

LOCATION SKETCH

NOTES :

ASSUMED LIVE LOAD = HL93 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 SAMPLE BARS SHOULD COME FROM STEEL ACTUALLY USED IN THE PROJECT AND THE SAMPLE BARS SHOULD BE REPLACED BY SPLICED BARS AS SPECIFIED IN THE SAMPLE BAR REPLACEMENT CHART. PAYMENT FOR THE SAMPLE BARS AND REPLACEMENT REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON SHEET S-1 SHALL BE EXCAVATED FOR A DISTANCE OF 35 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. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

THE EXISTING STRUCTURE CONSISTING OF 1 SPAN @ 40'-0", 1 SPAN @ 40'-6" AND 1 SPAN @ 41'-0" WITH A CLEAR ROADWAY WIDTH OF 24' AND HAVING A REINFORCED CONCRETE DECK ON I-BEAMS SUPERSTRUCTURE AND A SUBSTRUCTURE OF END BENTS AND INTERIOR BENTS WITH REINFORCED CONCRETE CAPS AND REINFORCED CONCRETE PILES SHALL BE REMOVED. THE EXISTING BRIDGE IS CURRENTLY POSTED FOR LOAD LIMITS.

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 DIFFERENCE BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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.

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.

FOR FIBER OPTIC CONDUIT SYSTEM, SEE SPECIAL PROVISIONS.

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 16+42.60 -L-."

SAMPLE BAR REPLACEMENT

| SIZE | LENGTH |
|------|---------|
| #3 | 6'-2" |
| #4 | 7'-4" |
| #5 | 8'-6" |
| #6 | 9'-8" |
| #7 | 10'-10" |
| #8 | 12'-0" |
| #9 | 13'-2" |
| #10 | 14'-6" |
| #11 | 15'-10" |

NOTE:
 SAMPLE BAR REPLACEMENT LENGTHS BASED ON 30" (SAMPLE LENGTH) PLUS TWO SPICE LENGTHS AND fy = 60ksi.

TOTAL BILL OF MATERIAL

| | REMOVAL OF EXISTING STRUCTURE | ASBESTOS ASSESSMENT | PDA TESTING | UNCLASSIFIED STRUCTURE EXCAVATION | CLASS A CONCRETE | BRIDGE APPROACH SLABS | REINFORCING STEEL | PILE DRIVING EQUIPMENT SETUP FOR HP 12 x 53 STEEL PILES | PILE DRIVING EQUIPMENT SETUP FOR 20" PRESTRESSED CONCRETE PILES | HP 12 x 53 STEEL PILES | 20" PRESTRESSED CONCRETE PILES | PILE REDRIVES | VERTICAL CONCRETE BARRIER RAIL | RIP RAP CLASS II (2'-0" THICK) | GEOTEXTILE FOR DRAINAGE | ELASTOMERIC BEARINGS | 3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLABS | FIBER OPTIC CONDUIT SYSTEM | |
|----------------|-------------------------------|---------------------|-------------|-----------------------------------|------------------|-----------------------|-------------------|---|---|------------------------|--------------------------------|---------------|--------------------------------|--------------------------------|-------------------------|----------------------|--|----------------------------|----------|
| | LUMP SUM | LUMP SUM | EA. | LUMP SUM | CU. YDS. | LUMP SUM | LBS. | EACH | EACH | NO. | LIN. FT. | EACH | LIN. FT. | TONS | SQ. YD. | LUMP SUM | NO. | LIN. FT. | LIN. FT. |
| SUPERSTRUCTURE | | | | | | | | | | | | | 290.75 | | | | 36 | 1740.00 | 286.52 |
| END BENT 1 | | | | | 23.4 | | 2887 | 7 | | 7 | 350 | 4 | | 275 | 225 | | | | |
| BENT 1 | | | | | 13.0 | | 2422 | | 8 | | 8 | 480 | 4 | | | | | | |
| BENT 2 | | | | | 13.0 | | 2422 | | 8 | | 8 | 480 | 4 | | | | | | |
| END BENT 2 | | | | | 23.4 | | 2887 | 7 | | 7 | 350 | 4 | | 285 | 225 | | | | |
| TOTAL | LUMP SUM | LUMP SUM | 2 | LUMP SUM | 72.8 | LUMP SUM | 10618 | 14 | 16 | 14 | 700 | 16 | 290.75 | 560 | 450 | LUMP SUM | 36 | 1740.00 | 286.52 |

FOUNDATION NOTES :

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT No. 1 AND END BENT No. 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 65 TONS PER PILE.

DRIVE PILES AT END BENT No. 1 AND END BENT No. 2 TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE.

PILES AT BENT No. 1 AND BENT No. 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 125 TONS PER PILE.

DRIVE PILES AT BENT No. 1 AND BENT No. 2 TO A REQUIRED DRIVING RESISTANCE OF 240 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.

INSTALL PILES AT BENT No. 1 AND BENT No. 2 TO A TIP ELEVATION NO HIGHER THAN 14.0.

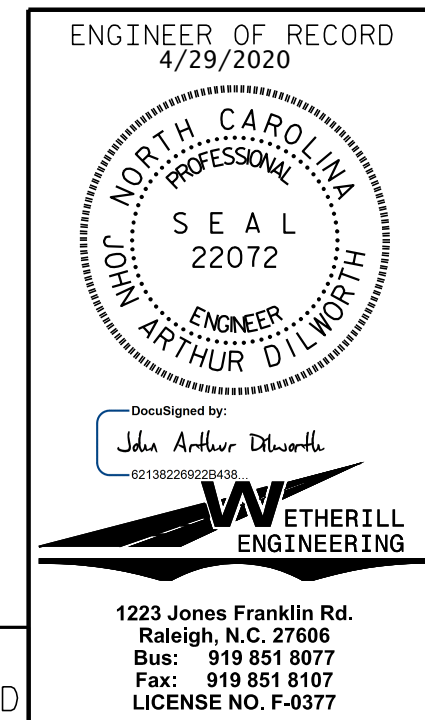
THE SCOUR CRITICAL ELEVATIONS FOR BENT No. 1 AND BENT No. 2 ARE ELEVATIONS 35.0 AND 32.0, RESPECTIVELY. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 55,000 TO 75,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT BENT NO. 1 AND NO. 2. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

TESTING PILES WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING MAY BE REQUIRED AT END BENTS 1 AND 2. THE ENGINEER WILL DETERMINE THE NEED FOR PDA TESTING. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

TESTING THE FIRST PRODUCTION PILE WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED AT BENT NO. 1 OR 2. THE ENGINEER WILL DETERMINE THE NEED FOR PDA TESTING. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. BR-0112
EDGEcombe COUNTY
 STATION: 16+42.60 -L-
 SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

BRIDGE ON SR 1616
 OVER OTTER CREEK
 BETWEEN SR 1617 AND US 258

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-2 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 21 |

DRAWN BY : J. PENDERGRAFT DATE : 3-19
 CHECKED BY : B.C. HUNT DATE : 11-19

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

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