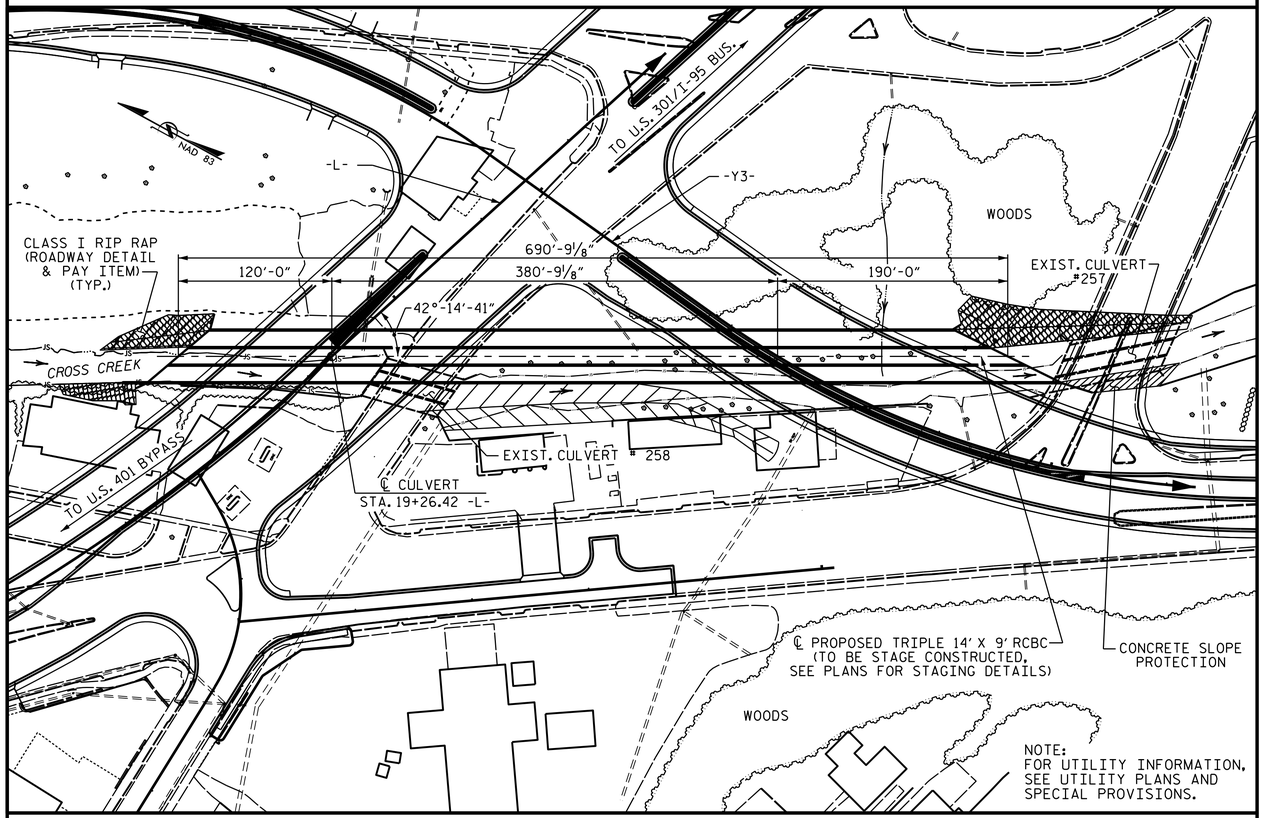
B.M. #BL-3: 80.06' RIGHT OF -L- STATION 17+99.86, ELEV. 94.80



LOCATION SKETCH

TEMPORARY SHORING NOT SHOWN FOR CLARITY. SEE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS.

HYDRAULIC DATA

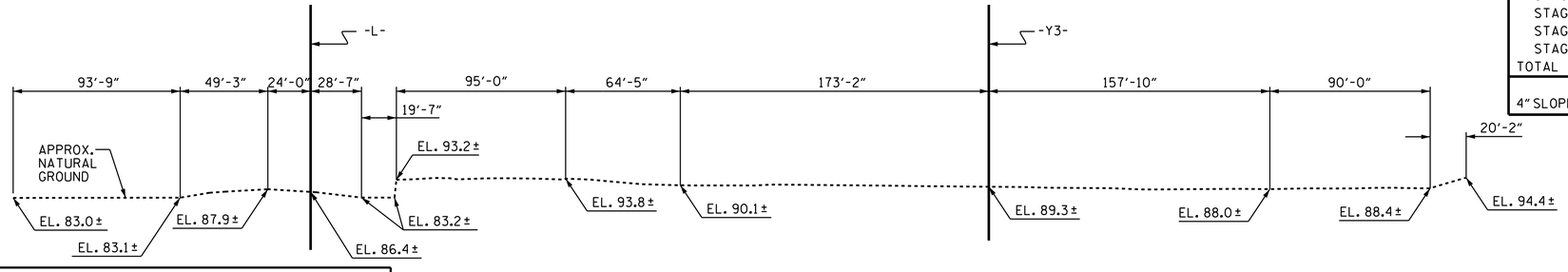
DESIGN DISCHARGE	=	4000 CFS
DESIGN FLOOD FREQUENCY	=	50 YR.
DESIGN HIGH WATER ELEVATION	=	100.3
BASE DISCHARGE (Q100)	=	4400 CFS
BASE ELEVATION (Q100)	=	101.40
DRAINAGE AREA	=	25.90 sq. mi.

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	=	1900 CFS
OVERTOPPING FLOOD FREQUENCY	=	2 YR+
OVERTOPPING FLOOD ELEVATION	=	95.0

GRADE DATA

GRADE POINT ELEV. @ STA. 19+26.42 -L-	=	94.65
BED ELEV. @ STA. 19+26.42 -L-	=	81.75
ROADWAY SLOPE	=	2:1



PROFILE ALONG ℄ CULVERT

DRAWN BY : T.L. AVERETTE DATE : 07-15
CHECKED BY : J.P. ADAMS DATE : 08-15
DESIGN ENGINEER OF RECORD: T.L. AVERETTE DATE : 09-15

29-MAR-2016 09:20
R:\Structures\Plans\CULVERT19+26.42-L- PLANS\B4490_culvert.dgn
jpadams

F.A. PROJECT NO. BRNHS-0024(24)

NOTES

ASSUMED LIVE LOAD HL-93 OR ALTERNATE LOADING.

FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

FOR CONSTRUCTION SEQUENCE, SEE EROSION CONTROL PLANS.

DESIGN FILL = 2.33 FEET (MIN. FILL)
4.84 FEET (MAX. FILL)

FOR OTHER DESIGN DATA AND NOTES, SEE SHEET SN.

3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.

FOR POURING SEQUENCE OF CONCRETE IN CULVERT, SEE "STAGING DETAILS", SHEET 4 OF 18.

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.

DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEETS.

AT THE CONTRACTORS OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALLS AND BOTH FACES OF INTERIOR WALLS ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

THE 48" Ø, 36" Ø, 18" Ø AND 15" Ø R.C. PIPES THROUGH THE SIDEWALLS OF THE CULVERT SHALL BE LOCATED BY THE ENGINEER. THE REINFORCING STEEL SHALL BE FIELD BENT AS NECESSARY TO CLEAR PIPE.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FEET. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.

FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING 96'-7" LONG TRIPLE 12 FT. X 9 FT. REINFORCED BOX CULVERT LOCATED AT THE OUTLET END OF THE PROPOSED CULVERT SHALL BE REMOVED.

AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING 67'-6" LONG TRIPLE 12 FT. X 9 FT. REINFORCED BOX CULVERT LOCATED APPROXIMATELY 160 FEET DOWNSTREAM FROM THE INLET END OF THE PROPOSED CULVERT SHALL BE REMOVED.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.

TOTAL STRUCTURE QUANTITIES

REMOVAL OF EXISTING STRUCTURES	LUMP SUM	
CULVERT EXCAVATION	LUMP SUM	
FOUNDATION COND. MAT'L.	TONS	2175
CLASS A CONCRETE		
STAGE I (PART A)	CU. YDS.	137.5
STAGE I (PART B)	CU. YDS.	385.0
STAGE II	CU. YDS.	521.5
STAGE III	CU. YDS.	132.1
STAGE IV	CU. YDS.	2098.0
STAGE V	CU. YDS.	39.7
SILLS (STAGES VI & VII)	CU. YDS.	7.1
TOTAL	CU. YDS.	3320.9
REINFORCING STEEL		
STAGE I (PART A)	LBS.	22,286
STAGE I (PART B)	LBS.	63,148
STAGE II	LBS.	65,013
STAGE III	LBS.	22,036
STAGE IV	LBS.	241,411
STAGE V	LBS.	5,638
TOTAL	LBS.	419,533
4" SLOPE PROTECTION	SQ. YDS.	150

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

NORTH CAROLINA PROFESSIONAL SEAL 29441 ENGINEER KRISTY W. ALFORD

DocuSigned by: Kristy W. Alford F2458389308F40E...
3/29/2016

NORTH CAROLINA PROFESSIONAL SEAL 022506 ENGINEER JESSE McARTHUR BAILEY

DocuSigned by: J. M. Bailey 9026554D9528471...
3/29/2016

PROJECT NO. B-4490
CUMBERLAND COUNTY
STATION: 19+26.42 -L-

SHEET 1 OF 18 REPLACES BRIDGE NO. 258

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TRIPLE 14 FT. X 9 FT. CONCRETE BOX CULVERT

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. C-1
TOTAL SHEETS 18

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED