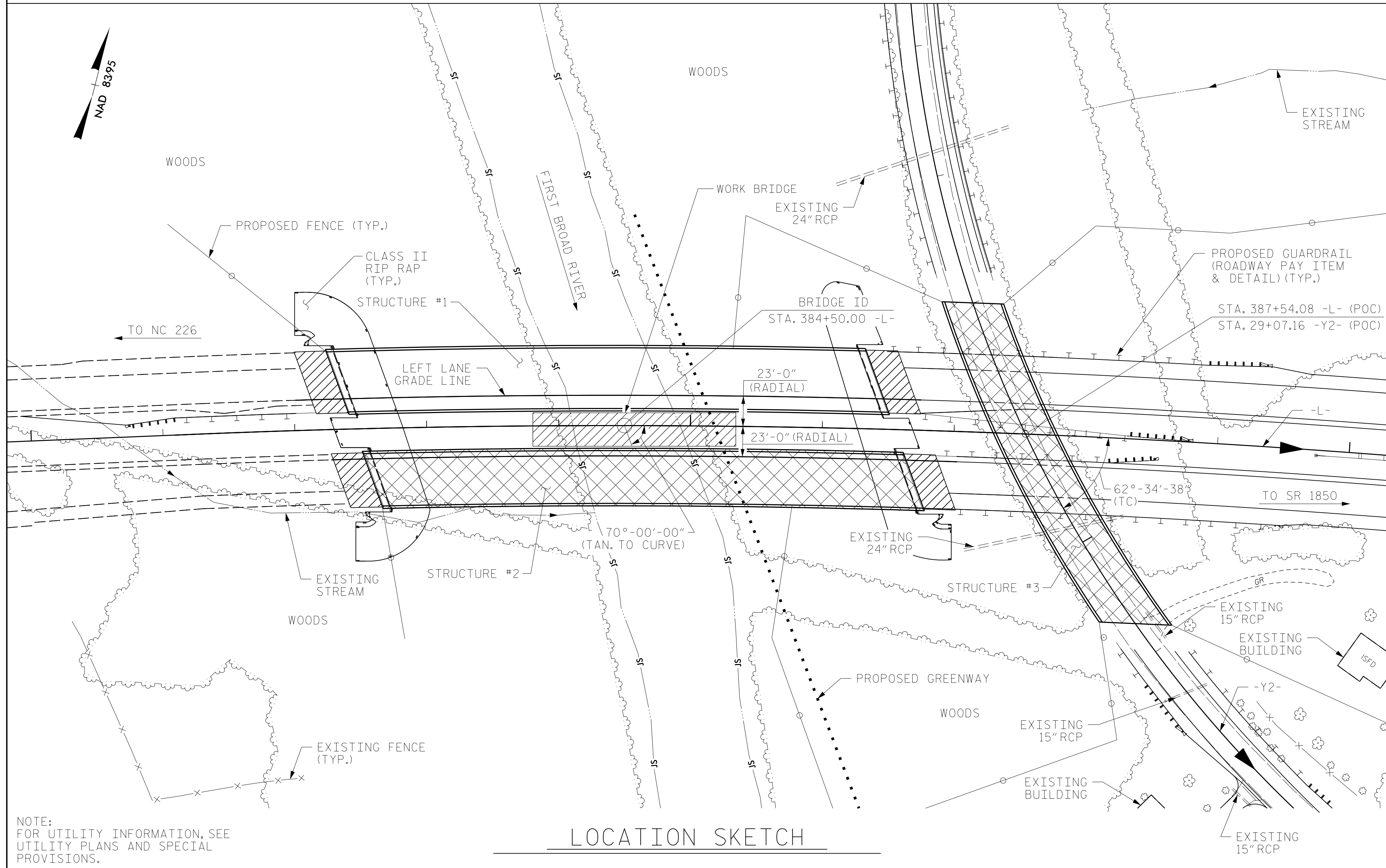


BENCH MARK #17: 8 INCH NAIL IN BASE OF 20 INCH SYCAMORE 93.83' LEFT OF STA. 385+52.11 -L-, EL. 707.47'



NOTE:  
FOR UTILITY INFORMATION, SEE  
UTILITY PLANS AND SPECIAL  
PROVISIONS.

LOCATION SKETCH

NOTES:

- ASSUMED LIVE LOAD = HL 93 OR ALTERNATE LOADING.
- THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR PLACING LOAD ON STRUCTURES, SEE SPECIAL PROVISIONS.
- REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.
- NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.
- THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 1024-5 AND 1024-6 OF THE STANDARD SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB.
- THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18 - EVALUATING SCOUR AT BRIDGES."
- THE SCOUR CRITICAL ELEVATION FOR BENT NO.1 AND NO.2 IS ELEVATION 679. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
- FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
- THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE THE TEMPORARY ACCESS AT STATION 384+50.00 -L- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE.
- FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS, SEE SPECIAL PROVISIONS.
- FOR 74" MODIFIED PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

HYDRAULIC DATA

DESIGN DISCHARGE	= 20,200 CFS
FREQUENCY OF DESIGN FLOOD	= 50 YRS
DESIGN HIGH WATER ELEVATION	= 716.2
DRAINAGE AREA	= 226 SQ. MI.
BASE DISCHARGE (Q100)	= 23,400 CFS
BASE HIGH WATER ELEVATION	= 717.69

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= >31,700 CFS
FREQUENCY OF OVERTOPPING FLOOD	= >500 YRS+
OVERTOPPING FLOOD ELEVATION	= 733.80

TOTAL BILL OF MATERIALS

	CONSTRUCTION, MAINTENANCE & REMOVAL OF TEMP. ACCESS AT STA. 384+50.00 -L-	4'-6" Ø DRILLED PIER IN SOIL	4'-6" Ø DRILLED PIER NOT IN SOIL	PERMANENT STEEL CASING FOR 4'-6" DIA. DRILLED PIER	CSL TESTING	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	74" MODIFIED PRESTRESSED CONCRETE GIRDERS	PILE EXCAVATION IN SOIL	PILE EXCAVATION NOT IN SOIL
	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM	LBS.	APPROX. LBS.	NO. LIN. FT.	LIN. FT.	LIN. FT.
SUPERSTRUCTURE						20,101	19,672		LUMP SUM			15 2027.3		
END BENT No. 1								52.2		9,348				
BENT No. 1		85.1	27.0	54.0	1			69.8		21,459	4,702			
BENT No. 2		76.1	27.0	54.0	1			71.9		21,045	4,587			
END BENT No. 2								52.2		9,413			84	36
TOTAL	LUMP SUM	161.2	54.0	108.0	2	20,101	19,672	246.1	LUMP SUM	61,265	9,289	15 2027.3	84	36

	HP 12x53 STEEL PILES	STEEL PILE POINTS	PILE DRIVING EQUIPMENT SETUP FOR HP 12x53 STEEL PILES	CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS
	NO. LIN. FT.	EACH	EACH	LIN. FT.	TONS	SQ. YDS.	LUMP SUM
SUPERSTRUCTURE				816.3			LUMP SUM
END BENT No. 1	12 480	12	12		400	490	
BENT No. 1							
BENT No. 2							
END BENT No. 2	12 240	12	12		265	325	
TOTAL	24 720	24	24	816.3	665	815	LUMP SUM

PROJECT NO. R-2707C  
CLEVELAND COUNTY  
STATION: 384+50.00 -L-

SHEET 4 OF 4

DRAWN BY : MAL DATE : 11/2016  
CHECKED BY : JMR DATE : 01/2017  
DESIGN ENGINEER OF RECORD: MAL DATE : 11/2016

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING  
LEFT LANE BRIDGE OVER FIRST  
BROAD RIVER ON US 74  
SHELBY BYPASS BETWEEN  
NC 226 AND SR 1850

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-4
1			3			TOTAL SHEETS
2			4			36

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED