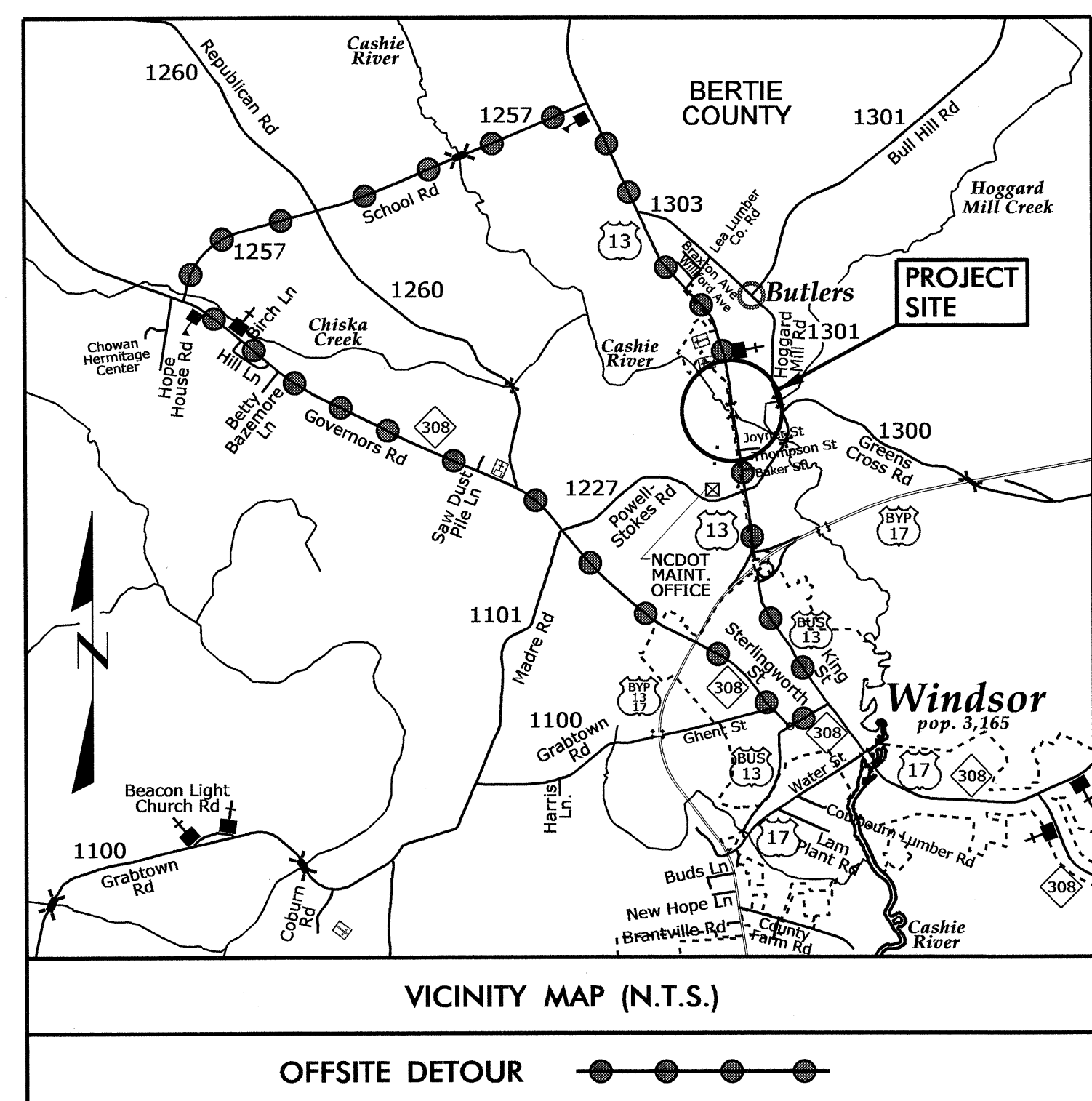


09/08/99

See Sheet 1-A For Index of Sheets
 See Sheet 1-B For Symbology
 See Sheet 1-C For Survey Control Sheet

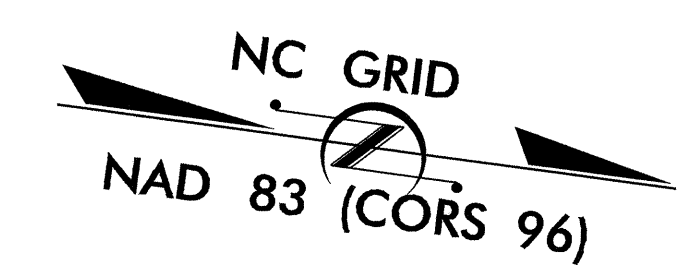
TIP PROJECT: B-5122



STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

BERTIE COUNTY

LOCATION: BRIDGE NO. 51, OVER THE CASHIE RIVER, ON US 13
TYPE OF WORK: GRADING, DRAINAGE, PAVING, & STRUCTURE

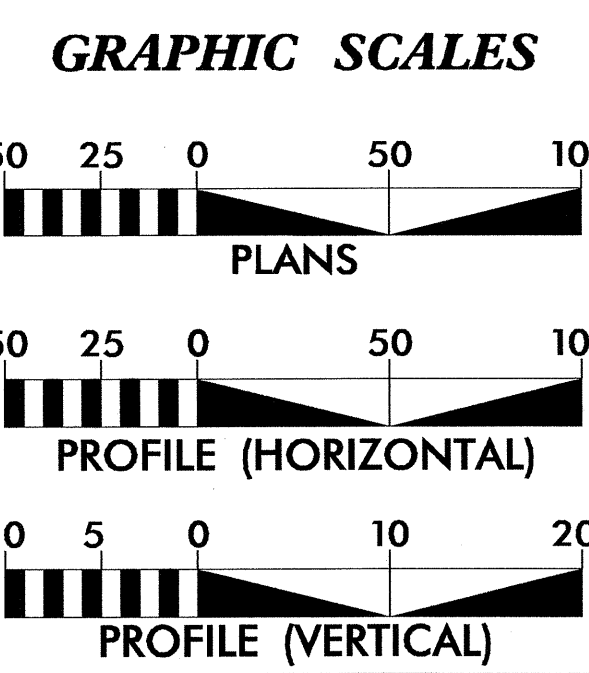
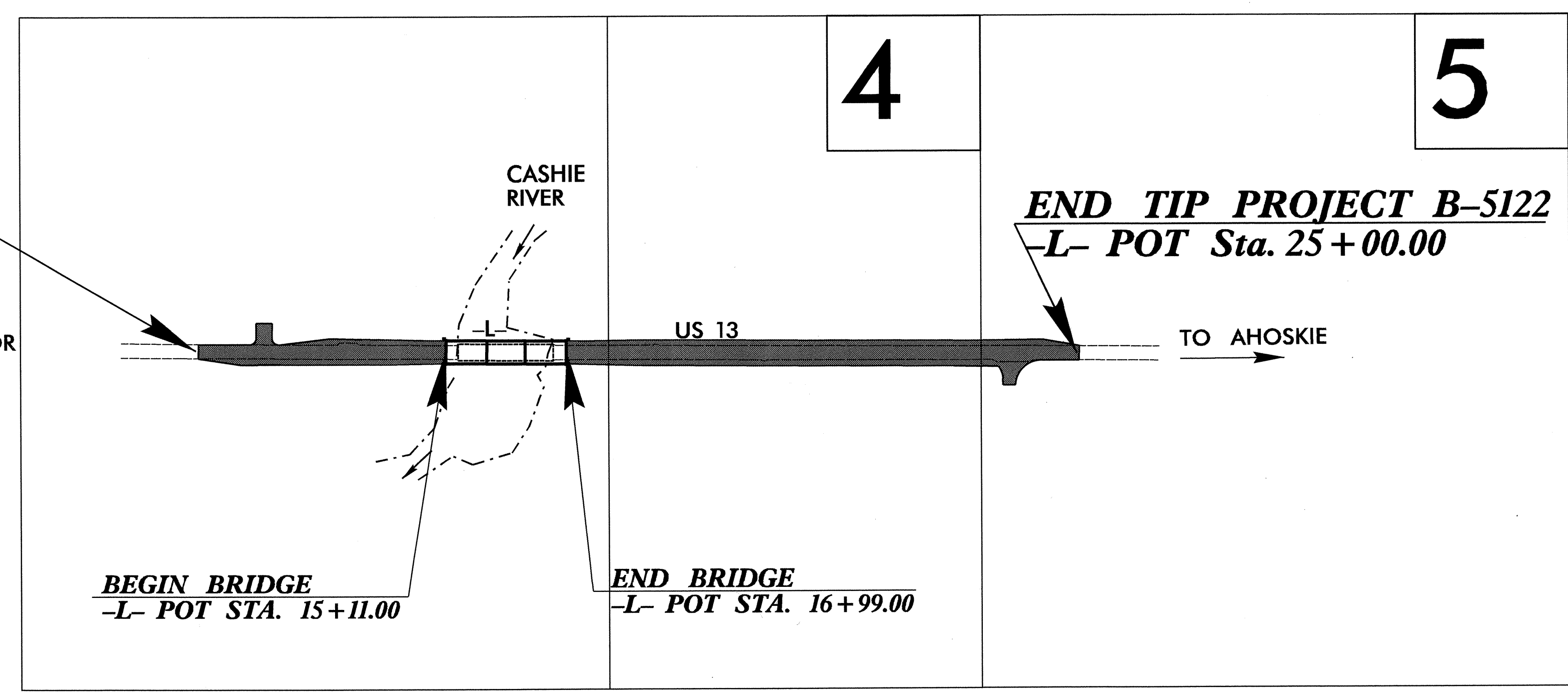


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5122	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42264.1.1	BRNHS-13(24)	PE	
42264.2.1	BRNHS-13(24)	RW & UTIL	
42264.3.1	BRNHS-13(24)	CONST.	

CONTRACT: C203025

BEGIN TIP PROJECT B-5122
-L- POT Sta. 11+25.00

END TIP PROJECT B-5122
-L- POT Sta. 25+00.00



DESIGN DATA

ADT 2013	=	8,150
ADT 2033	=	13,380
DHV	=	11 %
D	=	55 %
T	=	12 % *
V	=	60 MPH
* (TTST 5% + DUALS 7%)		
FUNC. CLASS.	=	MINOR ART.
TIER CLASS.	=	STATEWIDE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5122	=	0.224 mile
LENGTH STRUCTURE TIP PROJECT B-5122	=	0.036 mile
TOTAL LENGTH TIP PROJECT B-5122	=	0.260 mile

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

2012 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE:
 NOVEMBER 30, 2011

LETTING DATE:
 JUNE 18, 2013

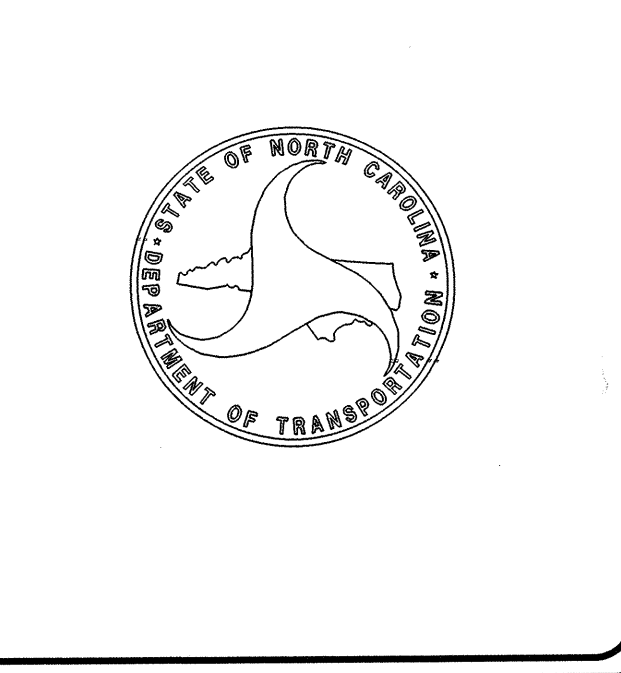
BRENDA MOORE, PE
 PROJECT ENGINEER

TATIA L. WHITE, PE
 PROJECT DESIGN ENGINEER

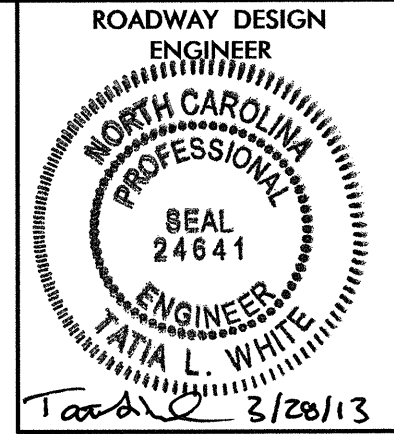
HYDRAULIC ENGINEER

ROADWAY DESIGN ENGINEER

Signature: *Tatia L. White* 3/20/13



28-MAR-2013 07:26
 P:\ROADWAY\PR\1105122_rdy_tsh.dgn
 \$\$\$USERNAME\$\$\$



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 THROUGH 1-D	SURVEY CONTROL SHEETS
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-A	STRUCTURE ANCHOR DETAIL
2-B	ROCK PLATING DETAIL
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE QUANTITIES
3-B	SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, SHOULDER BERM GUTTER SUMMARY AND ASPHALT PAVEMENT REMOVAL SUMMARY
3-C	PARCEL INDEX SHEET
4 THROUGH 5	PLAN SHEETS
6	PROFILE SHEET
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLAN
SIGN-1 THROUGH SIGN-3	SIGNING PLANS
PM-1 THROUGH PM-2	PAVEMENT MARKING PLANS
EC-1 THROUGH EC-7	EROSION CONTROL PLANS
UC-1 THROUGH UC-19	UTILITIES PLANS
UO-1 THROUGH UO- 8	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION SUMMARY
X-2 THRU X-8	CROSS-SECTIONS
S-1 THRU S-33	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 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.10	Reinforced Bridge Approach Fills
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
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
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

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

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 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.

SUBSURFACE DRAINS:
SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 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.

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: BERTIE COUNTY WATER, TOWN OF WINDSOR, TOWN OF ASKEWVILLE, CENTURY LINK AND PIEDMONT NATURAL GAS.

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.
UTILITIES BY OTHERS PLANS INCLUDED IN THE PROJECT.)
RIGHT-OF-WAY MARKERS:
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

8/17/99

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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	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	○
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 C/A 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	-----
U/G Power Cable Hand Hole	-----
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	-----

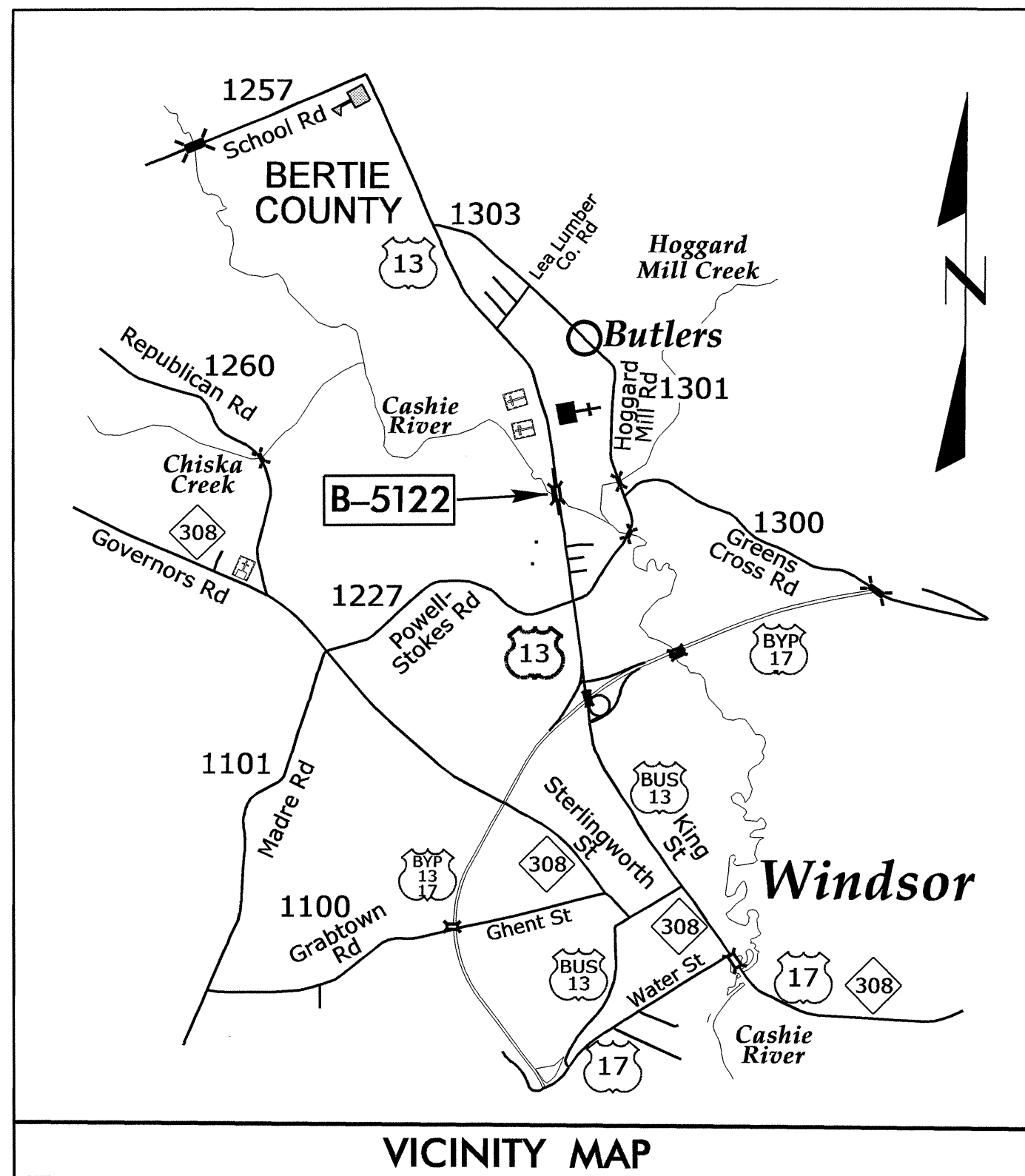
SANITARY SEWER:

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	-----
End of Information	-----

SURVEY CONTROL SHEET B-5122



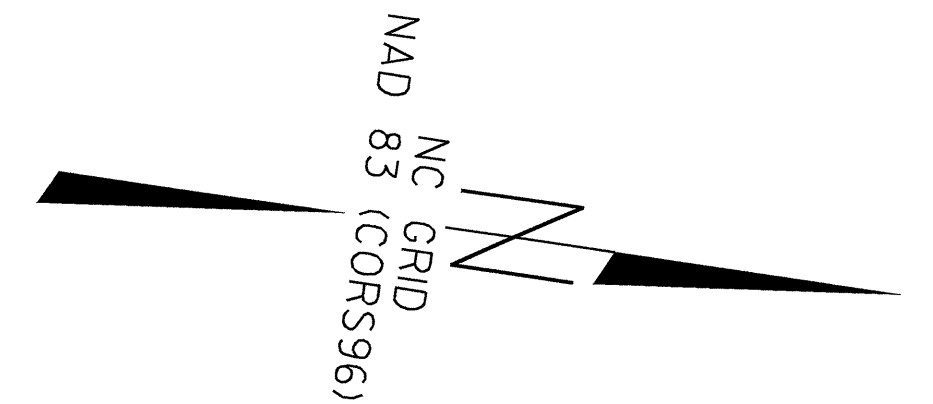
VICINITY MAP

CONTROL DATA

BLN	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
B51221	GPS MON	B5122-1	832018.4950	2604604.7950	9.67	OUTSIDE PROJECT LIMITS	
B51222	GPS MON	B5122-2	832938.5570	2604482.4720	10.88	OUTSIDE PROJECT LIMITS	
BL3		BL3	833751.0820	2604402.1150	13.00	12+99.84	18.01 RT
BL4		BL4	834898.8120	2604194.2650	13.08	OUTSIDE PROJECT LIMITS	

BENCHMARK DATA

BM1 ELEVATION - 11.62
 N 833658 E 2604447
 L STATION 12+01.00 49 RIGHT
 R/R SPIKE IN BASE OF 24" PINE



BEGIN TIP PROJECT B-5122
-L- POT Sta. 11+25.00

LOCALIZED PROJECT COORDINATES
 N= 833,575.4820
 E= 2,604,409.8105

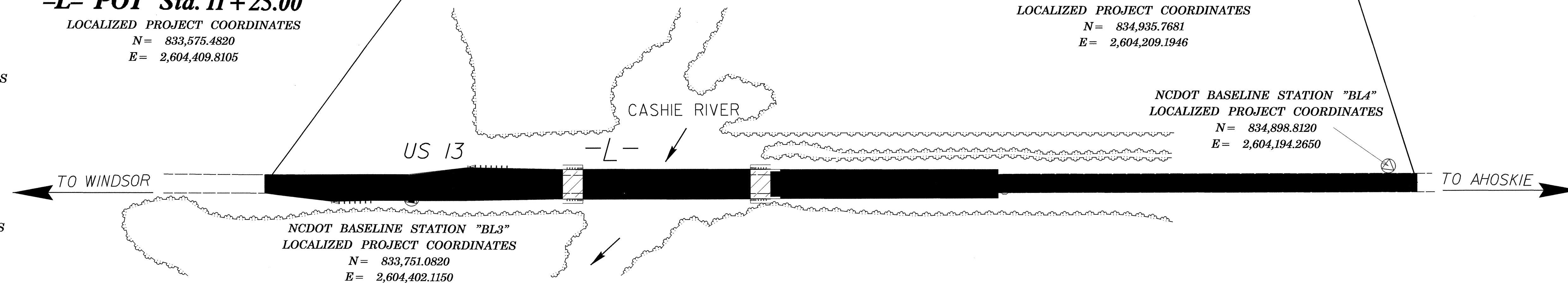
NCDOT GPS STATION "B5122-2"
 LOCALIZED PROJECT COORDINATES
 N= 832,938.5570
 E= 2,604,482.4720

NCDOT GPS STATION "B5122-1"
 LOCALIZED PROJECT COORDINATES
 N= 832,018.4950
 E= 2,604,604.7950

END TIP PROJECT B-5122
-L- POT Sta. 25+00.00

LOCALIZED PROJECT COORDINATES
 N= 834,935.7681
 E= 2,604,209.1946

NCDOT BASELINE STATION "BL4"
 LOCALIZED PROJECT COORDINATES
 N= 834,898.8120
 E= 2,604,194.2650



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR STATION "P5"
 WITH NAD 83 (CORS96) STATE PLANE GRID COORDINATES OF
 NORTHING: 834810.501(++) EASTING: 2604272.890(++)
 ELEVATION: 11.63(++)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999689846
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "P5" TO -L- STATION 11+25.00 IS
 S 06°19'34.57" E 1,242.59 (++)
 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
[HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT](http://www.ncdot.org/doh/preconstruct/highway/location/project)
 FILE: b5122_ls_control.txt

SITE CALIBRATION PARAMETERS HAVE NOT BEEN DETERMINED 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 UTILIZING GLOBAL POSITIONING SYSTEM REAL TIME KINEMATIC NETWORK.

NOTE: DRAWING NOT TO SCALE

SURVEY CONTROL SHEET B-5122

-L- DESIGN ALIGNMENT

TYPE	STATION	NORTH	EAST
POT	10+00.00	833451.8196	2604428.0484
POT	26+24.00	835058.4447	2604191.1021

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+25.00	30.00	833579.8590	2604439.4895
L	11+25.00	50.00	833582.7771	2604459.2755
L	11+75.00	50.00	833632.2420	2604451.9804
L	13+22.00	50.00	833777.6690	2604430.5327
L	13+22.00	85.00	833782.7756	2604465.1582
L	13+85.00	-50.00	833825.4046	2604322.4109
L	13+85.00	-85.00	833820.2980	2604287.7855
L	23+20.00	85.00	834770.0960	2604319.5474
L	23+20.00	50.00	834764.9894	2604284.9220
L	24+00.00	-85.00	834824.4364	2604139.6944
L	24+00.00	-50.00	834829.5430	2604174.3199

PERMANENT EASEMENT IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+25.00	-85.00	833563.0803	2604325.7201
L	11+25.00	85.00	833587.8837	2604493.9009
L	11+25.00	-50.00	833568.1868	2604360.3456
L	12+42.00	50.00	833698.5202	2604442.2056
L	12+42.00	85.00	833703.6268	2604476.8311
L	12+72.00	50.00	833728.2040	2604437.8278
L	12+72.00	85.00	833733.3106	2604472.4533

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR STATION "P5"

WITH NAD 83 (CORS96) STATE PLANE GRID COORDINATES OF
 NORTHING: 834810.501(ft) EASTING: 2604272.890(ft)
 ELEVATION: 11.63(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
 (GROUND TO GRID) IS: 0.9999689846

THE N.C. LAMBERT GRID BEARING AND
 LOCALIZED HORIZONTAL GROUND DISTANCE FROM

"P5" TO -L- STATION 11+25.00 IS
 S 06°19'34.57" E 1,242.59 (ft)

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

NOTES:

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HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT

FILE: b5122_ls_control.txt

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⊗ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEM REAL TIME KINEMATIC NETWORK.

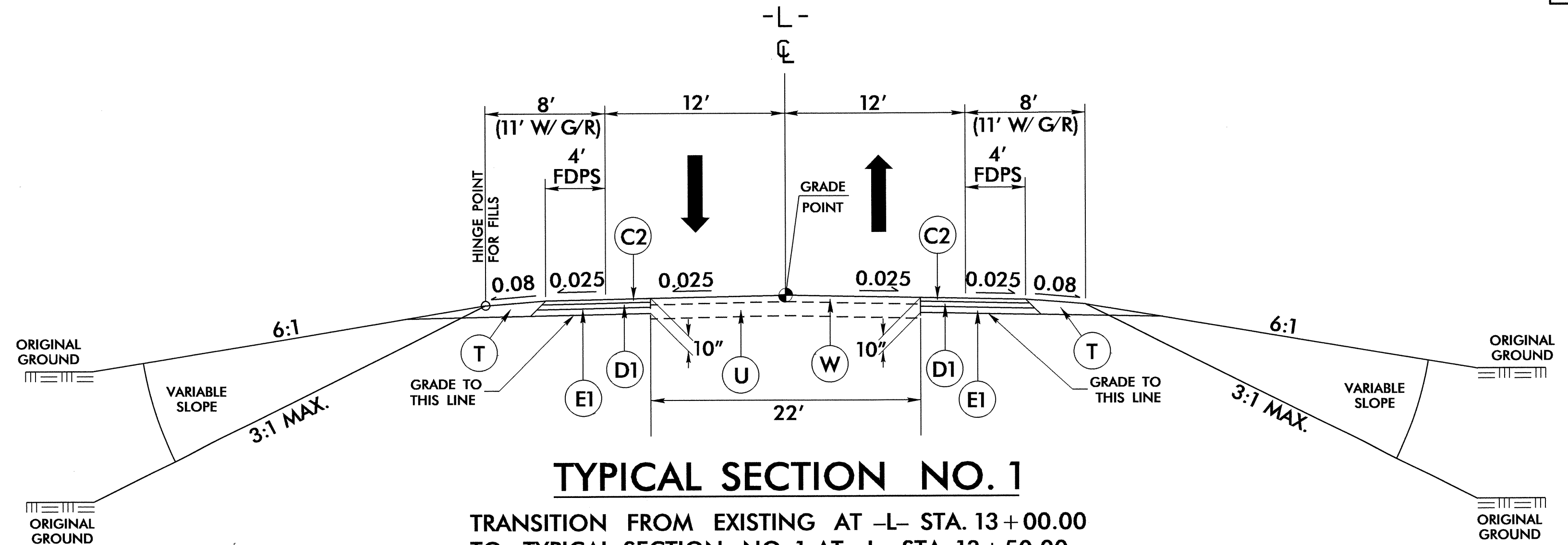
NOTE: DRAWING NOT TO SCALE

6/2/99

PROJECT REFERENCE NO. B-5122	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

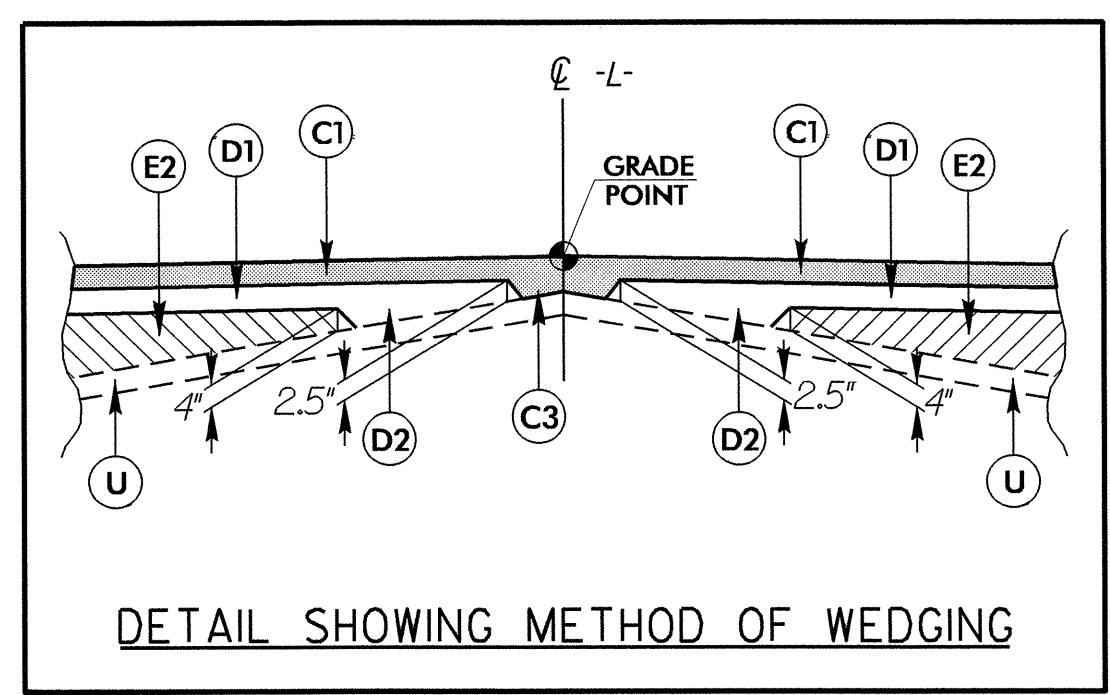
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 Lbs PER SQUARE YARD.
C2	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 Lbs PER SQUARE YARD IN EACH OF TWO LAYERS.
C3	PROP. VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 Lbs PER SQUARE YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.5" OR GREATER THAN 2.0" IN DEPTH.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 Lbs. PER SQUARE YARD.
D2	PROP. VARIABLE DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 Lbs PER SQUARE YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4.0" IN DEPTH.
E1	PROP. APPROX. 4.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0 B, AT AN AVERAGE RATE OF 513 Lbs PER SQUARE YARD.
E2	PROP. VARIABLE DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 Lbs PER SQUARE YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 4.0" OR GREATER THAN 5.5" IN DEPTH.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL THIS SHEET)

PAVEMENT EDGE SLOPES AND TRENCH SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

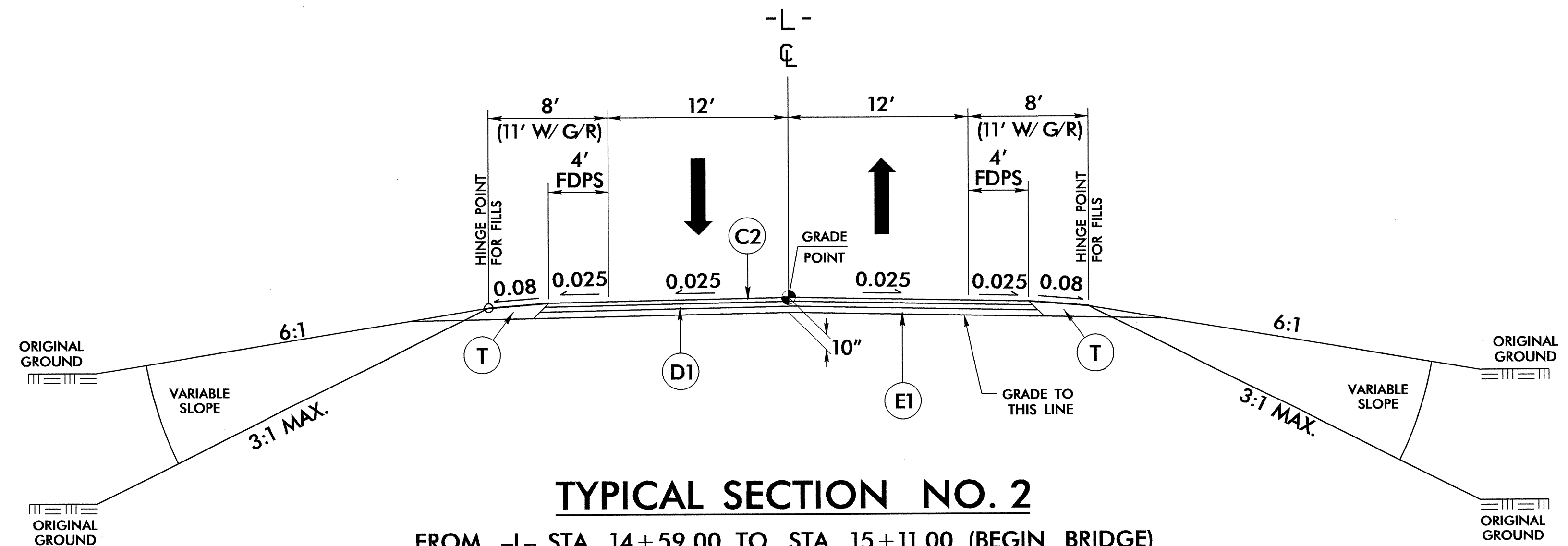


TYPICAL SECTION NO. 1

TRANSITION FROM EXISTING AT -L- STA. 13+00.00
 TO TYPICAL SECTION NO. 1 AT -L- STA. 13+50.00
 FROM -L- STA. 13+50.00 TO -L- STA. 14+59.00
 FROM -L- STA. 17+23.17 TO -L- STA. 19+50.00
 TRANSITION FROM TYPICAL NO. 1 AT -L- STA. 19+50.00
 TO EXISTING AT -L- STA. 20+00.00
 OVERLAY EXISTING PAVEMENT AND SHOULDER WIDENING
 FROM -L- STA. 11+25.00 TO -L- STA. 13+00.00
 AND -L- STA. 20+00.00 TO -L- STA. 25+00.00
 NOTE: PAVE TO THE FACE OF GUARDRAIL



DETAIL SHOWING METHOD OF WEDGING



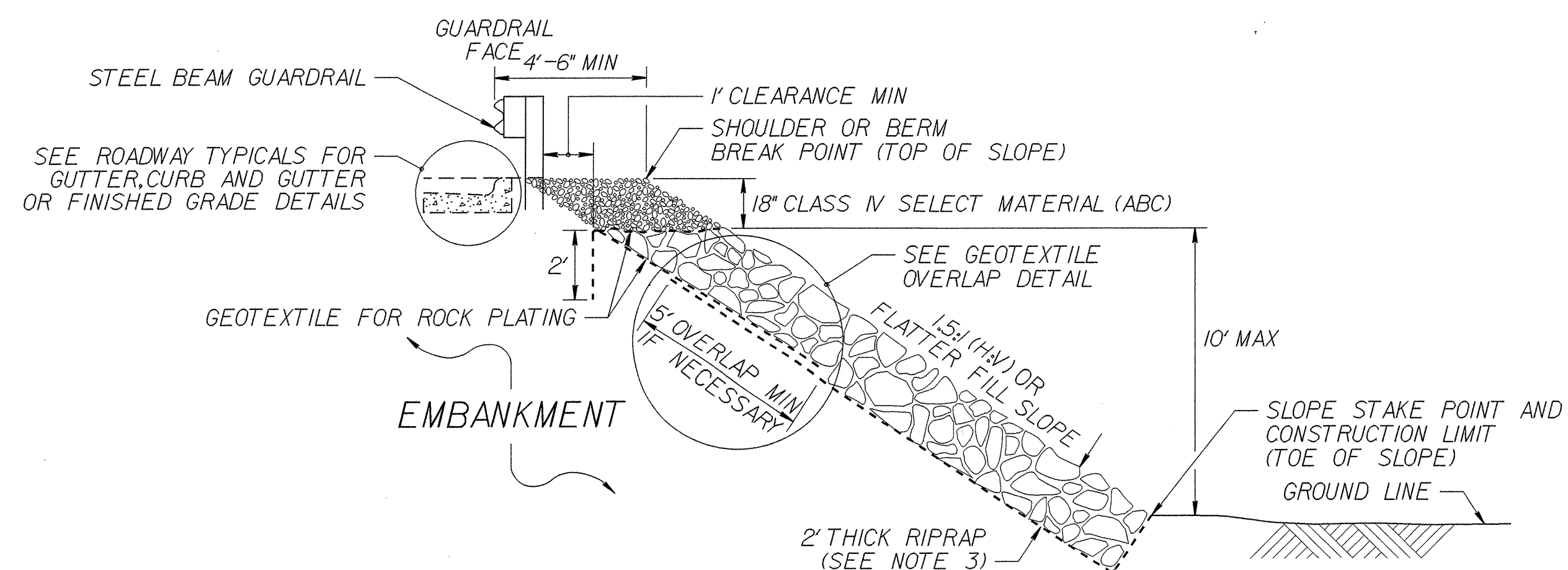
TYPICAL SECTION NO. 2

FROM -L- STA. 14+59.00 TO STA. 15+11.00 (BEGIN BRIDGE)
 FROM -L- STA. 16+99.00 (END BRIDGE) TO STA. 17+23.17

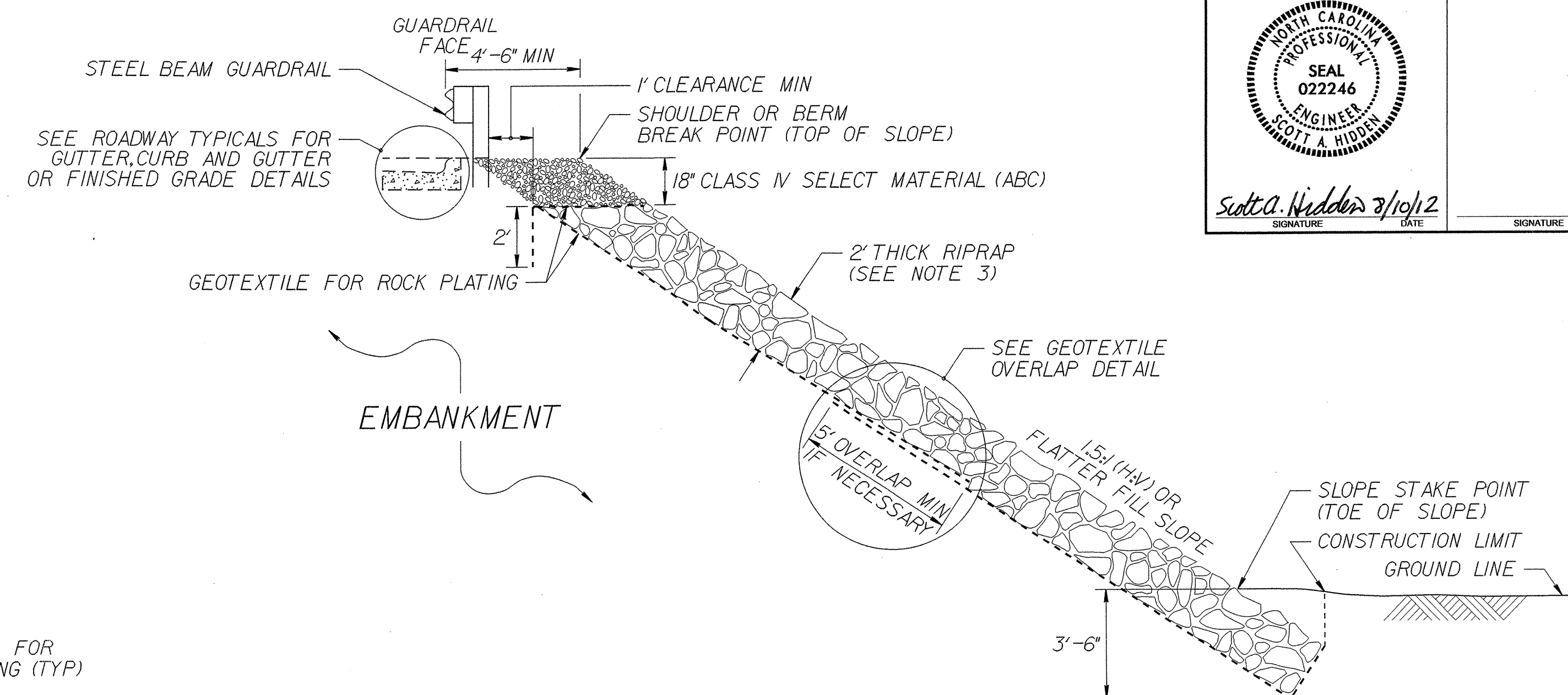
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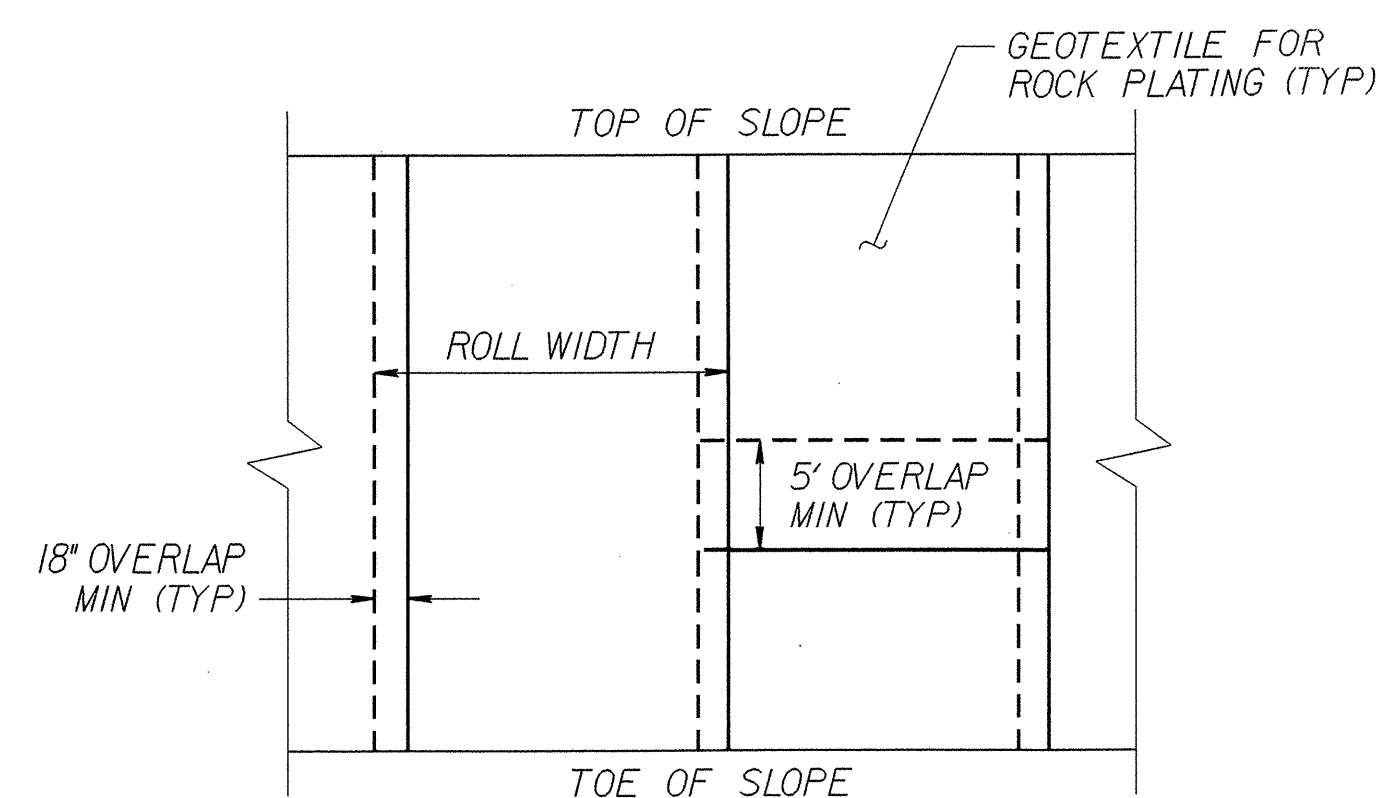
Scott A. Hadden 3/10/12
SIGNATURE DATE



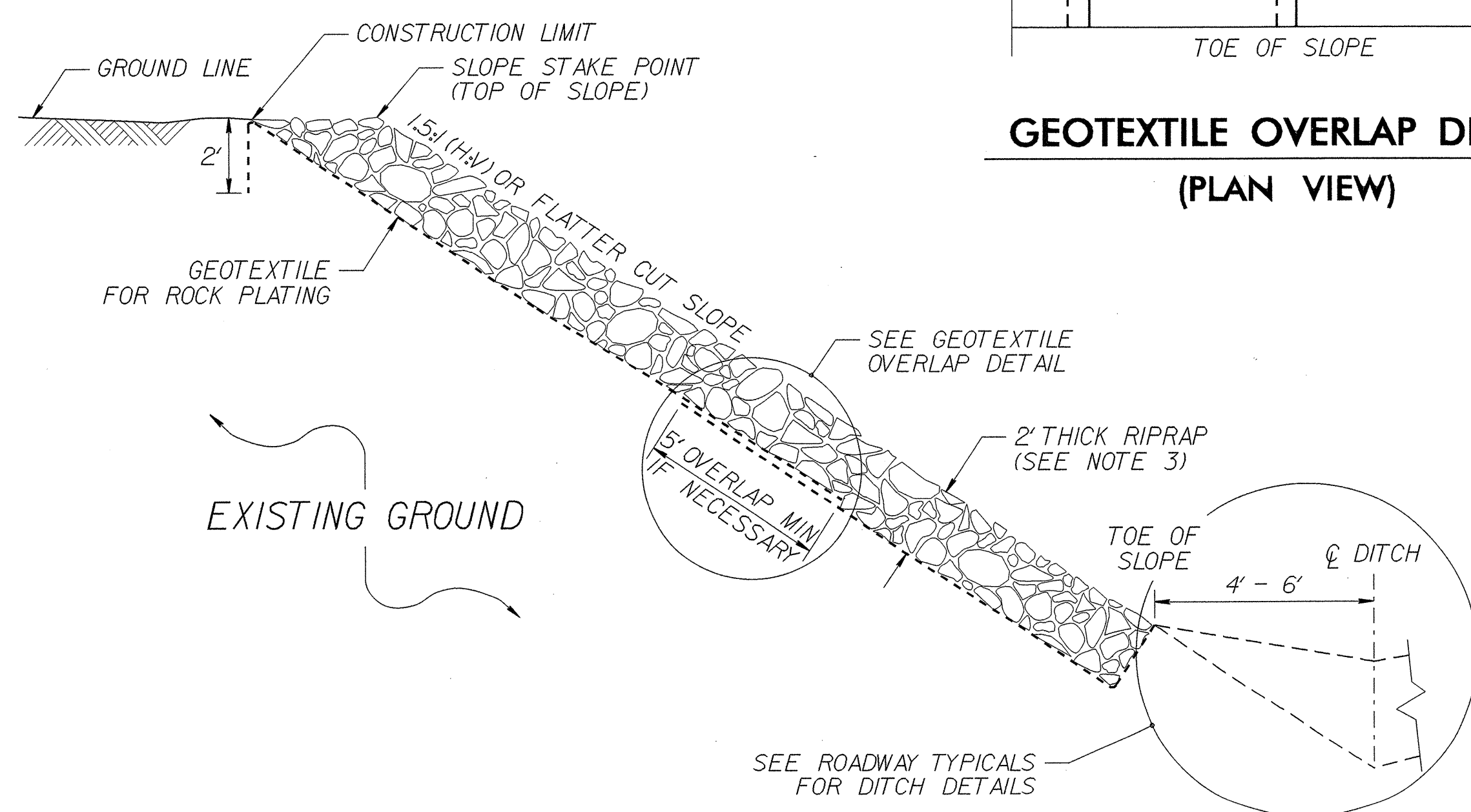
ROCK PLATING DETAIL NO. 1 - TYPICAL SECTION



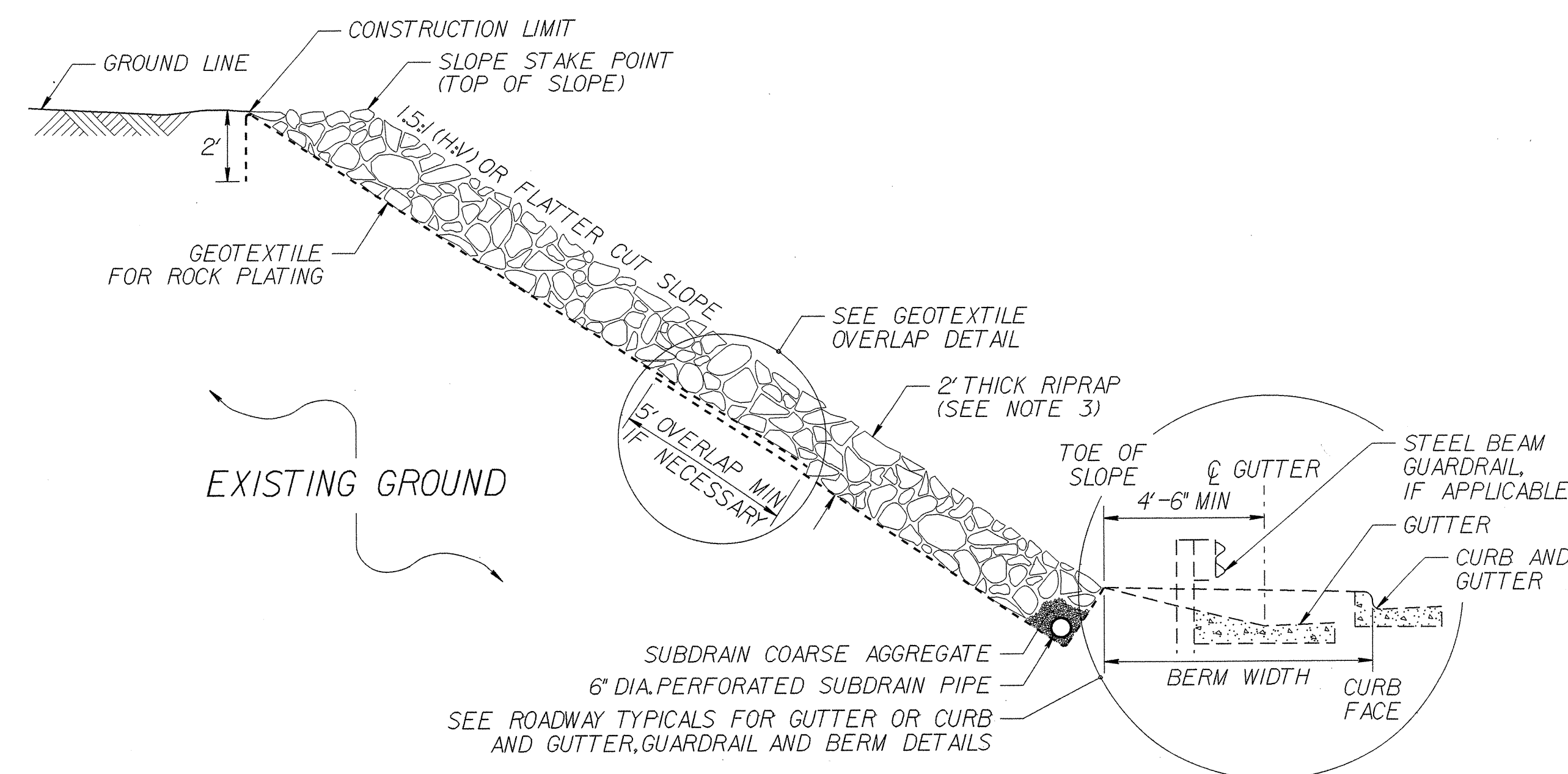
ROCK PLATING DETAIL NO. 2 - TYPICAL SECTION



GEOTEXTILE OVERLAP DETAIL (PLAN VIEW)



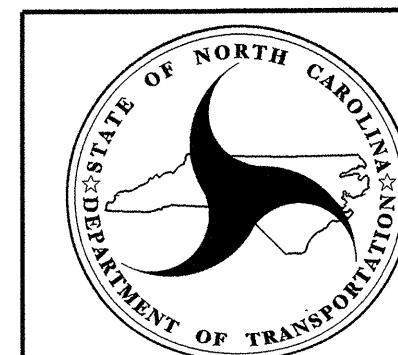
ROCK PLATING DETAIL NO. 3 - TYPICAL SECTION



ROCK PLATING DETAIL NO. 4 - TYPICAL SECTION

NOTES:

1. SEE ROADWAY PLANS AND SUMMARY SHEETS FOR ROCK PLATING LOCATIONS.
2. FOR STANDARD ROCK PLATING, SEE SECTION 275 OF THE STANDARD SPECIFICATIONS.
3. USE CLASS I, 2 OR B RIPRAP UNLESS REQUIRED OTHERWISE IN THE ROADWAY SUMMARY SHEETS.



GEOTECHNICAL ENGINEERING UNIT
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD DRAWING NO. 1802.01

STANDARD ROCK PLATING

DATE: 2-19-13

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203025

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (16+05.00)
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0057000000-E	226	350	CY	UNDERCUT EXCAVATION
0063000000-N	SP	Lump Sum		GRADING
0106000000-E	230	11,800	CY	BORROW EXCAVATION
0134000000-E	240	10	CY	DRAINAGE DITCH EXCAVATION
0195000000-E	265	350	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	350	SY	GEOTEXTILE FOR SOIL STABILIZATION
0223000000-E	275	850	SY	ROCK PLATING
0318000000-E	300	180	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
0320000000-E	300	340	SY	FOUNDATION CONDITIONING GEOTEXTILE
0343000000-E	310	236	LF	15" SIDE DRAIN PIPE
0348000000-E	310	4	EA	*** SIDE DRAIN PIPE ELBOWS (15")
0448200000-E	310	112	LF	15" RC PIPE CULVERTS, CLASS IV
1121000000-E	520	90	TON	AGGREGATE BASE COURSE
1220000000-E	545	12	TON	INCIDENTAL STONE BASE
1330000000-E	607	250	SY	INCIDENTAL MILLING
1489000000-E	610	580	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1498000000-E	610	300	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE 119.0B
1519000000-E	610	610	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1575000000-E	620	80	TON	ASPHALT BINDER FOR PLANT MIX
2022000000-E	815	22.4	CY	SUBDRAIN EXCAVATION

SUMMARY OF QUANTITIES - B-5122

ItemNumber	Sec #	Quantity	Unit	Description
2026000000-E	815	100	SY	GEOTEXTILE FOR SUBSURFACE DRAINS
2036000000-E	815	16.8	CY	SUBDRAIN COARSE AGGREGATE
2044000000-E	815	100	LF	6" PERFORATED SUBDRAIN PIPE
2070000000-N	815	1	EA	SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE
2286000000-N	840	8	EA	MASONRY DRAINAGE STRUCTURES
2367000000-N	840	8	EA	FRAME WITH TWO GRATES, STD 840.29
2556000000-E	846	1,585	LF	SHOULDER BERM GUTTER
3030000000-E	862	1,650	LF	STEEL BM GUARDRAIL
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3317000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77
3360000000-E	863	1,820	LF	REMOVE EXISTING GUARDRAIL
3649000000-E	876	6	TON	RIP RAP, CLASS B
3656000000-E	876	475	SY	GEOTEXTILE FOR DRAINAGE
4072000000-E	903	30	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
4096000000-N	904	2	EA	SIGN ERECTION, TYPE D
4158000000-N	907	2	EA	DISPOSAL OF SIGN SYSTEM, WOOD
4400000000-E	1110	400	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	96	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	156	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4435000000-N	1135	40	EA	CONES
4445000000-E	1145	112	LF	BARRICADES (TYPE III)
4450000000-N	1150	160	HR	FLAGGER
4685000000-E	1205	2,300	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
4686000000-E	1205	2,300	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)

ItemNumber	Sec #	Quantity	Unit	Description
4770000000-E	1205	900	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (II)
4900000000-N	1251	17	EA	PERMANENT RAISED PAVEMENT MARKERS
5325800000-E	1510	1,123	LF	8" WATER LINE
5546000000-E	1515	2	EA	8" VALVE
5709300000-E	1520	1,202	LF	6" FORCE MAIN SEWER
5709400000-E	1520	1,178	LF	8" FORCE MAIN SEWER
5800000000-E	1530	1,178	LF	ABANDON 6" UTILITY PIPE
5801000000-E	1530	2,257	LF	ABANDON 8" UTILITY PIPE
5871400000-E	1550	878	LF	TRENCHLESS INSTALLATION OF 6" IN SOIL
5871410000-E	1550	98	LF	TRENCHLESS INSTALLATION OF 6" NOT IN SOIL
5871500000-E	1550	1,854	LF	TRENCHLESS INSTALLATION OF 8" IN SOIL
5871510000-E	1550	206	LF	TRENCHLESS INSTALLATION OF 8" NOT IN SOIL
5882000000-N	SP	2	EA	GENERIC UTILITY ITEM 6" INSERT GATE VALVE
5882000000-N	SP	2	EA	GENERIC UTILITY ITEM 8" INSERT GATE VALVE
6000000000-E	1605	3,800	LF	TEMPORARY SILT FENCE
6006000000-E	1610	225	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	245	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	180	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	5	ACR	TEMPORARY MULCHING
6018000000-E	1620	150	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.75	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	750	LF	TEMPORARY SLOPE DRAINS
6029000000-E	SP	2,000	LF	SAFETY FENCE
6030000000-E	1630	360	CY	SILT EXCAVATION

ItemNumber	Sec #	Quantity	Unit	Description
6036000000-E	1631	10,000	SY	MATting FOR EROSION CONTROL
6037000000-E	SP	600	SY	COIR FIBER MAT
6042000000-E	1632	375	LF	1/4" HARDWARE CLOTH
6048000000-E	SP	425	SY	FLOATING TURBIDITY CURTAIN
6071012000-E	SP	350	LF	COIR FIBER WATTLE
6071020000-E	SP	55	LB	POLYACRYLAMIDE (PAM)
6071030000-E	1640	80	LF	COIR FIBER BAFFLE
6084000000-E	1660	5	ACR	SEEDING & MULCHING
6087000000-E	1660	2.5	ACR	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	125	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	3.75	TON	FERTILIZER TOPDRESSING
6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
6117000000-N	SP	25	EA	RESPONSE FOR EROSION CONTROL

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Station	Station	Uncl. Excav.	Undercut Excav.	Embank. +%	Borrow	Waste
11+25.00	15+11.00	99		1588	1489	
	BEGIN BRIDGE					
SUBTOTALS:		99		1588	1489	
16+99.00	25+00.00	241		9844	9603	
	END BRIDGE					
SUBTOTALS:		241		9844	9603	
TOTALS:		340		11431	11091	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					555	
PROJECT TOTALS:		340		11431	11646	
SAY:		400			11800	

SUMMARY OF ROCK PLATING

LINE	Beginning Slope	Approx. Station	Ending Slope	Approx. Station	LOC LT/RT	Rock Plating Detail No.	Riprap Class	YD ²
L	2.5:1	14+60	1.5:1	15+17	LT/RT	2	I, II or B	430
L	1.5:1	16+92	2.5:1	17+40	LT/RT	2	I, II or B	420
TOTAL:								850
SAY:								850

SUMMARY OF PROPOSED SHOULDER BERM GUTTER

LINE	Station	Station	LOC LT/RT/CL	FT
L	12+52.25	14+86.83	RT	234.58
L	13+80.25	14+86.83	LT	106.58
L	17+23.17	23+04.75	RT	581.58
L	17+23.17	23+83.75	LT	660.58
TOTAL:				1583.32
SAY:				1585

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD ²
L	14+59	15+30	CL	173.56
L	16+78	17+24	CL	112.44
TOTAL:				286.00
SAY:				290

UNDERCUT = 350 CY (GEOTECH REC'S 6/15/11)
 DDE = 10 CY

Note: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

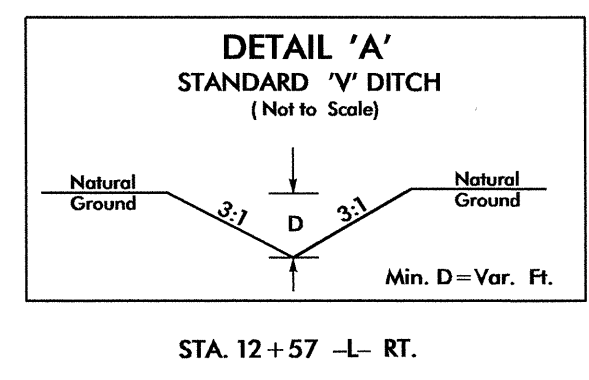
Note: Approximate quantities only. Unclassified excavation, fine grading, clearing and grubbing and removal of existing asphalt pavement will be paid for at the lump sum grading price for "Grading".

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING IMPACT ATTENUATOR TYPE 350
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

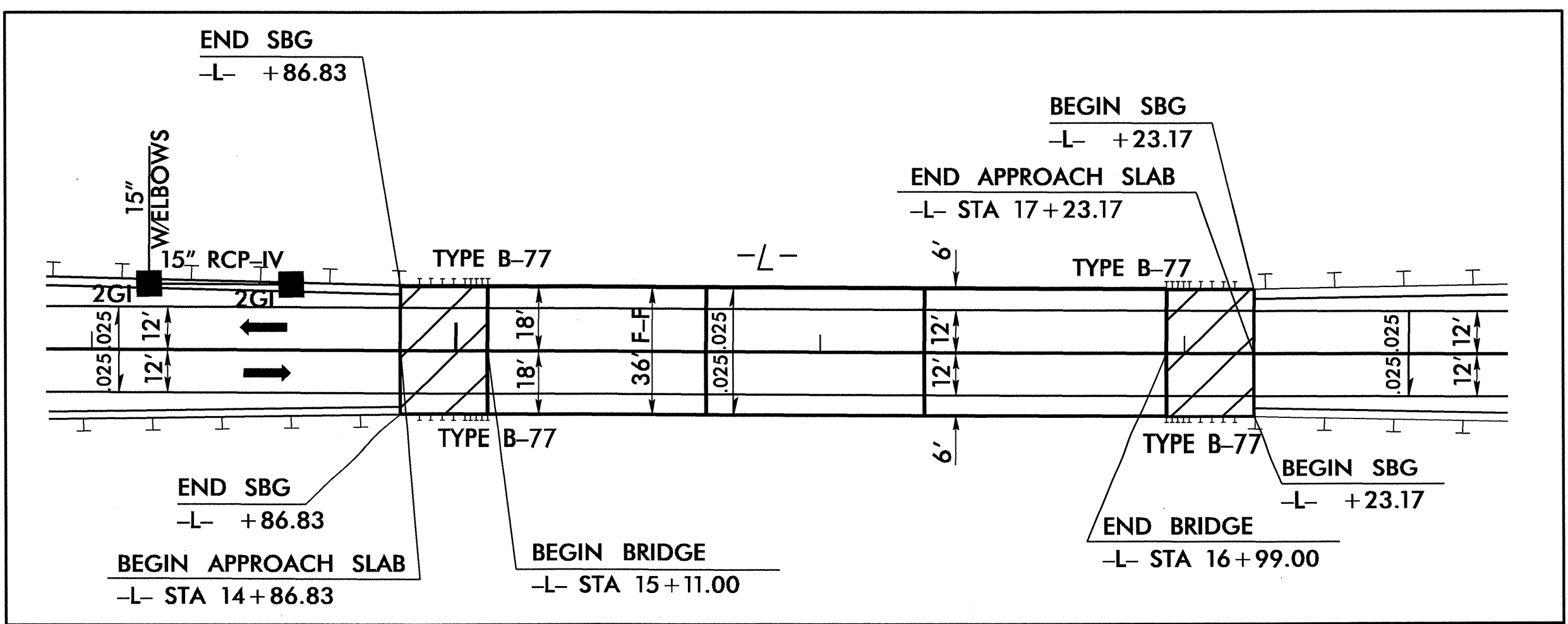
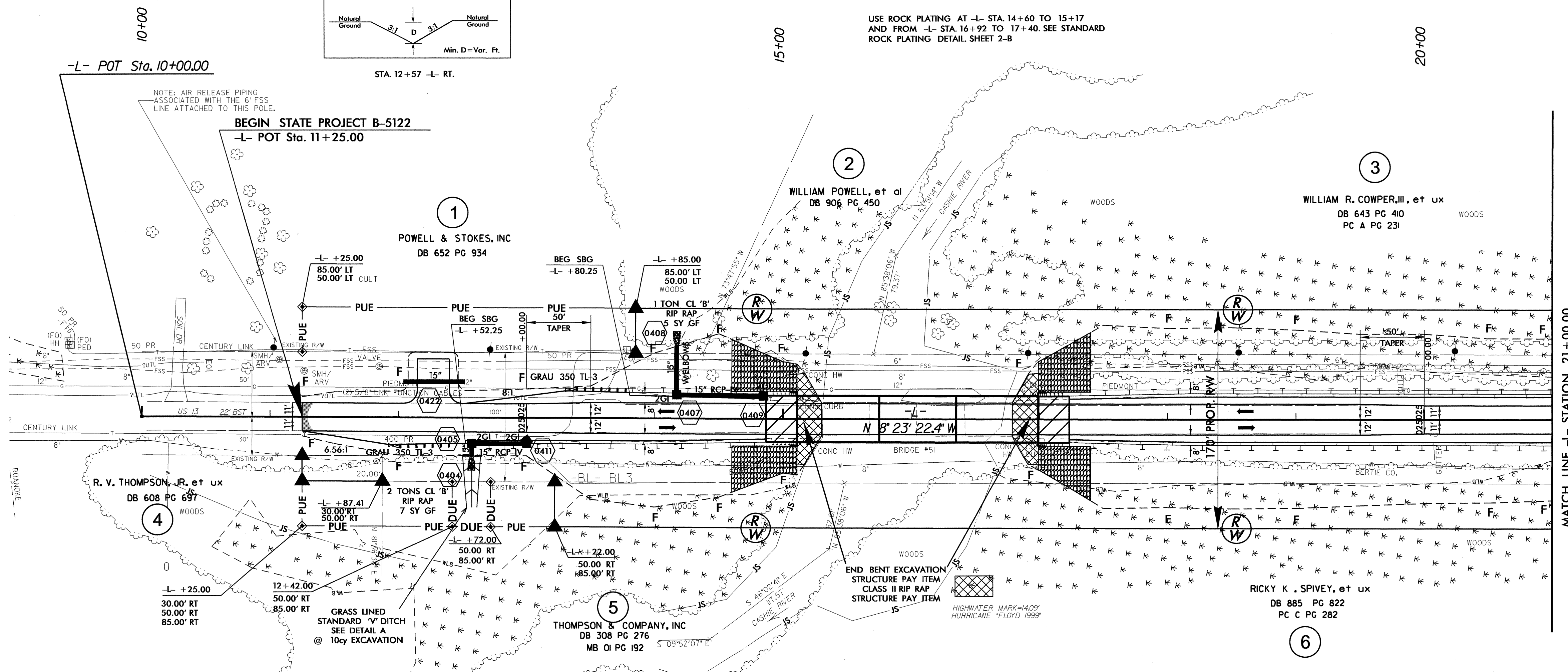
GUARDRAIL SUMMARY

LINE	BEG. STA.	END STA.	LOC.	WARRANT POINT	"N" DIST. FROM E.O.L.	TOTAL SHLDR WIDTH	FLAIR LENGTH APPR. END	TRAIL. END	W APPR. END	TRAIL. END	ANCHORS						IMP. ATTN. TYPE 350			REMOVE EXISTING GRDRAIL	REMARKS		
											GRAU 350 TL-3	M-350	B-77	CAT-1	VI MOD	EA	G	NG					
L	11+92.25	15+11.00	RT		6'	9'	1'		50'												226.81		
L	13+30.00	15+11.00	LT		6'	9'	1'		50'												150.41		
L	16+99.00	23+55.25	RT		6'	9'	1'		50'												676.16		
L	16+99.00	24+42.75	LT		6'	9'	1'		50'												763.49		
SUBTOTAL																						1816.87	
LESS ANCHOR DEDUCTIONS																							
TYPE B-77 4 @ 18.75'																							-75.00
GRAU 350 TL-3 4 @ 50.00'																							-200.00
TOTAL																							1,624.75
SAY																							1,650
																							5 ADDITIONAL GUARDRAIL POST

NC GRID
NAD 83 (CORS 96)



USE ROCK PLATING AT -L- STA. 14+60 TO 15+17
AND FROM -L- STA. 16+92 TO 17+40. SEE STANDARD
ROCK PLATING DETAIL SHEET 2-B



- NOTES:
1. SEE SHEET 6 FOR -L- PROFILE
 2. SEE SHEETS S-1 THROUGH S-33 FOR STRUCTURE PLANS
 3. DRIVEWAY RADII ARE 10' UNLESS OTHERWISE NOTED

8/17/99
 REVISIONS
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 R:\Roadway\Projects\B5122_rdy_psh_04.dgn
 TATIA L. WHITE

5/28/99

BMI
-L- STA 12+01.21 RIGHT 48.83'
N 833658 W 2604447
ELEVATION 11.62

-L-

PROPOSED 3 SPAN
PRESTRESSED CONCRETE GIRDER BRIDGE
2@64' 1@60'
CL STA. 16+05.00
DEPTH = 36"
SKEW = 90°

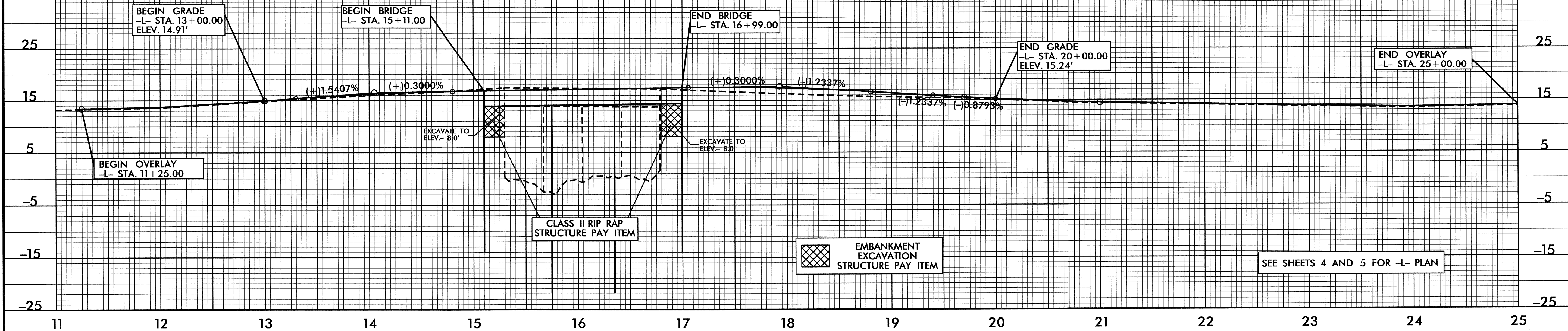
BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 8,555	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 12.2	FT
BASE DISCHARGE	= 10,422	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 13.29	FT
OVERTOPPING DISCHARGE	= 13,900	CFS
OVERTOPPING FREQUENCY	= 100+	YRS
OVERTOPPING ELEVATION	= 14.5	FT

PROJECT REFERENCE NO. B-5122	SHEET NO. 6
ROADWAY DESIGN ENGINEER TATIA L. WHILE 3/26/13	HYDRAULICS ENGINEER MTC T. SHOWN 9/1/13

PI = 14+05.00
EL = 16.53'
VC = 150'
K = 121
V = 56 MPH

PI = 17+93.07
EL = 17.69'
VC = 175'
K = 114
V = 55 MPH

PI = 19+70.00
EL = 15.51'
VC = 60'
K = 169
V > 60 MPH



BEGIN GRADE
-L- STA. 13+00.00
ELEV. 14.91'

BEGIN BRIDGE
-L- STA. 15+11.00

END BRIDGE
-L- STA. 16+99.00

END GRADE
-L- STA. 20+00.00
ELEV. 15.24'

END OVERLAY
-L- STA. 25+00.00

BEGIN OVERLAY
-L- STA. 11+25.00

EXCAVATE TO
ELEV. - 8.0'

EXCAVATE TO
ELEV. - 8.0'

CLASS II RIP RAP
STRUCTURE PAY ITEM

EMBANKMENT
EXCAVATION
STRUCTURE PAY ITEM

SEE SHEETS 4 AND 5 FOR -L- PLAN

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