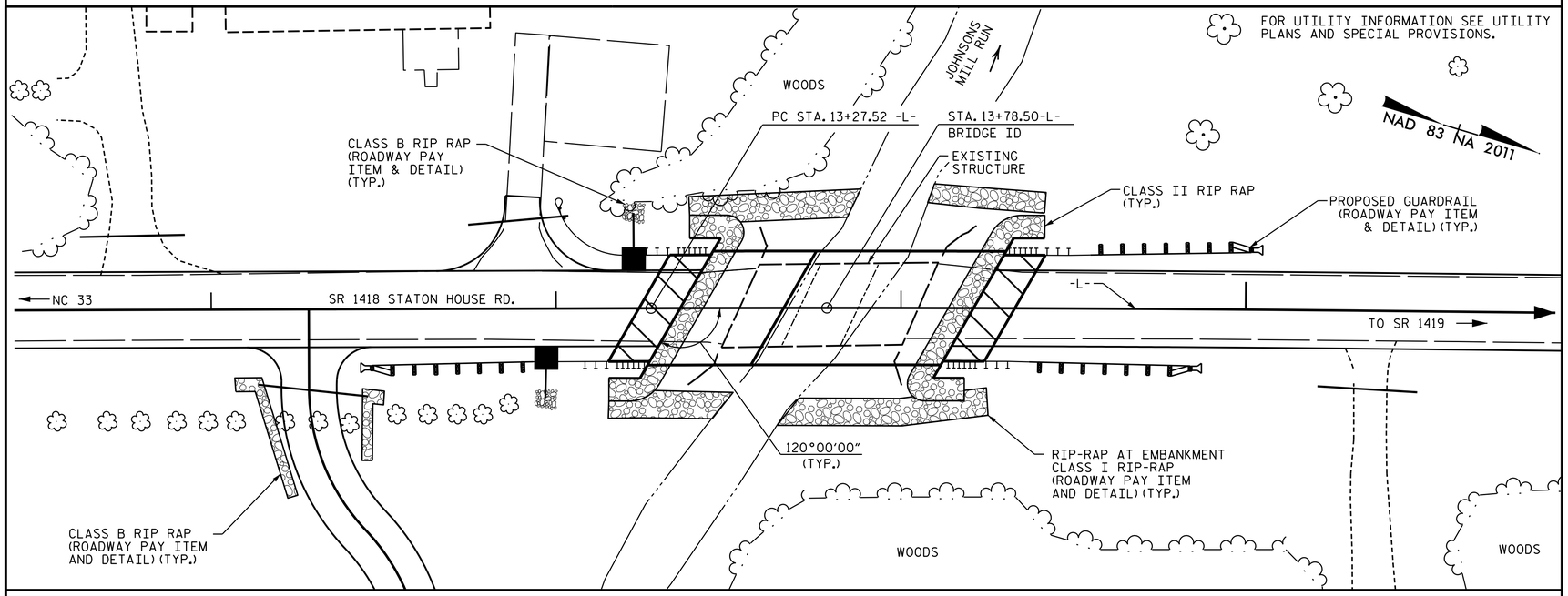
BENCH MARK #10: RR SPIKE IN POWER POLE, 29.5' RT. OF STA. 16+05.30-L-, ELEV.= 31.09' (NAVD 88)



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	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 12x53 STEEL PILES	PILE DRIVING EQUIPMENT SETUP FOR HP 14x73 GALVANIZED STEEL PILES	HP 12x53 STEEL PILES	HP 14x73 GALVANIZED STEEL PILES	PILE REDRIVES
	LUMP SUM	LUMP SUM	EACH	LUMP SUM	C.Y.	LUMP SUM	LBS.	EACH	EACH	LIN. FT.	LIN. FT.	EACH
SUPERSTRUCTURE												
END BENT 1					15.8		2,357	7		385		3
BENT 1					12.9		2,500		8		640	4
END BENT 2					15.8		2,357	7		490		3
TOTAL	LUMP SUM	LUMP SUM	1	LUMP SUM	44.5	LUMP SUM	7,214	14	8	875	640	10

TOTAL BILL OF MATERIAL (CONT.)

ITEM	VERTICAL CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THK.)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" x 1'-9" PRESTRESSED CONCRETE CORED SLABS		FIBER OPTIC CONDUIT SYSTEM
	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	NO.	LIN. FT.	LIN. FT.
SUPERSTRUCTURE	170.28				22	935.00	166.28
END BENT 1		85	95				
BENT 1							
END BENT 2		95	105				
TOTAL	170.28	180	200	LUMP SUM	22	935.00	166.28

DRAWN BY : TBE DATE : 3/19
CHECKED BY : MGC DATE : 9/19
DESIGN ENGINEER OF RECORD : MGC DATE : 9/19

NOTES:

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN (S-19).

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THE EXISTING STRUCTURE (1 @ 17'-1", 1 @ 16'-10", 1 @ 18'-2") WITH A CLEAR ROADWAY WIDTH OF 24'-0" CONSISTING OF A REINFORCED CONCRETE DECK ON 19 LINES OF TIMBER JOISTS WITH A SUBSTRUCTURE CONSISTING OF TIMBER POST AND SILL ABUTMENTS AND WITH A STEEL CRUTCH BENT AT END BENT 2 AND LOCATED AT THE SITE OF THE PROPOSED BRIDGE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, THIS LOAD LIMIT MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THIS PROJECT.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE MATERIAL SHOWN IN THE HATCHED AREA (SHEET 1 OF 2) SHALL BE EXCAVATED FOR A DISTANCE OF 25 FEET TO EACH SIDE OF THE CENTERLINE OF THE BRIDGE 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 SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. 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 DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITIES ON ROADWAY PLANS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES".

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

FOR FIBER OPTIC CONDUIT SYSTEM, SEE SPECIAL PROVISIONS

THIS BRIDGE SHALL BE CONSTRUCTED USING TOP-DOWN CONSTRUCTION METHODS, PROVIDED THAT SPAN A IS CONSTRUCTED FIRST. THE USE OF A TEMPORARY CAUSEWAY OR WORK BRIDGE IS NOT PERMITTED.

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 13+78.50 -L-".

FOUNDATION RECOMMENDATION NOTES:

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT NO. 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 51 TONS PER PILE.

PILES AT BENT NO. 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 100 TONS PER PILE.

PILES AT END BENT NO. 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 71 TONS PER PILE.

DRIVE PILES AT END BENT NO. 1 TO A REQUIRED DRIVING RESISTANCE OF 85 TONS PER PILE.

DRIVE PILES AT BENT NO. 1 TO A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.

DRIVE PILES AT END BENT NO. 2 TO A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE.

INSTALL PILES AT BENT NO. 1 TO A TIP ELEVATION NO HIGHER THAN -18.0 FT.

THE SCOUR CRITICAL ELEVATIONS FOR BENT NO. 1 IS ELEVATION 7.0 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

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.

PROJECT NO. 17BP.2.R.92
PITT COUNTY
STATION: 13+78.50 -L-

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER
DocuSigned by: Marshall G. Cheek Jr.
5FBCC2F3A4DC413...
1/6/2020

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

FOR BRIDGE ON SR 1418
OVER JOHNSONS MILL RUN
BETWEEN NC 33 AND SR 1419

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			19