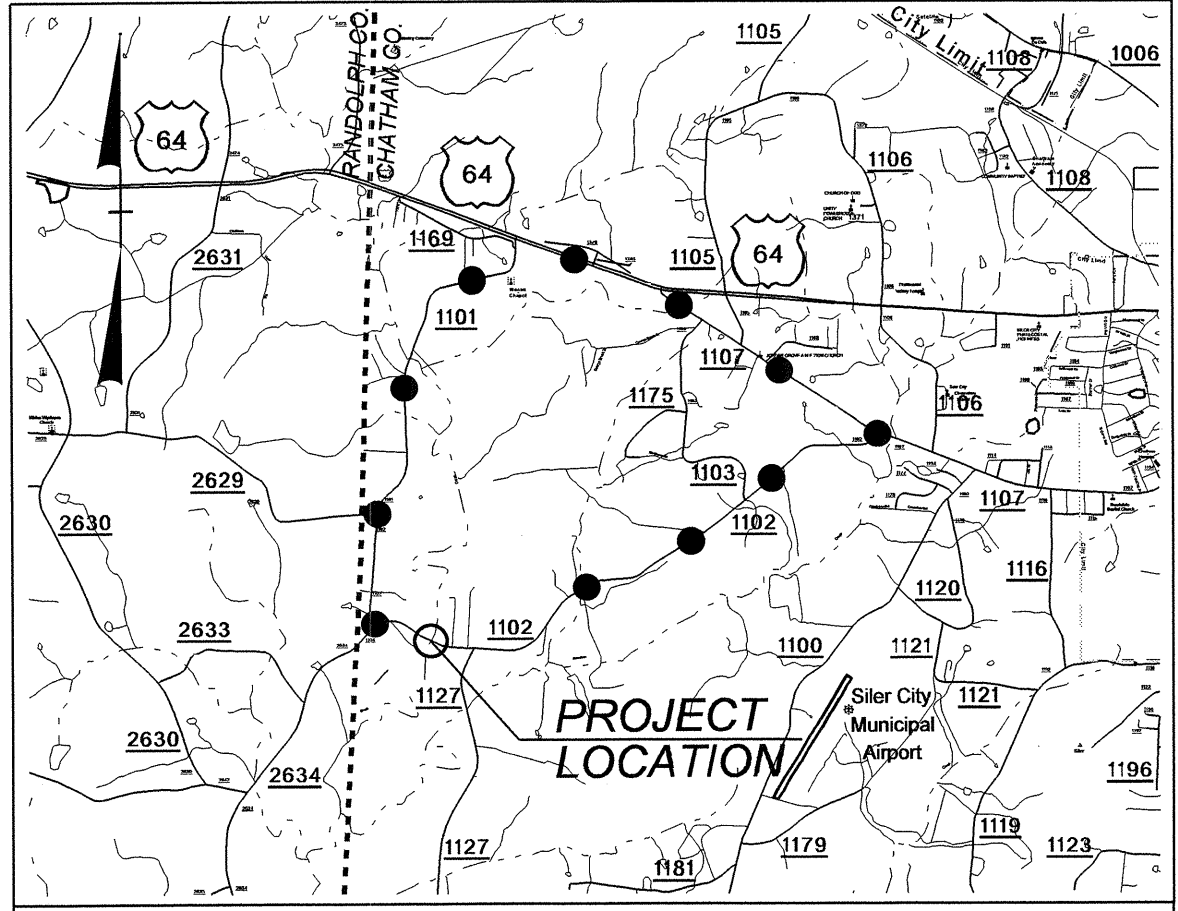


09.08/99

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



VICINITY MAP

●●●● OFF-SITE DETOUR ROUTE

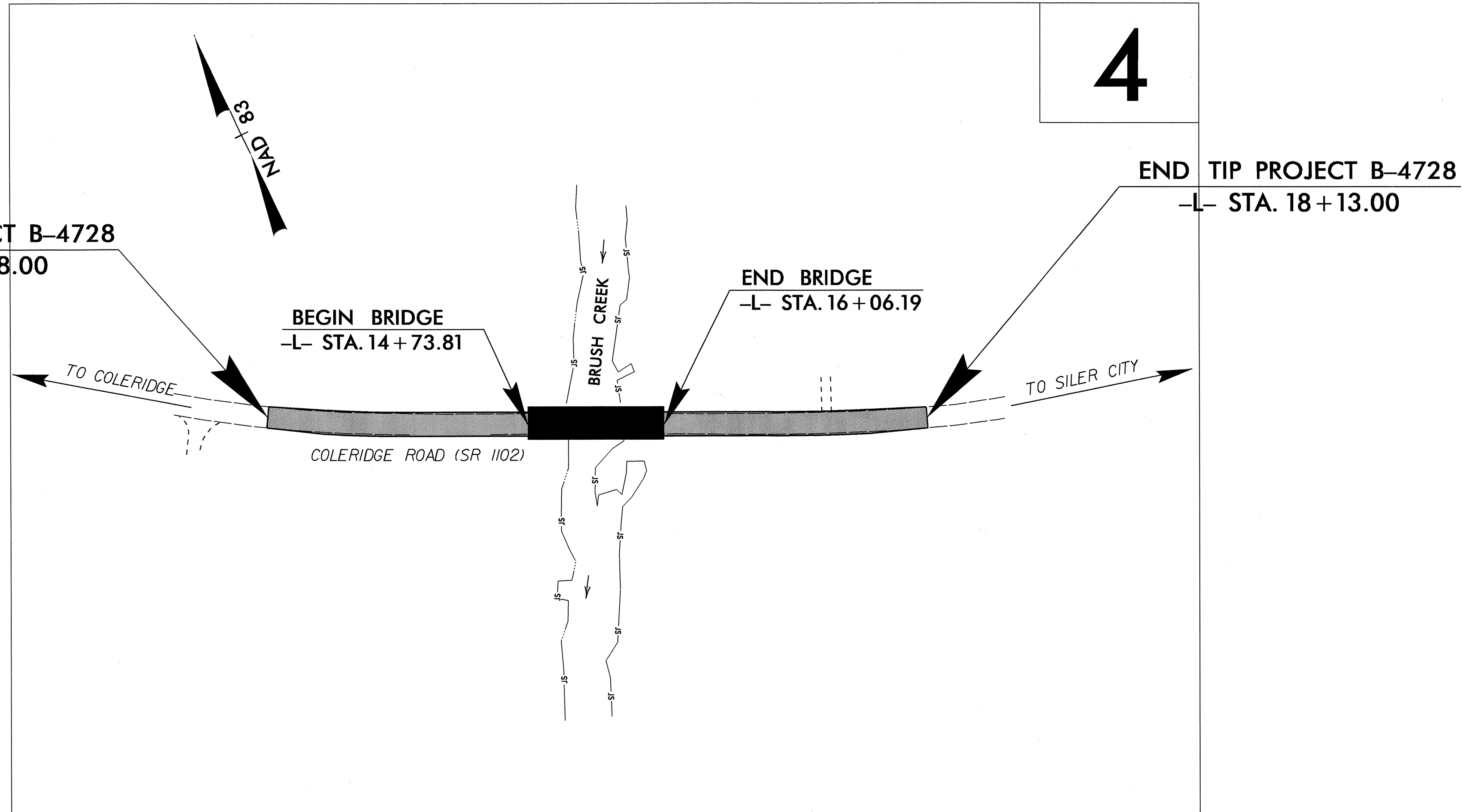
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**CHATHAM COUNTY**

LOCATION: BRIDGE NO. 251 OVER BRUSH CREEK ON SR 1102, COLERIDGE RD.

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

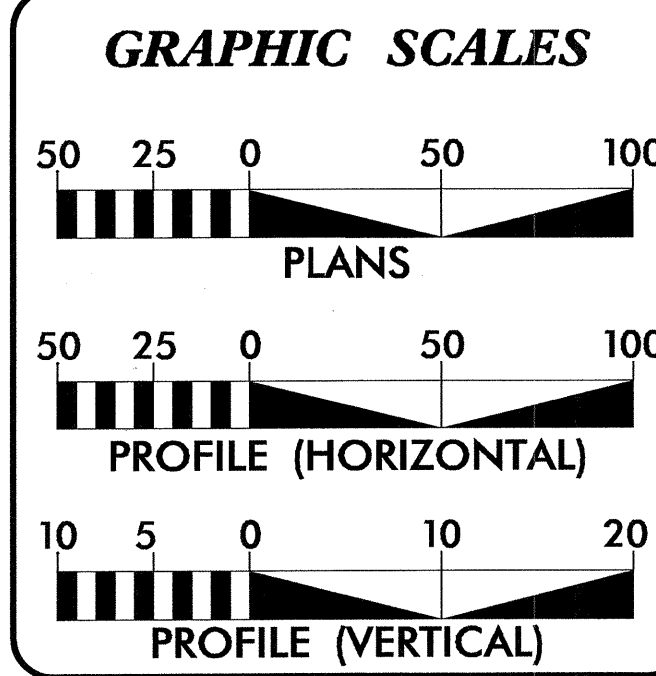
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4728	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38501.1.1	BRZ-1102(4)	P.E.	
38501.2.1	BRZ-1102(4)	R/W, UTIL.	
38501.3.1	BRZ-1102(4)	CONST.	



\* DESIGN EXCEPTION REQUIRED FOR SAG VERTICAL CURVE "K" FACTORS AND NIGHTTIME SSD.

TIP PROJECT: B-4728

CONTRACT: C203020



**DESIGN DATA**

ADT 2012 =	810 VPD
ADT 2035 =	1300 VPD
DHV =	60 %
D =	10 %
T =	3 % *
V =	55 MPH
* TTST 1% DUAL 2%	
FUNC CLASS =	COLLECTOR
SUB REGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4728	=	0.080 MI
LENGTH STRUCTURE TIP PROJECT B-4728	=	0.025 MI
TOTAL LENGTH OF TIP PROJECT B-4728	=	0.105 MI

Prepared in the Office of:

**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: NOVEMBER 9, 2011	JAMES A. SPEER, PE PROJECT ENGINEER
LETTING DATE: DECEMBER 18, 2012	ALLISON K. WHITE PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

27 SEP 2012 P.E.

**ROADWAY DESIGN**

9/26/2012 P.E.

SIGNATURE: \_\_\_\_\_

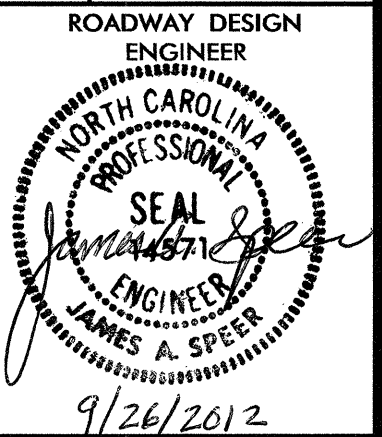
**DIVISION OF HIGHWAYS**  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

P.E.

24-SEP-2012 14:31  
R:\Roadway\Proj\B4728\_rdy\_tsh.dgn  
3:55:58 USER:NAME

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C TO 1-D	SURVEY CONTROL SHEETS
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE QUANTITIES SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, ASPHALT PAVEMENT REMOVAL SUMMARY AND SUMMARY OF SHOULDER BERM GUTTER
4	PLAN SHEET
5	PROFILE SHEET
TMP-1 THRU TMP-3	TRAFFIC MANAGEMENT PLANS
SD-1	SPECIAL SIGN DESIGN
PMP-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-2	SIGNING PLANS
UD-1 THRU UD-2	UTILITIES PLANS
X-1A	CROSS-SECTION SUMMARY
X-1 THRU X-5	CROSS-SECTIONS
S-1 THRU S-18	STRUCTURE PLANS

GENERAL NOTES: 2012 SPECIFICATIONS  
EFFECTIVE: 01-17-12  
REVISED: 11/01/11

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 TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:  
ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.02.

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 CENTURY LINK- TELEPHONE  
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

2012 ROADWAY ENGLISH STANDARD DRAWINGS

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
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	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
840.29	Frames and Narrow Slot Flat Grates
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

04/16/11

Note: Not to Scale

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

# CONVENTIONAL PLAN SHEET SYMBOLS

## BOUNDARIES AND PROPERTY:

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

## BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	Ⓞ
Well	Ⓞ
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	Ⓜ
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 RW Marker	⊠
Proposed Control of Access Line with Concrete CA Marker	⊠
Existing Control of Access	⊠
Proposed Control of Access	⊠
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

## ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	Ⓜ
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	-----
Bridge Wing Wall, Head Wall and End Wall	⊠
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	⊠
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	⊠
H-Frame Pole	⊙
Recorded U/G Power Line	-----
Designated U/G Power Line (S.U.E.*)	-----
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	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

## 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	-----

## TV:

TV Satellite Dish	⊙
TV Pedestal	⊠
TV Tower	⊙
U/G TV Cable Hand Hole	⊠
Recorded U/G TV Cable	-----
Designated U/G TV Cable (S.U.E.*)	-----
Recorded U/G Fiber Optic Cable	-----
Designated U/G Fiber Optic Cable (S.U.E.*)	-----

## GAS:

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

## SANITARY SEWER:

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

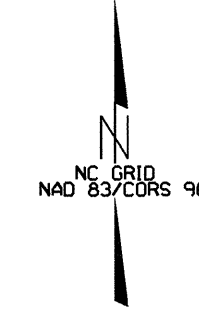
## MISCELLANEOUS:

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

6/2/99

# SURVEY CONTROL SHEET B-4728

PROJECT REFERENCE NO.	SHEET NO.
B-4728	I-C
Location and Surveys	



BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
2	B4728-2	713713.3330	1839407.9520	526.37	12+20.90	16.76 LT
101	BL-101	713559.7430	1839628.6880	521.76	14+88.97	16.53 RT
102	BL-102	713390.5160	1840014.4130	542.26	OUTSIDE PROJECT LIMITS	
103	BL-103	713382.0060	1840537.3980	558.28	OUTSIDE PROJECT LIMITS	

.....  
 BM1 ELEVATION = 532.10  
 N 713840 E 1839145  
 L STATION 10+00.00  
 N 75°04'30.53" W DIST 77.10  
 RR-SPIKE IN BASE OF POWER POLE  
 .....  
 BM2 ELEVATION = 508.14  
 N 713357 E 1839540  
 L STATION 14+97.00 238 RIGHT  
 RR-SPIKE IN ROOT OF 18IN GUM TREE  
 .....

**NCDOT GPS STATION "B4728-1"**  
**LOCALIZED PROJECT COORDINATES**  
 N = 713524.6420  
 E = 1837771.5360

**NCDOT GPS STATION "B4728-2"**  
**LOCALIZED PROJECT COORDINATES**  
 N = 713713.3330  
 E = 1839407.9520

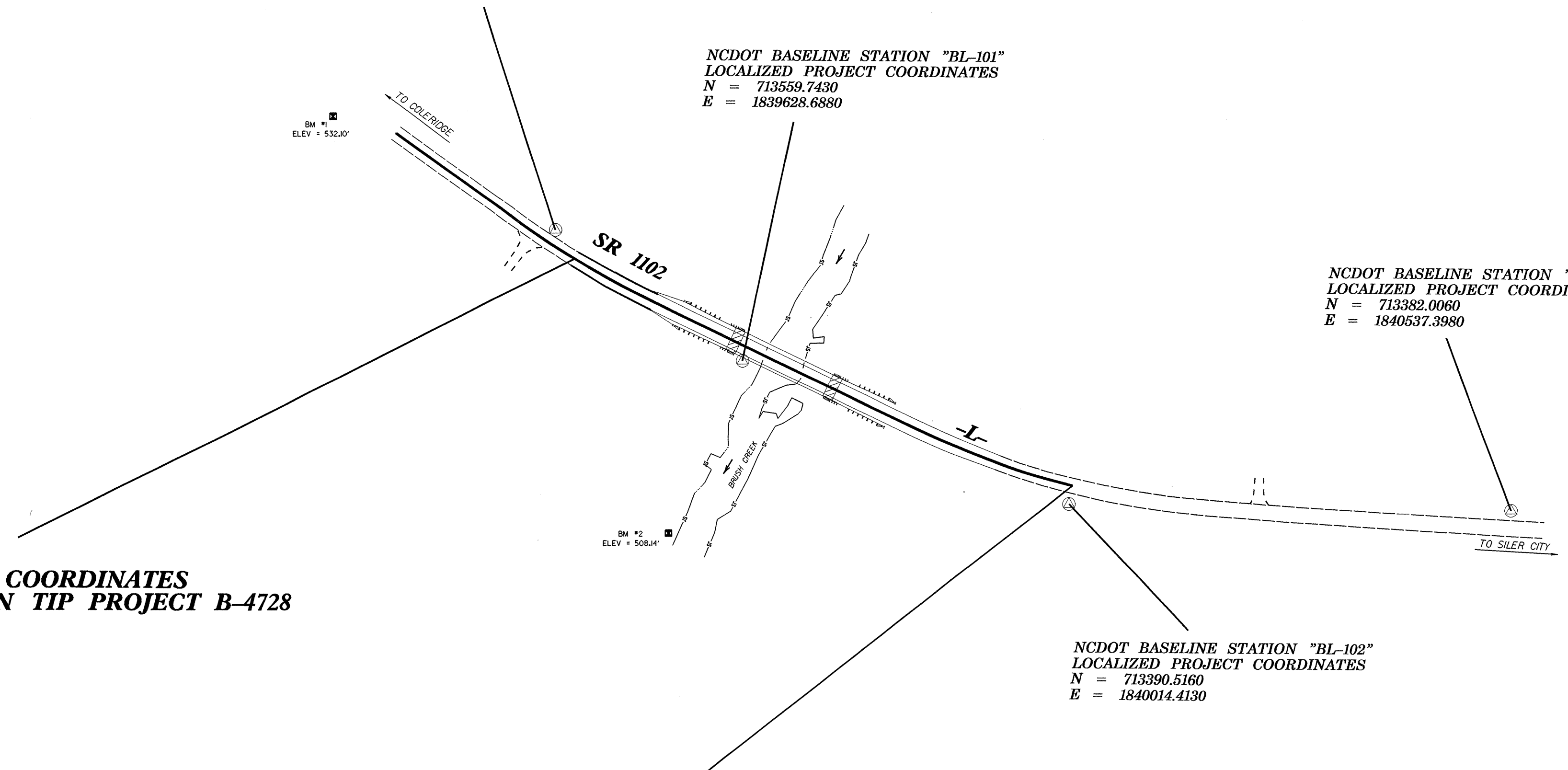
**NCDOT BASELINE STATION "BL-101"**  
**LOCALIZED PROJECT COORDINATES**  
 N = 713559.7430  
 E = 1839628.6880

**NCDOT BASELINE STATION "BL-103"**  
**LOCALIZED PROJECT COORDINATES**  
 N = 713382.0060  
 E = 1840537.3980

**LOCALIZED PROJECT COORDINATES**  
**-L- STA. 12+58.00 BEGIN TIP PROJECT B-4728**  
 N = 713679.7123  
 E = 1839430.2908

**NCDOT BASELINE STATION "BL-102"**  
**LOCALIZED PROJECT COORDINATES**  
 N = 713390.5160  
 E = 1840014.4130

**LOCALIZED PROJECT COORDINATES**  
**-L- STA. 18+13.00 END TIP PROJECT B-4728**  
 N = 713438.8224  
 E = 1839929.9234



### DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4728-2" WITH NAD 83/CORS 96 STATE PLANE GRID COORDINATES OF NORTHING: 713713.333(ft) EASTING: 1839407.952(ft) ELEVATION: 526.370(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988406 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4728-2" TO -L- STATION 12+58.00 IS S 33°36'05.4" E 40.366' 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/PRECONSTRUCTION/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/doh/preconstruction/highway/location/project/) THE FILES TO BE FOUND ARE AS FOLLOWS: B4728\_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.

NOTE: DRAWING NOT TO SCALE

05-SEP-2016 09:42 L:\4728-1s-1c.dgn

# SURVEY CONTROL SHEET B-4728

TYPE	STATION	NORTH	EAST
POT	10+00.00	713828.1906	1839219.4045
PC	11+80.84	713722.0177	1839365.7959
PT	12+53.02	713682.2702	1839426.0168
PC	12+77.61	713669.6437	1839447.1144
PT	13+65.60	713627.9943	1839524.5956
PC	16+97.21	713484.6004	1839823.5945
PCC	18+13.00	713438.8224	1839929.9234
PT	18+81.21	713417.8633	1839994.7959
POT	19+05.66	713411.6040	1840018.4274

ROW MARKER CONCRETE OR GRANITE-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	13+90.00	-50.00	713662.5292	1839568.2137
L	16+50.00	-50.00	713550.1042	1839802.6505
L	16+50.00	-30.00	713532.0706	1839794.0024
L	13+90.00	-30.00	713644.4955	1839559.5656
L	13+90.00	30.00	713590.3947	1839533.6214
L	13+90.00	50.00	713572.3611	1839524.9733
L	16+50.00	50.00	713459.9362	1839759.4102
L	16+50.00	30.00	713477.9698	1839768.0582

ROW MARKER PERMANENT EASEMENT-E				
ALIGN	STATION	OFFSET	NORTH	EAST
L	14+55.00	-50.00	713634.4229	1839626.8229
L	14+55.00	-60.00	713643.4397	1839631.1469
L	15+00.00	-60.00	713623.9816	1839671.7225
L	15+00.00	-50.00	713614.9648	1839667.3985

### DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4728-2"  
 WITH NAD 83/CORS 96 STATE PLANE GRID COORDINATES OF  
 NORTHING: 713713.333(ft) EASTING: 1839407.952(ft)  
 ELEVATION: 526.370(ft)  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988406  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4728-2" TO -L- STATION 12+58.00 IS  
 S 33°36'05.4" E 40.366'  
 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/DOHPRCONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/dohprconstruct/highway/location/project/)  
 THE FILES TO BE FOUND ARE AS FOLLOWS:  
 B4728\_IS\_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 GROUND CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.  
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

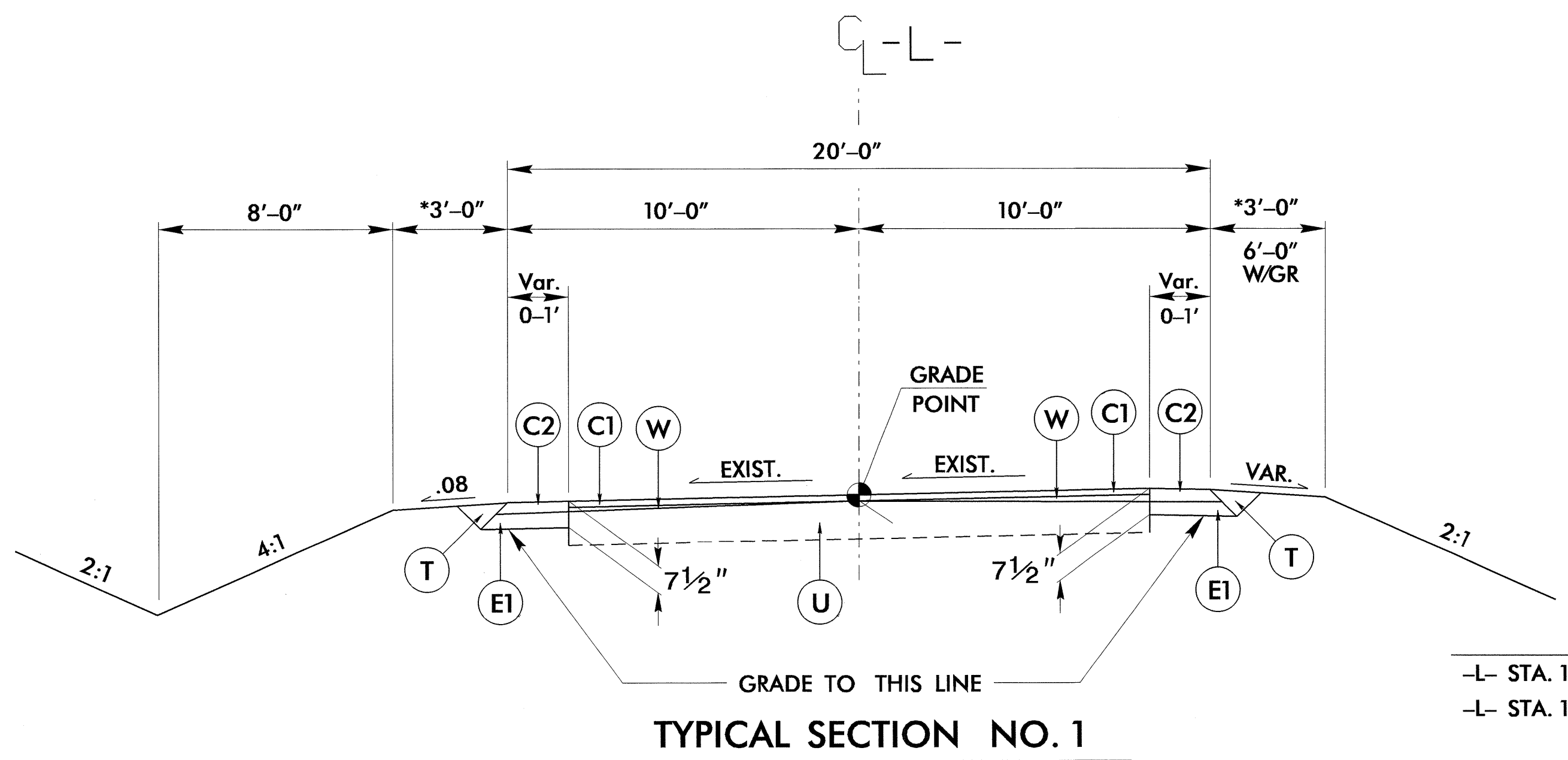
NOTE: DRAWING NOT TO SCALE

6/2/99

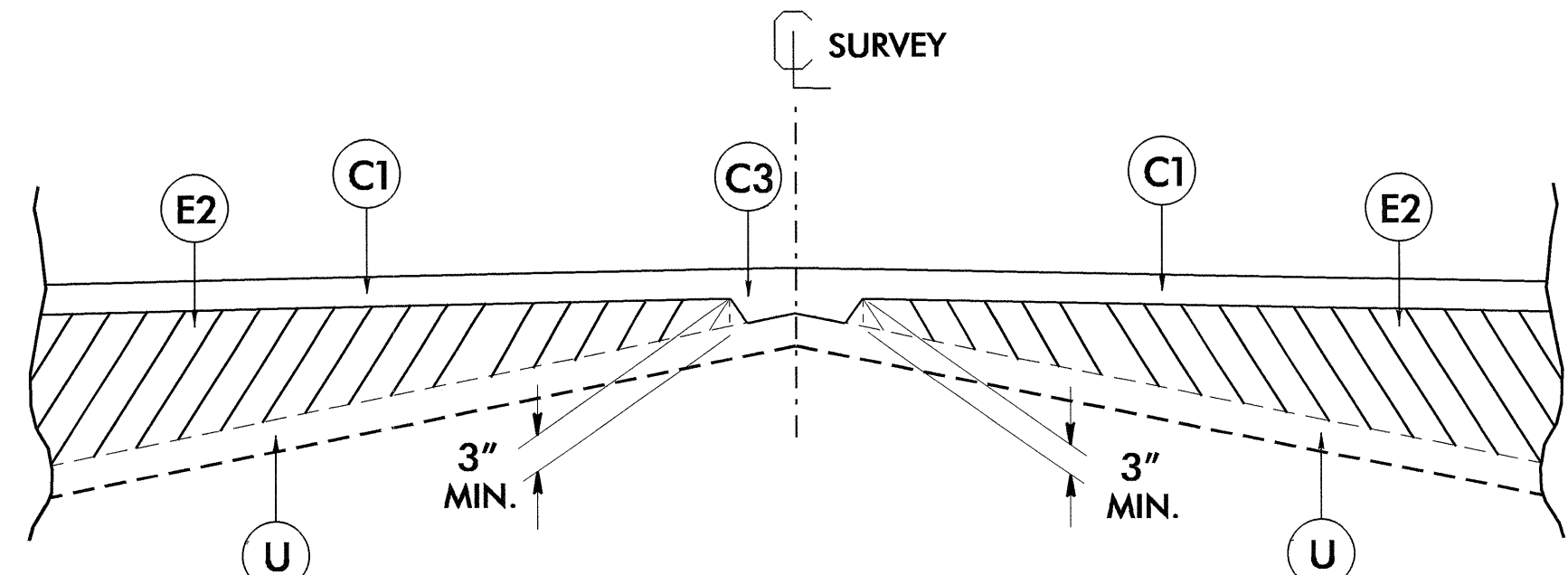
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE 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. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT. SEE DETAIL 1.

NOTE: ALL SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

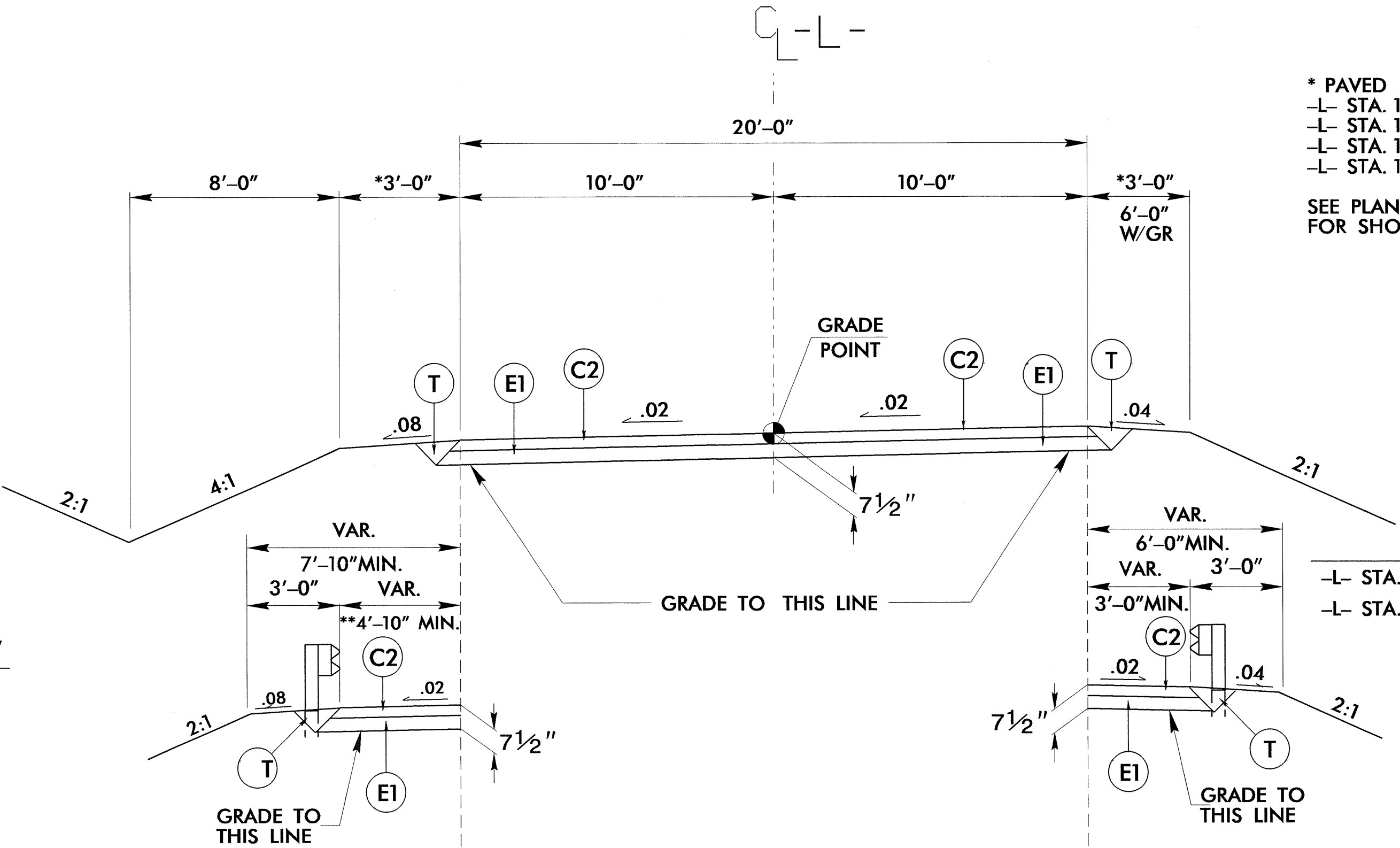
PROJECT REFERENCE NO. <b>B-4728</b>	SHEET NO. <b>2</b>
ROADWAY DESIGN ENGINEER <i>James A. Speer</i> SEAL 14371 ENGINEER 9/26/2012	PAVEMENT DESIGN ENGINEER <i>Clark S. Morrison</i> SEAL 22896 ENGINEER 9/28/12



USE TYPICAL SECTION NO. 1  
 -L- STA. 12+58.00 TO -L- STA. 14+25.00  
 -L- STA. 17+50.00 TO -L- STA. 18+13.00



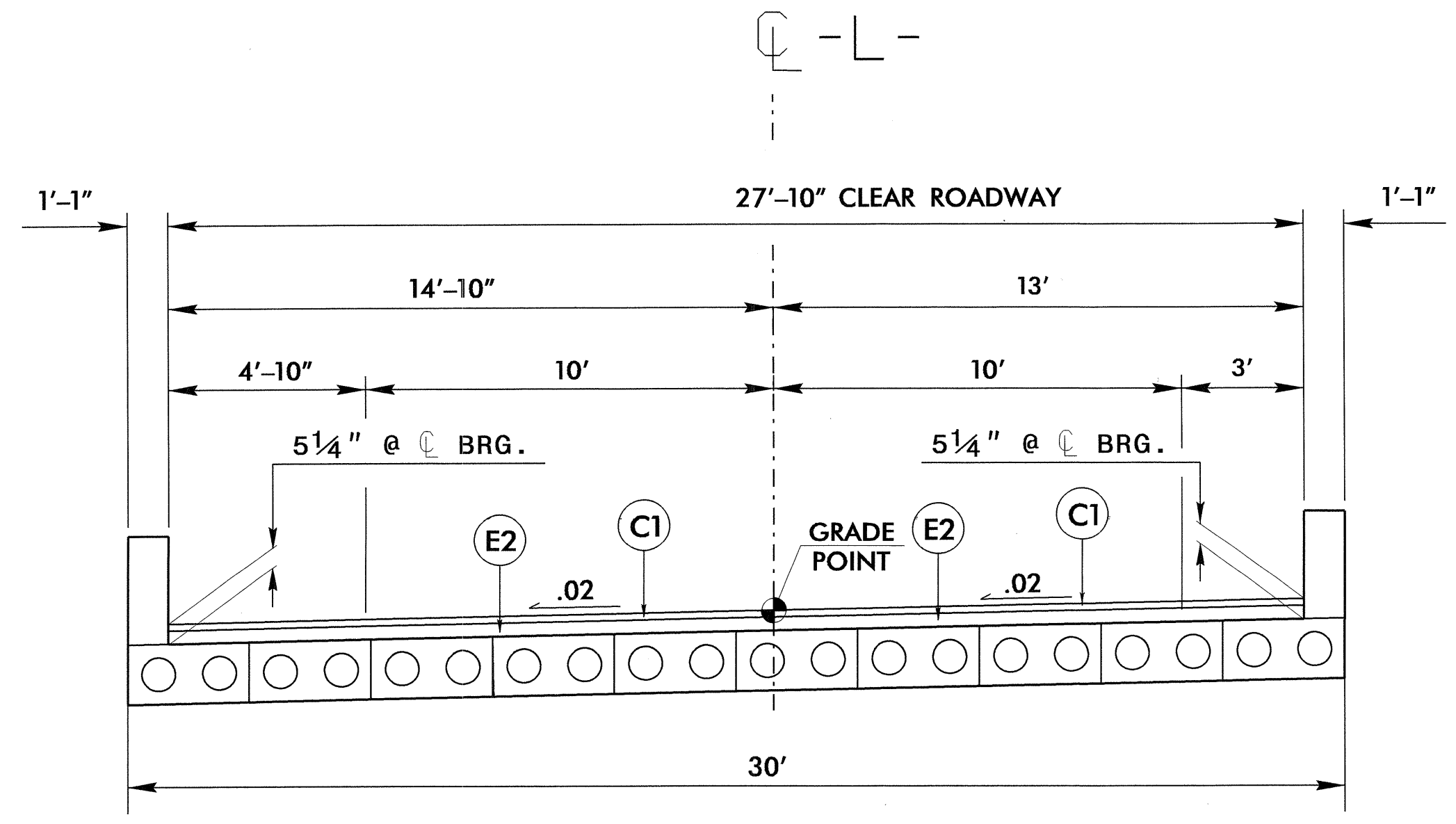
Detail Showing Method of Wedging  
DETAIL 1



\* PAVED SHOULDER LOCATIONS  
 -L- STA. 13+43.91 TO 14+73.81 (LT)  
 -L- STA. 13+58.56 TO 14+73.81 (RT)  
 -L- STA. 16+06.19 TO 17+36.09 (LT)  
 -L- STA. 16+06.19 TO 17+21.45 (RT)

SEE PLAN SHEET AND TYPICAL SECTION NO. 2 FOR SHOULDER PAVEMENT.

USE TYPICAL SECTION NO. 2  
 -L- STA. 14+25.00 TO -L- STA. 14+73.81 (BEG. BRIDGE)  
 -L- STA. 16+06.19 (END BRIDGE) TO -L- STA. 17+50.00



TYPICAL SECTION ON STRUCTURE

BEGIN BRIDGE -L- STA. 14+73.81 TO END BRIDGE -L- STA. 16+06.19

TYPICAL SECTION NO. 2

NOTE:  
 \*\* INSTALL SHOULDER BERM GUTTER (SBG) AS FOLLOWS:  
 -L- STA. 14+37.00 TO -L- STA. 14+62.81 (LT)

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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 - C203020

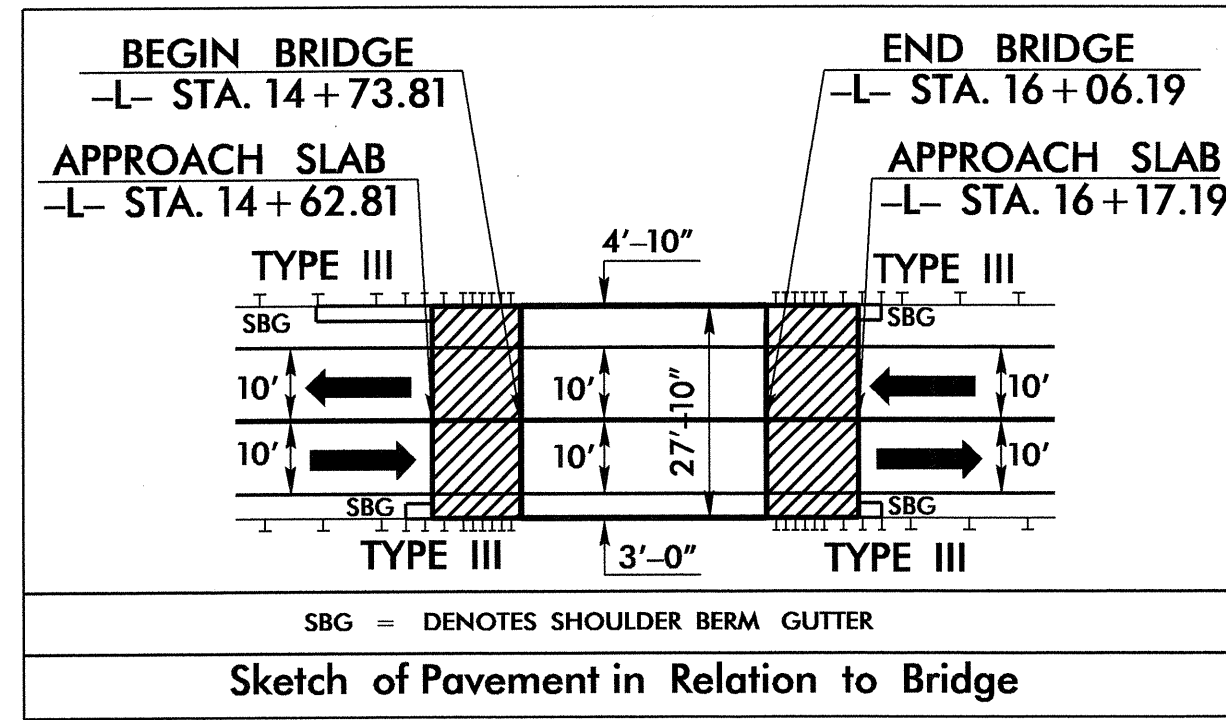
ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0030000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (15+40)
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0057000000-E	226	150	CY	UNDERCUT EXCAVATION
0195000000-E	265	100	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	100	SY	GEOTEXTILE FOR SOIL STABILIZATION
0318000000-E	300	12	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
0320000000-E	300	40	SY	FOUNDATION CONDITIONING GEOTEXTILE
0335200000-E	305	24	LF	15" DRAINAGE PIPE
0335300000-E	305	84	LF	18" DRAINAGE PIPE
0335850000-E	305	2	EA	*** DRAINAGE PIPE ELBOWS (15")
1330000000-E	607	90	SY	INCIDENTAL MILLING
1489000000-E	610	490	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1525000000-E	610	180	TON	ASPHALT CONC SURFACE COURSE, TYPE SP9.5A
1575000000-E	620	35	TON	ASPHALT BINDER FOR PLANT MIX
2000000000-N	806	8	EA	RIGHT OF WAY MARKERS
2286000000-N	840	2	EA	MASONRY DRAINAGE STRUCTURES
2355000000-N	840	1	EA	FRAME WITH GRATE, STD 840.29
2396000000-N	840	1	EA	FRAME WITH COVER, STD 840.54
2556000000-E	846	35	LF	SHOULDER BERM GUTTER
3030000000-E	862	50	LF	STEEL BM GUARDRAIL
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3215000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350

ItemNumber	Sec #	Quantity	Unit	Description
3628000000-E	876	4	TON	RIP RAP, CLASS I
3656000000-E	876	830	SY	GEOTEXTILE FOR DRAINAGE
4072000000-E	903	61	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4096000000-N	904	2	EA	SIGN ERECTION, TYPE D
4155000000-N	907	4	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
4400000000-E	1110	345	SF	WORK ZONE SIGNS (STATIONARY)
4410000000-E	1110	131	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4445000000-E	1145	96	LF	BARRICADES (TYPE III)
4810000000-E	1205	4,440	LF	PAINT PAVEMENT MARKING LINES (4")
6000000000-E	1605	850	LF	TEMPORARY SILT FENCE
6006000000-E	1610	190	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	100	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	240	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	1	ACR	TEMPORARY MULCHING
6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	100	LF	SAFETY FENCE
6030000000-E	1630	100	CY	SILT EXCAVATION
6036000000-E	1631	1,750	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	250	SY	COIR FIBER MAT
6038000000-E	SP	200	SY	PERMANENT SOIL REINFORCEMENT MAT
6042000000-E	1632	425	LF	1/4" HARDWARE CLOTH
6070000000-N	1639	6	EA	SPECIAL STILLING BASINS
6071010000-E	SP	30	LF	WATTLE
6071020000-E	SP	30	LB	POLYACRYLAMIDE (PAM)

ItemNumber	Sec #	Quantity	Unit	Description
6084000000-E	1660	1	ACR	SEEDING & MULCHING
6087000000-E	1660	0.5	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	0.75	TON	FERTILIZER TOPDRESSING
6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	18	EA	RESPONSE FOR EROSION CONTROL





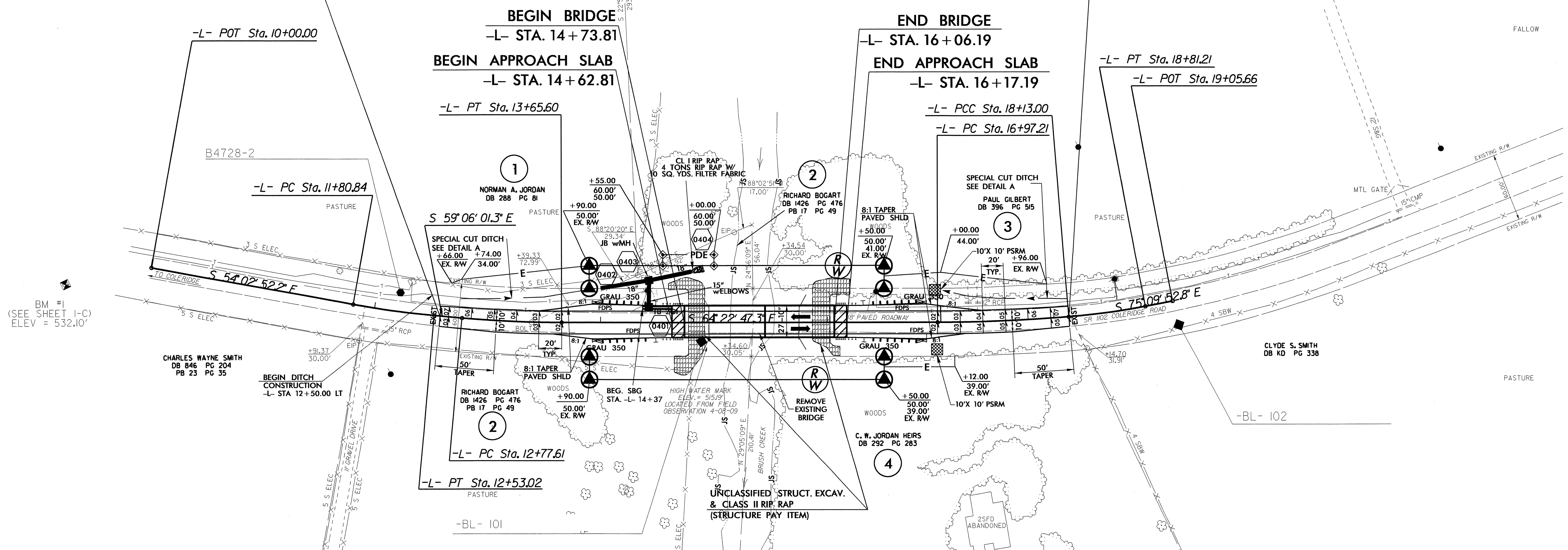


-L-	
PI Sta 12+16.95 Δ = 5° 03' 09" (LT) D = 7° 00' 00.0" L = 72.18' T = 36.11' R = 818.51'	PI Sta 13+21.64 Δ = 5° 16' 46.0" (LT) D = 5° 59' 58.4" L = 88.00' T = 44.03' R = 955.00' RO = SEE PLANS

-L-	
PI Sta 17+55.14 Δ = 4° 38' 46.5" (LT) D = 4° 00' 44.3" L = 115.80' T = 57.93' R = 1,428.00' RO = SEE PLANS	PI Sta 18+47.14 Δ = 6° 08' 19.0" (LT) D = 9° 00' 00.0" L = 68.21' T = 34.14' R = 636.62'

END TIP PROJECT B-4728  
 -L- STA. 18+13.00

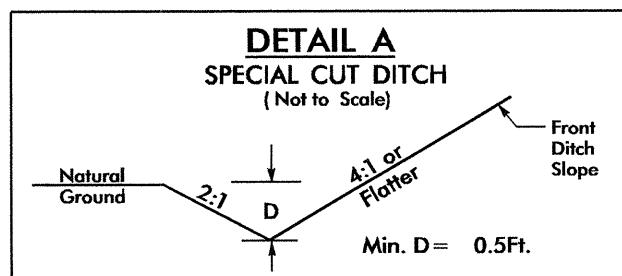
BEGIN TIP PROJECT B-4728  
 -L- STA. 12+58.00



BM #1 (SEE SHEET 1-C)  
 ELEV = 532.10'

BM #2 (SEE SHEET 1-C)  
 ELEV = 508.14'

"PSRM" denotes "Permanent Soil Reinforcement Mat"



FROM -L- STA. 12+50 TO STA. 14+25 LT.  
 FROM -L- STA. 17+00 TO STA. 18+13 LT.

NOTE: SEE SHEET NO. 5 FOR -L- PROFILE  
 NOTE: SEE SHEETS S-1 THRU S-18 FOR STRUCTURE PLANS

REVISIONS

8/17/99  
 24 SEP 2012 14:32  
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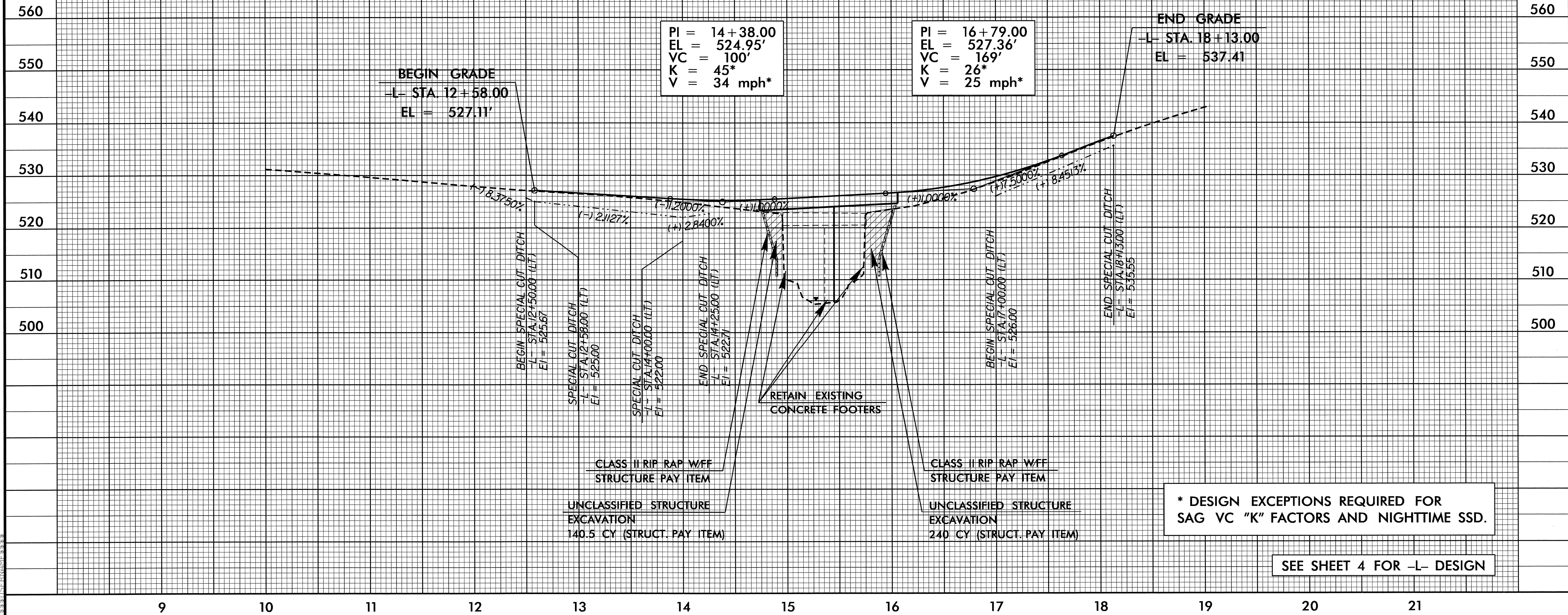
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PROJECT REFERENCE NO. <b>B-4728</b>	SHEET NO. <b>5</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 3200	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 515.2	FT
BASE DISCHARGE	= 477.8 (EIS)	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 516.9	FT
OVERTOPPING DISCHARGE	= 26000	CFS
OVERTOPPING FREQUENCY	= 500±	YRS
OVERTOPPING ELEVATION	= 525.4	FT
	= _____	FT
DATE OF SURVEY	= 9/14/10	
W.S. ELEVATION AT DATE OF SURVEY	= 506.1	FT

**BM#2 RR SPIKE IN ROOT OF 18" GUM TREE**  
 -L- STA. 14+96.96 237.51' RT.  
 N 713357 E 1839540 ELEV. = 508.14'

BRIDGE Q STA. 15+40 -L-  
 ELEV. = 525.97'  
 SKEW = 90°  
 PROPOSED 1 @ 70' AND 1 @ 60'  
 24" CORED SLAB  
 CORED SLAB, OAL = 132.38'



\* DESIGN EXCEPTIONS REQUIRED FOR SAG VC "K" FACTORS AND NIGHTTIME SSD.

SEE SHEET 4 FOR -L- DESIGN

27-SEP-2012 07:06  
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 \$\$\$\$SYTIME\$\$\$\$