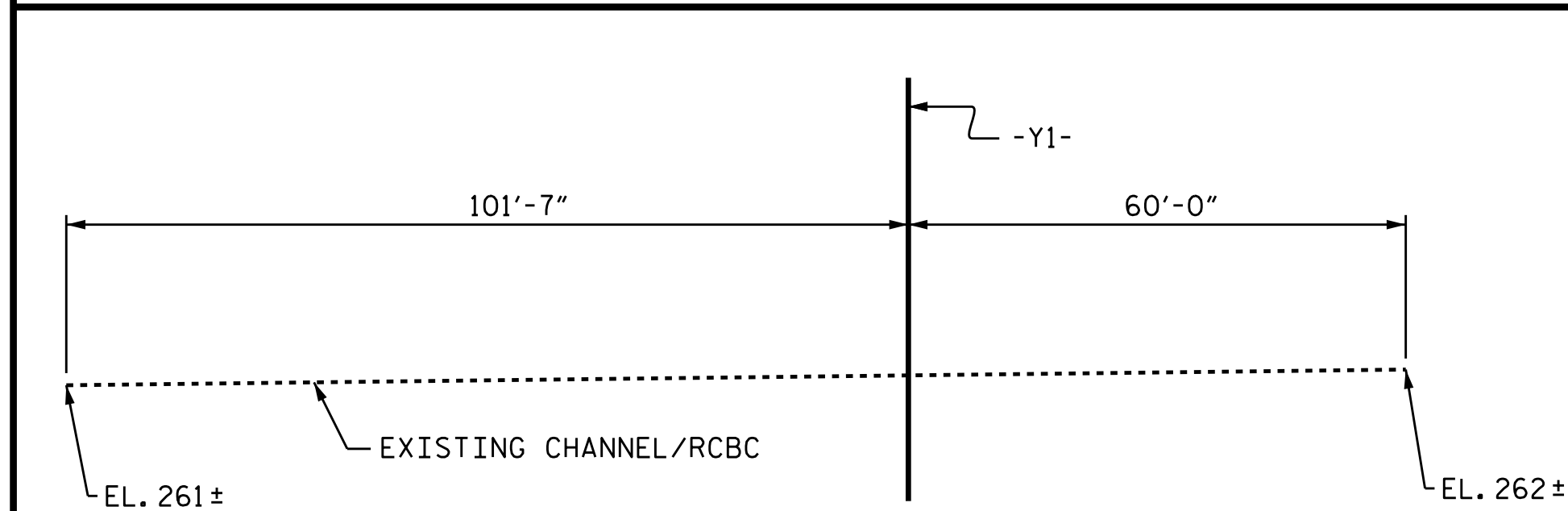


LOCATION SKETCH

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

NOTES

- ASSUMED LIVE LOAD -----HL-93 OR ALTERNATE LOADING.
- DESIGN FILL----- 4.49' (MAX. FILL)
2.91' (MIN. FILL)
- FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
- 3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- CONCRETE IN CULVERTS TO BE POURED IN THE FOLLOWING ORDER:
 1. STAGE I OUTLET END APRON AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
 2. THE REMAINING PORTIONS OF THE STAGE I WALLS AND OUTLET WALLS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.
 3. STAGE II FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
 4. THE REMAINING PORTIONS OF THE STAGE II WALLS FULL HEIGHT FOLLOWED BY ROOF SLAB.
- 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.
- TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FT. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- STEEL IN THE BOTTOM SLAB MAY BE SPLICED AT THE PERMITTED CONSTRUCTION JOINT AT THE CONTRACTOR'S OPTION. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.
- AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL 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.
- DOWELS SHALL BE USED TO CONNECT THE PROPOSED CULVERT TO THE EXISTING CULVERT AND EXISTING LINED CHANNEL AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SN.
- THE PIPES THROUGH THE WALLS OF THE CULVERT SHALL BE LOCATED BY THE ENGINEER. THE REINFORCING STEEL SHALL BE FIELD BENT AS NECESSARY TO CLEAR PIPE.
- 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.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
- NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- 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.
- TRAFFIC SHALL BE MAINTAINED ON SITE. FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.
- AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING REINFORCED CONCRETE BOX CULVERT SHALL BE REMOVED AS SHOWN IN THE LOCATION SKETCH.
- CONCRETE REPAIR MAY BE REQUIRED DUE TO REMOVAL OF EXISTING UTILITIES. METHOD OF CONCRETE REPAIR SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR CONCRETE REPAIR SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.



PROFILE ALONG CULVERT

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

GRADE DATA

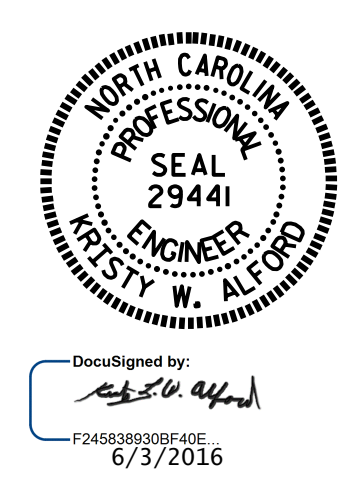
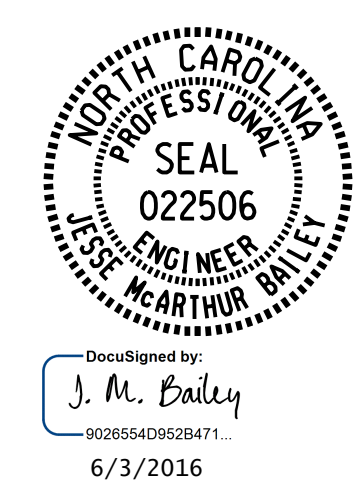
GRADE POINT ELEV. @ STA. 15+13.11 -Y1-	=	272.76
BED ELEV. @ STA. 15+13.11 -Y1-	=	261.56
ROADWAY SLOPE	=	2:1

HYDRAULIC DATA

DESIGN DISCHARGE	=	870 CFS
DESIGN FLOOD FREQUENCY	=	50 YEARS
DESIGN HIGH WATER ELEVATION	=	267.7
DRAINAGE AREA	=	0.90 SQ. MI.
BASE DISCHARGE (Q100)	=	900 CFS
BASE ELEVATION (Q100)	=	267.86

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE	
STAGE I	179.1 C.Y.
STAGE II	152.1 C.Y.
TOTAL	331.2 C.Y.
REINFORCING STEEL	
STAGE I	26998 LBS.
STAGE II	22781 LBS.
TOTAL	49779 LBS.
FOUNDATION CONDITIONING MATERIAL	
STAGE I	153 TONS
STAGE II	105 TONS
TOTAL	258 TONS
CULVERT EXCAVATION	LUMP SUM
REMOVAL OF EXISTING STRUCTURE	LUMP SUM



PROJECT NO. B-5121/B-5317
WAKE COUNTY
STATION: 15+13.11 -Y1-

SHEET 1 OF 10

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DOUBLE 11 FT. X 7 FT. CONCRETE BOX CULVERT

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			10

DRAWN BY: William F. Parker DATE: 08/15
CHECKED BY: I.L. AVERETTE DATE: 11/2015
DESIGN ENGINEER OF RECORD: I.L. AVERETTE DATE: 12/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED