

09/08/99

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheets 1-C Thru 1-D For Survey Control Sheets

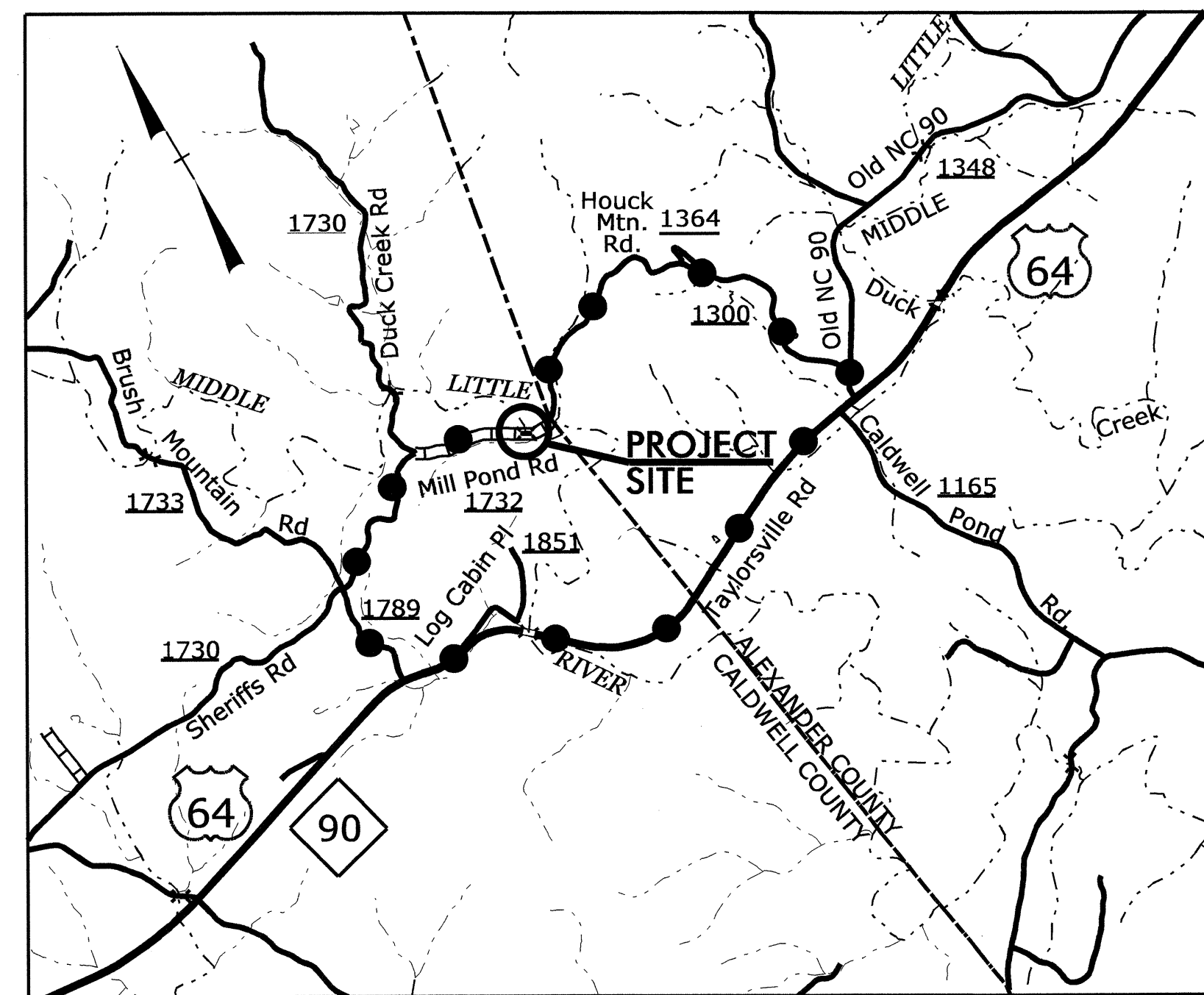
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4721	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
38495.1.1	BRZ-1732(2)	P.E.	
38495.2.1	BRZ-1732(2)	RW & UTILITIES	
38495.3.1	BRZ-1732(2)	CONST.	

CALDWELL COUNTY

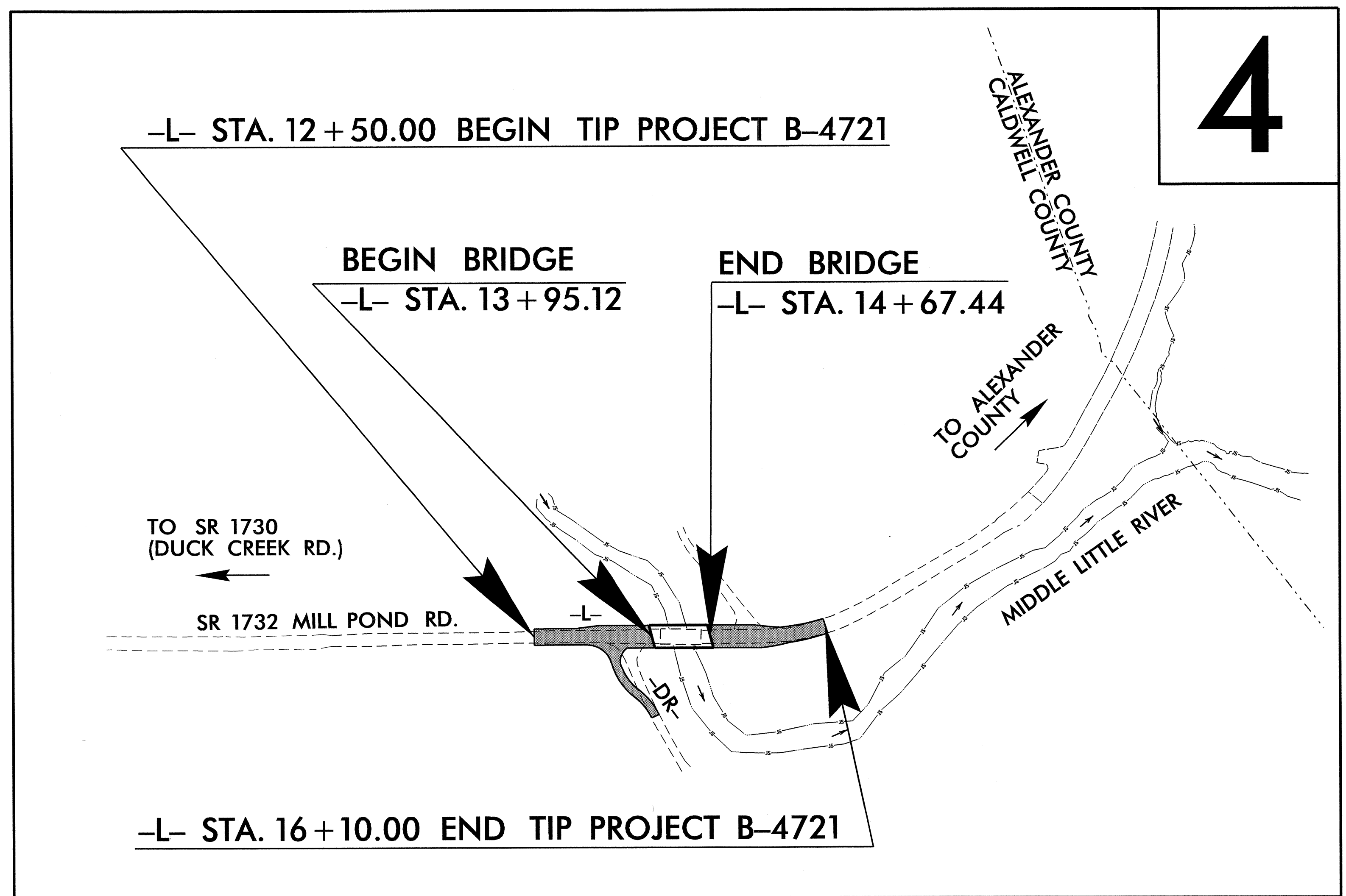
LOCATION: REPLACE BRIDGE NO. 57 OVER THE MIDDLE LITTLE RIVER ON SR 1732
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

TIP PROJECT: B-4721

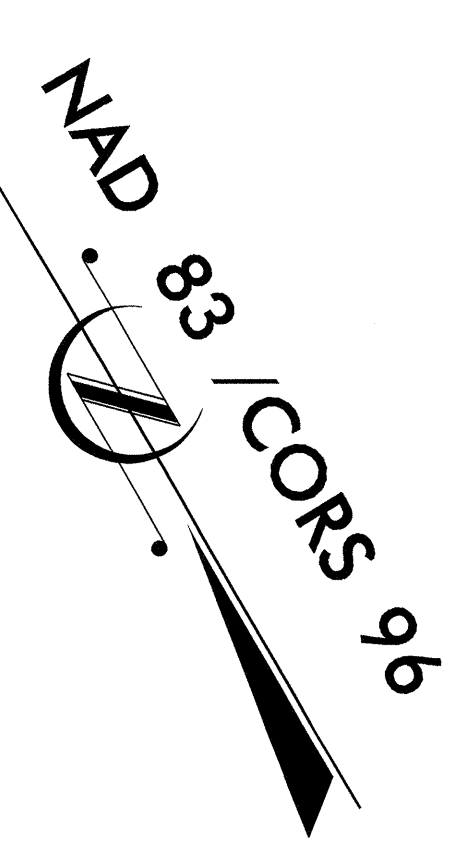


VICINITY MAP

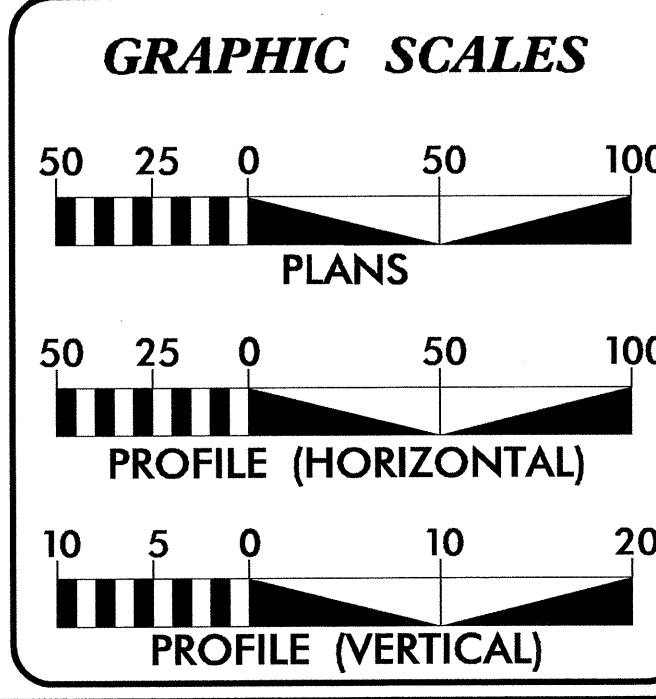
—●—●—●— OFF-SITE DETOUR



4



CONTRACT: C203083



DESIGN DATA

ADT 2013 =	30
ADT 2033 =	50
DHV =	10 %
D =	60 %
T =	2 % *
V =	40 MPH
* (TTST 0% + DUAL 2%)	
FUNC CLASS =	RURAL LOCAL
SUBREGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4721 =	0.054 MI
LENGTH STRUCTURE TIP PROJECT B-4721 =	0.014 MI
TOTAL LENGTH TIP PROJECT B-4721 =	0.068 MI

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 17, 2012

LETTING DATE:
MARCH 19, 2013

BRENDA MOORE, PE
PROJECT ENGINEER

TATIA L. WHITE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

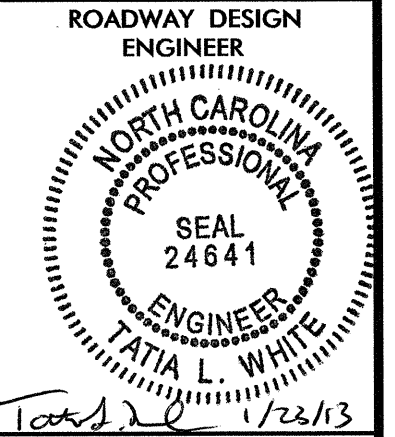
Karen H. Sledge 01/23/13
SIGNATURE: P.E. SEAL 31025

ROADWAY DESIGN ENGINEER

Tatia L. White 1/23/13
SIGNATURE: P.E. SEAL 24641



18-JAN-2013 08:55
R:\Roadway\Proj\B4721\RDY_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, & LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C THROUGH 1-D	SURVEY CONTROL SHEETS
2	PAVEMENT SCHEDULE & TYPICAL SECTIONS
2-A	STRUCTURE ANCHOR UNIT DETAIL
3	SUMMARY OF QUANTITIES
3-A	DRAINAGE SUMMARY
3-B	EARTHWORK SUMMARY, GUARDRAIL SUMMARY, & SHOULDER BERM GUTTER SUMMARY
4	PLAN SHEET
5	PROFILE SHEET
TMP-1 THROUGH TMP-2	TRAFFIC MANAGEMENT PLANS
PMP-1 THROUGH PMP-2	PAVEMENT MARKING PLANS
EC-1 THROUGH EC-5	EROSION CONTROL PLANS
UO-1 THROUGH UO-2	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTIONS INDEX SHEET
X-1A	CROSS-SECTIONS VOLUME SUMMARY
X-2 THROUGH X-5	CROSS-SECTIONS
S-1 THROUGH S-14	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
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
815.03	Pipe Underdrain and Blind Drain
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation

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

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 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.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 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.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE:

AT&T

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 OTHERS.

04/16/11

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	⑩ 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	○ S
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	← FLOW
False Sump	◇

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ 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	○ RW
Proposed Right of Way Line with Iron Pin and Cap Marker	○ RW ▲
Proposed Right of Way Line with Concrete or Granite Marker	○ RW ▲
Existing Control of Access	○ CA
Proposed Control of Access	○ CA
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	⊗

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-

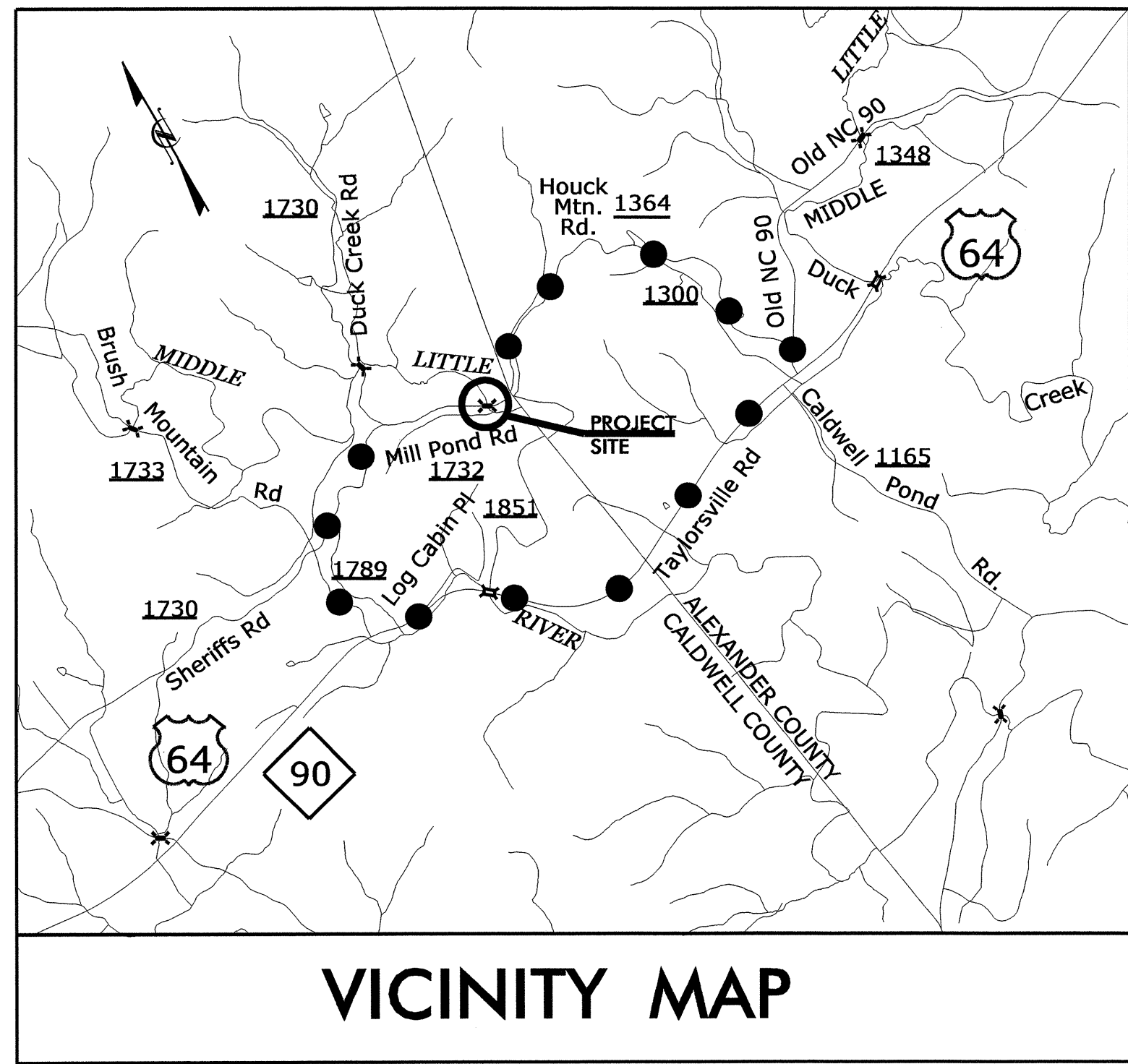
SANITARY SEWER:

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.

SURVEY CONTROL SHEET B-4721



VICINITY MAP

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
B47212		GPS B4721-2	799567.7080	1304976.0200	1337.46	OUTSIDE PROJECT LIMITS	
BL1		BL-1	799283.0684	1305381.8315	1310.43	10+15.13	15.87 RT
BL2		BL-2	799140.0827	1305695.8721	1299.58	13+58.78	14.29 LT
BL3		BL-3	798997.2842	1305917.2227	1303.62	16+19.40	14.55 RT
BL4		BL-4	799005.7373	1306236.2943	1295.91	OUTSIDE PROJECT LIMITS	

 BM#1 ELEVATION = 1337.46'
 N 799568. E 1304976.
 OUTSIDE PROJECT LIMITS
 30" IRON PIN AND CAP
 STAMPED GPS B4721-2

 BM#2 ELEVATION = 1298.37'
 N 798978. E 1305637.
 L STATION 13+89.00 155' RIGHT
 48" COPPER CLAD ROD IN 30" RIVER BIRCH

 BM#3 ELEVATION = 1296.91'
 N 798954. E 1305914.
 OUTSIDE PROJECT LIMITS
 8" SPIKE IN ROOT OF 20" WHITE OAK

**NC DOT GPS STATION B4721-2
 LOCALIZED COORDINATES**
 N = 799567.708
 E = 1304976.020

**NC DOT GPS STATION B4721-1
 LOCALIZED COORDINATES**
 N = 799705.106
 E = 1304049.625

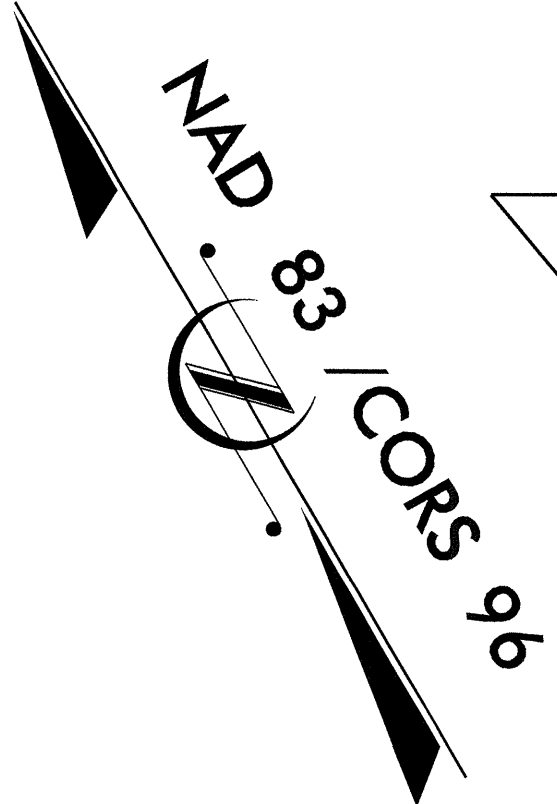
DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4721-2" WITH NAD 83/CORS96 STATE PLANE GRID COORDINATES OF NORTHING: 799567.708(ft) EASTING: 1304976.020(ft) ELEVATION: 1337.46(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998823538

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4721-2" TO -L- STATION 12+50.00 IS
 S 58°03'34" E 728.82

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

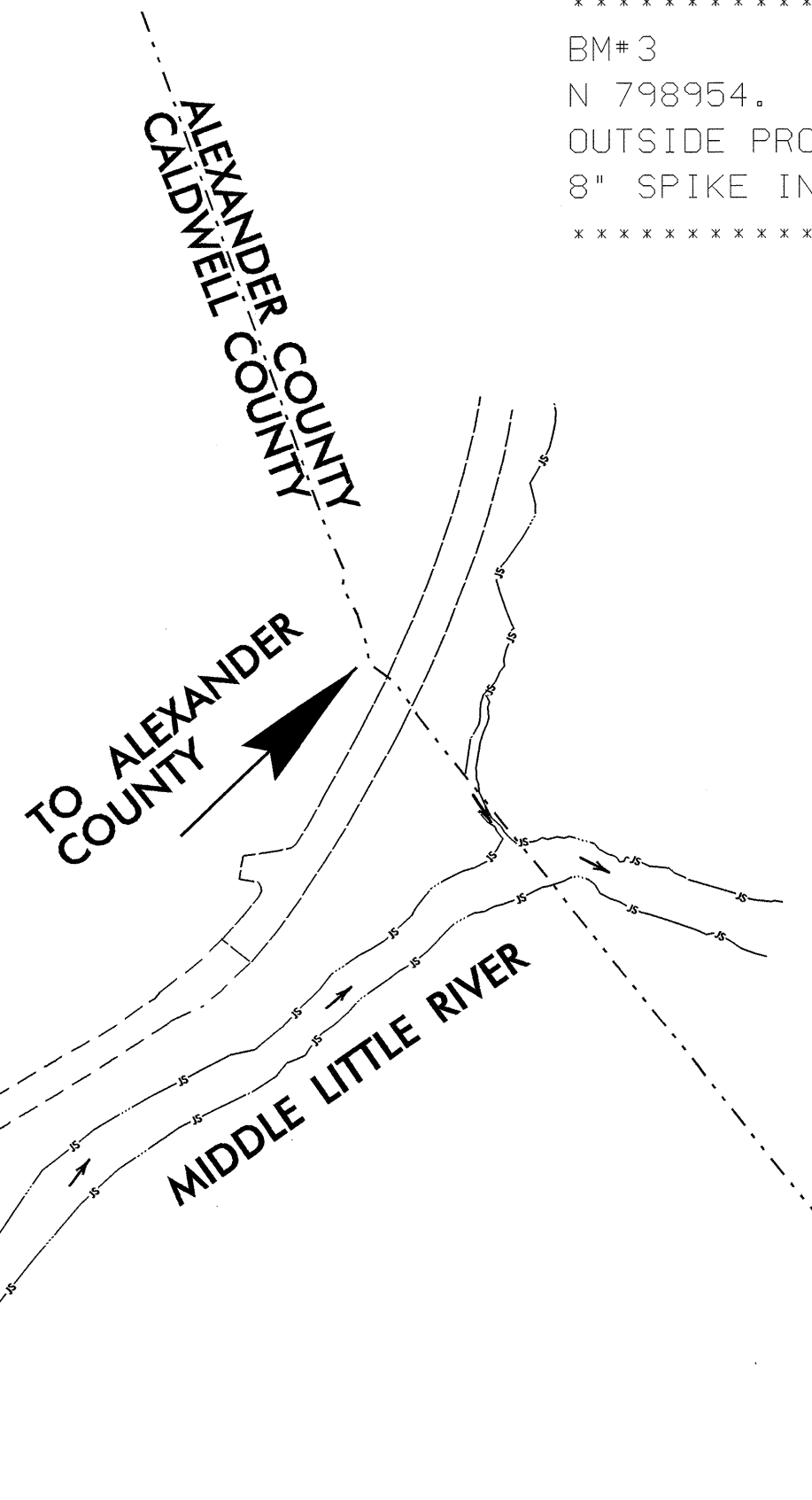


BEGIN TIP PROJECT B-4721
 -L- STA. 12 + 50.00
 N = 799182.1329
 E = 1305594.4955

TO SR 1730
 (DUCK CREEK RD.)

SR 1732 MILL POND RD.

END TIP PROJECT B-4721
 -L- STA. 16 + 10.00
 N = 799013.5296
 E = 1305911.2023



NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOHPRECONSTRUCTHIGHWAYLOCATION/PROJECT](http://www.ncdot.org/DOHPRECONSTRUCTHIGHWAYLOCATION/PROJECT)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 B4721_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 NGS ONLINE POSITIONING SERVICE (OPUS)
 SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

NOTE: DRAWING NOT TO SCALE

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 23-JAN-2013 10:45
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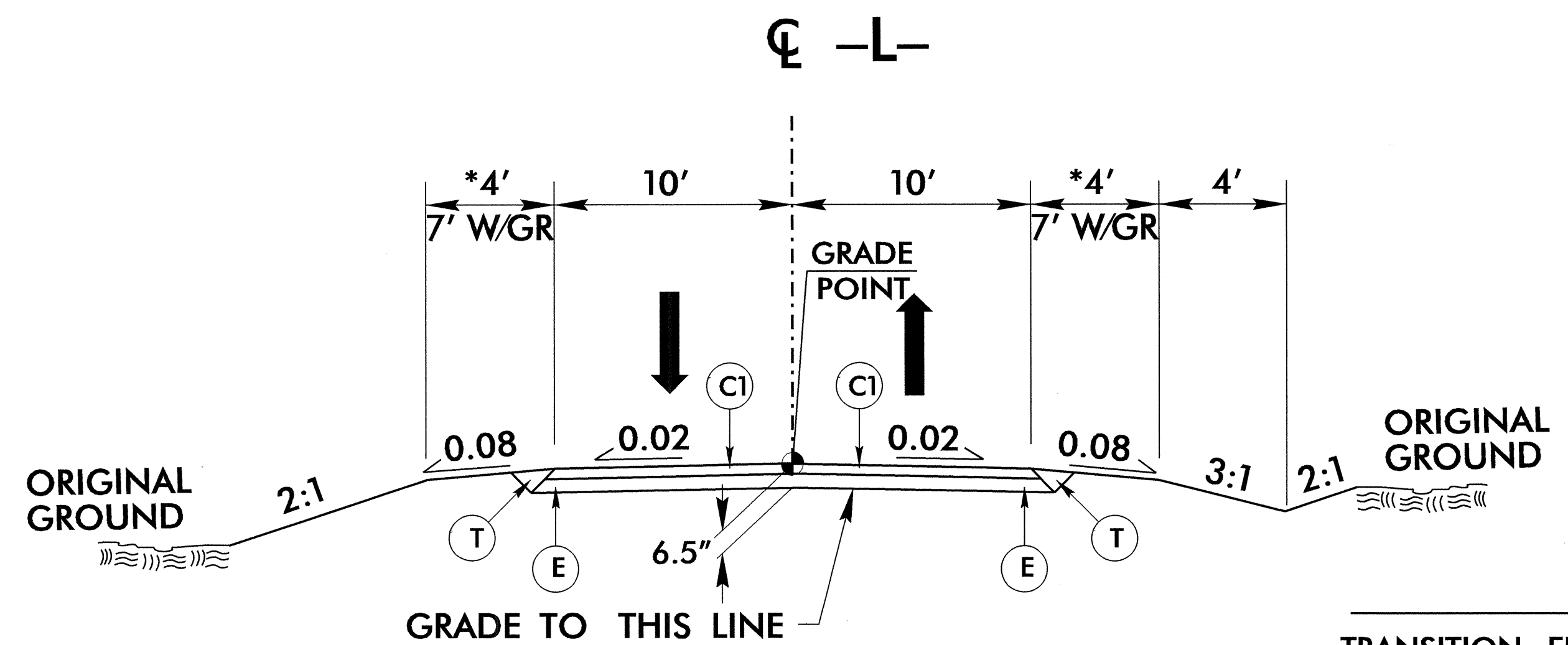
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FINAL PAVEMENT SCHEDULE

C1	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 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 1/2" IN DEPTH.
E	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
J1	PROP. 6" AGGREGATE BASE COURSE.
T	EARTH MATERIAL.

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

PROJECT REFERENCE NO. B-4721	SHEET NO. 2
ROADWAY DESIGN ENGINEER ATIA L. WHITE SEAL 24641 1/23/13	PAVEMENT DESIGN ENGINEER CLAY S. MORRISON SEAL 22896 1/18/13

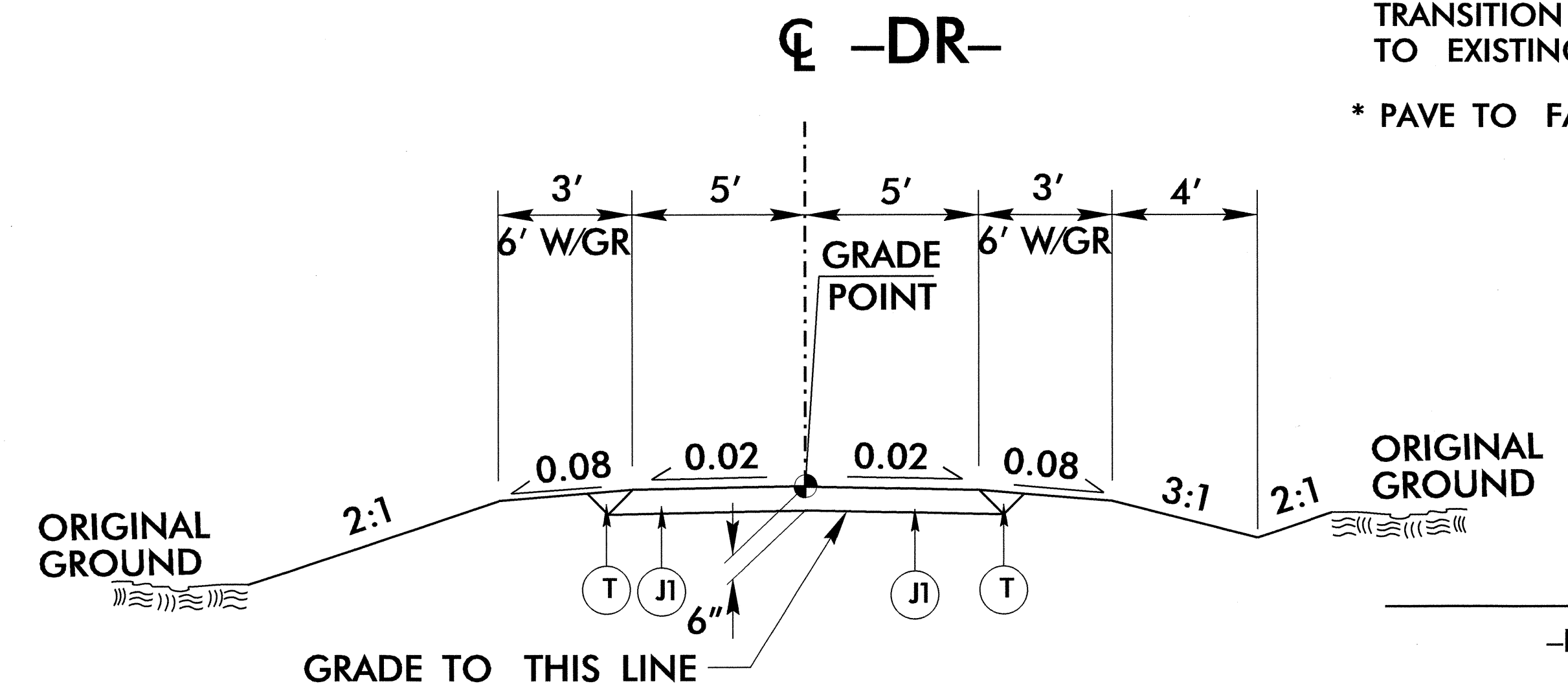


TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AT THE FOLLOWING LOCATIONS:

- TRANSITION FROM EXISTING AT -L- STA. 12+50.00 TO TYPICAL SECTION NO. 1 AT 13+00.00
- L- STA. 13+00.00 TO -L- STA. 13+95.12 (BEGIN BRIDGE)
- L- STA. 14+67.44 (END BRIDGE) TO -L- STA. 15+60.00
- TRANSITION FROM TYPICAL SECTION NO. 1 AT -L- STA. 15+60.00 TO EXISTING AT -L- STA. 16+10.00

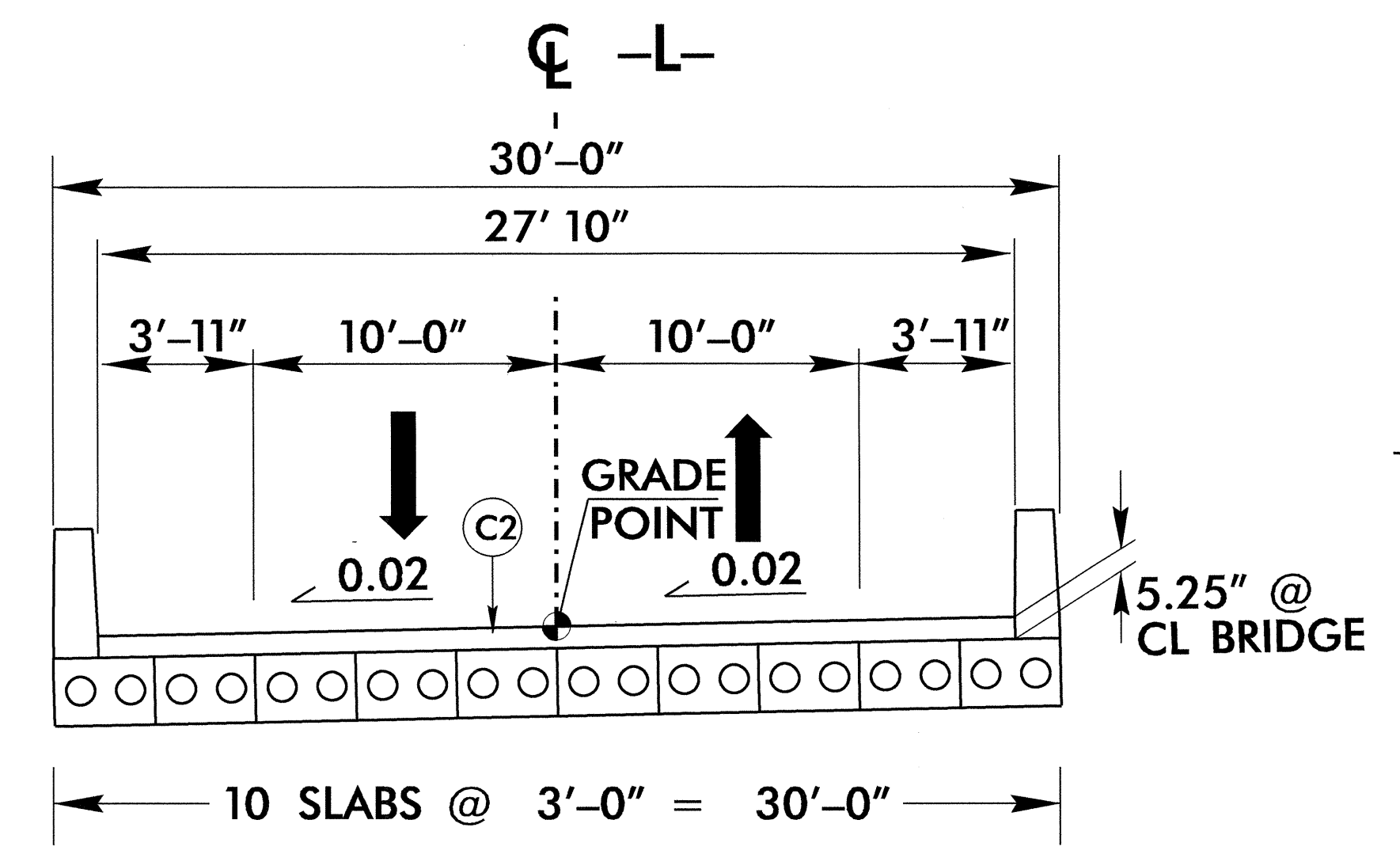
* PAVE TO FACE OF GUARDRAIL



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 AT THE FOLLOWING LOCATION:

- DR- STA. 10+10.00 TO -DR- STA. 11+15.00



TYPICAL SECTION ON STRUCTURE

USE TYPICAL SECTION ON STRUCTURE AT THE FOLLOWING LOCATION:

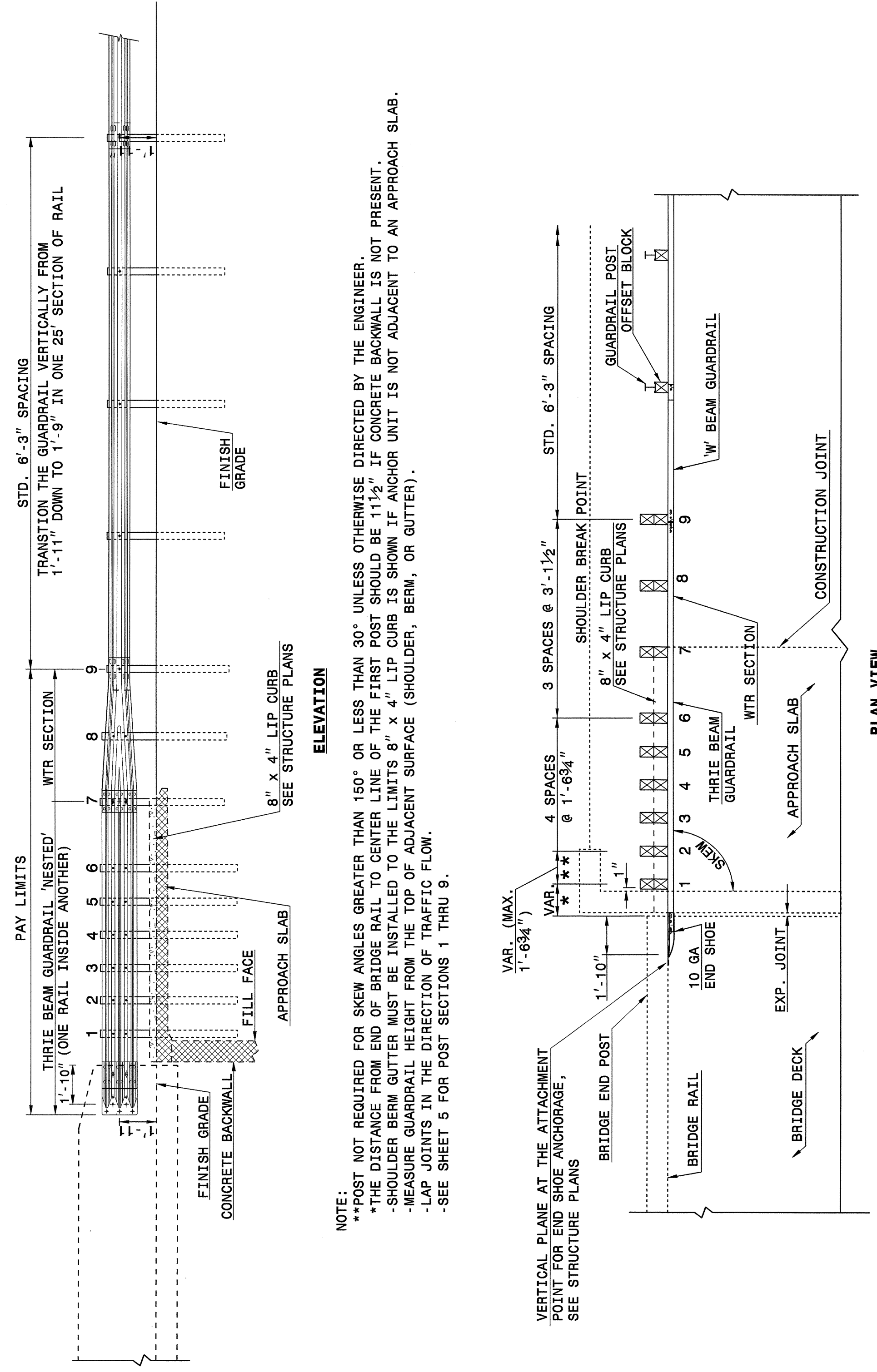
- L- STA. 13+95.12 (BEGIN BRIDGE) TO
- L- STA. 14+67.44 (END BRIDGE)

18 JAN 2013 14:15 \\B4721-R.dwg - typ.dgn
 11:58 AM 1/23/13

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**



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.

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.

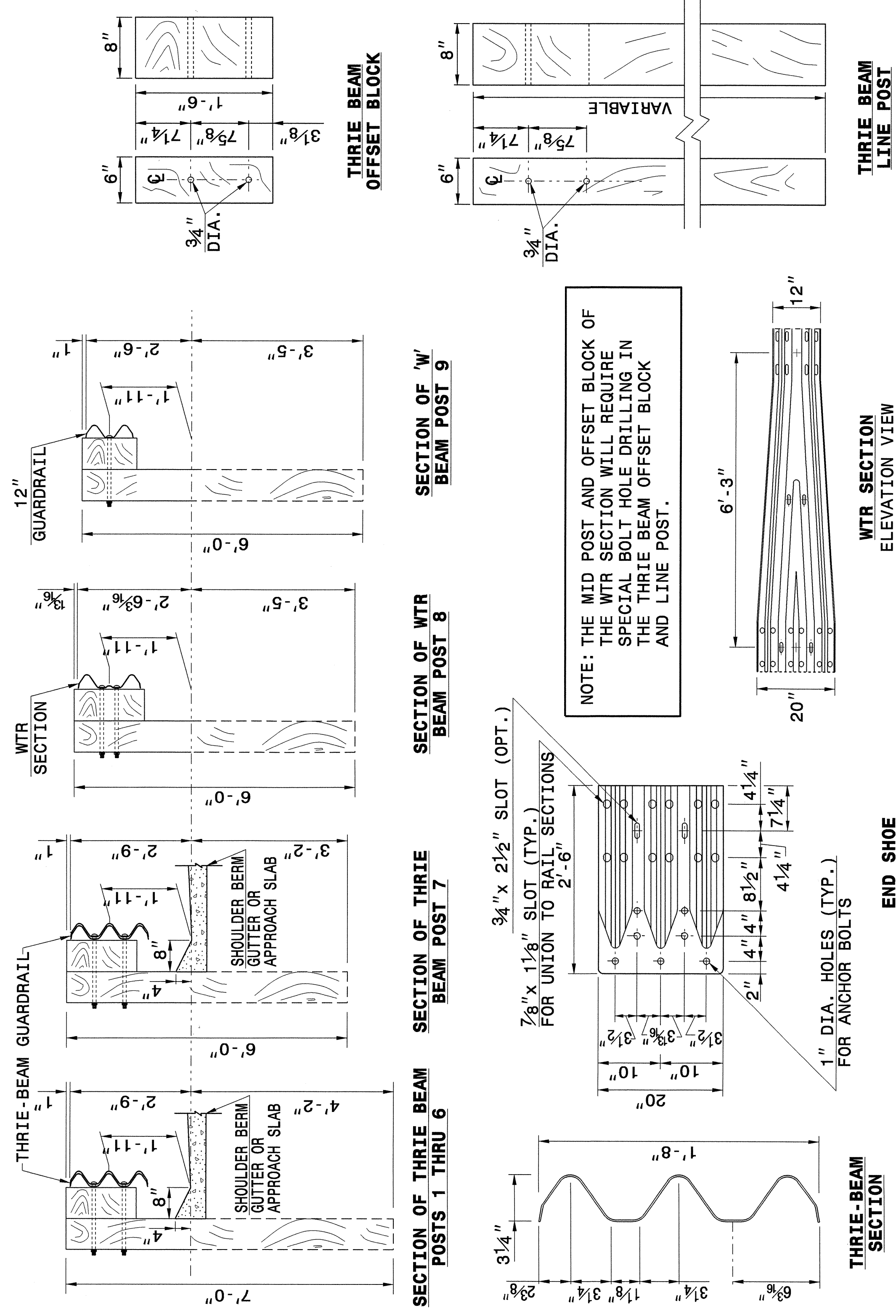
ENGLISH DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7 **862d03**

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**

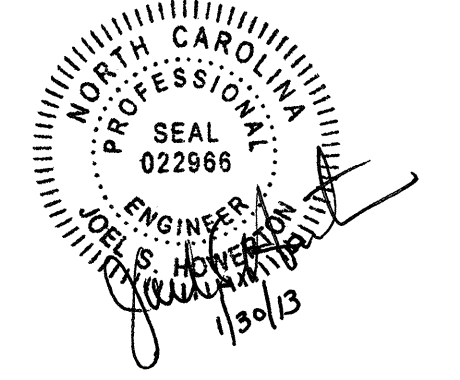


NOTE: THE MID POST AND OFFSET BLOCK OF THE WTR SECTION WILL REQUIRE SPECIAL BOLT HOLE DRILLING IN THE THRIE BEAM OFFSET BLOCK AND LINE POST.

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**



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: DATE:
 CHECKED BY: DATE: 11/13/12
 FILE SPEC.:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203083

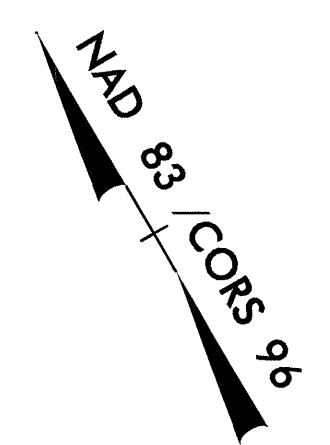
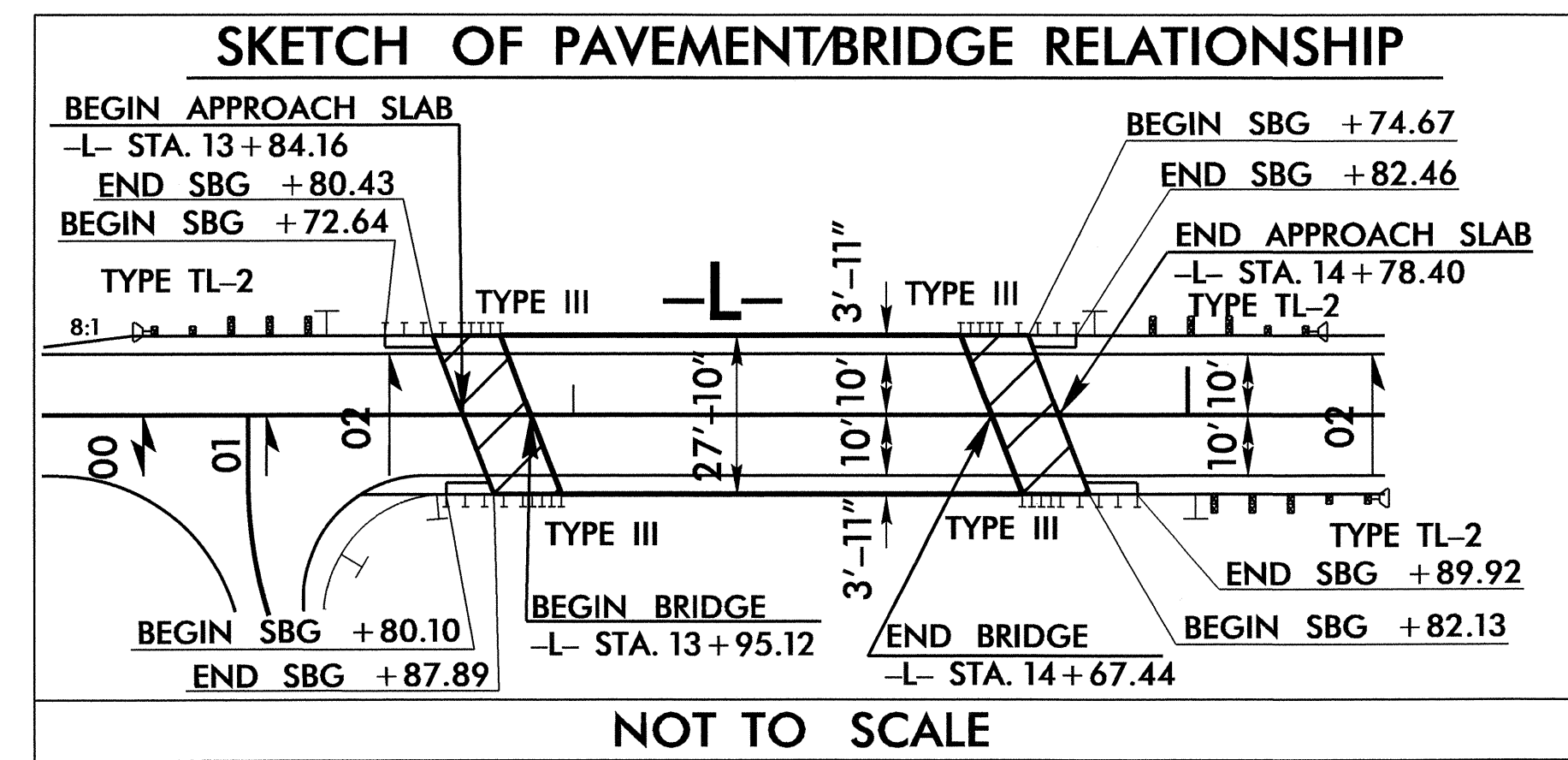
ItemNumber	Sec #	Quantity	Unit	Description
000010000-N	800	Lump Sum		MOBILIZATION
000040000-N	801	Lump Sum		CONSTRUCTION SURVEYING
003000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (14+31.00)
004300000-N	226	Lump Sum		GRADING
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
005700000-E	226	100	CY	UNDERCUT EXCAVATION
019500000-E	265	100	CY	SELECT GRANULAR MATERIAL
019600000-E	270	100	SY	GEOTEXTILE FOR SOIL STABILIZATION
031800000-E	300	6	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
032000000-E	300	20	SY	FOUNDATION CONDITIONING GEOTEXTILE
034300000-E	310	48	LF	15" SIDE DRAIN PIPE
109950000-E	505	70	CY	SHALLOW UNDERCUT
109970000-E	505	125	TON	CLASS IV SUBGRADE STABILIZATION
112100000-E	520	55	TON	AGGREGATE BASE COURSE
122000000-E	545	50	TON	INCIDENTAL STONE BASE
148900000-E	610	160	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
152500000-E	610	165	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
157500000-E	620	19	TON	ASPHALT BINDER FOR PLANT MIX
202200000-E	815	22.4	CY	SUBDRAIN EXCAVATION
203300000-E	815	16.8	CY	SUBDRAIN FINE AGGREGATE
204400000-E	815	100	LF	6" PERFORATED SUBDRAIN PIPE
207000000-N	815	1	EA	SUBDRAIN PIPE OUTLET
207700000-E	815	6	LF	6" OUTLET PIPE
255600000-E	846	35	LF	SHOULDER BERM GUTTER
303000000-E	862	50	LF	STEEL BM GUARDRAIL

ItemNumber	Sec #	Quantity	Unit	Description
304500000-E	862	75	LF	STEEL BM GUARDRAIL, SHOP CURVED
315000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
316500000-N	SP	3	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** (350 TL-2)
319500000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE AT-1
321500000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III
365600000-E	876	585	SY	GEOTEXTILE FOR DRAINAGE
440000000-E	1110	315	SF	WORK ZONE SIGNS (STATIONARY)
441000000-E	1110	114	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
443000000-N	1130	16	EA	DRUMS
444500000-E	1145	96	LF	BARRICADES (TYPE III)
481000000-E	1205	3,692	LF	PAINT PAVEMENT MARKING LINES (4")
588200000-N	SP	1	EA	GENERIC UTILITY ITEM RELOCATE 1" WATERLINE
600000000-E	1605	1,200	LF	TEMPORARY SILT FENCE
600600000-E	1610	270	TON	STONE FOR EROSION CONTROL, CLASS A
600900000-E	1610	20	TON	STONE FOR EROSION CONTROL, CLASS B
601200000-E	1610	90	TON	SEDIMENT CONTROL STONE
601500000-E	1615	0.5	ACR	TEMPORARY MULCHING
601800000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
602100000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
602400000-E	1622	100	LF	TEMPORARY SLOPE DRAINS
602900000-E	SP	100	LF	SAFETY FENCE
603000000-E	1630	60	CY	SILT EXCAVATION
603600000-E	1631	800	SY	MATting FOR EROSION CONTROL
603700000-E	SP	270	SY	COIR FIBER MAT
604200000-E	1632	115	LF	1/4" HARDWARE CLOTH

ItemNumber	Sec #	Quantity	Unit	Description
607000000-N	1639	2	EA	SPECIAL STILLING BASINS
6071010000-E	SP	60	LF	WATTLE
6071020000-E	SP	20	LB	POLYACRYLAMIDE (PAM)
6084000000-E	1660	0.5	ACR	SEEDING & MULCHING
6087000000-E	1660	0.2	ACR	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	0.25	TON	FERTILIZER TOPDRESSING
6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	16	EA	RESPONSE FOR EROSION CONTROL

5/28/99

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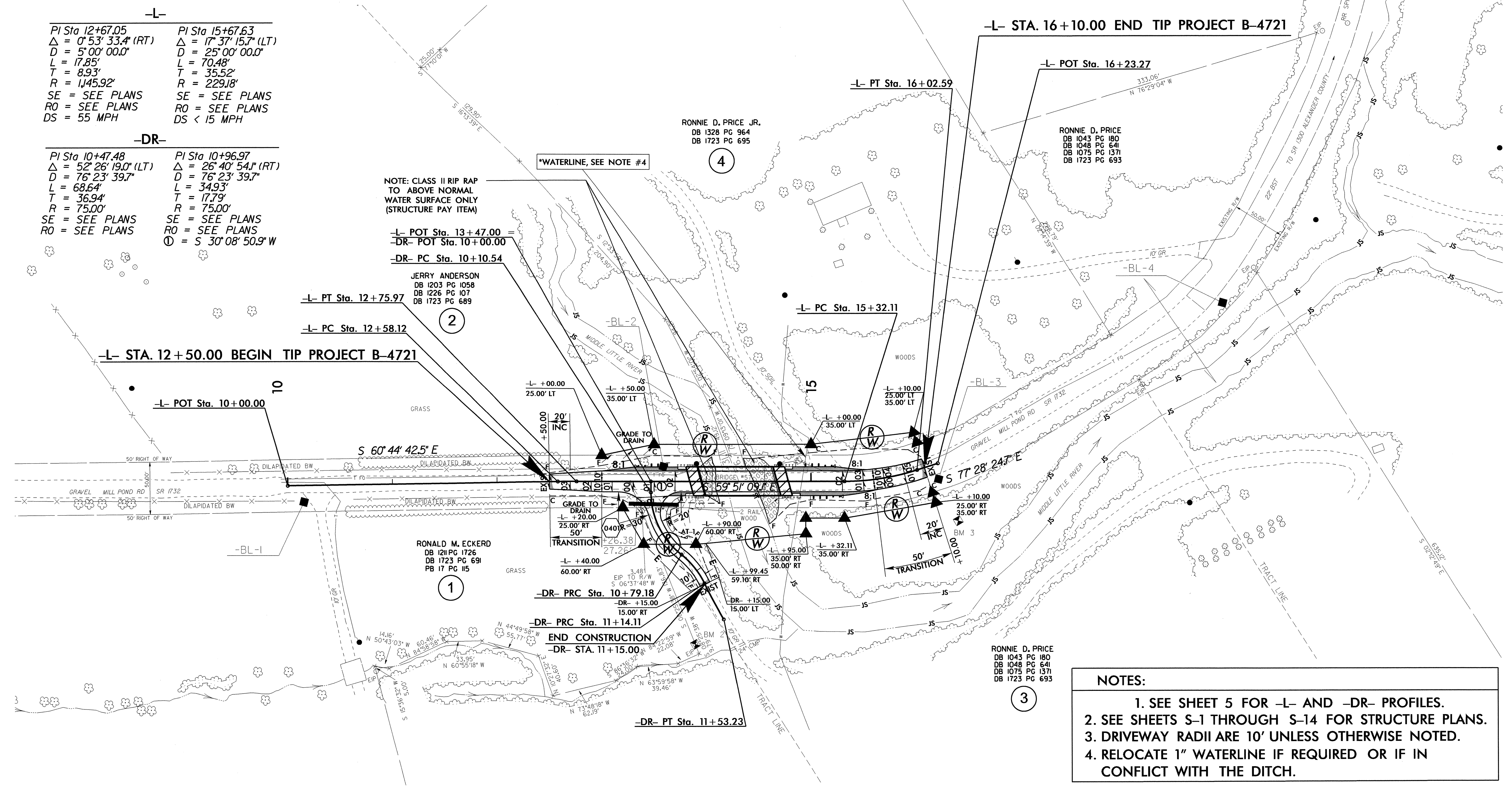


-L-

PI Sta 12+67.05 Δ = 0° 53' 33.4" (RT) D = 5° 00' 00.0" L = 17.85' T = 8.93' R = 1,145.92' SE = SEE PLANS RO = SEE PLANS DS = 55 MPH	PI Sta 15+67.63 Δ = 17° 37' 15.7" (LT) D = 25° 00' 00.0" L = 70.48' T = 35.52' R = 229.18' SE = SEE PLANS RO = SEE PLANS DS < 15 MPH
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-DR-

PI Sta 10+47.48 Δ = 52° 26' 19.0" (LT) D = 76° 23' 39.7" L = 68.64' T = 36.94' R = 75.00' SE = SEE PLANS RO = SEE PLANS	PI Sta 10+96.97 Δ = 26° 40' 54.1" (RT) D = 76° 23' 39.7" L = 34.93' T = 17.79' R = 75.00' SE = SEE PLANS RO = SEE PLANS ⊙ = S 30° 08' 50.9" W
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REVISIONS

8/17/09

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-L-

-DR-

PROJECT REFERENCE NO. B-4721	SHEET NO. 5
ROADWAY DESIGN ENGINEER TATIA L. WHITE	HYDRAULICS ENGINEER KAREN H. GULLIG
SEAL 24641	SEAL 31025
DATE: 5/23/13	

BRIDGE HYDRAULIC DATA

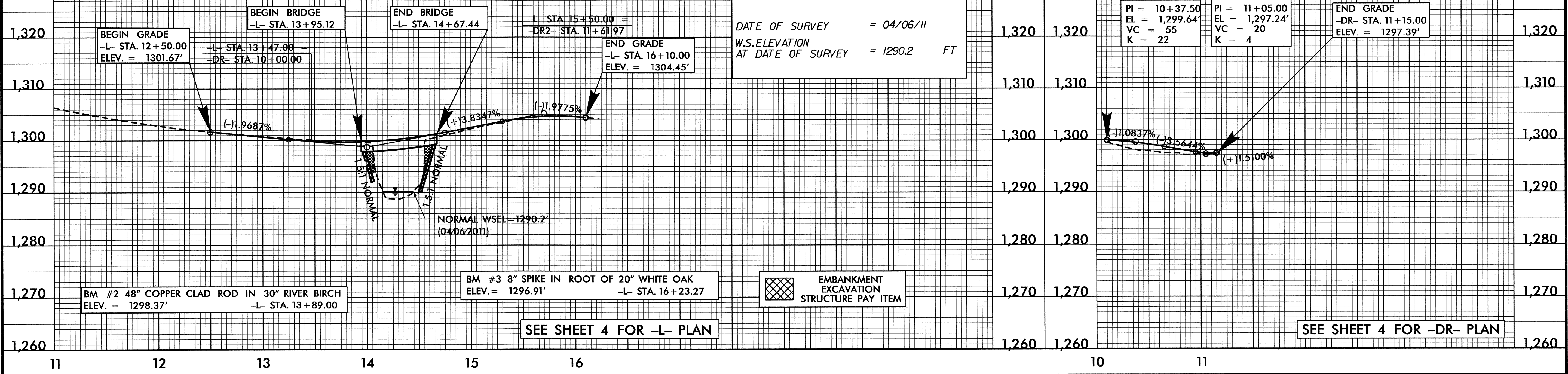
DESIGN DISCHARGE = 2,100 CFS
 DESIGN FREQUENCY = 25 YRS
 DESIGN HW ELEVATION = 1299.7 FT
 BASE DISCHARGE = 3,000 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 1300.9 FT
 OVERTOPPING DISCHARGE = 2,100 CFS
 OVERTOPPING FREQUENCY = 25 YRS
 OVERTOPPING ELEVATION = 1299.7 FT

DATE OF SURVEY = 04/06/11
 W.S. ELEVATION AT DATE OF SURVEY = 1290.2 FT

PROPOSED 1 SPAN CORED SLAB BRIDGE
 1@70'
 CL STA -L- 14+31.00
 DEPTH = 24"
 SKEW = 75°

PI = 14+00.00
 EL = 1,298.72'
 VC = 150'
 K = 26
 V = 25 MPH

PI = 15+70.00
 EL = 1,305.24'
 VC = 80'
 K = 14
 V = 27 MPH



BM #2 48" COPPER CLAD ROD IN 30" RIVER BIRCH
 ELEV. = 1298.37'
 -L- STA. 13+89.00

BM #3 8" SPIKE IN ROOT OF 20" WHITE OAK
 ELEV. = 1296.91'
 -L- STA. 16+23.27

EMBANKMENT EXCAVATION STRUCTURE PAY ITEM

SEE SHEET 4 FOR -L- PLAN

SEE SHEET 4 FOR -DR- PLAN

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 \$\$\$SUSANMAYHEM\$\$\$