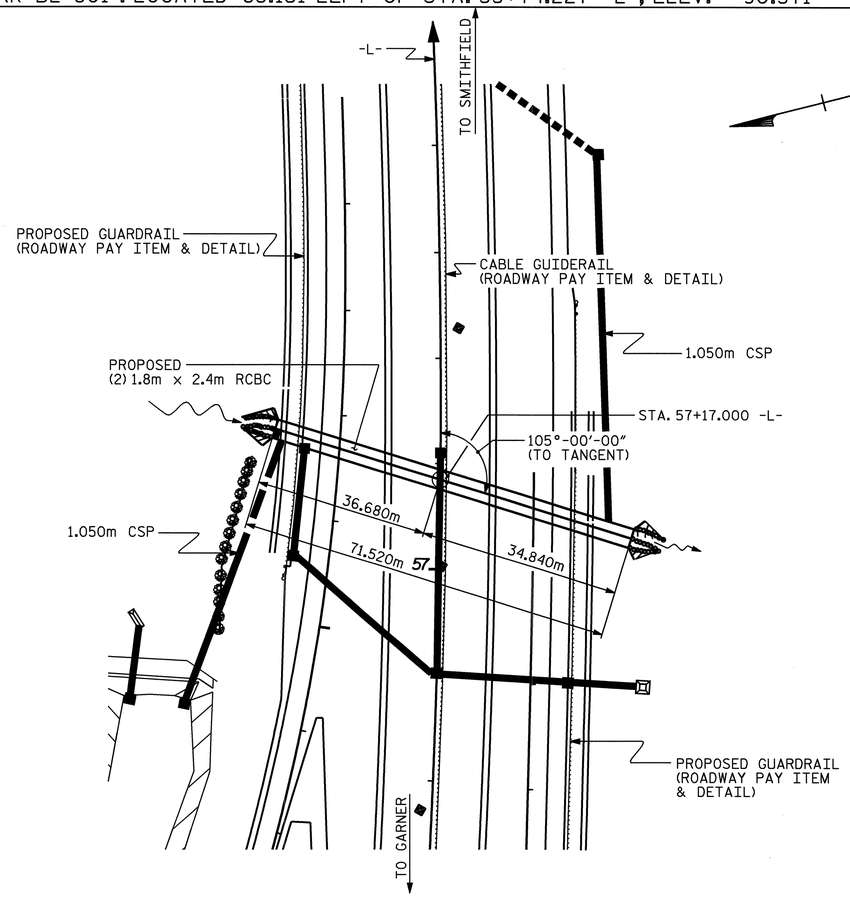
BENCH MARK BL-801 : LOCATED 83.151 LEFT OF STA. 55+74.227 -L-, ELEV. = 90.571



LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

GRADE DATA

GRADE POINT ELEV. @ STA. 57+17.000 -L-	= 89.284m
BED ELEV. @ STA. 57+17.000 -L-	= 82.66m
ROADWAY SLOPES	= 2:1

HYDRAULIC DATA

DESIGN DISCHARGE	= 14.2 cms
FREQUENCY OF DESIGN FLOOD	= 50 YR.
DESIGN HIGH WATER ELEVATION	= 85.28
DRAINAGE AREA	= 1.05 Sq.km
BASIC DISCHARGE (Q100)	= 16.3 cms
BASIC HIGH WATER ELEVATION	85.45

OVERTOPPING DATA

OVERTOPPING DISCHARGE	= 54.0 cms
FREQUENCY OF OVERTOPPING FLOOD	= 500 +YRS.
OVERTOPPING FLOOD ELEVATION	= 88.25

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE

BARREL @	3.52	m^3/m	251.8	m^3
WINGS ETC.			18.2	m^3
CONCRETE SILLS			0.7	m^3
TOTAL			270.7	m^3

REINFORCING STEEL

BARREL	21078	kg
WINGS, ETC.	654	kg
TOTAL	21732	kg

CULVERT EXCAVATION ---------- LUMP SUM

FOUNDATION COND. MAT'L ---- 204 METRIC TONS

NOTES

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

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

ALL ELEVATIONS ARE IN METERS.

DESIGN FILL ----------4.90m

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 1.050m DIA. PIPE THROUGH THE SIDEWALL OF THE CULVERT SHALL BE LOCATED BY THE ENGINEER. THE REINFORCING STEEL SHALL BE FIELD BENT AS NECESSARY TO CLEAR PIPE.

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.

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.

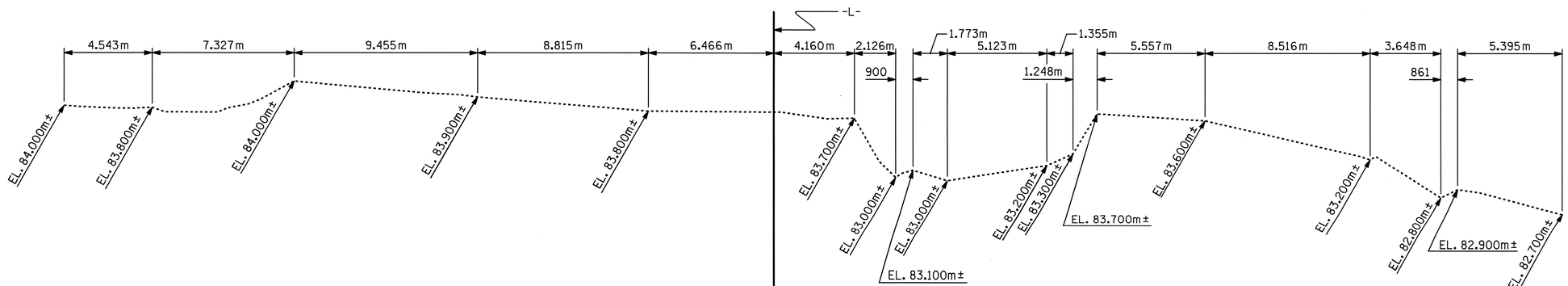
FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

NO PRECAST BOX CULVERT OPTION WILL BE ALLOWED.



PROFILE ALONG ℄ CULVERT

NORTH CAROLINA PROFESSIONAL SEAL 13014 ENGINEER QUANG H. NGUYEN
Quang H. Nguyen 3-29-05

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER MARSHALL GREGORY CHEEK, JR.
3-29-05

METRIC

PROJECT NO. R-2552AB

JOHNSTON COUNTY

STATION: 57+17.000 -L-

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DOUBLE 1.800m X 2.400m CONCRETE BOX CULVERT

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-5
1			3			TOTAL SHEETS
2			4			8

DRAWN BY : A.M.KEETER DATE : 2/3/05
CHECKED BY : M.G.CHEEK DATE : 2/21/05

23-MAR-2005 11:31
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