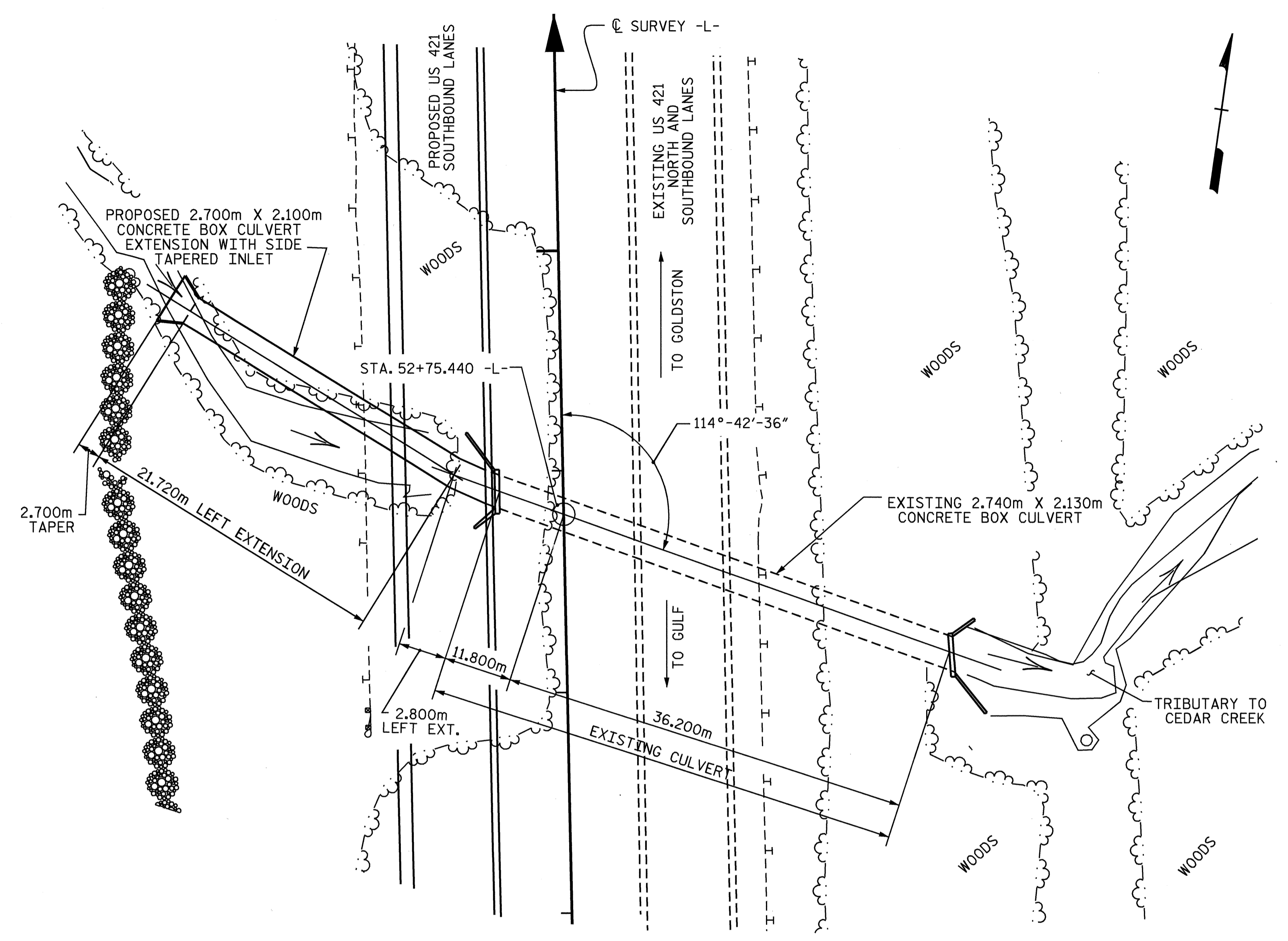
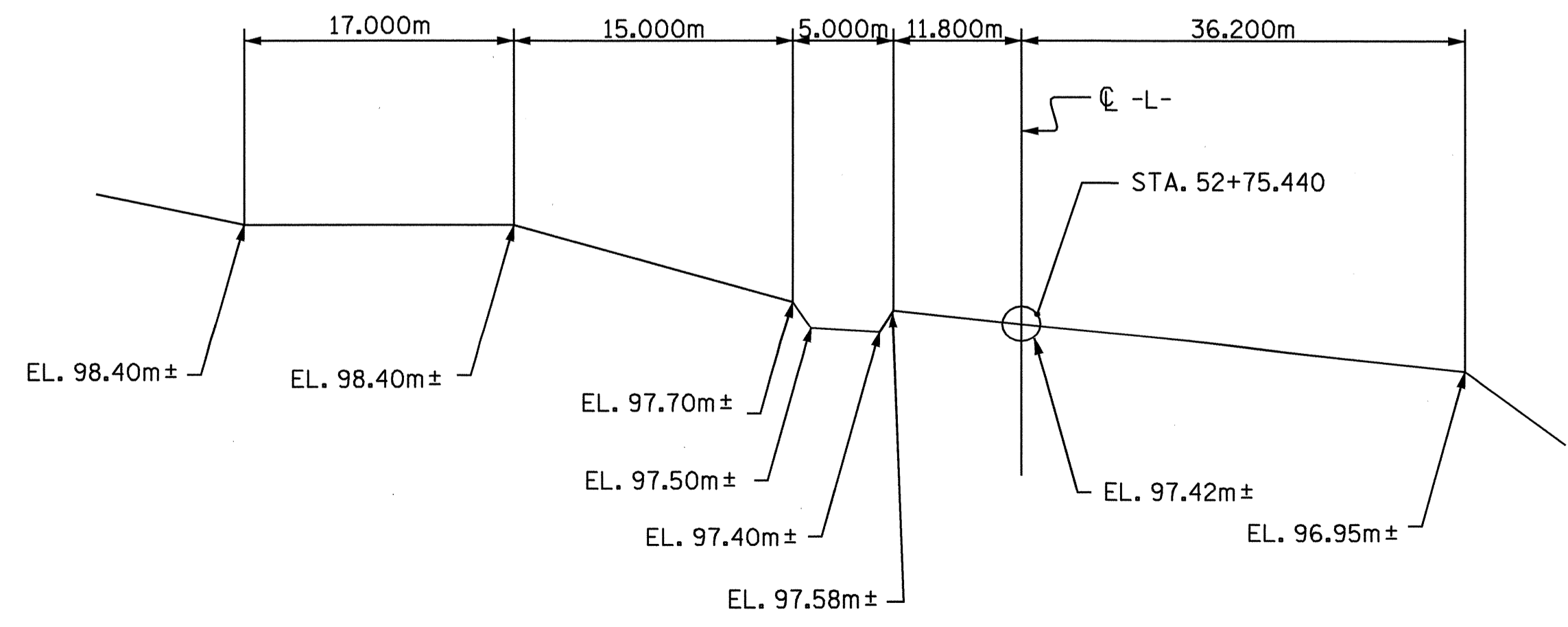


BM. #5 R/R SPIKE IN BASE OF POWER POLE 38.55m
RIGHT OF STA. 47+59.543 -L- EL. 112.873 NAD 83



LOCATION SKETCH

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



PROFILE ALONG CULVERT

ASSEMBLED BY : J. LAMBERT DATE : 4/03
CHECKED BY : S. PEARCE DATE : 11/03
DRAWN BY : EEM 6/97
CHECKED BY : ARB 7/97

GRADE DATA

GRADE POINT ELEVATION @	=	
STA. 52+75.440 -L-	=	107.464
BED ELEVATION @	=	
STA. 52+75.440 -L-	=	97.42
ROADWAY SLOPES	=	2:1

HYDRAULIC DATA

DESIGN DISCHARGE	=	26.9 c.m.s.
FREQUENCY OF DESIGN FLOOD	=	50 YRS
DESIGN HIGH WATER ELEVATION	=	101.04
DRAINAGE AREA	=	302.4 Ha
BASIC DISCHARGE (Q100)	=	30.6 c.m.s.
BASIC HIGH WATER ELEVATION	=	101.62

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	=	50.0 c.m.s.
FREQUENCY OF OVERTOPPING FLOOD	=	500+ YRS
OVERTOPPING FLOOD ELEVATION	=	106.62

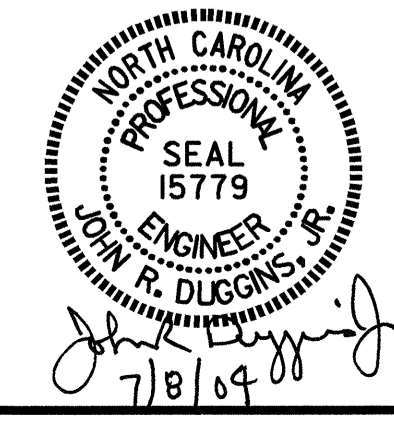
NOTES

- ASSUMED LIVE LOAD -----MS18 OR ALTERNATE LOADING.
- DESIGN FILL----- 8.02m
- 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 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.
- 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 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 10.3 MPa.
- DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SNSM.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- ALL ELEVATIONS ARE IN METERS.
- A 900mm STRIP OF FILTER FABRIC 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.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEMS, SEE EROSION CONTROL PLANS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.



TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE	
BARREL @ 2.85 m ³ /m	69.9 m ³
TAPERED INLET	8.9 m ³
WINGS ETC.	7.9 m ³
TOTAL	86.7 m ³
REINFORCING STEEL	
BARREL AND TAPER	7962 kg
WINGS ETC.	257 kg
TOTAL	8219 kg
CULVERT EXCAVATION	LUMP SUM
FOUNDATION COND. MAT'L	59 METRIC TONS



PROJECT NO. R-2610A
CHATHAM COUNTY
STATION: 52+75.440 -L-

SHEET 1 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SINGLE 2.740m X 2.130m
CONCRETE BOX CULVERT
EXTENSION**

114°-42'-36" SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-7
1			3			TOTAL SHEETS
2			4			18