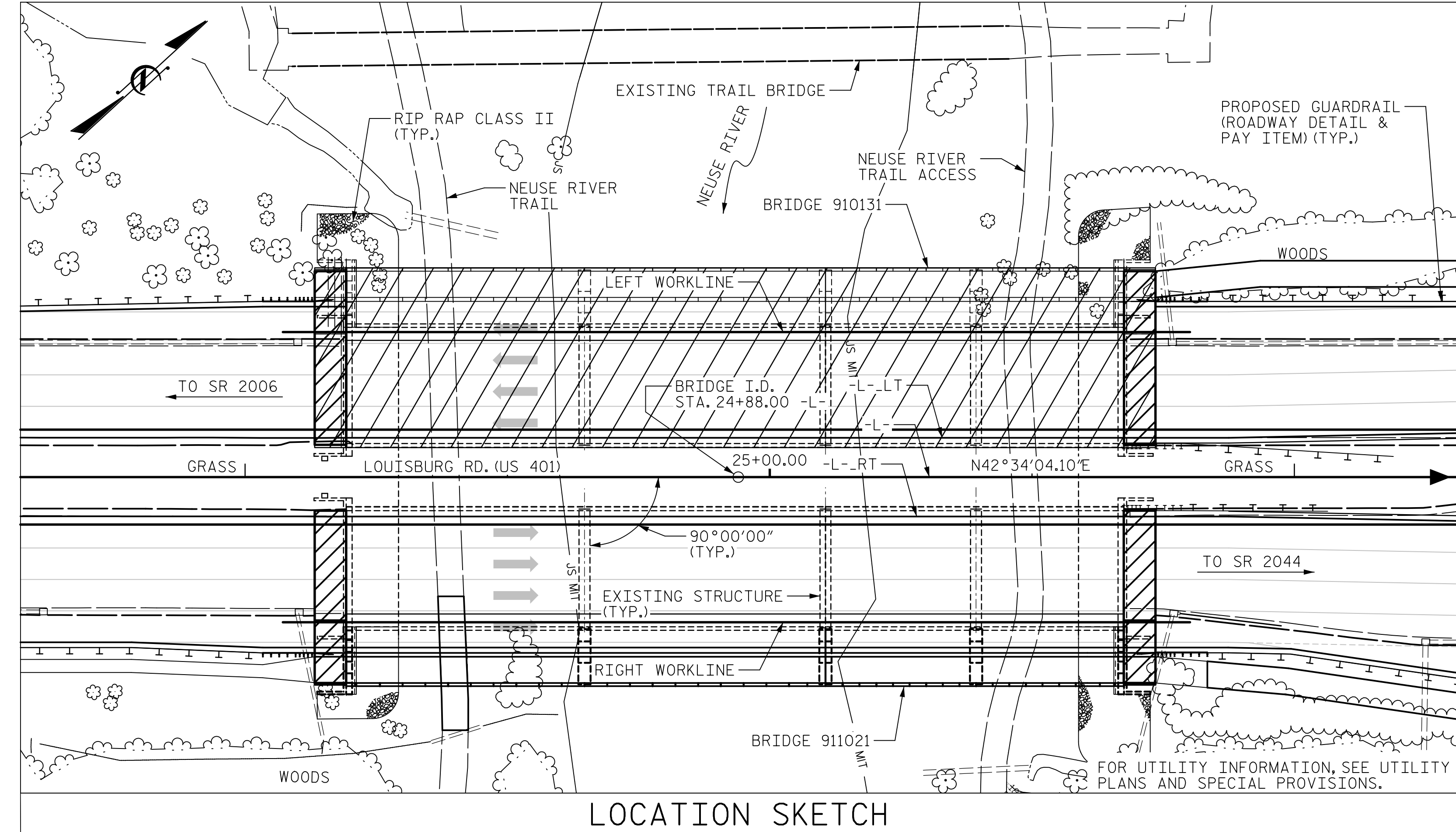


BENCHMARK: BM2; RR SPIKE IN 11" OAK; STA. 29+47.41 -L-, OFFSET 220.51' RT; N 777,257 E 2,140,288 EL. 198.37



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 STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC-18 - EVALUATING SCOUR AT BRIDGES."
- THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE, 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 SLAB 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 REINFORCED CONCRETE DECK SLAB.
- TEMPORARY SHORING WILL BE REQUIRED FOR MAINTENANCE OF TRAFFIC FOR CONSTRUCTION OF END BENTS. FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.
- FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
- FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

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

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THE EXISTING BRIDGE DECK WAS CONSTRUCTED USING 6,000 PSI CONCRETE AND PRESTRESSED CONCRETE GIRDERS HAVING A 28-DAY COMPRESSIVE STRENGTH OF 10,000 PSI.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE 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.

DIMENSIONS AND ELEVATIONS SHOWN FOR THE EXISTING STRUCTURE ARE FROM THE BEST INFORMATION AVAILABLE. IF FIELD CONDITIONS VARY FROM THE PLANS, MODIFICATIONS MAY BE MADE AS NECESSARY AS DIRECTED BY THE ENGINEER.

FOR LIMITS OF PARTIAL REMOVAL OF EXISTING STRUCTURE, SEE APPLICABLE SUPERSTRUCTURE AND SUBSTRUCTURE SHEETS.

THE CONTRACTOR MAY USE ADHESIVELY ANCHORED DOWELS IN PLACE OF EXPOSING AND RETAINING EXISTING STEEL IN THE DECK SLAB AND APPROACH SLAB. ANCHORED DOWELS SHALL MATCH SIZE AND SPACING OF EXISTING BARS CUT AND SHALL BE PLACED IN THE SAME HORIZONTAL PLANE. LEVEL 1 FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE DOWELS IS AS FOLLOWS:  
 #6 BARS: 26.4 KIPS  
 #4 BARS: 12.0 KIPS

**TOTAL BILL OF MATERIAL**

	CONSTRUCTION, MAINTENANCE, AND REMOVAL OF TEMPORARY ACCESS AT STA. 24+88.00	REMOVAL OF EXISTING STRUCTURE AT STA. 24+88.00	ASBESTOS ASSESSMENT	4'-6" Ø DRILLED PIERS IN SOIL	4'-6" Ø DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 4'-6" DIA. DRILLED PIER	PDA TESTING	SID INSPECTION	SPT TESTING	CSL TESTING	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	EPOXY MORTAR REPAIRS	BRIDGE JACKING (TYPE II)	CLASS II SURFACE PREP.	CONCRETE DECK REPAIR FOR PC OVERLAY	45" PRESTRESSED CONCRETE GIRDERS	54" PRESTRESSED CONCRETE GIRDERS	EPOXY COATING CONCRETE GIRDER ENDS		
	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LF	EACH	EACH	EACH	EACH	SQ. FT.	SQ. FT.	SQ. FT.	LUMP SUM	LBS.	LBS.	SQ. FT.	EACH	SQ. YD.	SQ. YD.	NO.	LIN. FT.	NO.	LIN. FT.	SQ. FT.
SUPERSTRUCTURE											6,963	16,296.4						40	15	15	6	337'-6"	6	544'-2 5/8"	550
END BENT 1																									
BENT 1				44.0	16.4	22.4											5								
BENT 2				44.4	25.0	26.4																			
BENT 3				72.4	12.8												2								
END BENT 2																	2								
<b>TOTAL</b>	<b>LUMP SUM</b>	<b>LUMP SUM</b>	<b>LUMP SUM</b>	<b>160.8</b>	<b>54.2</b>	<b>48.8</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>6,963</b>	<b>16,296.4</b>	<b>108.9</b>	<b>LUMP SUM</b>	<b>28,956</b>	<b>8,350</b>	<b>9</b>	<b>40</b>	<b>15</b>	<b>15</b>	<b>6</b>	<b>337.50</b>	<b>6</b>	<b>544.22</b>	<b>550</b>

	PILE DRIVING EQUIPMENT SETUP FOR HP 12X53 STEEL PILES	HP 12X53 STEEL PILES	STEEL PILE POINTS	PILE RE-DRIVES	TWO BAR METAL RAIL	CONCRETE BARRIER RAIL	1'-2" X 2'-6" CONCRETE PARAPET	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	FOAM JOINT SEALS	EPOXY COATING AND DEBRIS REMOVAL	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	PLACING AND FINISHING FOR POLYMER CONC. OVERLAY	SHOT-BLASTING BRIDGE DECK	SCARIFYING BRIDGE DECK	PLUG. OF EXIST. DECK DRAINS	EPOXY RESIN INJECTION	
	EACH	NO.	LIN. FT.	EA.	EA.	LIN. FT.	LIN. FT.	LIN. FT.	TON	SQ. YDS.	LUMP SUM	LUMP SUM	SQ. FT.	CU. YDS.	CU. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	EA.	LIN. FT.
SUPERSTRUCTURE						288.83	320.56	296.33							1,924.8	1,924.8	1,924.8	30	110	
END BENT 1	4	4	140	4					86	95										
BENT 1																				
BENT 2																				
BENT 3																				
END BENT 2	3	3	120	3					147	164										5
<b>TOTAL</b>	<b>7</b>	<b>7</b>	<b>260</b>	<b>7</b>	<b>4</b>	<b>288.83</b>	<b>320.56</b>	<b>296.33</b>	<b>233</b>	<b>259</b>	<b>LUMP SUM</b>	<b>LUMP SUM</b>	<b>410</b>	<b>58.6</b>	<b>58.6</b>	<b>1,924.8</b>	<b>1,924.8</b>	<b>1,924.8</b>	<b>30</b>	<b>115</b>

PROJECT NO. U-5748  
 WAKE COUNTY  
 STATION: 24+88.00 -L-

SHEET 2 OF 2

DRAWN BY: M.L. CATER DATE: 12/2022  
 CHECKED BY: J.C. MORRISON DATE: 12/2022  
 DESIGNED BY: D. RITACCO DATE: 09/2020  
 DESIGN CHECKED BY: J.C. MORRISON DATE: 09/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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**John C. Morrison**  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 SEAL 030474  
 2/10/2023

STATE OF NORTH CAROLINA  
**DEPARTMENT OF TRANSPORTATION**  
 RALEIGH

**GENERAL DRAWING**  
 BRIDGE OVER NEUSE RIVER  
 ON US-401 BETWEEN  
 SR2006 AND SR2224  
**(NORTHBOUND LANES)**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-04
1			3			TOTAL SHEETS
2			4			119

DATE: 2/10/2023 TIME: 4:25:58 PM  
 USER: catter\_m, pw:morrison, ds:lma, 2020 Documents\60609754-U-5748 WAKE COUNTY\Drawings\401\009-U-5748-SMU\_LOC-S1-04\_91021