#### NOTES

ASSUMED LIVE LOAD -----MS18 OR ALTERNATE LOADING.

DESIGN FILL----- 6.69m

FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.

76mm Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.

CONCRETE IN CULVERTS TO BE POURED IN THE FOLLOWING ORDER:

- 1. WING FOOTINGS AND FLOOR SLAB INCLUDING 100mm OF ALL VERTICAL WALLS.
- 2. THE REMAINING PORTIONS OF THE WALLS 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.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 21.0m. 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 ABOVE LOWER WALL COSTRUCTION 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.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

ALL ELEVATIONS ARE IN METERS.

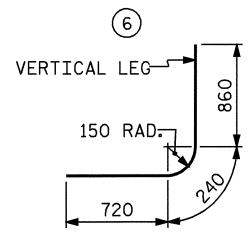
THE 800mm DIA. PIPE THROUGH THE SIDEWALL OF THE CULVERT SHALL BE LOCATED BY THE ENGINEER. THE REINFORCING STEEL SHALL BE FIELD BENT OR CUT AS NECESSARY TO CLEAR PIPE.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 360,000kg OF REINFORCING STEEL, ONE 760mm SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 360,000kg OF REINFORCING STEEL, TWO 760mm SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.

FOR FALSEWORK AND FORMWORK. SEE SPECIAL PROVISIONS.

#### BAR SCHEDULE NO. | SIZE | TYPE | LENGTH | WEIGHT 748 #19 3043 748 | #19 | 1820 3043 A100 405 | #25 | STR | 3680 5921 #25 | STR 3080 49 #25 | STR 2460 39 #25 STR 1880 30 #25 STR A104 1300 21 A105 #25 | STR 720 4 11 431 | #25 | STR 6301 A200 3680 #25 | STR A201 3100 49 #25 | STR A202 2540 40 #25 STR A203 1980 31 #25 STR A204 1420 23 A205 #25 | STR 880 14 4 570 | #13 | STR | 2920 1654 748 #16 STR 2180 2531 531 #13 STR 8400 4434 46 | #13 | STR | 2560 117 F1 | G1 | 4 | #13 | STR | 4300 17 S2 | 12 | #25 | STR | 4300 205 16 | #16 | STR | 1580 39 T2 REINFORCING STEEL = 27612 kg



#### BAR TYPE

DIMENSIONS ARE OUT TO OUT

DESIGN DISCHARGE FREQUENCY OF DESIGN FLOOD

DRAINAGE AREA

BASIC DISCHARGE (Q100)

BASIC HIGH WATER ELEVATION = 225.14

## HYDRAULIC DATA

 $= 15.0 \text{ m}^3/\text{s}$ 

= 50 YEARS DESIGN HIGH WATER ELEVATION = 224.93

 $= 1.19 \text{ km}^2$  $= 17.3 \text{m}^3/\text{s}$ 

### ROADWAY DATA

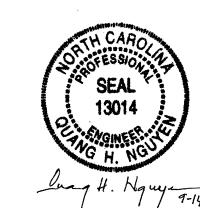
GRADE POINT ELEV. @ STATION 46+85.000 -L- = 231.321 BED ELEV. @ STATION 46+85.000 -L- = 222.360 ROADWAY SLOPES = 2:1



# OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = > 25.5m $^3$ /s FREQUENCY OF OVERTOPPING FLOOD = > 500+ YEARS OVERTOPPING FLOOD ELEVATION = 231.11m

TOTAL STRUCTURE	QUANTITIES
CLASS A CONCRETE  BARREL @3.670 m <sup>3</sup> /m_  WINGS ETC  TOTAL	260.7 m <sup>3</sup> 19.5 m <sup>3</sup> 280.2 m <sup>3</sup>
REINFORCING STEEL BARREL WINGS ETC TOTAL	27612 kg 746 kg 28358 kg
CULVERT EXCAVATION	LUMP SUM
FOUNDATION COND. MAT'L	- 177 METRIC TONS



SEAL 20125

PROJECT NO. R-2568B DAVIDSON COUNTY STATION: 46+85.000 -L-

SHEET 1 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SINGLE 3.4m X 2.4m CONCRETE BOX CULVERT 120° SKEW

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

STR. #3

STD. No. CBII20SM

ASSEMBLED BY: CF	R LEWIS G CHEEK	DATE: 06/04 DATE: 08/04
DRAWN BY : EEM CHECKED BY : ARB	6/97 7/97	

7.500 m

BENCH MARK #J3: A RR SPIKE IN 24"SWEET GUM 75.4m RT. OF STA. 43+98.100 -L-, ELEV. = 234.913

**€** SURVEY -L

UNNAMED TRIB.

FOR UTILITY INFORMATION SEE UTILITY PLANS AND SPECIAL PROVISIONS

TO RICH FORK CREEK

5.500 m

120°-00'-00"

4.000 m

36.500 m

STA. 46+85.000

14.000m

125mm CONC.

ISLAND

- ← PROPOSED 3.4m X 2.4m

LOCATION SKETCH

© SURVEY -L-

37.500 m

2.000 m

PROFILE ALONG & CULVERT

PROPOSED

GUARDRAIL

PAY ITEM &

2.5m BASE STREAM

RELOCATION

(ROADWAY PAY

ITEM & DETAIL)

(ROADWAY

DETAIL)

(TYP.)