

BENCH MARK : BY11-1038, NCDOT TRAVERSE STATION CAP STA. 25+78.00 -Y11- REV., ELEV. 73.418 DATUM : NGVD 1929

NOTES

- ASSUMED LIVE LOAD -----MS18 OR ALTERNATE LOADING.
- DESIGN FILL----- 2.49m
- 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.
- AT THE CONTRACTOR'S OPTION HE MAY SUBMIT, TO THE ENGINEER FOR APPROVAL, DESIGN AND DETAIL DRAWINGS FOR A PRECAST REINFORCED CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE CULVERT SHOWN ON THE PLANS. THE DESIGN SHALL PROVIDE THE SAME SIZE AND NUMBER OF BARRELS AS USED ON THE CAST-IN-PLACE DESIGN. FOR OPTIONAL PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- ALL ELEVATIONS ARE IN METERS.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
- A 900mm STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.
- THE EXISTING CULVERT LOCATED 35m +/- DOWNSTREAM FROM THE PROPOSED CULVERT SHALL BE REMOVED.
- REMOVAL OF THE EXISTING CULVERT SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE CULVERT AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

GRADE DATA

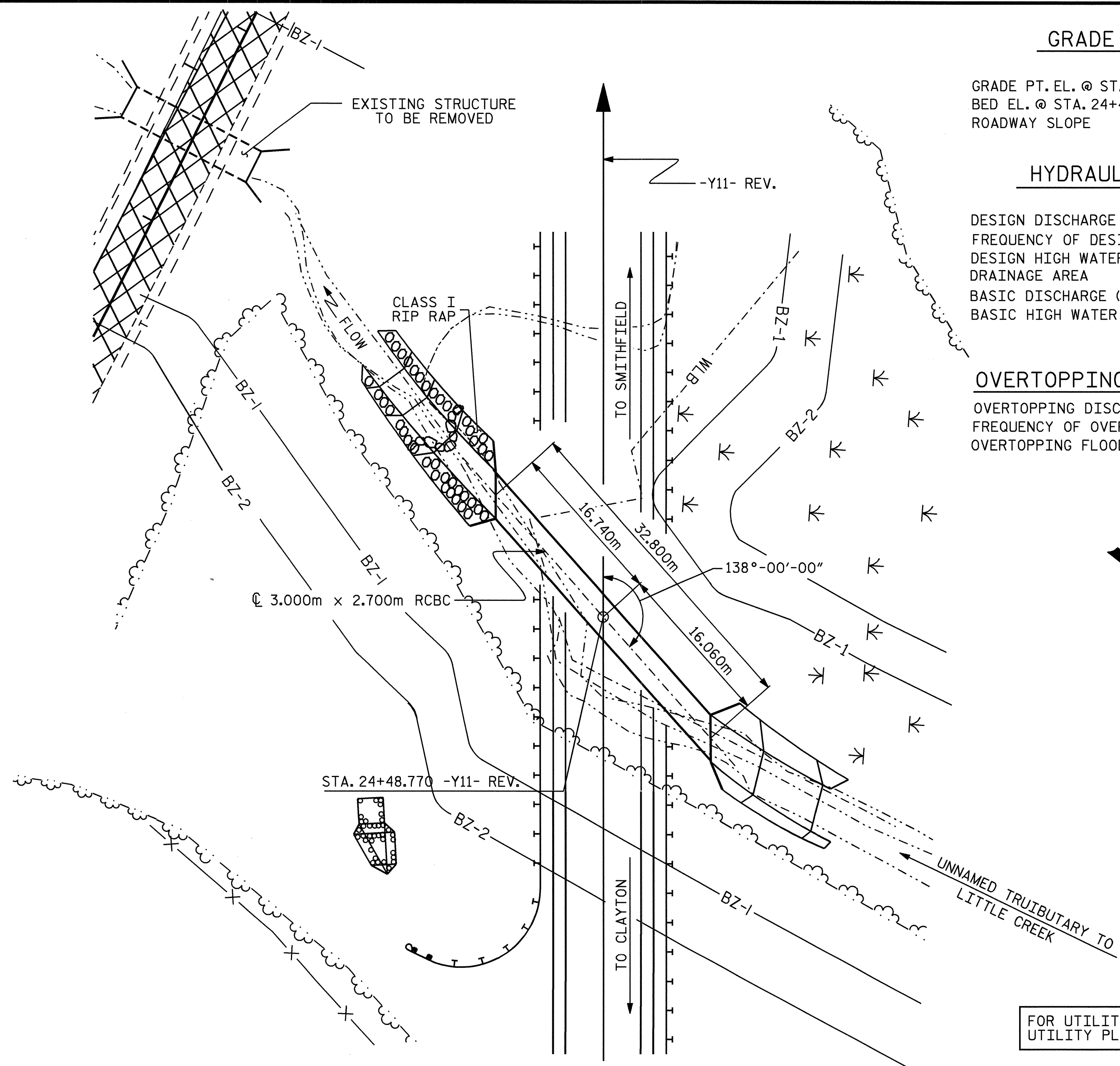
GRADE PT. EL. @ STA. 24+48.77 -Y11- REV. = 72.390
 BED EL. @ STA. 24+48.77 -Y11- REV. = 67.200
 ROADWAY SLOPE = 2:1

HYDRAULIC DATA

DESIGN DISCHARGE = 23.8 m³/s
 FREQUENCY OF DESIGN FLOOD = 25 YRS.
 DESIGN HIGH WATER ELEVATION = 70.62
 DRAINAGE AREA = 2.59 Sq. Km
 BASIC DISCHARGE (Q100) = 31.0 m³/s
 BASIC HIGH WATER ELEVATION = 71.42

OVERTOPPING FLOOD DATA

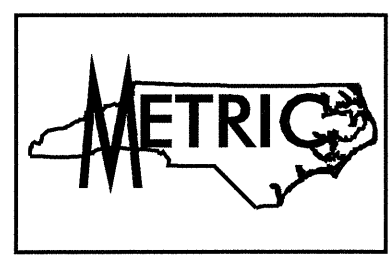
OVERTOPPING DISCHARGE = 37.5 m³/s
 FREQUENCY OF OVERTOPPING FLOOD => 100 YR.
 OVERTOPPING FLOOD ELEVATION = 72.28



LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

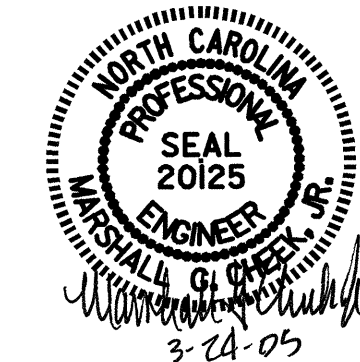
TOTAL STRUCTURE QUANTITIES	
CLASS A CONCRETE	
BARREL @ 2.66 m ³ /m	87.2 m ³
WINGS ETC.	27.8 m ³
TOTAL	115.0 m ³
REINFORCING STEEL	
BARREL	8806 kg
WINGS ETC.	1105 kg
TOTAL	9911 kg
CULVERT EXCAVATION	----- LUMP SUM
FOUNDATION COND. MAT'L	-- 76 METRIC TONS
REMOVAL OF EXISTING STRUCTURE	-- LUMP SUM



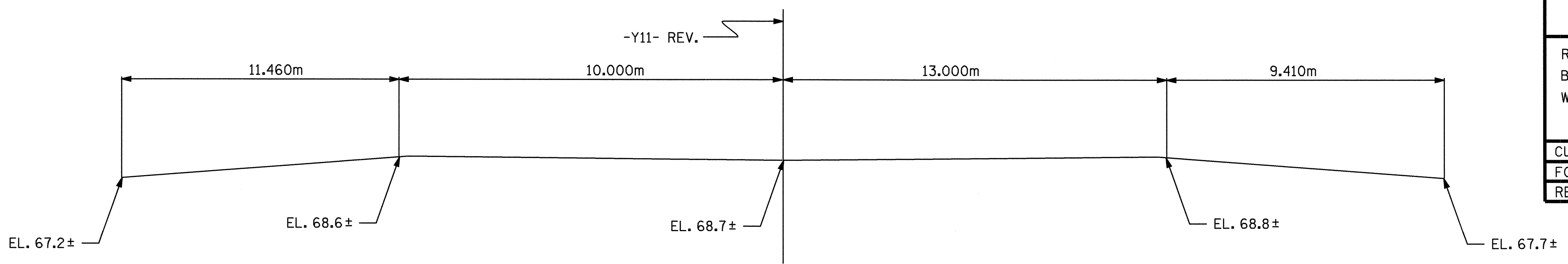
PROJECT NO. R-2552B
 JOHNSTON COUNTY
 STATION: 24+48.770 -Y11- REV.

SHEET 1 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SINGLE 3.000m X 2.700m
 CONCRETE BOX CULVERT
 138°-00'-00" SKEW



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-10
1			3			TOTAL SHEETS
2			4			42



PROFILE ALONG CULVERT

ASSEMBLED BY : J.B. WILSON DATE : 12/06/04
 CHECKED BY : D.A. GLADDEN DATE : 2/7/05
 DRAWN BY : EEM 6/97
 CHECKED BY : ARB 7/97