

NOTES

ASSUMED LIVE LOAD ----- HS20-44 OR ALTERNATE LOADING.
 DESIGN FILL----- 9.50' RIGHT EXT. 7.40' LEFT EXT.
 FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET SN.
 3"Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
 CONCRETE IN CULVERTS TO BE POURED IN THE FOLLOWING ORDER:

1. STAGE 1 FLOOR SLAB INCLUDING FOOTING FOR OUTLET WING WITH 4" OF ALL VERTICAL WALLS.
2. THE REMAINING PORTIONS OF STAGE 1 WALLS AND WING TO FULL HEIGHT.
3. STAGE 2 FLOOR SLAB INCLUDING FOOTING FOR OUTLET WING WITH 4" OF VERTICAL WALLS.
4. THE REMAINING PORTIONS OF STAGE 2 WALL AND WINGS TO FULL HEIGHT FOLLOWED BY ROOF SLAB, HEADWALLS AND INLET SILL.

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.

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.

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.

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY USE THE EXISTING WINGS AS TEMPORARY SHORING FOR THE CONSTRUCTION OF THE CULVERT EXTENSIONS. IN THIS CASE, THE BOTTOM SLAB OF THE EXTENSION SHALL BE POURED AT LEAST 72 HOURS PRIOR TO CUTTING THE WINGS. THE WINGS MAY BE CUT EARLIER PROVIDED THE SLAB CONCRETE STRENGTH HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI.

DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SN.

FOR CONSTRUCTION SEQUENCE, SEE EROSION CONTROL PLANS.

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.

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

PROJECT NO. R-2911D

ROWAN COUNTY

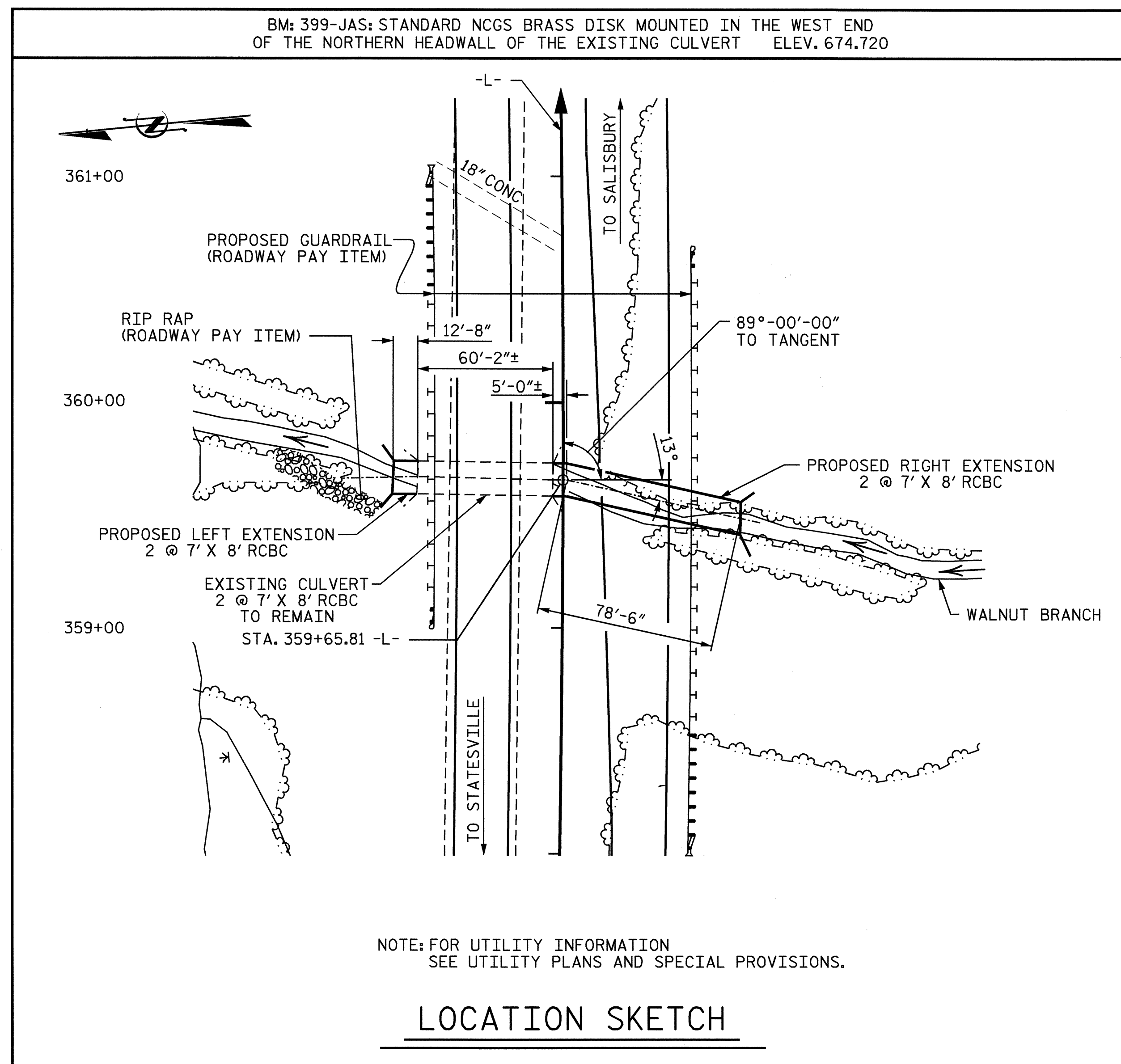
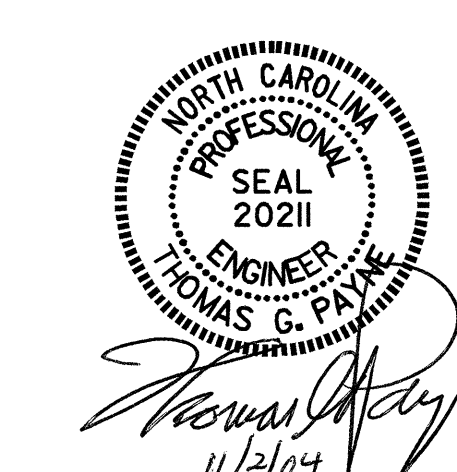
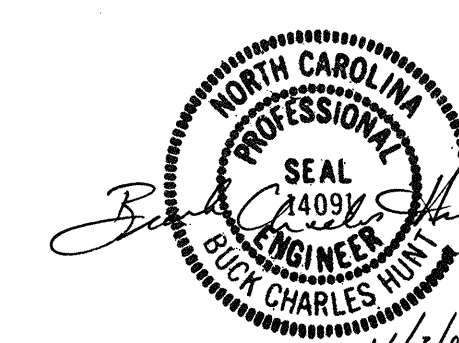
STATION: 359+65.81-L-

SHEET 1 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

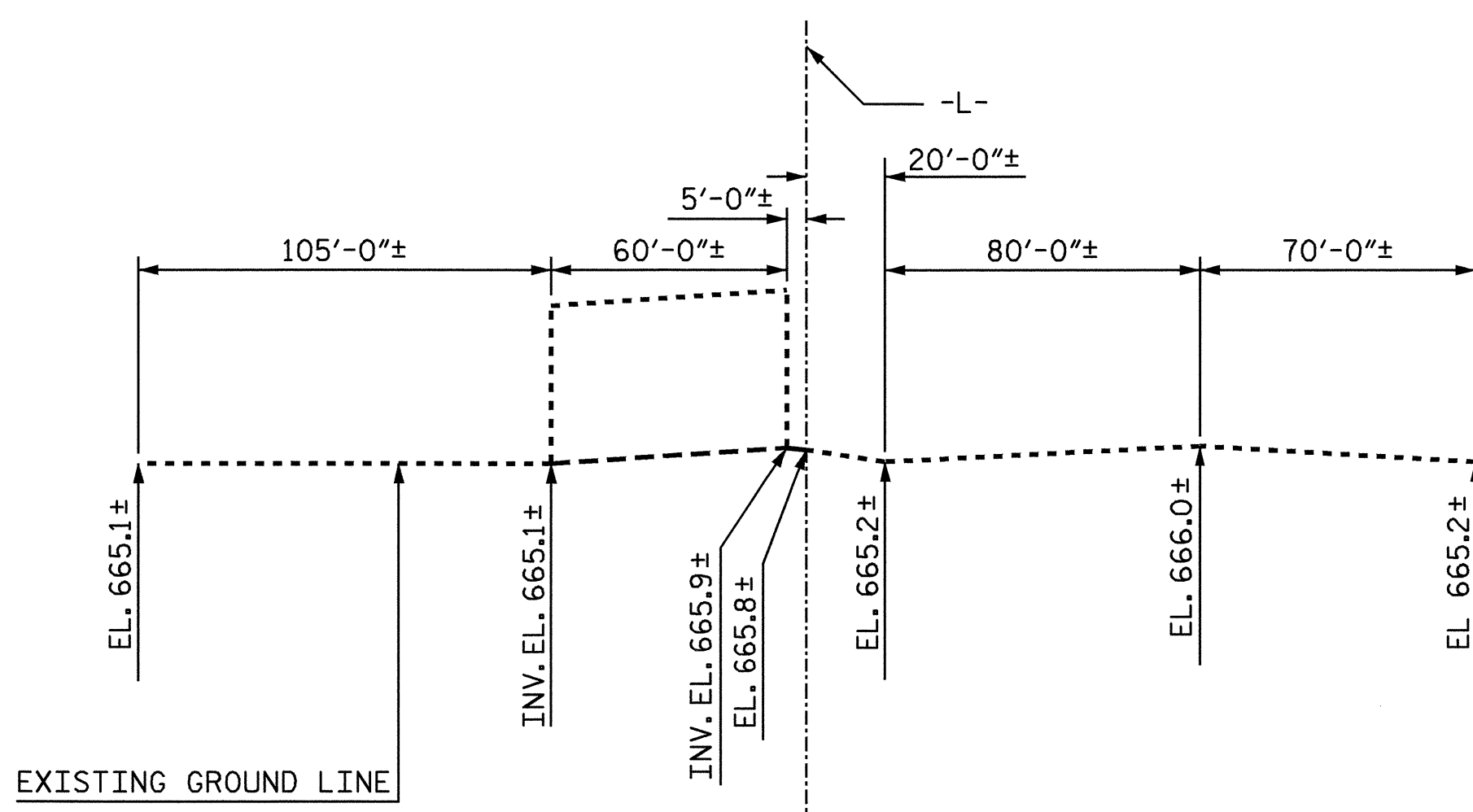
DOUBLE 7 FT. X 8 FT.
 LEFT & RIGHT
 EXTENSION RCBC
 89° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			C-6
2			4			13



NOTE: FOR UTILITY INFORMATION SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH



PROFILE ALONG CULVERT

DRAWN BY: A. CHAN DATE: 2/16/04
 CHECKED BY: J.P. ADAMS DATE: 6/21/04

HYDRAULICS DATA

DESIGN DISCHARGE = 900 CFS
 FREQUENCY OF DESIGN FLOOD = 50 YRS.
 DESIGN HIGH WATER ELEVATION = 676.100
 DRAINAGE AREA = 1.90 SQ MI
 BASIC DISCHARGE (Q100) = 1100 CFS
 BASIC HIGH WATER ELEVATION = 677.900

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 1475 CFS
 FREQUENCY OF OVERTOPPING FLOOD = 200 YRS+
 OVERTOPPING FLOOD ELEVATION = 681.600

ROADWAY DATA

GRADE POINT ELEV. @ STATION 359+66.62 -LLT- = 682.150

GRADE POINT ELEV. @ STATION 359+57.49 -LRT- = 682.230

BED ELEV. @ STATION 359+65.81 -L- = 665.820

ROADWAY SLOPES 2:1

STRUCTURE QUANTITIES (LEFT EXTENSION)		STRUCTURE QUANTITIES (RIGHT EXTENSION)	
CLASS A CONCRETE		CLASS A CONCRETE	
STAGE 1		STAGE 1	
BARREL @ 0.638 CY/FT	8.1 C.Y.	BARREL @ 0.652 CY/FT	54.5 C.Y.
WING ETC.	6.9 C.Y.	WING ETC.	6.3 C.Y.
TOTAL	15.0 C.Y.	TOTAL	60.8 C.Y.
STAGE 2		STAGE 2	
BARREL @ 0.803 CY/FT	10.2 C.Y.	BARREL @ 0.813 CY/FT	67.9 C.Y.
WING ETC.	7.1 C.Y.	WING ETC.	8.4 C.Y.
TOTAL	17.3 C.Y.	SILL	0.5 C.Y.
		TOTAL	76.3 C.Y.
REINFORCING STEEL		REINFORCING STEEL	
BARREL	3251 LBS.	BARREL	18751 LBS.
WINGS ETC.	726 LBS.	WINGS ETC.	773 LBS.
TOTAL	3977 LBS.	TOTAL	19524 LBS.
FOUNDATION COND. MAT'L 14 TONS		FOUNDATION COND. MAT'L 94 TONS	
TOTAL STRUCTURE QUANTITIES (LEFT & RIGHT EXTENSIONS)			
CLASS A CONCRETE 169.4 C.Y.		REINFORCING STEEL 23501 LBS.	
FOUNDATION COND. MAT'L 108 TONS		CULVERT EXCAVATION LUMP SUM	