

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

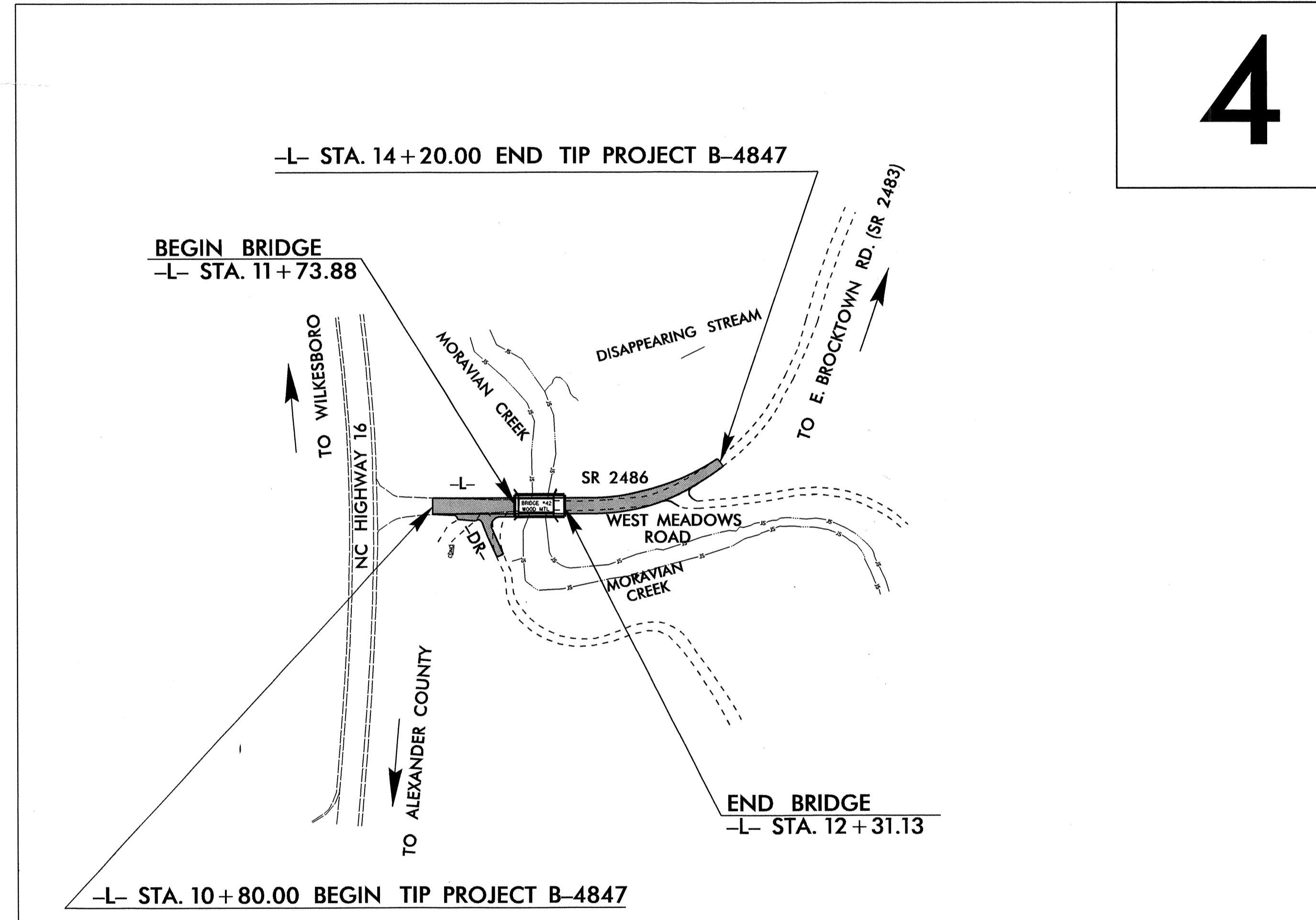
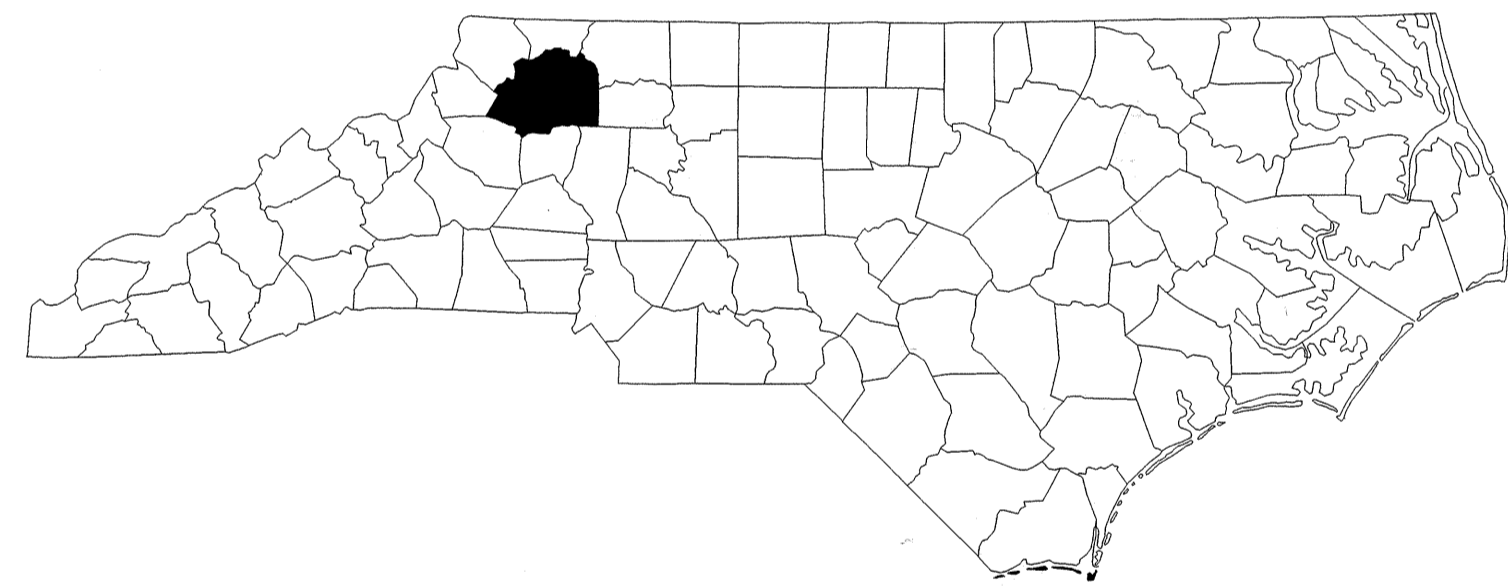
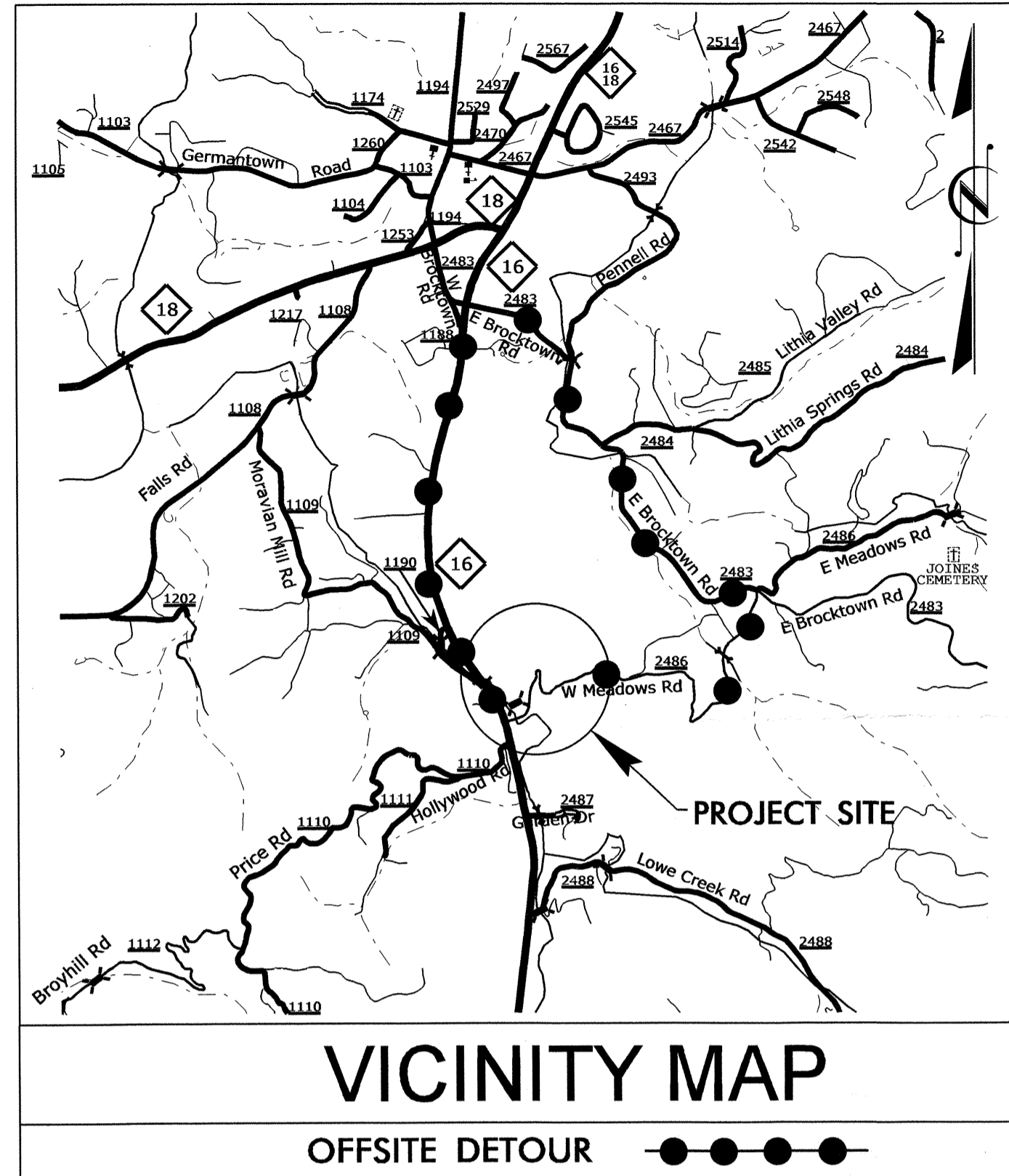
**WILKES COUNTY**

**LOCATION: REPLACE BRIDGE NO. 42 OVER MORAVIAN CREEK ON SR 2486**  
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE**

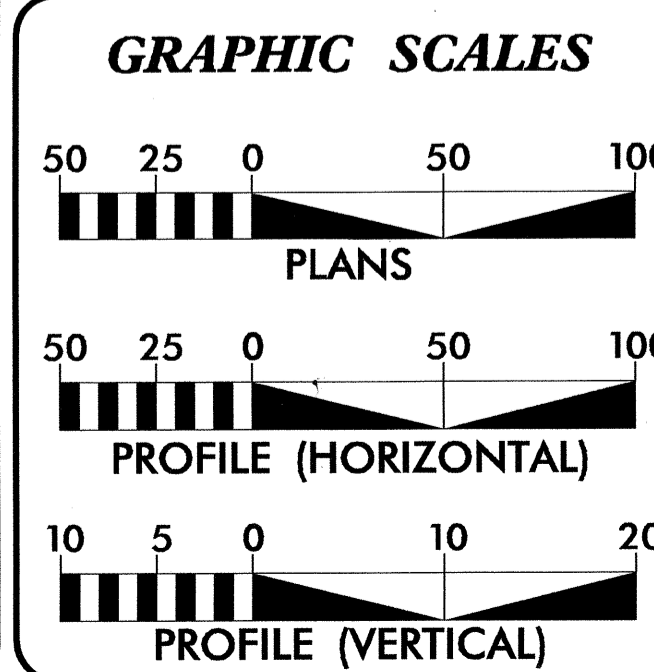
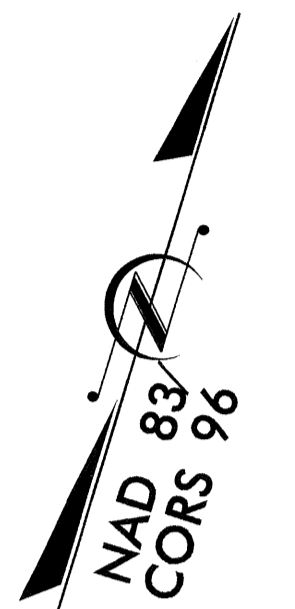
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4847	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
38617.1.1	BRZ-2486(1)	P.E.	
38617.2.1	BRZ-2486(1)	RW & UTL.	
38617.3.1	BRZ-2486(1)	CONST.	

**TIP PROJECT: B-4847**

**CONTRACT: C203029**



**4**



**DESIGN DATA**

ADT 2013 = <100  
ADT 2035 = 100  
DHV = 22 %  
D = 55 %  
T = 21 % \*  
V = 30 MPH \*\*  
\* (TTST 1% + DUAL 20%)  
FUNC CLASS =  
RURAL LOCAL  
SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4847 = 0.053 MI  
LENGTH STRUCTURE TIP PROJECT B-4847 = 0.011 MI  
TOTAL LENGTH TIP PROJECT B-4847 = 0.064 MI

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

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
DECEMBER 19, 2011

**LETTING DATE:**  
JANUARY 15, 2013

**GARY LOVERING, PE**  
PROJECT ENGINEER

**SUSAN C. LANCASTER, PE**  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

*Any A. Billings*  
SIGNATURE: ANY A. BILLINGS  
10/29/12  
P.E.

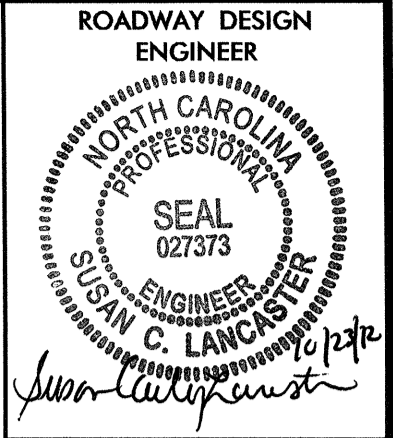
**ROADWAY DESIGN ENGINEER**

*Susan C. Lancaster*  
SIGNATURE: SUSAN C. LANCASTER  
10/29/12  
P.E.

Professional Engineer Seals for Any A. Billings (Seal 20328) and Susan C. Lancaster (Seal 027373).

**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**

22-OCT-2012 10:59  
R:\Roadway\Proj\B4847\_Rdy\_tsh.dgn  
\$\$\$\$\$USERNAME\$\$\$\$\$



INDEX OF SHEETS:

1	TITLE SHEET
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2-A	TYPE III - SHOP CURVED STRUCTURE ANCHOR UNIT
3	SUMMARY OF QUANTITIES
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PMP-1 THROUGH PMP-2	PAVEMENT MARKING PLANS
EC-1 THROUGH EC-5	EROSION CONTROL PLANS
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S-1 THROUGH S-15	STRUCTURE PLANS

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 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
862.03	Structure Anchor Units

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.

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

Telephone - Century Link

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 OTHERS.

04/16/11

Note: Not to Scale

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

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.  
B-4847 1-B

# CONVENTIONAL PLAN SHEET SYMBOLS

## BOUNDARIES AND PROPERTY:

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

## BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○ 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	○ 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 R/W Marker	○ RW ▲
Proposed Control of Access Line with Concrete C/A 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	-----

## 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	○ S
Storm Sewer	---

## UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	○ P
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	○ T
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	○ W
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

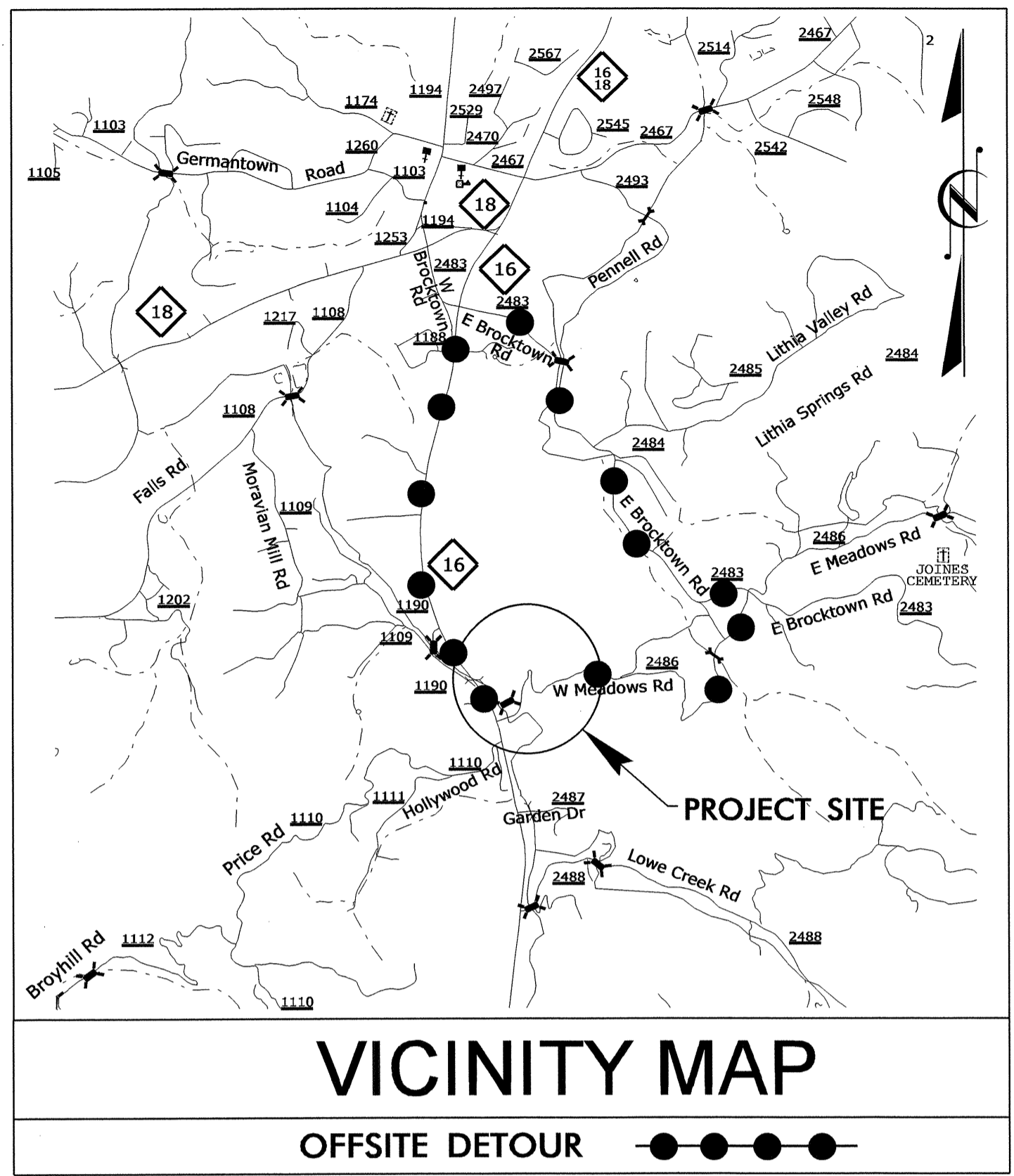
## SANITARY SEWER:

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-4847



BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
B48472	GPS B4847-2	851891.0160	1356537.6960	1231.31	10+26.02	25.27 RT
BL2	BL-2	851973.8950	1356747.3980	1212.98	12+50.82	7.65 RT
BL3	BL-3	852099.3840	1356915.1460	1223.76	OUTSIDE PROJECT LIMITS	
BL4	BL-4	852311.1667	1356947.5693	1245.59	OUTSIDE PROJECT LIMITS	

BY POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
B48472	GPS B4847-2	851891.0160	1356537.6960	1231.31	10+26.02	25.27 RT
B48471	GPS B4847-1	851199.0630	1356648.1900	1236.11	OUTSIDE PROJECT LIMITS	

\*\*\*\*\*  
 BM1 ELEVATION = 1230.10      BM2 ELEVATION = 1208.68      BM3 ELEVATION = 1256.11  
 N 851708    E 1356533      N 851874    E 1356810      N 852344    E 1356963  
 OUTSIDE PROJECT LIMITS      L STATION 12+75.00 122 RIGHT      OUTSIDE PROJECT LIMITS  
 CHISELED SQUARE ON THE SOUTH WEST CORNER OF A CONCRETE HEADWALL      8" SPIKE IN ROOT OF 12" SYCAMORE      8" SPIKE IN ROOT OF 30" WHITE PINE  
 \*\*\*\*\*

**BEGIN TIP PROJECT B-4847**  
 -L- STA. 10+80.00  
 N = 851931.0271  
 E = 1356581.8664

**NC DOT GPS STATION B4847-2 LOCALIZED COORDINATES**  
 N = 851891.0162  
 E = 1356537.6969

**DATUM DESCRIPTION**

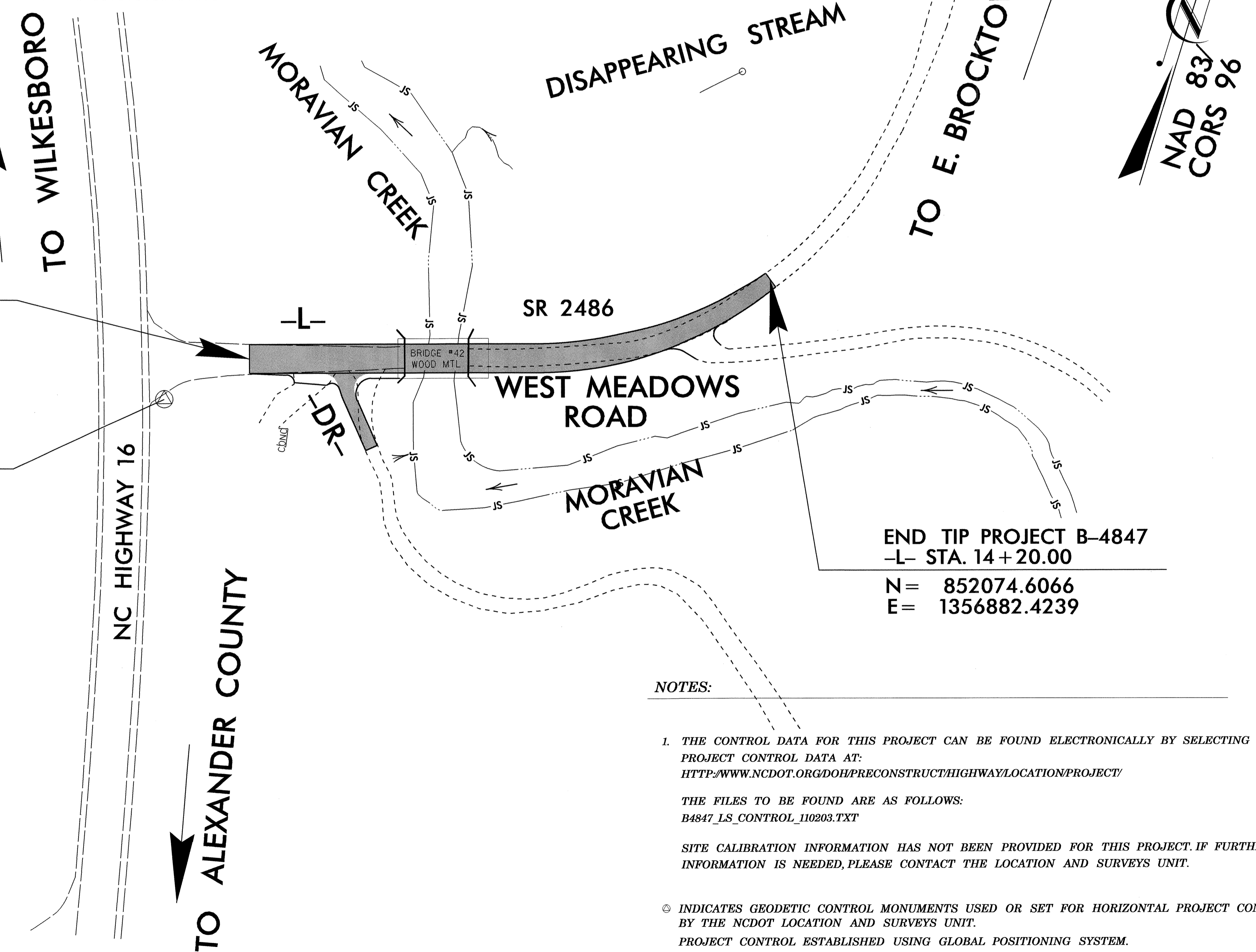
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4847-2" WITH NAD 83/CORS 96 STATE PLANE GRID COORDINATES OF NORTHING: 851891.0160(±) EASTING: 1356537.6960(±) ELEVATION: 1231.31(±)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999207963

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4847-2" TO -L- STATION 10+80.00 IS  
 N 47° 49' 43" E 59.60'

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

**NC DOT GPS STATION B4847-1 LOCALIZED COORDINATES**  
 N = 851199.0630  
 E = 1356648.1900



- NOTES:**
- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:  
[HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/)  
 THE FILES TO BE FOUND ARE AS FOLLOWS:  
 B4847\_LS\_CONTROL\_110203.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.  
 SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

NOTE: DRAWING NOT TO SCALE

16-OCT-2002 11:37 P:\V\cc\con\surveys\B4847\_1s\_1-c.dgn

# SURVEY CONTROL SHEET B-4847

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	851907.5246	1356505.3966
PC	12+60.88	851984.1672	1356754.7681
PT	14+18.45	852073.3630	1356881.4934
POT	14+20.00	852074.6066	1356882.4239

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+80.50	30.00	851902.4982	1356591.1591
L	10+85.33	-30.00	851961.2687	1356578.1464
L	12+60.88	30.00	851955.4910	1356763.5815
L	12+60.88	-30.00	852012.8434	1356745.9547
L	14+18.45	30.00	852055.3903	1356905.5138
L	14+18.45	-30.00	852091.3357	1356857.4729
L	14+20.00	15.00	852065.6203	1356894.4341
L	14+20.00	-15.00	852083.5930	1356870.4137

### DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4847-2"

WITH NAD 83/CORS 96 STATE PLANE GRID COORDINATES OF  
 NORTHING: 851891.0160(±) EASTING: 1356537.6960(±)  
 ELEVATION: 1231.31(±)

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 N 47°49'43" E 59.60'

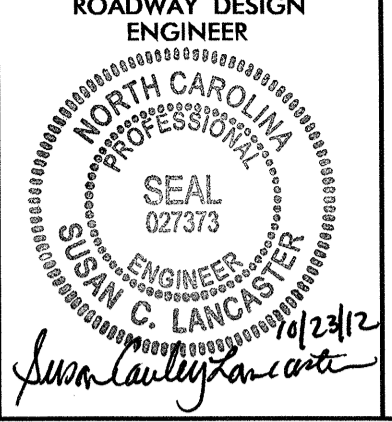
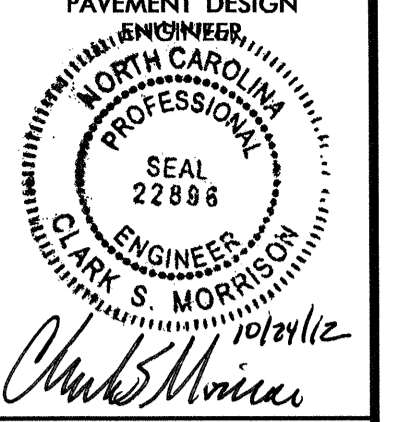
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
 VERTICAL DATUM USED IS NAVD 88

### NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:  
[HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/doh/preconstruct/highway/location/project/)  
 THE FILES TO BE FOUND ARE AS FOLLOWS:  
 B4847\_LS\_CONTROL\_110203.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.  
 SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

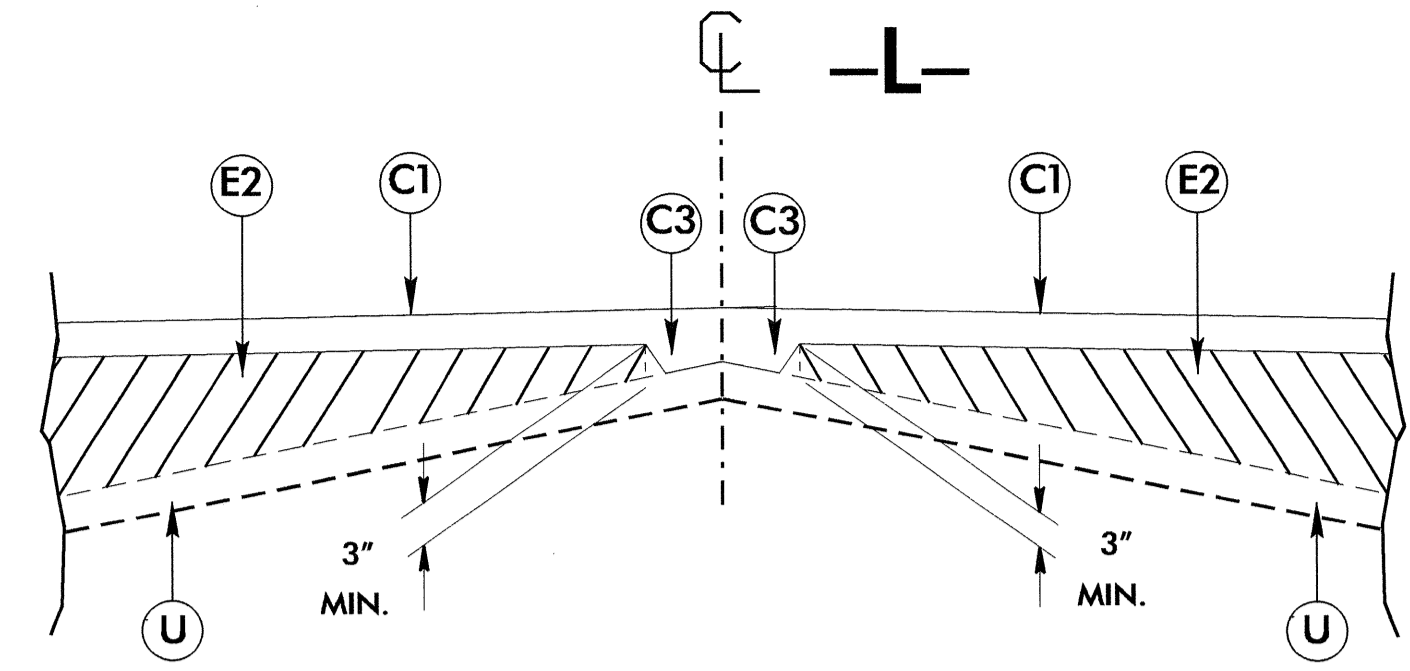
## FINAL TABLES

6/2/99

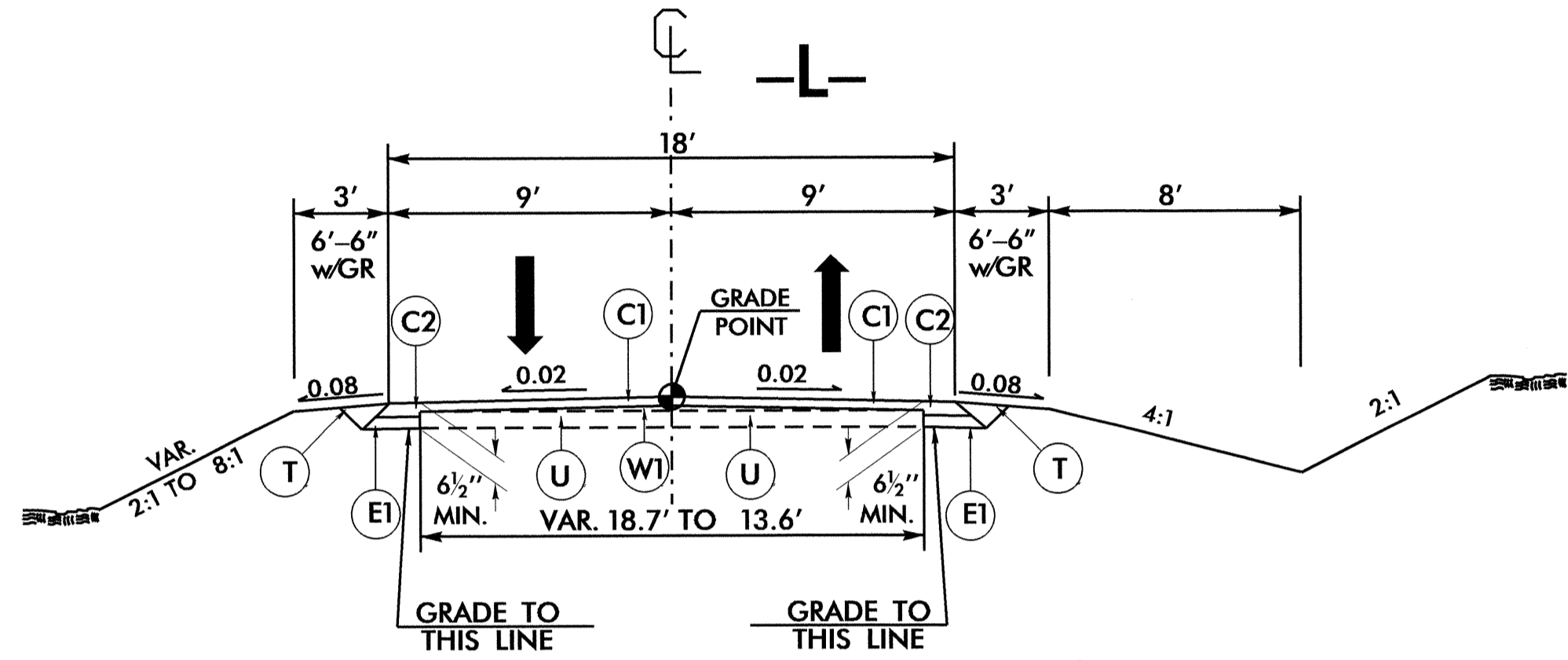
PROJECT REFERENCE NO. <b>B-4847</b>	SHEET NO. <b>2</b>
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	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.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0, 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 1/2" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W1	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE DETAIL SHOWING METHOD OF WEDGING).
W2	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE DETAIL SHOWING METHOD OF WEDGING ON BRIDGE).

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



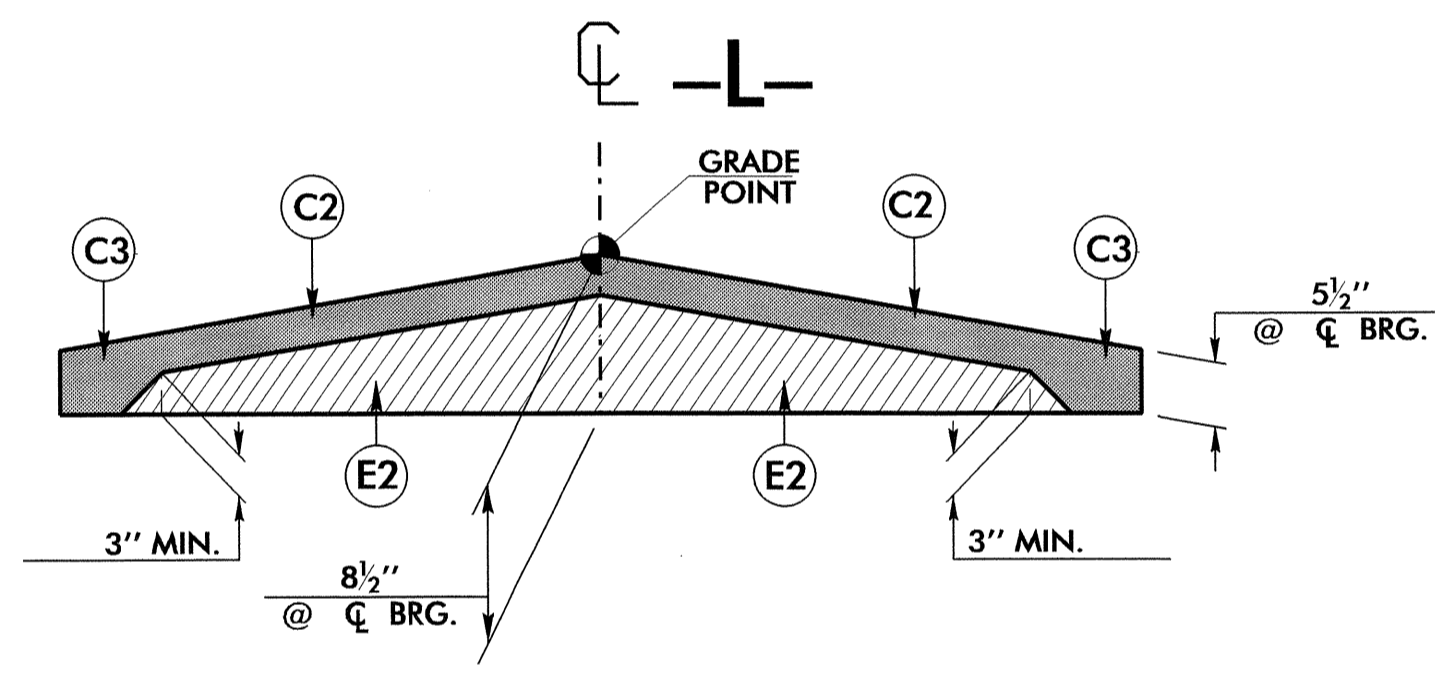
DETAIL SHOWING METHOD OF WEDGING  
USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1



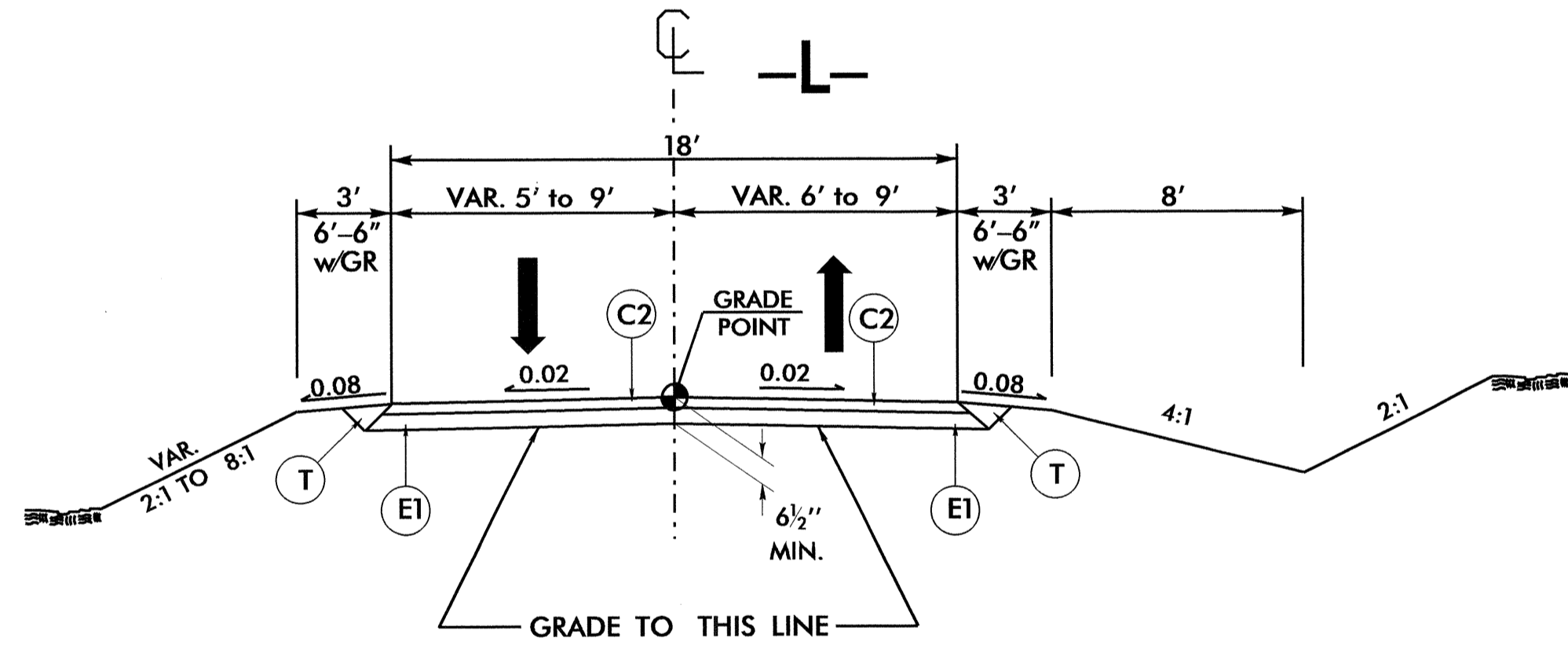
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1  
AT THE FOLLOWING LOCATION:

-L- STA. 10+80.00 TO -L- STA. 11+50.00



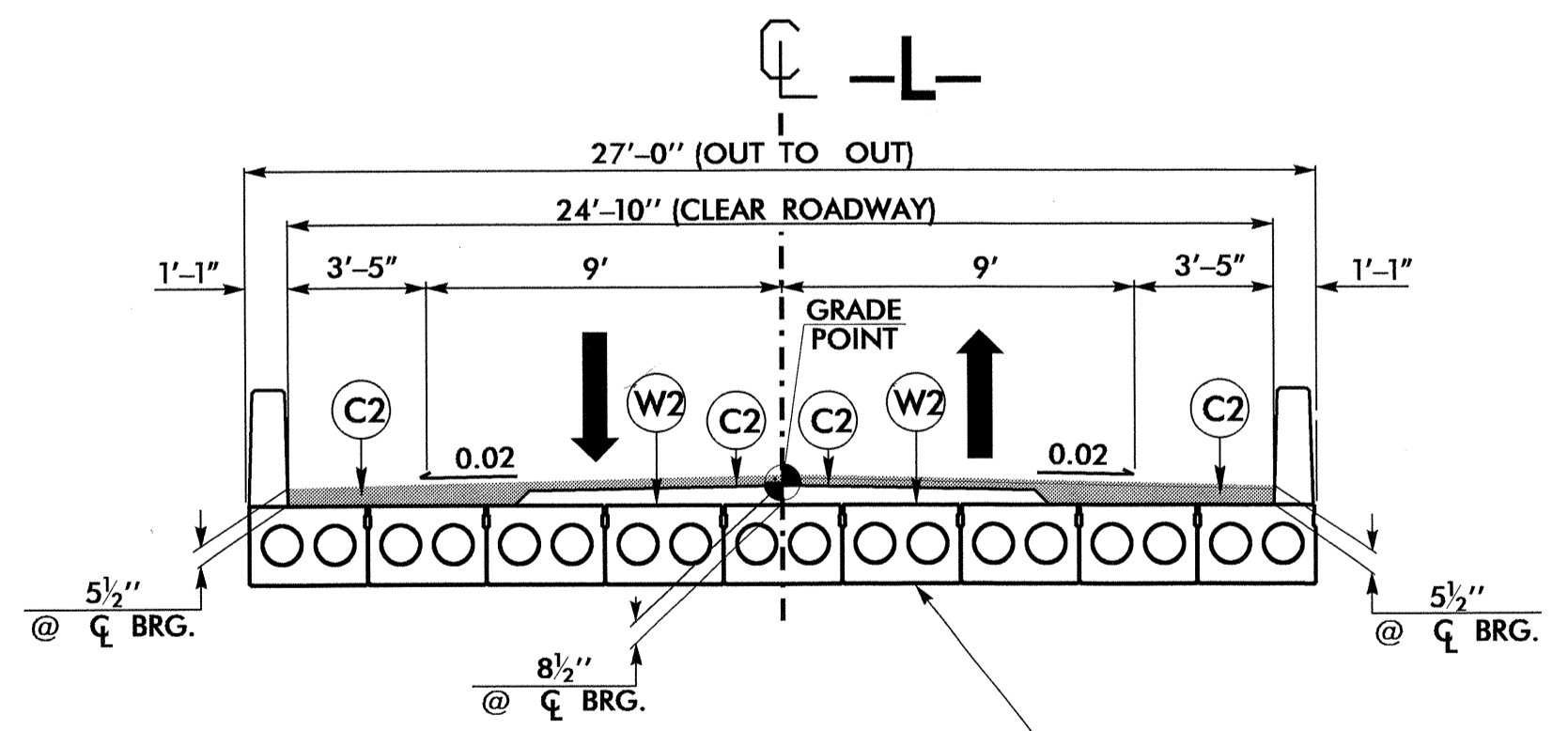
DETAIL SHOWING METHOD OF WEDGING ON BRIDGE  
USE IN CONJUNCTION WITH TYPICAL SECTION NO. 4



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2  
AT THE FOLLOWING LOCATIONS:

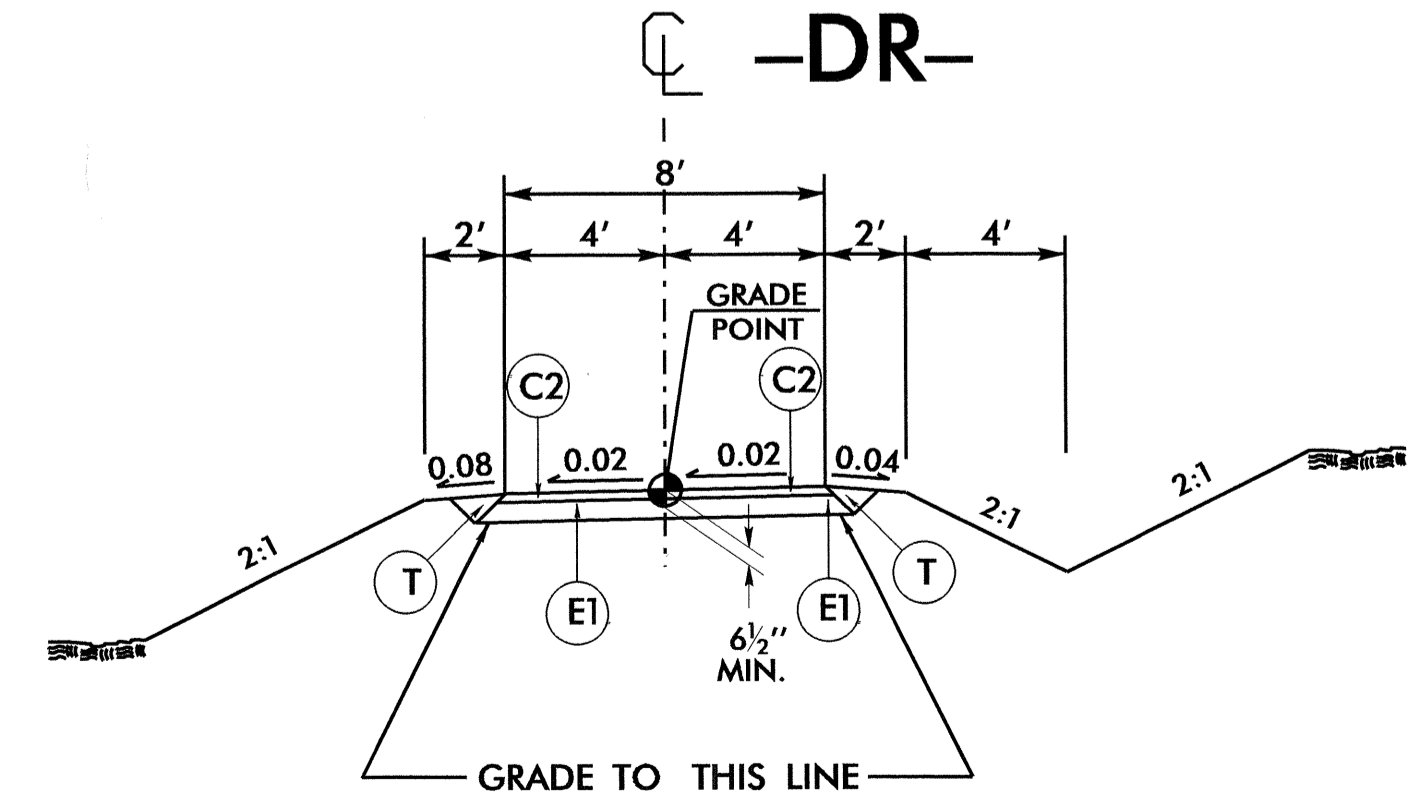
-L- STA. 11+50.00 TO -L- STA. 11+73.88 (BEGIN BRIDGE)  
-L- STA. 12+31.13 (END BRIDGE) TO -L- STA. 14+20.00



TYPICAL SECTION NO. 4  
PROPOSED CORED  
SLAB BRIDGE  
SEE STRUCTURE PLANS

USE TYPICAL SECTION NO. 4  
AT THE FOLLOWING LOCATION:

-L- STA. 11+73.88 (BEGIN BRIDGE) TO  
-L- STA. 12+31.13 (END BRIDGE)



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3  
AT THE FOLLOWING LOCATION:

-DR- STA. 10+09.00 TO -DR- STA. 10+60.00

04-OCT-2012 07:36  
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STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

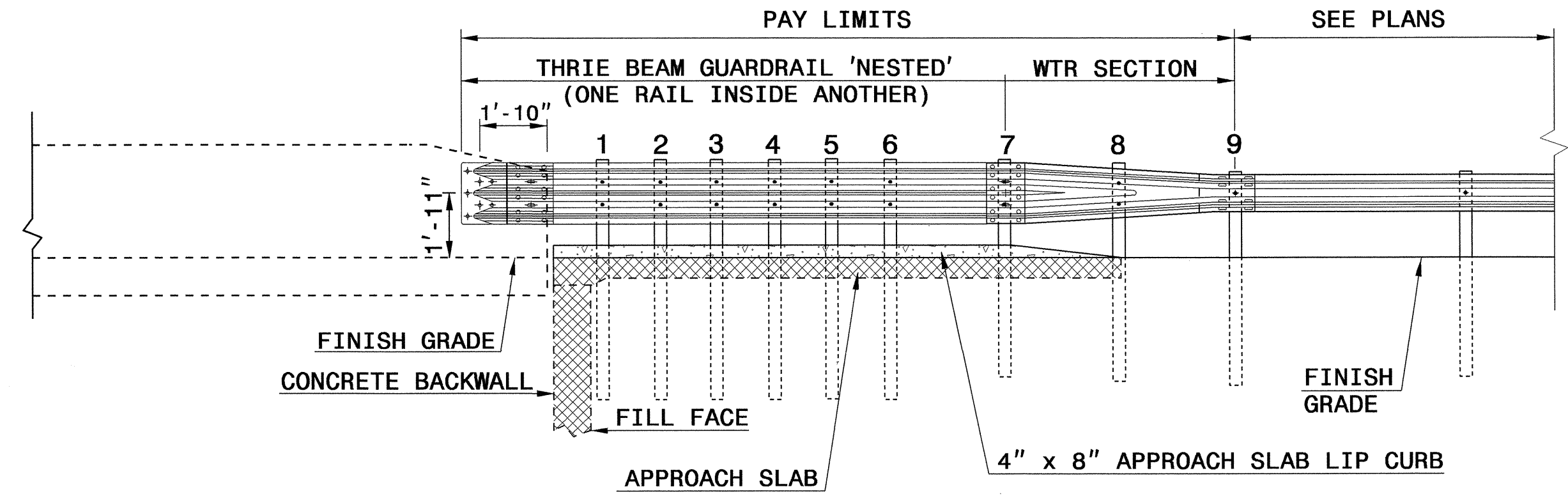
ENGLISH DETAIL DRAWING FOR  
**TYPE III - SHOP CURVED  
STRUCTURE ANCHOR UNIT**

SHEET 1 OF 1  
**TYPE III SC**

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

ENGLISH DETAIL DRAWING FOR  
**TYPE III - SHOP CURVED  
STRUCTURE ANCHOR UNIT**

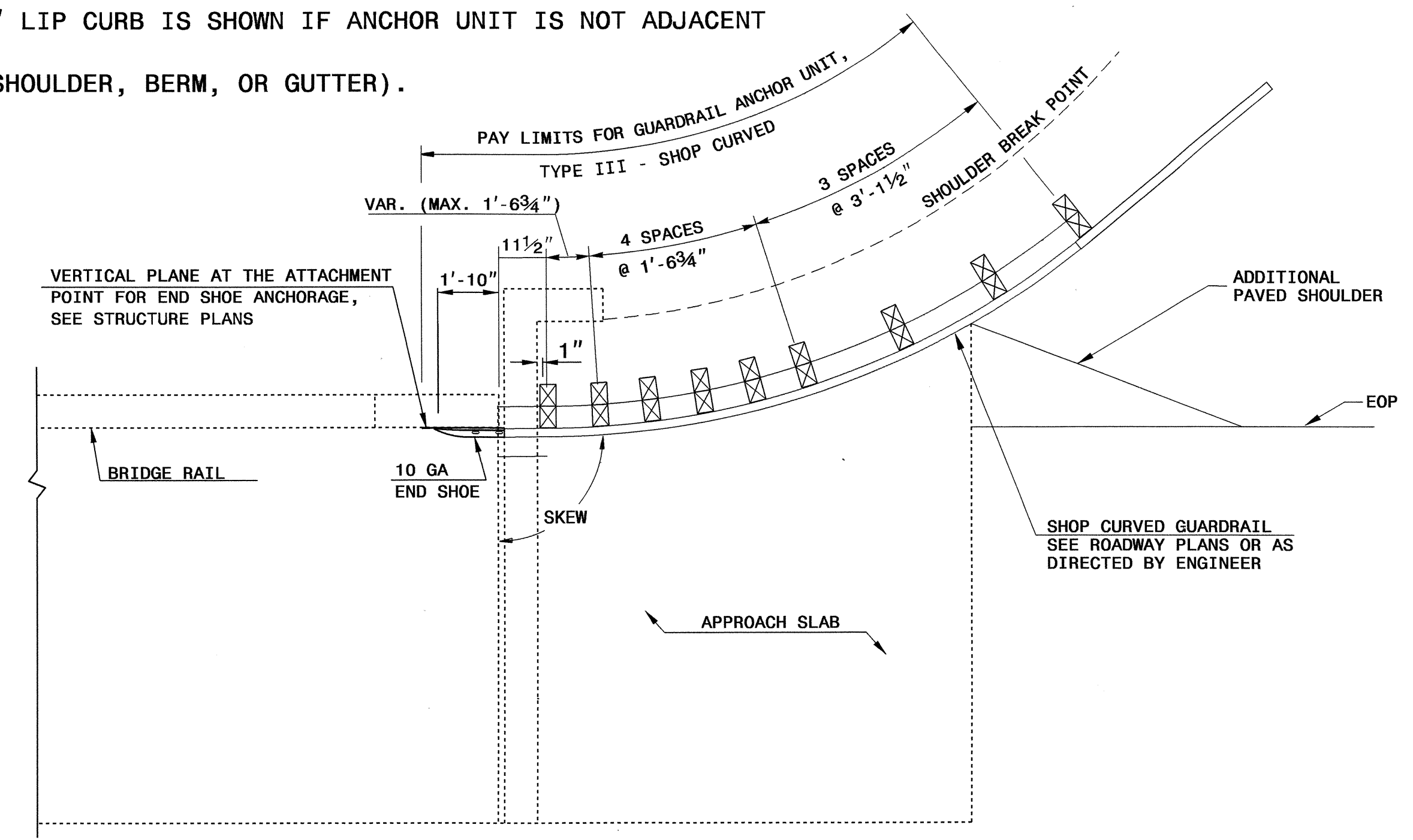
SHEET 1 OF 1  
**TYPE III SC**



**ELEVATION**

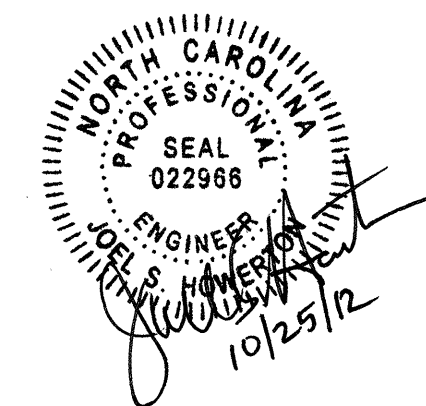
SEE ROADWAY PLANS FOR END TREATMENT

- 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).
  - USE NO STEEL POSTS WITHIN THE GUARDRAIL ANCHOR UNIT LIMITS.
  - LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
  - SEE STANDARD 862.03 SHEET 4 FOR POST SECTIONS 1 THRU 9.



**PLAN VIEW**

**GUARDRAIL ANCHOR UNIT, TYPE III - SHOP CURVED  
FOR ATTACHMENT TO RAIL ON BRIDGE**



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

**SEE PLATE FOR TITLE**

ORIGINAL BY: E.E.Ward DATE: 4-4-02  
MODIFIED BY: T.S.Spell DATE: 5-29-09  
CHECKED BY: J.S. [Signature] DATE: 10/3/12  
FILE SPEC.: ward:\usr\details\stand\862stds\typeiiisc.dgn

5/14/99

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**SUMMARY OF QUANTITIES**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203029

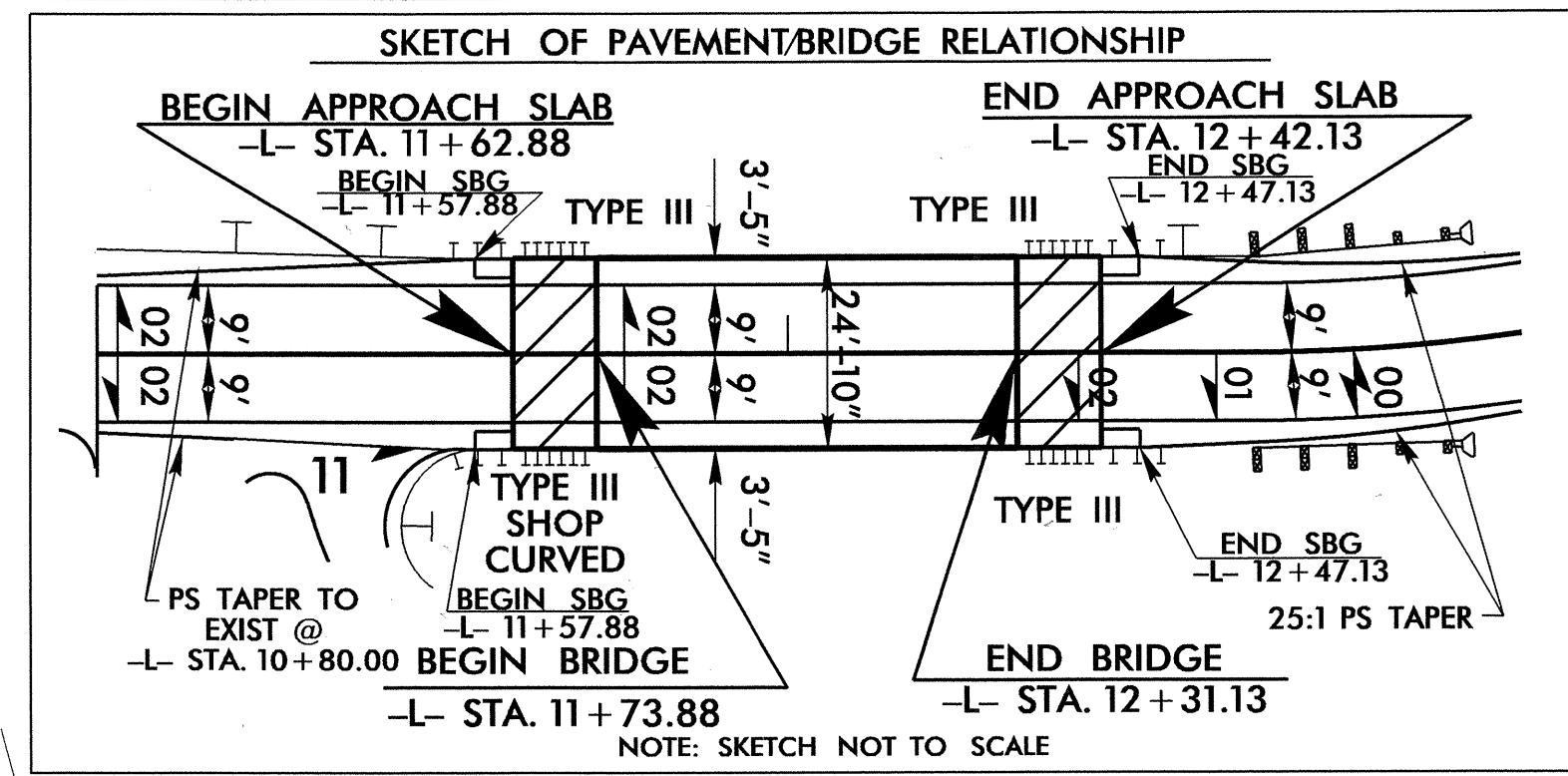
ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION	319500000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE AT-1
003000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (12+02.50 -L-)	321500000-N	862	3	EA	GUARDRAIL ANCHOR UNITS, TYPE III
004300000-N	226	Lump Sum		GRADING	365600000-E	876	490	SY	GEOTEXTILE FOR DRAINAGE
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING	440000000-E	1110	375	SF	WORK ZONE SIGNS (STATIONARY)
005700000-E	226	100	CY	UNDERCUT EXCAVATION	441000000-E	1110	73	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
019500000-E	265	100	CY	SELECT GRANULAR MATERIAL	443000000-N	1130	27	EA	DRUMS
019600000-E	270	100	SY	GEOTEXTILE FOR SOIL STABILIZATION	445000000-E	1145	72	LF	BARRICADES (TYPE III)
109950000-E	305	75	CY	SHALLOW UNDERCUT	481000000-E	1205	2,721	LF	PAINT PAVEMENT MARKING LINES (4")
109970000-E	305	125	TON	CLASS IV SUBGRADE STABILIZATION	600000000-E	1605	900	LF	TEMPORARY SILT FENCE
122000000-E	545	50	TON	INCIDENTAL STONE BASE	606000000-E	1610	160	TON	STONE FOR EROSION CONTROL, CLASS A
148900000-E	610	130	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	609000000-E	1610	40	TON	STONE FOR EROSION CONTROL, CLASS B
152500000-E	610	110	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A	601200000-E	1610	85	TON	SEDIMENT CONTROL STONE
157500000-E	620	15	TON	ASPHALT BINDER FOR PLANT MIX	601500000-E	1615	0.5	ACR	TEMPORARY MULCHING
202200000-E	815	22.4	CY	SUBDRAIN EXCAVATION	601800000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
203300000-E	815	16.8	CY	SUBDRAIN FINE AGGREGATE	602100000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
204400000-E	815	100	LF	6" PERFORATED SUBDRAIN PIPE	602400000-E	1622	100	LF	TEMPORARY SLOPE DRAINS
207000000-N	815	1	EA	SUBDRAIN PIPE OUTLET	602900000-E	SP	100	LF	SAFETY FENCE
207700000-E	815	6	LF	6" OUTLET PIPE	603000000-E	1630	60	CY	SILT EXCAVATION
255600000-E	846	22	LF	SHOULDER BERM GUTTER	603600000-E	1631	1,500	SY	MATTING FOR EROSION CONTROL
303000000-E	862	87.5	LF	STEEL BM GUARDRAIL	603700000-E	SP	125	SY	COIR FIBER MAT
304500000-E	862	25	LF	STEEL BM GUARDRAIL, SHOP CURVED	603800000-E	SP	200	SY	PERMANENT SOIL REINFORCEMENT MAT
315000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS	604200000-E	1632	190	LF	1/4" HARDWARE CLOTH
316500000-N	SP	2	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** (350, TL-2)	607000000-N	1639	2	EA	SPECIAL STILLING BASINS
318000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** (III - SHOP CURVED)	607101000-E	SP	65	LF	WATTLE
					607102000-E	SP	10	LB	POLYACRYLAMIDE (PAM)
					608400000-E	1660	0.5	ACR	SEEDING & MULCHING
					608700000-E	1660	0.5	ACR	MOWING
					609000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
					609300000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
					609600000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
					610800000-E	1665	0.5	TON	FERTILIZER TOPDRESSING
					611450000-N	1667	10	MHR	SPECIALIZED HAND MOWING
					611700000-N	SP	15	EA	RESPONSE FOR EROSION CONTROL

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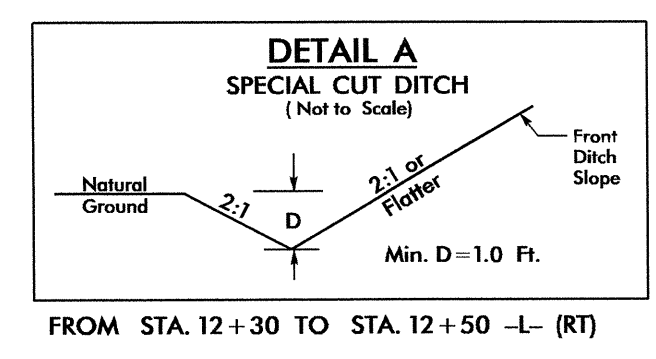
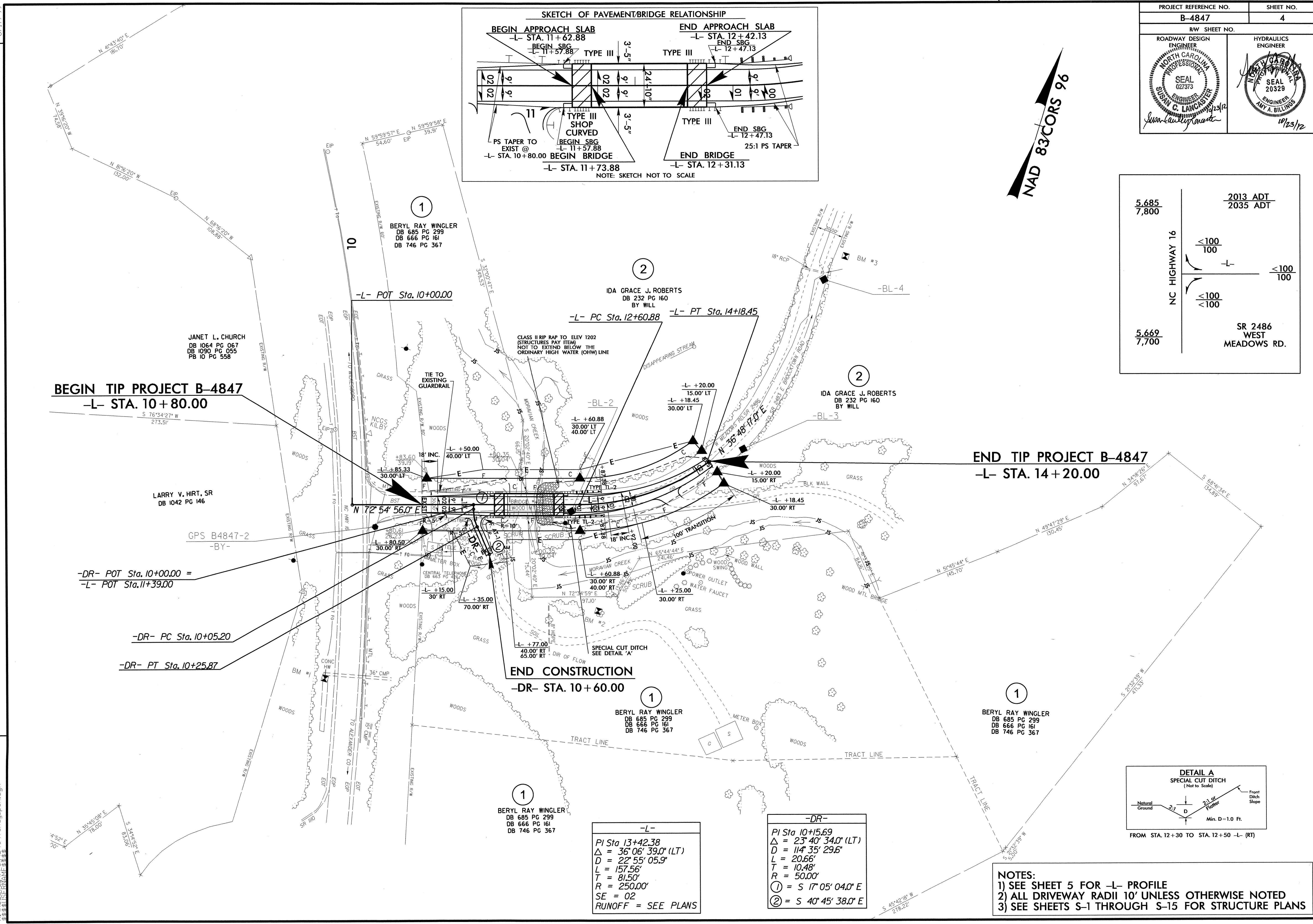
**NAD 83 CORRS 96**

5.685 7,800	2013 ADT	2035 ADT
	<100 100	<100 100
NC HIGHWAY 16		
SR 2486 WEST MEADOWS RD.		
5.669 7,700		

REVISIONS

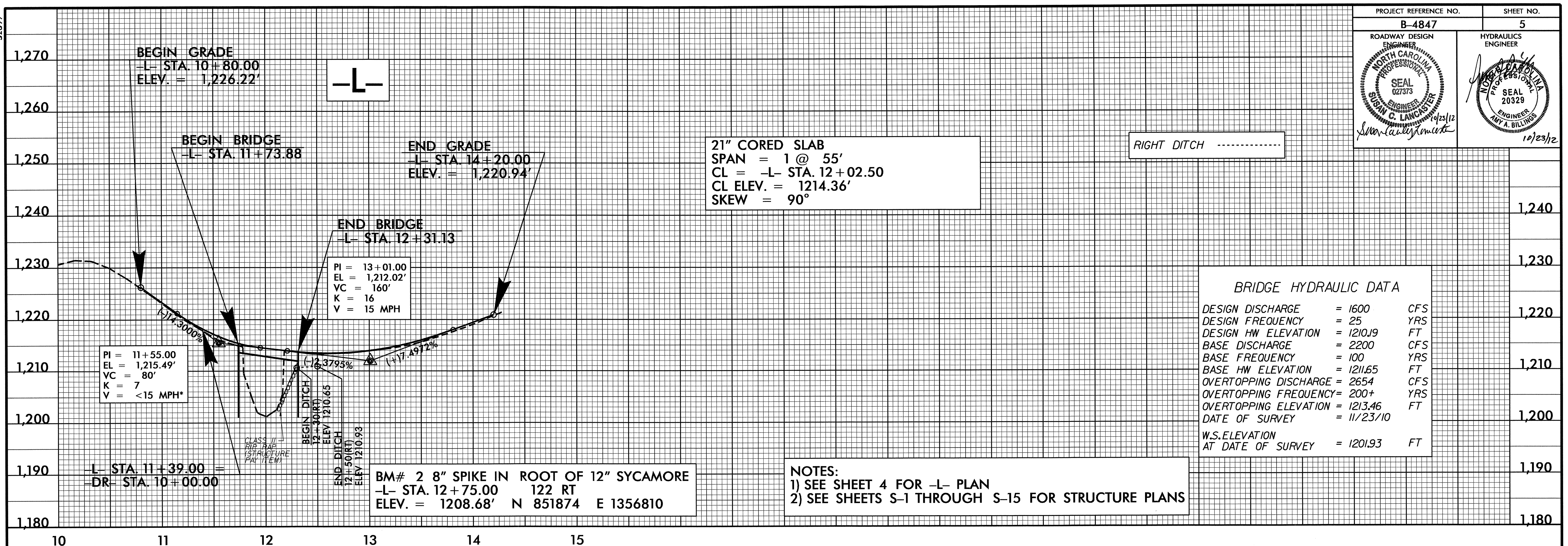
**BEGIN TIP PROJECT B-4847**  
-L- STA. 10+80.00

**END TIP PROJECT B-4847**  
-L- STA. 14+20.00



**NOTES:**  
 1) SEE SHEET 5 FOR -L- PROFILE  
 2) ALL DRIVEWAY RADII 10' UNLESS OTHERWISE NOTED  
 3) SEE SHEETS S-1 THROUGH S-15 FOR STRUCTURE PLANS

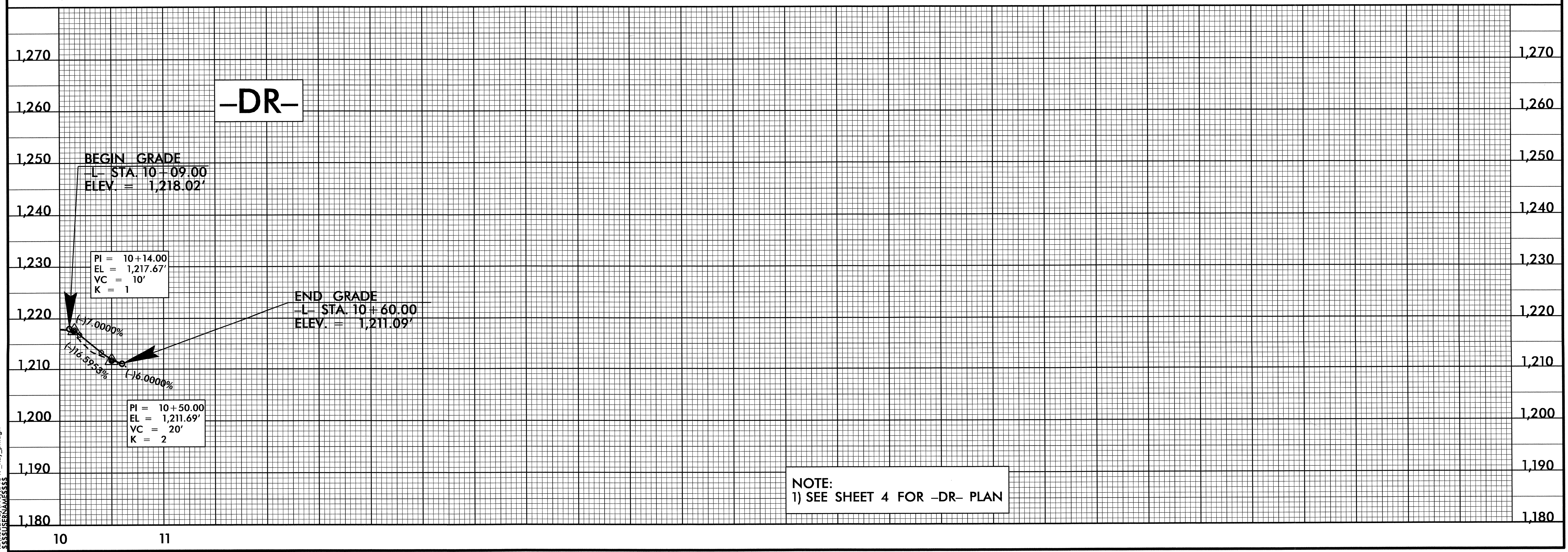
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 13:43:07 PERMANENT



**BRIDGE HYDRAULIC DATA**

DESIGN DISCHARGE	= 1600	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 1210.19	FT
BASE DISCHARGE	= 2200	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1211.65	FT
OVERTOPPING DISCHARGE	= 2654	CFS
OVERTOPPING FREQUENCY	= 200+	YRS
OVERTOPPING ELEVATION	= 1213.46	FT
DATE OF SURVEY	= 11/23/10	
W.S. ELEVATION AT DATE OF SURVEY	= 1201.93	FT

**NOTES:**  
 1) SEE SHEET 4 FOR -L- PLAN  
 2) SEE SHEETS S-1 THROUGH S-15 FOR STRUCTURE PLANS



**NOTE:**  
 1) SEE SHEET 4 FOR -DR- PLAN

52899  
 03-OCT-2012 09:21  
 C:\GIS\PROJ\B-4847\DRY.pfl.dgn