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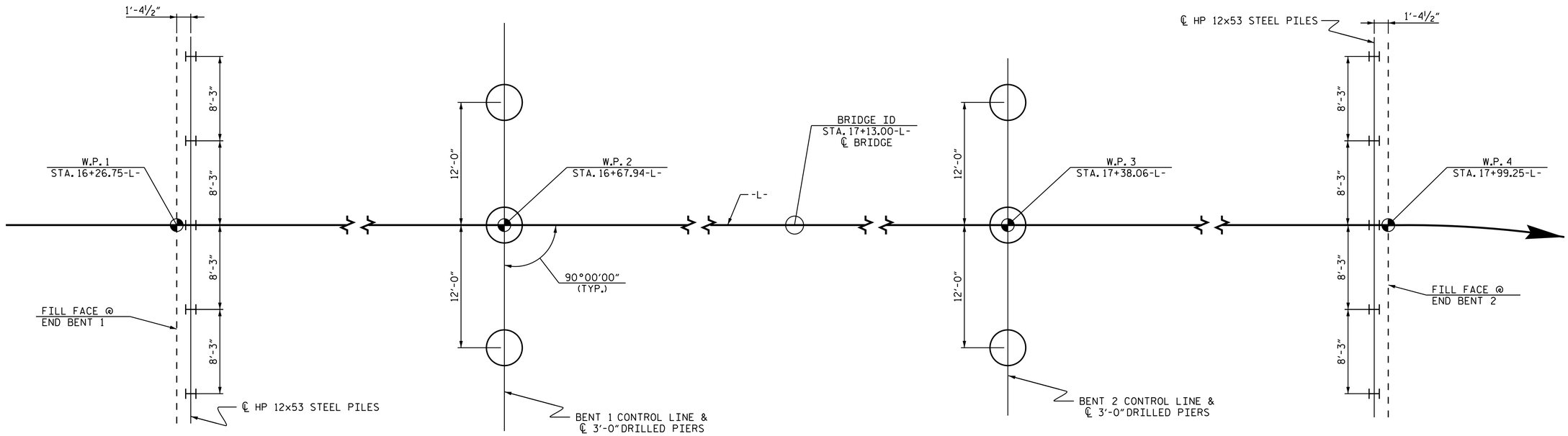

FOUNDATION LAYOUT PLAN

ALL PILES ARE HP12x53 STEEL PILES.
DIMENSIONS LOCATING PILES ARE SHOWN TO
THE CENTERLINE OF PILES.

NOTES:

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 70 TONS PER PILE.

PILES AT END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 90 TONS PER PILE.

DRIVE PILES AT END BENT 1 TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE.

DRIVE PILES AT END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.

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.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 20,000 TO 30,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT 1 AND END 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.

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.

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

DRILLED PIERS AT BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 350 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 110 TSF.

DRILLED PIERS AT BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 410 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 130 TSF.

INSTALL DRILLED PIERS AT BENT 1 TO A TIP ELEVATION NO HIGHER THAN 2,619 FT WITH THE REQUIRED TIP RESISTANCE AND A PENETRATION OF AT LEAST 6 FT INTO CRYSTALLINE ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

INSTALL DRILLED PIERS AT BENT 2 TO A TIP ELEVATION NO HIGHER THAN 2,621 FT WITH THE REQUIRED TIP RESISTANCE AND A PENETRATION OF AT LEAST 6 FT INTO CRYSTALLINE ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

THE SCOUR CRITICAL ELEVATION FOR BENT 1 AND BENT 2 IS ELEVATION 2,630 FT SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

SID INSPECTIONS MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR SID INSPECTIONS. FOR SID INSPECTIONS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

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

PROJECT NO. 17BP.11.R.145
ASHE COUNTY
STATION: 17+13.00-L-

SHEET 2 OF 4

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER MARSHALL G. CHEEK, JR.
Marshall G. Cheek, Jr.
1/24/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE OVER
BIG HORSE CREEK
ON SR 1347 BETWEEN
NC 194 AND H ST.

REVISIONS							SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:		S-2
1			3				TOTAL SHEETS
2			4				30

DRAWN BY :	LAB	DATE :	4/21
CHECKED BY :	MGC	DATE :	7/21