

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	1220mm DIA DRILLED PIERS IN SOIL	1220mm DIA DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 1220mm DRILLED PIER	SPT TESTING	CROSSHOLE SONIC LOGGING	CSL TUBES	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	1143mm PRESTRESSED CONCRETE GIRDERS	HP 310 X 79 STEEL PILES	CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (600mm THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS		
	LUMP SUM	METERS	METERS	METERS	EACH	EACH	METERS	SQ. METERS	SQ. METERS	CU. METERS	LUMP SUM	kg	kg	NO.	METERS	NO.	METERS	METERS	METRIC TON	SQ. METERS	LUMP SUM	LUMP SUM
SUPERSTRUCTURE								568.9	607.1		LUMP SUM			12	220.080			111.656			LUMP SUM	LUMP SUM
END BENT 1										18.3		1737			7	31.5			177	181		
BENT 1		9.0	8.0	5.0	2	1	74.1			15.1		3653	782									
BENT 2		8.0	8.0	5.0	2		70.1			15.6		3613	769									
END BENT 2										18.5		1735			7	33.5			203	208		
TOTAL	LUMP SUM	17.0	16.0	10.0	4	1	144.2	568.9	607.1	67.5	LUMP SUM	10738	1551	12	220.080	14	65.0	111.656	380	389	LUMP SUM	LUMP SUM

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.

THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS IS BASED ON AN APPROXIMATE GROUND LINE ELEVATION. IF THE CONSTRUCTION JOINT IS ABOVE THE ACTUAL GROUND ELEVATION, THE CONTRACTOR SHALL PLACE THE CONSTRUCTION JOINT 300mm BELOW THE GROUND LINE.

THE EXISTING STRUCTURE CONSISTING OF 3 @ 12.19m I-BEAM SPANS, A 7.32m CLEAR ROADWAY, AND A REINFORCED CONCRETE DECK SLAB ON REINFORCED CONCRETE POST AND BEAM BENTS, LOCATED 53.4m UPSTREAM FROM THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE A LOAD LIMIT MAY BE POSTED AND 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.

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 14+72.000-Y11-REV."

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.

FOR METRIC STRUCTURAL STEEL, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

THE DRILLED PIERS AT BENTS 1 AND 2 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 1400 KPA.

THE CONTRACTOR SHALL OBSERVE A THREE MONTH WAITING PERIOD BEFORE BEGINNING ANY WORK FOR END BENT CONSTRUCTION AFTER COMPLETION OF THE EMBANKMENT AT EACH END BENT. THE CONTRACTOR MAY BEGIN THE REINFORCED BRIDGE APPROACH FILL CONSTRUCTION AFTER COMPLETION OF END BENT INCLUDING WINGWALLS.

THE REQUIRED TIP BEARING CAPACITY AT BENTS 1 AND 2 SHALL BE VERIFIED.

THE DRILLED PIERS FOR BENTS 1 AND 2 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 1380 KN EACH AT THE TOP OF THE COLUMN.

PERMANENT STEEL CASING IS REQUIRED FOR THE DRILLED PIERS AT BENT 1 AND BENT 2. THE CASINGS SHALL NOT EXTEND BELOW ELEVATION 57.0m WITHOUT THE ENGINEER'S PERMISSION.

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

DRILLED PIERS AT BENT 1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 51.0m AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT 2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 50.5m(LEFT) AND 52.5m(RIGHT) AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

THE SCOUR CRITICAL ELEVATION FOR BENTS 1 AND 2 IS 54.0m. THESE 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 REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENTS 1 AND 2.

SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.

SID INSPECTIONS ARE NOT REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENTS 1 AND 2.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENTS 1 AND 2. SEE SPECIAL PROVISIONS FOR CROSSHOLE SONIC LOGGING.

PILES FOR END BENTS 1 AND 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 530 KN EACH.

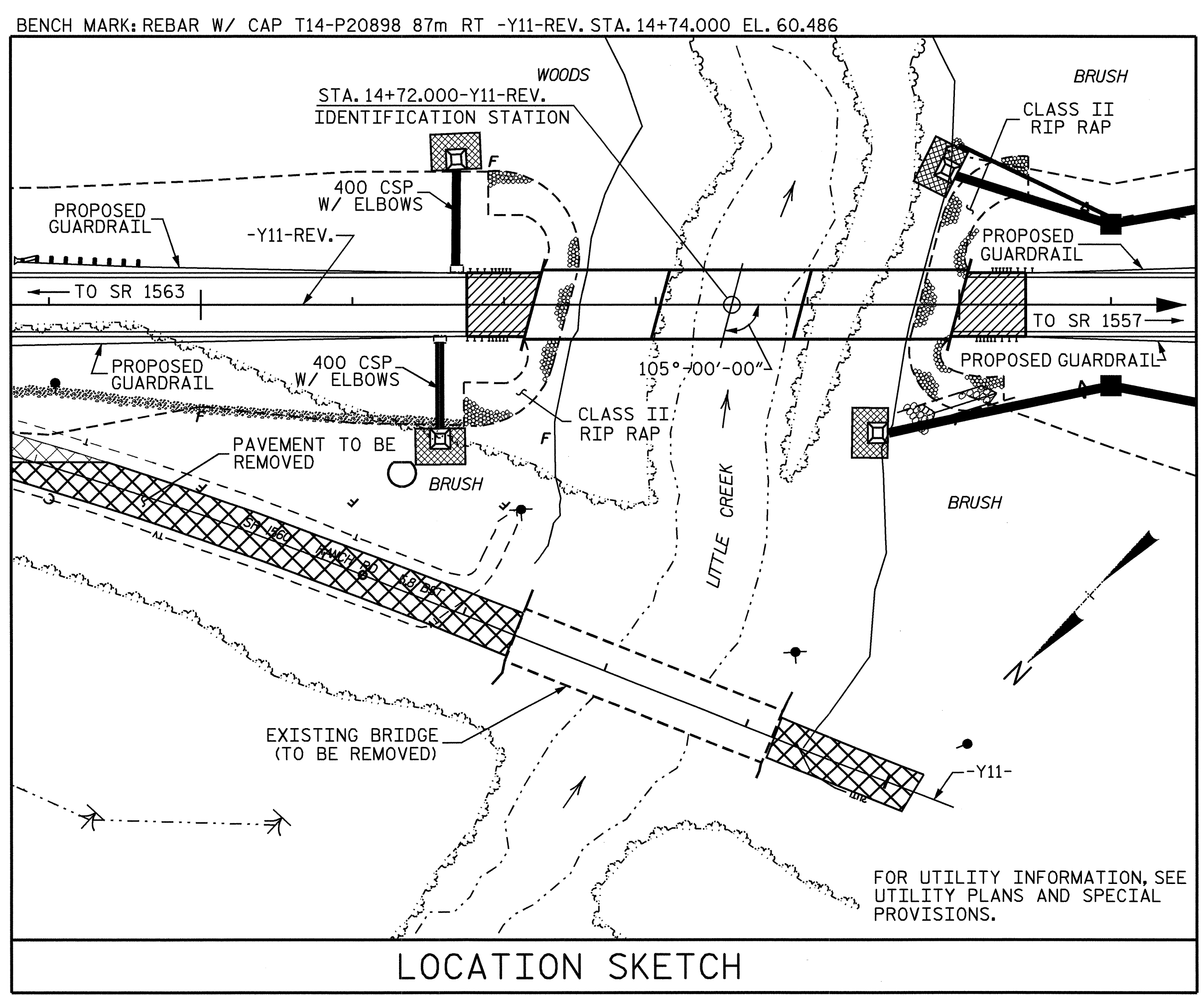
WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

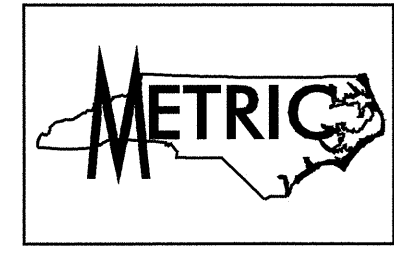
PRESTRESSED CONCRETE DECK PANELS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE CONTRACTOR MAY CHOOSE TO UTILIZE THE STANDARD OVERHANG FALSEWORK BRACING SYSTEM, SEE "STANDARD OVERHANG FALSEWORK" SHEETS.



LOCATION SKETCH



PROJECT NO. R-2552B  
 JOHNSTON COUNTY  
 STATION: 14+72.000-Y11-REV.

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

GENERAL DRAWING FOR  
 BRIDGE ON SR 1560 (-Y11-REV.)  
 (RANCH ROAD) OVER  
 LITTLE CREEK BETWEEN  
 SR 1557 AND SR 1563



DRAWN BY: R.D. MARTIN DATE: 2/18/05  
 CHECKED BY: H. A. LUCAS DATE: 2/18/05

29-MAR-2005 08:29  
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 rmartin

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-154
1			3			TOTAL SHEETS
2			4			431