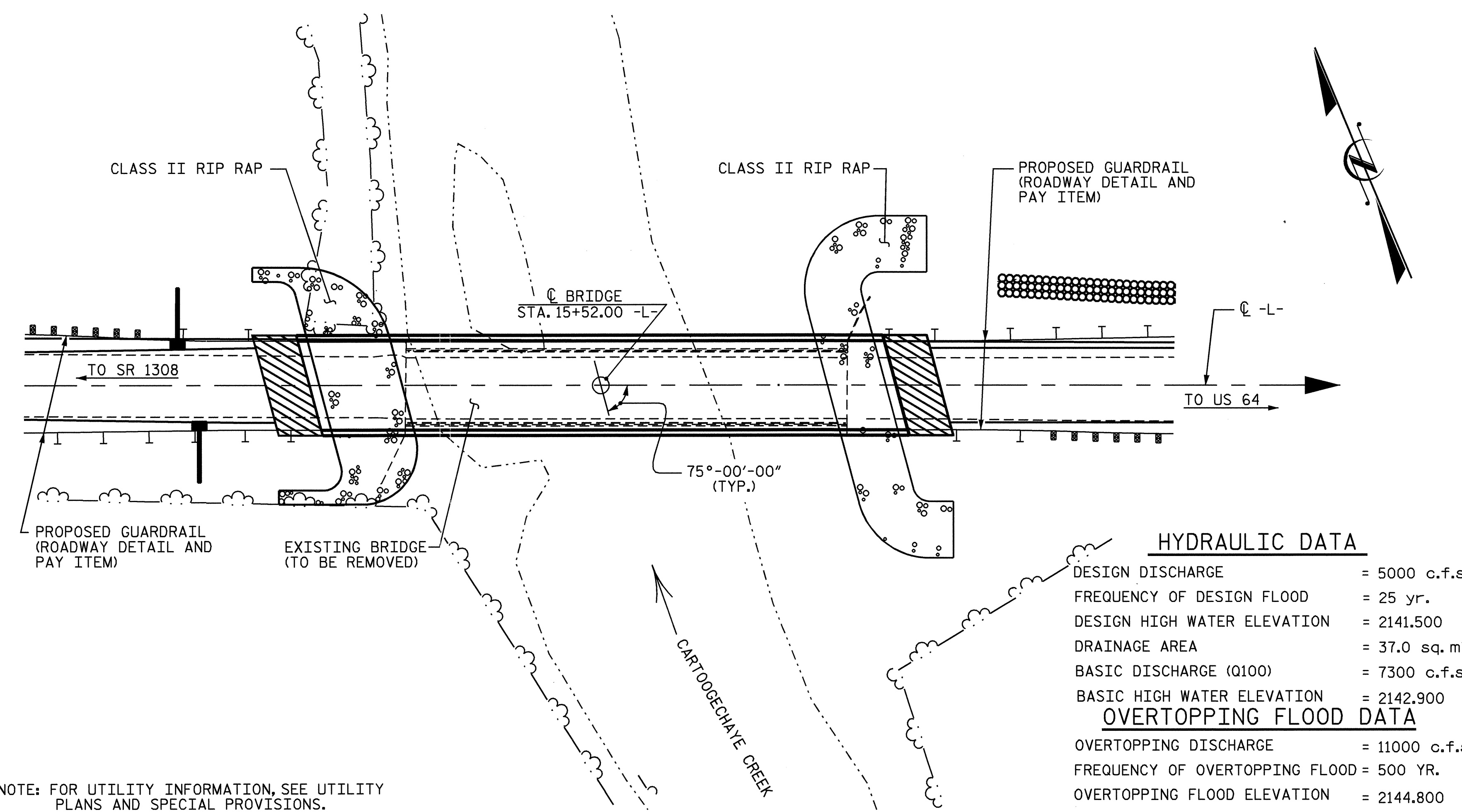


TBM #2: 8" SPIKE SET IN BASE OF 15" WALNUT LOCATED 16.6' LEFT OF BASELINE STA. 15+56.11.0' NORTH NW OF NORTHWEST WINGWALL/BRIDGE BENT. ELEV. 2140.20

NOTES



HYDRAULIC DATA

DESIGN DISCHARGE = 5000 c.f.s.
 FREQUENCY OF DESIGN FLOOD = 25 yr.
 DESIGN HIGH WATER ELEVATION = 2141.500
 DRAINAGE AREA = 37.0 sq. mi
 BASIC DISCHARGE (Q100) = 7300 c.f.s.
 BASIC HIGH WATER ELEVATION = 2142.900

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 11000 c.f.s.
 FREQUENCY OF OVERTOPPING FLOOD = 500 YR.
 OVERTOPPING FLOOD ELEVATION = 2144.800

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

LOCATION SKETCH

ASSUMED LIVE LOAD = HS 20 OR ALTERNATE LOADING.
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
 FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.
 THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.
 THE EXISTING STRUCTURE CONSISTING OF TIMBER PILES, STEEL GIRDERS WOODEN ABUTMENTS WITH 3 SPANS 120.5 FT. LONG, 21.7 FT. CLEAR WIDTH, SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE FURTHER DETERIORATE, THIS LOAD LIMITATION MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT. SEE SPECIAL PROVISIONS FOR REMOVAL OF EXISTING STRUCTURE.
 REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.
 THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 20.0 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. FOR UNCLASSIFIED STRUCTURE EXCAVATION, SEE SPECIAL PROVISIONS.
 THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.
 THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER, 1995.
 THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY B.
 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.
 INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1, OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 15+52.00 -L-".
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
 ALUMINUM BRIDGE RAILS SHALL BE ANODIZED. SEE ONE BAR METAL RAIL SHEET FOR DETAILS.
 FOR "GLASS FIBER REINFORCED POLYMER", SEE SPECIAL PROVISIONS.
 THE CONTRACTOR'S ATTENTION IS BROUGHT TO THE FACT THAT THE "A" AND "B" BARS IN THE "REINFORCED CONCRETE DECK SLAB" ARE BEING PAID FOR AS "GLASS FIBER REINFORCED POLYMER" AND SHALL NOT BE INCLUDED IN THE SQUARE FOOT COST OF "REINFORCED CONCRETE DECK SLAB". ALL OTHER REINFORCING STEEL SHOWN IN THE SUPERSTRUCTURE BILL OF MATERIAL SHALL BE INCLUDED IN THE PAY ITEM "REINFORCED CONCRETE DECK SLAB".
 THE CONTRACTOR SHALL PROVIDE DEPT. PERSONNEL WITH ACCESS FOR INSTALLING INSTRUMENTATION AND MONITORING EQUIPMENT, FOR ACCESS FOR INSTRUMENTATION, SEE SPECIAL PROVISIONS.
 NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.
 THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 1024-5 AND 1024-6 OF THE STANDARD SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB.
 THE CONTRACTOR MAY CHOOSE TO UTILIZE THE STANDARD OVERHANG FALSEWORK BRACING SYSTEM. SEE "STANDARD OVERHANG FALSEWORK" SHEETS.
 FOR "FABRICATED METAL STAY-IN-PLACE FORMS", SEE SPECIAL PROVISIONS.
 FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

PILES FOR END BENTS #1 AND #2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS EACH.
 WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED
 FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.
 SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.
 PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENT #1 LEFT, BENT #1 RIGHT, BENT #2 LEFT, AND BENT #2 RIGHT AND THE CASING SHALL NOT EXTEND BELOW ELEVATION 2121.0 FEET, 2129.5 FEET, 2122.0 FEET, AND 2129.0 FEET RESPECTIVELY WITHOUT THE ENGINEER'S PERMISSION.
 FOR PERMANENT STEEL CASING, SEE SPECIAL PROVISIONS FOR DRILLED PIERS.
 THE SCOUR CRITICAL ELEVATION FOR END BENT #1 LEFT IS ELEVATION 2120.0 FEET. THE SCOUR CRITICAL ELEVATION FOR BENT #1 RIGHT IS ELEVATION 2129.0 FEET. THE SCOUR CRITICAL ELEVATION ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
 THE SCOUR CRITICAL ELEVATION FOR BENT #2 LEFT IS ELEVATION 2121.0 FEET. THE SCOUR CRITICAL ELEVATION FOR BENT #2 RIGHT IS ELEVATION 2128.0 FEET. THE SCOUR CRITICAL ELEVATION ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
 THE DRILLED PIERS AT BENT NOS. 1 AND 2 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 20 TSF AT BENT NOS. 1 AND 2.
 THE REQUIRED TIP BEARING CAPACITY AT BENT #1 AND BENT #2 SHALL BE VERIFIED.
 DRILLED PIERS FOR BENT #1 AND 2 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 160 TONS EACH AT THE TOP OF THE COLUMN.
 DRILLED PIERS AT BENT #1 (LEFT) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 2109.0 FEET AND SATISFY THE REQUIRED BEARING CAPACITY.
 DRILLED PIERS AT BENT #1 (RIGHT) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 2120.0 FEET AND SATISFY THE REQUIRED BEARING CAPACITY.
 DRILLED PIERS AT BENT #2 (LEFT) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 2112.0 FEET AND SATISFY THE REQUIRED BEARING CAPACITY.
 DRILLED PIERS AT BENT #2 (RIGHT) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 2122.0 FEET AND SATISFY THE REQUIRED BEARING CAPACITY.
 SPT TESTING IS NOT REQUIRED TO DETERMINE THE BEARING CAPACITY OF THE DRILLED PIERS AT BENT #1 AND #2.
 CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT #1 AND #2. SEE SPECIAL PROVISION FOR CROSSHOLE SONIC LOGGING.
 AT THE CONTRACTOR'S OPTION, AND UPON REMOVAL OF THE CAUSEWAY, THE CLASS II RIPRAP USED IN THE CAUSEWAY MAY BE PLACED AS RIPRAP SLOPE PROTECTION. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 15+52.00 -L-
 THE SUBSTITUTION OF PRESTRESSED CONCRETE DECK PANELS WILL NOT BE ALLOWED.

TOTAL BILL OF MATERIAL

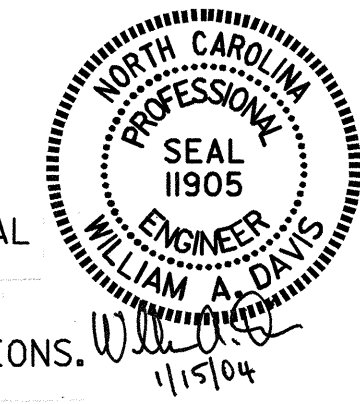
	CONSTRUCTION MAINTENANCE & REMOVAL OF TEMPORARY ACCESS	REMOVAL OF EXISTING STRUCTURE	3'-6" DIA. DRILLED PIERS IN SOIL	3'-6" DIA. DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 3'-6" DIA. DRILLED PIERS	CROSSHOLE SONIC LOGGING	CSL TUBES	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL
	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	LIN. FT.	LUMP SUM	SQ. FT.	SQ. FT.	C.Y.	LUMP SUM	LBS.
SUPERSTRUCTURE									4141	3308			
END BENT #1								LUMP SUM			20.7		3010
BENT #1			17.2	25.0	20.7	1	175.6				14.4		4699
BENT #2			18.2	19.0	20.2		155.6				15.8		4698
END BENT #2								LUMP SUM			21.8		3067
TOTAL	LUMP SUM	LUMP SUM	35.4	44.0	40.9	1	331.2	LUMP SUM	4141	3308	73.7	LUMP SUM	15474

	SPIRAL COLUMN REINFORCING STEEL	45" PRESTRESSED CONCRETE GIRDERS	HP 12 X 53 STEEL PILES	ONE BAR METAL RAIL (ANODIZED)	1'-0"x18" CONCRETE PARAPET	PLAIN RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS	GLASS FIBER REINFORCED POLYMER		
	LBS.	NO.	LIN. FT.	NO.	LIN. FT.	LIN. FT.	TON	SQ. YDS	LUMP SUM	LUMP SUM	LBS.	
SUPERSTRUCTURE		12	620.34			300.69	315.69		LUMP SUM	LUMP SUM	21460	
END BENT #1				6	90.0							
BENT #1	1176						1567	1741				
BENT #2	1188						321	357				
END BENT #2				6	90.0							
TOTAL	2364	12	620.34	12	180.0	300.69	315.69	1888	2098	LUMP SUM	LUMP SUM	21460

PROJECT NO. B-3485
 MACON COUNTY
 STATION: 15+52.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
FOR BRIDGE OVER
CARTOOGECHAYE
CREEK ON SR 1470
(FORMERLY 1309) BETWEEN
SR 1309 AND US 64



NO.		REVISIONS		SHEET NO.	
BY:	DATE:	NO.	DATE:	NO.	DATE:
1		3		S-3	
2		4		TOTAL SHEETS	32

DRAWN BY : J.G. KHARVA DATE : 06/21/02
 CHECKED BY : J.D. HAWK DATE : 05/28/03