

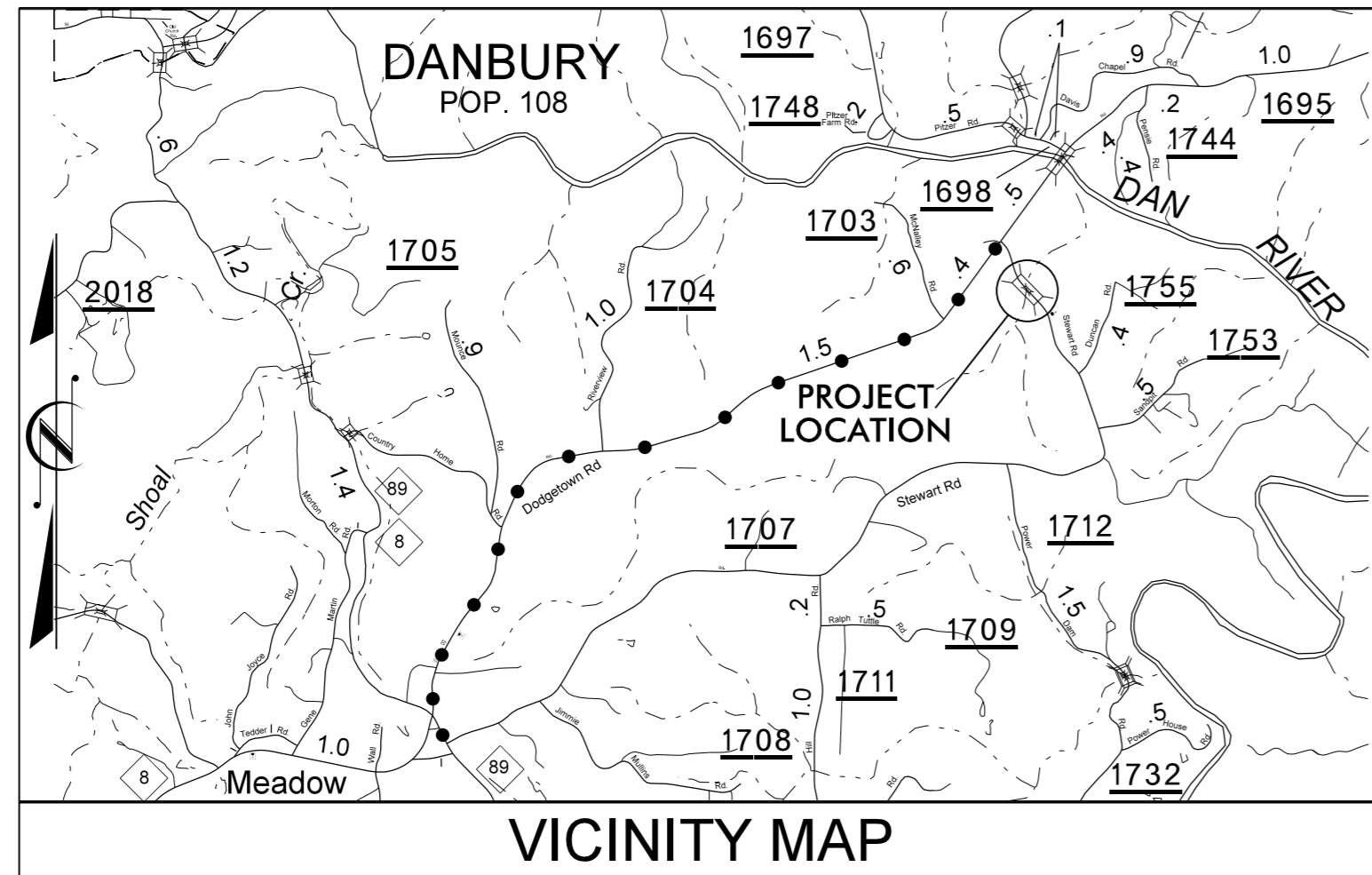
**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
shall not be considered a certified document.**

09/08/99

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



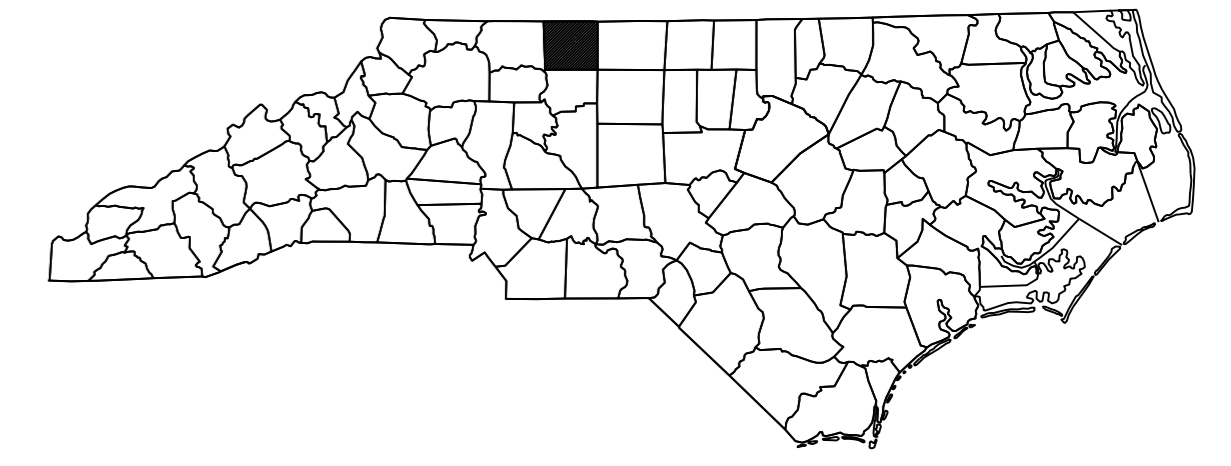
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STOKES COUNTY

LOCATION: REPLACE EXISTING BRIDGE NO.103 WITH ALUMINUM BOX CULVERT ON SR 1707 (STEWART RD) OVER WOOD BENTON BRANCH

TYPE OF WORK: GRADING, WIDENING, CULVERT, AND PAVEMENT MARKINGS

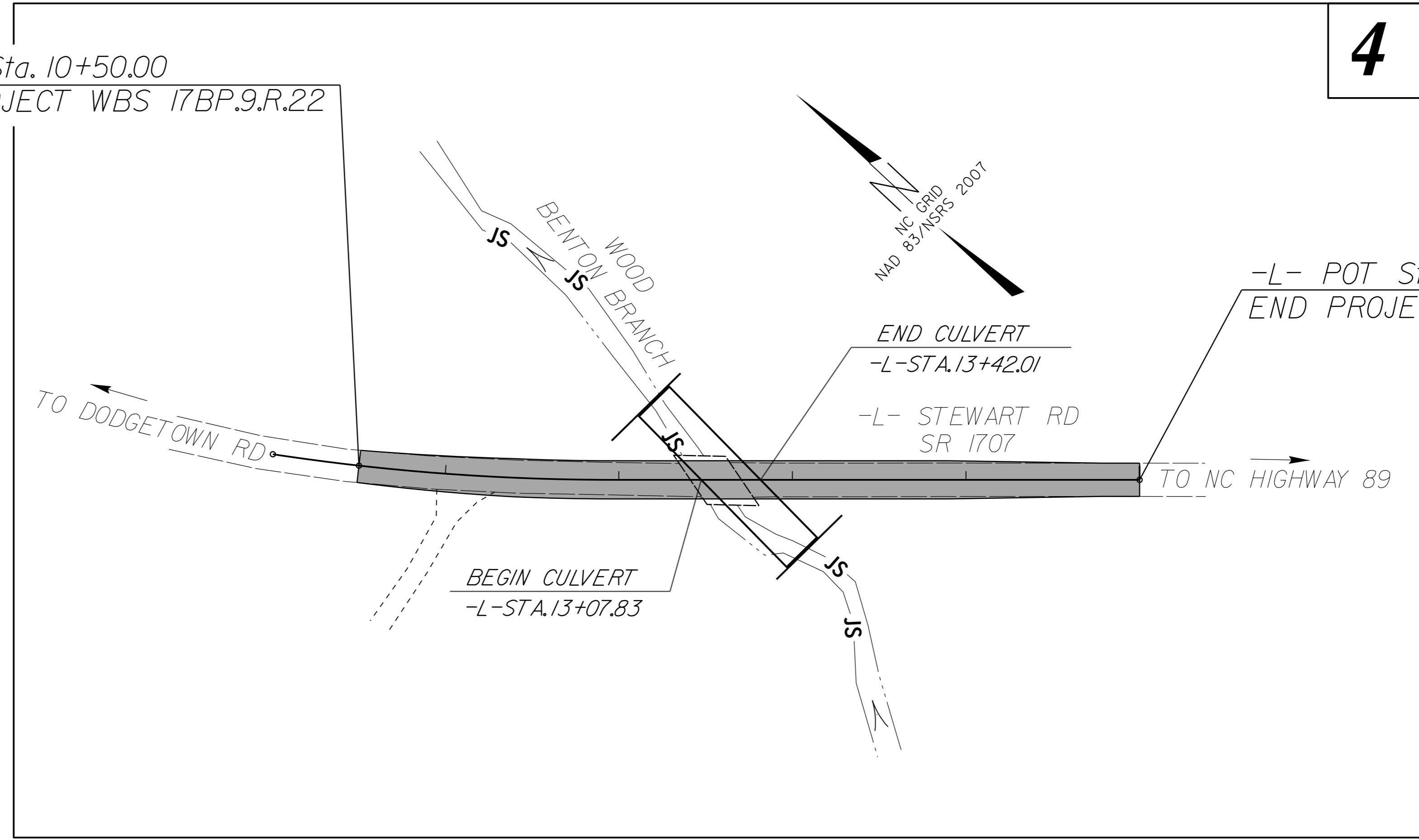
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.9.R.22	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.9.R.22	N/A	PE	
17BP.9.R.22	N/A	RWUTILS	
17BP.9.R.22	N/A	CONST	



TIP PROJECT: 17BP.9.R.22

CONTRACT: DI00122

-L- POC Sta. 10+50.00
BEGIN PROJECT WBS 17BP.9.R.22

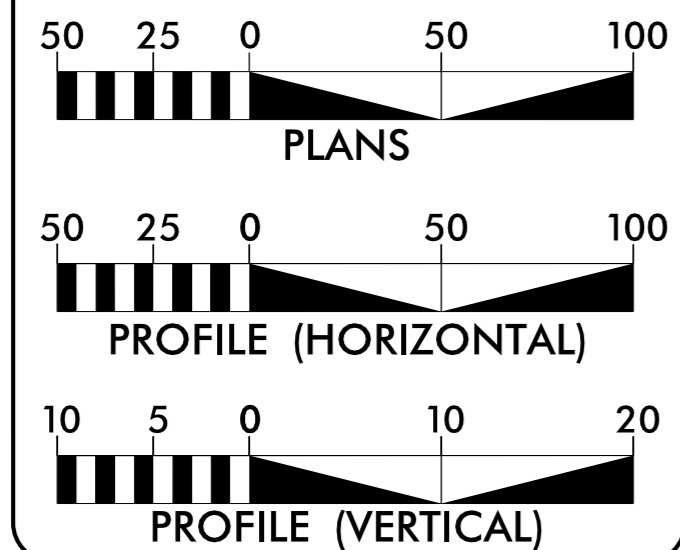


4

-L- POT Sta. 15+00.00
END PROJECT WBS 17BP.9.R.22

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2012 = 620
V = 60 MPH
FUNC CLASS = LOCAL
*SUB REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT 17BP.9.R.22 = 0.079 MILE
LENGTH STRUCTURE TIP PROJECT 17BP.9.R.22 = 0.006 MILE
TOTAL LENGTH TIP PROJECT 17BP.9.R.22 = 0.085 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS

1000 Birch Ridge Dr., Raleigh NC, 27610

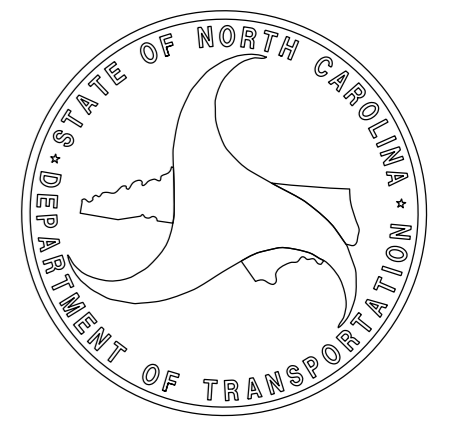
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: NOVEMBER 2014	MATTHEW W. JONES, PE PROJECT ENGINEER
LETTING DATE: TBD	W. AL BLANTON, PE, PLS PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

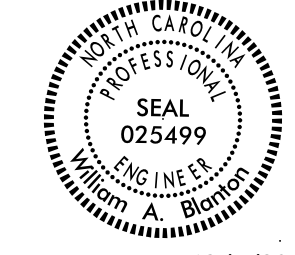
DocuSigned by:
Christopher R. Lewis 12/8/2015 P.E.
SEAL 41420

ROADWAY DESIGN ENGINEER

DocuSigned by:
William A. Blanton 12/8/2015 P.E.
SEAL 025499



04-DEC-2015 15:04
S:\DDC\2014-Stewart Rd-8400103\84-0103_ddc_tsh.dgn
wablanton AT D9CAD268308

PROJECT REFERENCE NO. <i>17BP9R22</i>	SHEET NO. <i>1-A</i>
DDC ENGINEER  DocuSigned by: <i>William A. Blanton</i> 12/4/2015	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1C-1 THRU 1C-2	SURVEY CONTROL
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
3A	SUMMARY OF DRAINAGE QUANTITIES, EARTHWORK SUMMARY, PAVEMENT REMOVAL, GUARDRAIL SUMMARY, PARCEL INDEX
4	PLAN and PROFILE SHEET
TMP-1 THRU TMP-3	TRAFFIC CONTROL PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
X-1 THRU X-3	CROSS-SECTIONS

GENERAL NOTES

GENERAL NOTES: 2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 07/30/12

GRADING AND SURFACING OR RESURFACING AND WIDENING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED 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 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. 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 STD. NO. 560.01.

SIDE ROADS:
THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

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.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE Duke Energy, Telephone
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

2012 ROADWAY ENGLISH STANDARD DRAWINGS

2012 ROADWAY ENGLISH STANDARD DRAWINGS

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 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
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.01	Rip Rap in Channels

12/05/11

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	----->
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
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	○ W
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	----- R/W
Proposed Right of Way Line with Iron Pin and Cap Marker	----- R/W ▲
Proposed Right of Way Line with Concrete or Granite R/W Marker	----- R/W ●
Proposed Control of Access Line with Concrete CA Marker	----- C/A
Existing Control of Access	----- C/A
Proposed Control of Access	----- C/A
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	--- E ◆ ---

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	▨

VEGETATION:

Single Tree	☼
Single Shrub	☼
Hedge	-----
Woods Line	-----

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	----- W
Designated U/G Water Line (S.U.E.*)	----- W
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:

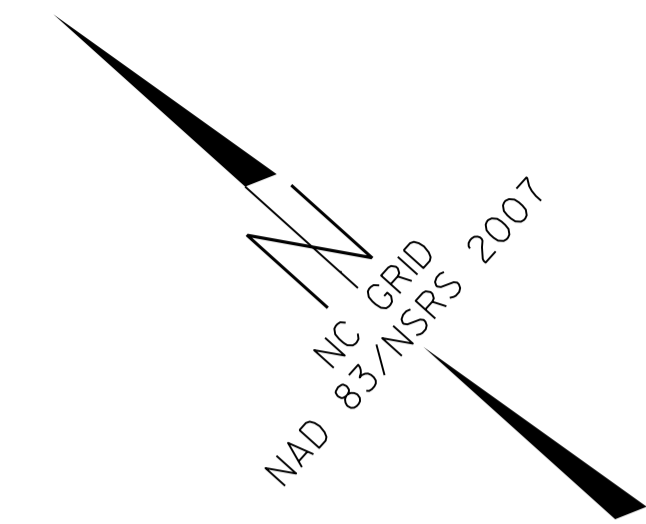
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	----- ?UTL
U/G Tank; Water, Gas, Oil	▭
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	▭
Geoenvironmental Boring	⊕
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to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

6/2/99

08-OCT-2015 07:55
S:\Projects\84-0103-1\84-0103-1\84-0103-1.dgn

SURVEY CONTROL SHEET 17BP.9.R.22

PROJECT REFERENCE NO.	SHEET NO.
17BP.9.R.22	1C-1
DDC	



-L- POC Sta. 11+10.00
BEGIN PROJECT WBS 17BP.9.R.22

-L- POT Sta. 15+60.00
END PROJECT WBS 17BP.9.R.22

84-0103-1
N=964067.6880
E=1664229.5990
ELEV.= 705.99

BL-3
N=964168.9130
E=1664589.3130
ELEV.= 696.67

-L- Sta. 10+00.00

84-0103-2
N=964372.7600
E=166439.6110
ELEV.= 692.16

-L- Sta. 15+98.00

BM2
N=964287
E=1664301
ELEV.= 691.33

BENCHMARKS (NAD 88)

BM1 ELEVATION = 705.99'

N 964608 E 1664230

EL STATION 10+01.00 25' LEFT

BM1-84-0103-1

BM2 ELEVATION = 691.33'

N 964287 E 1664301

EL STATION 12+92.00 115' RIGHT

R/R SPIKE IN NORTH ROOT OF A

TWIN SYCAMORE

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "84-0103-1" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 964607.688(±) EASTING: 1664229.599(±) ELEVATION: 705.99(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000432097

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "84-0103-1" TO -L- STATION 10+00 IS

S 62 ° 40' 47.5" W 25.20'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS NAVD 88

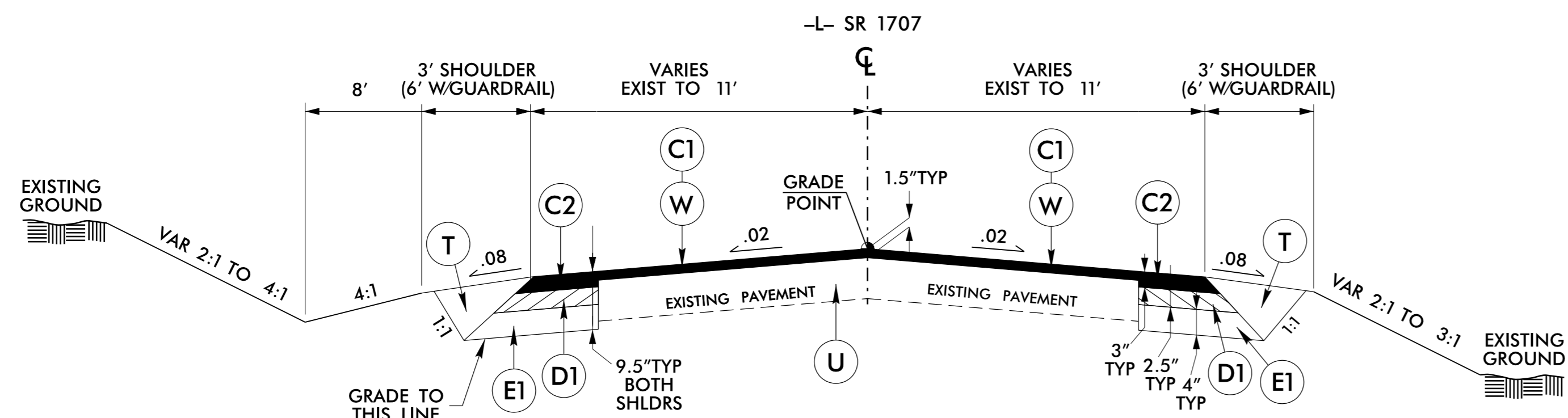
BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	84-0103-1		964607.6880	1664229.5990	705.99	10+01.32	25.17 LT
2	84-0103-2		964372.7600	1664349.6110	692.16	12+62.51	21.13 RT
3	BL-3		964168.9130	1664589.3130	696.67	15+75.12	14.69 LT

NOTES:

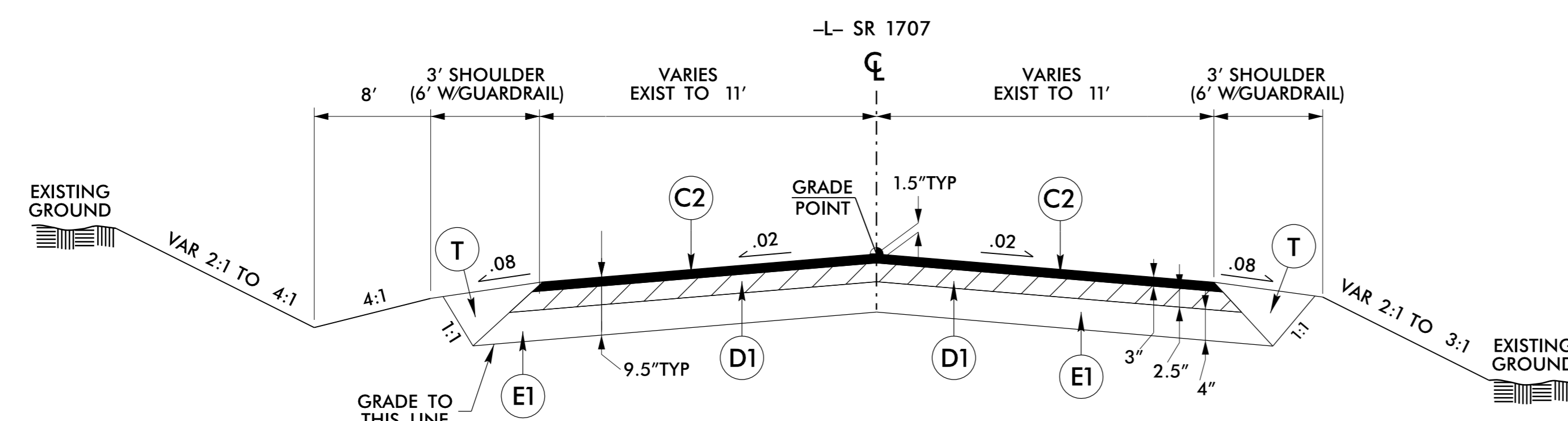
▲ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.

PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

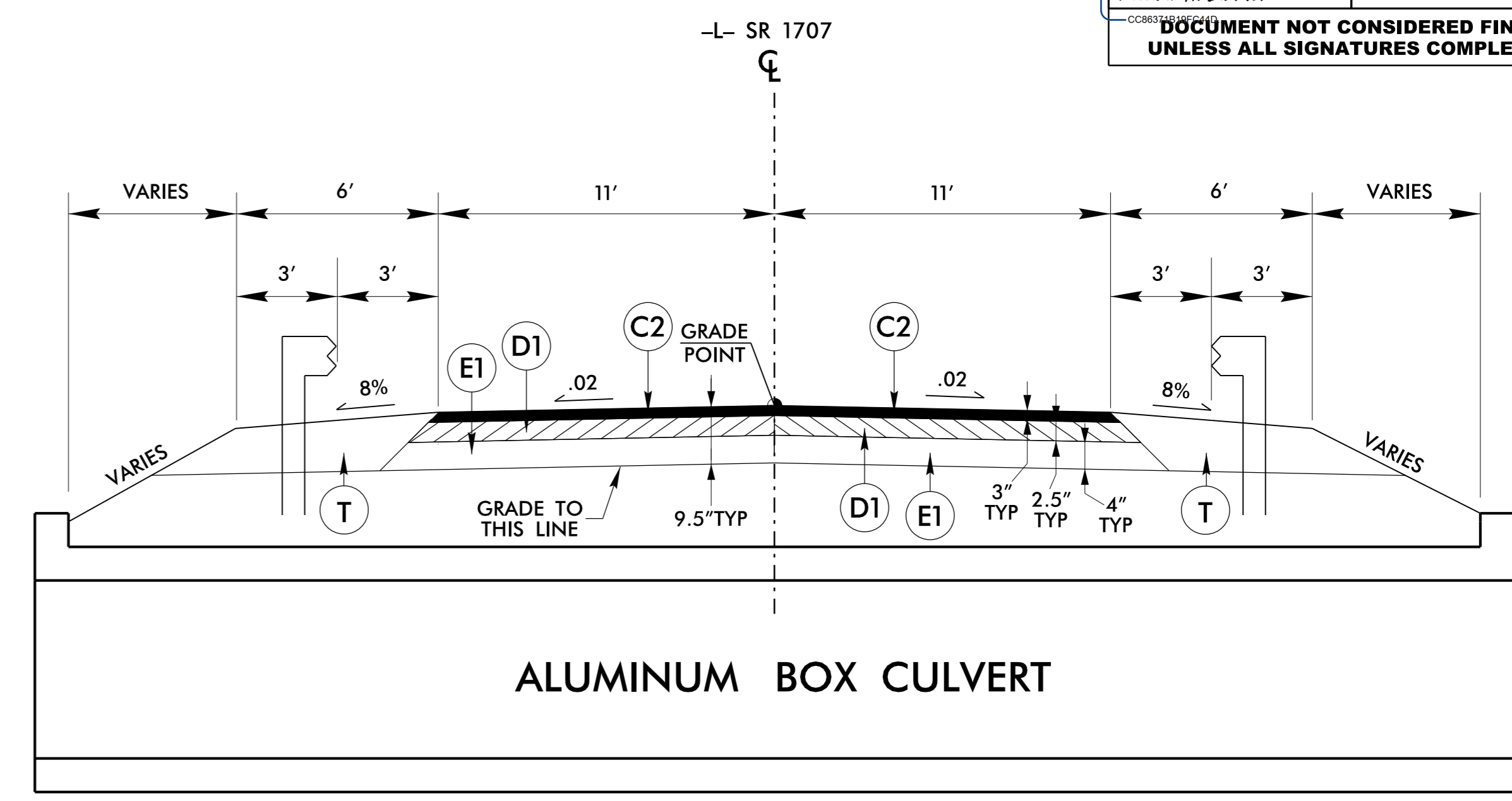
NOTE: DRAWING NOT TO SCALE



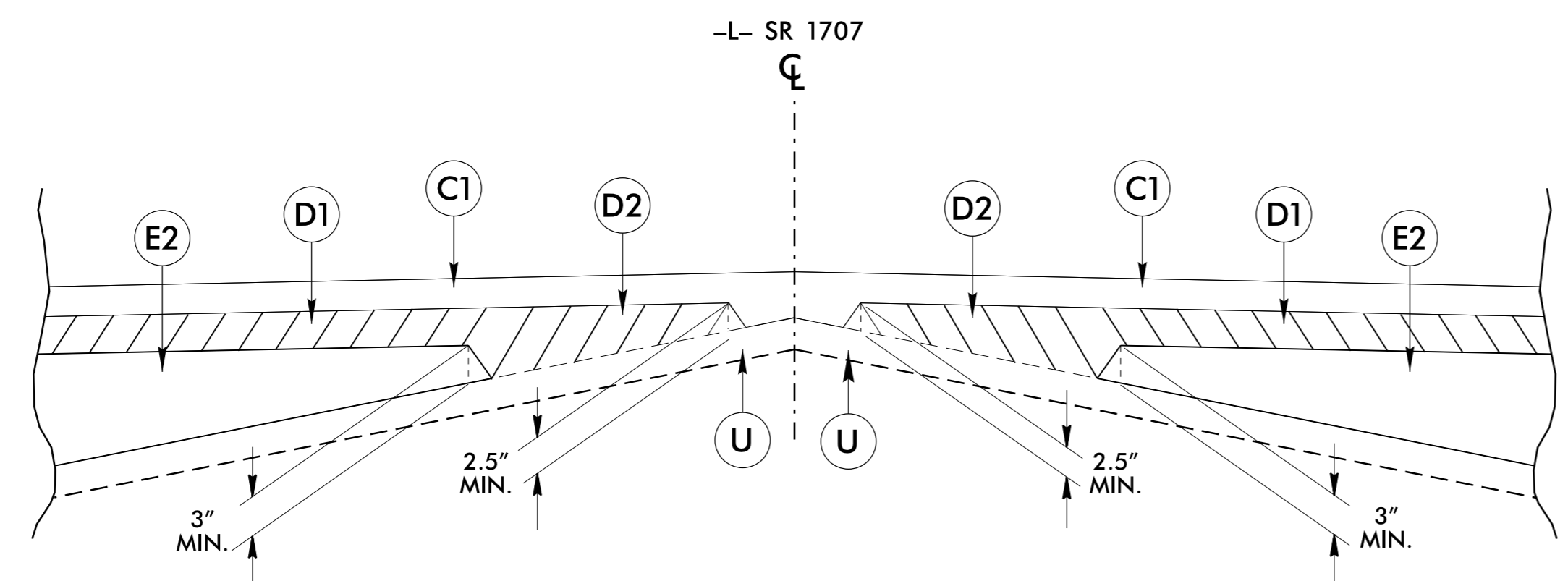
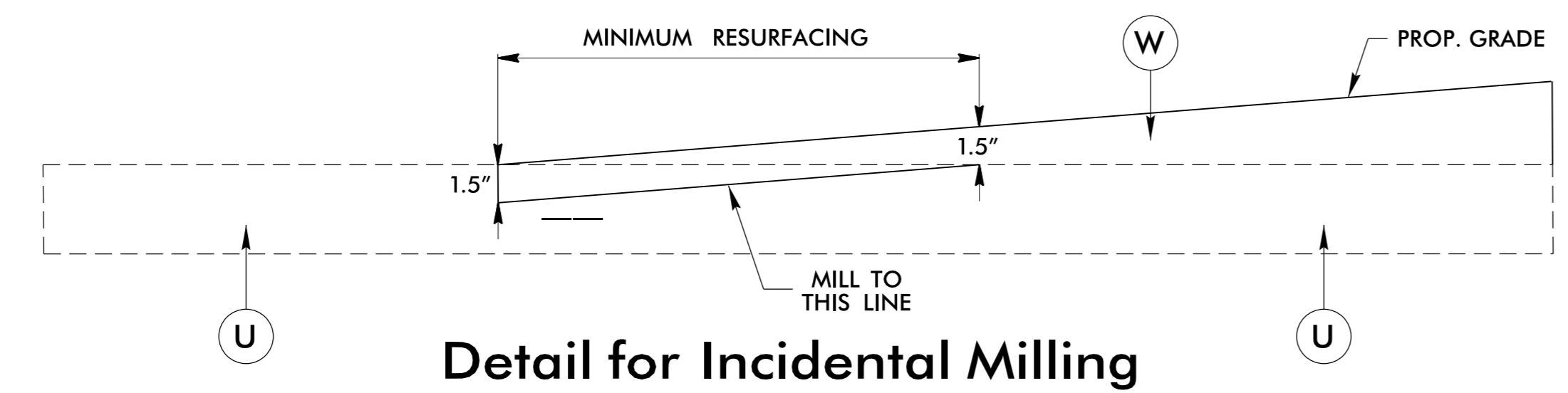
USE TYPICAL SECTION NO. 1 AS FOLLOWS:
 FROM -L- 11+10 TO -L- STA. 12+50
 FROM -L- 13+75 TO -L- STA. 15+60



USE TYPICAL SECTION NO. 1 AS FOLLOWS:
 FROM -L- 12+50 TO -L- STA. 13+07.83
 FROM -L- 13+42.01 TO -L- STA. 13+75



USE TYPICAL SECTION No. 2 AS FOLLOWS:
 FROM -L- STA. 13+07.83 (BEGIN CULVERT)
 TO -L- STA. 13+42.01 (END CULVERT)



PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I9.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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

6/2/99

02-DEC-2015 13:30
 S:\100\2014-Spec\04-PAV\03-04-0103-ddc-tyr.dgn
 William A. Blanton

SURVEY CONTROL SHEET 17BP.9.R.22

ROW MARKER PERMANENT EASEMENT

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+50.00	-30.00	964416.7224	1664378.5191
L	12+50.00	-80.00	964450.6975	1664415.2028
L	12+65.00	-90.00	964446.8485	1664432.4749
L	13+00.00	30.00	964339.3171	1664368.7410
L	13+00.00	70.00	964311.9940	1664339.5272
L	13+60.00	-60.00	964356.9733	1664475.4568
L	13+60.00	-30.00	964336.4810	1664453.5465
L	13+90.00	70.00	964246.2629	1664401.0041
L	14+10.00	55.00	964241.9021	1664425.6209
L	14+10.00	30.00	964258.9790	1664443.8795

L

TYPE	STATION	NORTH	EAST
PC	10+10.00	964587.1937	1664211.7812
PCC	10+60.35	964544.3711	1664238.2275
PT	12+56.35	964391.6901	1664360.8341
POT	15+97.99	964142.1741	1664594.2010

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "84-0103-1"

WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
 NORTHING: 964607.688(ft) EASTING: 1664229.599(ft)
 ELEVATION: 705.99(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000432097

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "84-0103-1" TO -L- STATION 10+00 IS
 S 62 ° 40' 47.5" W 25.20'

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

COMPUTED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.
 17BP-9.R.22 3A

SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV.	EMBANK. +20%	BORROW	WASTE
11+10 -L-	15+60	15	910	895	0
SUBTOTALS:		15	910	895	0
LOSS DUE TO CLEAR & GRUBB		-10			
PROJECT TOTALS		5	910	905	0
GRAND TOTALS		5	910	905	0
SAY		5		905	

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD ²
L	12+00	14+00	LT/RT	425
TOTAL:				425
SAY:				425

PARCEL INDEX

PARCEL NO.	SHEET NO.	PROPERTY OWNERS NAMES
1	4	MEADOWS BAPTIST CHURCH
2	4	RICHARD B. SR. & BRENDA B. CARTER
3	4	STEVEN H. TYSINGER

NOTE:
 1) EARTHWORK QUANTITIES ARE CALCULATED BY DDC UNIT.
 2) APPROXIMATE QUANTITIES ONLY, UNCLASSIFIED EXCAVATION, SHOULDER BORROW, FINE GRADING, CLEARING AND GRUBBING, BREAKING OF EXISTING ASPHALT, AND REMOVAL OF EXISTING ASPHALT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".
 3) EARTHWORK QUANTITIES EXCLUDE VOLUMES FOR "UNCLASSIFIED CULVERT EXCAVATION".

GUARDRAIL SUMMARY

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING IMPACT ATTENUATOR TYPE 350
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

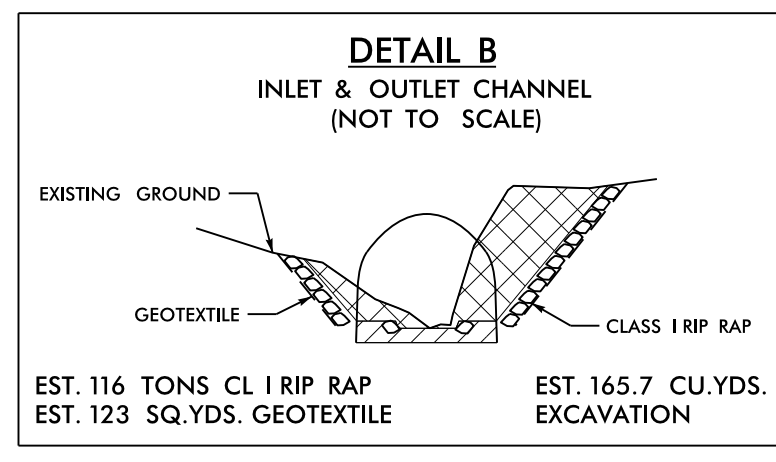
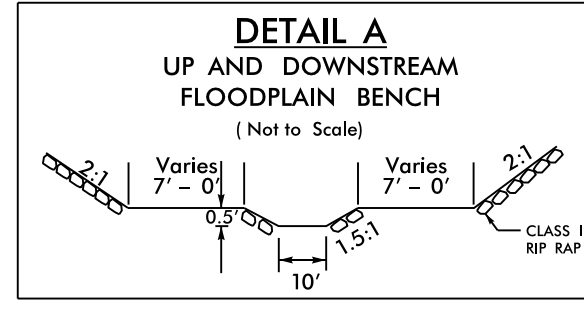
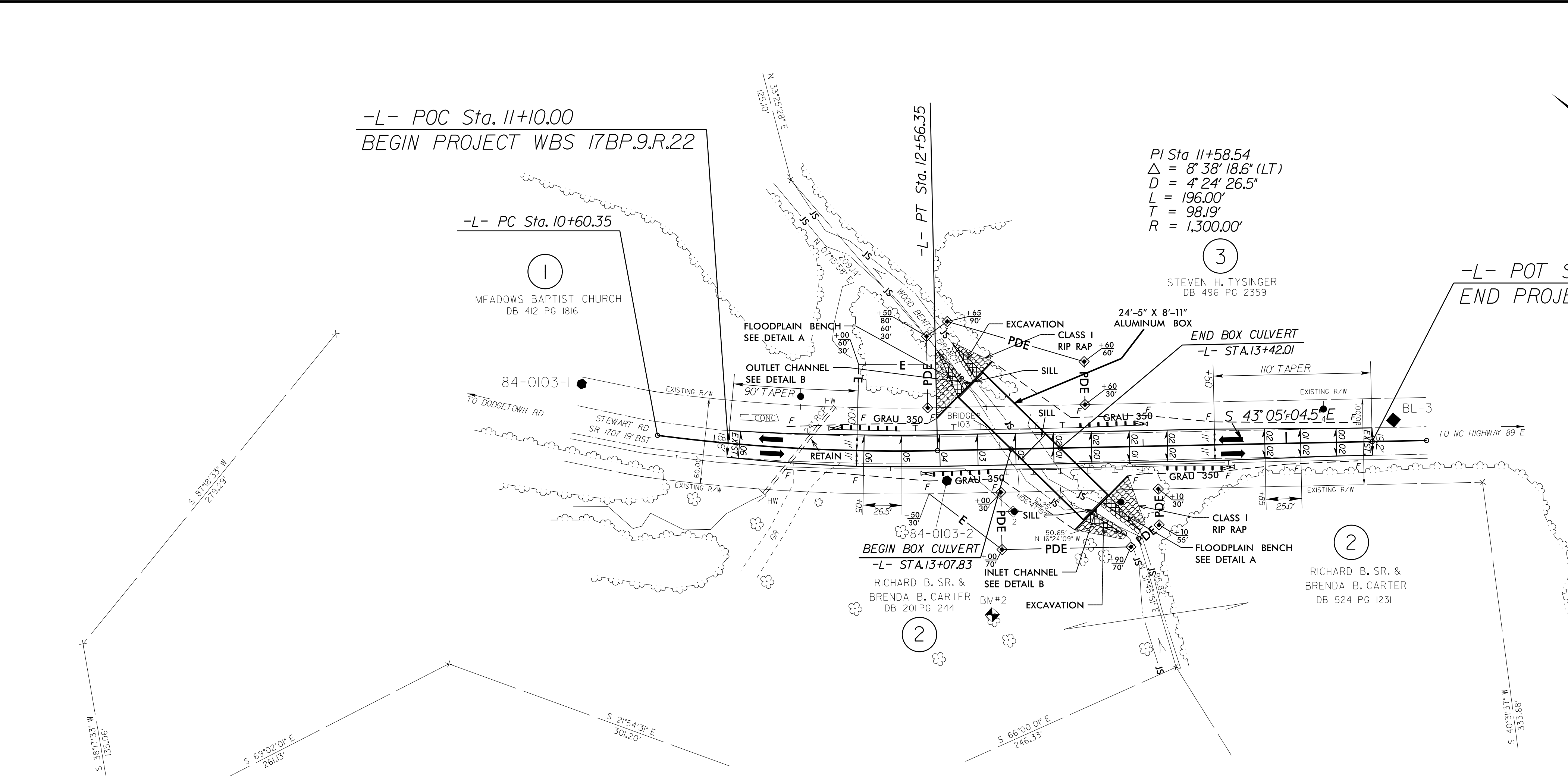
SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS										IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS								
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	XI MOD	XI	GRAU 350	M-350	XIII	CAT-1	VI MOD	BIC	AT-1	EA	G	NG															
-L-	11+80	14+04	LT	224'			CULVERT																																
-L-	12+45	14+64	RT	219'			CULVERT																																
LESS ANCHOR DEDUCTIONS																																							
GRAU 350 4 @ 50' =				-200'																																			
TOTAL				243'																																			
SAY				250'																																			

6/21/00
 I:\MAY-2005\1537
 S:\DDC\2014\1537\17BP-9.R.22.ddc-ph_3A.dgn

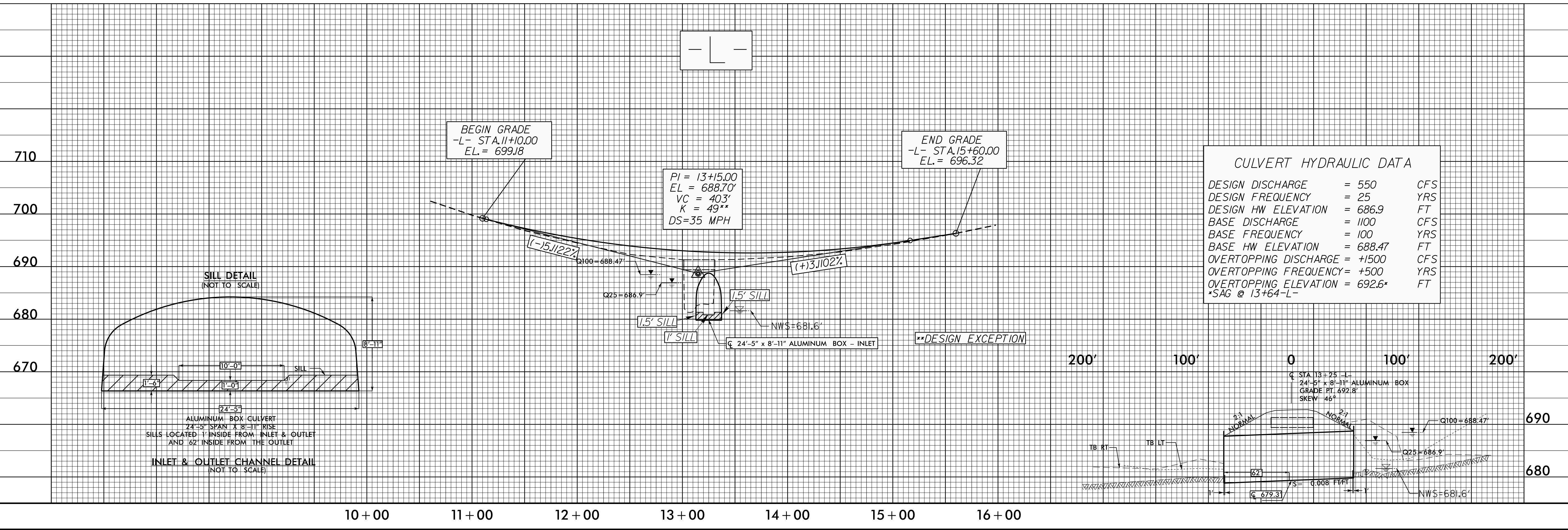
-L- POC Sta. 11+10.00
BEGIN PROJECT WBS 17BP.9.R.22

PI Sta. 11+58.54
Δ = 8' 38" 18.6" (LT)
D = 4' 24" 26.5"
L = 196.00'
T = 98.19'
R = 1,300.00'

-L- POT Sta. 15+60.00
END PROJECT WBS 17BP.9.R.22



REVISIONS



8/17/99
98-DEC-2015 08:52
S:\17BP.9.R.22\17BP.9.R.22.dwg
S:\17BP.9.R.22\17BP.9.R.22.dwg
S:\17BP.9.R.22\17BP.9.R.22.dwg

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION STOKES COUNTY

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
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND INDEX OF SHEETS
TMP-1A	GENERAL NOTES, PHASING AND DETOUR SIGNING.

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

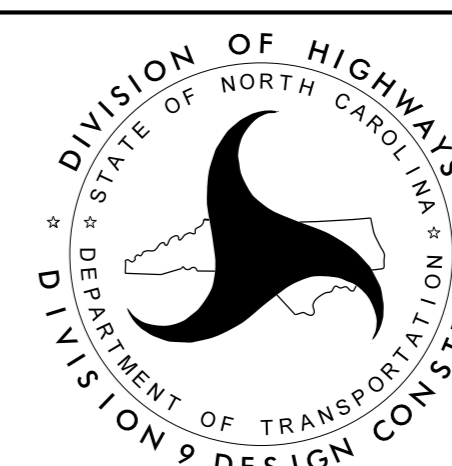
PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

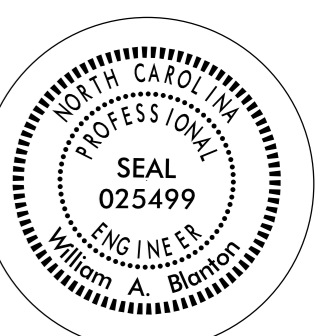
- PAVEMENT MARKING SYMBOLS

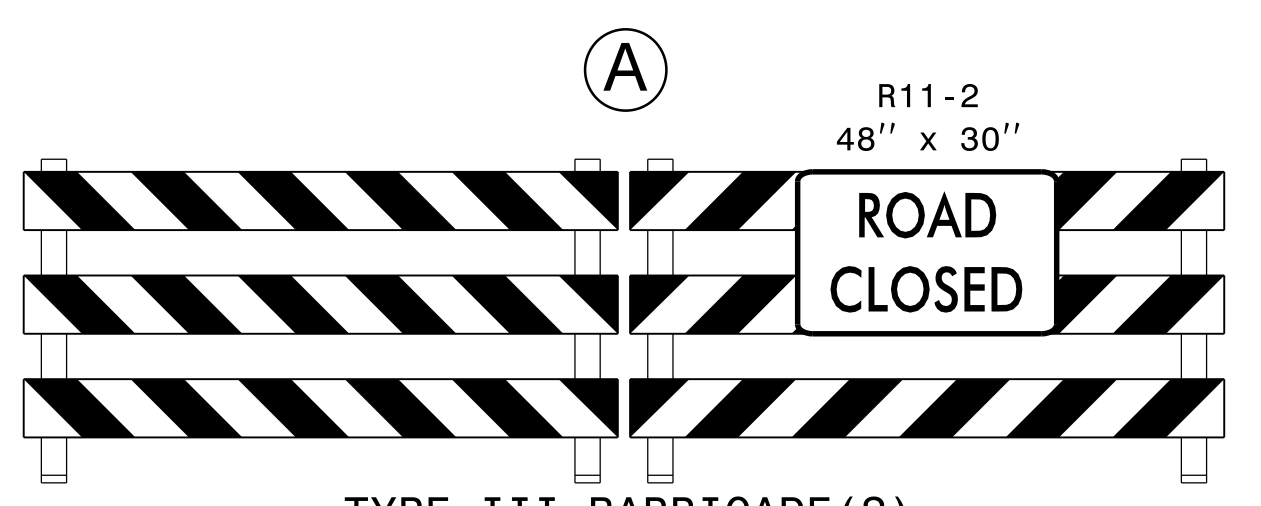
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



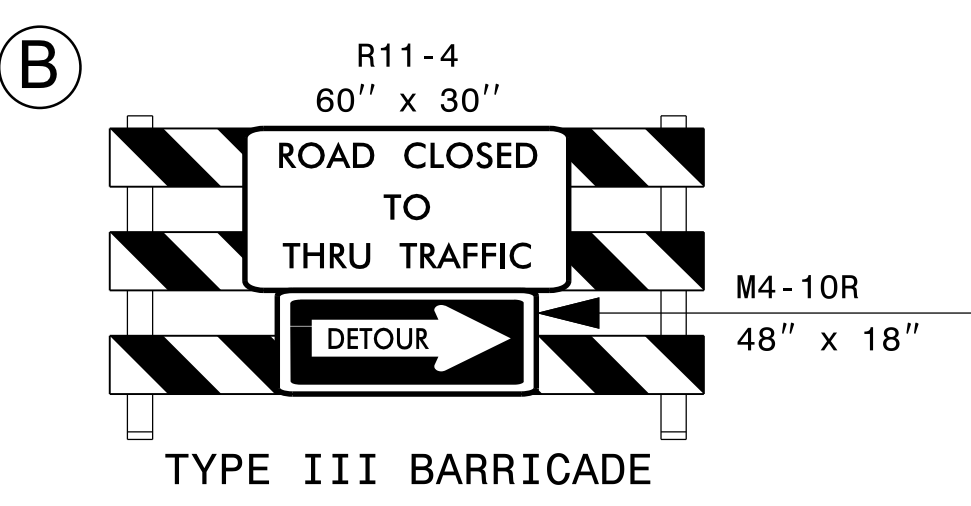
DocuSigned by:
APPROVED: William A. Blanton
CC6971819FC44D
DATE: 12/4/2015

SEAL

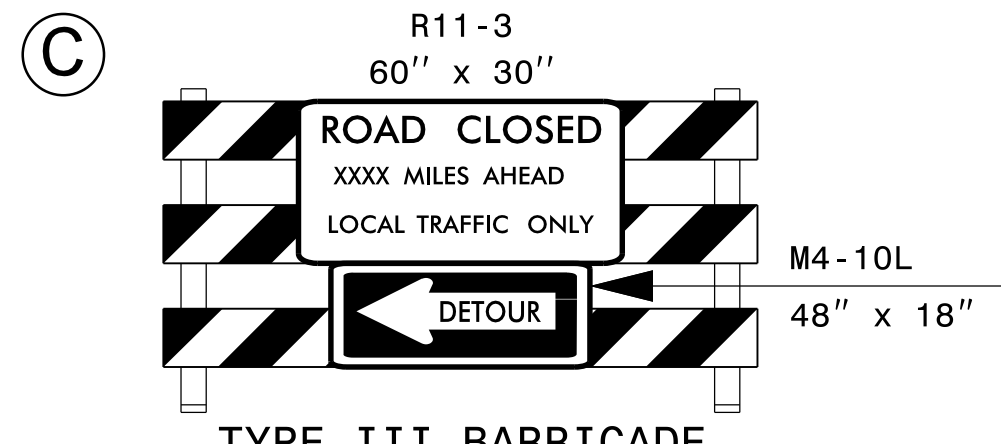




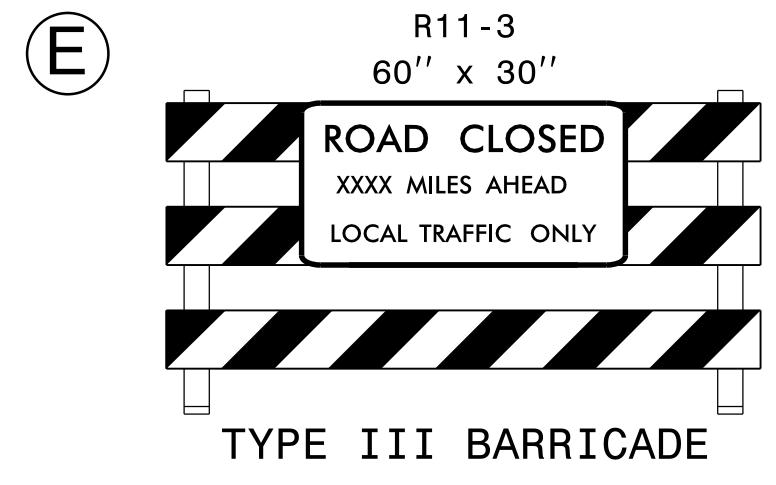
TYPE III BARRICADE(S)



TYPE III BARRICADE



TYPE III BARRICADE

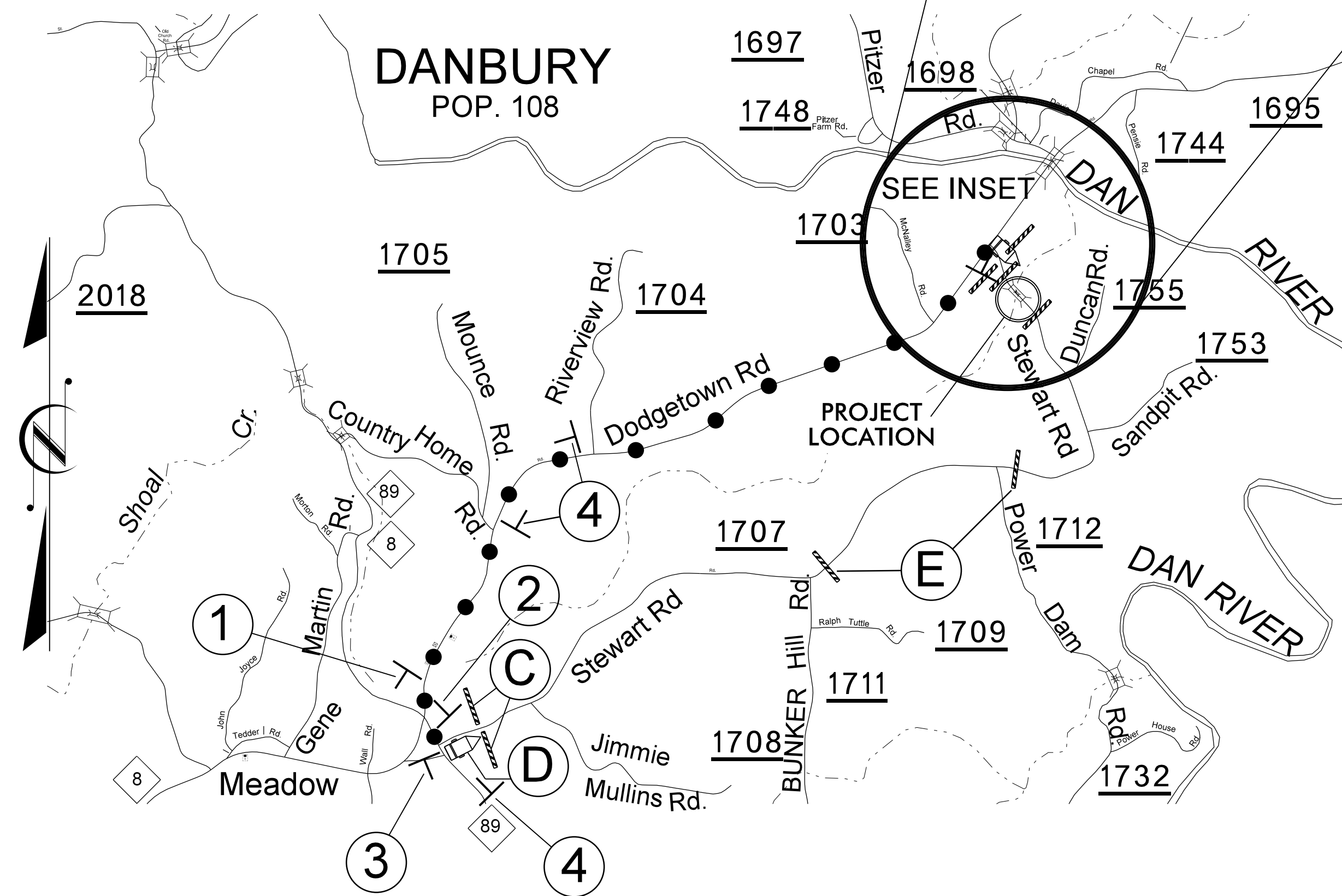
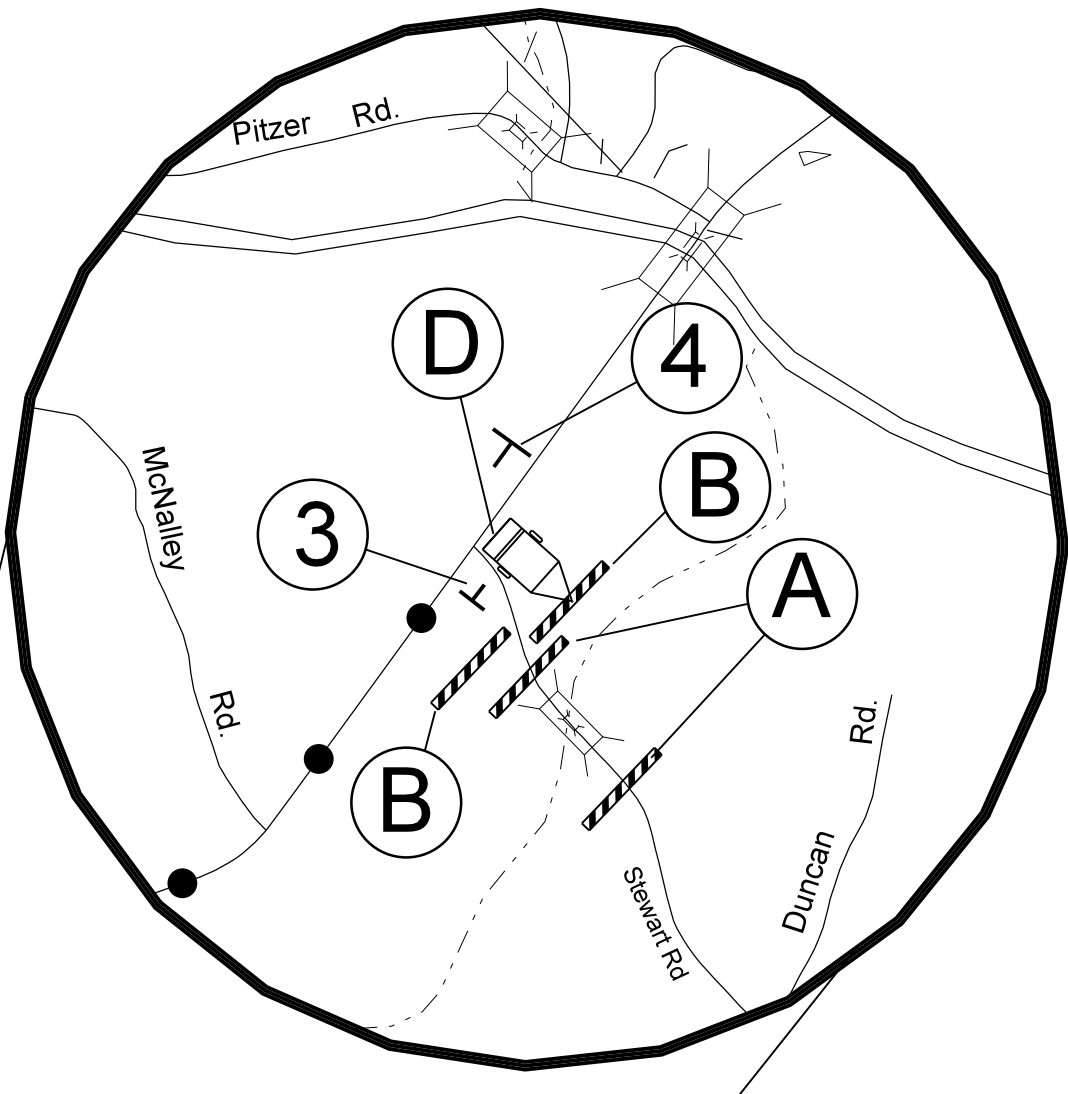


TYPE III BARRICADE

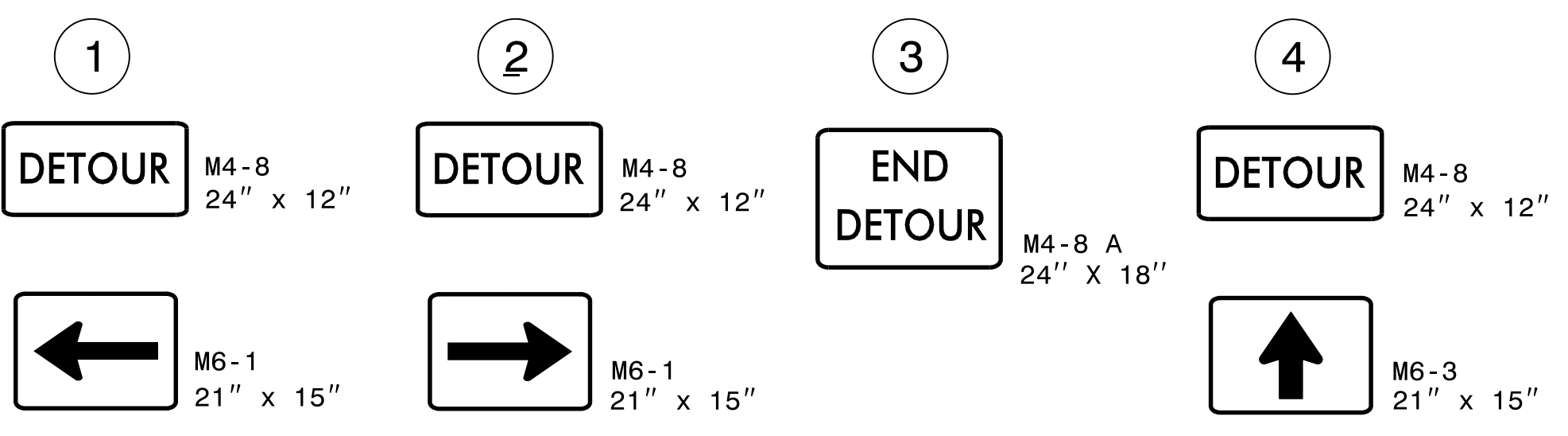
MESSAGE NO. 1	MESSAGE NO. 2
BRIDGE CLOSED 00-00-00	FOR XXX DAYS

CHANGEABLE MESSAGE SIGN

INSET



DETOUR ROUTE DETOUR LENGTH 3.3 MILES



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.

LANE AND SHOULDER CLOSURE REQUIREMENTS:

- A) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

TRAFFIC PATTERN ALTERATIONS

- C) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION

SIGNING

- D) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- E) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN ON THIS SHEET.

- F) 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.

- G) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- H) INSTALL AND ACTIVATE CMS SIGNS 2 WEEKS PRIOR TO ROAD CLOSURE.

TRAFFIC CONTROL DEVICES

- I) PLACE TYP III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

- J) INSTALL PAVEMENT MARKINGS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING
SR 1707 (STEWART RD.)	PAINT
- K) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- L) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS.
- M) PASSING ZONE WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

PHASING

PHASE I

PRIOR TO ANY CONSTRUCTION OPERATIONS, PLACE AND COVER OFF-SITE DETOUR SIGNING AS SHOWN ON TCP-2 AND IN ACCORDANCE WITH RSD 1102.03 (SHEET 1 OF 9). PLACE CMS AND ACTIVATE AT LEAST TWO WEEKS PRIOR TO CLOSING STEWART RD.

PHASE II

USING OFF-SITE DETOUR, UNCOVER DETOUR SIGNS, CLOSE -L- (SR 1707/STEWART RD.) TO TRAFFIC, EXCAVATE AND CONSTRUCT NEW CULVERT AND ROADWAY UP TO AND INCLUDING FINAL LAYER OF SURFACE COURSE.

PHASE III

UPON COMPLETION OF CULVERT AND ROADWAY, PLACE FINAL PAVEMENT MARKING IN ACCORDANCE WITH RSD 1205.01. REMOVE CMS, BARRICADES, DETOUR SIGNS, AND OPEN -L- (SR 1707) TO TRAFFIC.

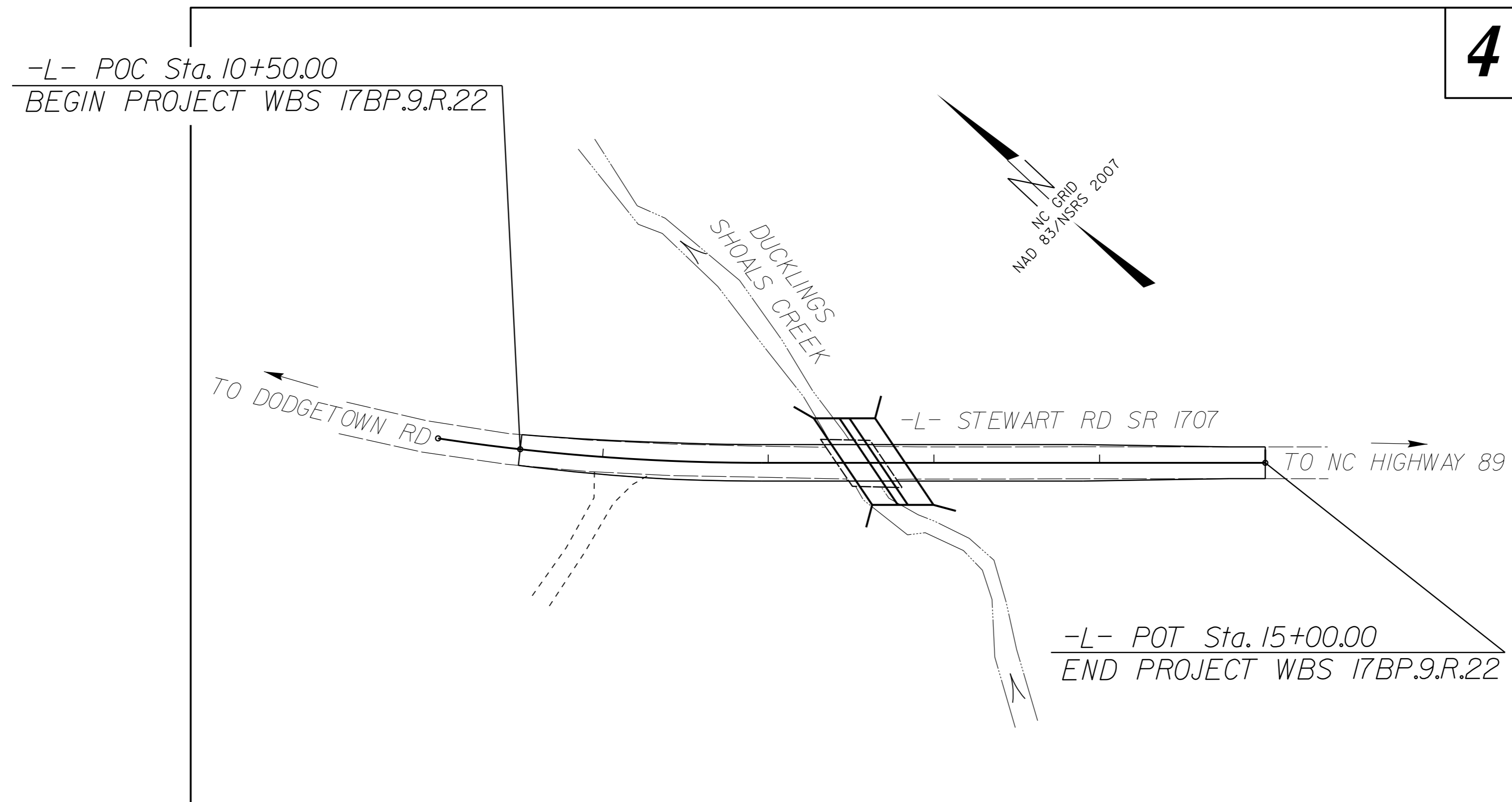
REVISIONS

8/17/99
 02-06-C-2015-0327
 L:\PROJECTS\17BP9R22\9CC\DDC\2014-5-view\17BP9R22.ddc IMP.dgn
 L:\PROJECTS\17BP9R22\9CC\DDC\2014-5-view\17BP9R22.ddc
 L:\PROJECTS\17BP9R22\9CC\DDC\2014-5-view\17BP9R22.ddc
 L:\PROJECTS\17BP9R22\9CC\DDC\2014-5-view\17BP9R22.ddc

TIP PROJECT: 17BP.9.R.22

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

**LOCATION: REPLACE EXISTING BRIDGE NO.103 WITH DUAL CULVERT
 SR 1707 (STEWART RD) OVER DUCKLINGS SHOALS CREEK
 TYPE OF WORK: GRADING, DRAINAGE, WIDENING, CULVERT,
 AND PAVEMENT MARKINGS**



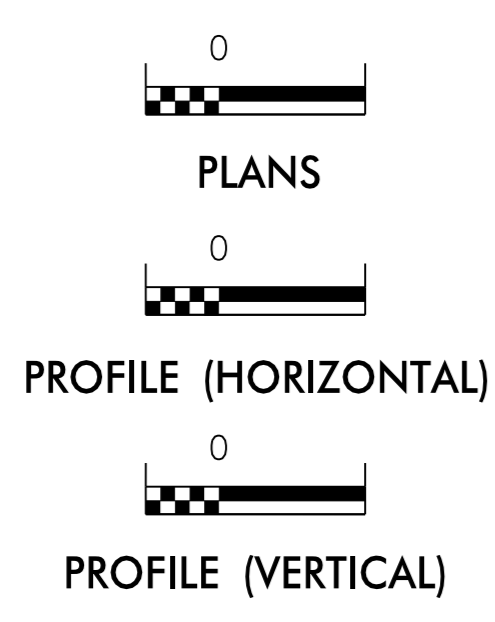
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.9.R.22	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1650.03	Temporary Silt Ditch	TD
1650.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	△△△△△
1622.01	Temporary Berms and Slope Drains	— T —
1650.02	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	— W —
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	— W —
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	⊓
1650.04	Stilling Basin	▭
1650.06	Special Stilling Basin	▭
	Rock Inlet Sediment Trap:	
1652.01	Type A	A
1652.02	Type B	B
1652.03	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
 Designed by:
Noelle Ring **3456**
 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 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

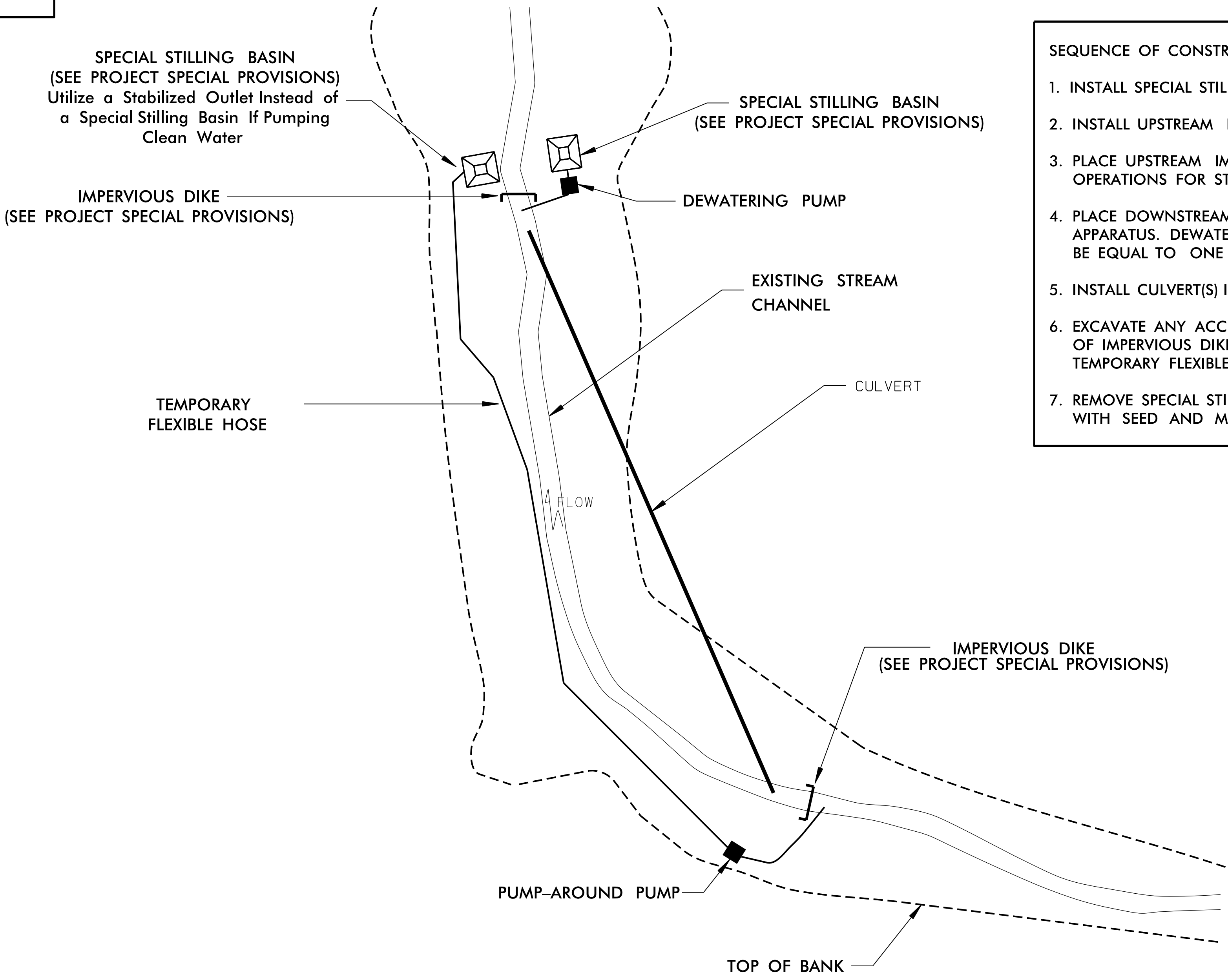
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type 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	

07-JAN-2015 15:27
 documents\divisions\17BP.9.R.22_Design\17BP.9.R.22_EC.tsh.dgn
 Noelle Ring

PROJECT REFERENCE NO.	SHEET NO.
17BP.9.R.22	EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXAMPLE OF PUMP-AROUND OPERATION

- NOTES:
- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
 - 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
 - 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
 - 4) Pumps and hoses shall be of sufficient size to dewater the work area.



- SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA
1. INSTALL SPECIAL STILLING BASIN(S).
 2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
 3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
 4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
 5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
 6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
 7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>17BP9R22</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

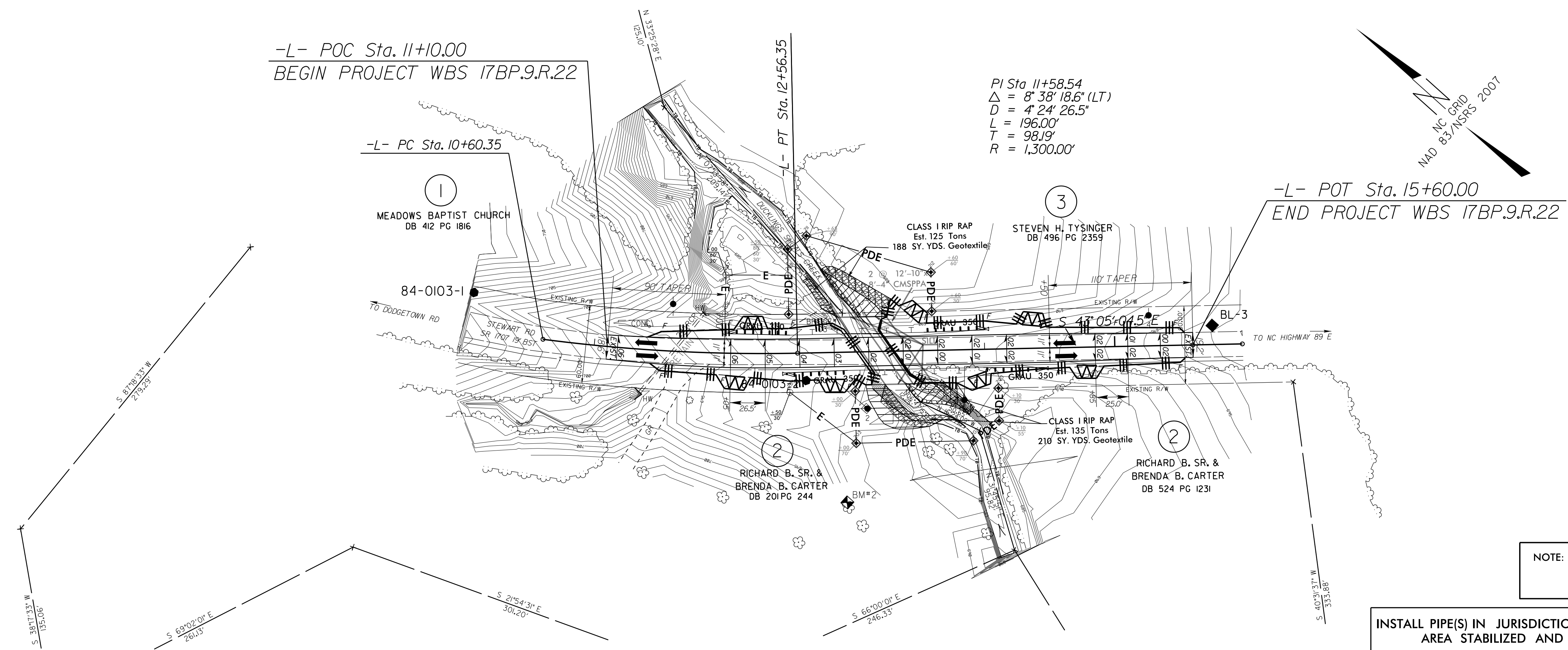
SOIL STABILIZATION TIMEFRAMES

<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

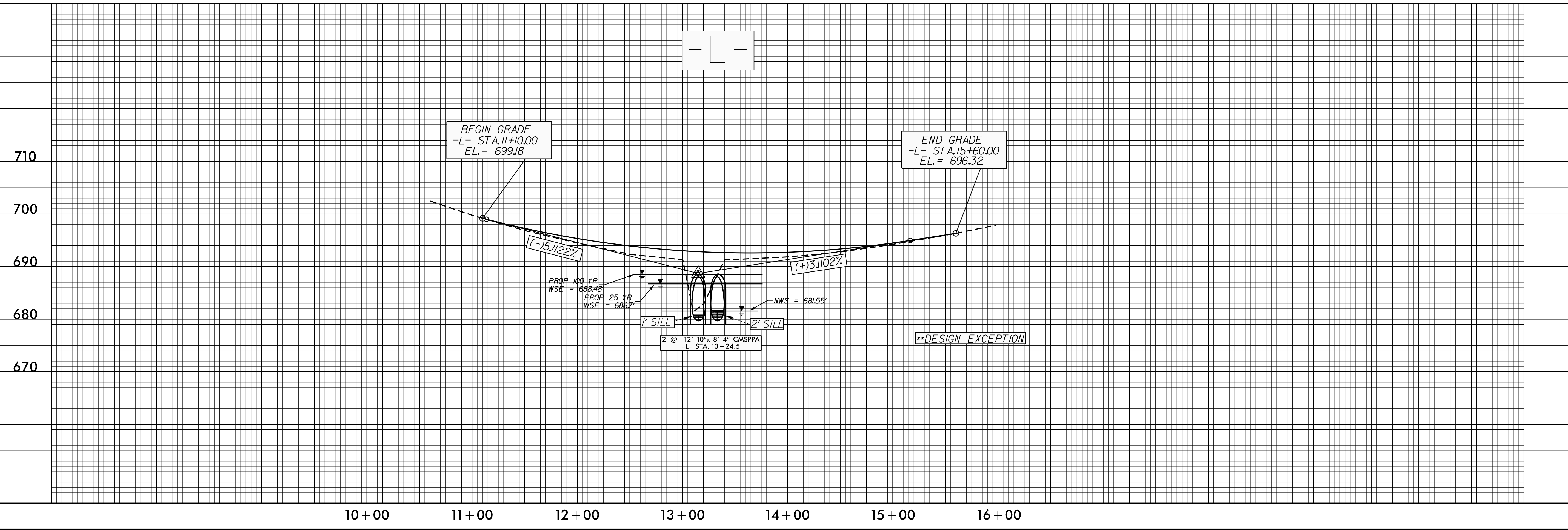
PROJECT REFERENCE NO.	SHEET NO.
17BP.9.R.22	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO PUMP AROUND DETAIL.



C:\Users\AT\Documents\Division Project\Noelle\17BP.9.R.22\Design\84-0103-EC.psh4.dgn
 07/JAN/2015 15:22
 C:\Users\AT\Documents\Division Project\Noelle\17BP.9.R.22\Design\84-0103-EC.psh4.dgn

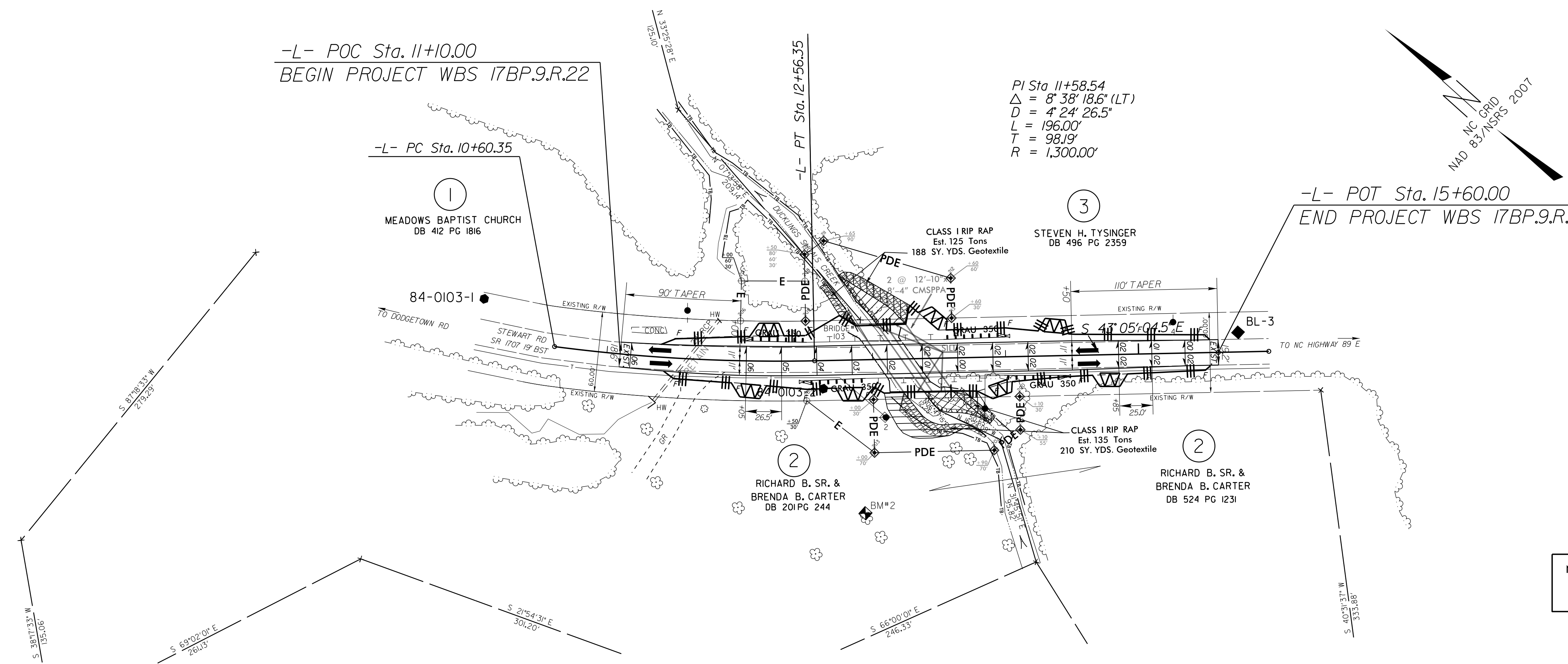
PROJECT REFERENCE NO. 17BP.9.R.22	SHEET NO. EC-5/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

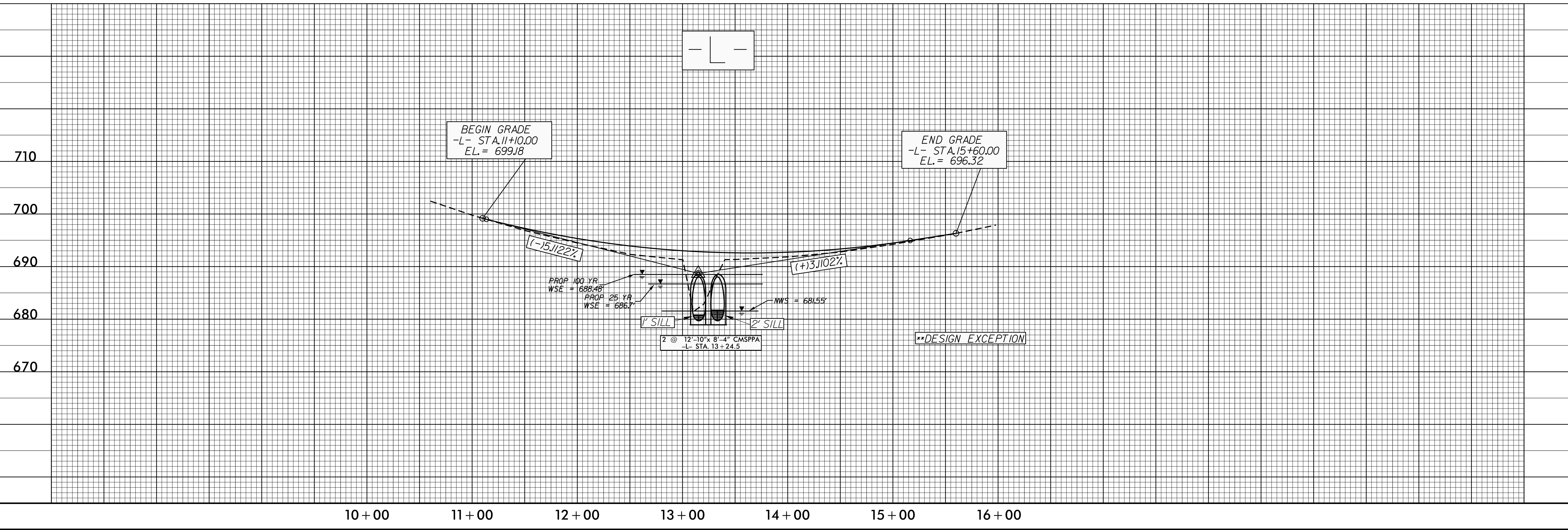
-L- POC Sta. 11+10.00
BEGIN PROJECT WBS 17BP.9.R.22

PI Sta. 11+58.54
 $\Delta = 8^{\circ} 38' 18.6" (LT)$
 $D = 4' 24" 26.5"$
 $L = 196.00'$
 $T = 98.19'$
 $R = 1,300.00'$

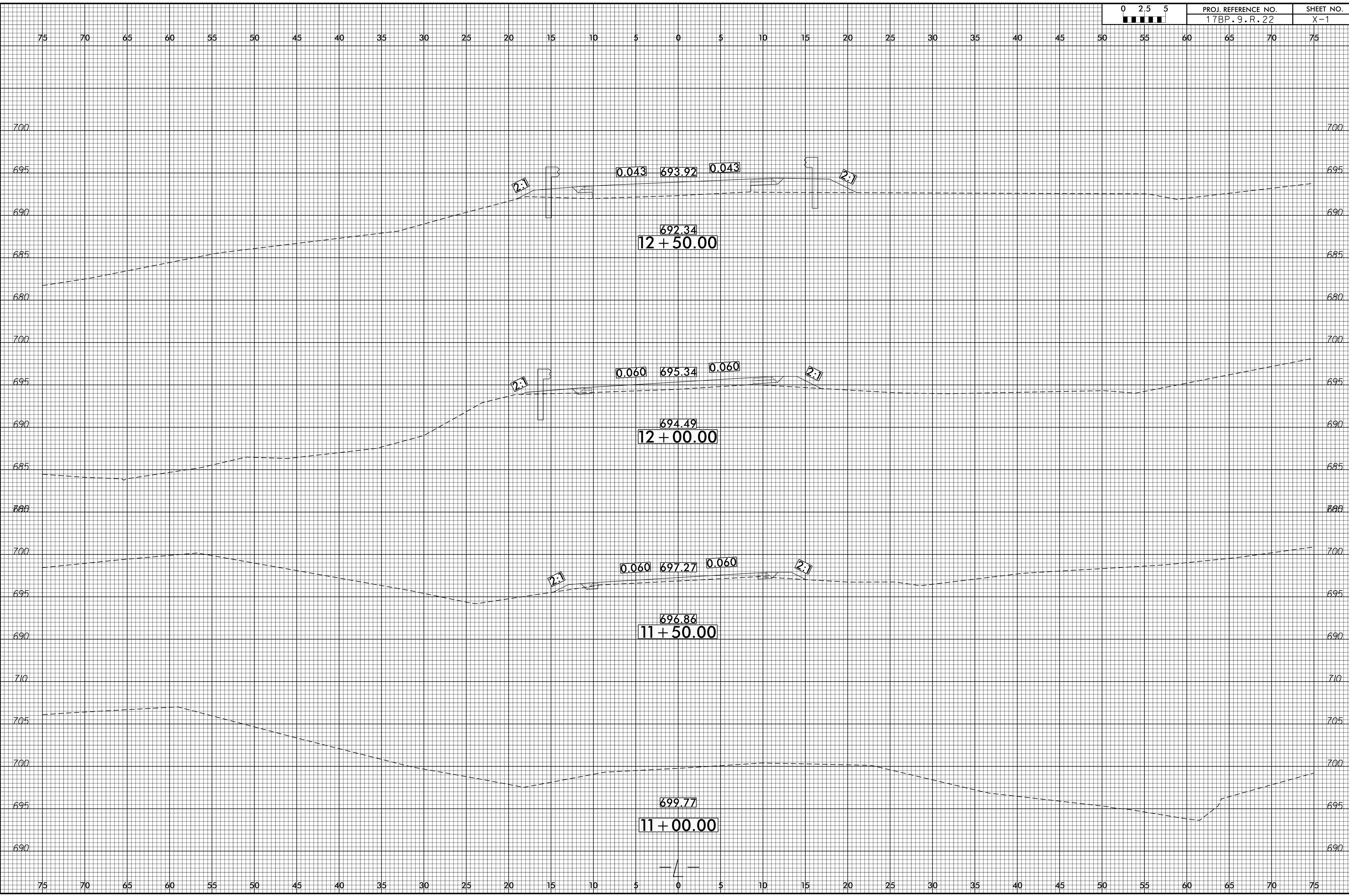
-L- POT Sta. 15+60.00
END PROJECT WBS 17BP.9.R.22

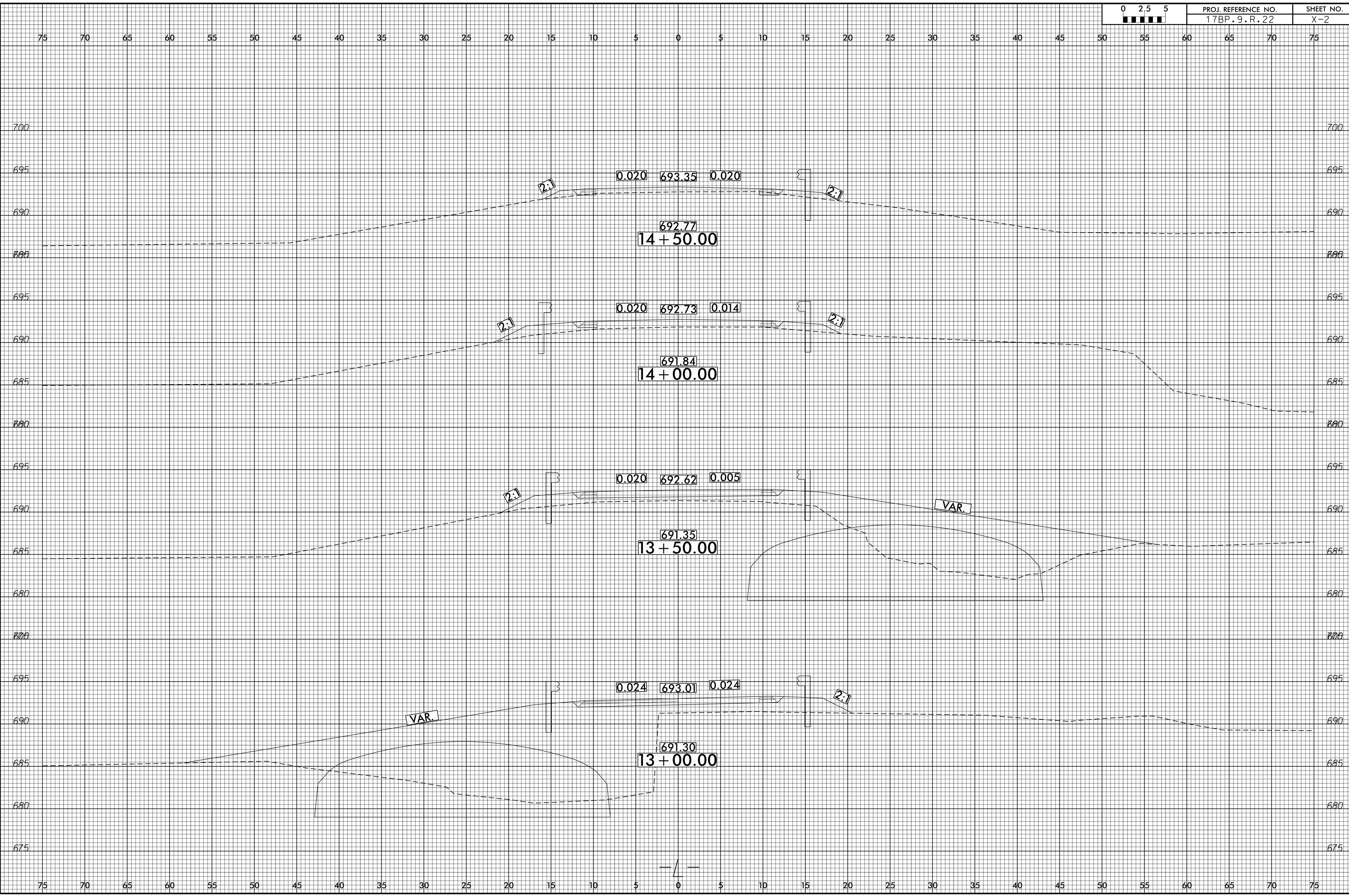


NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.



C:\Users\AT\Documents\Division Project Noel\17BP.9.R.22\Design\84-0103-EC.psh4.dgn
 07/JAN/2015 15:22
 C:\Users\AT\Documents\Division Project Noel\17BP.9.R.22\Design\84-0103-EC.psh4.dgn





75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

