

05/08/99

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

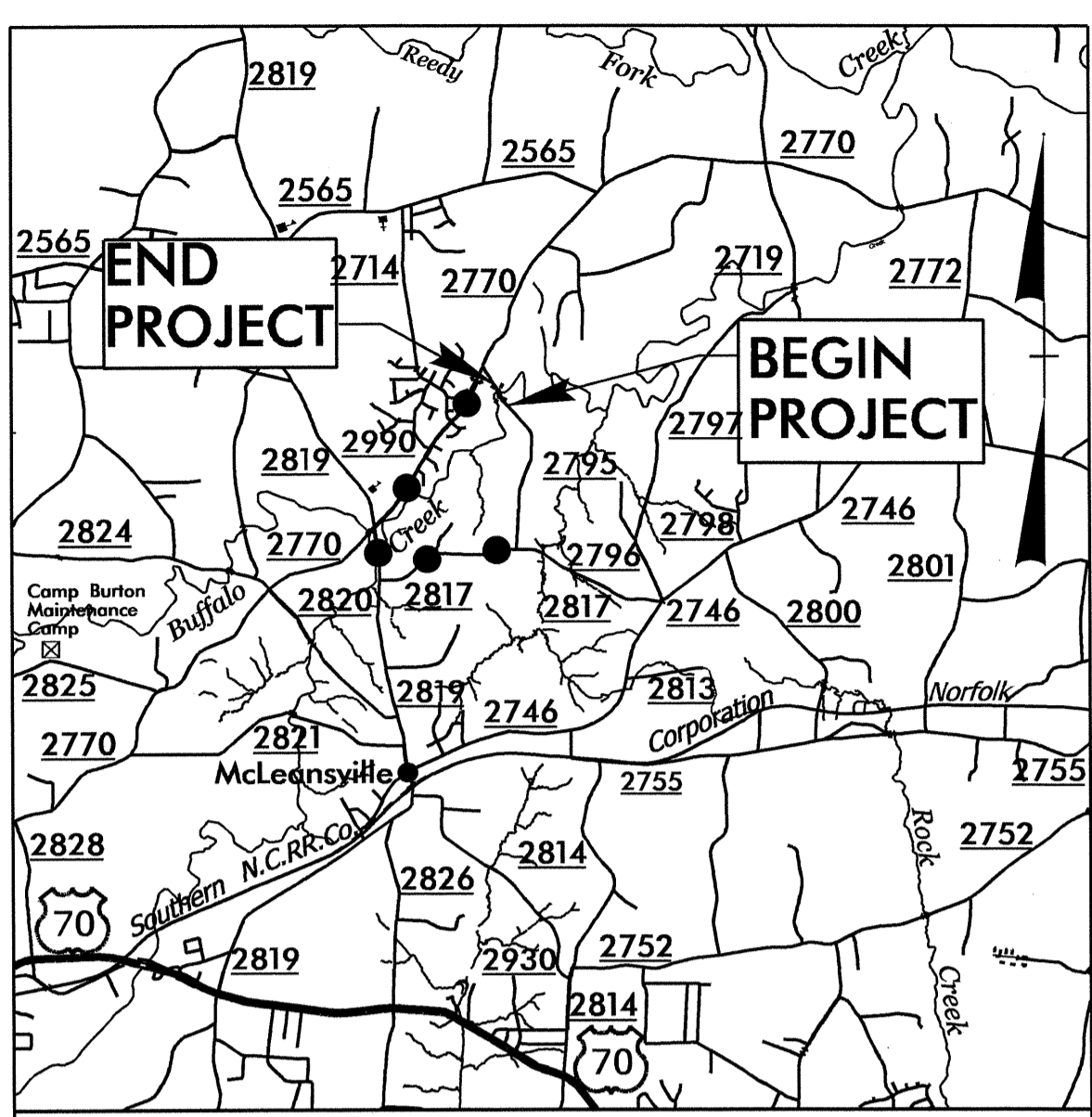
**LOCATION: BRIDGE NO. 175 OVER BUFFALO CREEK ON
SR 2795 (HUFFINE FARM RD.)**

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

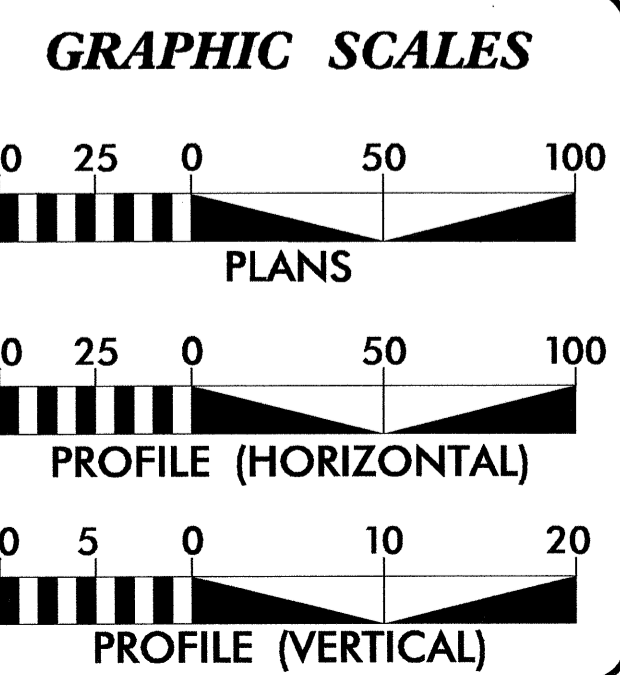
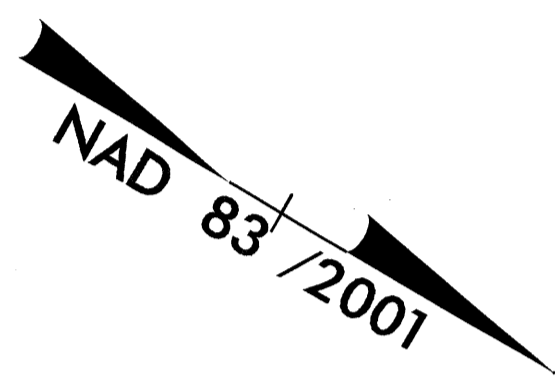
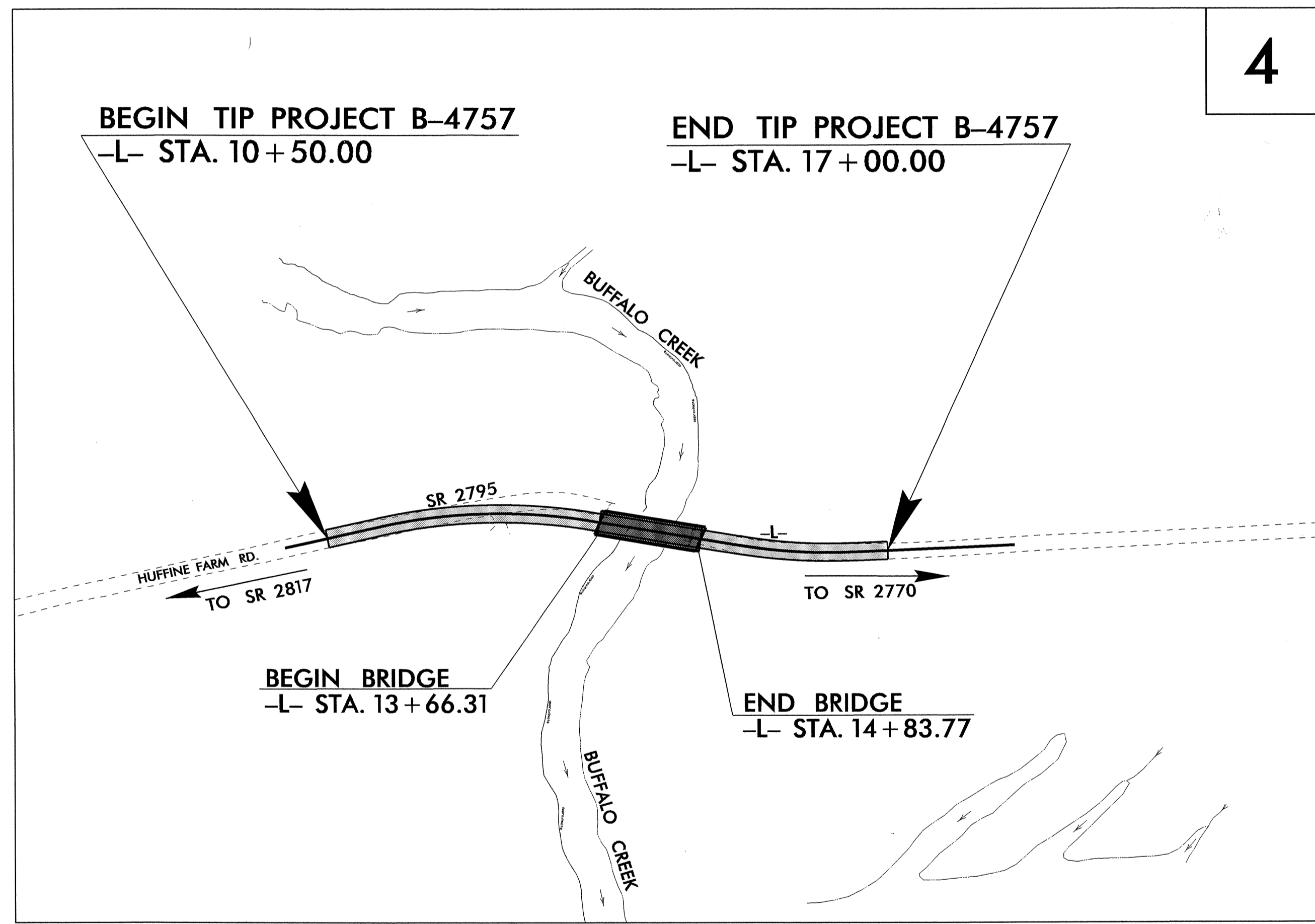
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4757	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38529.1.1	BRZ-2795(1)	P.E.	
38529.2.1	BRZ-2795(1)	RW, UTIL	
38529.3.1	BRZ-2795(1)	CONSTRUCTION	

TIP PROJECT: B-4757

CONTRACT: C203151



VICINITY MAP
●●●●● OFFSITE DETOUR



DESIGN DATA

ADT 2012 =	115
ADT 2035 =	200
DHV =	10 %
D =	60 %
T =	3 % *
V =	45 MPH
* TTST 1% DUAL 2%	
FUNC CLASS = LOCAL RURAL	
SUB REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4757 =	0.101 MI
LENGTH STRUCTURE TIP PROJECT B-4757 =	0.022 MI
TOTAL LENGTH OF TIP PROJECT B-4757 =	0.123 MI

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 9, 2012

LETTING DATE:
MAY 21, 2013

JAMES A. SPEER, PE
PROJECT ENGINEER

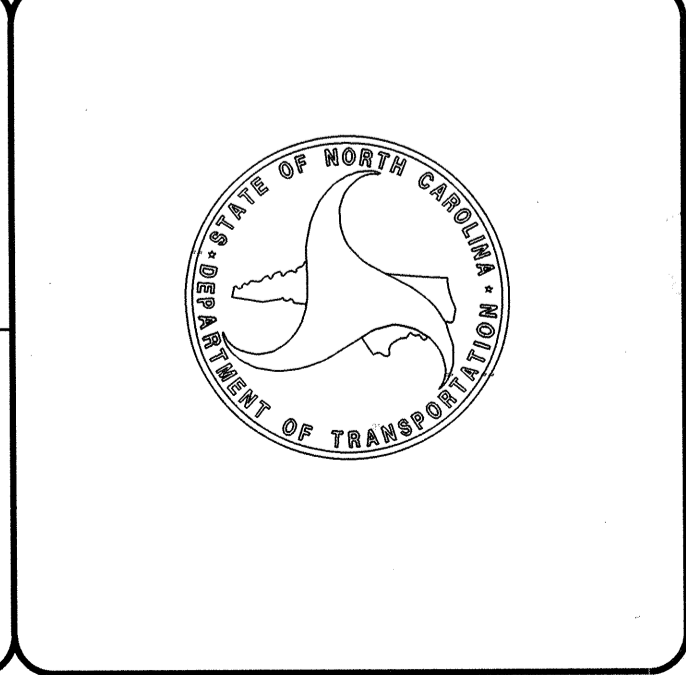
ALLISON K. WHITE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

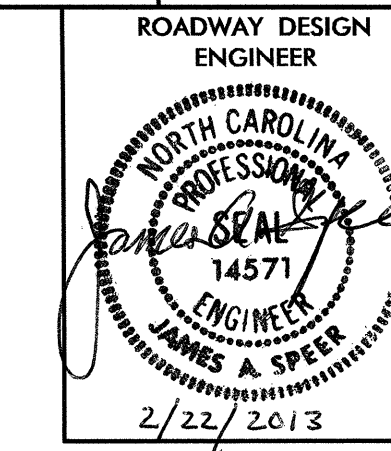
Signature: [Signature] 2/22/13
P.E.

ROADWAY DESIGN

Signature: [Signature] 2/22/2013
P.E.



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R:\Roadway\Proj\01\B4757_Rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE QUANTITIES SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, AND SHOULDER BERM GUTTER SUMMARY
4	PLAN SHEET
5	PROFILE SHEET
TMP-1 THRU TMP-3	TRANSPORTATION MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING PLANS
RF-1	REFORESTATION PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-2	SIGNING PLANS
X-1A	CROSS SECTIONS VOLUME SHEET
X-1 THRU X-4	CROSS-SECTIONS
S-1 THRU S-22	STRUCTURE PLANS

GENERAL NOTES:

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

EFF. 01-17-2012
REV. 10-30-2012

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	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
840.00	Concrete Base Pad for Drainage Structures
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.45	Precast Drainage Structure
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units (Details in Lieu of Standard Drawing as March 2013 Letting)

GRADE LINE:
GRADING AND SURFACING:

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

CLEARING:

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

SIDE ROADS:

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

GUARDRAIL:

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

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.

RIGHT-OF-WAY MARKERS:

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

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

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ 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	-----
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	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite R/W Marker	-----
Proposed Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
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	○
Storm Sewer	-----

UTILITIES:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	----- ?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.

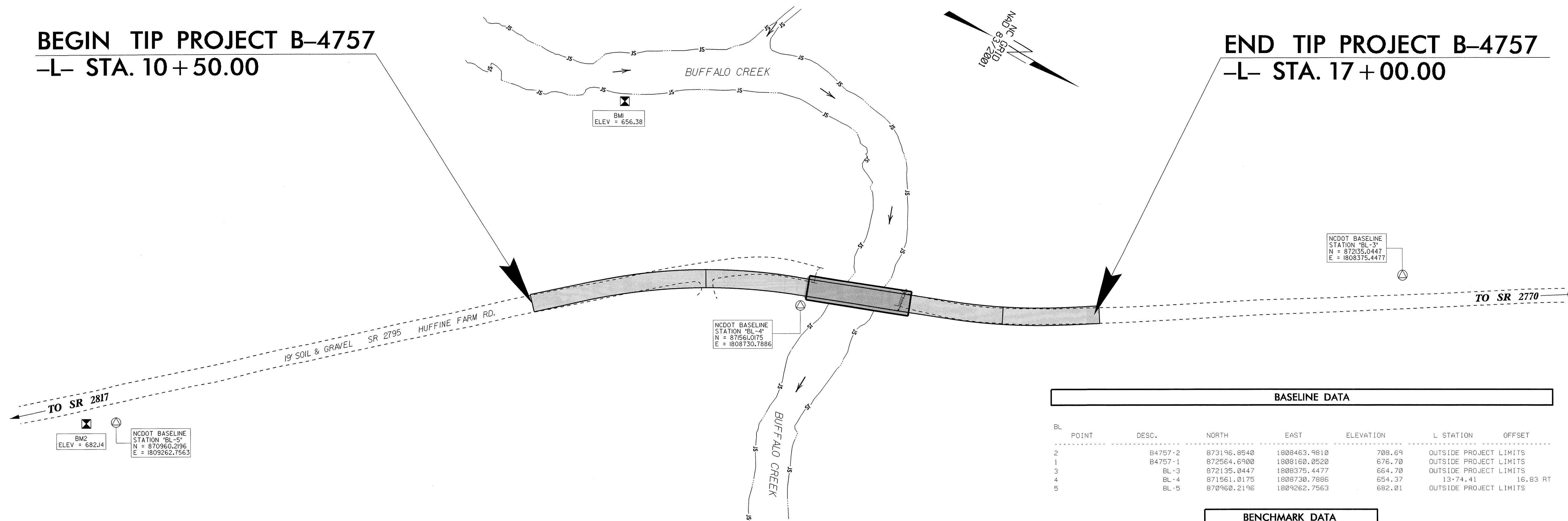
04/16/11

B-4757 SURVEY CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-4757	1C
Location and Surveys	

BEGIN TIP PROJECT B-4757
-L- STA. 10 + 50.00

END TIP PROJECT B-4757
-L- STA. 17 + 00.00



BM2
ELEV = 682.14

NCDOT BASELINE STATION "BL-5"
N = 870960.296
E = 1809262.7563

BM1
ELEV = 656.38

NCDOT BASELINE STATION "BL-3"
N = 87235.0447
E = 1808375.4477

NCDOT BASELINE STATION "BL-4"
N = 871561.0175
E = 1808730.7886

BASELINE DATA						
BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
2	B4757-2	873196.8540	1808463.9810	708.69		OUTSIDE PROJECT LIMITS
1	B4757-1	872564.6900	1808160.0520	676.70		OUTSIDE PROJECT LIMITS
3	BL-3	872135.0447	1808375.4477	664.70		OUTSIDE PROJECT LIMITS
4	BL-4	871561.0175	1808730.7886	654.37	13+74.41	16.83 RT
5	BL-5	870960.2196	1809262.7563	682.01		OUTSIDE PROJECT LIMITS

BENCHMARK DATA	
BM1	ELEVATION = 656.38
N 871274	E 1808665
L STATION	11+99.00 203 LEFT
RR SPIKE IN BASE OF 30' ELM	
.....	
BM2	ELEVATION = 682.14
N 870932	E 1809281
L STATION	10+00.00
S 45°55'37.32" E DIST 475.52	
RR SPIKE IN BASE OF 12' POPLAR	
.....	

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4757-1" WITH NAD 83/2001 STATE PLANE GRID COORDINATES OF NORTHING: 872,564.690(ft) EASTING: 1,808,160.052(ft) ELEVATION: 676.70'(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999667293

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4757-1" TO -L- STATION 10+50.00 IS S 30° 31' 34" E 1,468.52'

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.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.doh.dot.state.nc.us/preconstruct/highway/location/project/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 B4757-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 FROM EXISTING NCGS MONUMENTATION.

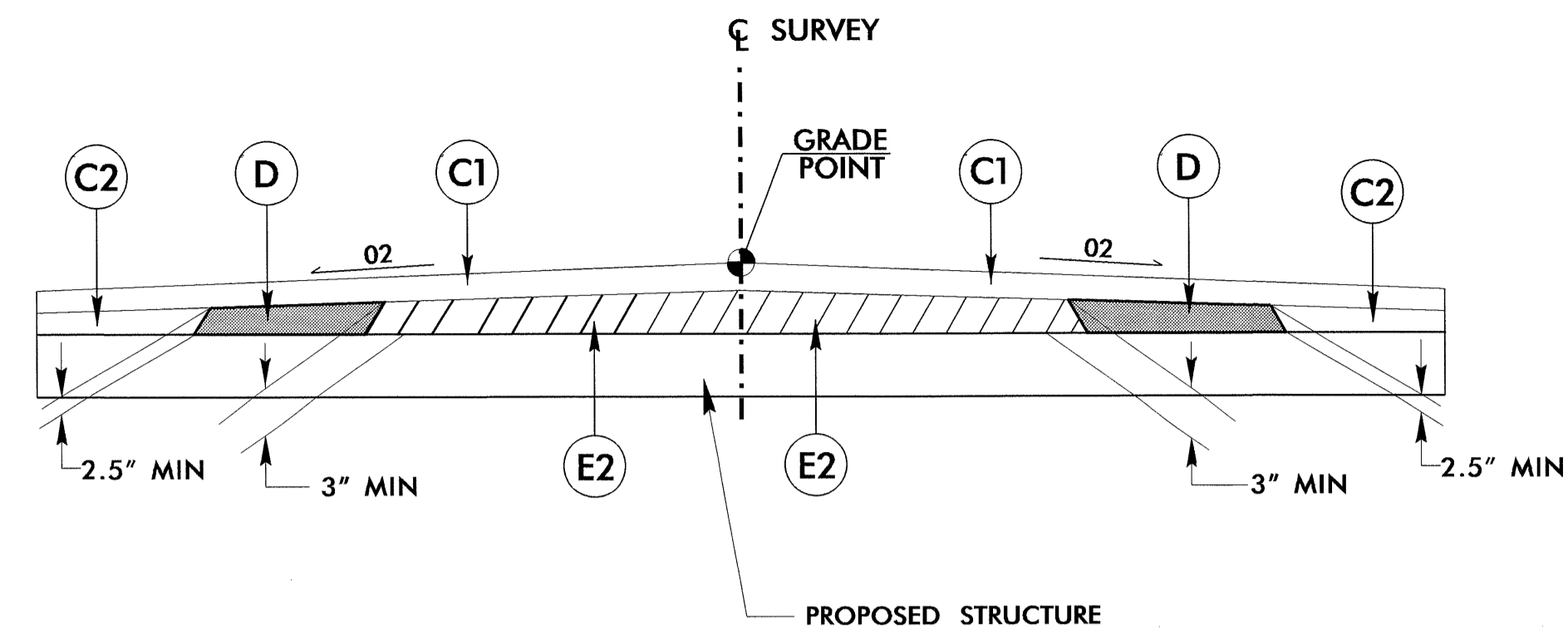
TYPE	STATION	L	
		NORTH	EAST
POT	10+00.00	871262.5800	1808939.4420
PC	11+11.16	871344.0195	1808863.7781
PT	13+53.96	871548.2929	1808735.1716
PC	15+28.88	871711.0475	1808671.0844
PT	16+59.36	871826.8625	1808611.4517
POT	18+46.44	871983.7675	1808509.5770

ALIGN	STATION	OFFSET	FINAL NEW R/W MONUMENTS	
			NORTH	EAST
L	16+59.36	-30.00	871810.5256	1808586.2901
L	16+59.36	-17.60	871817.2790	1808596.6915
L	16+59.36	18.40	871836.8838	1808626.8863
L	16+59.36	30.00	871843.1993	1808636.6134
L	15+28.88	-30.00	871700.0559	1808643.1705
L	15+28.88	30.00	871722.0390	1808698.9983
L	13+53.96	-47.41	871530.9227	1808691.0585
L	13+53.96	30.00	871559.2845	1808763.0855
L	12+50.00	-41.55	871433.8258	1808745.0705
L	11+11.16	-27.89	871325.0363	1808843.3516
L	11+11.16	20.12	871357.7116	1808878.5173
L	11+11.16	30.00	871364.4390	1808885.7563

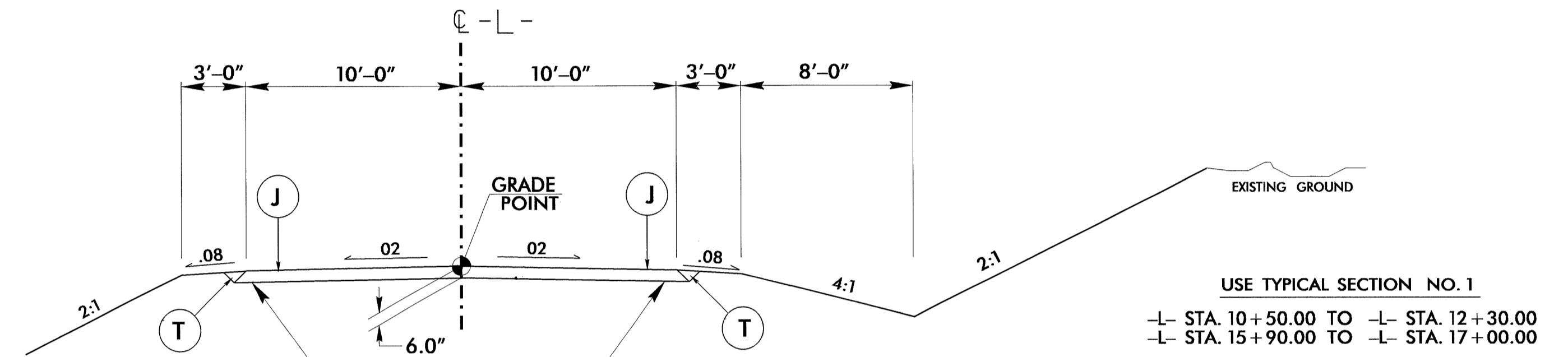
NOTE: DRAWING NOT TO SCALE

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2½" 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 1½" IN DEPTH.
D	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
J	PROP. 6" AGGREGATE BASE COURSE.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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

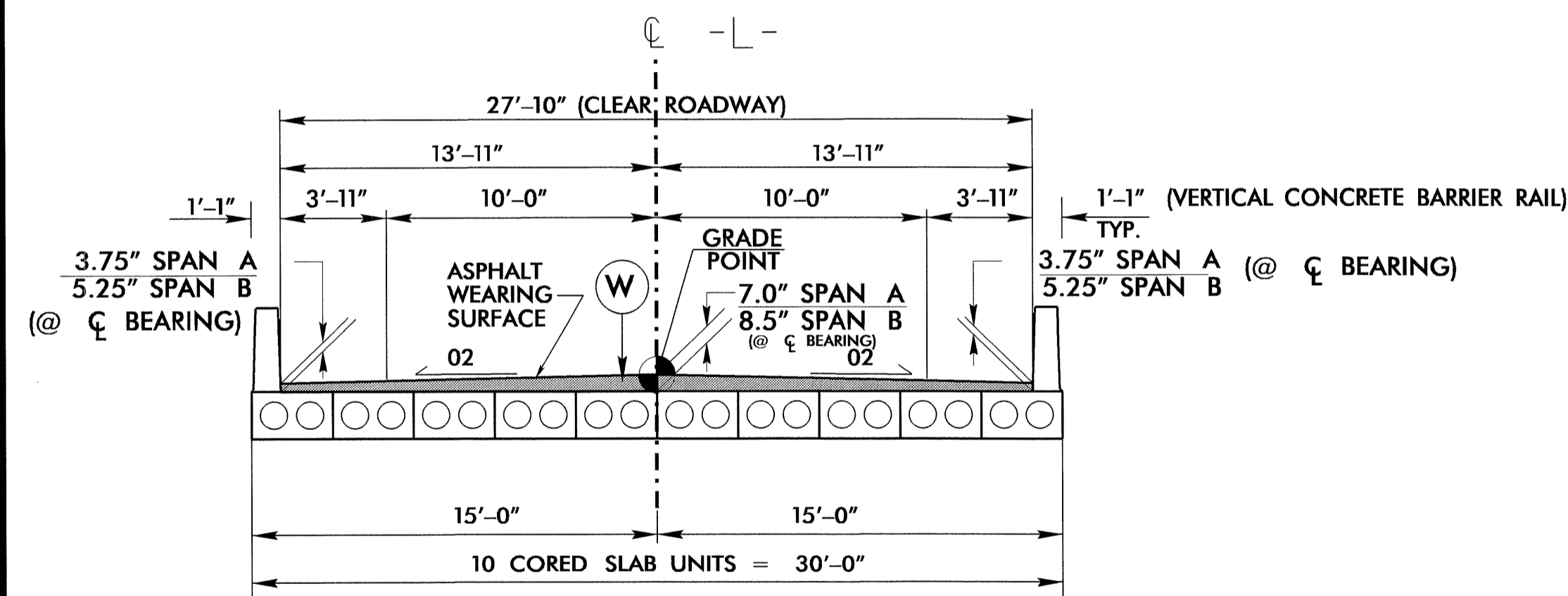


DETAIL SHOWING METHOD OF WEDGING



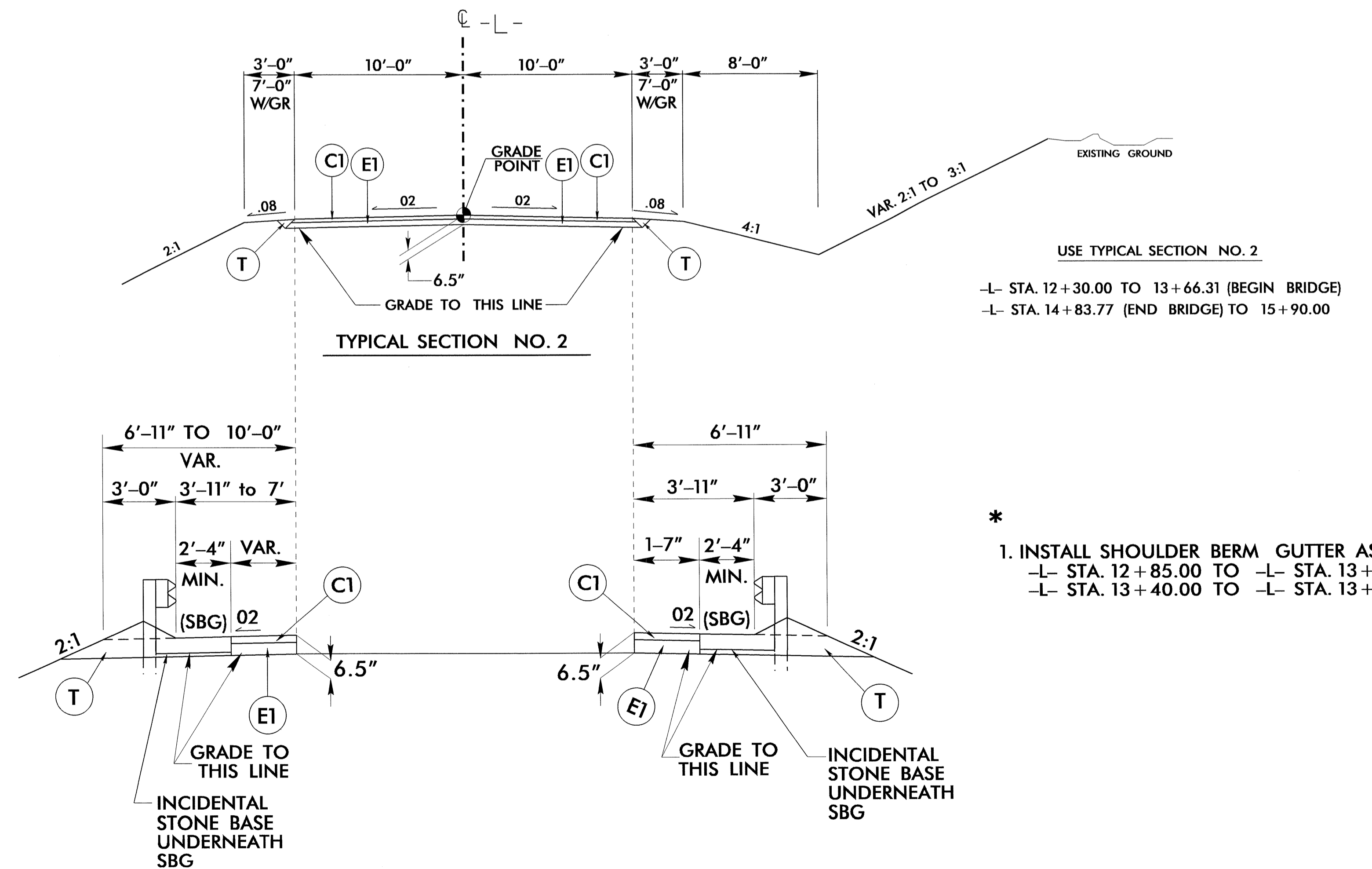
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
 -L- STA. 10+50.00 TO -L- STA. 12+30.00
 -L- STA. 15+90.00 TO -L- STA. 17+00.00



TYPICAL SECTION ON STRUCTURE

BEGIN BRIDGE -L- STA. 13+66.31 TO END BRIDGE -L- STA. 14+83.77



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
 -L- STA. 12+30.00 TO 13+66.31 (BEGIN BRIDGE)
 -L- STA. 14+83.77 (END BRIDGE) TO 15+90.00

*
 1. INSTALL SHOULDER BERM GUTTER AS FOLLOWS:
 -L- STA. 12+85.00 TO -L- STA. 13+55.00 (LT)
 -L- STA. 13+40.00 TO -L- STA. 13+50.00 (RT)

REVISIONS

8/17/99

22-FEB-2013 09:02
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

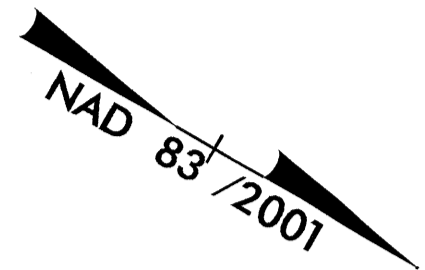
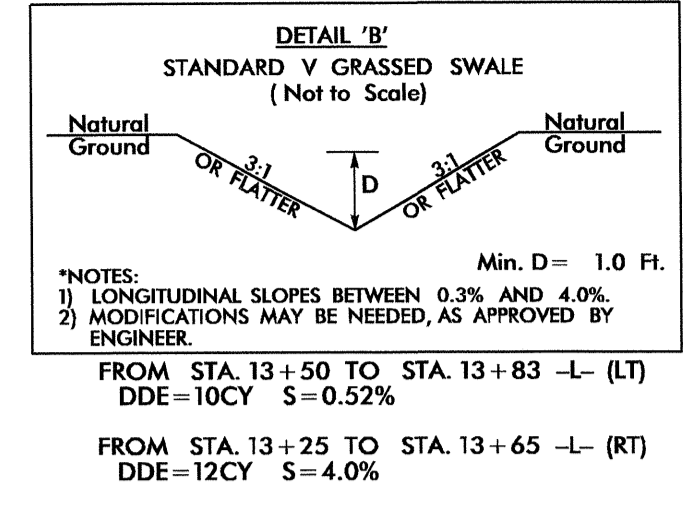
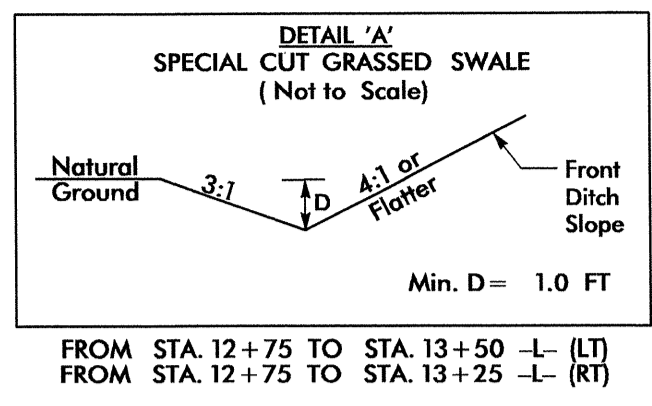
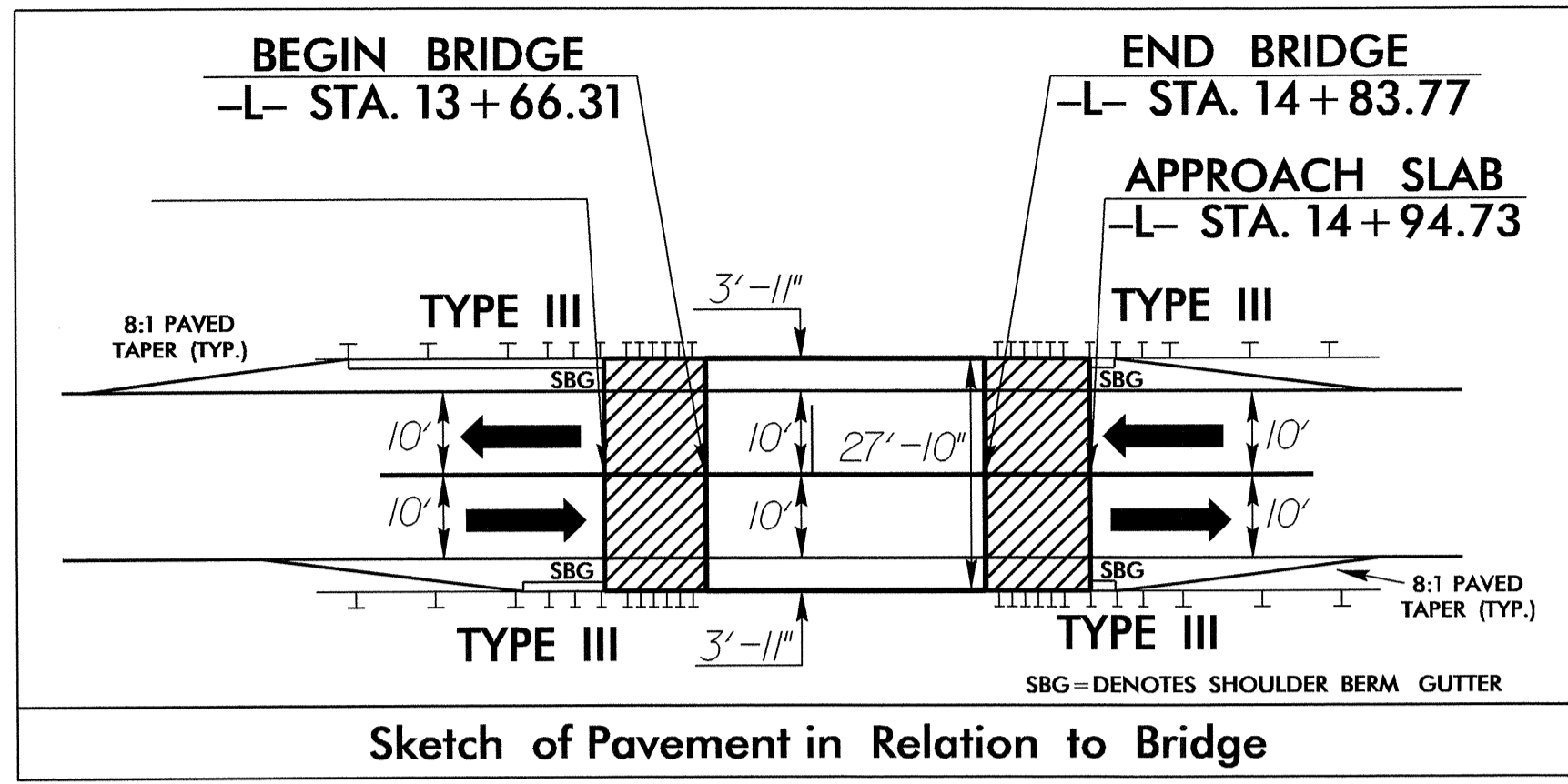
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203151

ItemNumber	Sec #	Quantity	Unit	Description
000010000-N	800	Lump Sum		MOBILIZATION
003000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (14+25.04)
004300000-N	226	Lump Sum		GRADING
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
005700000-E	226	200	CY	UNDERCUT EXCAVATION
013400000-E	240	22	CY	DRAINAGE DITCH EXCAVATION
019500000-E	265	100	CY	SELECT GRANULAR MATERIAL
019600000-E	270	300	SY	GEOTEXTILE FOR SOIL STABILIZATION
031800000-E	300	10	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
032000000-E	300	30	SY	FOUNDATION CONDITIONING GEOTEXTILE
044820000-E	310	84	LF	15" RC PIPE CULVERTS, CLASS IV
112100000-E	520	245	TON	AGGREGATE BASE COURSE
122000000-E	545	100	TON	INCIDENTAL STONE BASE
148900000-E	610	170	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
149800000-E	610	50	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE 119.0B
152500000-E	610	110	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
157500000-E	620	20	TON	ASPHALT BINDER FOR PLANT MIX
200000000-N	806	12	EA	RIGHT OF WAY MARKERS
228600000-N	840	3	EA	MASONRY DRAINAGE STRUCTURES
236700000-N	840	3	EA	FRAME WITH TWO GRATES, STD 840.29
255600000-E	846	87	LF	SHOULDER BERM GUTTER
303000000-E	862	100	LF	STEEL BM GUARDRAIL
315000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
321500000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III

ItemNumber	Sec #	Quantity	Unit	Description
327000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
365600000-E	876	870	SY	GEOTEXTILE FOR DRAINAGE
407200000-E	903	60	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
409600000-N	904	2	EA	SIGN ERECTION, TYPE D
415500000-N	907	4	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
440000000-E	1110	297	SF	WORK ZONE SIGNS (STATIONARY)
441000000-E	1110	119	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
443500000-N	1135	10	EA	CONES
444500000-E	1145	80	LF	BARRICADES (TYPE III)
481000000-E	1205	5,200	LF	PAINT PAVEMENT MARKING LINES (4")
600000000-E	1605	450	LF	TEMPORARY SILT FENCE
600600000-E	1610	225	TON	STONE FOR EROSION CONTROL, CLASS A
600900000-E	1610	80	TON	STONE FOR EROSION CONTROL, CLASS B
601200000-E	1610	175	TON	SEDIMENT CONTROL STONE
601500000-E	1615	1	ACR	TEMPORARY MULCHING
601800000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
602100000-E	1620	1.25	TON	FERTILIZER FOR TEMPORARY SEEDING
602400000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
602900000-E	SP	200	LF	SAFETY FENCE
603000000-E	1630	210	CY	SILT EXCAVATION
603600000-E	1631	1,400	SY	MATTING FOR EROSION CONTROL
603700000-E	SP	325	SY	COIR FIBER MAT
604200000-E	1632	135	LF	1/4" HARDWARE CLOTH
607000000-N	1639	6	EA	SPECIAL STILLING BASINS
607101000-E	SP	60	LF	WATTLE
607102000-E	SP	30	LB	POLYACRYLAMIDE (PAM)
607103000-E	1640	175	LF	COIR FIBER BAFFLE
607105000-E	SP	5	EA	*** SKIMMER (1-1/2")
608400000-E	1660	1	ACR	SEEDING & MULCHING
608700000-E	1660	0.25	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	18	EA	RESPONSE FOR EROSION CONTROL
612300000-E	1670	0.1	ACR	REFORESTATION

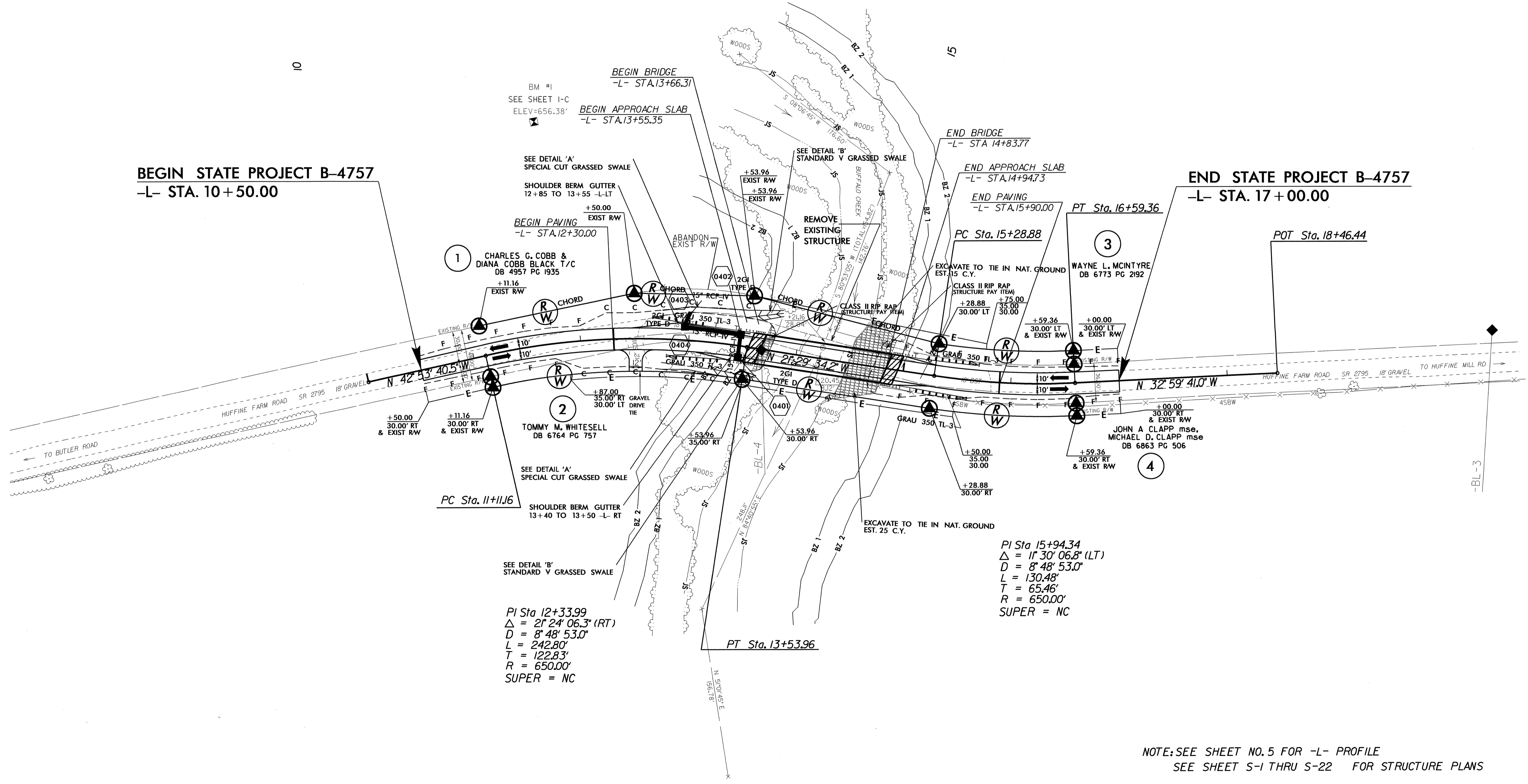
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BEGIN STATE PROJECT B-4757
-L- STA. 10+50.00

END STATE PROJECT B-4757
-L- STA. 17+00.00



NOTE: SEE SHEET NO. 5 FOR -L- PROFILE
SEE SHEET S-1 THRU S-22 FOR STRUCTURE PLANS

REVISIONS

8/17/99

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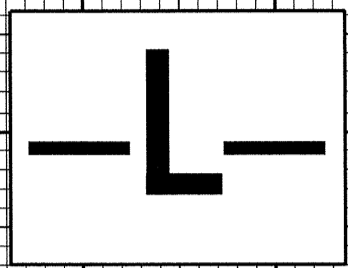
5/14/99

DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	-----

BM #1 RR SPIKE IN BASE OF 38" ELM
 247" RT OF -BL- STA. 25+22.00
 205.33' LT OF -L- STA. 11+80.51
 ELEV. 656.38'

BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	=	2,960 CFS
DESIGN FREQUENCY	=	2 YRS
DESIGN HW ELEVATION	=	654.21 FT
BASE DISCHARGE	=	16,570 CFS
BASE FREQUENCY	=	100 YRS
BASE HW ELEVATION	=	664.93 FT
OVERTOPPING DISCHARGE	=	3,500 CFS
OVERTOPPING FREQUENCY	=	2 YRS
OVERTOPPING ELEVATION	=	654.68 FT
NORMAL WATER SURFACE ELEVATION	=	641.4 FT
DATE OF SURVEY	=	8/9/11
W.S. ELEVATION AT DATE OF SURVEY	=	641.40 FT

PROJECT REFERENCE NO. B-4757 ROADWAY DESIGN ENGINEER	SHEET NO. 5 HYDRAULICS ENGINEER



CL STA 14+25.04
 PROPOSED 1 @ 45' 21" CORED SLAB,
 70 FT 24" CORED SLAB BRIDGE
 LENGTH = 115 FT
 SKEW = 105 DEGREES

BEGIN GRADE
 -L- STA. 10+50.00
 EL = 657.11'

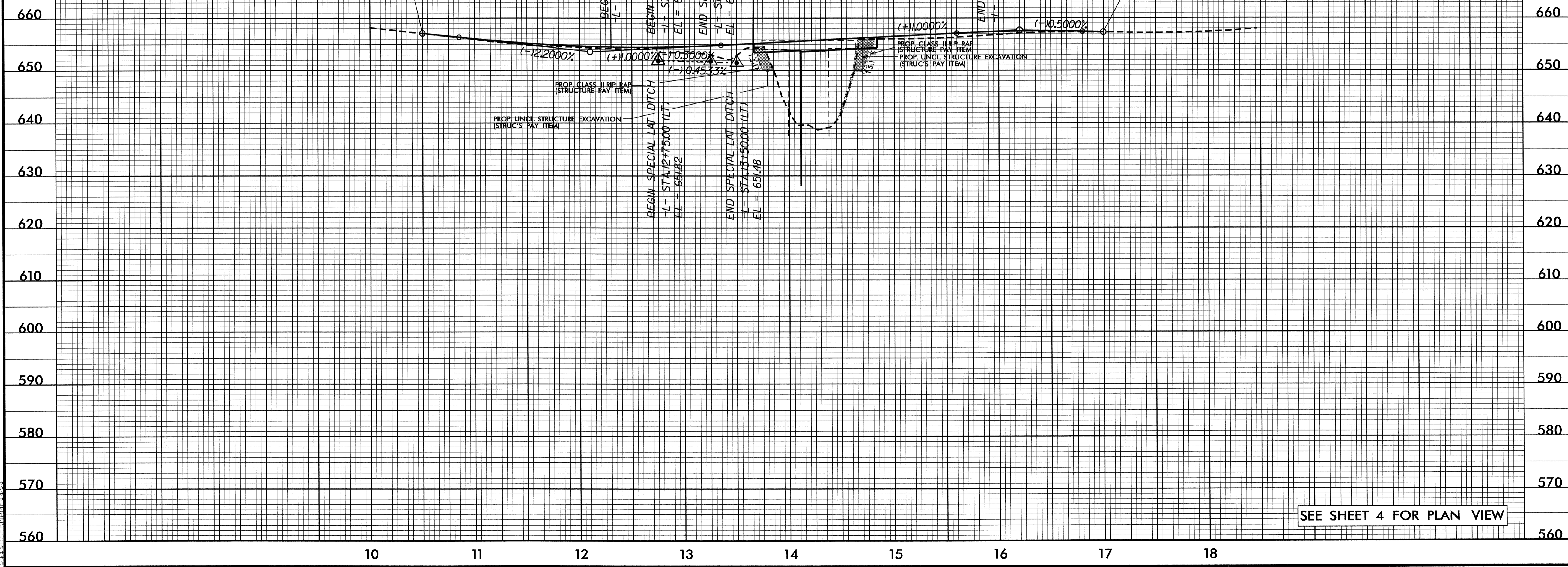
PI = 12+10.00
 EL = 653.59'
 VC = 250'
 K = 78
 V = 40mph

BEGIN BRIDGE
 -L- STA 13+66.31

END BRIDGE
 -L- STA 14+83.77

PI = 16+20.00
 EL = 657.69'
 VC = 120'
 K = 80
 V = 45mph

END GRADE
 -L- STA. 17+00.00
 EL = 657.29'



SEE SHEET 4 FOR PLAN VIEW

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