

TOTAL BILL OF MATERIAL

	CONSTRUCTION MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS	REMOVAL OF EXISTING STRUCTURE	914mm Ø DRILLED PIERS IN SOIL	914mm Ø DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 914mm Ø DRILLED PIERS	CROSSHOLE SONIC LOGGING	CSL TUBES	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	HP 310 X 79 STEEL PILES	STEEL PILE POINTS	CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (600mm THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	914mm X 533mm PRESTRESSED CONCRETE CORED SLABS		
	LUMP SUM	LUMP SUM	METERS	METERS	METERS	EA.	METERS	CU. METERS	LUMP SUM	kg	kg	NO.	METERS	EA.	METERS	METRIC TONS	SQUARE METERS	LUMP SUM	NO.	METERS
SUPERSTRUCTURE									LUMP SUM									LUMP SUM	48	689.400
END BENT 1								11.3		1128		9	76.5	9		240	245			
BENT 1			23.2	5.3	18.9	1	124.2	13.4		3296	786									
BENT 2			18.1	6.0	13.0	1	106.7	13.4		3031	671									
BENT 3			18.4	5.3	13.2	1	104.9	13.4		3000	658									
END BENT 2								11.3		1128		9	45.0	9	225	230				
TOTAL	LUMP SUM	LUMP SUM	59.7	16.6	45.1	3	335.8	62.8	LUMP SUM	11583	2115	18	121.5	18	115.164	465	475	LUMP SUM	48	689.400

NOTES

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 ALL ELEVATIONS ARE IN METERS.
 ASSUMED LIVE LOAD = MS 18 OR ALTERNATE LOADING.
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SNSM.
 FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.
 THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS.

AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING STRUCTURE CONSISTING OF 2 SPANS AT 7.9m, LOW WATER BRIDGE WITH A CLEAR ROADWAY WIDTH OF 5.0m AND TIMBER FLOOR ON I-BEAMS WITH REINFORCED CONCRETE ABUTMENTS AND PIER AND LOCATED 4m UPSTREAM FROM THE PROPOSED STRUCTURE 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.

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 WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

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.

ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.
 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 AASHTO STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY A.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 360,000 kg OF REINFORCING STEEL, ONE 760mm SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 360,000 kg OF REINFORCING STEEL, TWO 760mm 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.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

AT THE CONTRACTOR'S OPTION, AND UPON REMOVAL OF THE CAUSEWAY, THE CLASS II RIP RAP USED IN THE CAUSEWAY MAY BE PLACED AS RIP RAP SLOPE PROTECTION. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 12+48.000 -L-.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

THE DRILLED PIERS AT BENT NOS. 1, 2 AND 3 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 3000 kPa.

THE REQUIRED TIP BEARING CAPACITY AT BENT NOS. 1, 2 AND 3 SHALL BE VERIFIED.

DRILLED PIERS FOR BENT NOS. 1, 2 AND 3 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 1790 kN EACH AT THE TOP OF THE COLUMN.

PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENT NOS. 1, 2 AND 3; AND THE CASING SHALL NOT EXTEND BELOW ELEVATION 383.0m AT BENT 1 AND 385.0m AT BENTS 2 AND 3 WITHOUT THE ENGINEER'S PERMISSION.

FOR PERMANENT STEEL CASING, SEE SPECIAL PROVISION FOR DRILLED PIERS.

DRILLED PIERS AT BENT NO. 1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 379.3m (LEFT) AND 380.3m (RIGHT), SATISFY THE REQUIRED TIP BEARING CAPACITY, AND HAVE A MINIMUM PENETRATION OF 0.3m INTO ROCK AS DEFINED BY THE DRILLED PIERS SPECIAL PROVISION.

DRILLED PIERS AT BENT NO. 2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 381.3m, SATISFY THE REQUIRED TIP BEARING CAPACITY, AND HAVE A MINIMUM PENETRATION OF 0.3m INTO ROCK AS DEFINED BY THE DRILLED PIERS SPECIAL PROVISION.

DRILLED PIERS AT BENT NO. 3 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 381.0m (LEFT) AND 382.0m (RIGHT), SATISFY THE REQUIRED TIP BEARING CAPACITY, AND HAVE A MINIMUM PENETRATION OF 0.3m INTO ROCK AS DEFINED BY THE DRILLED PIERS SPECIAL PROVISION.

THE SCOUR CRITICAL ELEVATIONS FOR BENT(S) NOS. 1, 2 AND 3 ARE ELEVATION 382.0, 382.9, AND 383.9m, RESPECTIVELY. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NOS. 1, 2 AND 3.

SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.

SID INSPECTIONS ARE NOT REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENT NOS. 1, 2 AND 3.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT NOS. 1, 2 AND 3. SEE SPECIAL PROVISION FOR CROSSHOLE SONIC LOGGING.

PILES FOR END BENT NOS. 1 AND 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 450 kN EACH.

STEEL PILE POINTS ARE REQUIRED FOR PILES AT END BENT NOS. 1 AND 2. SEE SPECIAL PROVISION FOR STEEL PILE POINTS.

WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

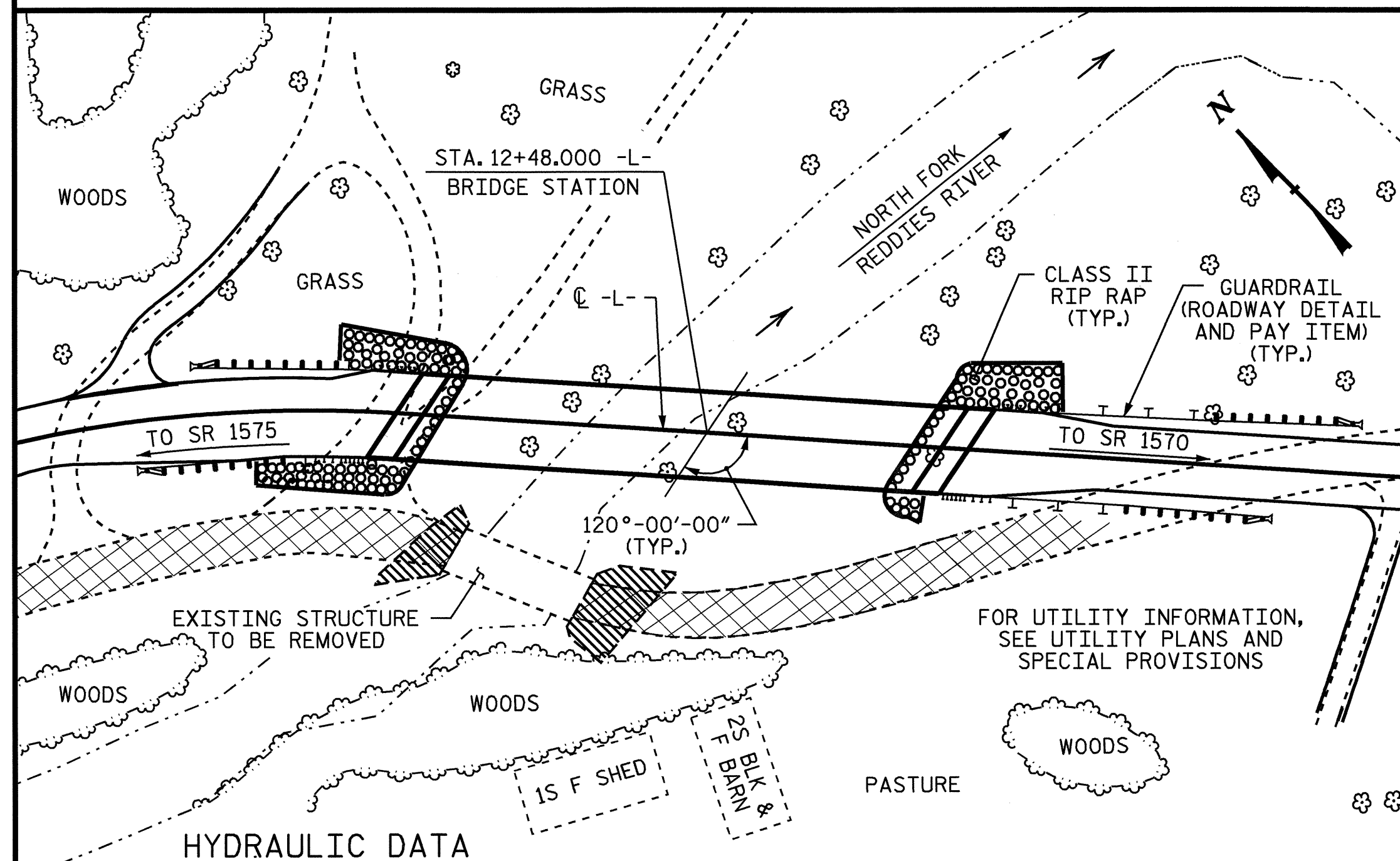
INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR 'REMOVAL OF EXISTING STRUCTURE AT STATION 12+48.000 -L-.'

CONSTRUCTION JOINTS IN THE DRILLED PIERS ARE NOT ALLOWED.

THE COST FOR REMOVAL OF 85m³ OF EXISTING EMBANKMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR REMOVAL OF EXISTING STRUCTURE.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

BENCHMARK #2: RAILROAD SPIKE IN ROOT OF 600mm SYCAMORE,
 -L- STA. 12+50.518 5.167m RIGHT; EL. 388.742



DESIGN DISCHARGE = 100 m³/s
 FREQUENCY OF DESIGN FLOOD = 25 YRS.
 DESIGN HIGH WATER ELEVATION = 390.800
 DRAINAGE AREA = 56.5 Sq. Km
 BASIC DISCHARGE (Q100) = 150 m³/s
 BASIC HIGH WATER ELEVATION = 391.330

OVERTOPPING FLOOD DATA
 OVERTOPPING DISCHARGE = 120 m³/s
 FREQUENCY OF OVERTOPPING FLOOD = 50+ YRS.
 OVERTOPPING FLOOD ELEVATION = 390.770

LOCATION SKETCH

DRAWN BY: D. G. ELY DATE: 9/23/04
 CHECKED BY: B. C. HANKS DATE: 10/11/04

PROJECT NO. B-3266
 WILKES COUNTY
 STATION: 12+48.000 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE OVER NORTH
 FORK REDDIES RIVER
 ON SR 1567 BETWEEN
 SR 1575 AND SR 1570



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			26