

**TOTAL BILL OF MATERIAL**

	CONSTRUCTION, MAINTENANCE, AND REMOVAL OF TEMPORARY STRUCTURE	REMOVAL OF EXISTING STRUCTURE	FOUNDATION EXCAVATION	PILE EXCAVATION IN SOIL	PILE EXCAVATION NOT IN SOIL	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	HP 12 X 53 STEEL PILES	RIP RAP CLASS I	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	APPLICATION OF BRIDGE COATING	ASBESTOS ASSESSMENT	BRIDGE DECK GRINDING	3'-0" X 1'-10" PRESTRESSED CONCRETE CORED SLABS	1'-7" X 9/2" CONCRETE CURB	32" ALASKA RAIL	ARCHITECTURAL CONCRETE SURFACE TREATMENT		
	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LUMP SUM	CU. YDS.	LUMP SUM	LBS.	NO.	LIN. FT.	TONS	SO. YDS.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	NO.	LIN. FT.	LIN. FT.	LIN. FT.	SO. FT.
SUPERSTRUCTURE								LUMP SUM						LUMP SUM	LUMP SUM		LUMP SUM	11	385.00	70.00	55.00	
END BENT No. 1			LUMP SUM	60	35	LUMP SUM	24.9		2733	7	125	27	30									315
END BENT No. 2			LUMP SUM	40	35	LUMP SUM	21.6		2473	7	105	27	30									245
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	100	70	LUMP SUM	46.5	LUMP SUM	5206	14	230	54	60	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	11	385.00	70.00	55.00	560

**HYDRAULIC DATA**

DESIGN DISCHARGE ----- = 700 CFS  
 FREQUENCY OF DESIGN FLOOD ----- = 25 YEARS  
 DESIGN HIGH WATER ELEVATION ----- = 2903.5  
 DRAINAGE AREA ----- = 2.2 SQ. MI.  
 BASE DISCHARGE (Q100) ----- = 1000 CFS  
 BASE HIGH WATER ELEVATION ----- = 2904.9

**OVERTOPPING FLOOD DATA**

OVERTOPPING DISCHARGE ----- = 775 CFS  
 FREQUENCY OF OVERTOPPING FLOOD -- = 25+ YEARS  
 OVERTOPPING FLOOD ELEVATION ----- = 2904.2

**FOUNDATION NOTES**

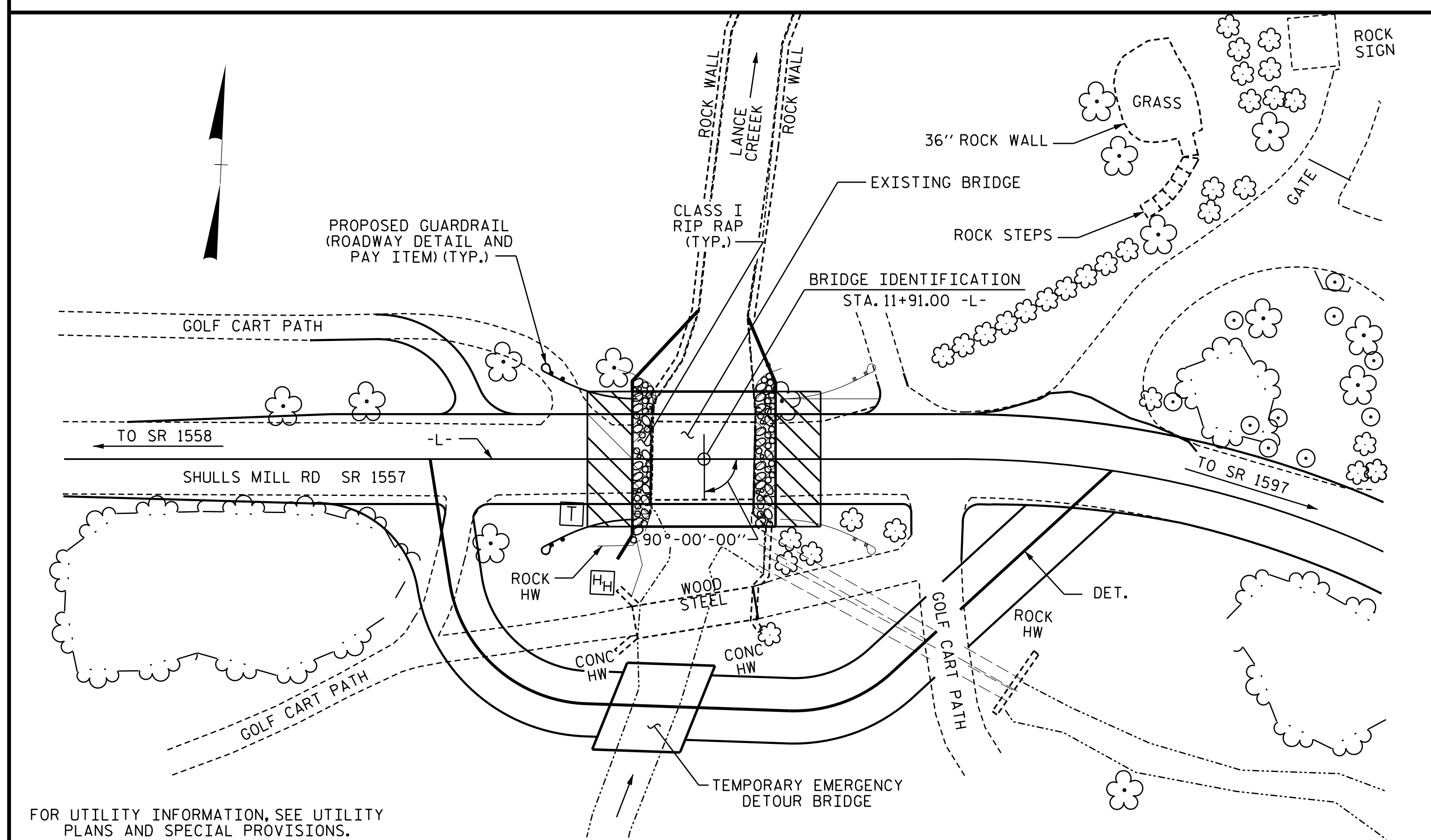
FOR PILES, SEE GEOTECHNICAL SPECIAL PROVISIONS AND SECTION 450 OF THE STANDARD SPECIFICATIONS.  
 PILES AT END BENT NO.1 AND END BENT NO.2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 60 TONS PER PILE.  
 PILE EXCAVATION IS REQUIRED TO INSTALL PILES AT END BENT NO.1, EXCAVATE HOLES AT PILE LOCATIONS TO 2881.2 (LT) AND 2887.4 (RT). FOR PILE EXCAVATION SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.  
 PILE EXCAVATION IS REQUIRED TO INSTALL PILES AT END BENT NO.2, EXCAVATE HOLES AT PILE LOCATIONS TO 2887.1 (LT) AND 2887.4 (RT). FOR PILE EXCAVATION SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.  
 CONCRETE OR GROUT IS REQUIRED TO FILL HOLES FOR PILE EXCAVATION AT END BENT NO.1 AND END BENT NO.2.  
 THE REQUIRED BEARING CAPACITY OF END BENT NO.1 AND END BENT NO.2 WALLS IS 2000 PSF AND SHALL BE VERIFIED.

**NOTES**

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.  
 THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.  
 THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.  
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.  
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.  
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.  
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.  
 FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.  
 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. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.  
 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".  
 THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 25 FT (LT) AND 20 FT (RT) OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.  
 THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE A TEMPORARY STRUCTURE AT STATION 11+91.00 -L- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE, SEE SPECIAL PROVISIONS.  
 REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.  
 THE EXISTING ROCK WALLS SHALL BE REMOVED TO THE EXISTING STREAM BED ELEVATION FROM THE EXISTING BRIDGE TO THE END OF THE PROPOSED RETAINING WALLS AS DIRECTED BY THE ENGINEER. THE PROPOSED RETAINING WALLS SHALL TIE INTO THE EXISTING ROCK WALLS AS DIRECTED BY THE ENGINEER.  
 AT THE CONTRACTOR'S OPTION, CAST-IN-PLACE GRAVITY RETAINING WALLS MAY BE SUBSTITUTED IN PLACE OF THE CANTILEVER RETAINING WALLS AS DETAILED IN THE PLANS. THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER TO RECEIVE REVISED PLANS AND DETAILS FROM THE STRUCTURES MANAGEMENT AND GEOTECHNICAL UNITS. THE REDESIGN WILL BE AT NO ADDITIONAL COST TO THE CONTRACTOR. ANY ADDITIONAL MATERIALS REQUIRED FOR CONSTRUCTION OF THE CAST-IN-PLACE GRAVITY WALLS WILL BE AT NO ADDITIONAL COST TO THE DEPARTMENT.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18-EVALUATING SCOUR AT BRIDGES."  
 FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.  
 ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.  
 FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.  
 THE EXISTING SINGLE SPAN STRUCTURE (1 @ 25'-7") CONSISTING OF A TIMBER FLOOR ON STEEL I-BEAMS WITH A SUBSTRUCTURE CONSISTING OF TIMBER CAPS & TIMBER POST AND SILL ABUTMENTS SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, THE LOAD LIMIT MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT. SEE SPECIAL PROVISIONS FOR REMOVAL OF EXISTING STRUCTURE.  
 AT THE CONTRACTOR'S OPTION, PRESTRESSED CONCRETE END BENT CAPS MAY BE SUBSTITUTED IN PLACE OF THE CAST-IN-PLACE CAPS. THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER TO RECEIVE REVISED PLANS AND DETAILS FROM THE STRUCTURES MANAGEMENT UNIT. THE REDESIGN AND ANY ADDITIONAL MATERIALS NEEDED WILL BE AT NO ADDITIONAL COST TO THE CONTRACTOR.  
 FOR ARCHITECTURAL CONCRETE SURFACE TREATMENT, SEE SPECIAL PROVISIONS.  
 FOR BRIDGE DECK GRINDING, SEE SPECIAL PROVISIONS.  
 FOR 3'-0" X 1'-10" PRESTRESSED CONCRETE CORED SLABS, SEE SPECIAL PROVISIONS.  
 FOR 32" ALASKA RAIL, SEE SPECIAL PROVISIONS.  
 FOR APPLICATION OF BRIDGE COATING, SEE SPECIAL PROVISIONS.

**B.M. #1 : CHISELED SQUARE IN SE HEADWALL OVER CREEK, 17' LEFT OF STA. 13+86.00 -BL4-, EL. 2908.19**



**LOCATION SKETCH**

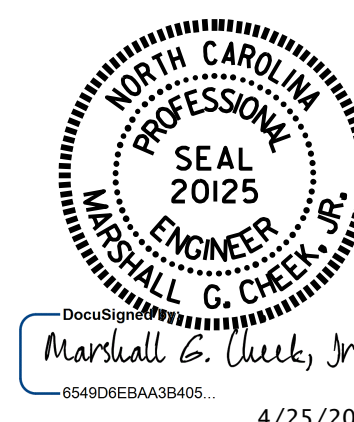
DRAWN BY : D. A. GLADDEN/MEP DATE : 01-16  
 CHECKED BY : M.G. CHEEK DATE : 03-15-16

PROJECT NO. B-5118  
WATAUGA COUNTY  
 STATION: 11+91.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**  
 FOR BRIDGE OVER LANCE  
 CREEK ON SR 1557 BETWEEN  
 SR 1558 AND SR 1597



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			20

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED