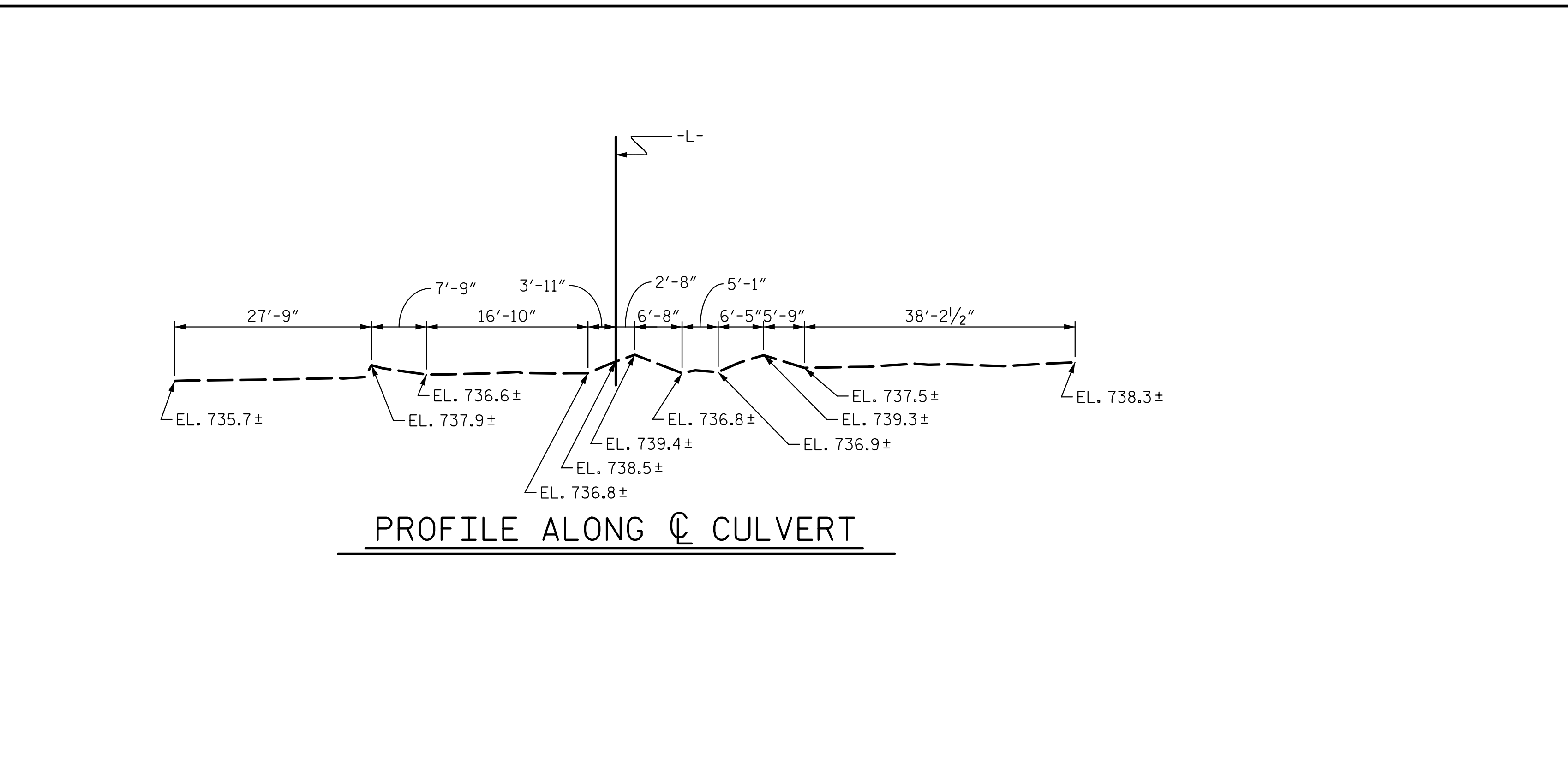


**LOCATION SKETCH**

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.



**PROFILE ALONG CULVERT**

**TOTAL STRUCTURE QUANTITIES**

<b>CLASS A CONCRETE</b>	
BARREL @ 1.093 CY/FT	84.7 C.Y.
WINGS, ETC.	23.3 C.Y.
SILLS	1.3 C.Y.
<b>TOTAL</b>	<b>109.3 C.Y.</b>
<b>REINFORCING STEEL</b>	
BARREL, SILLS	9,287 LBS.
WINGS, ETC.	1,658 LBS.
<b>TOTAL</b>	<b>10,945 LBS.</b>
FOUNDATION CONDITIONING MATERIAL	53 TONS
CULVERT EXCAVATION	LUMP SUM
PLACEMENT OF NATURAL STREAM BED MATERIAL	LUMP SUM

**HYDRAULIC DATA**

DESIGN DISCHARGE	= 500 CFS
FREQUENCY OF DESIGN FLOOD	= 50 YR.
DESIGN HIGH WATER ELEVATION	= 734.7
DRAINAGE AREA	= 0.3 SQ MI
BASE DISCHARGE (Q 100)	= 600 CFS
BASE HIGH WATER ELEVATION	= 744.43

**OVERTOPPING FLOOD DATA**

OVERTOPPING DISCHARGE	= 1,400 CFS
FREQUENCY OF OVERTOPPING FLOOD	= 500 YR +
OVERTOPPING FLOOD ELEVATION	= 752.6

**NOTES**

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

DESIGN FILL = 10'

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.

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

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

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.

CONCRETE IN CULVERTS TO BE POURED IN THE FOLLOWING ORDER:

1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
2. THE REMAINING PORTIONS OF THE WALLS, SILLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.

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 SHEET.

AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR 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.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

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

NATURAL STREAM BED MATERIAL SHALL BE USED TO BACKFILL THE CULVERT BETWEEN SILLS. SEE SPECIAL PROVISIONS FOR "PLACEMENT OF NATURAL STREAM BED MATERIAL."

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.

PROJECT NO. W-5516

ROWAN COUNTY

STATION: 108+21.00 -L-

SHEET 1 OF 8

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**SINGLE BARREL  
8 FT. X 7 FT.  
CONCRETE BOX CULVERT  
81° SKEW**

**REVISIONS**

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

SHEET NO.

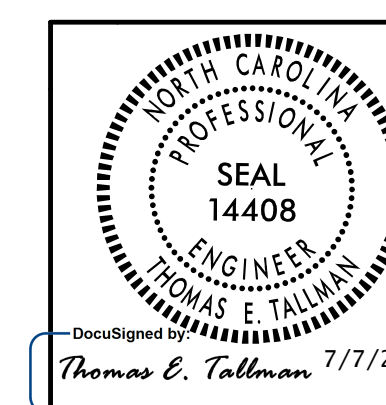
C-6

TOTAL SHEETS

13



5121 Kingdom Way, Suite 100 Raleigh, NC 27607  
NC License No. P-0205



DocuSigned by:  
Thomas E. Tallman 7/7/2015