

**FOUNDATION LAYOUT**  
 ALL PILES ARE HP 14X73 STEEL PILES.  
 ALL BRACE PILES ARE BATTERED AT 3:12.  
 DIMENSIONS LOCATING PILES ARE SHOWN TO PILE CENTERLINE.

**FOUNDATION NOTES**

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT NO.1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 115 TONS PER PILE.

DRIVE PILES AT END BENT NO.1 TO A REQUIRED DRIVING RESISTANCE OF 192 TONS PER PILE.

FOR DRILLED PIERS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

DRILLED PIERS AT BENT NO.1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 780 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 80 TSF.

INSTALL DRILLED PIERS AT BENT NO.1 TO A TIP ELEVATION NO HIGHER THAN 2705 FT (COLUMNS #1&2), 2703 FT (COLUMNS #3&4), AND 2700 FT (COLUMNS #5&6), SATISFY THE REQUIRED TIP RESISTANCE AND HAVE A PENETRATION OF AT LEAST 11 FT INTO ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

PERMANENT STEEL CASINGS ARE REQUIRED FOR DRILLED PIERS AT BENT NO.1. DO NOT EXTEND PERMANENT CASINGS BELOW ELEVATION 2720 FT WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

THE SCOUR CRITICAL ELEVATION FOR BENT NO.1 IS 2718 FT (LT), 2715 (CT), AND 2712 (RT). THE SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR CSL TESTING. FOR CSL TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT NO.2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 135 TONS PER PILE.

DRIVE PILES AT END BENT NO.2 TO A REQUIRED DRIVING RESISTANCE OF 225 TONS PER PILE.

DRILLED-IN PILES ARE REQUIRED FOR THE RIGHTMOST 10 PILES AT END BENT NO.2. EXCAVATE HOLES AT PILE LOCATIONS TO ELEVATION 2738 FT. FOR PILE EXCAVATION, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

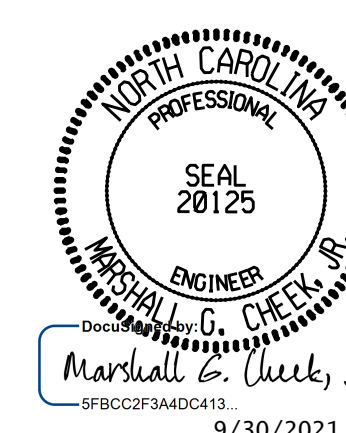
CONCRETE IS REQUIRED TO FILL HOLES FOR PILE EXCAVATION AT END BENT NO.2.

PROJECT NO. R-2566BA  
WATAUGA COUNTY  
 STATION: 164+30.00 -L-

SHEET 2 OF 4

DRAWN BY : STM DATE : 04/19  
 CHECKED BY : MGC DATE : 06/21  
 DESIGN ENGINEER OF RECORD: MGC DATE : 8/21

8/27/2021  
 X:\MCDOT\R-2566BA\Structures\Final plans\DCN files\401.005.R-2566BA.SMU. GD01.S02.940005.dgn  
 Users\sbwilliams



DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS  
 706 HILLSBOROUGH STREET  
 SUITE 200  
 RALEIGH, NC 27603  
 PH (919) 773-8887  
 CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**  
 BRIDGE OVER WATAUGA  
 RIVER ON NC 105 BETWEEN  
 SR 1112 AND SR 1111

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			79