



ANGLES TO SHORT CHORD	
S1	= 89°-10'-11"
S2	= 87°-30'-32"
S3	= 85°-50'-53"
S4	= 84°-11'-15"
S5	= 82°-31'-36"
S6	= 81°-29'-24"

FOUNDATION LAYOUT

DIMENSIONS LOCATING PILES SHOWN TO THE CENTERLINE OF PILES AT BOTTOM OF CAP ELEVATION. BRACED PILES (↑) ARE BATTERED AT 3:12 * SEE LONG CHORD LAYOUT

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 105 TONS PER PILE.
- PILES AT BENT NO.1, BENT NO.2, BENT NO.3, BENT NO.4, AND BENT NO.5 ARE DESIGNED FOR A FACTORED RESISTANCE OF 300 TONS PER PILE.
- DRIVE PILES AT END BENT NO.1 TO A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE.
- DRIVE PILES AT END BENT NO.2 TO A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE.
- DRIVE PILES AT BENT NO.1 TO A REQUIRED DRIVING RESISTANCE OF 410 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.
- DRIVE PILES AT BENT NO.2 TO A REQUIRED DRIVING RESISTANCE OF 405 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.
- DRIVE PILES AT BENT NO.3 TO A REQUIRED DRIVING RESISTANCE OF 400 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.
- DRIVE PILES AT BENT NO.4 TO A REQUIRED DRIVING RESISTANCE OF 425 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.
- DRIVE PILES AT BENT NO.5 TO A REQUIRED DRIVING RESISTANCE OF 400 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.
- INSTALL PILES AT BENT NO.1 TO A TIP ELEVATION NO HIGHER THAN -41.0 FT.
- INSTALL PILES AT BENT NO.2 TO A TIP ELEVATION NO HIGHER THAN -50.0 FT.
- INSTALL PILES AT BENT NO.3 TO A TIP ELEVATION NO HIGHER THAN -41.0 FT.
- INSTALL PILES AT BENT NO.4 TO A TIP ELEVATION NO HIGHER THAN -41.0 FT.
- INSTALL PILES AT BENT NO.5 TO A TIP ELEVATION NO HIGHER THAN -22.0 FT.

- IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 164 TO 186 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT BENT NO.1, BENT NO.2, BENT NO.3, BENT NO.4, AND BENT NO.5. THIS ESTIMATED ENERGY RANGES DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.
- TESTING THE FIRST PRODUCTION PILE WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED AT END BENT NO.1 AND END BENT NO.2. 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, BENT NO.2, BENT NO.3, BENT NO.4, AND BENT NO.5. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
- STEEL PIPE PILE CONICAL POINTS ARE REQUIRED FOR STEEL PIPE PILES AT BENT NO.1, BENT NO.2, BENT NO.3, BENT NO.4, AND BENT NO.5. (USE "INSIDE FIT" PIPE PILE CONICAL POINTS, I.E., CONICAL POINTS WITH AN OUTSIDE DIAMETER EQUAL TO THE PIPE PILE DIAMETER.) FOR STEEL PILE POINTS, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
- THE SCOUR CRITICAL ELEVATION FOR BENT NO.1, BENT NO.3, AND BENT NO.4 IS ELEVATION -11 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
- THE SCOUR CRITICAL ELEVATION FOR BENT NO.2 IS ELEVATION -14 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
- THE SCOUR CRITICAL ELEVATION FOR BENT NO.5 IS ELEVATION 4 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
- SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS FOR THE SETTLEMENT GAUGES REQUIRED AT END BENT NO.1 AND END BENT 2.
- OBSERVE A 3 MONTH WAITING PERIOD AFTER CONSTRUCTING THE EMBANKMENT TO WITHIN 2 FT OF FINISHED GRADE BEFORE BEGINNING END BENT CONSTRUCTION AT END BENT NO.1 AND END BENT NO.2. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS.
- PIPE PILE CONICAL POINTS ARE REQUIRED FOR THE FIRST PRODUCTION STEEL PIPE PILE TO BE TESTED WITH PDA AT EACH INTERIOR BENT. THE ENGINEER WILL DETERMINE THE NEED FOR PIPE PILE CONICAL POINTS AFTER DRIVING TEST PILES OR A FEW INITIAL PRODUCTION PILES. FOR STEEL PIPE PILE POINTS, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
- PILE CUSHIONS ARE REQUIRED TO DRIVE STEEL PIPE PILES WITHIN THE LIMITS OF THE RIVER. REFER TO PROJECT SPECIAL PROVISIONS FOR MORE INFORMATION.

PROJECT NO. B-4484
CRAVEN COUNTY
 STATION: 25+06.00 -L1-

SHEET 3 OF 5 REPLACES BRIDGE NO. 240138



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE OVER NEUSE RIVER
 ON SR 1470 BETWEEN
 SR 1472 AND SR 1400

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-3
2			4			TOTAL SHEETS 37

DRAWN BY : MRA DATE : 04/2019
 CHECKED BY : JMR DATE : 06/2019
 DESIGN ENGINEER OF RECORD: MAL DATE : 06/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED