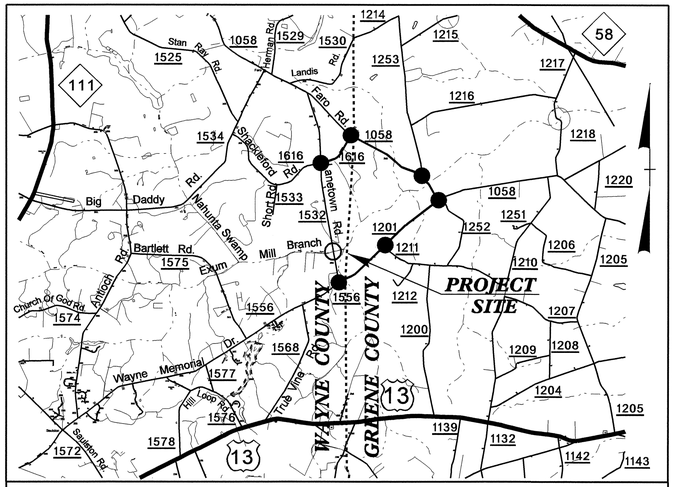
09/08/95

TIP PROJECT: B-4671

CONTRACT: C202019

See Sheet 1-A For Index of Sheets



Detour Route

VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAYNE COUNTY

LOCATION: BRIDGE 35 ON SR 1532 OVER NAHUNTA SWAMP

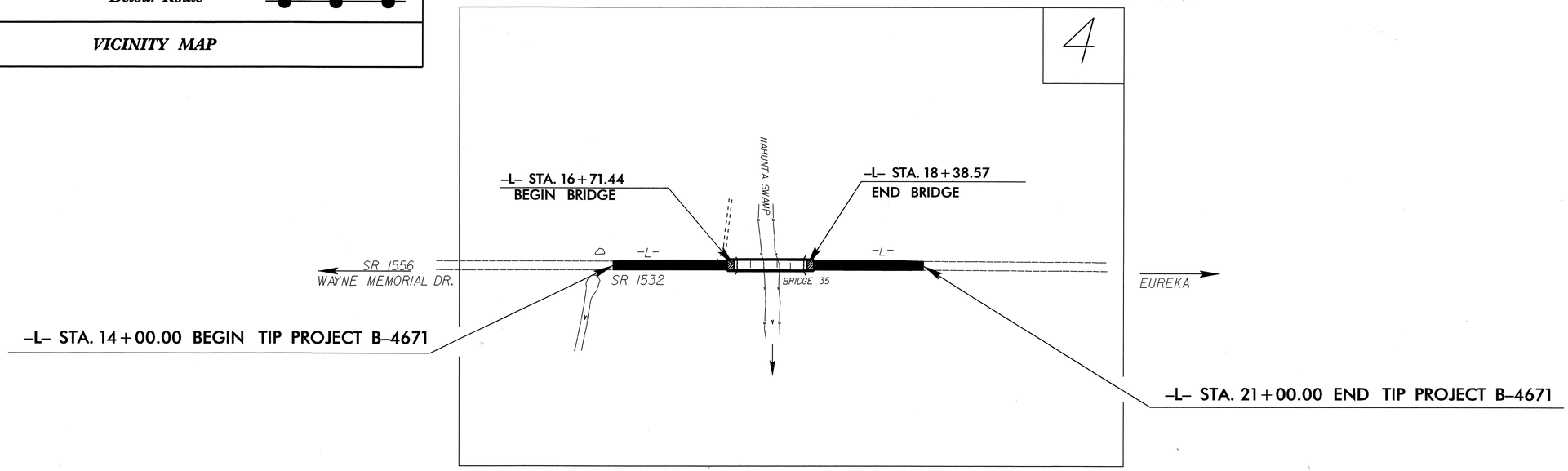
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

NAD 83/95

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4671	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33826.1.1	BRZ-1532(3)	PE
33826.2.1	BRZ-1532(3)	R/W & UTIL
33826.3.1	BRZ-1532(3)	CONST.

4



GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2008	=	250
ADT 2030	=	500
DHV	=	60 %
D	=	10 %
T	=	3 % *
V	=	55 MPH

* TTST 1% DUAL 2%

FUNCTIONAL CLASSICATION
RURAL LOCAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4671 = 0.101 MILES

LENGTH STRUCTURE TIP PROJECT B-4671 = 0.032 MILES

TOTAL LENGTH TIP PROJECT B-4671 = 0.133 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: DECEMBER 18, 2007

LETTING DATE: OCTOBER 21, 2008

G.E. BREW, PE
PROJECT ENGINEER

I.T. YOUNIS
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 9334 ENGINEER HENRY WELLS JR.

SIGNATURE: *P.E.* 7/25/08

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18903 ENGINEER GREGORY E. BREW

7-25-08

SIGNATURE: Gregory C. Brew

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

P.E.
STATE HIGHWAY DESIGN ENGINEER

03-JUL-2008 15:08
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$$$$USERNAME$$$$

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4671	1-A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18903 ENGINEER GREGORY E. BREW

7-25-08

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-A	DETAIL OF ANCHORAGE FOR FRAMES - BRICK/CONCRETE/PRECAST CONCRETE
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF DRAINAGE QUANTITIES
3-B	SUMMARY OF GUARDRAIL, EARTHWORK SUMMARY, AND ASPHALT PAVEMENT REMOVAL SUMMARY
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THRU TCP-2	TRAFFIC CONTROL PLANS
RF-1	REFORESTATION PLANS
EC-1 THRU EC-3	EROSION CONTROL PLANS
SD-1	SPECIAL SIGN DESIGN
X-1A	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-4	CROSS-SECTIONS
S-1 THRU S-23	STRUCTURE PLANS

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

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
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
300.01	Method of Pipe Installation - Method 'A'
422.10	Reinforced Bridge Approach Fills
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
654.01	Pavement Repairs
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
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.46	Traffic Bearing Precast Drainage Structure
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
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

GENERAL NOTES:

2006 SPECIFICATIONS
EFFECTIVE: 07-18-06
REVISED: 07-18-06

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.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL:

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

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

RIGHT-OF-WAY MARKERS:

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

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3/15/06

PROJECT REFERENCE NO.	SHEET NO.
B-4671	1-B

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 — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- 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 — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line
- Proposed Right of Way Line with Iron Pin and Cap Marker
- Proposed Right of Way Line with Concrete or Granite 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

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Proposed Wheel Chair Ramp Curb Cut — WCC
- Curb Cut for Future Wheel Chair Ramp — CCFR
- 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 — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

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

WATER:

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

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

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

SANITARY SEWER:

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

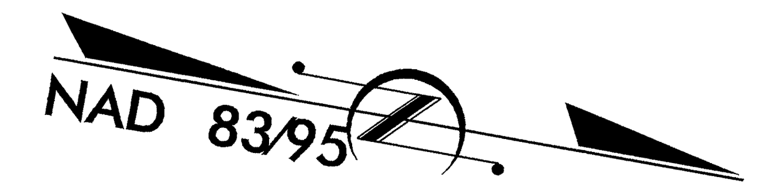
MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
B-4671	I-C
Location and Surveys	

8/17/99

SURVEY CONTROL SHEET B-4671

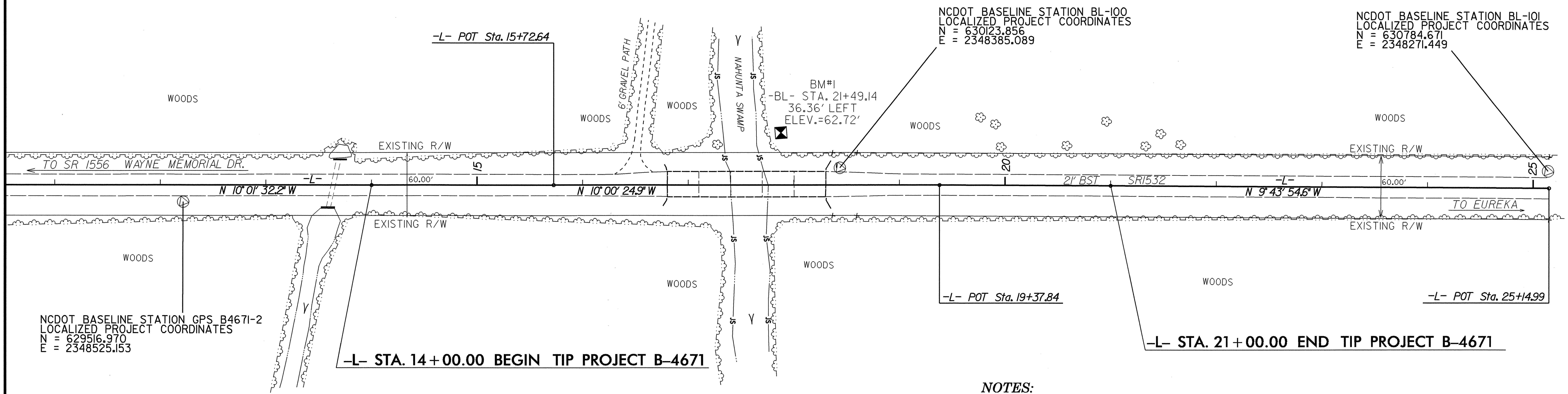


BASELINE DATA

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	GPS B4671-1	628452.5550	2348709.3340	68.23	OUTSIDE PROJECT LIMITS	
2	GPS B4671-2	629516.9700	2348525.1530	65.96	12+21.53	16.09 RT
100	BL-100	630123.8560	2348385.0890	68.73	18+43.53	16.27 LT
101	BL-101	630784.6710	2348271.4490	69.02	25+13.97	16.12 LT

BENCHMARK DATA

200 ELEVATION = 62.72
N 630063 E 2348362
L STATION 17+88 50 LEFT
BM #1
RR SPIKE IN BASE OF 14" TWIN RIVERBIRCH



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT ""GPS B4671-2""
WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF
NORTHING: 629516.970(ft) EASTING: 2348525.153(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988232
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM ""GPS B4671-2"" TO -L- STATION 14+00.00 IS
N 15°10'38" W 179.19'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

NOTES:

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/

THE FILES TO BE FOUND ARE AS FOLLOWS:
B4671_LS_CONTROL_070514.TXT

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

(symbol) 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)

11-JUN-2008 12:18
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6/2/99

PROJECT REFERENCE NO.	SHEET NO.
B-4671	2

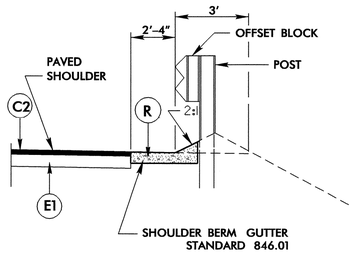
ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 18903 ENGINEER GREGORY E. BREW — 7-25-08

PAVEMENT DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 22896 ENGINEER CLARK S. MORRISON — 7/23/08

FINAL PAVEMENT SCHEDULE

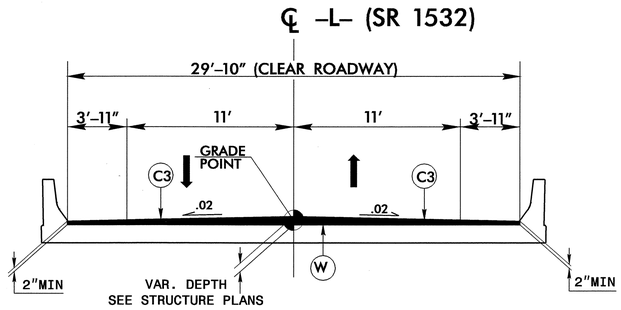
C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
J	6" AGGREGATE BASE COURSE
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT.

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



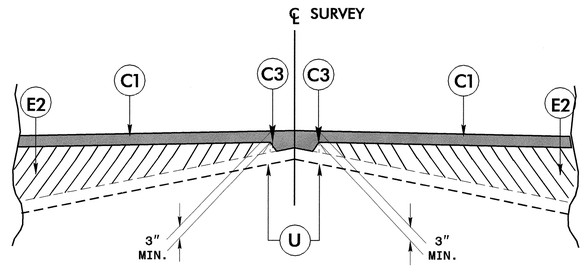
DETAIL SHOWING SHOULDER BERM GUTTER

(SEE STD 846.02)
SEE PLANS FOR LOCATIONS



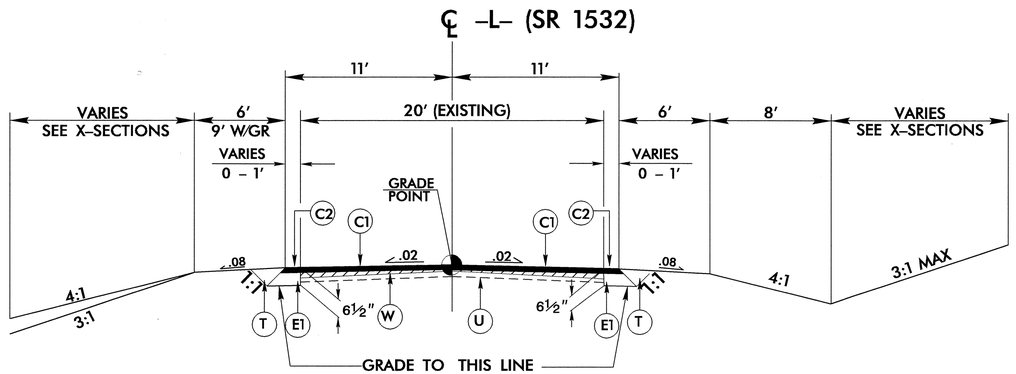
TYPICAL SECTION ON STRUCTURE

–L– STA. 16+71.44 TO 18+38.57



Detail Showing Method of Wedging

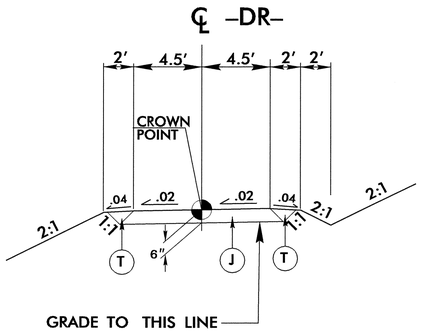
USE WITH TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 1

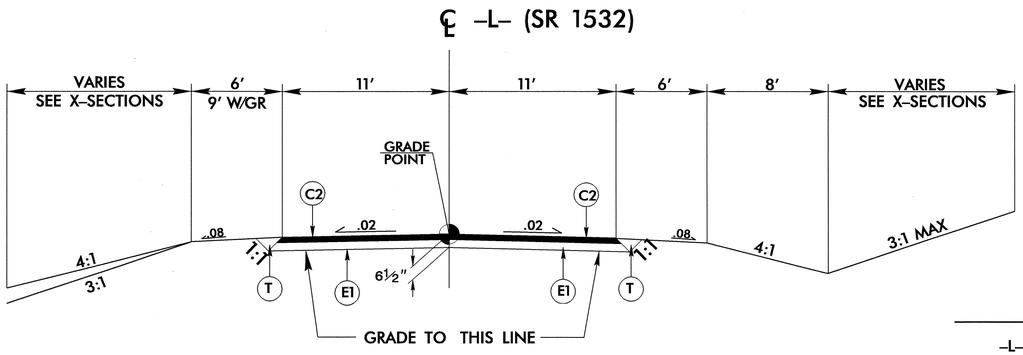
USE TYPICAL SECTION NO. 1

–L– STA 14+00.00 TO 14+50.00 TRANSITION FROM EXISTING TO T.S. 1
–L– STA 14+50.00 TO 16+30.00
–L– STA 18+80.00 TO 20+50.00
–L– STA 20+50.00 TO 21+00.00 TRANSITION FROM T.S. 1 TO EXISTING



TYPICAL SECTION NO. 3

NOTE:
A DRIVEWAY CONNECTION WILL BE PROVIDED FOR THE TOWN OF WILSON APPROXIMATELY 2000' SOUTH OF THE PROPOSED BRIDGE (ON WEST SIDE)



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

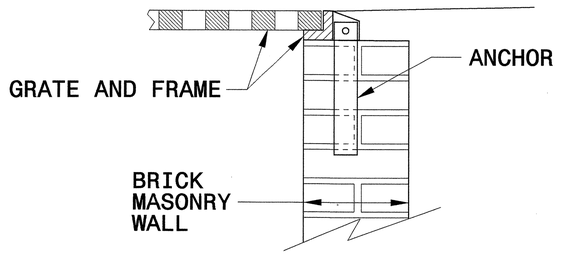
–L– STA 16+30.00 TO 16+71.44 (BEGIN BRIDGE)
–L– STA 18+38.57 (END BRIDGE) TO 18+80.00

PROJECT REFERENCE NO.	SHEET NO.
B-4671	2-A

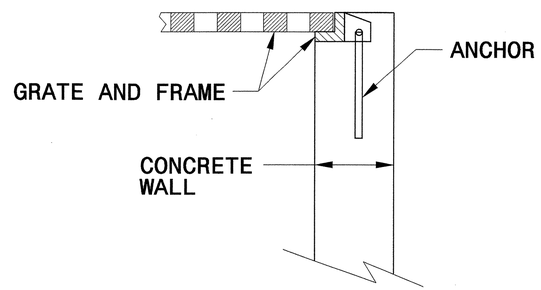
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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

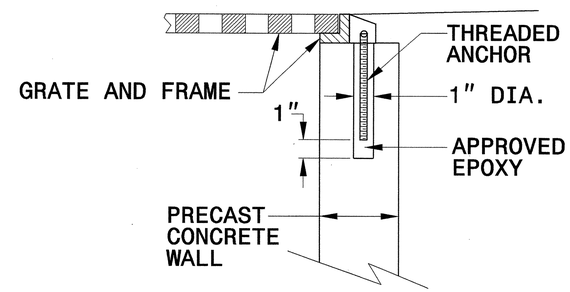
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



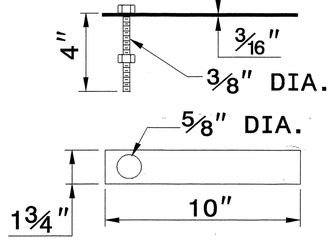
CONCRETE CONSTRUCTION



PRECAST CONCRETE CONSTRUCTION

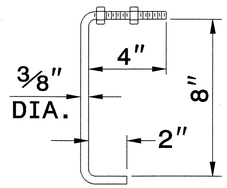
DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

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



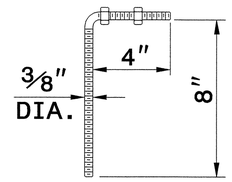
MASONRY ANCHOR

3/8" DIA. BOLT WITH PLATE



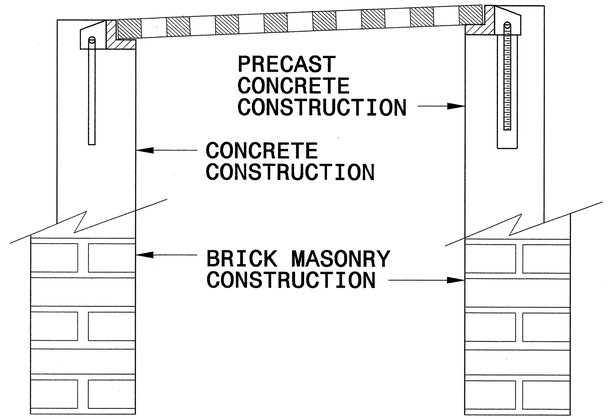
CONCRETE ANCHOR

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

SEAL 022966
JOEL S. HOWERTON
7/30/08

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 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: DATE:
FILE SPEC.:

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-4671	3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202019

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ********** (17+55.00)
0043000000-N	226	Lump Sum		GRADING
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
0057000000-E	226	300	CY	UNDERCUT EXCAVATION
0195000000-E	265	300	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	300	SY	FABRIC FOR SOIL STABILIZATION
0318000000-E	300	11	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
0366000000-E	310	98	LF	15" RC PIPE CULVERTS, CLASS III
1121000000-E	520	15	TON	AGGREGATE BASE COURSE
1489000000-E	610	240	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1525000000-E	610	300	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A
1560000000-E	620	30	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
1693000000-E	654	50	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
2000000000-N	806	8	EA	RIGHT OF WAY MARKERS
2022000000-E	815	25	CY	SUBDRAIN EXCAVATION
2033000000-E	815	20	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	100	LF	6" PERFORATED SUBDRAIN PIPE
2055000000-E	815	3	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)
2286000000-N	840	4	EA	MASONRY DRAINAGE STRUCTURES
2308000000-E	840	1.6	LF	MASONRY DRAINAGE STRUCTURES
2367000000-N	840	4	EA	FRAME WITH TWO GRATES, STD 840.29
2556000000-E	846	40	LF	SHOULDER BERM GUTTER
3030000000-E	862	375	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
3649000000-E	876	2	TON	RIP RAP, CLASS B
3656000000-E	876	2,210	SY	FILTER FABRIC FOR DRAINAGE
4400000000-E	1110	289	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	96	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	94	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4430000000-N	1130	30	EA	DRUMS
4435000000-N	1135	30	EA	CONES
4445000000-E	1145	80	LF	BARRICADES (TYPE III)
4455000000-N	1150	10	MD	FLAGGER
4810000000-E	1205	5,600	LF	PAINT PAVEMENT MARKING LINES (4")
4900000000-N	1251	14	EA	PERMANENT RAISED PAVEMENT MARKERS
6000000000-E	1605	3,550	LF	TEMPORARY SILT FENCE
6006000000-E	1610	450	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	5	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	80	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	2.5	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	50	LF	TEMPORARY SLOPE DRAINS
6027000000-N	1622	2	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
6029000000-E	SP	800	LF	SAFETY FENCE
6030000000-E	1630	5	CY	SILT EXCAVATION
6036000000-E	1631	2,200	SY	MATTING FOR EROSION CONTROL
6042000000-E	1632	275	LF	1/4" HARDWARE CLOTH
6084000000-E	1660	3.5	ACR	SEEDING & MULCHING
6087000000-E	1660	1	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	1.25	TON	FERTILIZER TOPDRESSING
6114000000-N	SP	5	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	12	EA	RESPONSE FOR EROSION CONTROL
6123000000-E	1670	0.1	ACR	REFORESTATION

RD226348

COMPUTED BY: CJT DATE: 9/17/2007

CHECKED BY: JBT DATE: 9/27/2007

PROJECT NO.	SHEET NO.
B-4671	3-A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

STATION	LOCATION (LT, RT, OR CL)*	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) SIZE 12"	15"	18"	24"	30"	36"	42"	48"	BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE) SIZE 12"	15"	18"	24"	30"	36"	42"	48"	CLASS III R.C. PIPE OR ALUMINIZED C.S. PIPE, TYPE IR OR HDPE PIPE, TYPE S OR D SIZE 12"	15"	18"	24"	30"	36"	42"	48"	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	CU. YARDS C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') LIN. FT. A 5.0' THRU 10.0'	LIN. FT. B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	T.B. DROP INLET STD. 840.35	FRAME & TWO (N.S.) GRATES STD. 840.29	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD. 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN. FT.	REMARKS
THICKNESS OR GAUGE																.064	.064	.064	.064	.079	.079	.109	.109																										
-L- 16+45	RT	1		68.8																															1						1	1					
		1	2		66.1	64.4			32																																						
-L- 16+45	LT	2		68.8																															1						1	1					
		2	3		64.4	63			16																																						
-L- 18+63	LT	4		70.7																															1						1	1					
		4	5		68	64.1			32																																						
-L- 18+63	RT	5		70.7																															1		1.6				1	1					
		5	6		64.1	62.5			18																																						
TOTAL									98																																4	1.6			4	4					TOTAL

ABBREVIATIONS	
C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	GRATED DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

COMPUTED BY: JBT DATE: 10-02-07
CHECKED BY: IY DATE: 6-13-08

PROJECT NO.	SHEET NO.
B-4671	3-B

RD214491

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

CUBIC YARDS

Station to Station	Uncl. Exc. C.Y.	Embank. +% C.Y.	Borrow C.Y.	Waste C.Y.
SUMMARY NO. 1				
-L- 13+50 TO 16+71.44	11	333	322	
-L- 18+38.57 TO 21+50.00	24	149	125	
SUMMARY NO. 1 TOTALS	35	482	447	
Waste In Lieu of Borrow				
Est 5% To Replace Topsoil at Borrow Pit			22	
PROJECT TOTALS	35	482	469	
SAY:	50		500	
ESTIMATED UNDERCUT= 300 C.Y.				

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE LUMP SUM PRICE FOR "GRADING".

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.

SUMMARY OF EXISTING ASPHALT REMOVAL

LINE	Station to Station	LOC LT/RT/CL	Ashalt Removal SQ. YDS.
L	16+30 TO 16+80.08	CL	122.95
L	18+30.43 TO 18+80	CL	124.49
	PROJECT TOTAL		247.44
		SAY	250

GUARDRAIL SUMMARY

"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 TPYE 350

LINE	BEG. STA.	END STA.	LOC.	LENGTH (FT.)			WARRANT POINT		"N" DIST.	TOTAL	FLARE LENGTH		W (FT)		ANCHORS (EA)						IMP. ATTEN. TYPE 350			REMOVE	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPR. END	TRAIL. END	FROM E.O.L.	SHLDR WIDTH	APPR. END	TRAIL. END	APPR. END	TRAIL. END	GRAU 350	TYPE B-77					EA	G	NG	EXISTING GUARDRAIL	
L	15+83.94	16+71.44	LT	87.5				16+71.44	6'	9'		68.50		1.375'	1	1									
L	14+33.94	16+71.44	RT	237.5			16+71.44		6'	9'	218.75		3'		1	1									
L	18+38.57	19+26.07	RT	87.5			18+38.57		6'	9'		68.50		1.375'	1	1									
L	18+38.57	20+76.07	LT	237.5				18+38.57	6'	9'	218.75		3'		1	1									
		SUBTOTALS		650.00											4	4									TOTAL
DEDUCTION FOR ANCHOR UNITS		(4 GRAU@50')		-200																					
		(4 TYPE B-77 @18.75')		-75																					
		PROJECT TOTALS		375.0																					
ADDITIONAL GUARDRAIL POSTS= 5 EA																									

PROJECT REFERENCE NO.	SHEET NO.
B-4671	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

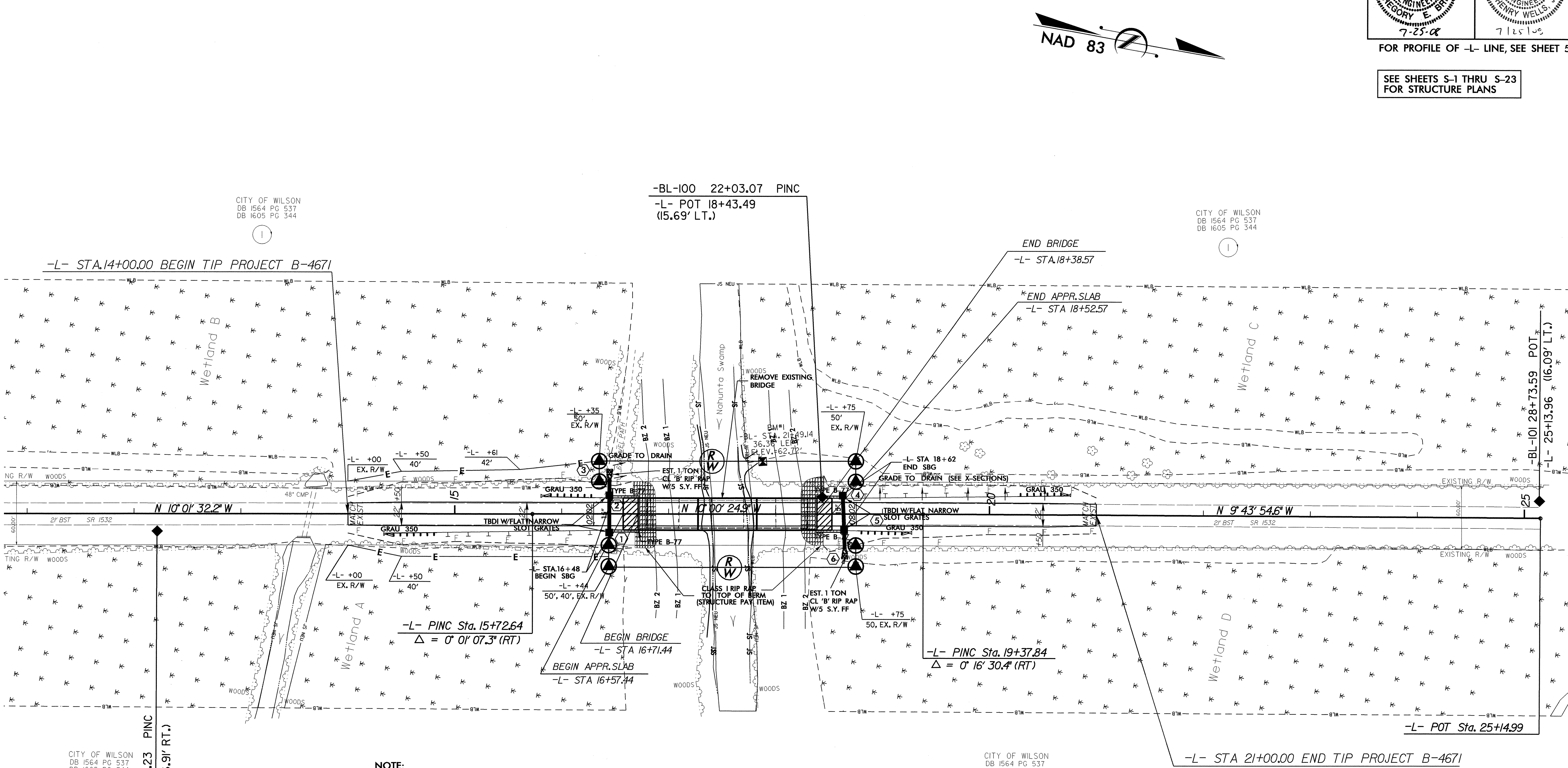
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18903 GREGORY E. BREW 7-25-08

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 9334 HENRY WELLS, JR. 7/25/08

FOR PROFILE OF -L- LINE, SEE SHEET 5

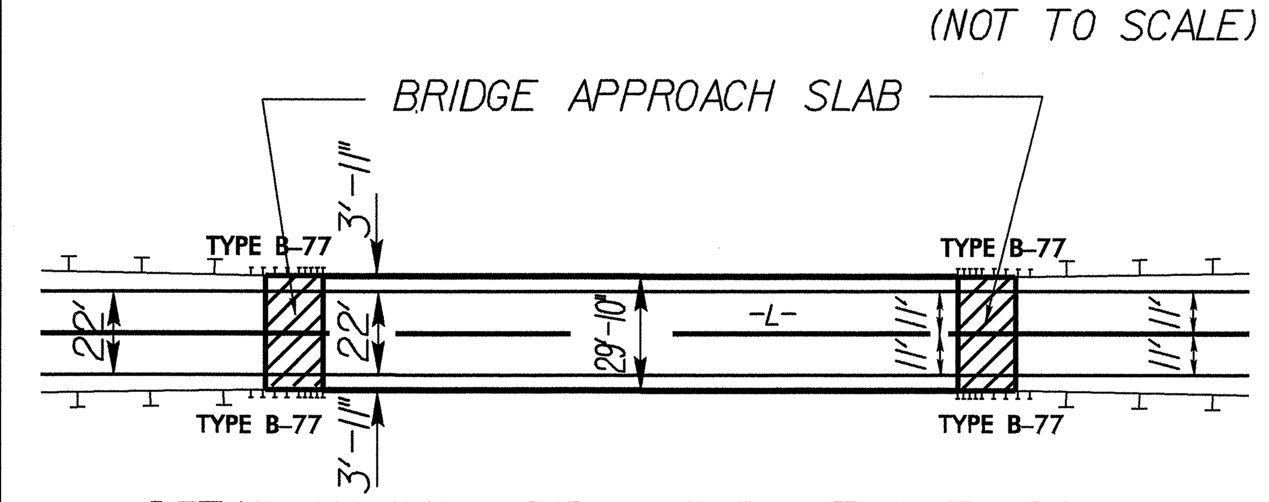
SEE SHEETS S-1 THRU S-23 FOR STRUCTURE PLANS

REVISIONS



NOTE:
A DRIVEWAY CONNECTION WILL BE PROVIDED FOR THE TOWN OF WILSON APPROXIMATELY 2000' SOUTH OF THE PROPOSED BRIDGE (ON THE WEST SIDE)

(NOT TO SCALE)



DETAIL SHOWING BRIDGE IN RELATION TO PAVEMENT

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8/17/99

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-4671	5

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 18903 ENGINEER GREGORY E. BRIEW

7-25-08

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 9334 ENGINEER HENRY WELLS, JR.

7/25/08

FOR PLANS OF LINE -L- SEE SHEET 4

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 3550	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 67.4	FT
BASE DISCHARGE	= 5680	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 68.6	FT
OVERTOPPING DISCHARGE	= -3550	CFS
OVERTOPPING FREQUENCY	= -25	YRS
OVERTOPPING ELEVATION	= 66.8	FT
	=	FT
DATE OF SURVEY	= 4/13/07	
W.S. ELEVATION AT DATE OF SURVEY	= 58.0	FT

-L-

BM #1 ELEV 62.72'
-BL- STA 21+49.4 36.36' LEFT
N 630063.1250 E 2348361.7860
RR SPIKE IN BASE OF 14" TWIN RIVERBIRCH