_ City Limits 🎚

BEGIN PROJECT WOODFIN VICINITY MAP DETOUR ROUTE Vaughn & Melfon Consulting Engineers □ Kentucky ■ North Carolina Spartanburg, □ South Carolina 828 · 253 · 2796 Copyright⊘ 1994 Vaughn & Melton,Inc. A∥Rights Reserved

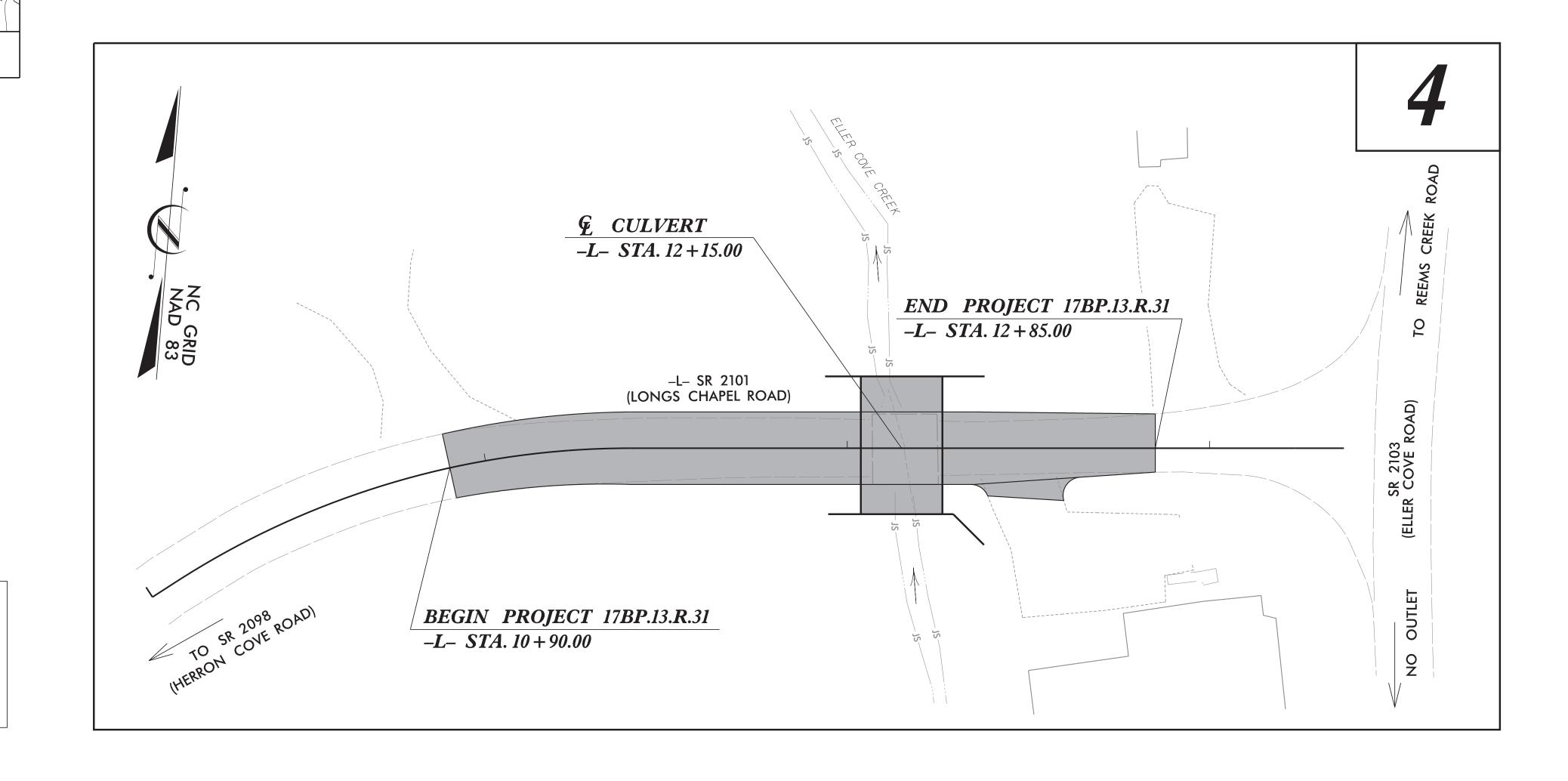
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

BUNCOMBE COUNTY

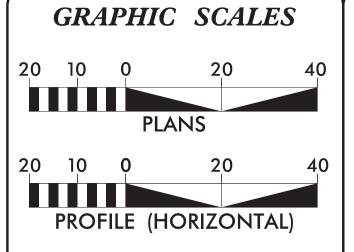
LOCATION: BRIDGE NO. 403 OVER ELLER COVE CREEK ON SR 2101 (LONGS CHAPEL RD.)

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

STATE ST	TATE PROJECT REFERENCE NO.	NO.	SHEETS			
N.C. 17	7BP.13.R.31	1				
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPT	TION			
17BP.13.R.31	N/A	P.E.				
17BP.13.R.31	N/A	R/W				
17BP.13.R.31	N/A	CONST.				







PROFILE (VERTICAL)

DESIGN DATA

Tri-Cities,

Middlesboro

864 • 574 • 4775

1025 Wade Avenue Raleigh, NC 27605 Tel:919-789-9977

FOR

ENGINEERING & Fax:919-789-9591
CONSTRUCTION License: C-2197

ADT 2010 = 505ADT 2025 = 680

* T = 6 %V = 30 MPH $^{\circ}$ TTST = 3 DUAL = 3

FUNC CLASS = LOCAL SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY PROJECT 17BP.13.R.31 = 0.033 MI. LENGTH STRUCTURE PROJECT 17BP.13.R.31 = 0.004 MI. TOTAL LENGTH OF PROJECT 17BP.13.R.31 = 0.037 MI.

Prepared in the Office of: VAUGHN & MELTON 1318-F PATTON AVE. ASHEVILLE NC, 28806 FOR THE NORTH CAROLINA DIVISION OF HIGHWAYS 2012 STANDARD SPECIFICATIONS REECE SCHULER, PE PROJECT ENGINEER RIGHT OF WAY DATE: MARCH 22, 2013 DENNIS BOUTON, PE PROJECT DESIGN ENGINEER LETTING DATE: NCDOT CONTACT: PAUL SPROUSE, PE PROJECT ENGINEER - ROADWAY DESIGN

HYDRAULICS ENGINEER 033023 Bradley S Ridnour ROADWAY DESIGN **ENGINEER**

SIGNATURE:

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
17BP.13.R.31	/-A

ROADWAY DESIGN ENGINEER

INDEX OF SHEETS

GENERAL NOTES:

2012 SPECIFICATIONS EFFECTIVE: 01-17-12

	INDEX OF SHEETS	EFFECTIVE: 01-17-12
SHEET NUMBER	SHEET	
1	TITLE SHEET	GRADE LINE: Grading and surfacing or resurfacing and widening:
1 -A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS	THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPO SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE
1 -B	CONVENTIONAL SYMBOLS	ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACIN
1-C	SURVEY CONTROL SHEET	PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO PROPER TIE-IN.
2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS	CLEARING:
3 A	SUMMARY OF DRAINAGE QUANTITIES, Summary of Guardrail, and Asphalt Pavement removal summary	CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABL METHOD II.
3B	EARTHWORK SUMMARY	SUPERELEVATION:
4	PLAN AND PROFILE SHEET	ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON SUPERELEVATION IS TO BE DEVOLVED ABOUT THE CRADE BOINTS SHOWN ON
TMP-1 THRU TMP-2	TRAFFIC MANAGEMENT PLANS	SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON SECTIONS.
SD-1	SPECIAL SIGN DESIGN	SHOULDER CONSTRUCTION:
EC-1 THRU EC-3	EROSION CONTROL PLANS	ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH S
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS	SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01
X-0	CROSS-SECTION SUMMARY	GUARDRAIL:
X-1 THRU X-3	CROSS-SECTIONS	THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURIN CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.
S-1 THRU S-4	STRUCTURE PLANS	
		SUBSURFACE PLANS:
		NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACT MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

OPOSED CING WILL BE TO SECURE A

ABLISHED BY

E WITH STD. ON THE PLANS. ON THE TYPICAL

H SIDE OF

JLD CONSULT

ACTOR SHOULD

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE: TELEPHONE - FRONTIER COMMUNICATIONS

RIGHT-OF-WAY MARKERS:

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

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch -RE NO GRADE LINES N. C. Department of Transportation - Raleigh, N. C., Dated January 17, 2012 are applicable to this EXISTING PAVEMENT project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION	2 - EARTHWORK
200.02	Method of Clearing - Method II
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
DIVISION	8 - INCIDENTALS
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Anchorage for Guardrail Post on Box Culvert
866.03	Woven Wire Fence
876.01	Rip Rap in Channels

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO. ITBP.13.R.31 I-B

NA

CONVENTIONAL PLAN SHEET SYMBOLS

						WAILK.	
BOUNDARIES AND PROPERTY:		RAILROADS:				Water Manhole	W
State Line		Standard Gauge	CSX TRANSPORTATION			Water Meter	
County Line		RR Signal Milepost	 MILEPOST 35			Water Valve	\otimes
Township Line		Switch -		EXISTING STRUCTURES:		Water Hydrant	÷
City Line		RR Abandoned		MAJOR:		Recorded U/G Water Line	
Reservation Line		RR Dismantled		Bridge, Tunnel or Box Culvert	CONC	Designated U/G Water Line (S.U.E.*)	w
				Bridge Wing Wall, Head Wall and End Wall -	-) CONC WW (Above Ground Water Line	A/G Water
Property Line	\odot	RIGHT OF WAY:		MINOR:			
Existing Iron Pin	EIP	Baseline Control Point	-	Head and End Wall	CONC HW	TV:	
Property Corner		Existing Right of Way Marker		Pipe Culvert		TV Satellite Dish	
Property Monument	ECM	Existing Right of Way Line		Footbridge ————————————————————————————————————	>	TV Pedestal	C
Parcel/Sequence Number	— (123)	Proposed Right of Way Line	$\frac{R}{W}$	Drainage Box: Catch Basin, DI or JB	СВ	TV Tower	\bigotimes
Existing Fence Line		Proposed Right of Way Line with	$\frac{R}{W}$	Paved Ditch Gutter		U/G TV Cable Hand Hole	H _H
Proposed Woven Wire Fence		Iron Pin and Cap Marker		Storm Sewer Manhole ————	<u>s</u>	Recorded U/G TV Cable	TV
Proposed Chain Link Fence		Proposed Right of Way Line with Concrete or Granite Marker		Storm Sewer ——————	s	Designated U/G TV Cable (S.U.E.*)	
Proposed Barbed Wire Fence		Existing Control of Access				Recorded U/G Fiber Optic Cable	TV FO
Existing Wetland Boundary		Proposed Control of Access —		UTILITIES:		Designated U/G Fiber Optic Cable (S.U.E.*)—	TV FO— — —
Proposed Wetland Boundary	WLB	Existing Easement Line ————————————————————————————————————	F	POWER:		Designated 6/6 Tibel Opile Cable (5.6.1.)	
Existing Endangered Animal Boundary	EAB	Proposed Temporary Construction Easement –		Existing Power Pole ————————————————————————————————————	_	GAS:	
Existing Endangered Plant Boundary	EPB	Proposed Temporary Drainage Easement —	TDE			Gas Valve	\wedge
BUILDINGS AND OTHER CULT	TURE:	Proposed Permanent Drainage Easement ——		Proposed Power Pole			A
Gas Pump Vent or U/G Tank Cap	— O	Proposed Permanent Utility Easement ———	PDE ——	Existing Joint Use Pole		Gas Meter	\
Sign —	<u> </u>	Troposed Termanem Onliny Lasement	PUE	Proposed Joint Use Pole	-	Recorded U/G Gas Line	G
Well —	<u> </u>	ROADS AND RELATED FEATUR	RES:	Power Manhole	(9)	Designated U/G Gas Line (S.U.E.*)	G
Small Mine	w —	Existing Edge of Pavement		Power Line Tower		Above Ground Gas Line	
Foundation —		Existing Curb		Power Transformer			
		Proposed Slope Stakes Cut	<u>C</u>	U/G Power Cable Hand Hole	H _H	SANITARY SEWER:	
Area Outline	+	Proposed Slope Stakes Fill	<u>F</u>	H_Frame Pole	•	Sanitary Sewer Manhole	
Cemetery		Proposed Wheel Chair Ramp	- WCR	Recorded U/G Power Line	P	Sanitary Sewer Cleanout —————	(+)
Building —		Proposed Wheel Chair Ramp Curb Cut	- WCC	Designated U/G Power Line (S.U.E.*)	P	U/G Sanitary Sewer Line —————	SS
School		Curb Cut for Future Wheel Chair Ramp	- CCFR			Above Ground Sanitary Sewer —————	A/G Sanitary Sewer
Church		·	- <u> </u>	TELEPHONE:		Recorded SS Forced Main Line	FSS
Dam		Existing Metal Guardrail		Existing Telephone Pole		Designated SS Forced Main Line (S.U.E.*) —	— — — FSS — — —
HYDROLOGY:		Proposed Guardrail		Proposed Telephone Pole	-0-		
Stream or Body of Water —		Existing Cable Guiderail		Telephone Manhole		MISCELLANEOUS:	
Hydro, Pool or Reservoir —	_	Proposed Cable Guiderail		Telephone Booth	3	Utility Pole —	•
Jurisdictional Stream		Equality Symbol	-	Telephone Pedestal	\Box	Utility Pole with Base —————	
Buffer Zone 1	— JS — — — — — — — — — — — — — — — — — —	Pavement Removal		Telephone Cell Tower	,	Utility Located Object —	\odot
Buffer Zone 2	– BZ 2 —	VEGETATION:		U/G Telephone Cable Hand Hole ————	HH	Utility Traffic Signal Box —	S
Flow Arrow		Single Tree	—	Recorded U/G Telephone Cable	т	Utility Unknown U/G Line —————	
Disappearing Stream —	->	Single Shrub	—	Designated U/G Telephone Cable (S.U.E.*)	T	U/G Tank; Water, Gas, Oil ———————————————————————————————————	
Spring —	-0	Hedge		Recorded U/G Telephone Conduit	тс	A/G Tank; Water, Gas, Oil —————	
Swamp Marsh ————————————————————————————————————	-	Woods Line		Designated U/G Telephone Conduit (S.U.E.*)		U/G Test Hole (S.U.E.*)	
Proposed Lateral, Tail, Head Ditch —		Orchard —	—		Т F0	Abandoned According to Utility Records —	AATUR
False Sump	FLOW		는 Vineyard	Designated U/G Fiber Optics Cable (S.U.E.*)		End of Information —	E.O.I.
. 4.55 5 5111 p		Vineyard ————————————————————————————————————	VIII G YOL U	Designated U/G Fiber Optics Cable (5.U.E.*)			E.U.I.

FINAL -L-

TYPE	STATION	NORTH	EAST
POT	10+00.00	722451.2448	950932.6320
PC	10+07.91	722456.0601	950938.9075
PT	11+40.19	722503.0869	951060.6219
POT	13+53.40	722520.7423	951273.0982
	•	•	

ROW MARKER CONCRETE OR GRANITE-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+90.00	13.50	722480.6635	951015.4340
	10+90.00	-13.50	722506.4594	951007.4609
L	11+20.00	30.00	722470.9736	951045.6822
L	11+20.00	-30.00	722530.1073	951035.5233
	11+90.00	-30.00	722537.1088	951107.7797
L	11+90.00	-45.00	722552.0572	951106.5376
L	11+95.00	30.00	722477.7289	951117.7311
L	11+95.00	45.00	722462.7804	951118.9732
	12+40.00	13.50	722497.8986	951161.2102
L	12+40.00	45.00	722466.5068	951163.8186
L	12+45.00	-20.00	722531.6976	951163.4189
	12+45.00	-45.00	722556.6117	951161.3487
L	12+70.00	-13.50	722527.2901	951188.8713
L	12+70.00	-20.00	722533.7678	951188.3331

BEGIN PROJECT 17BP.13.R.31

- L- STA. 10+90.00

LOCALIZED PROJECT COORDINATES

N = 722493.5614

E = 951011.4474

TO SR 2098 ROADI

NCDOT BASELINE STATION (BL-1)
 LOCALIZED PROJECT COORDINATES
 N = 722449.3351

E= 950951.9960 ELEVATION = 2137.59'

SURVEY CONTROL SHEET 10-0403

PUINI	UESU.	NURTH	EASI	ELEVATIUN	L STATIUN	UFFSEI
1	BL1	722449.3351	950951.9960	2137.59	10+14.58	13.21 RT
2	BL2	722499.1730	951152.1990	2133.15	12+31.13	11.48 RT
3	BL3	722541.5586	951243.9851	2138.18	13+26.11	23.16 LT
				* * * * * * * *	* * * * * * * * * * * * * * * * * * *	<pre>< * * * * * * * * * * * * * * * * * * *</pre>
				4 0 0 0		

1206 ELEVATION = 2127.89
N 722454 E 951152
BL STATION 6+95.00 44 RIGHT
BM1-8" SPIKE SET IN 12" WALNUT EAST
SIDE OF ROAD

END PROJECT 17BP.13.R.31 - L- STA. 12+85.00 LOCALIZED PROJECT COORDINATES N = 722515.0786E = 951204.9377NCDOT BASELINE STATION (BL-3) LOCALIZED PROJECT COORDINATES N = 722541.5586C/L CULVERT E= 951243.9851 -L- STA. 12+15.00 **ELEVATION = 2138.18'** TO SR 2103 (ELLER COVE ROAD) NCDOT BASELINE STATION (BL-2) LOCALIZED PROJECT COORDINATES N = 722499.1730E= 951152.1990

ELEVATION = 2133.15'

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "10-0403 BL-2"

WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 722499.1730(ft) EASTING: 951152.1990(ft) ELEVATION: 2133.15(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99980385

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "10-0403 BL-2" TO -L- STATION 10+00.00 IS S 77°41'11" W 224.74

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

VERTICAL DATUM USED IS NAVD 88

NOTES:

NOTE: DRAWING NOT TO SCALE

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/

THE FILES TO BE FOUND ARE AS FOLLOWS: 100403_LS_CONTROL_130920.TXT

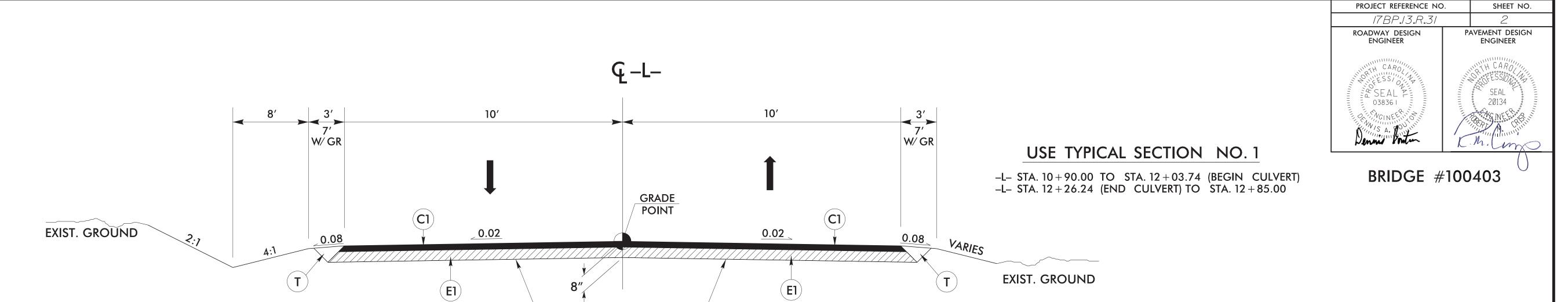
SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.



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.

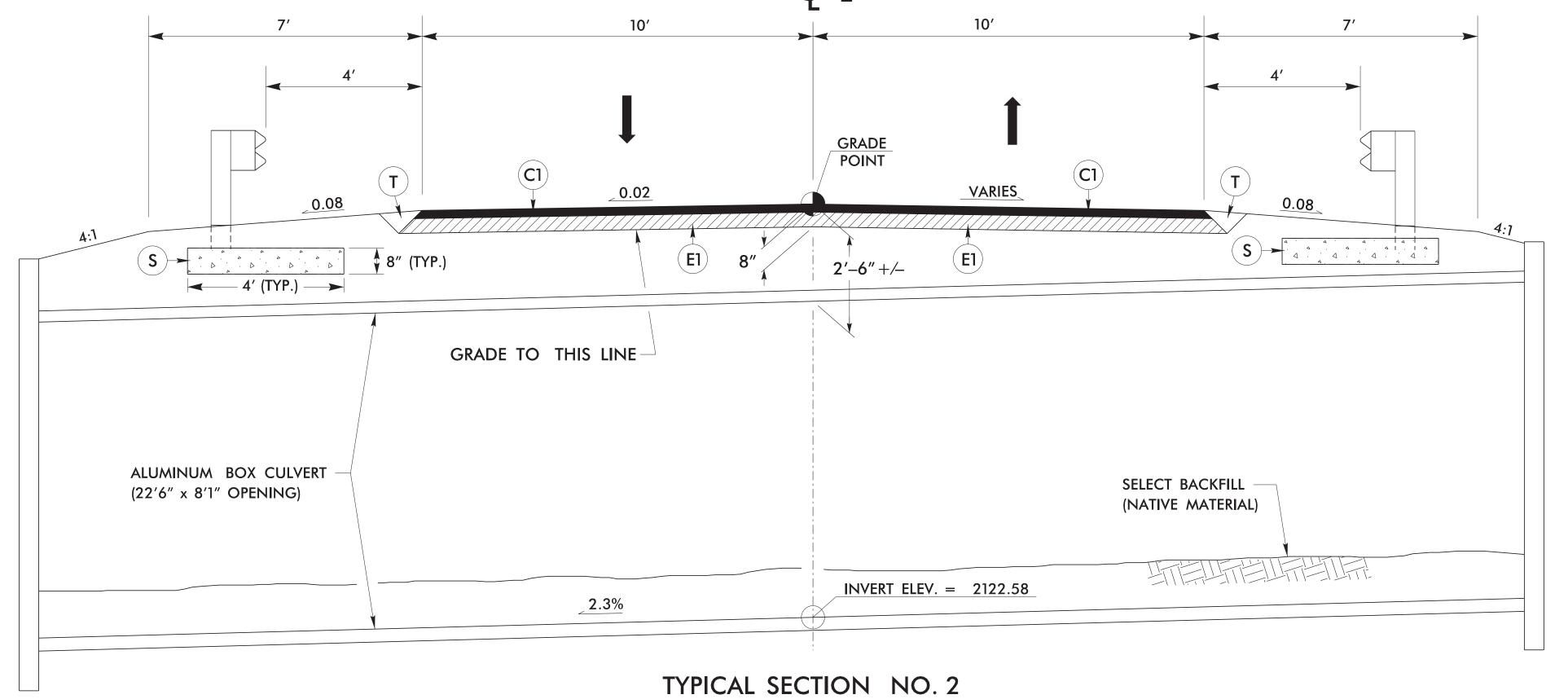
NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)



Q _L_

USE TYPICAL SECTION NO. 2

-L- STA. 12 + 03.74 (BEGIN CULVERT) TO -L-STA. 12 + 26.24 (END CULVERT)



MEASURED ALONG & CULVERT

GRADE TO THIS LINE-

TYPICAL SECTION NO. 1

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

- 2. SEE STD. DWG. 862.03 (SHEET 7 OF 7) FOR GUARDRAIL ANCHORAGE TO FOOTINGS.
- 3. SEE CROSS SECTIONS FOR POSSIBLE VARIATIONS TO TYPICAL SECTIONS.

	PAVEMENT SCHEDULE							
C1	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.							
E1	PROP. APPROX. 5.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.							
S	4000 PSI CONCRETE							
Т	EARTH MATERIAL							

COMPUTED BY:	DAB	DATE: <u>2–20–13</u>
CHECKED BY: _	RMS	DATE: <u>2–22–13</u>

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO. 17BP.13.R.31 3-A



PAVEMENT REMOVAL SUMMARY

	IN SQUARE	YARDS			
LINE	LOCATION	ASPHALT REMOVAL	ASPHALT BREAK-UP	CONCRETE REMOVAL	CONCRETE REMOVAL
-L-	10 + 90 TO 12 + 06.96	255			
-L-	12 + 24.95 TO 12 + 85	125			
	TOTAL	380			

Approximate quantities only. Pavement removal, borrow excavation, fine grading, and clearing and grubbing will be paid for at the contract lump sum price for "grading".

"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

GUARDRAIL SUMMARY

SURVEY	DEC. CTA	5) 15 .07.	LOCATION		LENGTH		WARRAI	NT POINT	"N" DIST.	TOTAL	FLARE L	ENGTH	\	W			anchors	;		IMPACT ATTENUATC TYPE 350	PR SINGLE	REMOVE	REMOVE AND	
LINE	BEG. STA.	END STA.	LOCATION	STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END	FROM E.O.L.	SHOUL. WIDTH	APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI X	GRAU 350	GRAU 350 TL–2	TYPE III SHOP CURVED	B–77	AT-1 EA G N	GUARDRAII	REMOVE EXISTING L GUARDRAIL	STOCKPILE EXISTING GUARDRAIL	REMARKS
-L-	11 + 45	12 + 15	LT	70				11 + 93.89	4	7		25		0.5			1							GUARDRAIL FOOTINGS WILL BE REQUIRED OVER CULVERT
-L-	11 + 42.75	12 + 15	RT	72.25			11 + 94.75		4	7	25		0.5				1							GUARDRAIL FOOTINGS WILL BE REQUIRED OVER CULVERT
-L-	12 + 15	12 + 57.50	LT	42.5			12 + 37.89		4	7	25		0.5				1							
-L-	12 + 15	12 + 40	RT	9	12.5			12 + 37.73	4	7										1				
			SUBTOTAL	193.75	12.5												3			1				
		LESS DEDUCTI	ons for anchors																					
			AT-1 1 @ 6.25′	-6.25′																				
		GRAU-3	50 TL-2 3 @ 25'=	- 75																				
			PROJECT TOTALS:	112.5	12.5												3			1				
		ADDIT	IONAL GUARDRAIL POS	TS=5 EA.																				
T																								

 COMPUTED BY:
 DAB
 DATE: 2-19-13

 CHECKED BY:
 RMS
 DATE: 2-21-13

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA



3-B

PROJECT REFERENCE NO. 178P./3.R.3/

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
SUMMARY NO.1					
-L- STA. 10+90 TO STA. 12+03.74 (BEGIN CULVERT)	0		59	59	
SUBTOTAL SUMMARY NO.1	0		59	59	
SUMMARY NO.2					
-L- STA. 12 + 03.74 (BEGIN CULVERT)					
TO STA. 12 + 26.24 (END CULVERT)	0		36	36	
SUBTOTAL SUMMARY NO.2	0		36	36	
SUMMARY NO.3					
-L- STA. 12 + 26.24 (END CULVERT) TO STA. 12 + 85	0		15	15	
SUBTOTAL SUMMARY NO.3	0		15	15	
PROJECT SUBTOTAL	0		110	110	
EST. 5% FOR REPLACING TOP SOIL ON BORROW PITS				6	
GRAND TOTAL	0		110	116	
SAY	0			120	

CONTINGENCY ITEMS:

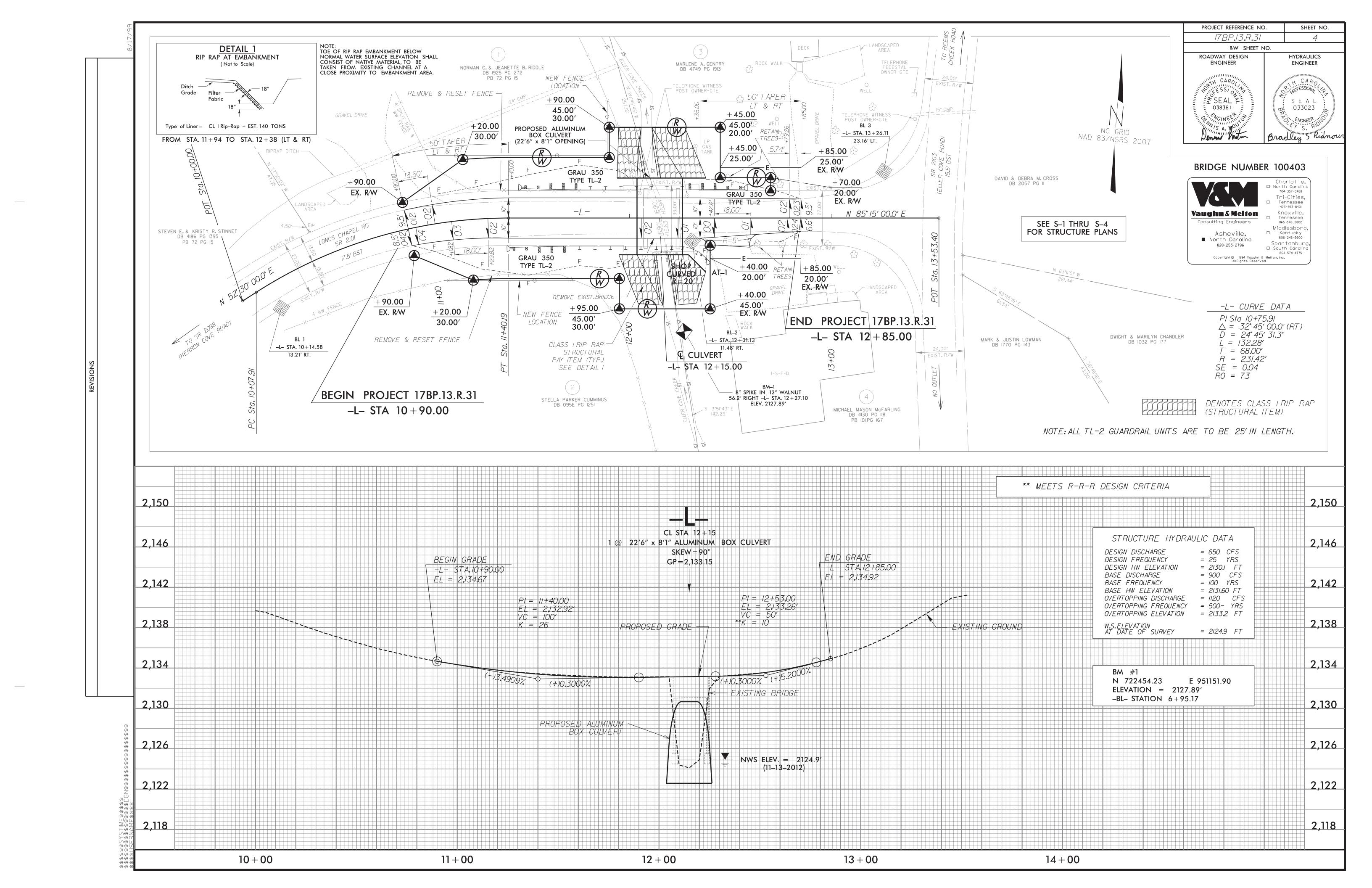
INCIDENTAL STONE = 20 TONS

UNDERCUT EXCAVATION = 20 CY

SELECT GRANULAR MATERIAL = 20 CY

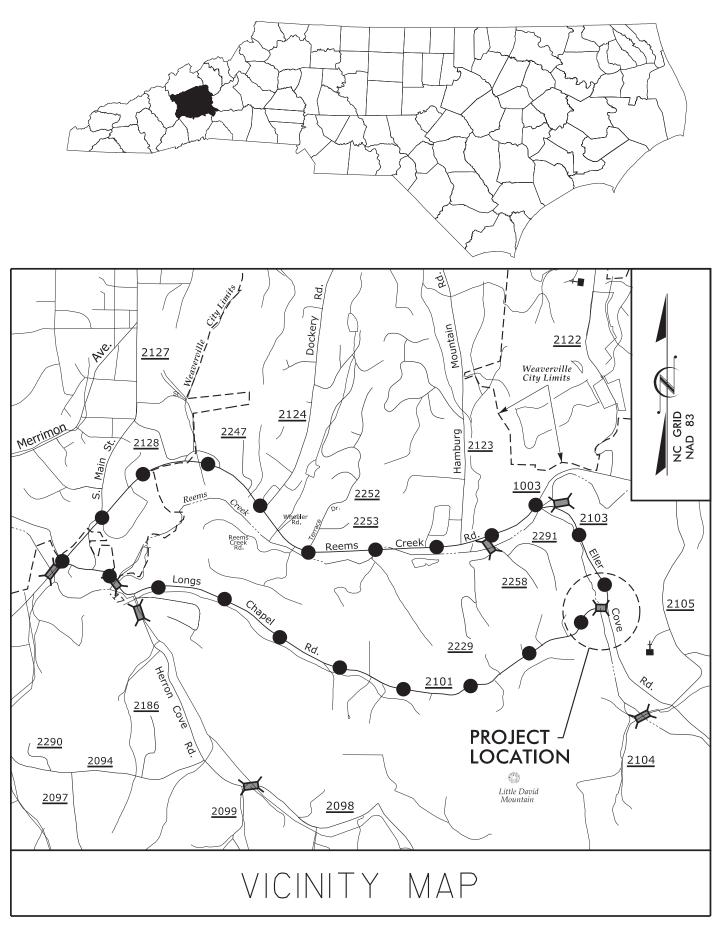
GEOTEXTILE FOR SOIL STABILIZATION = 25 SY

Approximate quantities only. Pavement removal, borrow excavation, fine grading, and clearing and grubbing will be paid for at the contract lump sum price for "grading".



TRANSPORTATION MANAGEMENT PLAN

BUNCOMBE COUNTY **DIVISION** 13



OFF-SITE DETOUR ROUTE ----

LOCATION: BRIDGE NO. 403 OVER ELLER COVE CREEK ON SR 2101 (LONGS CHAPEL RD.)

INDEX OF SHEETS

SHEET NO.

TMP - 1

TITLE

TITLE SHEET, LEGEND, AND INDEX OF SHEETS

LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, TMP-1A GENERAL NOTES AND TRANSPORTATION OPERATIONS

TEMPORARY TRAFFIC CONTROL DETAIL, PHASING NOTES OFFSITE DETOUR SIGNING AND ROAD CLOSURE TMP-2

SPECIAL SIGN DESIGN

LEGEND

GENERAL

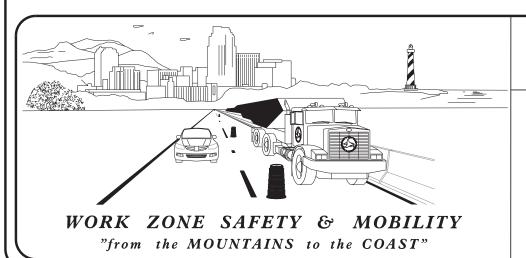
───── NORTH ARROW

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

TEMPORARY SIGNING

- STATIONARY SIGN



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL 1580 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1580 1020 BIRCH RIDGE DRIVE, RALEIGH, NC 27610 (DELIVERY) PHONE: (919) 250-4094 FAX: (919) 250-4098

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER

LLOYD D. BROWN, P.E. TRAFFIC CONTROL PROJECT ENGINEER

DENNIS BOUTON, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER

DENNIS BOUTON, P.E. TRAFFIC CONTROL DESIGN ENGINEER





PROJECT LLOYD D. BROWN, P.E. DESIGN DENNIS BOUTON, P.E.

APPROVED: DATE:_ SEAL

TMP-1

Asheville, ■ North Carolina 828 · 253 · 2796 Charlotte, □ North Carolina

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
1130.01	DRUMS
1145.01	BARRICADES
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.12	PAVEMENT MARKINGS - BRIDGES

TRANSPORTATION **OPERATIONS**

CONSTRUCTION

REMOVE AND REPLACE EXISTING STRUCTURE AND APPROACHES ALONG THE EXISTING ROADWAY ALIGNMENT AS SHOWN IN THE CONSTRUCTION PLANS.

TMP DESIGN PARAMETERS

TRAFFIC WILL BE DETOURED OFF-SITE DURING THE CONSTRUCTION PERIOD.

THE OFF-SITE DETOUR WILL INCLUDE SR 2103 (ELLER COVE ROAD), SR 1003 (REEMS CREEK ROAD) AND SR 2101 (LONGS CHAPEL ROAD) (SEE SHEET TMP-2).

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 UNDESIRED 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.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- B) PROVIDE PERMANENT SIGNING.
- C) 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 IN THE TRAFFIC CONTROL PLANS.

D) 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.

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

TRAFFIC CONTROL DEVICES

F) PLACE TYPE III BARRICADES WITH "ROAD CLOSED" SIGN R-11-2 ATTACHED OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

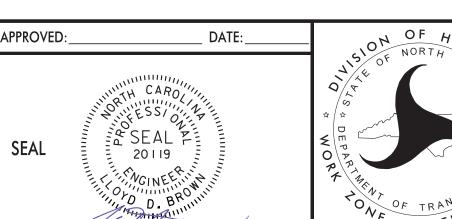
PAVEMENT MARKINGS AND MARKERS

- G) INSTALL PAVEMENT MARKINGS (PAINT) ON THE FINAL SURFACE OF THE ENTIRE PROJECT.
- H) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

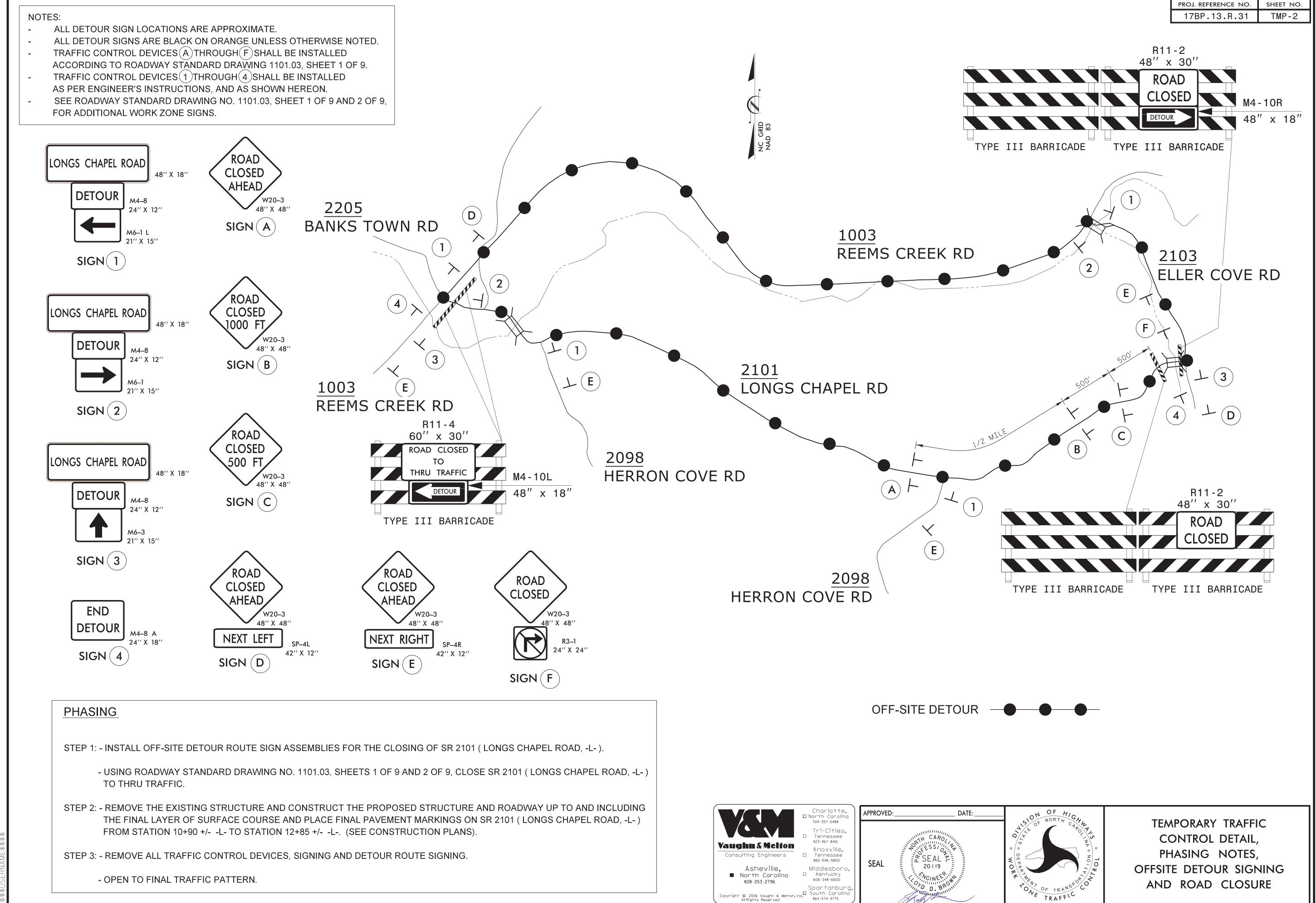
LOCAL NOTES

1. NOTIFY BUNCOMBE COUNTY EMERGENCY SERVICES AND PUBLIC SCHOOLS AT LEAST ONE MONTH PRIOR TO ROAD CLOSURE.

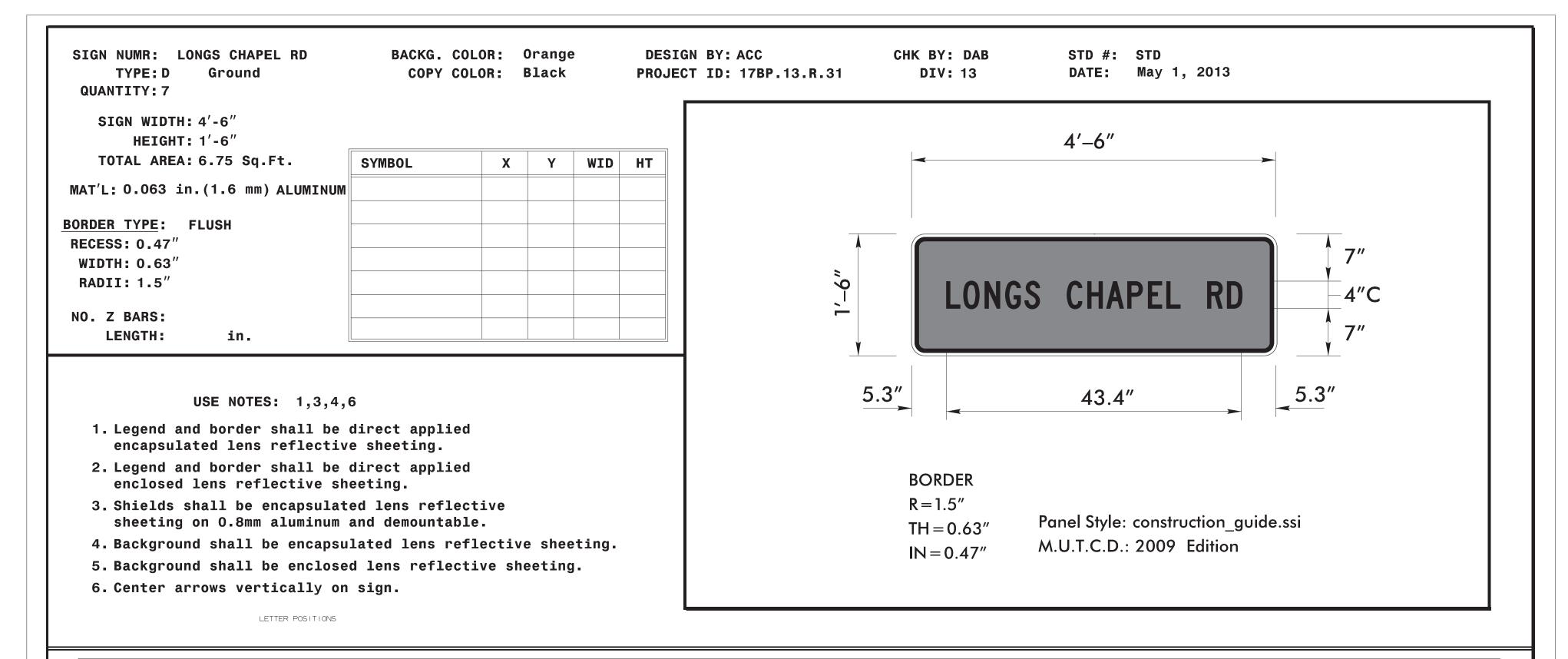




ROADWAY STANDARD DRAWINGS, GENERAL NOTES & TRANSPORTATION OPERATIONS

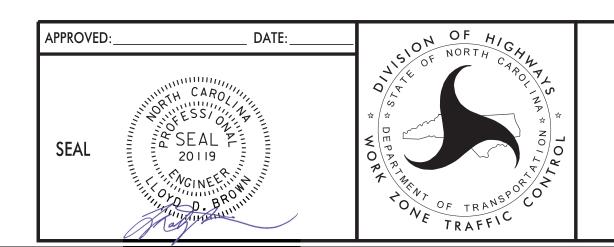


PROJ. REFERENCE NO. SHEET NO. 17BP.13.R.31 SD-1



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5.3	2.5	3.2	3	2.8	2.2	4	3	2.8	3.1	3	2.7	2	4	2.9	2.2	5.3					43.
<u> </u>																					

FILENAME: GS40_ENGL



SPECIAL SIGN DESIGN

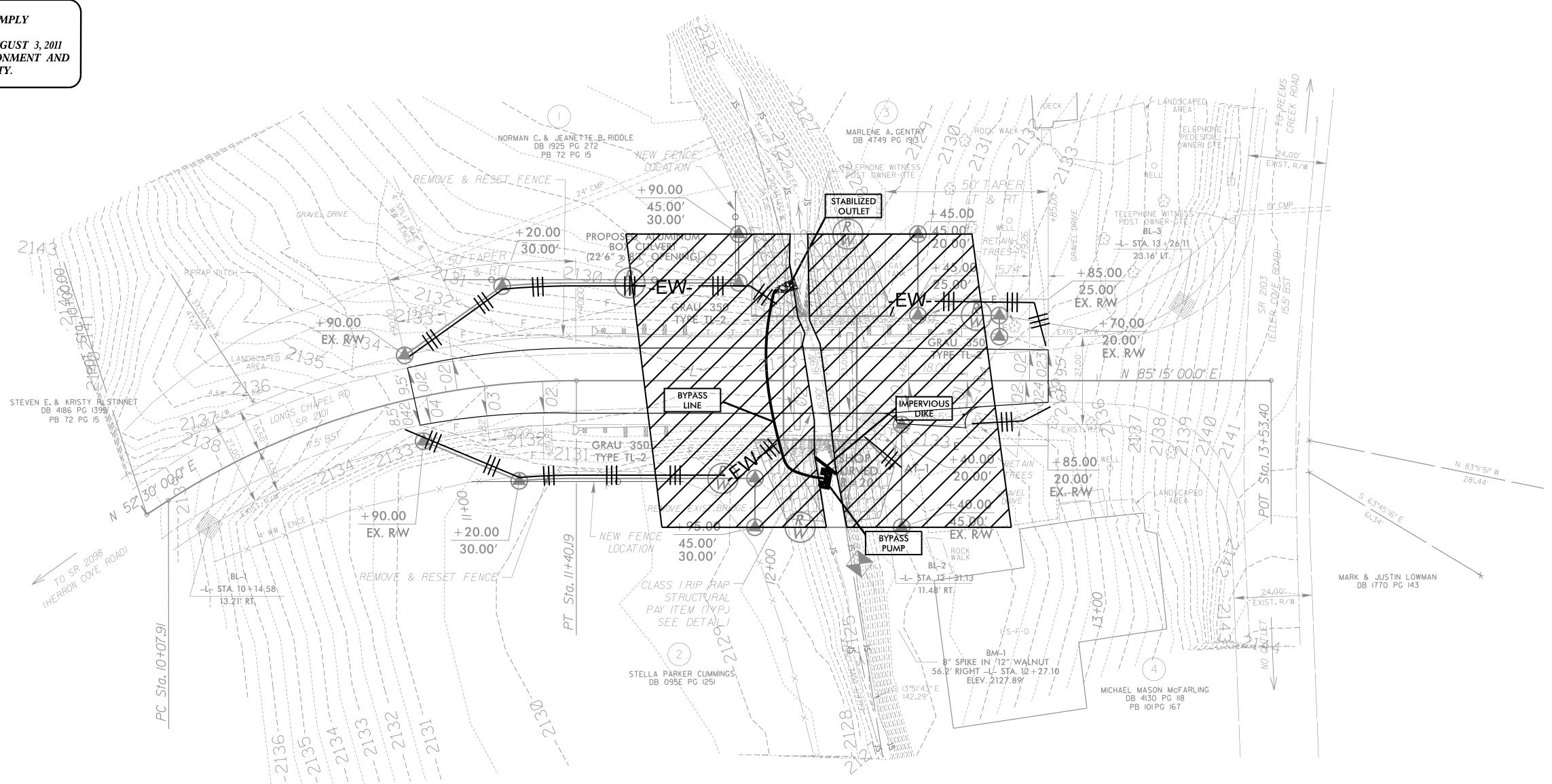
PROJECT REFERENCE NO. SHEET NO. 17BP.13.R.31 R/W SHEET NO.

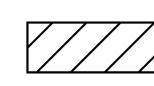
ROADSIDE ENVIRONMENTAL UNIT DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

2012 STANDARD SPECIFICATIONS

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.

EROSION CONTROL PLAN





ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

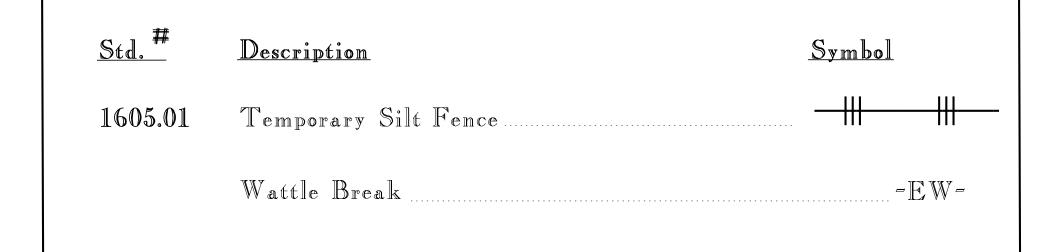
Level III-A: Designer of Erosion and Sediment Control Plans

NC GRID NAD 83/NSRS 2007

Dennis A. Bouton, P.E. Date Issued: June 12, 2012 Date Expires: December 31, 2015 Certification Number: 3172

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

> ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



PROJECT NO.17BP.13.R.31 COUNTY BUNCOMBE STATION: 12+15.00

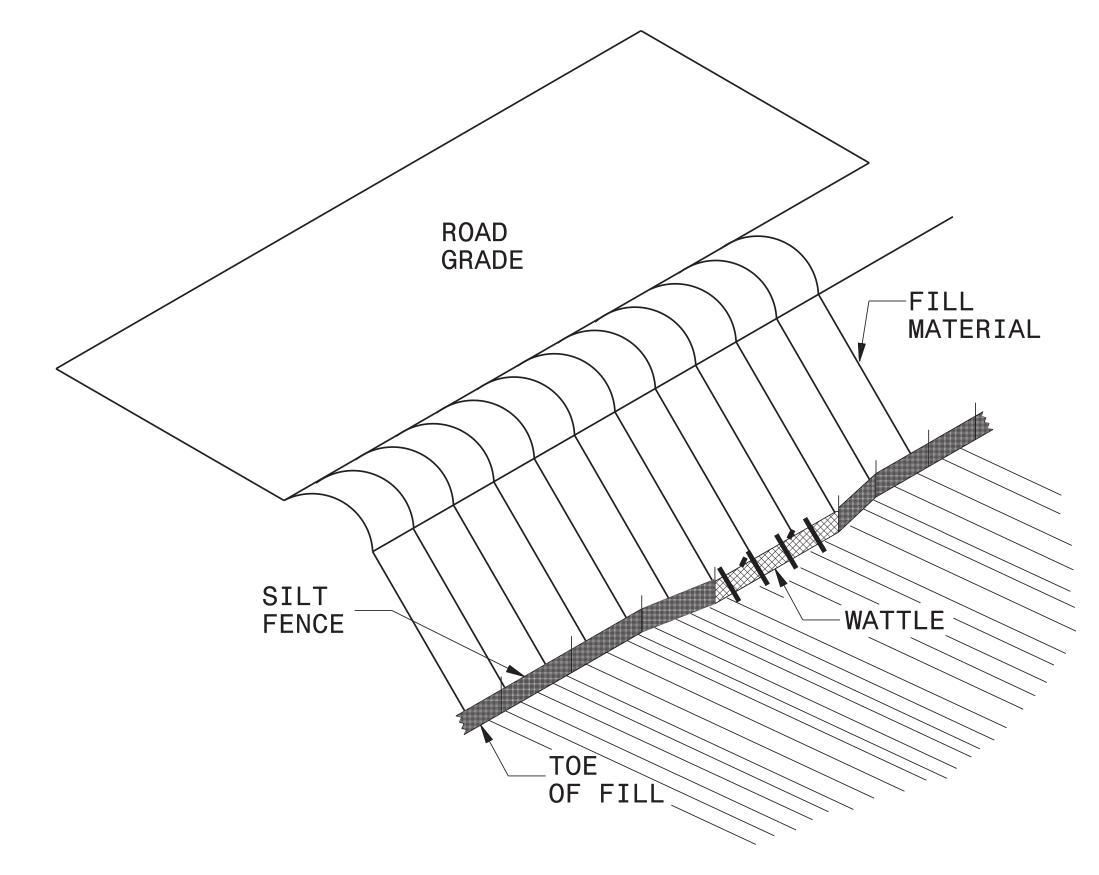
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BRIDGE #403 ON SR 2101 OVER ELLER COVE CREEK

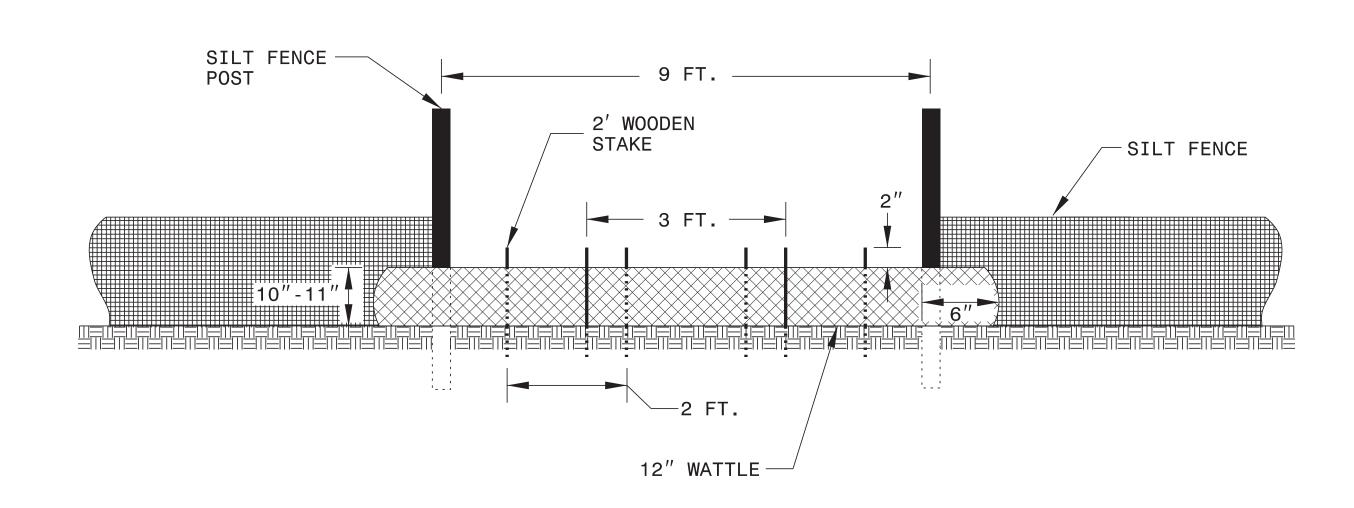
SHEET NO.			SIONS	REVI		
EC-I	DATE	BY	NO.	DATE	BY	
TOTAL SHEETS			3			
1			<u>a</u> ,			

SILT FENCE WATTLE BREAK DETAIL

PROJECT REFERENCE NO	PROJECT REFERENCE NO.					
17BP.13.R.31	17BP.13.R.31					
R∕W SHEET N	R/W SHEET NO.					
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER				



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE AND LENGTH OF 10 FT.

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

DO NOT PLACE WATTLE ON TOE OF SLOPE.

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

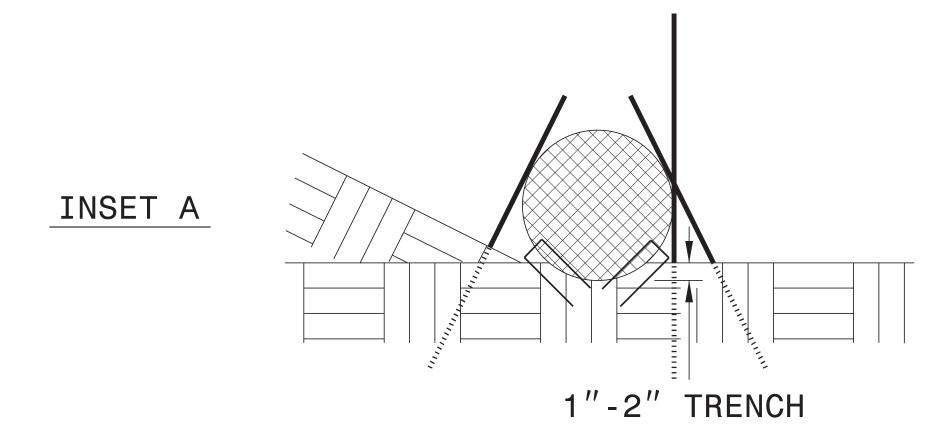
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

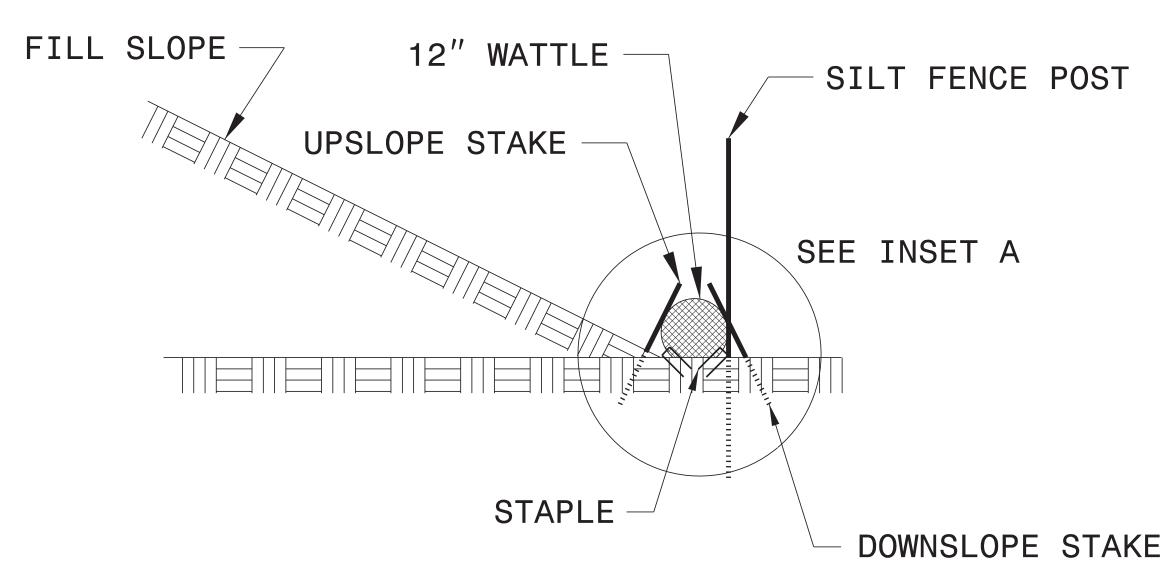
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

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

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





SIDE VIEW

PROJECT REFERENCE NO		SHEET NO.					
17BP.13.R.31	17BP.13.R.31						
R/W SHEET N	R/W SHEET NO.						
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER					

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES, AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

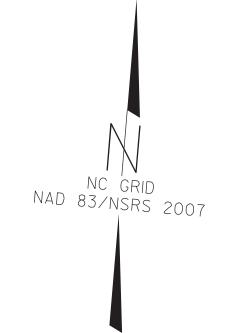
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

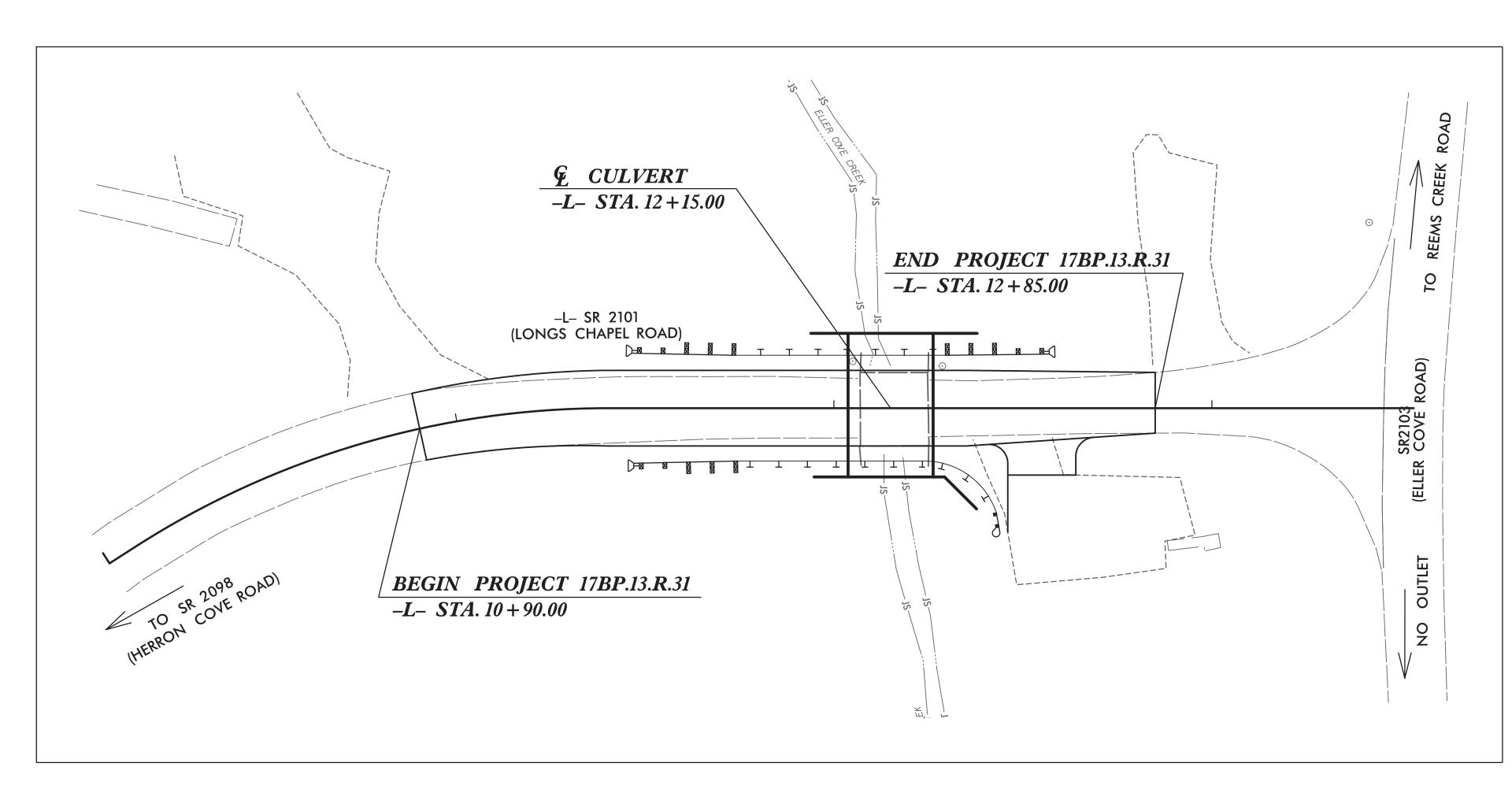
T.I.P. NO. SHEET NO. 17BP.13.R.31 UO-1

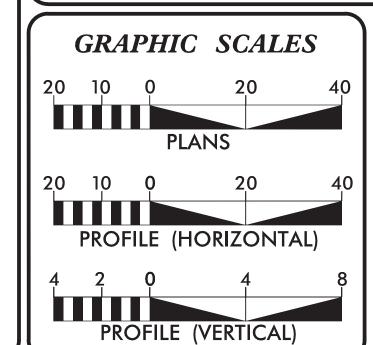
BUNCOMBE COUNTY

LOCATION: BRIDGE NO. 403 OVER ELLER COVE CREEK ON SR 2101 (LONGS CHAPEL ROAD)

TYPE OF WORK: TELEPHONE COMMUNICATIONS RELOCATION







INDEX OF SHEETS

SHEET NO.

UO-1 **UO**–2

PROJECT SITE-

VICINITY MAP

DETOUR ROUTE

WOODFIN

DESCRIPTION TITLE SHEET

UTILITIES BY OTHERS PLAN **SHEET**

UTILITY OWNERS ON PROJECT 1) FRONTIER TELEPHONE



UTILITIES COORDINATION CONSULTANT Lavon Tyson



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

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

Ron Wilkins, PE

Roger Worthington, P.E. UTILITIES SECTION ENGINEER UTILITIES SQUAD LEADER PROJECT ENGINEER

PROJECT REFERENCE NO. SHEET NO. 17BP.13.R.31 U0-2 R/W SHEET NO. ENGINEERING & Fax:919-789-9591
CONSTRUCTION License: C-2197 UTILITIES BY OTHERS ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS PROP OH TEL LINE (FRONTIER TELEPHONE) PROP TEL POLES (FRONTIER TELEPHONE) TO REEMS CREEK ROA - LANDSCAPED DECK ROCK WALK— TELEPHONE
PEDESTAL
OWNER GTE MARLENE A. GENTRY DB 4749 PG 1913 PROP UG TEL LINES NORMAN C. & JEANETTE B. RIDDLE DB 1925 PG 272 PB 72 PG 15 // - METAL GATE (FRONTIER TELEPHONE EXIST. UG TEL LINES NEW FENCE EXIST. R/W LOCATION . TO BE ABANDONED TELEPHONE WITNESS POST OWNER-GTE WELL REMOVE & RESET FENCE — (FRONTIER TELEPHONE) → 50' TAPER +90.00 ASPHALT DRIVE 45.00' +45.00TELEPHONE WITNESS -POST OWNER-GTE GRAVEL DRIVE 30.00' 45.00 WELL 9 1 1 20.00' RETAIN 9 1 1 +20.00 PROPOSED ALUMINUM BOX CULVERT (22'6" x 8'1" OPENING) +45.005.74′ +85.00 🕃 RIPRAP DITCH -4.07' **25.00**′ 25.00′ EX. R/W GRAU 350 DAVID & DEBRA M. CROSS DB 2057 PG II GRAU 350 +90.00 EX. R/W 7 TYPE TL=2 EX. R/W LANDSCAPED -AREA 4.58′____ STEVEN E. & KRISTY R. STINNET
DB 4186 PG 1395
PB 72 PG 15 GRAU 350 TYPE TL-2 +45.00+85.00 WELL 20.00' EX. RW SHOP/CURVED 1 20.00' GRAVEL ORNE LANDSCAPED AREA +45.00REMOVE EXIST.BRIDGE +90.00 45.00 +95.00EX. R/W +20.00EX. RW LNEW FENCE LOCATION 45.00′ END PROJECT 17BP.13.R.31 30.00′ 30.00′ -L- STA 12+85.00 REMOVE & RESET FENCE — MARK & JUSTIN LOWMAN DB 1770 PG 143 CLASS I RIP RAP — STRUCTURAL PAY ITEM (TYP.) Q CULVERT EXIST. R/W _L+ \$TA 12+15.00 I-S-F-D EXIST. UG TEL LINES BEGIN PROJECT 17BP.13.R.31 TO BE ABANDONED STELLA PARKER CUMMINGS DB 095E PG 1251 (FRONTIER TELEPHONE) -L- STA 10 + 90.00_S |3°5|′43" E |42.29′ MICHAEL MASON MCFARLING DB 4130 PG 118 PB 101 PG 167

 COMPUTED BY:
 DAB
 DATE: 2-19-13

 CHECKED BY:
 RMS
 DATE: 2-21-13

DIVISION OF HIGHWAYS

SEAL PERSONNEL OF SEAL PROPERTY OF SEAL

X - O

17BP.13.R.31

CROSS SECTION SUMMARY

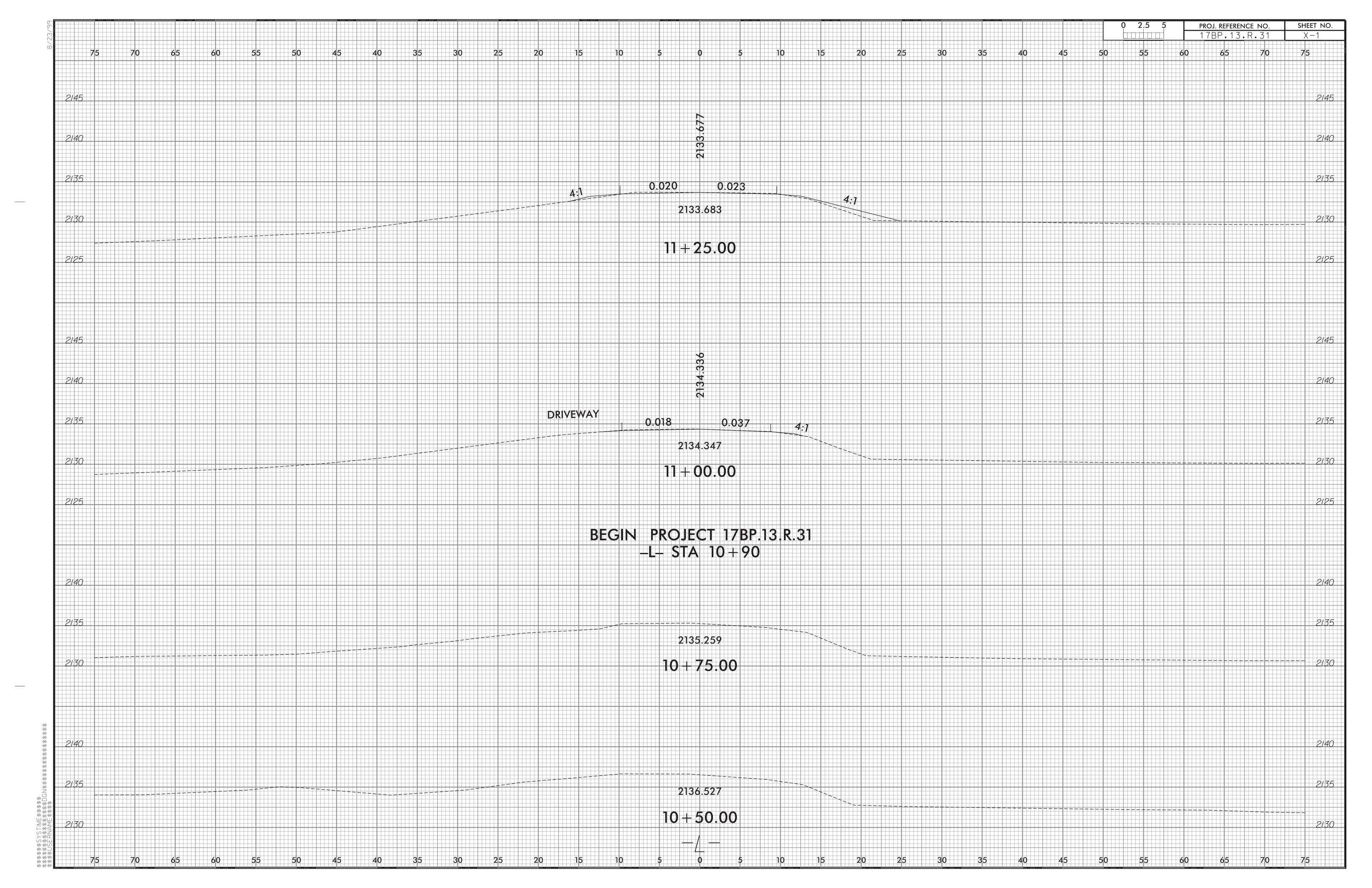
STATE OF NORTH CAROLINA

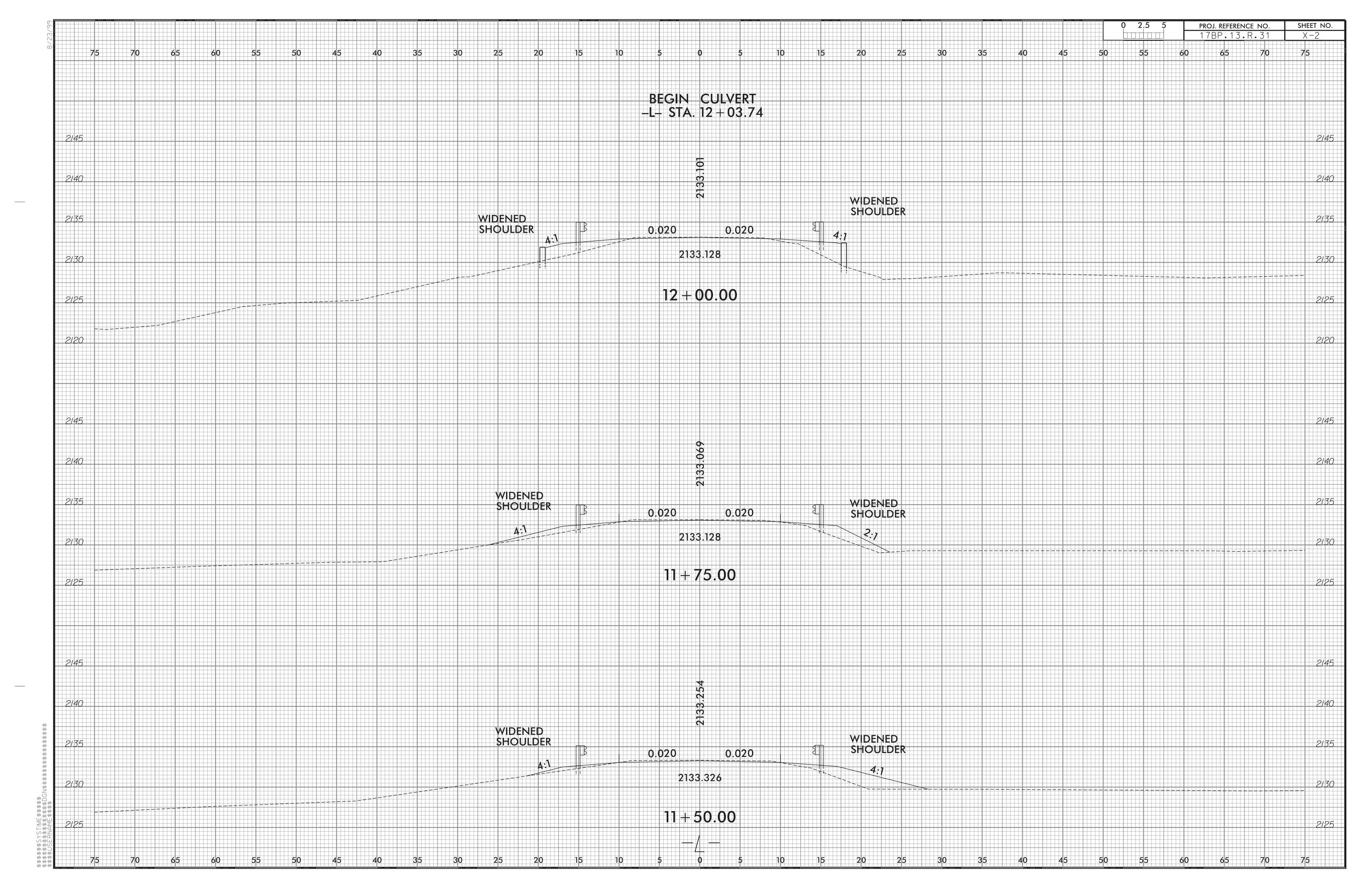
IN CUBIC YARDS

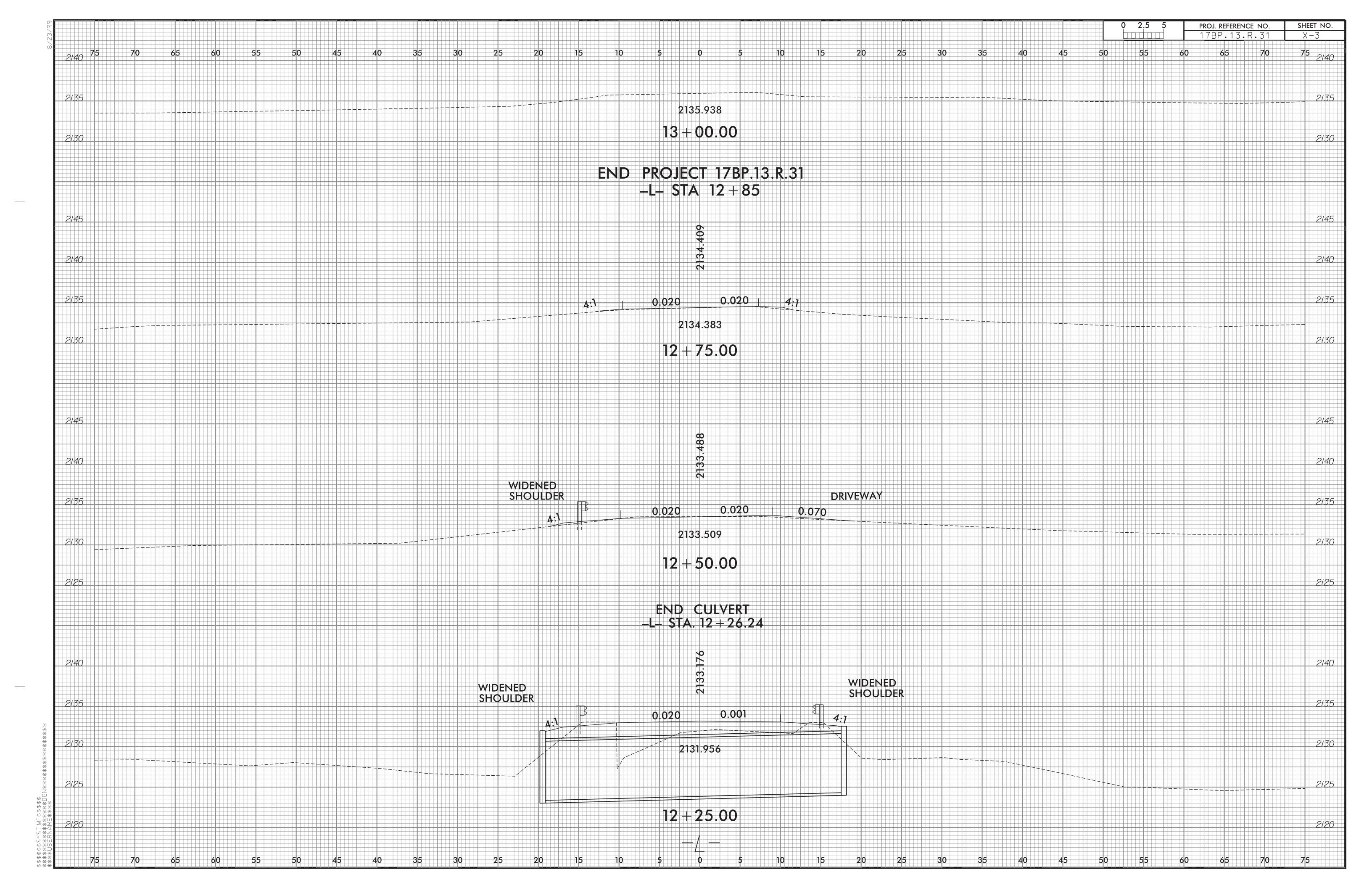
-L- LOCATION	UNCLASSIFIED EXCAVATION	EMBT
10 + 90	0	0
11 + 00	0	1
11 + 25	0	3
11 + 50	0	12
11 + 75	0	17
12 + 00	0	17
12 + 03.74 BEGIN CULVERT	0	3
12 + 26.24 END CULVERT	0	32
12 + 50	0	7
12 + 75	0	2
12 + 85	0	1

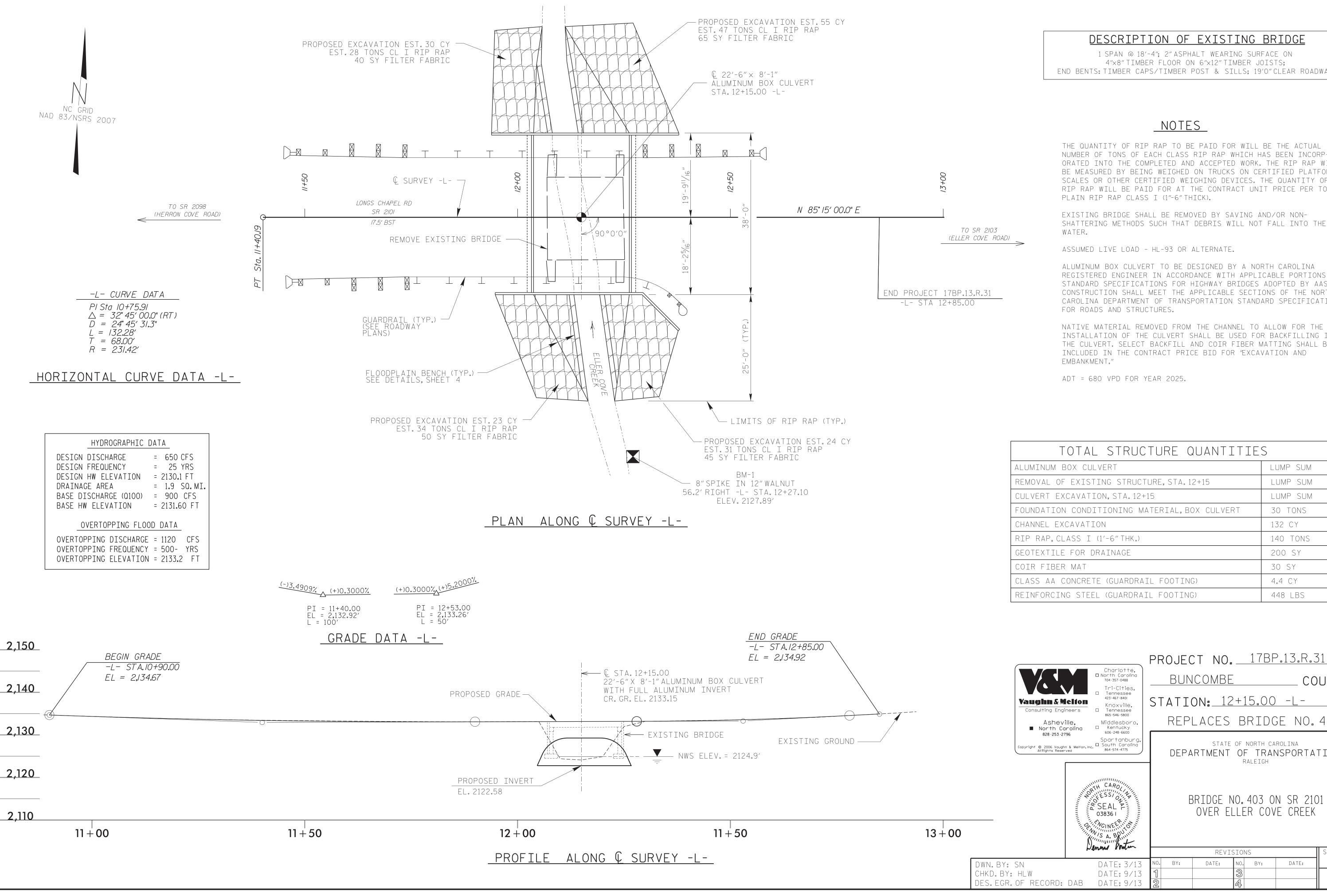
NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT.

Approximate quantities only. Pavement removal, borrow excavation, fine grading, and clearing and grubbing will be paid for at the contract lump sum price for "grading".









DESCRIPTION OF EXISTING BRIDGE

1 SPAN @ 18'-4"; 2" ASPHALT WEARING SURFACE ON 4"x8" TIMBER FLOOR ON 6"x12" TIMBER JOISTS: END BENTS: TIMBER CAPS/TIMBER POST & SILLS; 19'0"CLEAR ROADWAY

THE QUANTITY OF RIP RAP TO BE PAID FOR WILL BE THE ACTUAL NUMBER OF TONS OF EACH CLASS RIP RAP WHICH HAS BEEN INCORP-ORATED INTO THE COMPLETED AND ACCEPTED WORK. THE RIP RAP WILL BE MEASURED BY BEING WEIGHED ON TRUCKS ON CERTIFIED PLATFORM SCALES OR OTHER CERTIFIED WEIGHING DEVICES. THE QUANTITY OF RIP RAP WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON.

EXISTING BRIDGE SHALL BE REMOVED BY SAVING AND/OR NON-SHATTERING METHODS SUCH THAT DEBRIS WILL NOT FALL INTO THE

ALUMINUM BOX CULVERT TO BE DESIGNED BY A NORTH CAROLINA REGISTERED ENGINEER IN ACCORDANCE WITH APPLICABLE PORTIONS OF STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES ADOPTED BY AASHTO. CONSTRUCTION SHALL MEET THE APPLICABLE SECTIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

NATIVE MATERIAL REMOVED FROM THE CHANNEL TO ALLOW FOR THE INSTALLATION OF THE CULVERT SHALL BE USED FOR BACKFILLING INSIDE THE CULVERT. SELECT BACKFILL AND COIR FIBER MATTING SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR "EXCAVATION AND

TOTAL STRUCTURE QUANTITIE	S
ALUMINUM BOX CULVERT	LUMP SUM
REMOVAL OF EXISTING STRUCTURE, STA. 12+15	LUMP SUM
CULVERT EXCAVATION, STA. 12+15	LUMP SUM
FOUNDATION CONDITIONING MATERIAL, BOX CULVERT	30 TONS
CHANNEL EXCAVATION	132 CY
RIP RAP, CLASS I (1'-6"THK.)	140 TONS
GEOTEXTILE FOR DRAINAGE	200 SY
COIR FIBER MAT	30 SY
CLASS AA CONCRETE (GUARDRAIL FOOTING)	4.4 CY
REINFORCING STEEL (GUARDRAIL FOOTING)	448 LBS

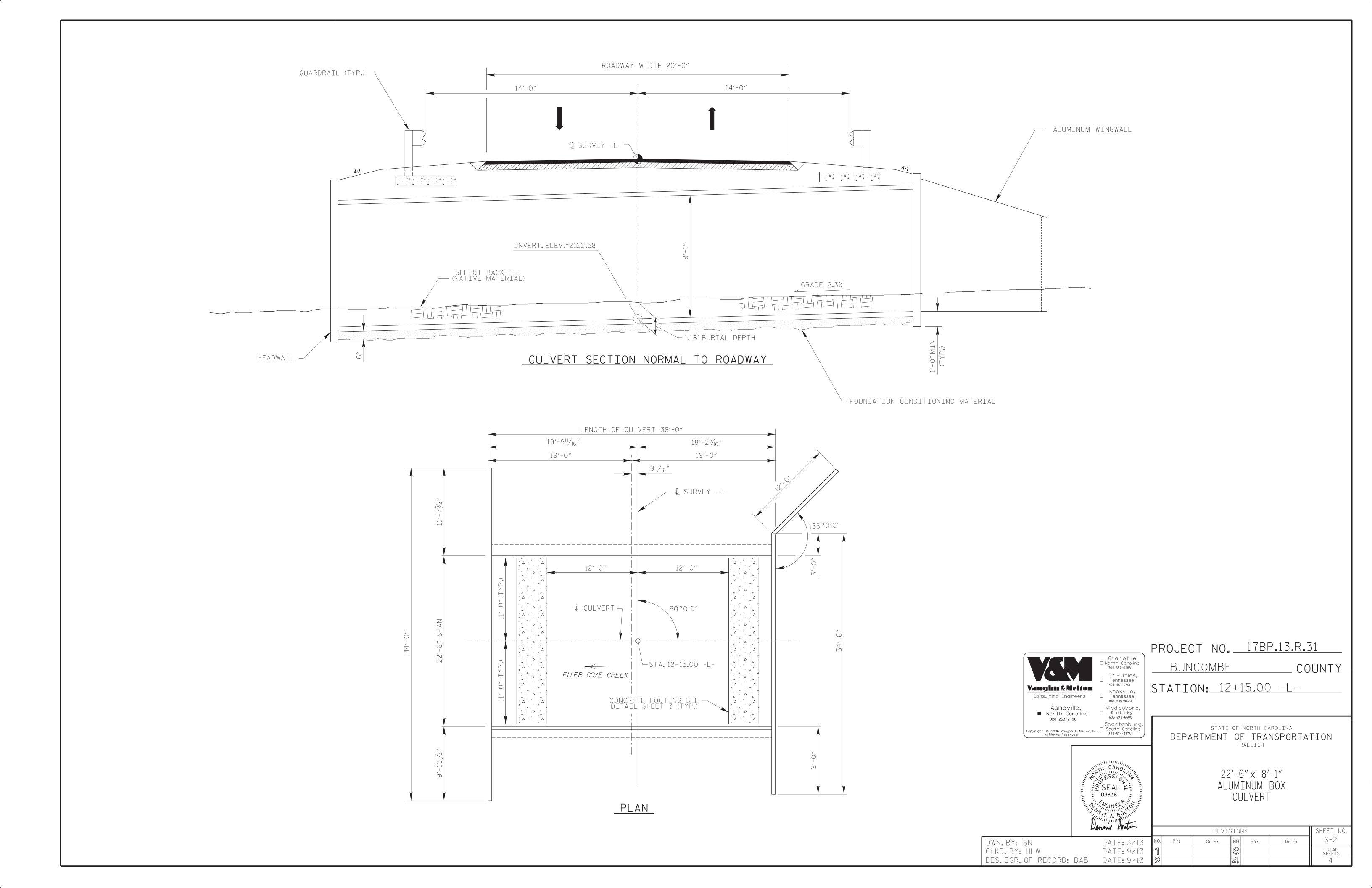
STATION: 12+15.00 -L-REPLACES BRIDGE NO. 403

> STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

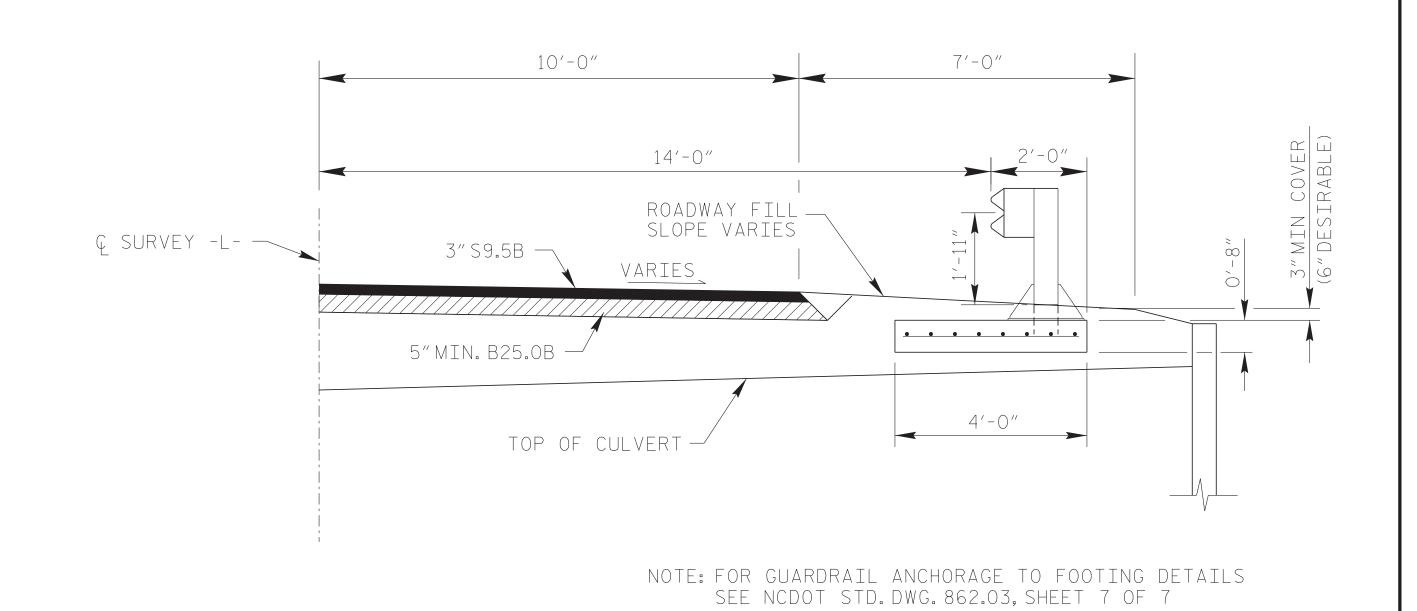
COUNTY

BRIDGE NO. 403 ON SR 2101 OVER ELLER COVE CREEK

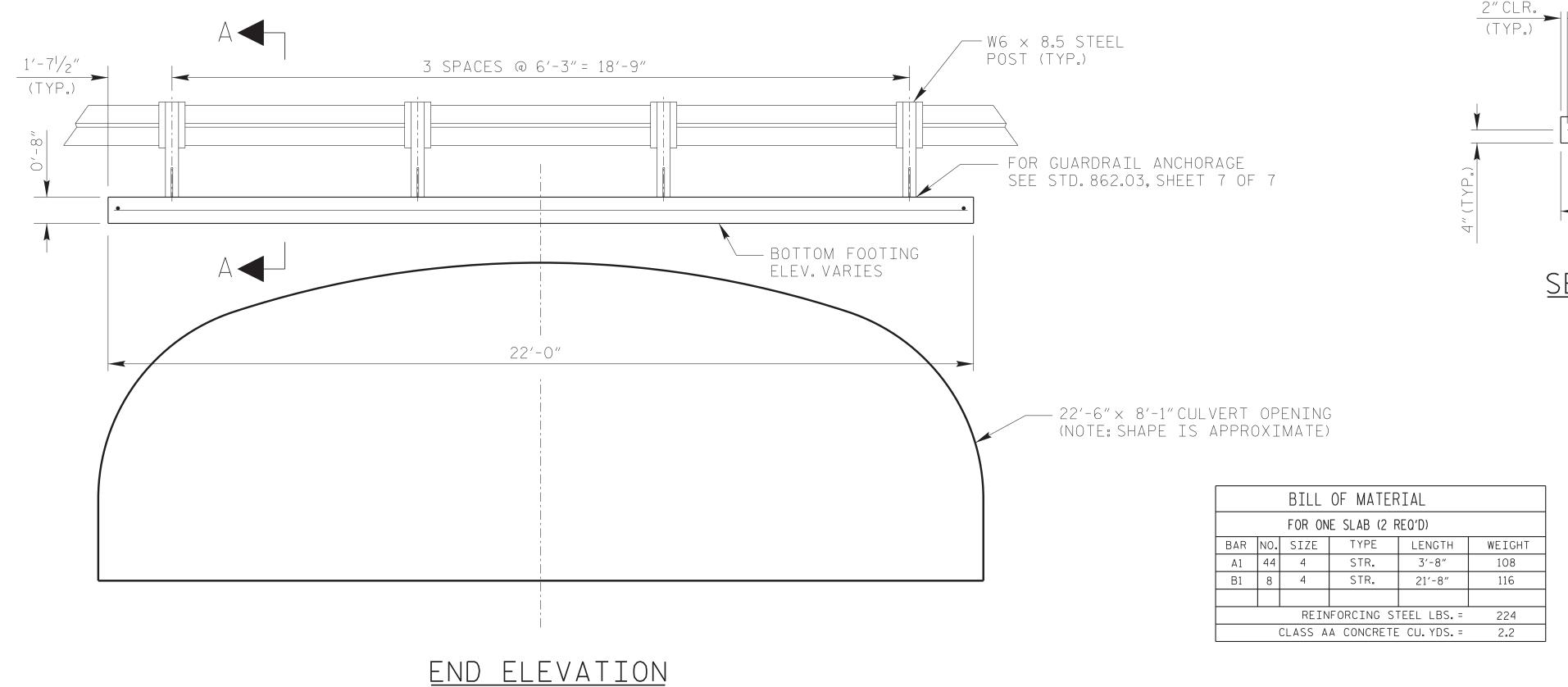
	110										
	Pennes Pontu	REVISIONS									
BY: SN	DATE: 3/13	NO.	BY:	DATE:	NO.	BY:	DATE:	S-1			
.BY: HLW	DATE: 9/13	1			3			TOTAL SHEETS			
EGR. OF RECORD: DAB	DATE: 9/13	2			4			4			

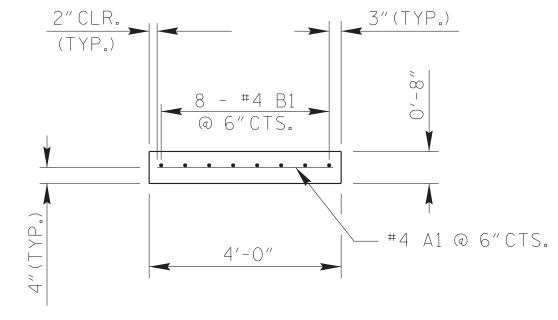






SECTION A-A





SECTION B-B



PROJECT NO. 178P.13.R.31 BUNCOMBE COUNTY

STATE OF NORTH CAROLINA

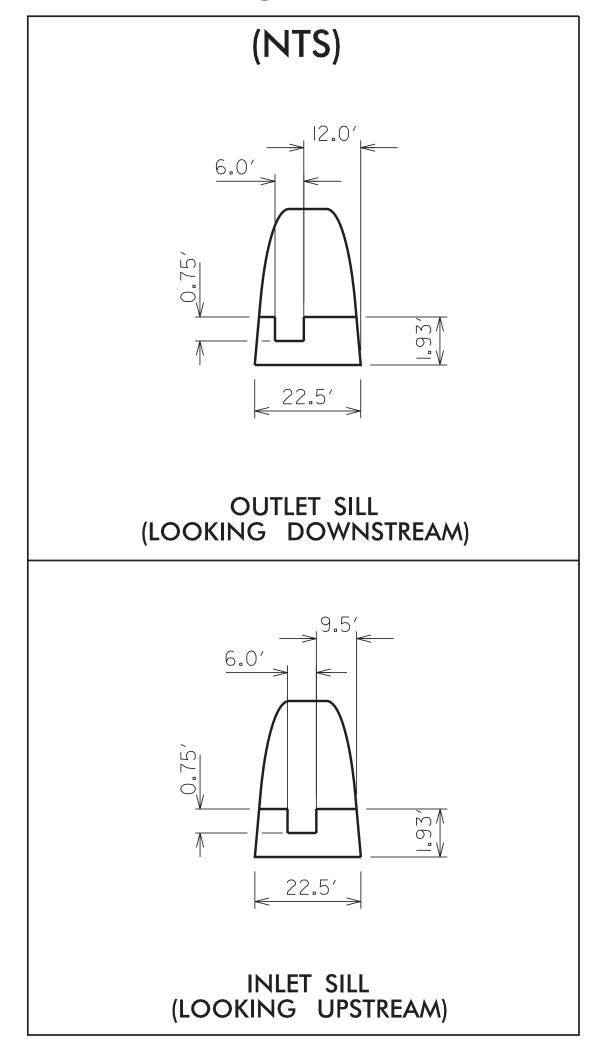
STATION: 12+15.00 -L-

DEPARTMENT OF TRANSPORTATION

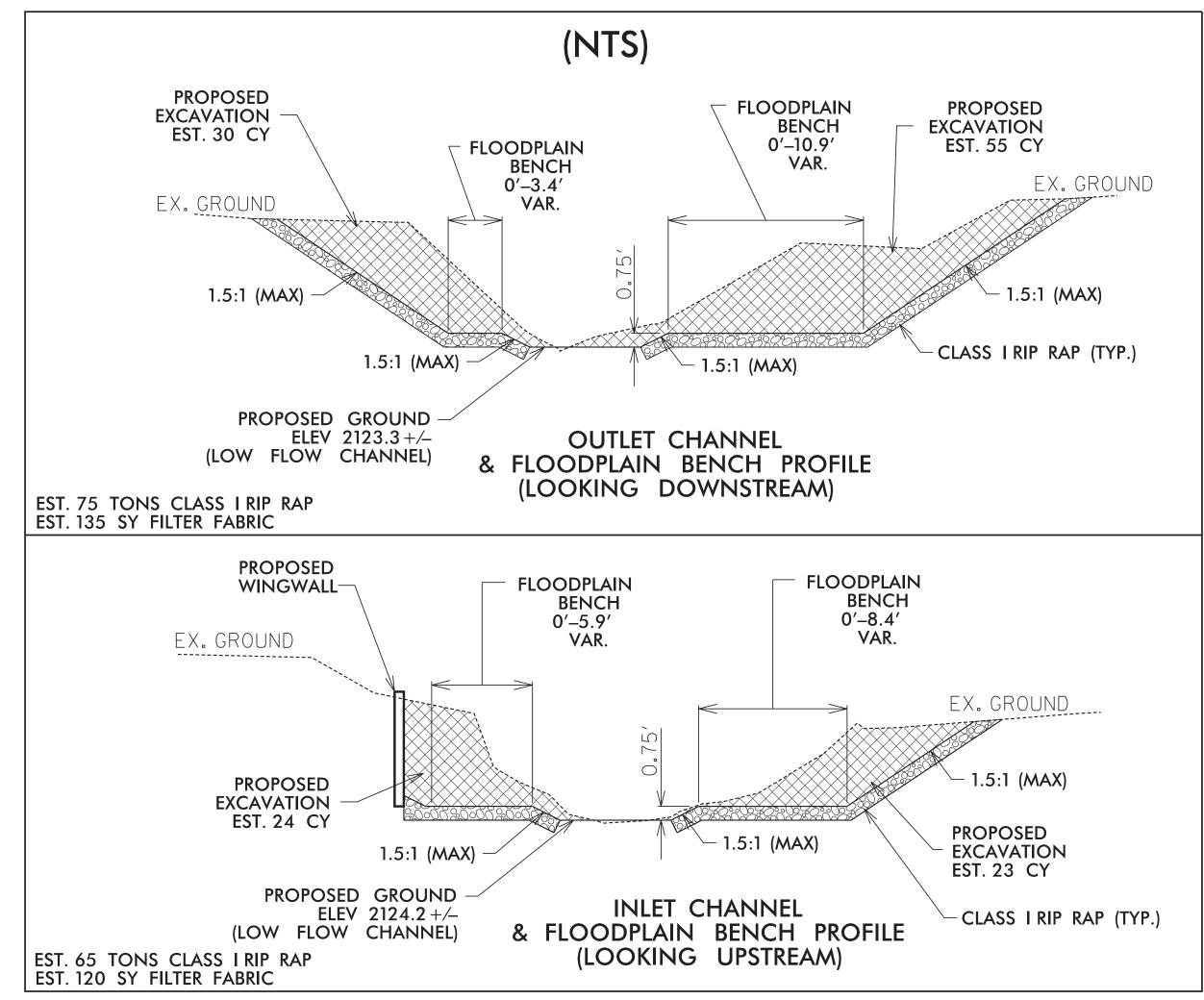
GUARDRAIL ASSEMBLY DETAILS

	1 1/1	WIS A. BOUNT				DE	IAIL	_5	
	μ.	enne Polu			REV]	SION	S		SHEET NO.
WN.BY: SN		DATE: 3/13	NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
HKD.BY: HLW		DATE: 9/13	1			3			TOTAL SHEETS
ES. EGR. OF RECORD:	DAB	DATE: 9/13	2			4			4

DETAIL C: SILL DETAILS @ INLET & OUTLET



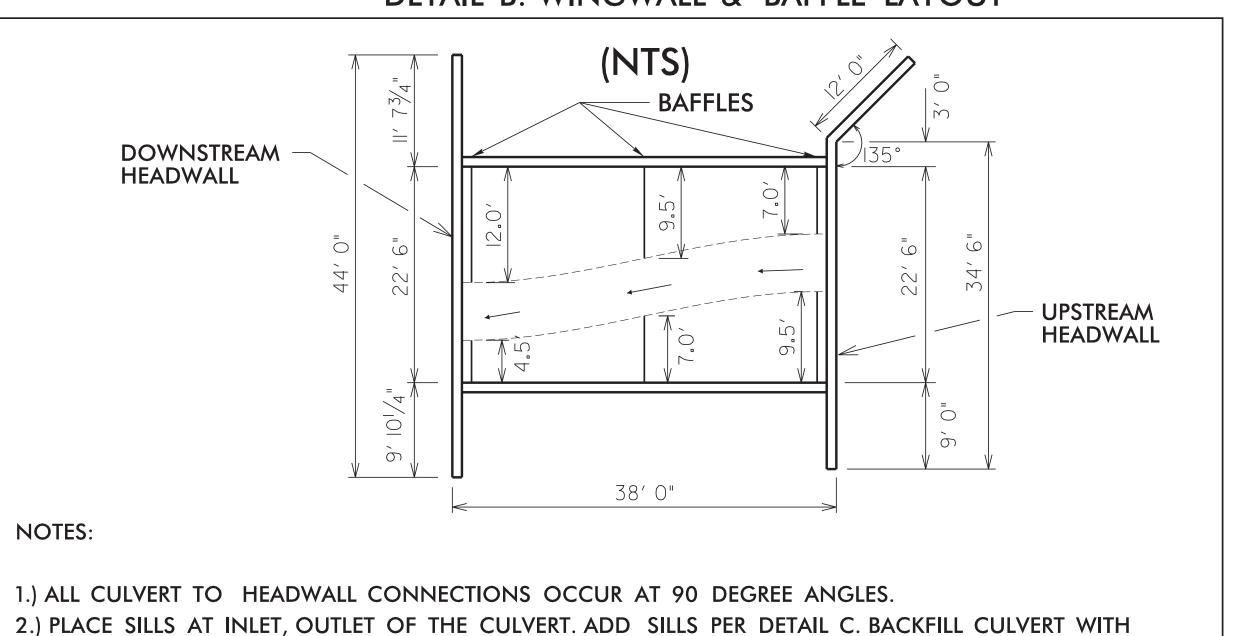
DETAIL A: U/S & D/S FLOODPLAIN BENCH PROFILE



NOTES:

1.) FILTER FABRIC TO BE USED BENEATH CLASS I RIP RAP IN ALL AREAS. 2.) COIR FIBER MATTING TO BE USED THROUGH CULVERT INTERNAL CHANNEL.

DETAIL B: WINGWALL & BAFFLE LAYOUT



NATURAL BED MATERIAL SIMILAR IN SIZE TO CLASS B RIP RAP. SUBSIDIZE W/CLASS B RIP RAP AS NEEDED.

PROJECT NO. 17BP.13.R.31 BUNCOMBE COUNTY Tri-Cities Tennessee STATION: 12+15.00 -L-Consulting Engineers

Asheville, ■ North Carolina 828·253·2796 ☐ Kentucky 606·248·6600 STATE OF NORTH CAROLINA opyright © 2006 Vaughn & Melton, Inc.

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All Rights Reserved DEPARTMENT OF TRANSPORTATION

> SILL & BAFFLE DETAILS ON TONEER

REVISIONS SHEET NO S-4 DWN. BY: SN DATE: 3/13 DATE: DATE: NO. BY: DATE: 9/13 CHKD.BY: HLW DES.EGR.OF RECORD: DAB DATE: 9/13

SEAL SEAL

03836 I

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS ---- A.A.S.H.T.O. (CURRENT) ----- SEE PLANS LIVE LOAD IMPACT ALLOWANCE STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36 - 20,000 LBS.PER SQ.IN. - AASHTO M270 GRADE 50W - 27,000 LBS.PER SQ.IN. - AASHTO M270 GRADE 50 - 27,000 LBS.PER SQ.IN. REINFORCING STEEL IN TENSION GRADE 60 - - 24.000 LBS. PER SQ. IN. CONCRETE IN COMPRESSION CONCRETE IN SHEAR STRUCTURAL TIMBER - TREATED OR UNTREATED - EXTREME FIBER STRESS - - - - - 1.800 LBS.PER SQ. IN. COMPRESSION PERPENDICULAR TO GRAIN 375 LBS. PER SQ. IN. OF TIMBER - - - -EQUIVALENT FLUID PRESSURE OF EARTH ----

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2006 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

30 LBS.PER CU.FT.

(MINIMUM)

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4"RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE. ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ACTUAL BEAM CAMBER.

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE $3\!\!\!/_4$ "ø studs specified on the plans. This substitution shall be made at THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-O".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16"IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2"OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH