHANNEL

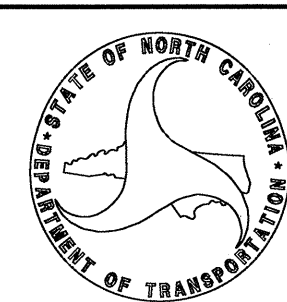
INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET, QUANTITIES, NOTES, AND EXISTING SIGN DETAILS

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

A. I. ALQUDWAH, P.E. SIGNING & DELINEATION REGIONAL ENGINEER

D. M. EATON SIGNING & DELINEATION PROJECT DESIGN ENGINEER



09/08/99

TIP PROJECT: B-5143

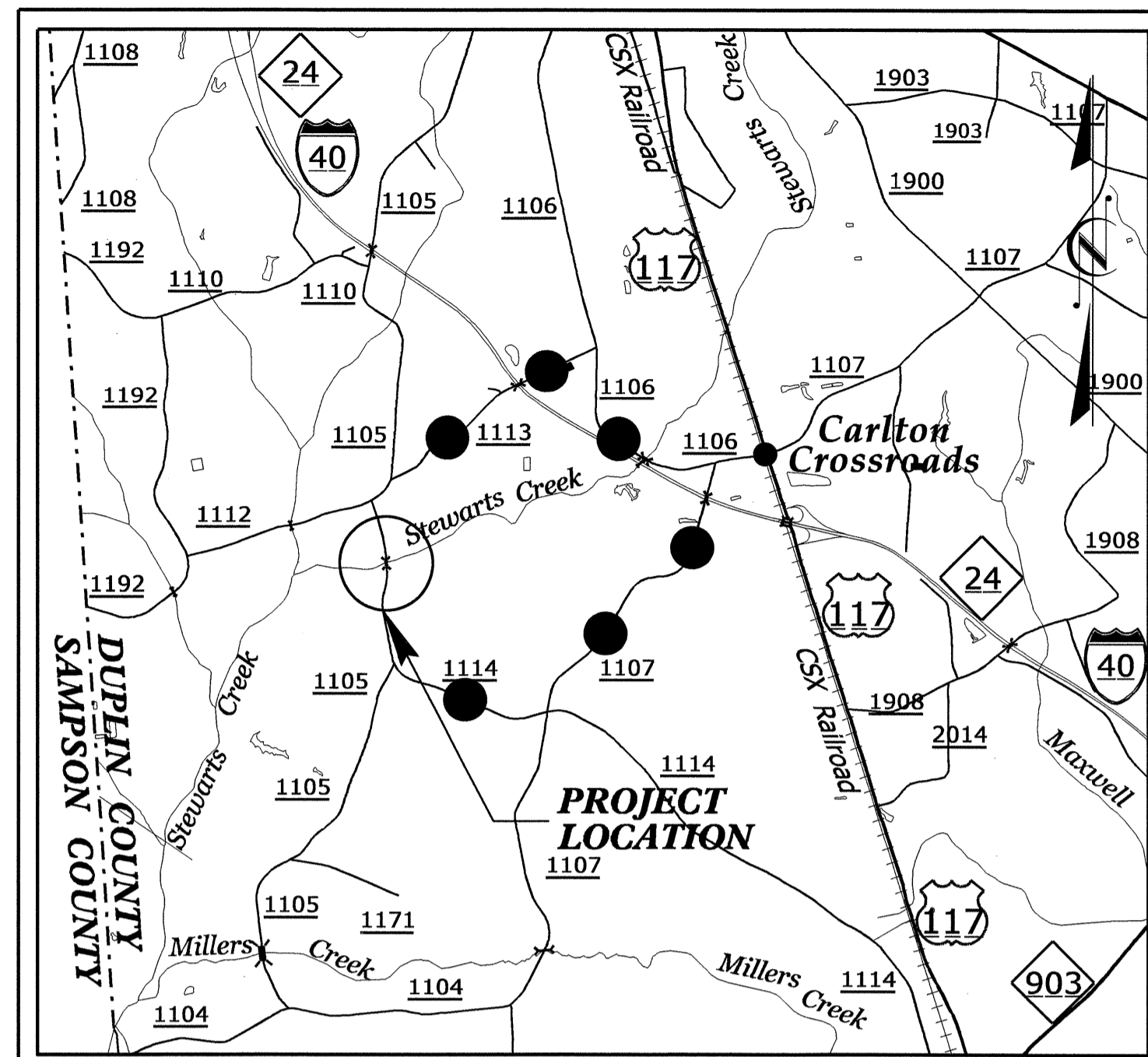
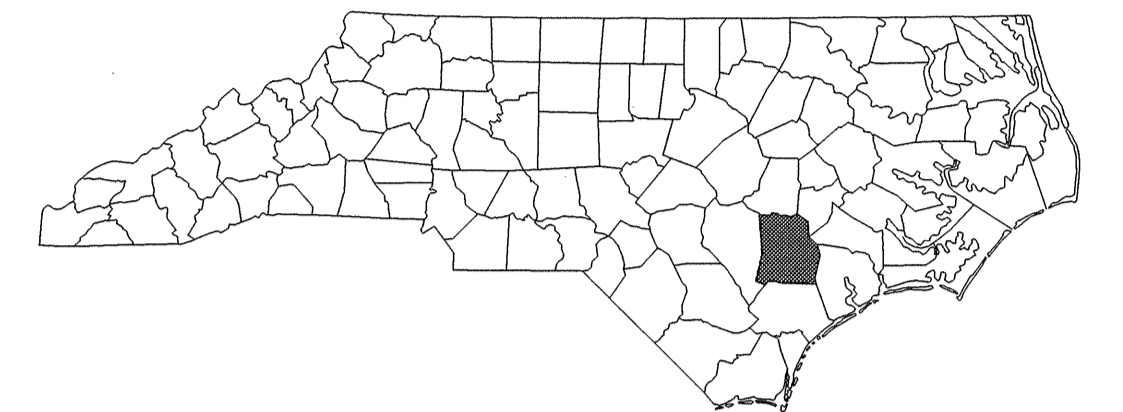
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
B-5143	UC-1

UTILITY CONSTRUCTION PLANS DUPLIN COUNTY

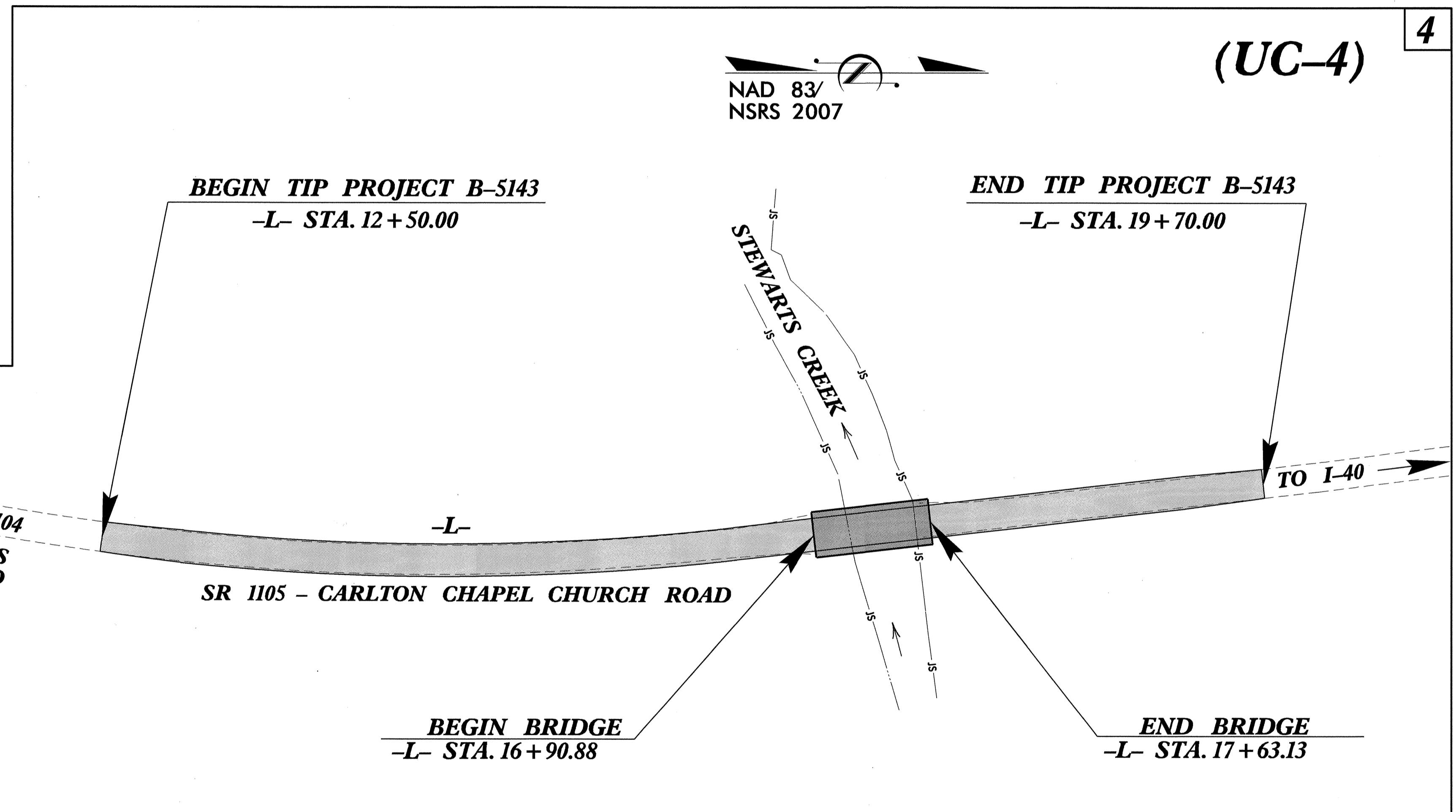
LOCATION: BRIDGE NO. 408 OVER STEWARTS CREEK
ON SR 1105

TYPE OF WORK: RELOCATE WATER LINE



VICINITY MAP

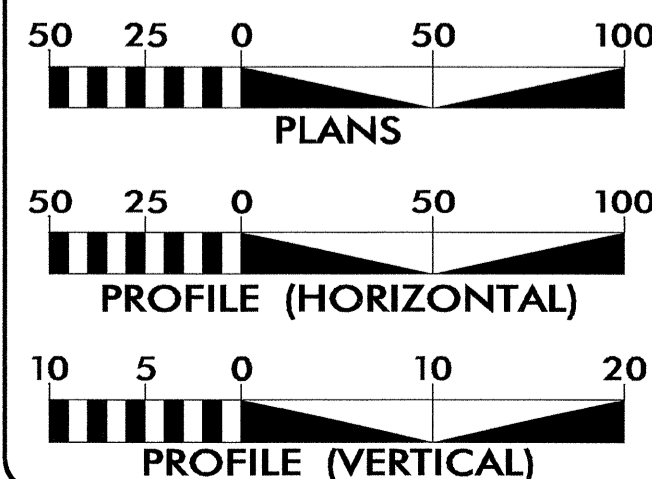
OFF-SITE DETOUR



(UC-4) 4

2012 STANDARD SPECIFICATIONS

GRAPHIC SCALES



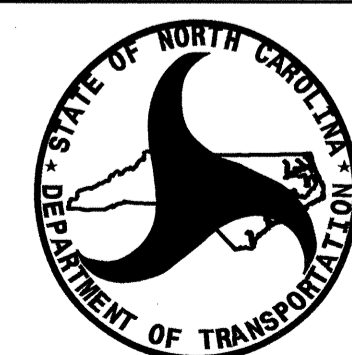
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A	DETAILS
UC-4	UTILITY CONSTRUCTION SHEET
UC-5	PROFILE SHEET

WATER AND SEWER OWNERS ON PROJECT

(1) Duplin County Water Department (Water)

SEAL



PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 250-4151

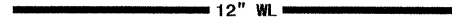























Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Nabil Hamdan UTILITIES PROJECT DESIGNER

08-OCT-2013 10:06
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\$\$\$\$\$USERNAME\$\$\$\$\$





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS









PROPOSED WATER SYMBOLS








Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	



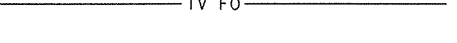
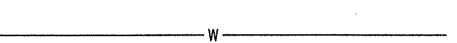


PROPOSED MISCELLANEOUS UTILITIES SYMBOLS



Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

NOTE
PAY ITEM

EXISTING UTILITIES SYMBOLS

Power Pole		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records	AATUR	Sanitary Sewer Cleanout	
End of Information	E.O.I.		

*For Existing Utilities
Utility Line Drawn from Record (Type as Shown) 
Designated Utility Line (Type as Shown) 

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REV: 2/1/2012

UTILITY CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
B-5143	UC-3
DESIGNED BY: NSH	
DRAWN BY: NSH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2012.
2. THE EXISTING UTILITIES BELONG TO Duplin County Water Department.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPROTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

PROJECT SPECIFIC NOTES:

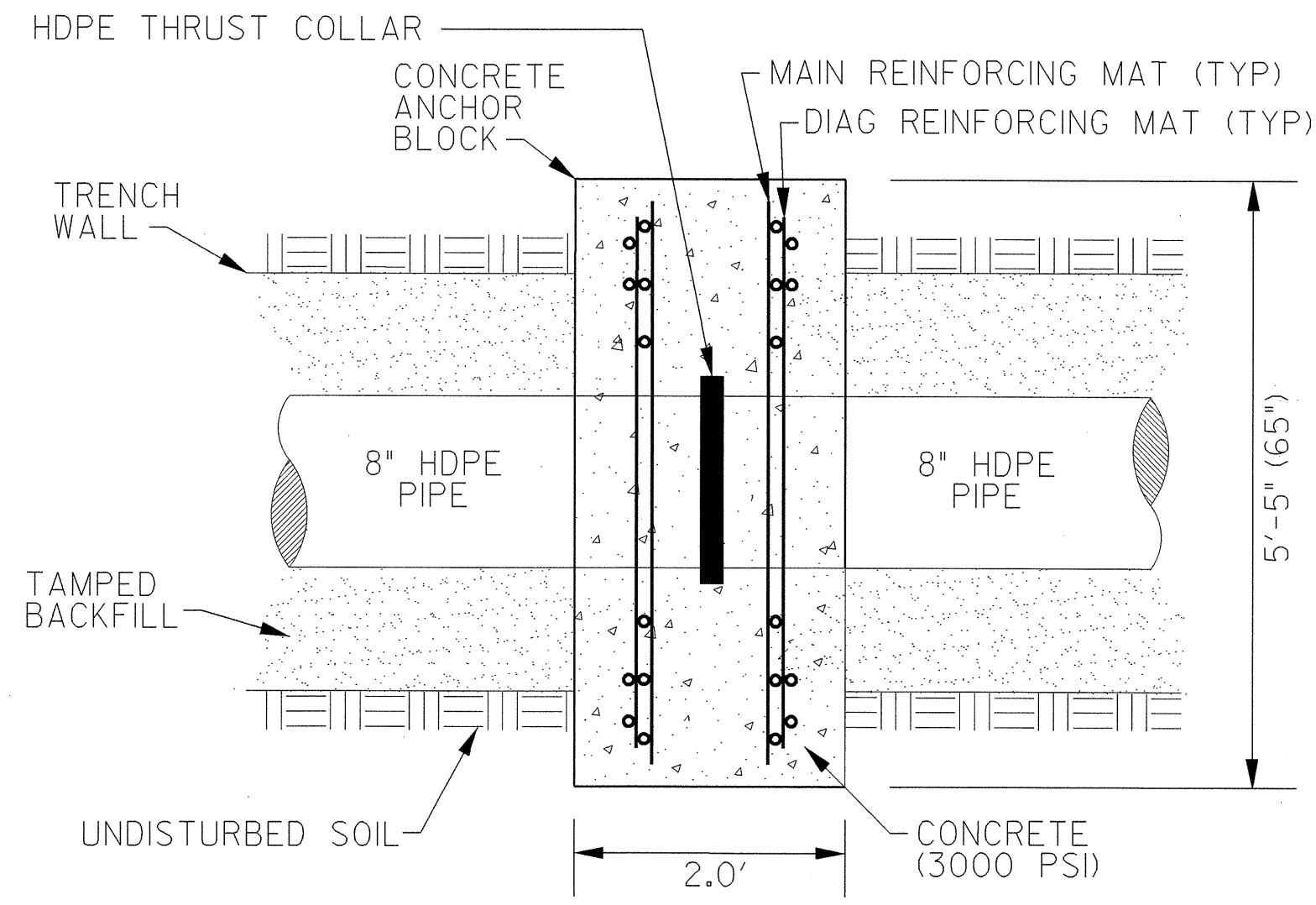
1. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
2. IF HDPE PIPE IS INSTALLED BY DIRECTIONAL DRILL. IT SHALL BE FILLED WITH WATER AND NOT BE CONNECTED TO ANY OTHER PIPE OR FITTINGS FOR ONE WEEK FROM THE TIME OF INSTALLATION.

UTILITY CONSTRUCTION

5/14/99

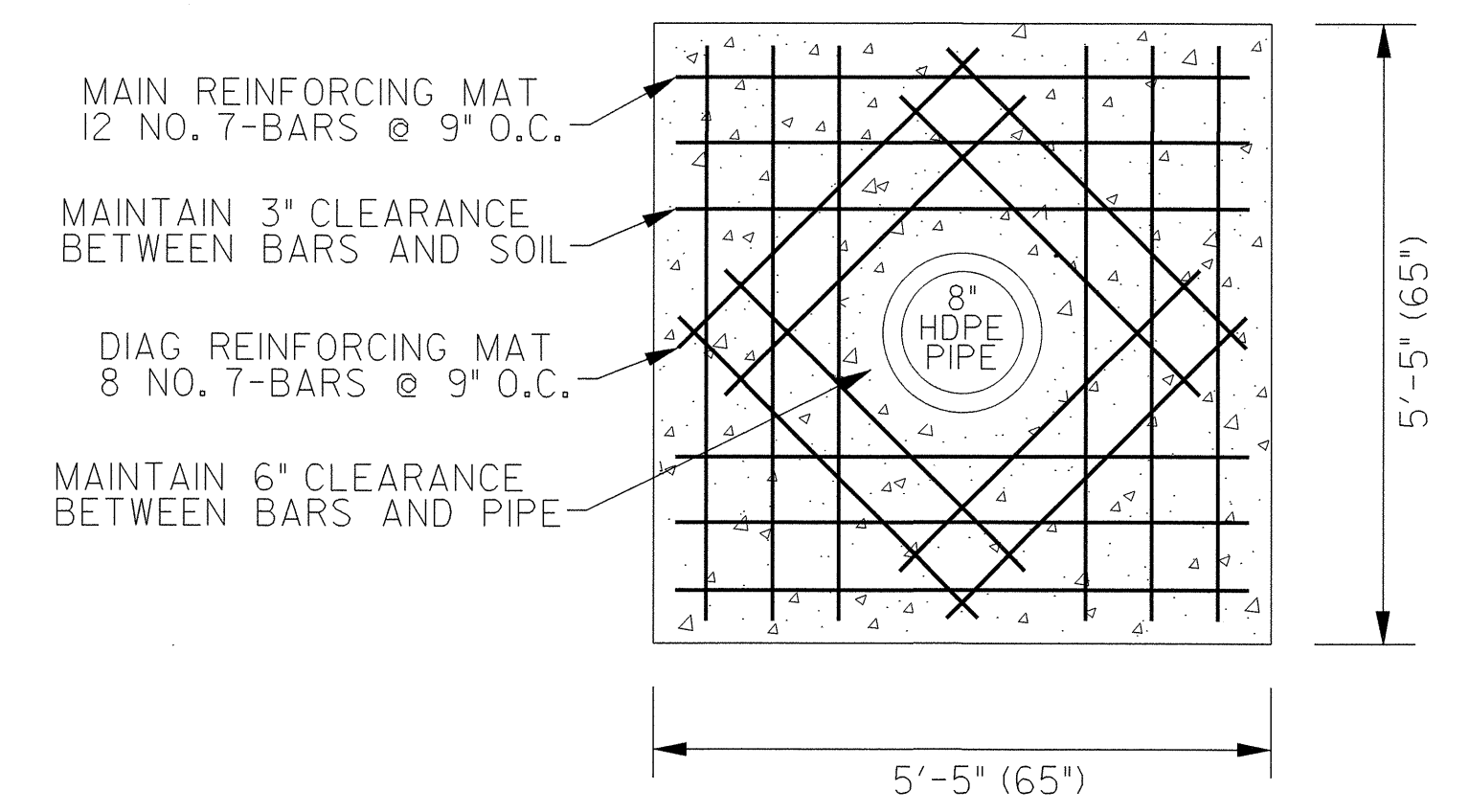
PROJECT REFERENCE NO.	SHEET NO.
B-5143	UC-3A
DESIGNED BY: NSH	
DRAWN BY: NSH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

CONCRETE ANCHOR BLOCK - PLAN VIEW FOR HDPE PIPE



NOTE: BOTTOM OF TRENCH NEEDS TO BE STABILIZED TO SUPPORT THE WEIGHT OF THE THRUST COLLAR

CONCRETE ANCHOR BLOCK - SECTION VIEW FOR HDPE PIPE

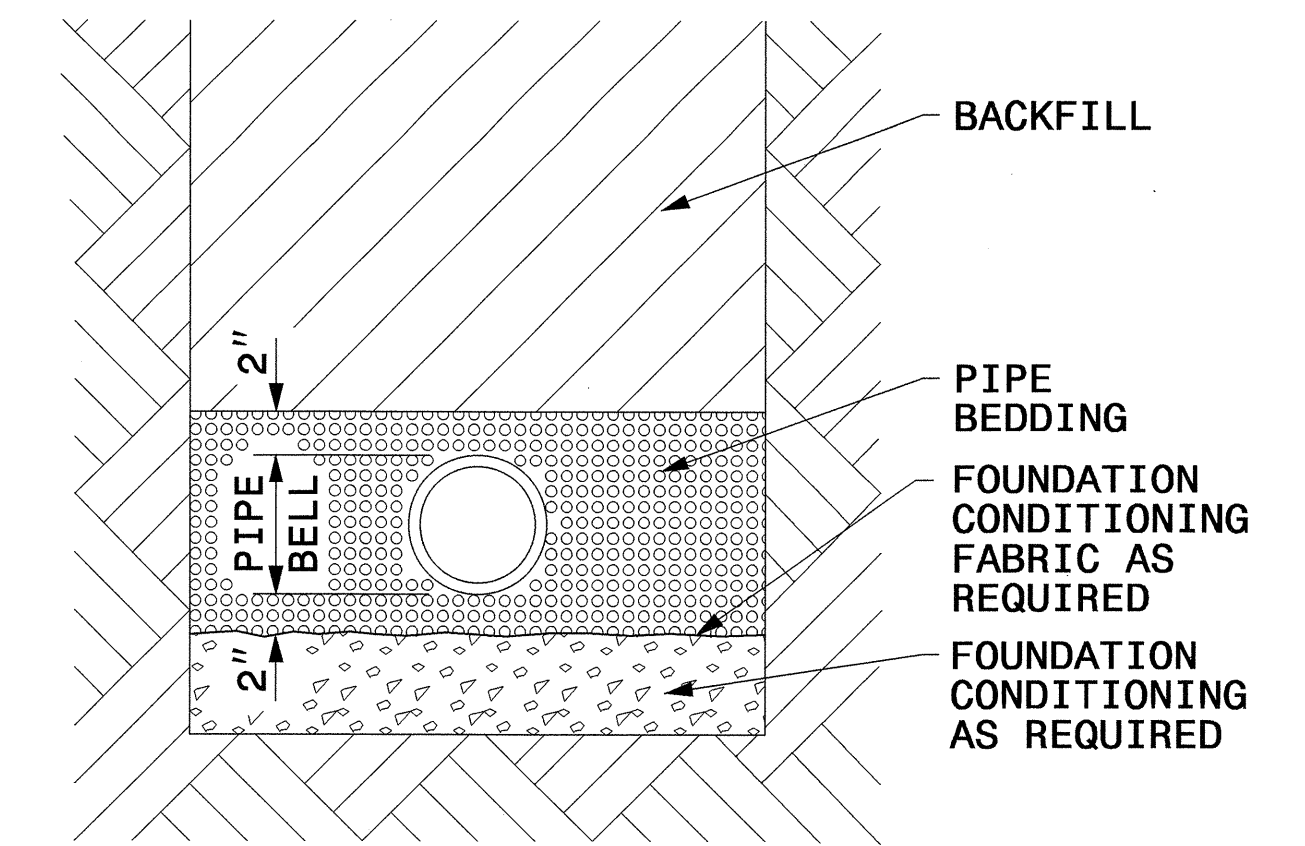


REINFORCING BARS (PER ANCHOR BLOCK):
 MAIN MATS = 24 (#7 BARS) @ 59" LONG
 DIAG MATS = 16 (#7 BARS) @ 41" LONG

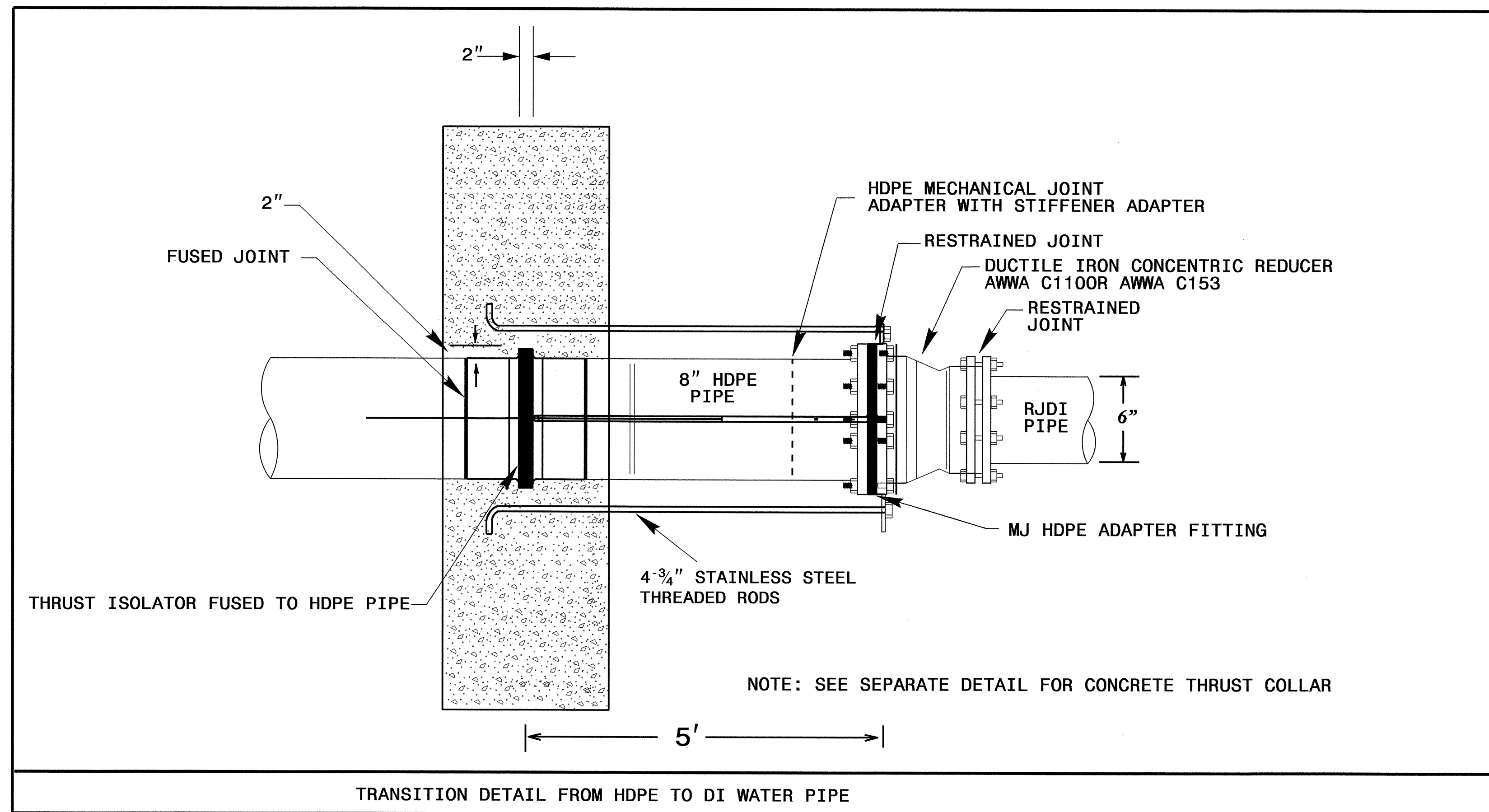
FORCE MAIN AND WATER MAIN PROFILE NOTES:

- (1) ELEVATIONS OF EXISTING UTILITIES SHOWN ON PROFILE NEED TO BE VERIFIED IN THE FIELD.
- (2) CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE PATH DESIGNED AND SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER OR BUFFER ZONES.
- (3) CONTRACTOR'S ENGINEER SHALL PROVIDE ON-SITE OVERSIGHT FOR HDD OPERATION.

TRENCH DETAIL



PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER. PIPE BEDDED IN SELECT MATERIAL, CLASS II (TYPE 1) OR CLASS III. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROXIMATELY 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.



NOTE: SEE SEPARATE DETAIL FOR CONCRETE THRUST COLLAR

TRANSITION DETAIL FROM HDPE TO DI WATER PIPE

MAXIMUM TRENCH WIDTH AT TOP OF PIPE

NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		

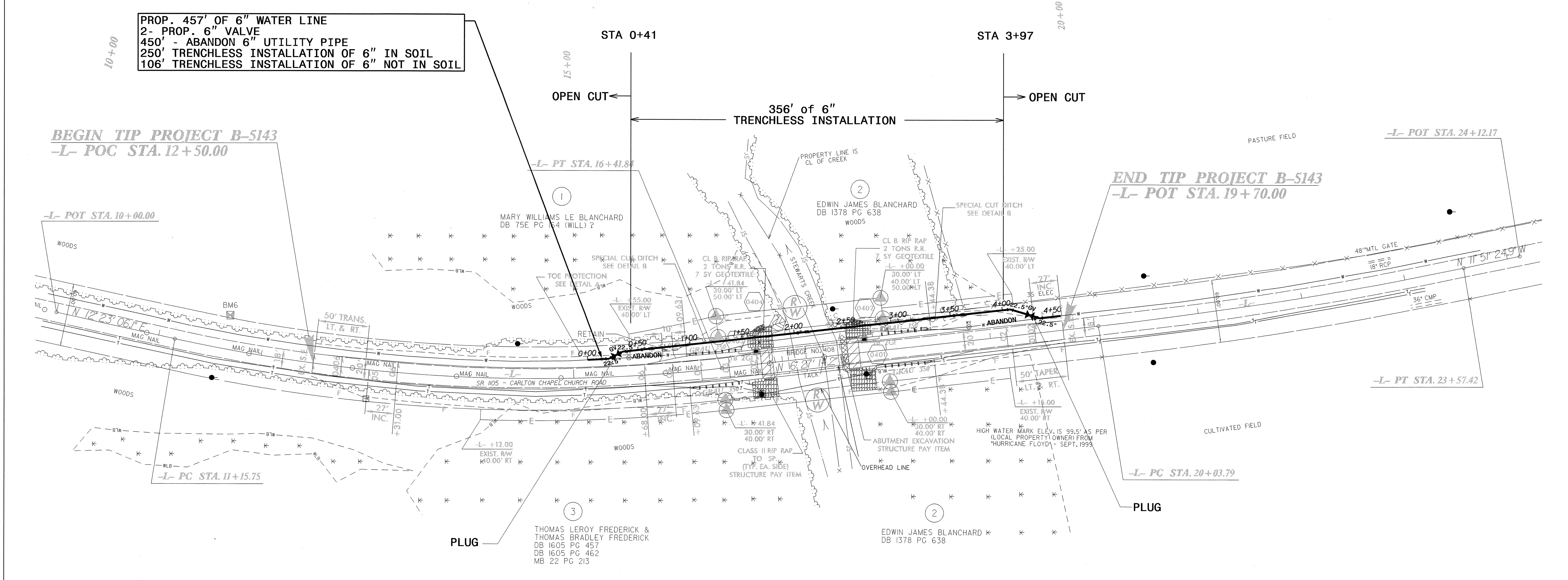
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PROJECT REFERENCE NO.	SHEET NO.
B-5143	UC-4
DESIGNED BY: NSH	
DRAWN BY: NSH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

NAD 83/NSRS 2007

PROP. 457' OF 6" WATER LINE
 2- PROP. 6" VALVE
 450' - ABANDON 6" UTILITY PIPE
 250' TRENCHLESS INSTALLATION OF 6" IN SOIL
 106' TRENCHLESS INSTALLATION OF 6" NOT IN SOIL

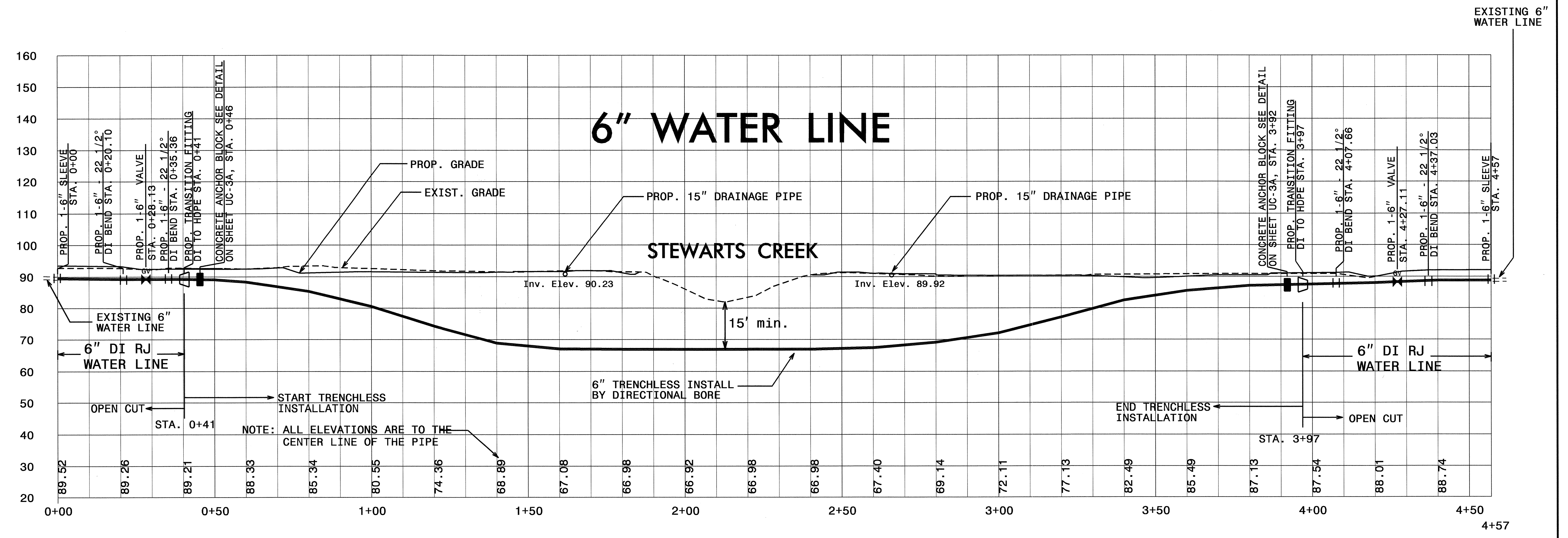


5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
B-5143	UC-5
DESIGNED BY: NSH	
DRAWN BY: NSH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



Note: WATER LINE SHALL MAINTAIN A 3' MINIMUM COVER.

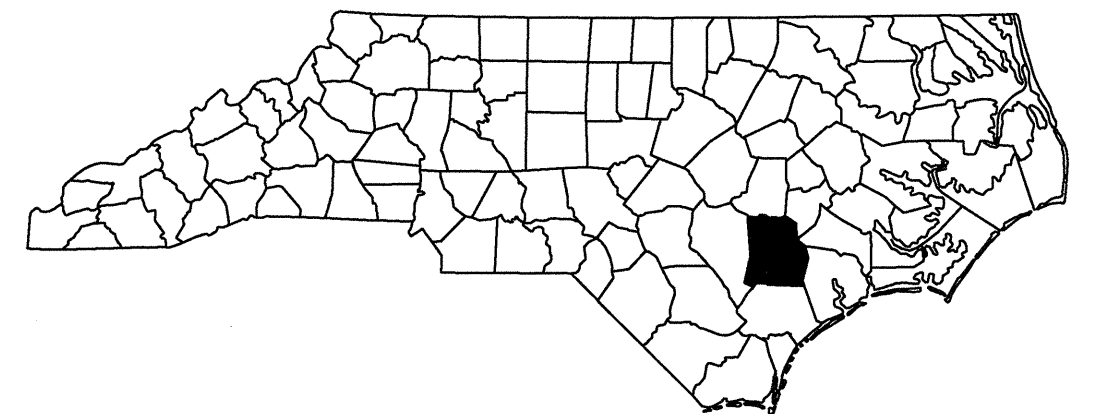
05/08/99

T.I.P. NO. B-5143 SHEET NO. UO-1

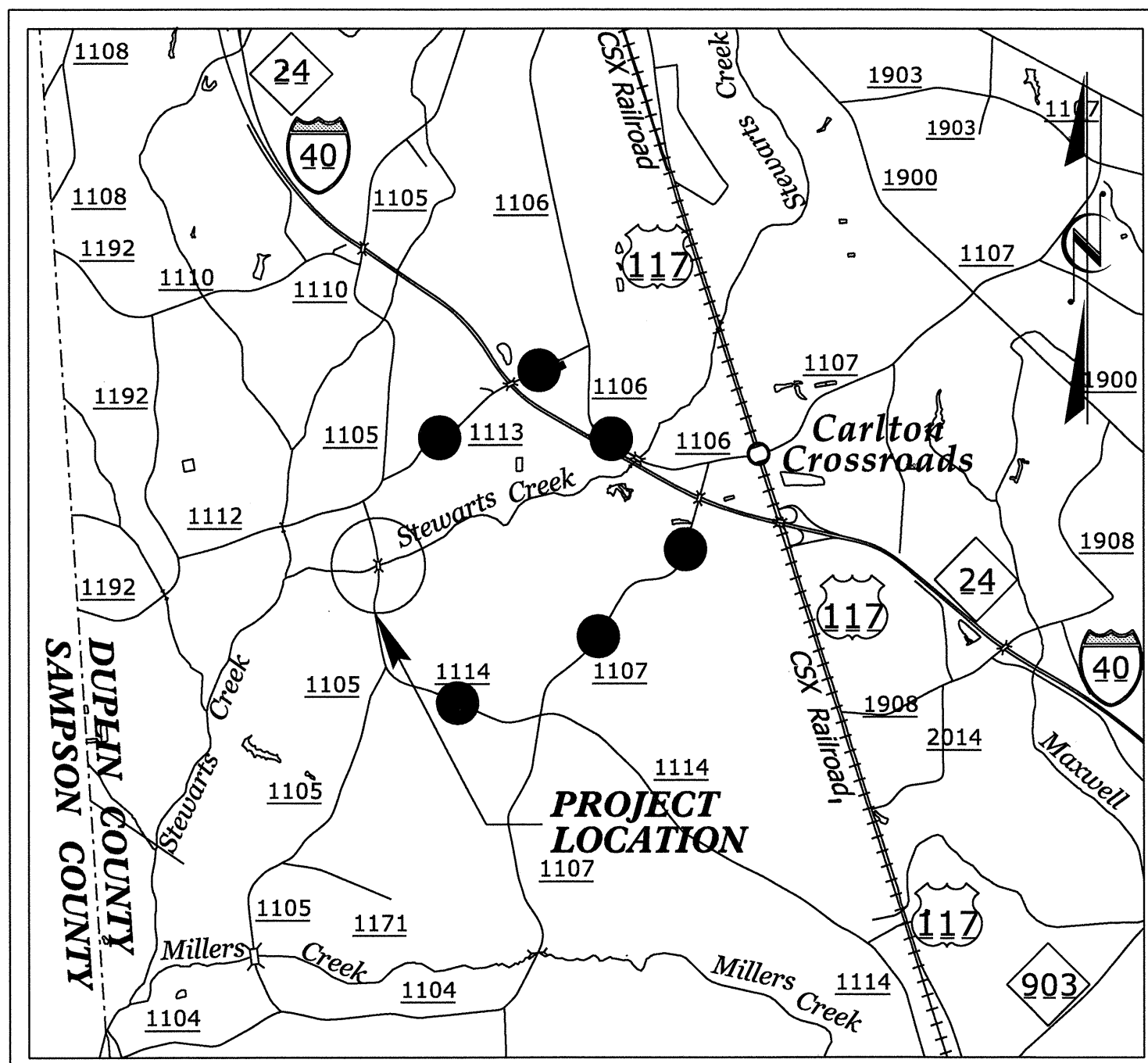
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

UTILITIES BY OTHERS PLANS DUPLIN COUNTY

LOCATION: BRIDGE NO. 408 OVER STEWARTS CREEK ON SR 1105
TYPE OF WORK: RELOCATION OF TELEPHONE LINE



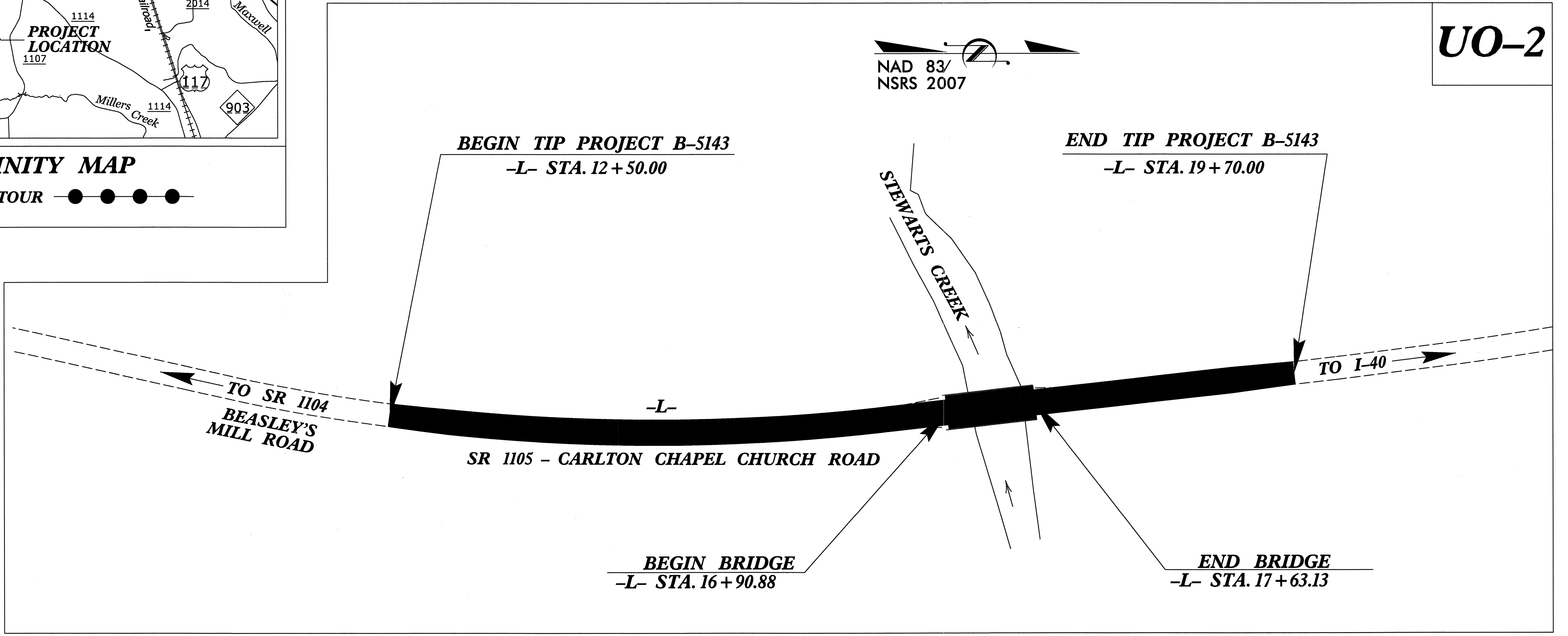
TIP PROJECT: B-5143



VICINITY MAP
OFF-SITE DETOUR ●●●●

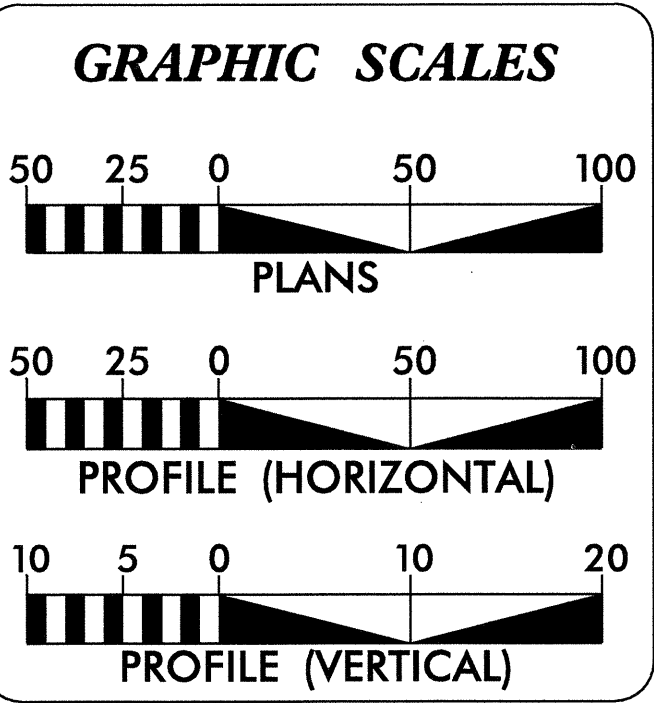
UO-2

NAD 83/
NSRS 2007



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

CONTRACT:



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITY BY OTHERS PLAN SHEET

UTILITY OWNERS ON PROJECT

(1) CENTURLINK (Telephone)
Contact: Anthony Melilli
113 Rea Street
Wilmington, NC
(910) 577-9359

So-Deep, US, P.C.
4650 Paragon Park Road
Raleigh, NC 27616
(919) 878-7466

PREPARED IN THE OFFICE OF:
**DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING**

1555 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

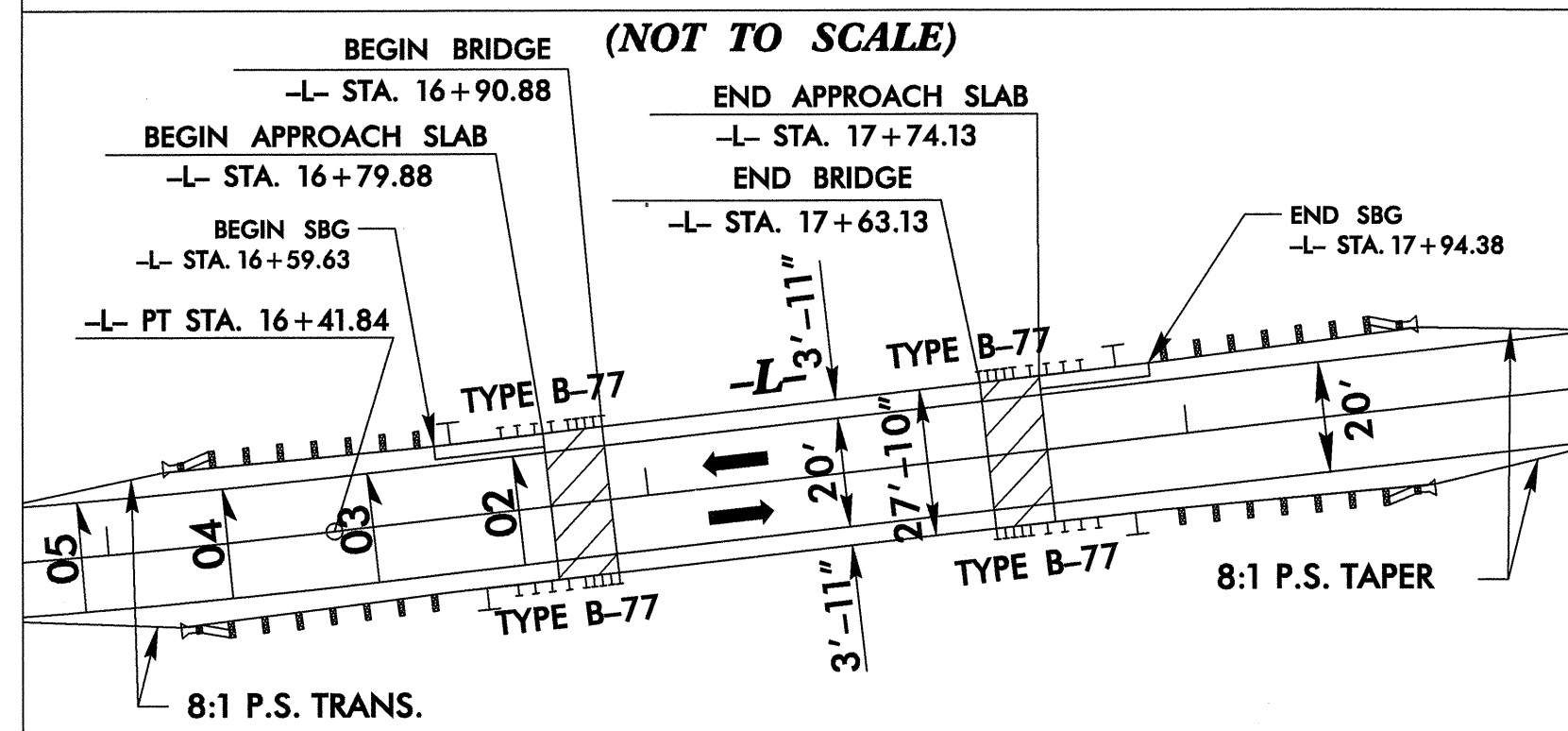
Roger Worthington, P.E.	UTILITIES SECTION ENGINEER
Corey Bousquet, P.E.	UTILITIES SQUAD LEADER PROJECT ENGINEER
Nabil Hamdan	UTILITIES PROJECT DESIGNER

\$\$\$SYSTEMTIME\$\$\$
\$\$\$DCN\$\$\$
\$\$\$USERNAME\$\$\$

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

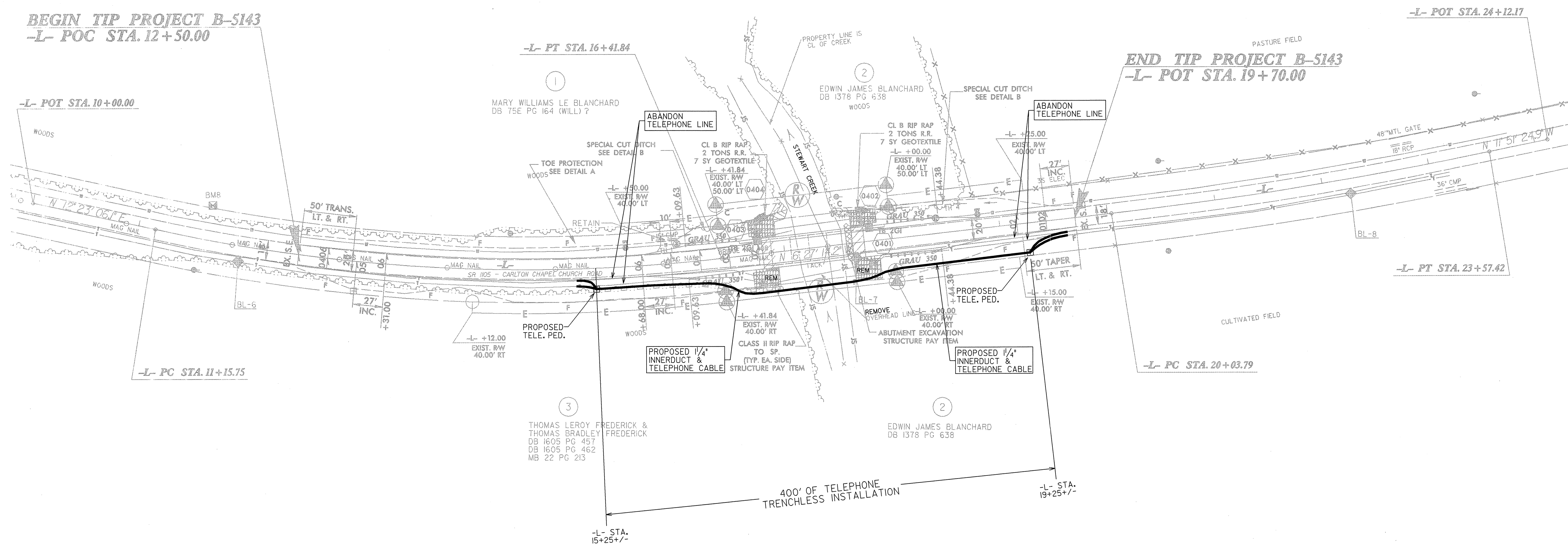


NAD 83/NSRS 2007

REVISIONS

BEGIN TIP PROJECT B-5143
-L- POC STA. 12+50.00

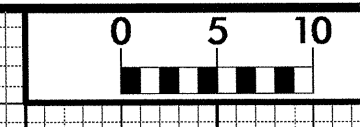
END TIP PROJECT B-5143
-L- POT STA. 19+70.00



So-Deep, US, P.C.
4650 Paragon Park Road
Raleigh, NC 27616
(919) 878-7466

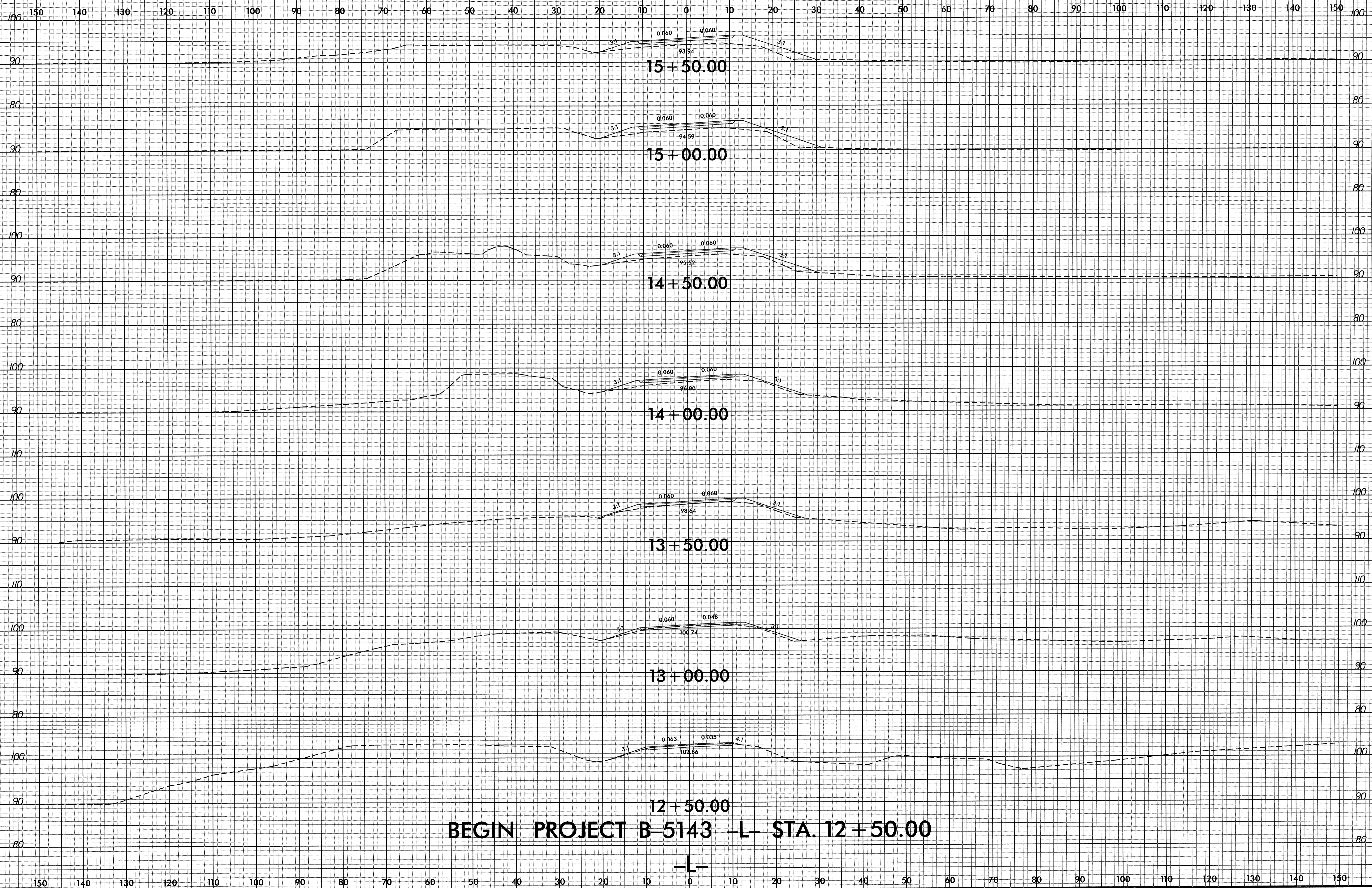
8/17/09

8/23/99

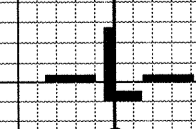


PROJ. REFERENCE NO.
B-5143

SHEET NO.
X-1

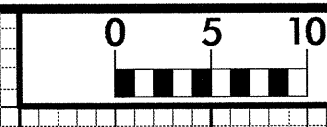


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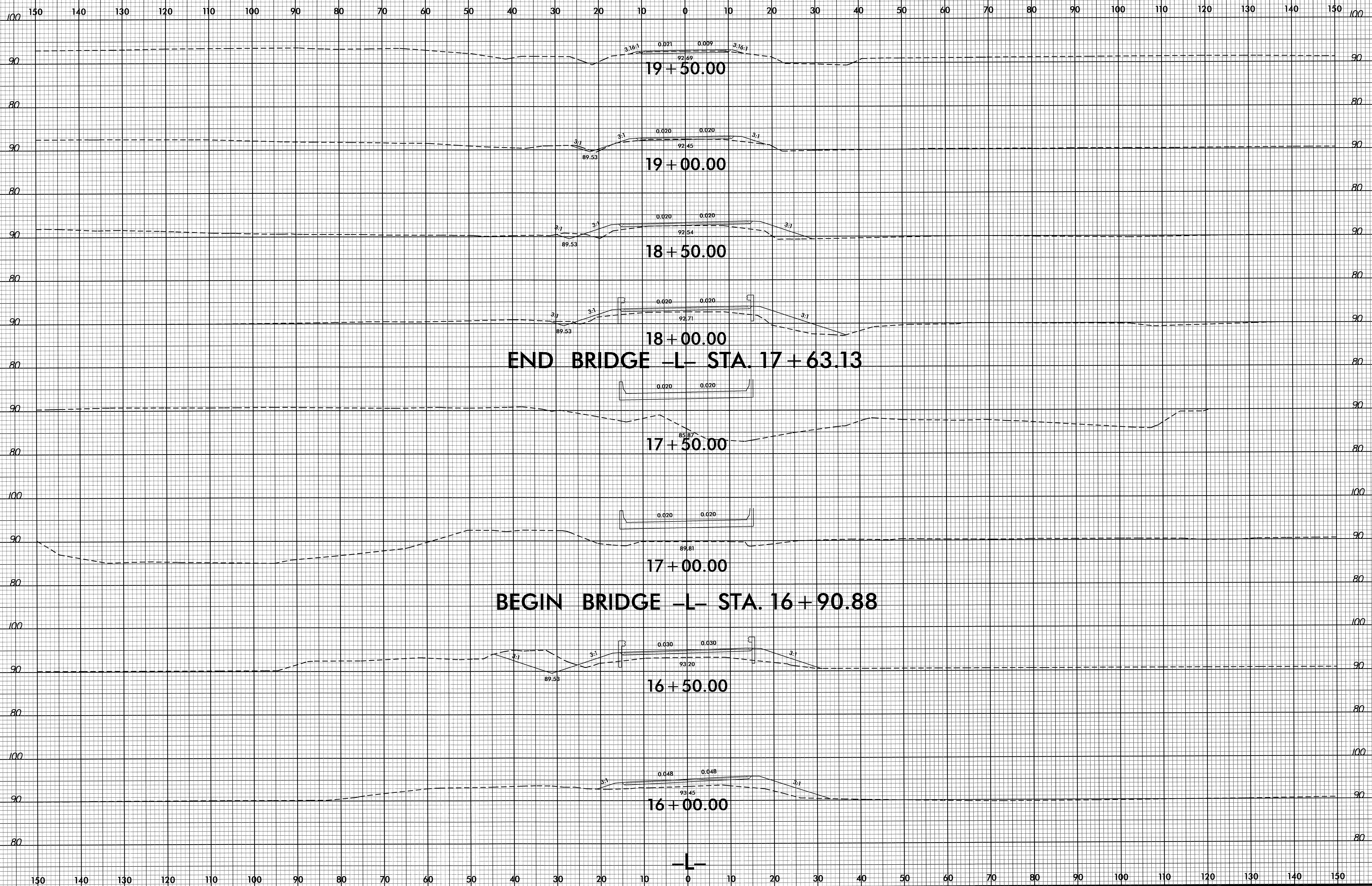
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8/23/99



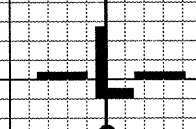
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B-5143

SHEET NO.
X-2



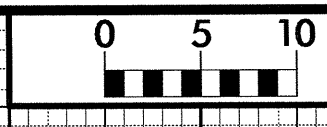
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BEGIN BRIDGE -L- STA. 16+90.88



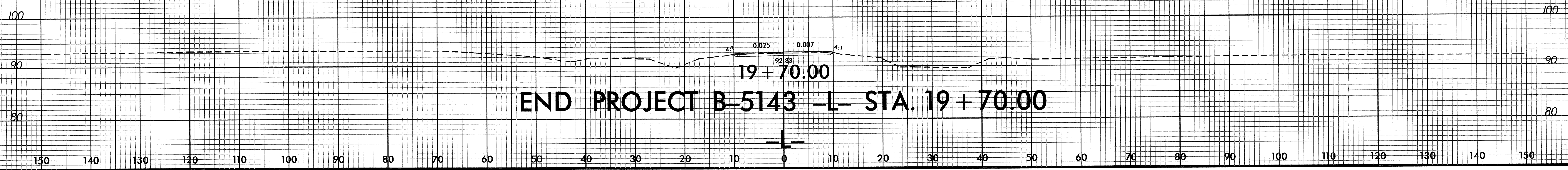
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8/23/99

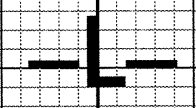


PROJ. REFERENCE NO.	SHEET NO.
B-5143	X-3

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END PROJECT B-5143 -L- STA. 19+70.00



10-OCT-2013 10:30
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