

4/7/2020 4:10:47 PM G:\Projects\2018\Division 3 (SEA)\B-5639 (Duplin 36 NC11 over Maxwell Creek)\Structures\Drawings\Final\B5639\_SMJ\_GD\_300036.dgn

**FOUNDATION NOTES:**

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS

STEEL H-PILES POINTS ARE REQUIRED FOR STEEL H-PILES AT END BENT 1 AND END BENT 2. FOR STEEL PILE POINTS, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE 75 TONS PER PILE.

DRIVE PILES AT END BENT 1 TO A REQUIRED DRIVING RESISTANCE OF 125 TONS PER PILE.

PILES AT BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 125 TONS PER PILE.

DRIVE PILES AT BENT 1 TO A REQUIRED DRIVING RESISTANCE OF 215 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.

STEEL PIPE PILE CUTTING SHOES ARE REQUIRED FOR STEEL PIPE PILES AT BENT 1. USE "INSIDE FIT" PIPE PILE CUTTING SHOES, I.E., CUTTING SHOES WITH AN OUTSIDE DIAMETER EQUAL TO THE PIPE PILE DIAMETER. FOR STEEL PILE POINTS, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS

INSTALL PILES AT BENT 1 TO A TIP ELEVATION NO HIGHER THAN 16 FT. LT. AND 21 FT. RT.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 40 TO 51 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT BENT 1. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

THE SCOUR CRITICAL ELEVATION FOR BENT 1 IS ELEVATION 41 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

PILES AT BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 125 TONS PER PILE.

DRIVE PILES AT BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 215 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.

STEEL PIPE PILE CUTTING SHOES ARE REQUIRED FOR STEEL PIPE PILES AT BENT 2. USE "INSIDE FIT" PIPE PILE CUTTING SHOES, I.E., CUTTING SHOES WITH AN OUTSIDE DIAMETER EQUAL TO THE PIPE PILE DIAMETER. FOR STEEL PILE POINTS, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

INSTALL PILES AT BENT 2 TO A TIP ELEVATION NO HIGHER THAN 20 FT. LT. AND 25 FT. RT.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 40 TO 51 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT BENT 2. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

THE SCOUR CRITICAL ELEVATION FOR BENT 2 IS ELEVATION 41 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

PILES AT END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 75 TONS PER PILE.

DRIVE PILES AT END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 125 TONS PER PILE.

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

TOTAL BILL OF MATERIAL										
	CONSTRUCTION, MAINTENANCE & REMOVAL OF TEMP STRUCTURE	REMOVAL OF EXISTING STRUCTURE	ASBESTOS ASSESSMENT	PDA TESTING	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	PILE DRIVING EQUIP. SETUP FOR HP 12 X 53 STEEL PILES	PILE DRIVING EQUIP. SETUP FOR PP 18 X 0.50 GALVANIZED STEEL PILES
	LS	LS	LS	EA	LS	CY	LS	LB	EA	EA
SUPERSTRUCTURE							LS			
END BENT 1					LS	23.0		2,806	7	
BENT 1										8
BENT 2										8
END BENT 2					LS	23.0		2,806	7	
TOTAL	LS	LS	LS	1	LS	46.0	LS	5,612	14	16

TOTAL BILL OF MATERIAL															
	HP 12 X 53 STEEL PILES		PP 18 X 0.50 GALVANIZED STEEL PILES		STEEL PILE POINTS	PILE REDRIVES	VERTICAL CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 2'-0" PRESTRESSED CONCRETE CORED SLABS		3'-0" X 2'-6" PRESTRESSED CONCRETE BENT CAPS		FIBER OPTIC CONDUIT SYSTEM
	NO.	LF	NO.	LF	EA	EA	LF	TON	SY	LS	NO.	LF	LF	LF	
SUPERSTRUCTURE								340.75		LS	36	2,040.00		336.75	
END BENT 1	7	385			7	4		160	180						
BENT 1			8	380	8	4							38.33		
BENT 2			8	380	8	4							38.33		
END BENT 2	7	315			7	4		140	155						
TOTAL	14	700	16	760	30	16	340.75	300	335	LS	36	2,040.00	76.66	336.75	

PROJECT NO. B-5639  
DUPLIN COUNTY  
 STATION: 23+55.00 -L-

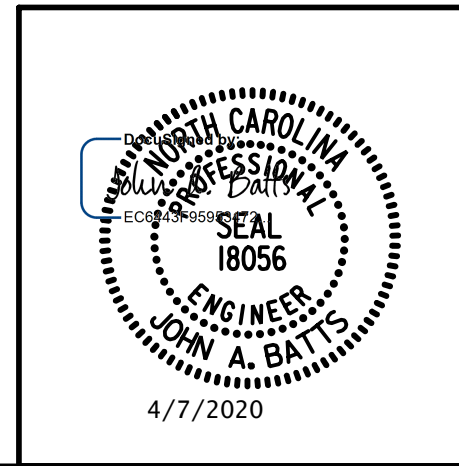
SHEET 3 OF 3

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**

FOR BRIDGE ON NC HWY 11  
 OVER MAXWELL CREEK  
 BETWEEN SR 1918 AND SR 1912

PLANS PREPARED BY:  
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 LICENSURE NO. C-2521



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			25

DRAWN BY: T. BANKOVICH DATE: 2-20  
 CHECKED BY: J.A. BATTS DATE: 2-20  
 DESIGN ENGINEER OF RECORD: J.A. BATTS DATE: 2-20

**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**