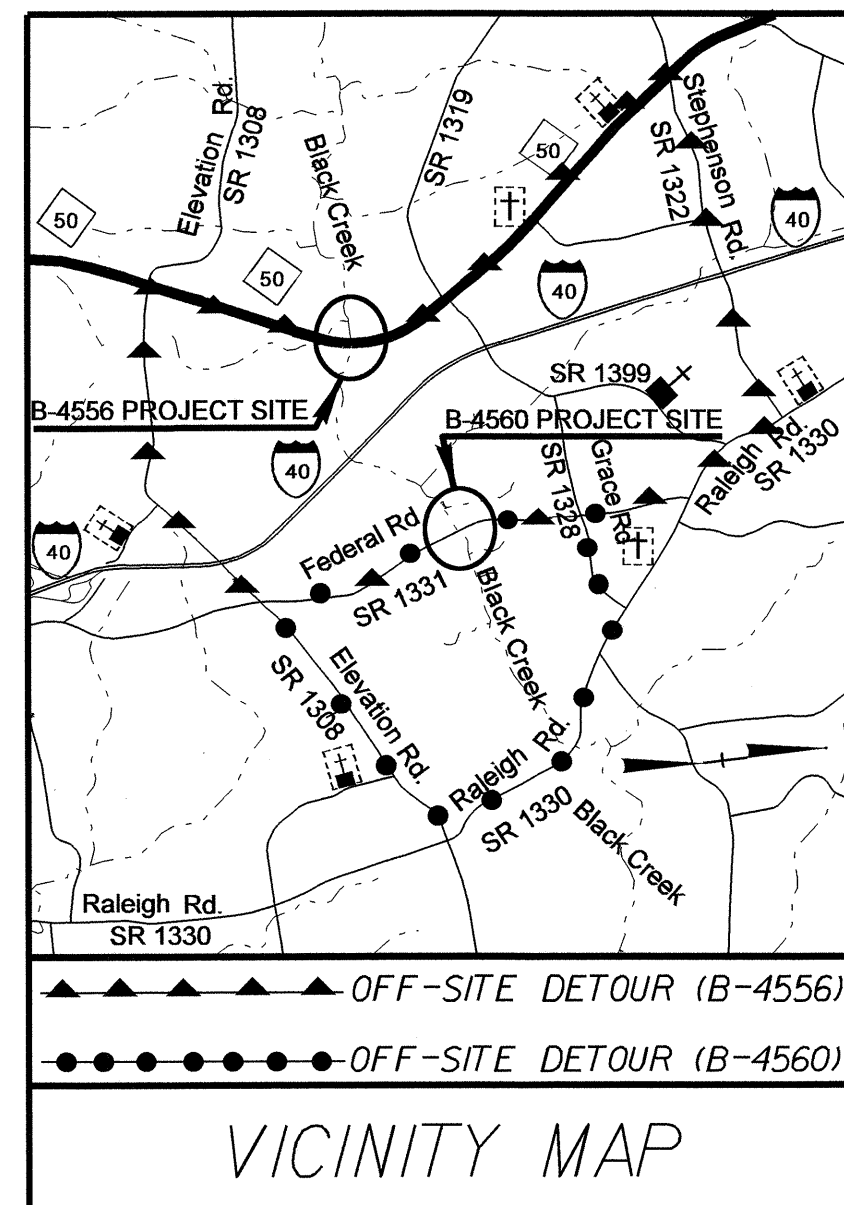


31-OCT-2011 15:30
 P:\Roadway\Projects\COMBINED INFO B4556-B4560\b4556_b4560_rdy_combined_tsh.dgn
 \$\$\$USERNAME\$\$\$

CONTRACT: C202739 **TIP PROJECTS: B-4556 / B-4560**

See Sheet 1-A For Index of Sheets



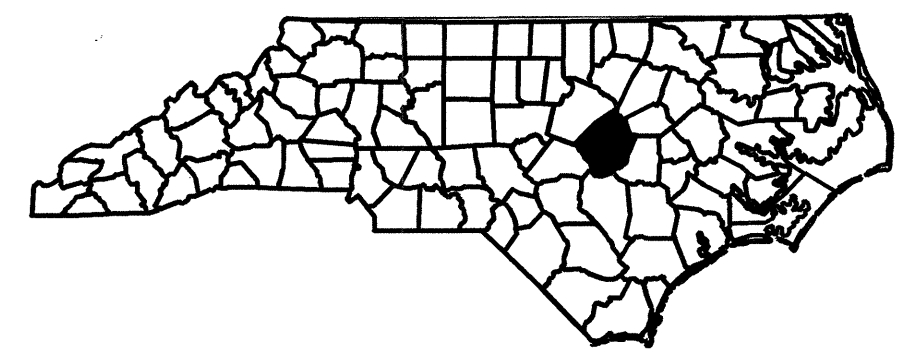
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JOHNSTON COUNTY

PART I - B-4556 LOCATION: BRIDGE 74 OVER BLACK CREEK ON NC 50

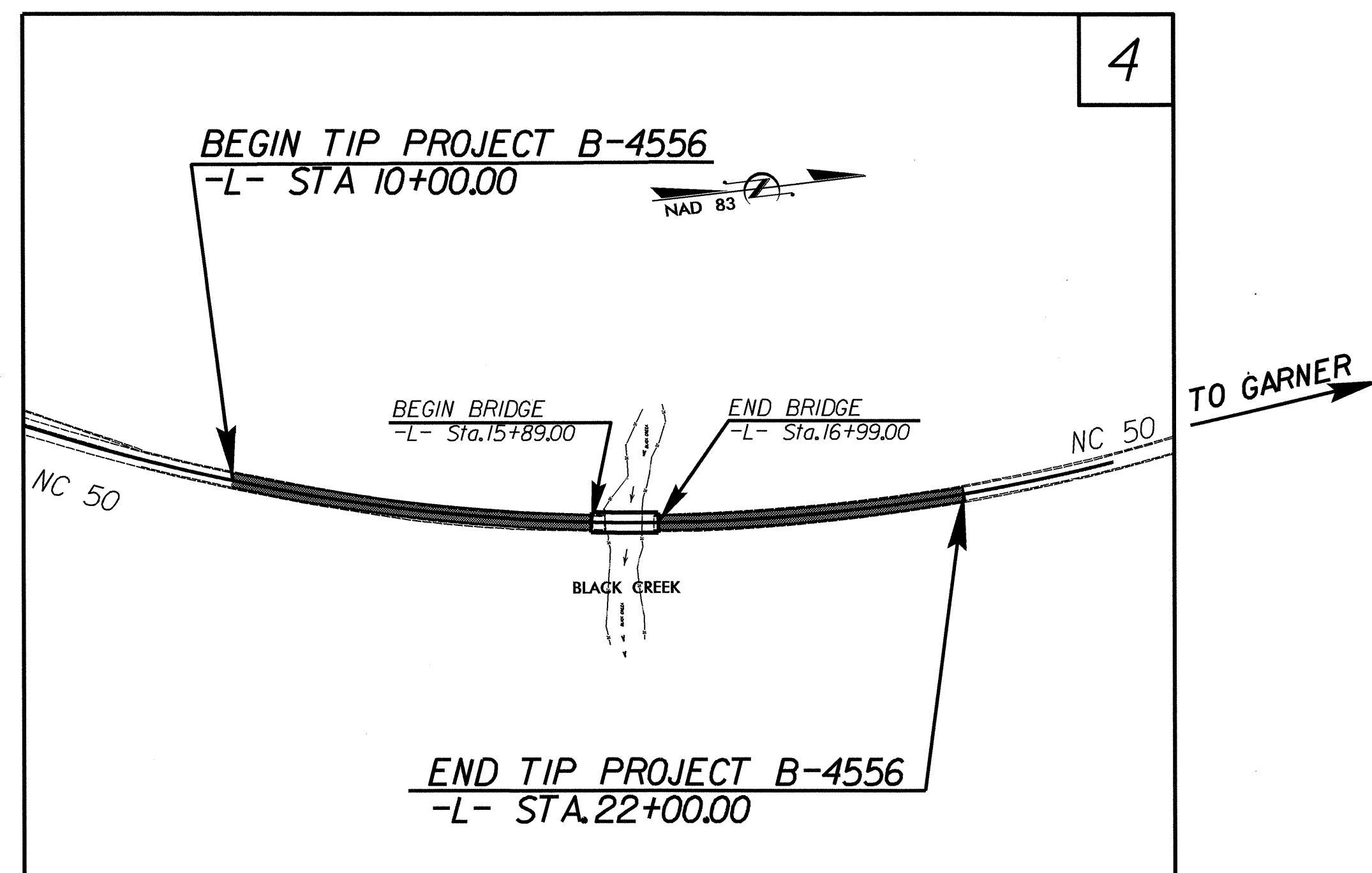
PART II - B-4560 LOCATION: BRIDGE 102 OVER BLACK CREEK ON ON SR 1331 (FEDERAL ROAD)

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

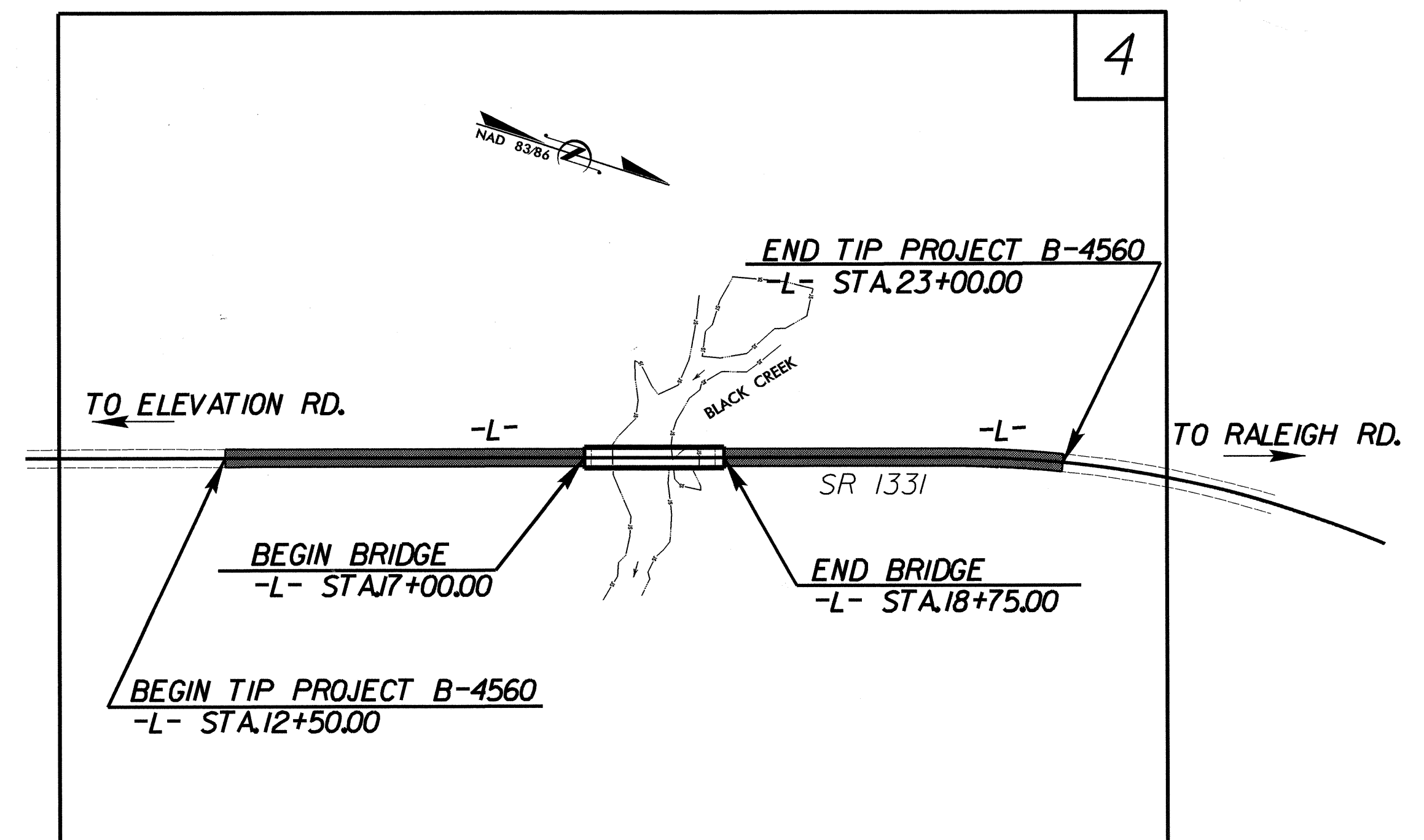


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4556 / B-4560	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33768.1.1	BRSTP-0050(7)	B-4556 (P.E.)	
33771.1.1	BRZ-1331(10)	B-4560 (P.E.)	
33768.2.1	BRSTP-0050(7)	B-4556 (R/W. UTL)	
33771.2.1	BRZ-1331(10)	B-4560 (R/W. UTL)	
33768.3.1	BRSTP-0050(7)	B-4556/B-4560 (CONST)	

PART I



PART II



PROJECT LENGTH

LENGTH ROADWAY TIP PROJECTS B-4556/B-4560 = 0.372 MILE
 LENGTH STRUCTURE TIP PROJECTS B-4556/B-4560 = 0.054 MILE
 TOTAL LENGTH TIP PROJECTS B-4556/B-4560 = 0.426 MILE

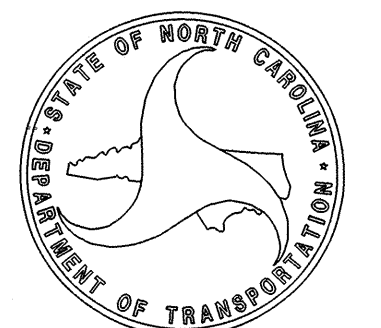
Prepared in the Office of:
DIVISION OF HIGHWAYS
 1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE (B-4556): NOVEMBER 30, 2010
RIGHT OF WAY DATE (B-4560): DECEMBER 09, 2010

LETTING DATE: January 17, 2012

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



Art McMiller
 STATE HIGHWAY DESIGN ENGINEER

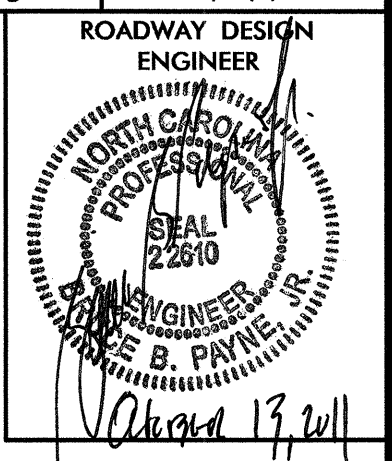
8/17/09

CONTRACT: C202739
TIP PROJECT: B-4556
COUNTY: JOHNSTON

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 08/31/11

PROJECT REFERENCE NO.	SHEET NO.
B-4556/B-4560	1-A



1
1-A
2
3
PART I - INDEX OF SHEETS

COMBINED TITLE SHEET (B-4556/B-4560)
COMBINED INDEX OF SHEETS, GENERAL NOTES,
AND LIST OF STANDARDS
COMBINED CONVENTIONAL SYMBOLS
COMBINED SUMMARY OF QUANTITIES

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.

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
Elevation Water District

RIGHT-OF-WAY MARKERS:

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

SHEET NUMBER
1
1-A THRU 1-B
2
2-A THRU 2-B
2-C
2-D
3-A
3-B
3-C
3-C
4
TMP-1 THRU TMP-3
PMP-1 THRU PMP-2
EC-1 THRU EC-5
RF-1
SIGN-1 THRU SIGN-3
UC-1 THRU UC-2
UO-1 THRU UO-2
X-0
X-1 THRU X-8
S-1 THRU S-22

SHEET
TITLE SHEET (B-4556)
SURVEY CONTROL SHEET
METHOD OF WEDGING, AND TYPICAL SECTION
METHOD OF PIPE INSTALLATION
ANCHORAGE FOR FRAMES
METHOD OF SHOULDER CONSTRUCTION (METHOD I)
SUMMARY OF DRAINAGE QUANTITIES
SUMMARY OF GUARDRAIL
SUMMARY OF PAVEMENT REMOVAL
MISCELLANEOUS REMOVAL SUMMARIES
SUMMARY OF EARTHWORK
PLAN SHEET/PROFILE SHEET
TRAFFIC MANAGEMENT PLANS
PAVEMENT MARKING PLANS
EROSION CONTROL PLANS
REFORESTATION PLANS
SIGNING PLANS
UTILITY CONSTRUCTION PLANS
UTILITY BY OTHERS
CROSS SECTION SUMMARY
CROSS SECTIONS
STRUCTURE PLANS

CONTRACT: C202740
TIP PROJECT: B-4560
COUNTY: JOHNSTON

PART II - INDEX OF SHEETS

SHEET NUMBER
1
1-A
2
2-A
2-B
2-C THRU 2-D
3-A
3-B
3-B
3-B
4
5
TMP-1 THRU TMP-3
SD-1
PMP-1 THRU PMP-2
EC-1 THRU EC-5
RF-1
UO-1 THRU UO-2
X-1A
X-1 THRU X-4
S-23 THRU S-42

SHEET
TITLE SHEET (B-4560)
SURVEY CONTROL SHEET
PAVEMENT SCHEDULE, DETAIL SHOWING
METHOD OF WEDGING, AND TYPICAL SECTION
DETAIL FOR ANCHORAGE FOR FRAMES
DETAIL FOR BRIDGE APPROACH FILLS
DETAIL FOR METHOD OF PIPE INSTALLATION
SUMMARY OF DRAINAGE QUANTITIES
SUMMARY OF GUARDRAIL
SUMMARY OF PAVEMENT REMOVAL
SUMMARY OF EARTHWORK
PLAN SHEET
PROFILE SHEET
TRANSPORTATION MANAGEMENT PLANS
SPECIAL SIGN DESIGN
PAVEMENT MARKING PLANS
EROSION CONTROL PLANS
REFORESTATION PLANS
UTILITY BY OTHERS
CROSS SECTION SUMMARY
CROSS SECTIONS
STRUCTURE PLANS

2006 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 July 18, 2006 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	
422.10	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	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.03	Pipe Underdrain and Blind 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
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.66	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
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class "B" Rip Rap

EFF. 07-18-06
REV. 01-02-07

13-OCT-2011 09:40
R:\Roadway\Projects\COMBINED INFO B4556-B4560\B4556_b4560_rdy_combined.tsh_01a.dgn
\$\$\$\$\$

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	-----
Property Monument	□
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-

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 Marker	-----
Existing Control of Access	○
Proposed Control of Access	○
Existing Easement Line	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
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 Wheel Chair 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	□
AG Tank; Water, Gas, Oil	□
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

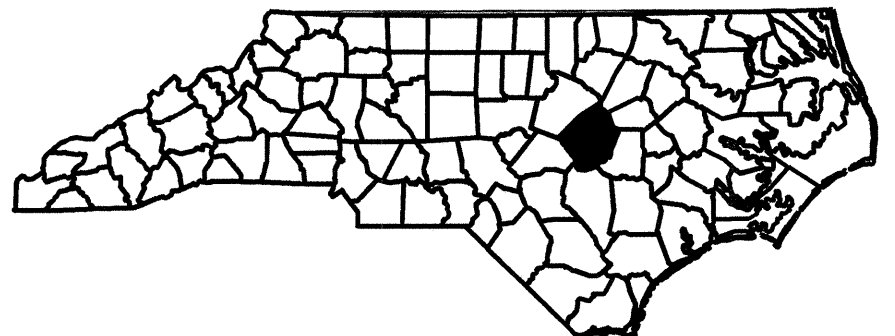
5/28/99

09-SEP-2011 07:51 R:\PROJECTS\B4560\B4560-b4560-r-dly-combined-sum_03.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202739														
ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	2033000000-E	SP	16.8	CY	SUBDRAIN FINE AGGREGATE	4810000000-E	1205	8,400	LF	PAINT PAVEMENT MARKING LINES (4")
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (16+44.00)	2044000000-E	SP	100	LF	6" PERFORATED SUBDRAIN PIPE	5326600000-E	1510	246	LF	16" WATER LINE
0030000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (17+87.50-L)	2070000000-N	SP	1	EA	SUBDRAIN PIPE OUTLETS	5810000000-E	1530	238	LF	ABANDON 16" UTILITY PIPE
0050000000-E	226	2	ACR	SUPPLEMENTARY CLEARING & GRUB-BING	2077000000-E	SP	6	LF	6" OUTLET PIPE (SUBDRAINS)	6000000000-E	1605	3,700	LF	TEMPORARY SILT FENCE
0057000000-E	226	500	CY	UNDERCUT EXCAVATION	2286000000-N	840	11	EA	MASONRY DRAINAGE STRUCTURES	6006000000-E	1610	450	TON	STONE FOR EROSION CONTROL, CLASS A
0063000000-N	SP	Lump Sum		GRADING	2308000000-E	840	6.3	LF	MASONRY DRAINAGE STRUCTURES	6009000000-E	1610	410	TON	STONE FOR EROSION CONTROL, CLASS B
0106000000-E	230	8,800	CY	BORROW EXCAVATION	2367000000-N	840	11	EA	FRAME WITH TWO GRATES, STD 840.29	6012000000-E	1610	915	TON	SEDIMENT CONTROL STONE
0195000000-E	SP	500	CY	SELECT GRANULAR MATERIAL	2556000000-E	846	1,427	LF	SHOULDER BERM GUTTER	6015000000-E	1615	6.5	ACR	TEMPORARY MULCHING
0196000000-E	270	795	SY	FABRIC FOR SOIL STABILIZATION	3030000000-E	862	2,162.5	LF	STEEL BM GUARDRAIL	6018000000-E	1620	300	LB	SEED FOR TEMPORARY SEEDING
0318000000-E	SP	72	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	3150000000-N	862	10	EA	ADDITIONAL GUARDRAIL POSTS	6021000000-E	1620	2	TON	FERTILIZER FOR TEMPORARY SEEDING
0320000000-E	SP	140	SY	FOUNDATION CONDITIONING FABRIC	3215000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III	6024000000-E	1622	720	LF	TEMPORARY SLOPE DRAINS
0335200000-E	SP	306	LF	15" DRAINAGE PIPE	3270000000-N	SP	8	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	6027000000-N	1622	15	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
0335850000-E	SP	6	EA	*** DRAINAGE PIPE ELBOWS (15")	3317000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE B-77	6029000000-E	SP	1,200	LF	SAFETY FENCE
0366000000-E	SP	96	LF	15" RC PIPE CULVERTS, CLASS III	3360000000-E	863	499.76	LF	REMOVE EXISTING GUARDRAIL	6030000000-E	1630	750	CY	SILT EXCAVATION
1121000000-E	520	96	TON	AGGREGATE BASE COURSE	3649000000-E	876	10	TON	RIP RAP, CLASS B	6036000000-E	1631	4,900	SY	MATting FOR EROSION CONTROL
1220000000-E	545	50	TON	INCIDENTAL STONE BASE	3656000000-E	876	1,554	SY	FILTER FABRIC FOR DRAINAGE	6037000000-E	SP	40	SY	COIR FIBER MAT
1330000000-E	607	500	SY	INCIDENTAL MILLING	4072000000-E	903	30	LF	SUPPORTS, 3-LB STEEL U-CHANNEL	6042000000-E	1632	3,100	LF	1/4" HARDWARE CLOTH
1489000000-E	610	1,290	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	4096000000-N	904	2	EA	SIGN ERECTION, TYPE D	6048000000-E	SP	200	SY	FLOATING TURBIDITY CURTAIN
1498000000-E	610	525	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	4155000000-N	907	6	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	6070000000-N	SP	8	EA	SPECIAL STILLING BASINS
1519000000-E	610	696	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	4400000000-E	1110	783	SF	WORK ZONE SIGNS (STATIONARY)	6071020000-E	SP	40	LB	POLYACRYLAMIDE (PAM)
1525000000-E	610	510	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A	4410000000-E	1110	238	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)	6071030000-E	SP	230	LF	COIR FIBER BAFFLE
1575000000-E	SP	162	TON	ASPHALT BINDER FOR PLANT MIX	4445000000-E	1145	192	LF	BARRICADES (TYPE III)	6071050000-E	SP	2	EA	*** SKIMMER (1-1/2")
2000000000-N	806	22	EA	RIGHT OF WAY MARKERS	4685000000-E	1205	2,180	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	6084000000-E	1660	7	ACR	SEEDING & MULCHING
2022000000-E	SP	22.4	CY	SUBDRAIN EXCAVATION	4686000000-E	1205	2,180	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	6087000000-E	1660	5.5	ACR	MOWING
					4770000000-E	1205	440	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (II)	6090000000-E	1661	100	LB	SEED FOR REPAIR SEEDING
										6093000000-E	1661	0.5	TON	FERTILIZER FOR REPAIR SEEDING
										6096000000-E	1662	175	LB	SEED FOR SUPPLEMENTAL SEEDING
										6108000000-E	1665	4.75	TON	FERTILIZER TOPDRESSING
										6114500000-N	SP	20	MHR	SPECIALIZED HAND MOWING
										6117000000-N	SP	32	EA	RESPONSE FOR EROSION CONTROL
										6123000000-E	1670	0.35	ACR	REFORESTATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4556	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33768.1.1	BRSTP-0050(7)	P.E.	
33768.2.1	BRSTP-0050(7)	R/W, UTL	
33768.3.1	BRSTP-0050(7)	CONST	



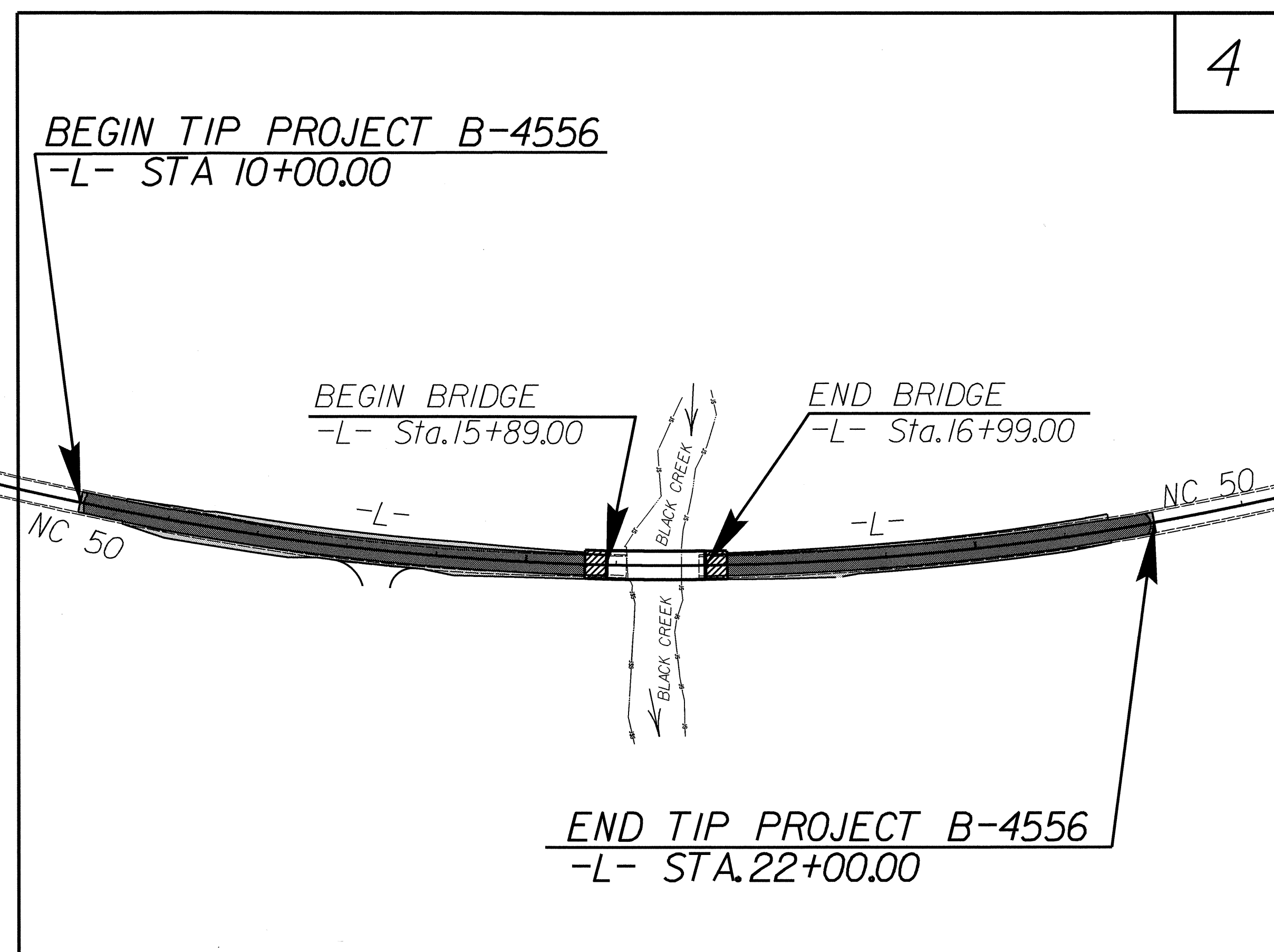
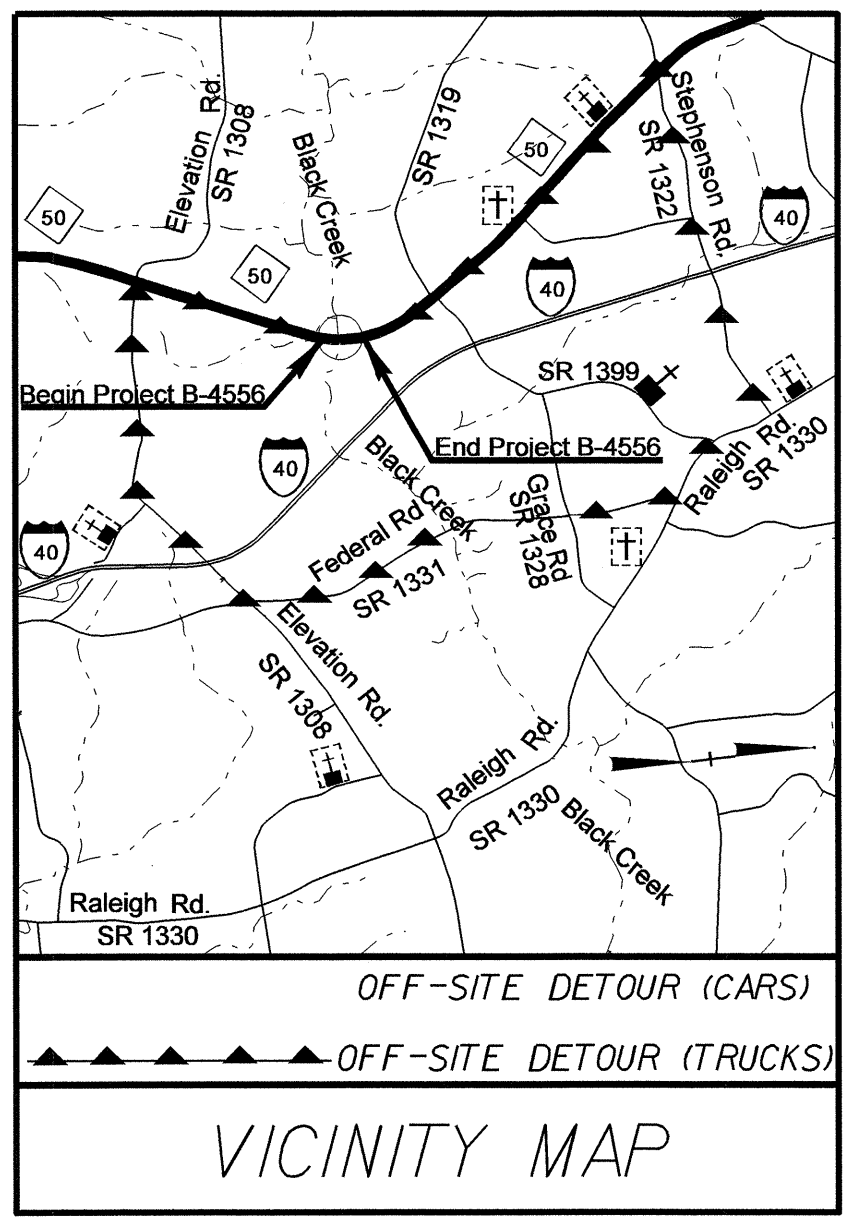
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JOHNSTON COUNTY

LOCATION: BRIDGE 74 OVER BLACK CREEK ON NC 50

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

See Sheet 1-A For Index of Sheets

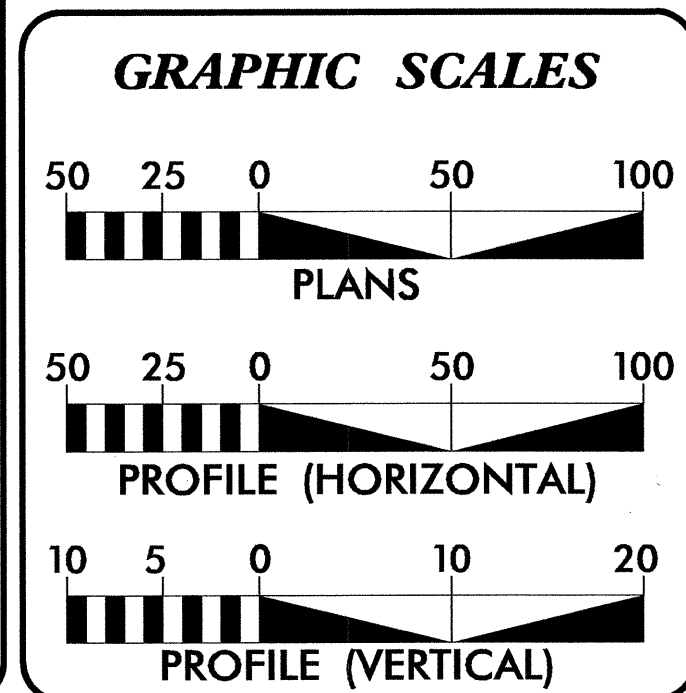


PART I

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.

TIP PROJECT: B-4556

CONTRACT:



DESIGN DATA

ADT 2011 = 5907
ADT 2030 = 10200
DHV = 11 %
D = 60 %
T = 6 % *
V = 60 MPH
FUNCTIONAL CLASS = RURAL COLLECTOR
* TTST 2% DUAL 4%
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4556 = 0.206 MILE
LENGTH STRUCTURE TIP PROJECT B-4556 = 0.021 MILE
TOTAL LENGTH TIP PROJECT B-4556 = 0.227 MILE

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 30, 2010

LETTING DATE:
DECEMBER 20, 2011

TONY HOUSER, PE
PROJECT ENGINEER

BRUCE B. PAYNE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

Professional Engineer Seal for Jason D. Lawing, No. 032615, dated 9-29-11.

Professional Engineer Seal for Bruce B. Payne, No. 22610, dated 9-27-11.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Professional Engineer Seal for the State of North Carolina, Department of Transportation.

Signature: *ant mcmiller*
STATE HIGHWAY DESIGN ENGINEER

14-SEP-2011 4:19 P:\Roadway\Projects\B4556_rdy_tsh.dgn

SURVEY CONTROL SHEET B-4556

PROJECT REFERENCE NO.	SHEET NO.
B-4556	I-A
Location and Surveys	

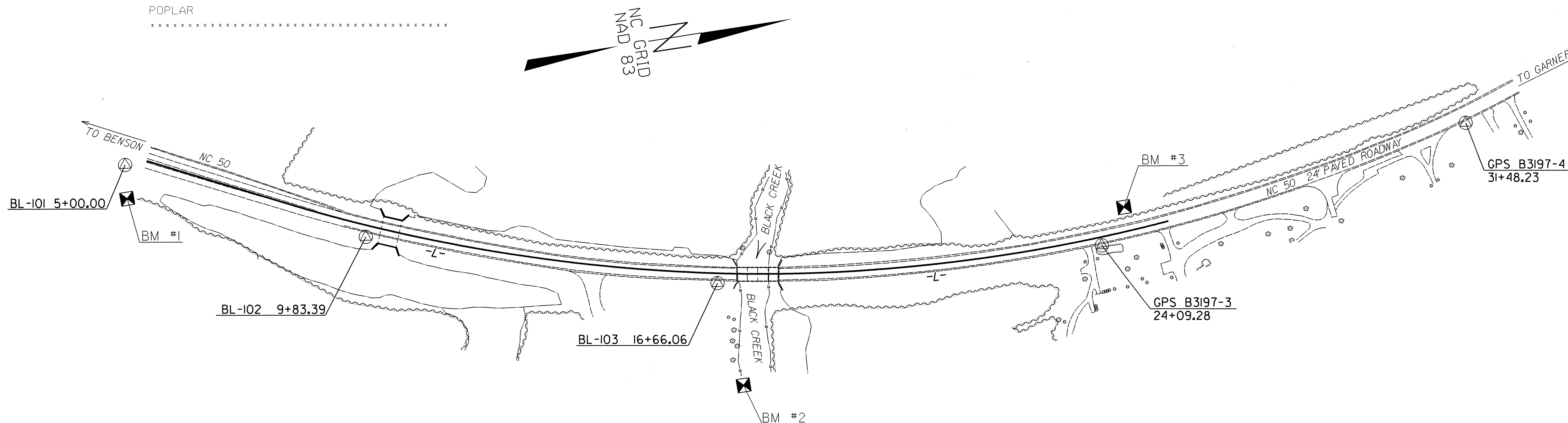
BENCHMARK DATA

```

*****
202      ELEVATION = 149.92
N 622301      E 2133174
L STATION 4+50
S 53° 58' 07.3" E DIST      82.40
BM #1 RR SPIKE IN BASE OF 12" MAPLE
*****
201      ELEVATION = 146.11
N 623418      E 2133711
L STATION 16+26 215 RIGHT
BM #2 RR SPIKE IN BASE OF 10" OAK
*****
200      ELEVATION = 172.49
N 624194      E 2133485
L STATION 23+73 47 LEFT
BM #3 RR SPIKE IN BASE OF 10" TWIN
POPLAR
*****
    
```

BASELINE DATA

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
101	BL-101	622307.4430	2133108.6620	153.23	OUTSIDE PROJECT LIMITS	
102	BL-102	622743.5420	2133317.1980	153.13	8+94.75	22.02 RT
103	BL-103	623398.7990	2133508.6880	153.59	15+74.36	18.76 RT
3	GPS B3197-3	624140.7956	2133551.3923	169.87	23+15.22	15.80 RT
4	GPS B3197-4	624868.9569	2133425.5855	192.97	OUTSIDE PROJECT LIMITS	



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B3197-1"
 WITH NAD 83 STATE PLANE GRID COORDINATES OF
 NORTHING: 621429.899(±) EASTING: 2132639.350(±)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987631
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B3197-1" TO -L- STATION 10+00.00 IS
 N 26°07'25.4" E 1581.47 FT.
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NGVD 29

NOTES:

1. 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:
 B4556_LS_CONTROL_081031.TXT

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

⊕ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE

6/2/99

09-JUN-2011 08:32
 R:\Location\Survey\B-4556_1a_081031.dgn

6/2/09

SURVEY CONTROL SHEET B-4556

PROJECT REFERENCE NO.	SHEET NO.
B-4556	1-0
Location and Surveys	

ROW MONUMENTS

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+00.00	-58.00	622870.3529	2133281.4480
L	14+50.00	-60.00	623293.4912	2133406.8609
L	18+10.00	-67.00	623642.3746	2133457.1723
L	20+67.00	-77.00	623893.4584	2133463.1186
L	21+50.00	-50.00	623974.5197	2133490.8142
L	20+00.00	50.27	623822.6101	2133588.1293
L	16+91.00	80.00	623505.8499	2133588.2478
L	14+97.00	67.00	623312.5593	2133540.9445
L	14+58.00	51.88	623276.8888	2133517.7902
L	10+00.00	-50.00	622867.5204	2133288.9298
L	12+50.00	-54.00	623101.9707	2133363.4536
L	19+05.00	80.00	623724.0339	2133612.0847

DESIGN ALIGNMENT -L-

ALIGN	STATION	OFFSET	NORTH	EAST
L	4+50.00	0.00	622349.6943	2133107.4231
L	6+98.89	0.00	622573.4638	2133216.3885
L	12+27.02	0.00	623064.7294	2133408.7071
L	24+50.12	-0.00	624274.3370	2133524.8517

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:
B4556_LS_CONTROL_081030.TXT
SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

DATUM DESCRIPTION

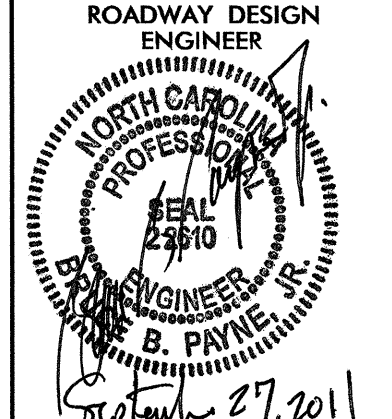
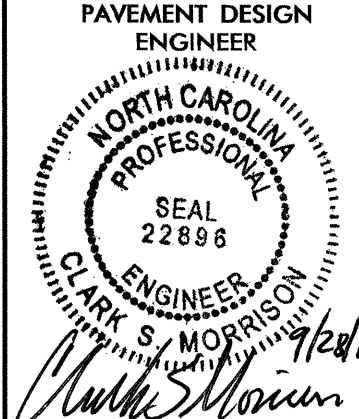
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B3197-1"
WITH NAD 83 STATE PLANE GRID COORDINATES OF
NORTHING: 621429.899(ft) EASTING: 2132639.350(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987631
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B3197-1" TO -L- STATION 10+00.00 IS
N 26°07'25.4" E 1581.47 FT.
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

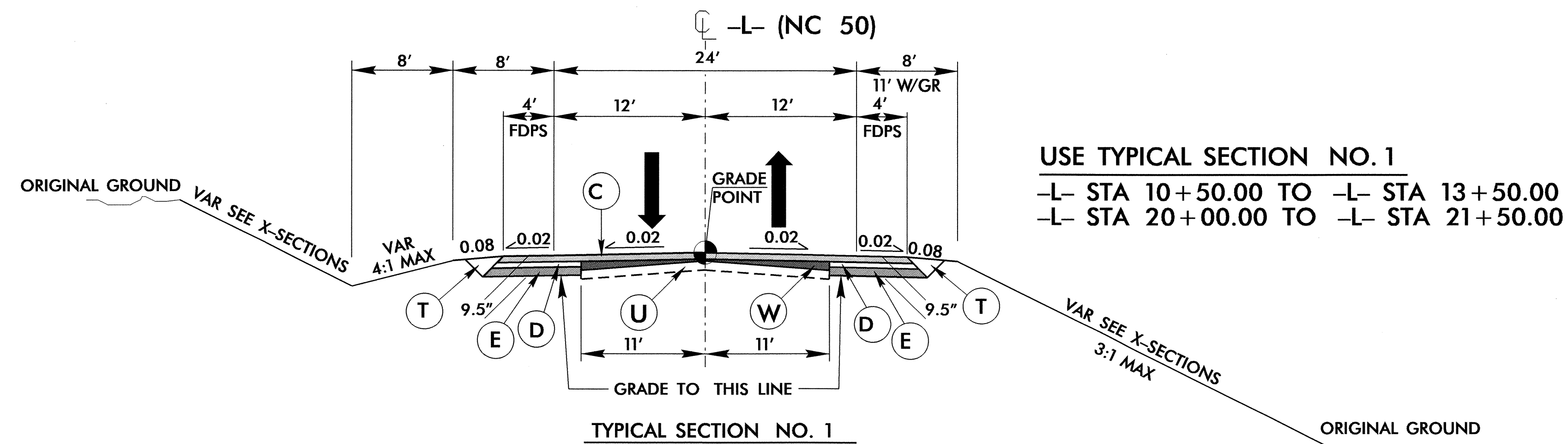
NOTE: DRAWING NOT TO SCALE

20-SEP-2011 13:32
C:\Locations\SURVEYS\B-4556_1s_101208.dgn
\$\$\$\$\$

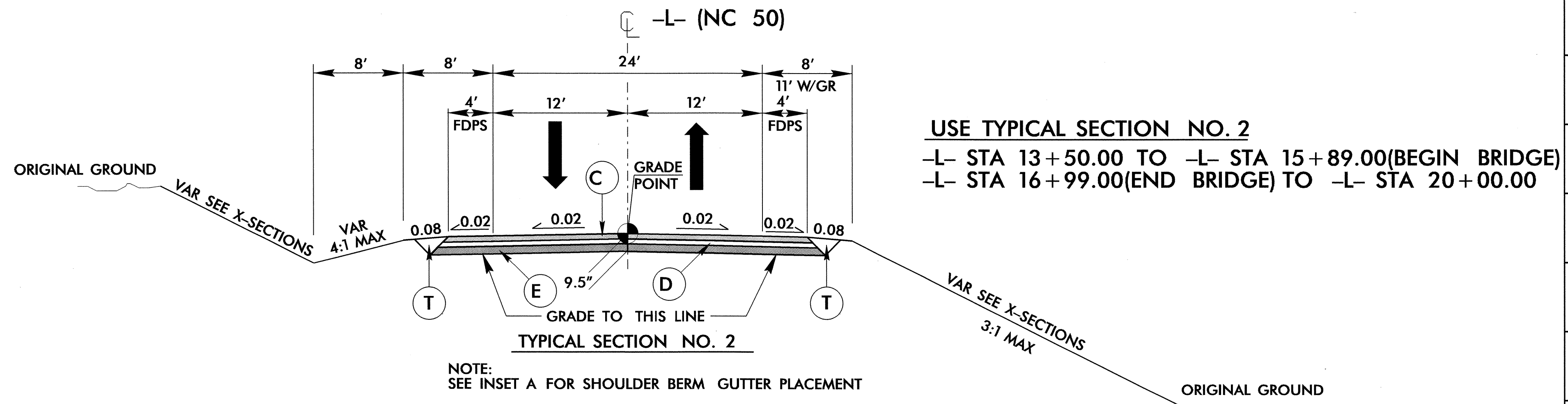
6/2/99

27-SEP-2011 14:23
 R:\Vodrow\Proj\164556-rdu-tyb.dgn
 \$\$\$\$USERNAME\$\$\$\$

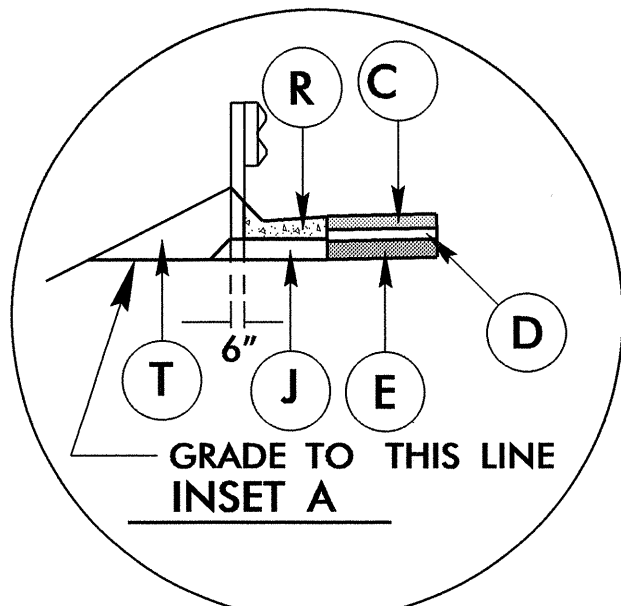
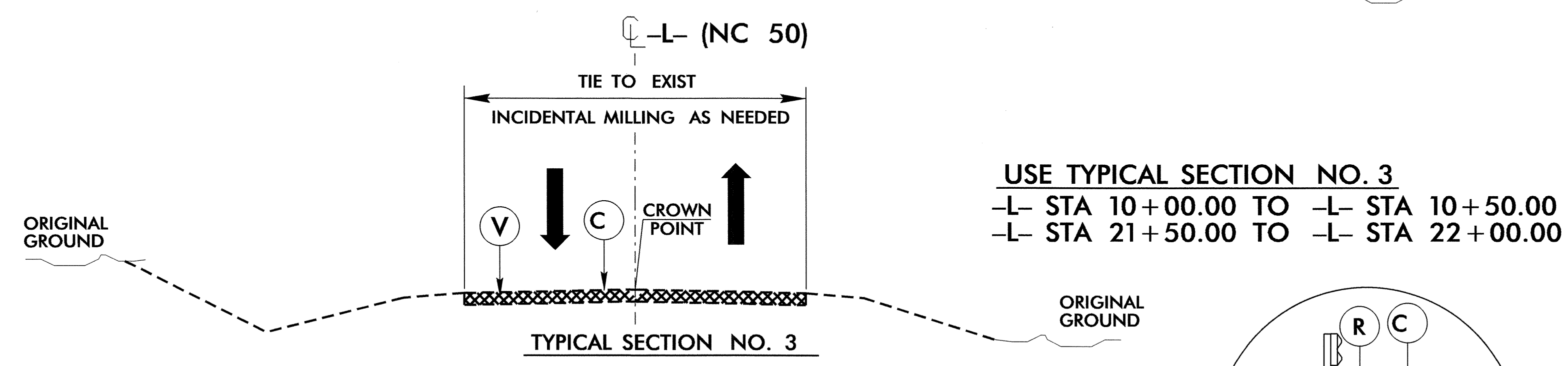
PROJECT REFERENCE NO. B-4556	SHEET NO. 2
ROADWAY DESIGN ENGINEER  DAVID B. PAYNE	PAVEMENT DESIGN ENGINEER  CURTIS S. MORRISON



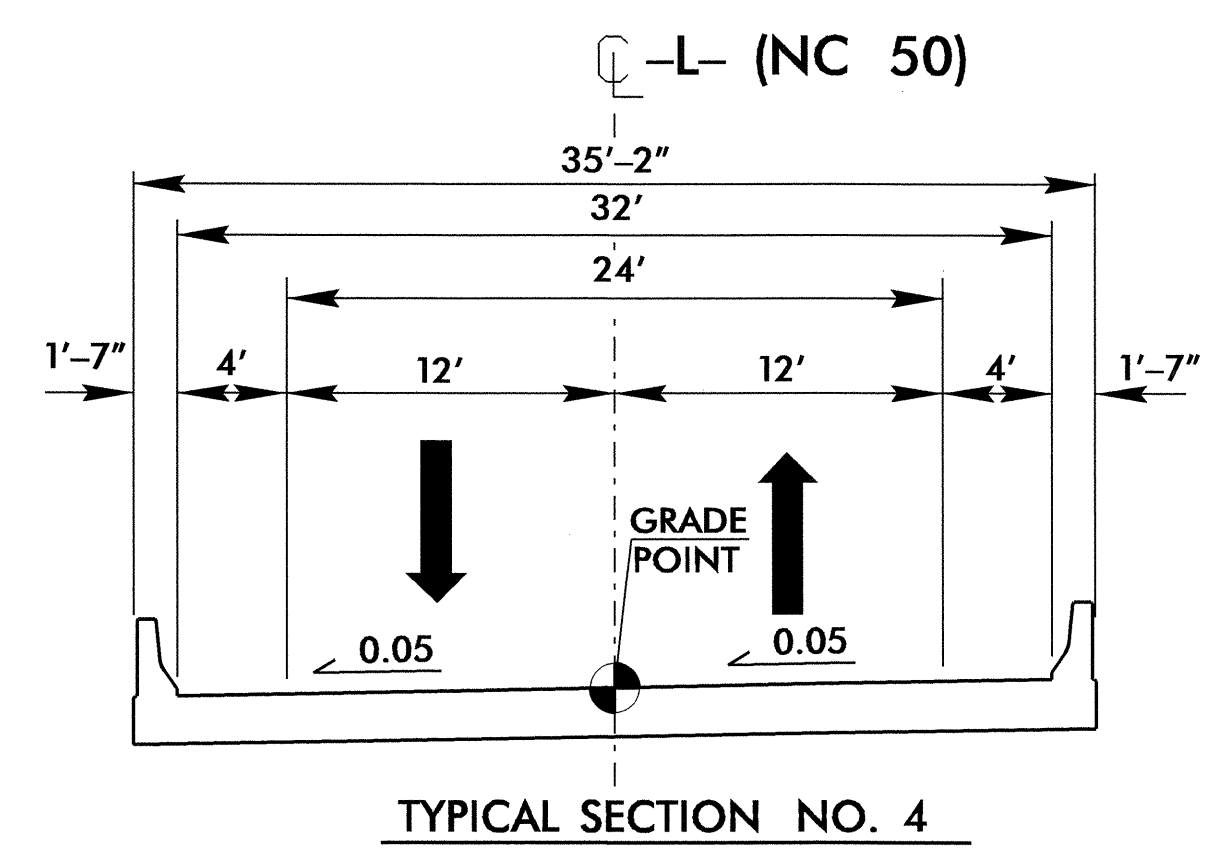
NOTE:
 SEE INSET A FOR SHOULDER BERM GUTTER PLACEMENT



NOTE:
 SEE INSET A FOR SHOULDER BERM GUTTER PLACEMENT



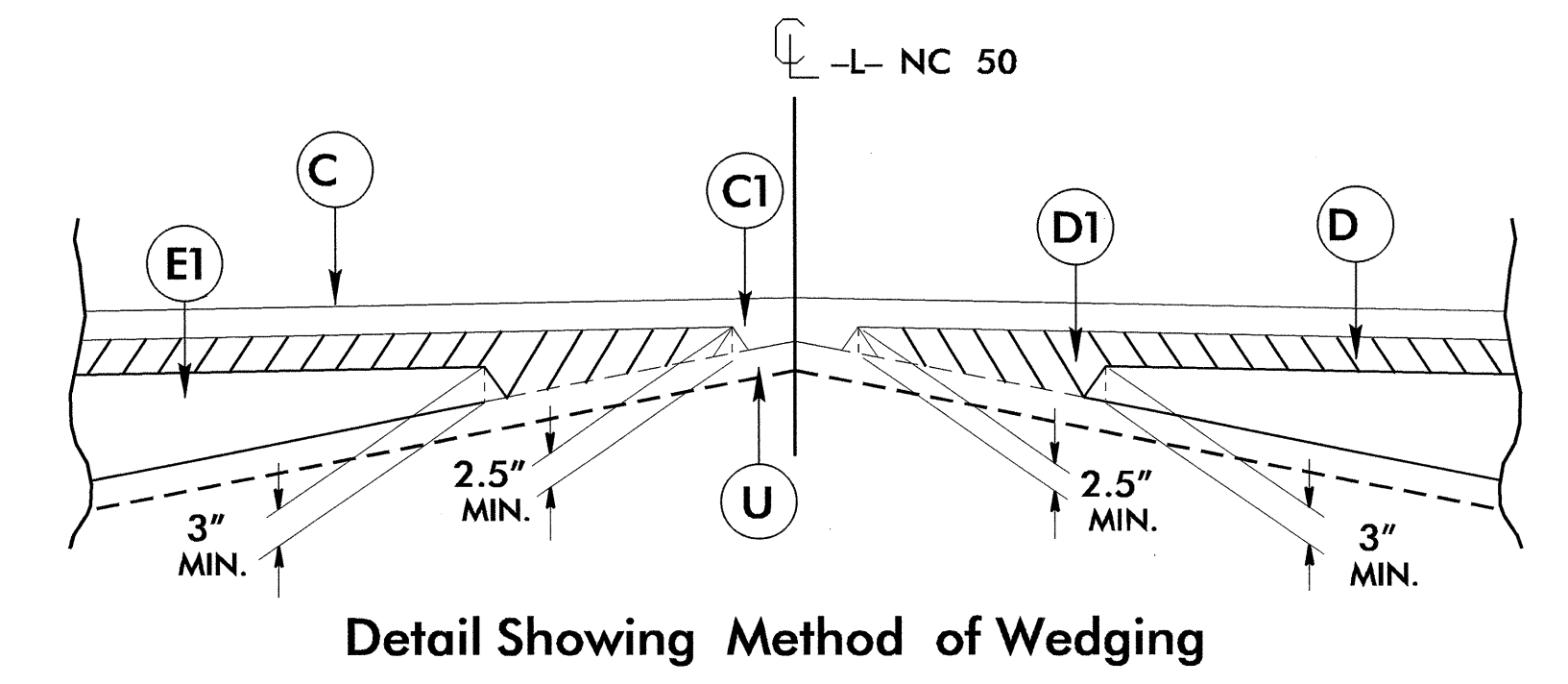
USE INSET A
 -L- STA 11+50.00 TO -L- STA 15+65.00 LT
 -L- STA 17+23.00 TO -L- STA 21+50.00 LT



USE TYPICAL SECTION NO. 4
 -L- STA 15+89.00(BEGIN BRIDGE) TO -L- STA 16+99.00(END BRIDGE)

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN 09/10/08)	
C	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D1	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 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ.
E1	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.
J	PROP. 4 1/2" AGGREGATE BASE COURSE.
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	INCIDENTAL MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT

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



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

7-06

ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE

300D01
SHEET 1 OF 3

NORMAL EARTH FOUNDATION
PIPE IN TRENCH
 O.D. + 3'

NORMAL EARTH FOUNDATION
PIPE ABOVE GROUND
 O.D. + 2'

UNSUITABLE MATERIAL FOUNDATION
PIPE IN TRENCH
 O.D. + 3'

UNSUITABLE MATERIAL FOUNDATION
PIPE ABOVE GROUND
 O.D. + 2'

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

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

7-06

ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE

300D01
SHEET 1 OF 3

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

7-06

ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

300D01
SHEET 2 OF 3

NORMAL EARTH FOUNDATION
PIPE IN TRENCH
 O.D. + 3'

NORMAL EARTH FOUNDATION
PIPE ABOVE GROUND
 O.D. + 2'

UNSUITABLE MATERIAL FOUNDATION
PIPE IN TRENCH
 O.D. + 3'

UNSUITABLE MATERIAL FOUNDATION
PIPE ABOVE GROUND
 O.D. + 2'

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

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

7-06

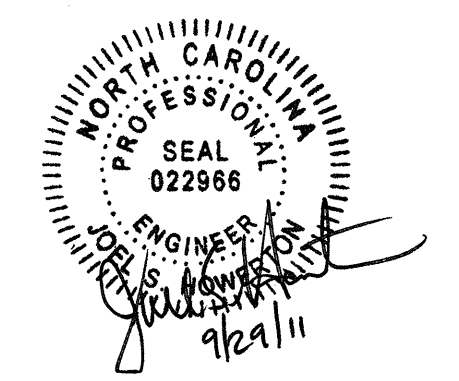
ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

300D01
SHEET 2 OF 3

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
 Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

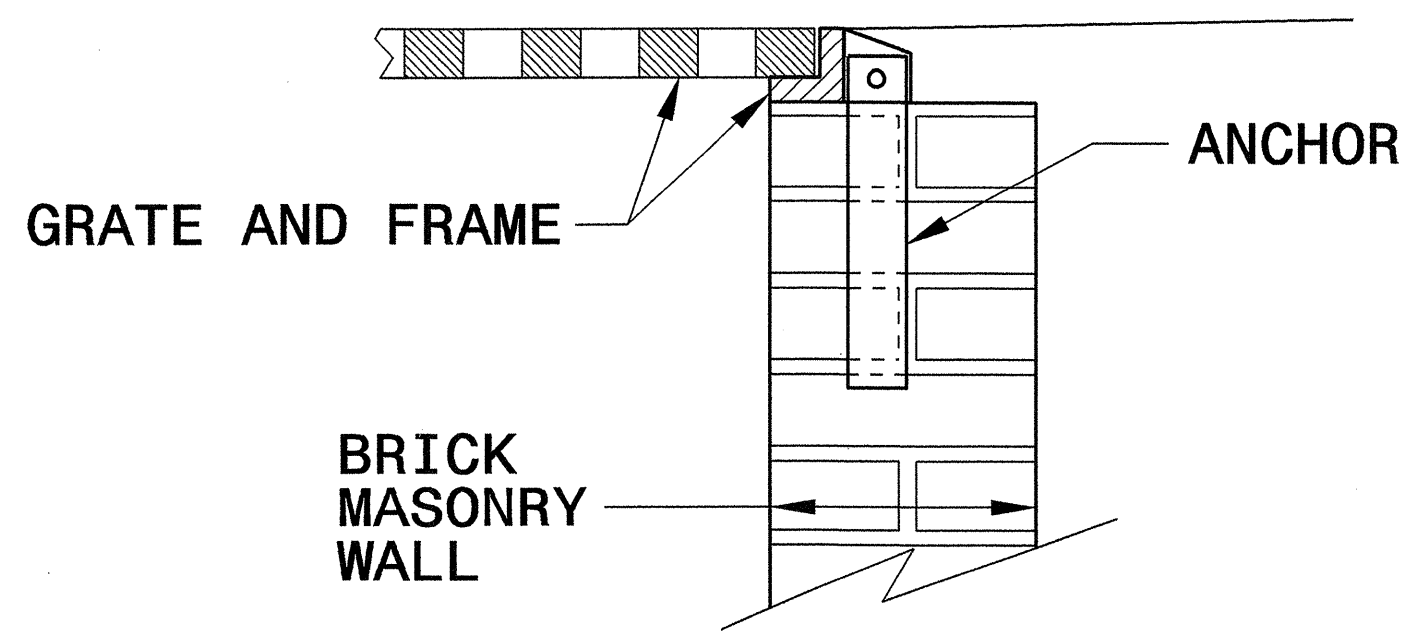
ORIGINAL BY: KKempf DATE: 5-15-09
 MODIFIED BY: DATE:
 CHECKED BY: DATE: 7/30/09
 FILE SPEC: /er/ward/stds/stdsdetails/30001/0300d01.dgn



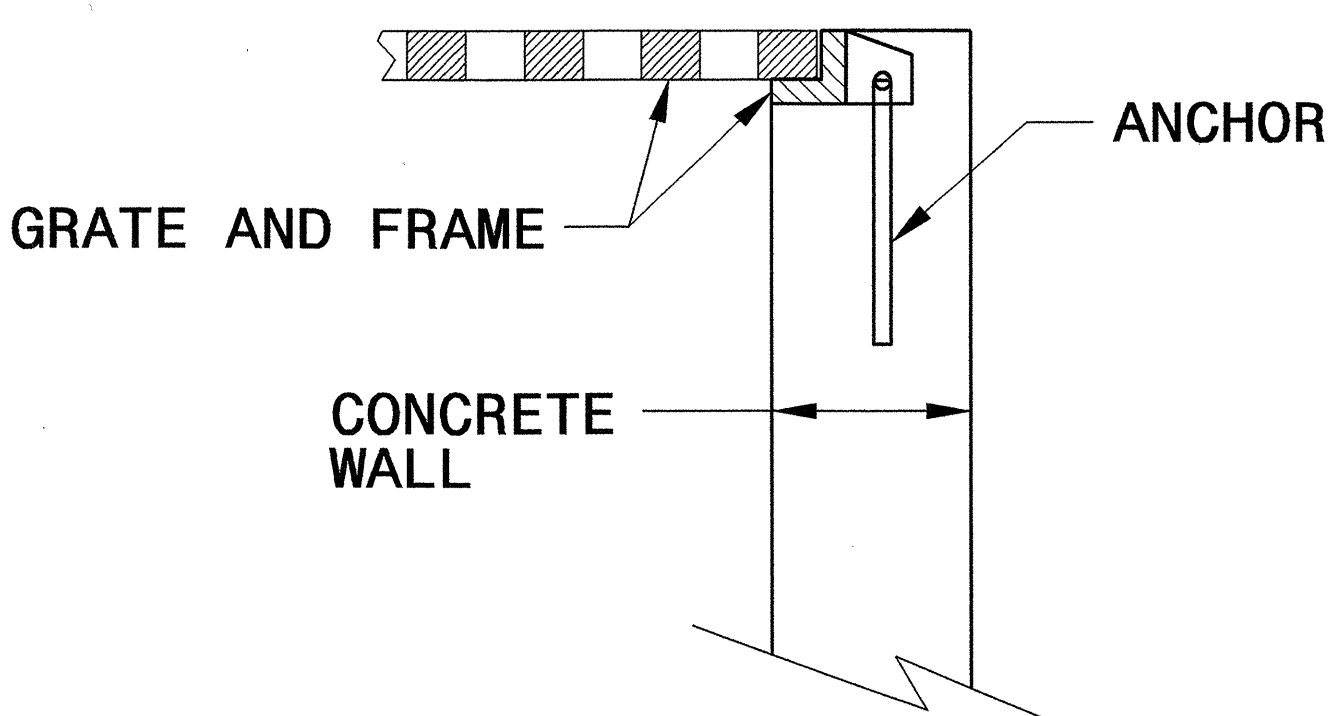
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

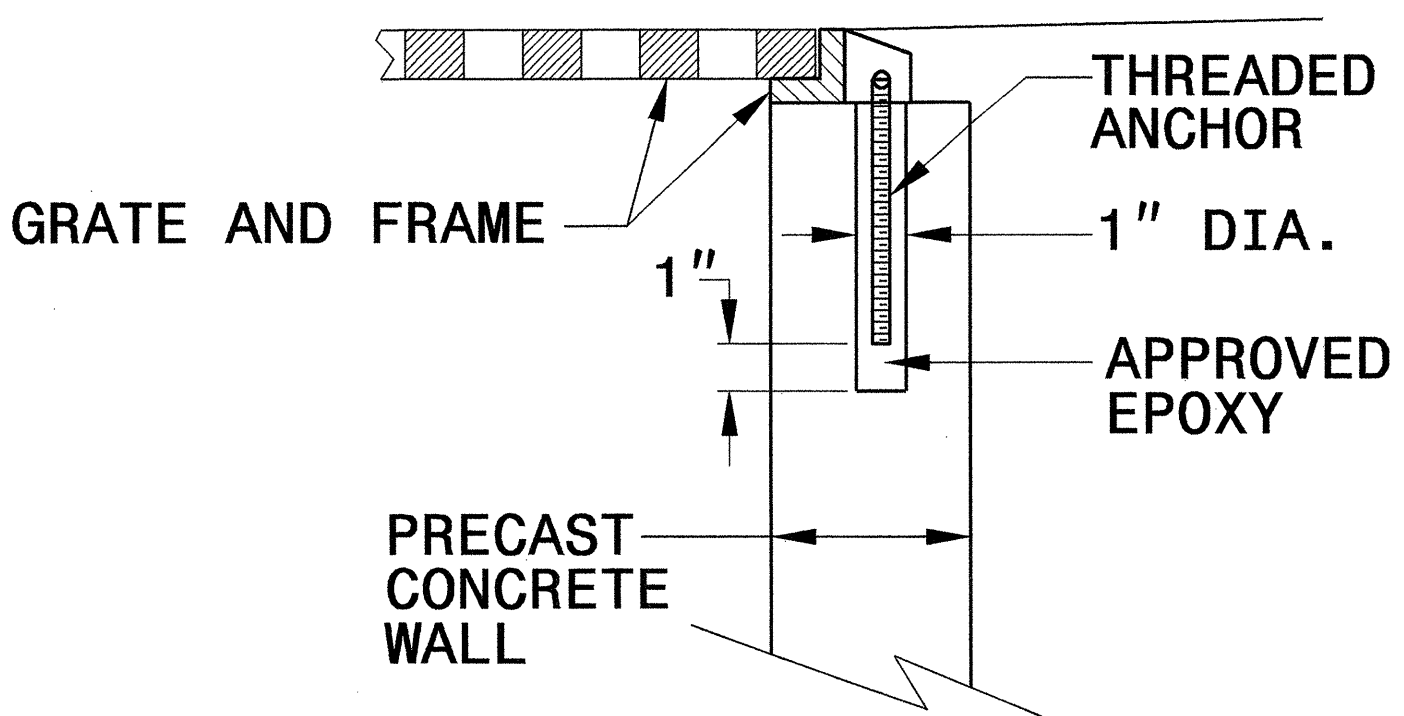
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



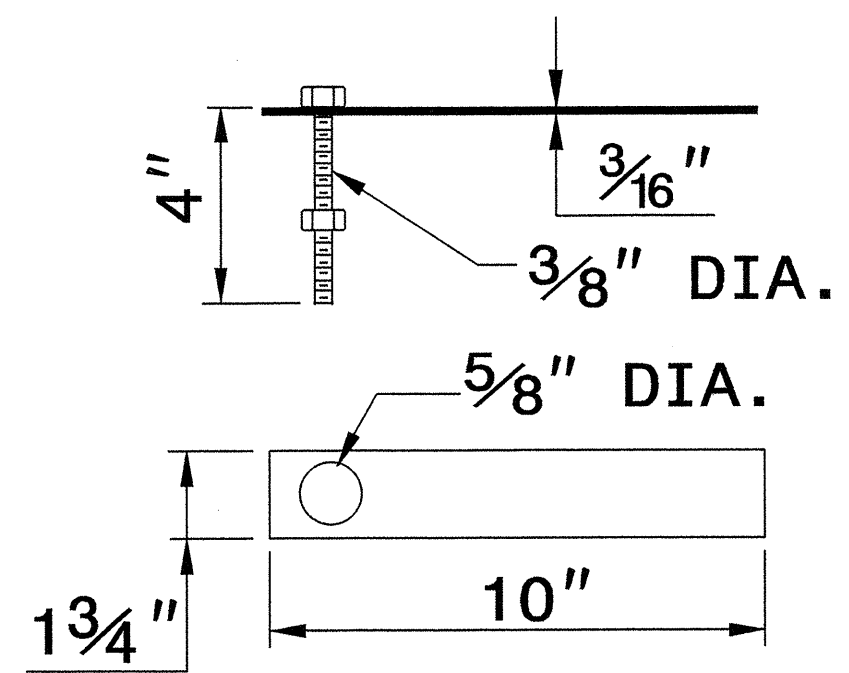
CONCRETE CONSTRUCTION



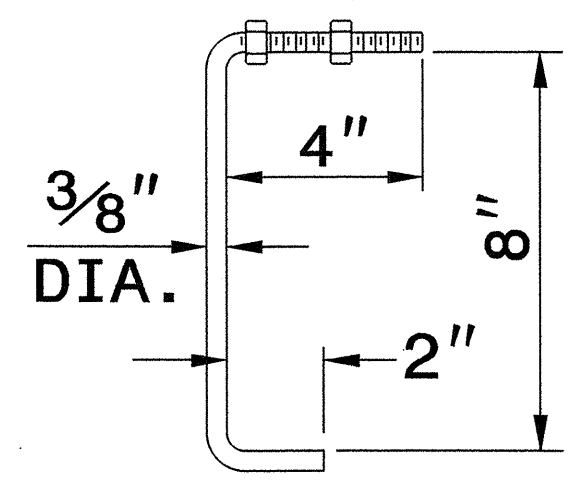
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

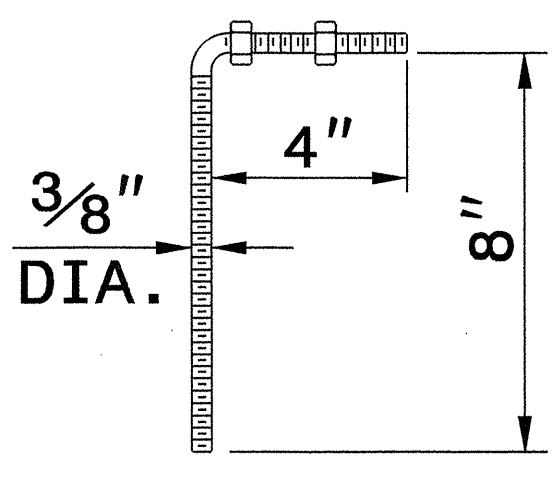
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



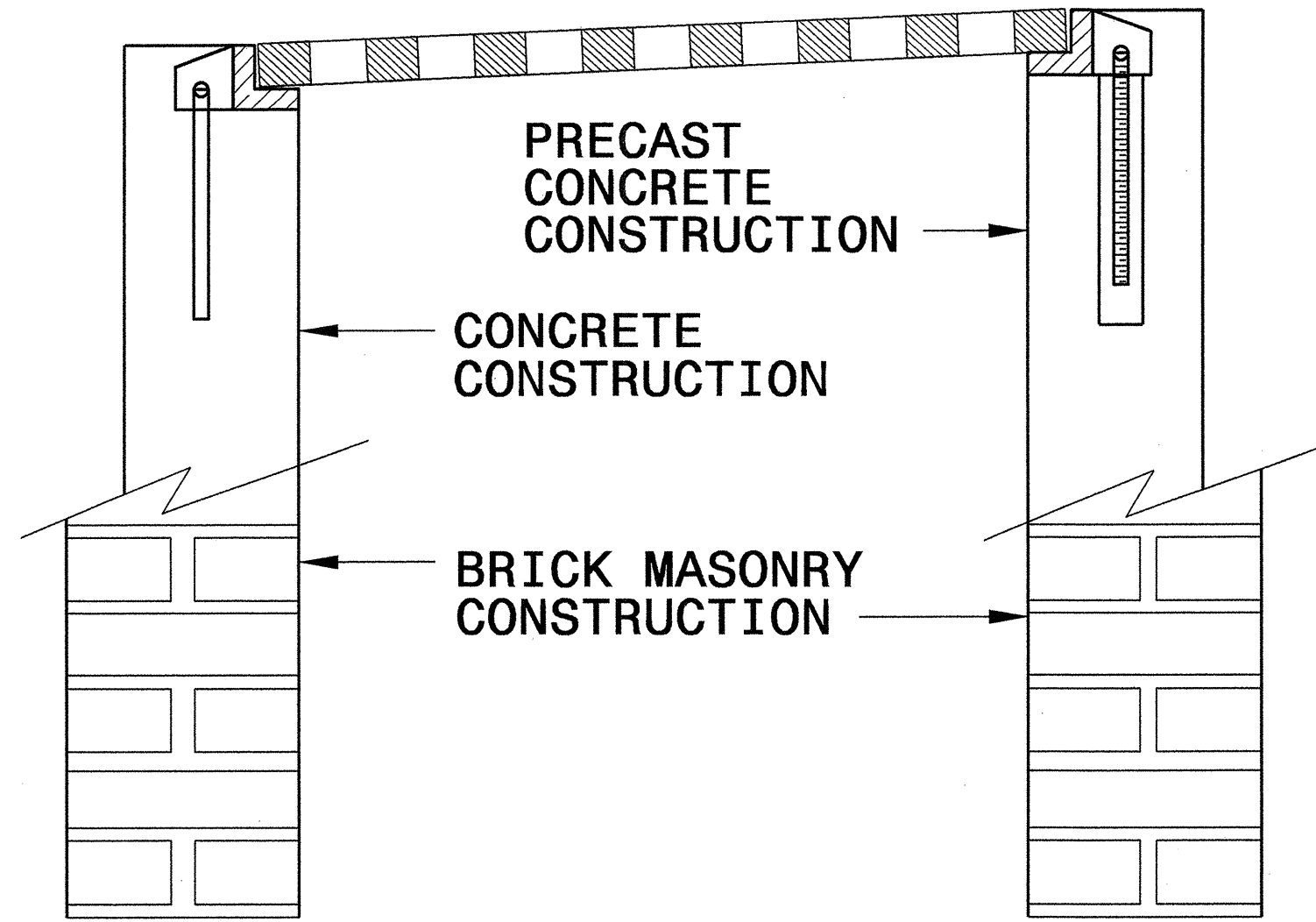
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR



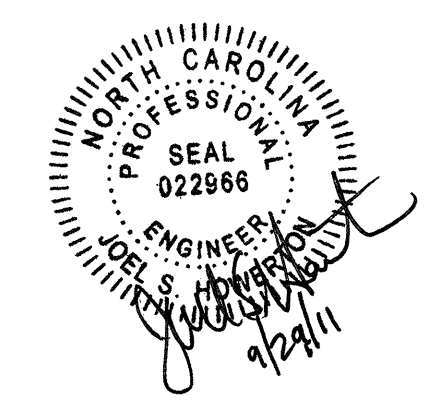
FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

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

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

24 AUG 2010 9:23 AM C:\Users\jhowerton\Documents\Standard Drawings\06 Stds to Special Details\840D25 Anchorage for Frames\0840d25.dgn



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

SEE PLATE FOR TITLE

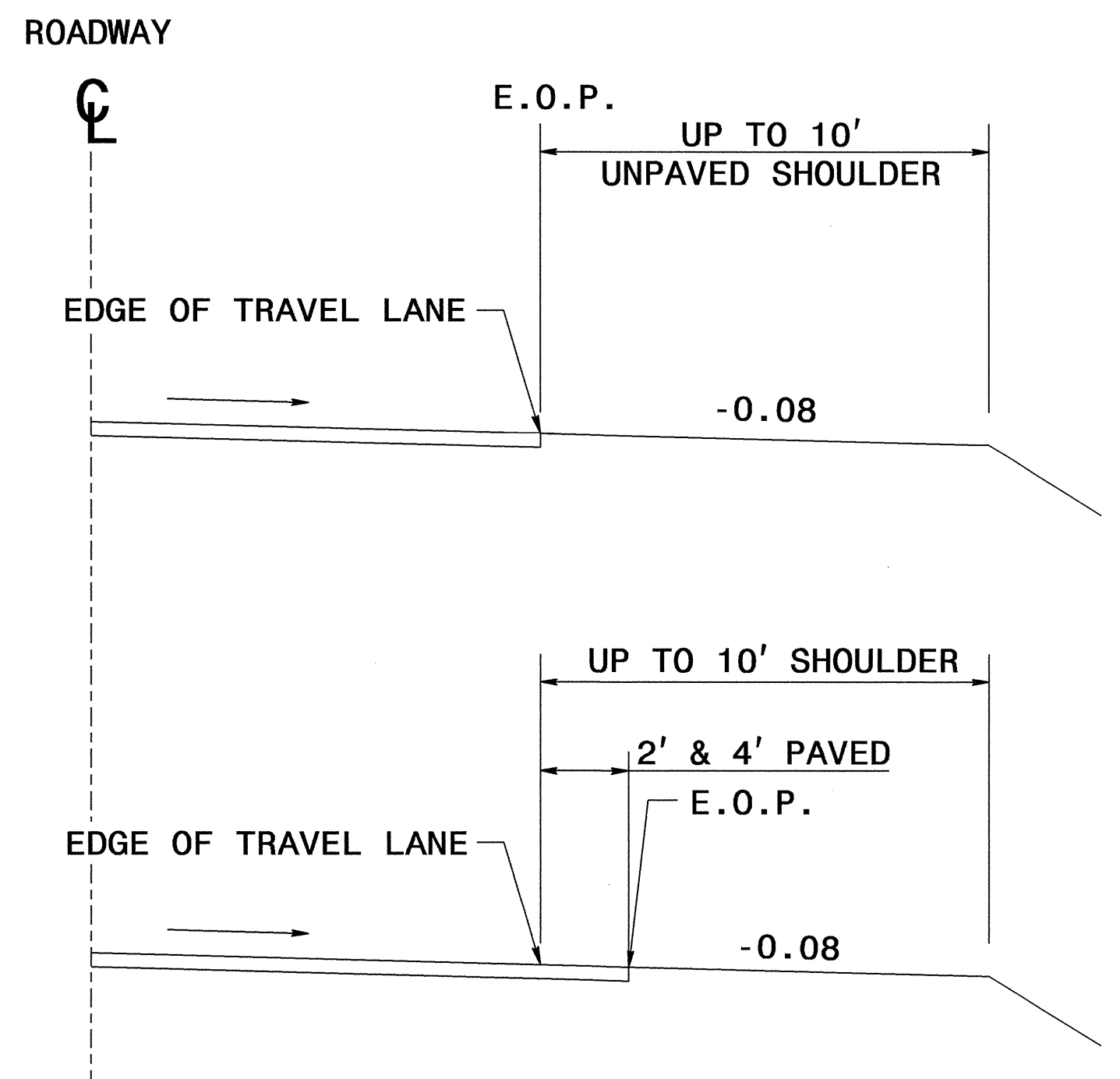
ORIGINAL BY: 2006 STD 840.25 DATE: 07/18/06
MODIFIED BY: E.E. WARD DATE: 9/25/06
CHECKED BY: J. S. Ward DATE: 9/24/11
FILE SPEC.: J

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

ENGLISH DETAIL DRAWING FOR
METHOD OF SHOULDER CONSTRUCTION
HIGH SIDE OF SUPERELEVATED CURVE
METHOD I (SHOULDERS UP TO 10')

SHEET 1 OF 1
560D01

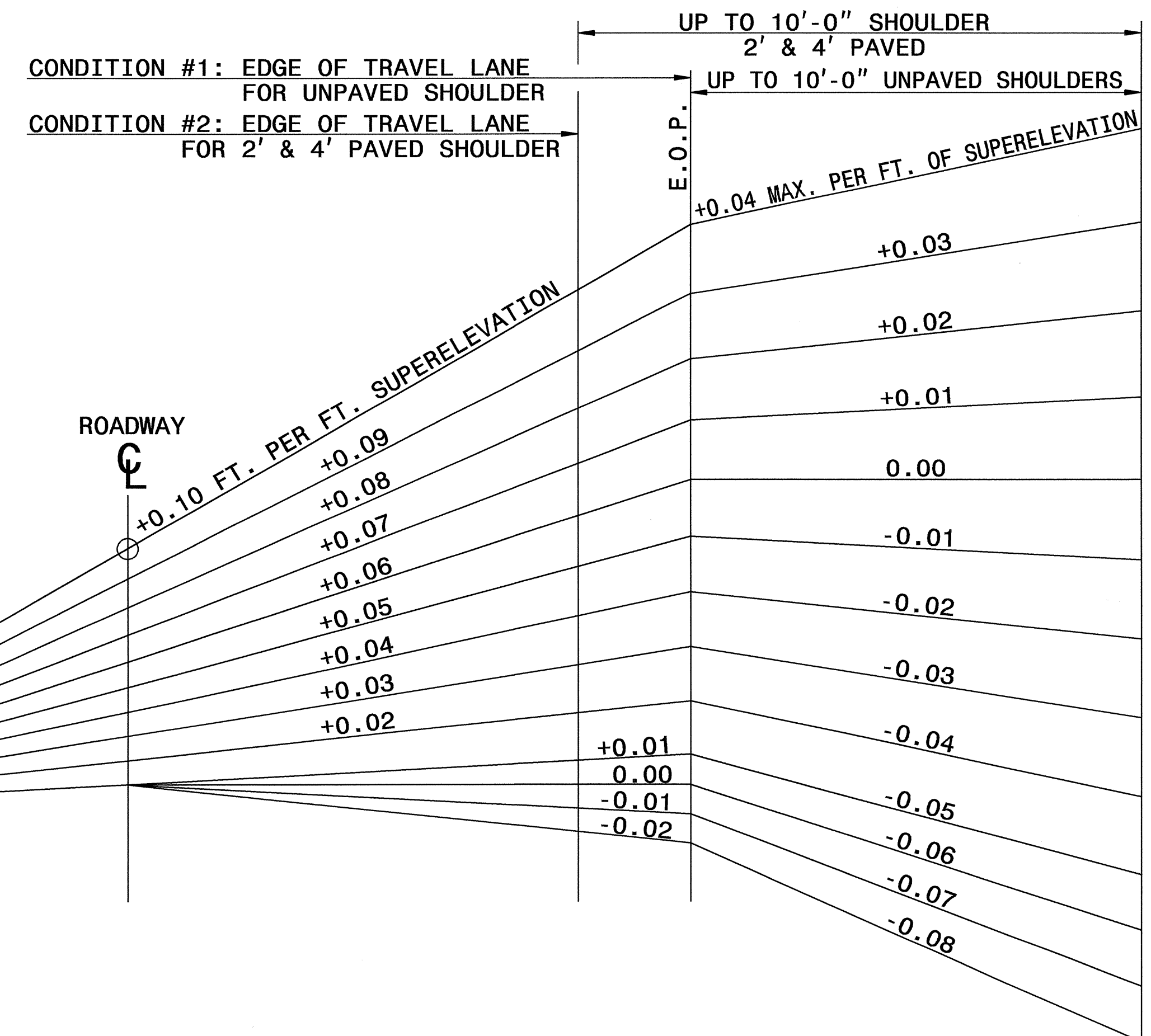
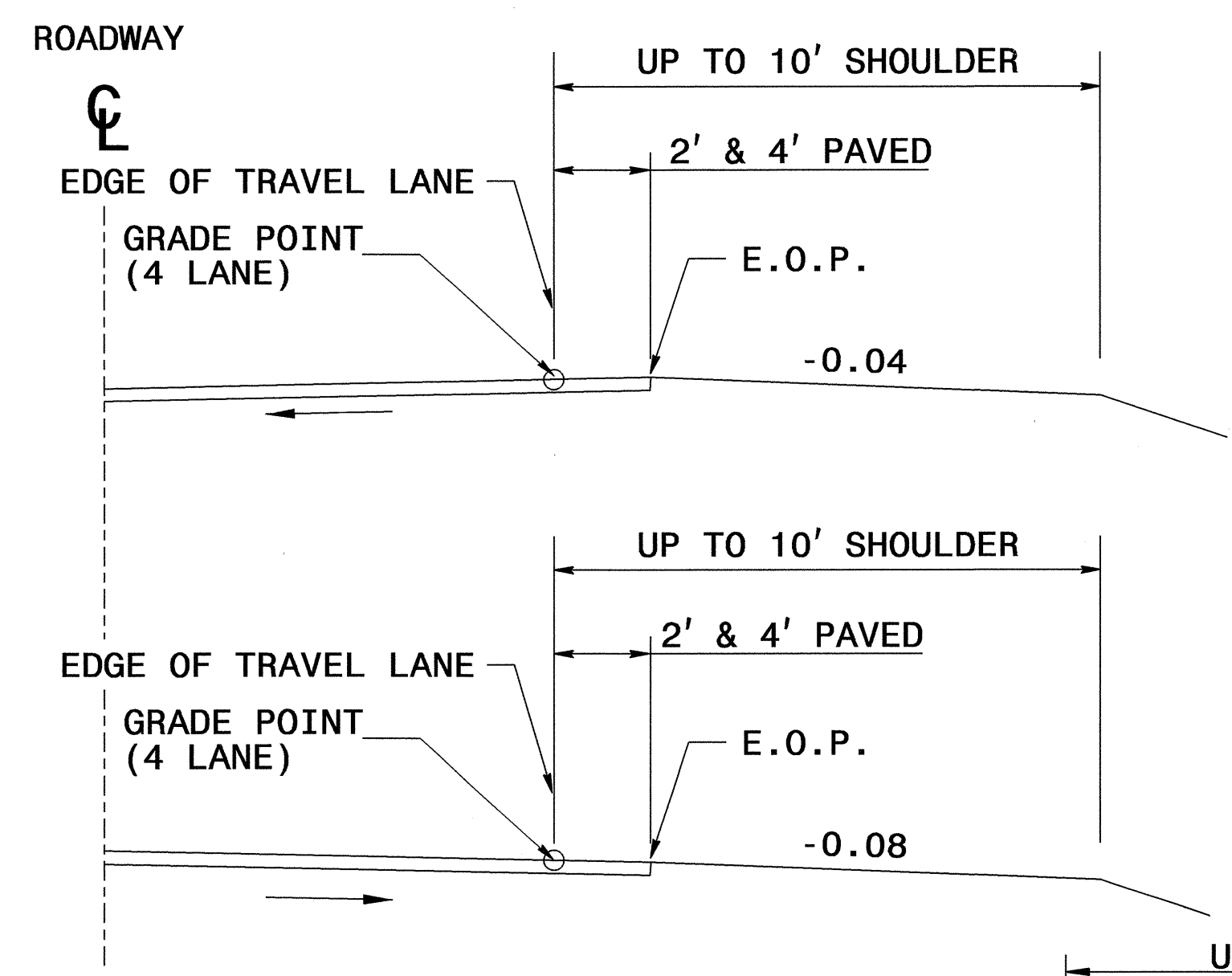
NORMAL OUTSIDE SHOULDER SLOPES



NOTE: ON LOW SIDE OF SUPERELEVATED PAVEMENT USE NORMAL SHOULDER SLOPE UNLESS NORMAL SHOULDER SLOPE IS FLATTER THAN SUPERELEVATION, THEN USE SUPER-ELEVATION RATE ON SHOULDER.

NOTE: "ROLL-OVER" ALGEBRAIC DIFFERENCE IN RATES OF CROSS SLOPE NOT TO EXCEED 0.06 AS SHOWN. IF SUPER-ELEVATION IS REVOLVED ABOUT CENTER LINE OF PAVEMENT, SAME APPLIES. ON DIVIDED ROADWAYS, GRADE POINT TO BE AT THE MEDIAN EDGE OF TRAVEL LANE.

NORMAL MEDIAN SHOULDER SLOPES

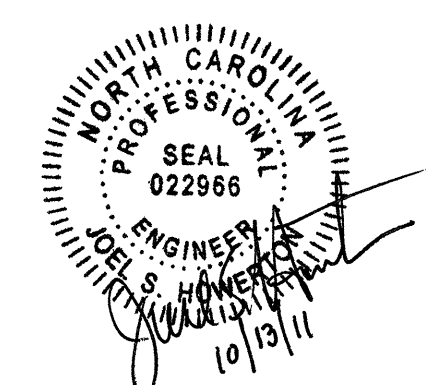


STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
METHOD OF SHOULDER CONSTRUCTION
HIGH SIDE OF SUPERELEVATED CURVE
METHOD I (SHOULDERS UP TO 10')

SHEET 1 OF 1
560D01

05-OCT-2010 07:50:00 \\jhowerton\Standard Drawings\12 Stds to Special Details\560d01\0560d01.dgn



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

SEE TITLE BLOCK

ORIGINAL BY: J. HOWERTON DATE: 10/5/11
 MODIFIED BY: [Signature] DATE: 10/5/11
 CHECKED BY: [Signature] DATE: 10/5/11
 FILE SPEC.: \\joe1\12 Stds to Special Details\560d01

RD242264

COMPUTED BY: esm DATE: 9/9/11
 CHECKED BY: chl DATE: 9/14/11

PROJECT NO. B-4556	SHEET NO. 3C
-----------------------	-----------------

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
-L-					
10+00.00 to 15+89.00 (BEGIN BRIDGE)		33	2119	2086	0
SUBTOTALS:					
		33	2119	2086	0
-L-					
16+99.00 (END BRIDGE) TO 22+00.00		244	4811	4567	0
SUBTOTALS:					
		244	4811	4567	0
TOTAL					
		277	6930	6653	0
SHOULDER MATERIAL			150	150	
PROJECT TOTALS:		277	7080	6803	0
EST. FOR REPL. TOPSOIL ON BOR. PIT				340	
B-4556 GRAND TOTALS:		277		7143	
B-4556 SAY TOTALS:		300		7200	
B-4560 SAY TOTALS:		50		1600	
GRAND TOTALS:		350		8800	

B-4556 UNDERCUT EXCAVATION 200 CY
 B-4560 UNDERCUT EXCAVATION 300 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, Breaking of Existing Pavement, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD ²
-L-	14+89.00	15+89.00	CL	244.44
-L-	16+99.00	17+99.00	CL	244.44
PROJECT TOTAL:				488.88
SAY TOTAL B-4556:				513
SAY TOTAL B-4560:				1270
GRAND TOTAL:				1783

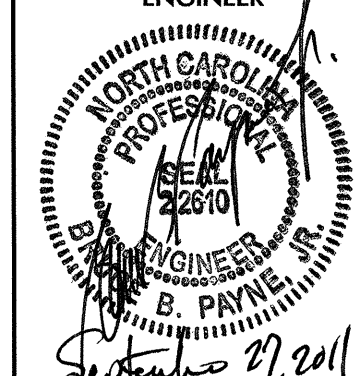
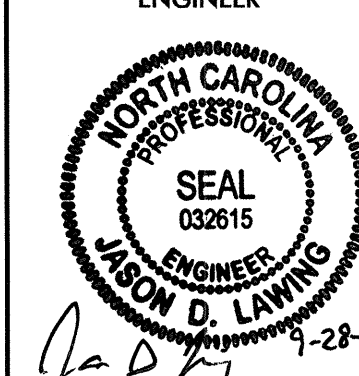
SUMMARY OF BREAKING EXISTING ASPHALT PAVEMENT

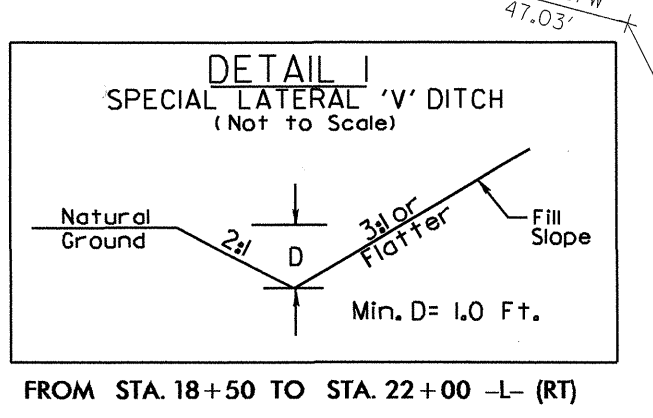
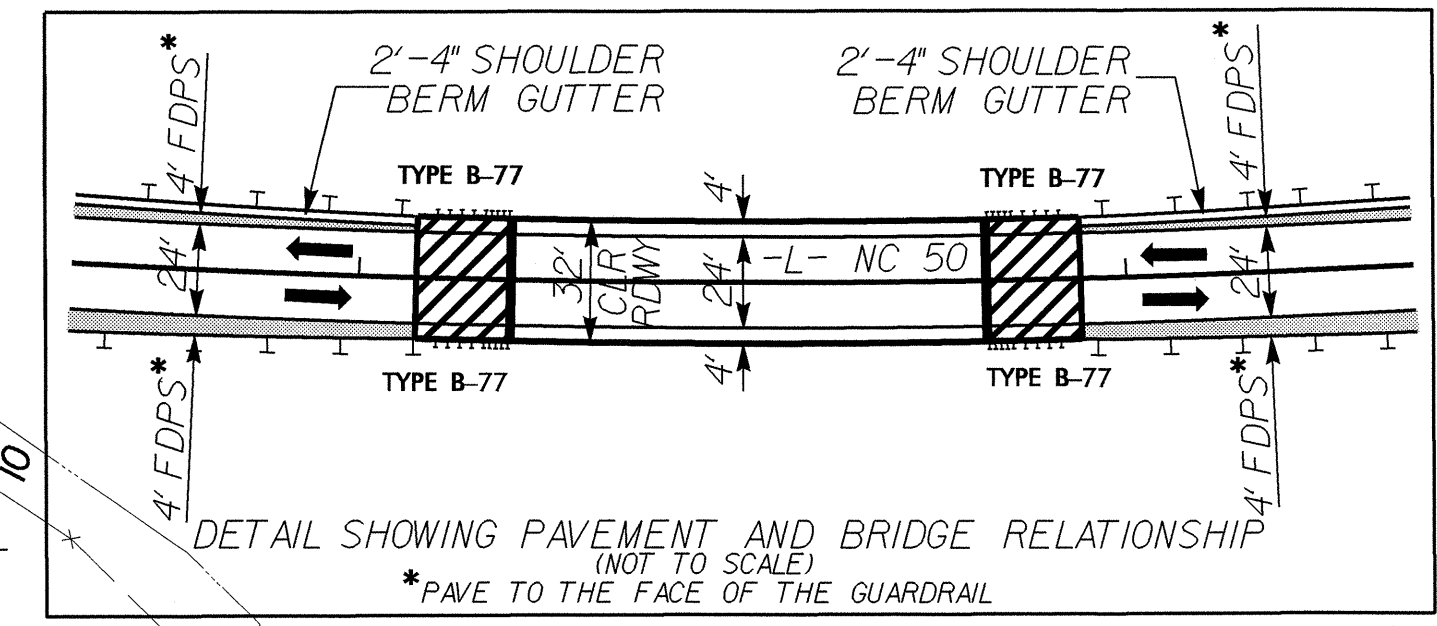
LINE	Station	Station	LOC LT/RT/CL	YD ²
-L-	17+99.00	19+00.00	CL	246.89
TOTAL:				246.89
SAY:				259

SUMMARY OF SHOULDER BERM GUTTER

LINE	Station	Station	LOC LT/RT/CL	FT
-L-	11+50.00	15+64.00	LT	414.00
-L-	17+24.00	21+30.00	LT	406.00
TOTAL:				820.00
B-4556 SAY:				825.00
B-4560 SAY:				602.00
GRAND TOT:				1427.00

8/17/199
 20-SEP-2011 15:07
 R:\Roadway\Projects\B4556_rdy_pah_pf1.04.dgn
 B4556.rdy

PROJECT REFERENCE NO. B-4556	SHEET NO. 4
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 



-L-
 PI Sta 9+63.52 PI Sta 18+46.64
 $\Delta = 9'10''10.6''$ (LT) $\Delta = 22'37''09.8''$ (LT)
 $D = 1'44''10.4''$ $D = 1'50''57.7''$
 $L = 528.13'$ $L = 1,223.10'$
 $T = 264.63'$ $T = 619.62'$
 $R = 3,300.00'$ $R = 3,098.15'$
 $SE = 05$ $SE = 05$
 $INC = 27.00'$ $INC = 27.00'$

