



LOCATION SKETCH

NOTES:

- ALL STATIONS SHOWN ARE ALONG -LREV- UNLESS NOTED OTHERWISE.
- 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 UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.
- 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 PLACING LOAD ON STRUCTURAL MEMBERS, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE, SEE SPECIAL PROVISIONS.
- FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
- SEE RETAINING WALL SHEETS FOR MSE WALL PLANS AND DETAILS.
- THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.
- 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.
- ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W AND PAINTED IN ACCORDANCE WITH SYSTEM 4 OF ARTICLE 442-8 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- 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 106 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.

GIRDER ERECTION SEQUENCE:

- END BENT BACKWALLS AND ALL ASSOCIATED MSE REINFORCEMENT SHALL BE IN PLACE PRIOR TO PLACING ANY STRUCTURAL STEEL.
- THE STRUCTURAL STEEL SHALL BE SUPPORTED DURING ERECTION IN ITS CAMBERED POSITION.
- ONE EXTERIOR GIRDER AND ITS ADJACENT INTERIOR GIRDER SHALL BE ERECTED WITH ALL DIAPHRAGMS AND LATERAL BRACING BETWEEN THE GIRDERS IN PLACE AND ALL BOLTS TIGHTENED PRIOR TO RELEASE OF THE GIRDERS. THE REMAINING GIRDERS SHALL THEN BE ERECTED WITH ALL DIAPHRAGMS CONNECTING THE GIRDER TO THE PREVIOUSLY ERECTED GIRDERS INSTALLED AND ALL BOLTS TIGHTENED PRIOR TO RELEASE OF THE GIRDER.
- GIRDERS SHALL BE ERECTED AS FOLLOWS: THE FIRST GIRDER SECTION FROM END BENT 1 TO TEMPORARY BENT 1 SHALL BE SET FOR GIRDERS GIR THRU G6R. THE NEXT SECTION OF GIRDER SHALL BE SET FROM THE FIRST GIRDER SECTION PREVIOUSLY ERECTED TO TEMPORARY BENT 2 FOR GIRDERS GIR THRU G6R. THE LAST GIRDER SECTION SHALL BE SET FROM GIRDER SECTION 2 TO END BENT 2 FOR GIRDERS GIR THRU G6R.
- A MINIMUM OF TWO TEMPORARY BENTS SHALL BE USED.
- TEMPORARY BENTS SHALL REMAIN IN PLACE UNTIL ALL DIAPHRAGMS AND LATERAL BRACING ARE INSTALLED AND HIGH STRENGTH BOLTS TIGHTENED.
- TEMPORARY BENTS SHALL PROVIDE BEARING AT CONNECTOR PLATE LOCATIONS. WHEN CONNECTOR PLATES ARE USED AS TEMPORARY BEARING STIFFENERS, DIAPHRAGMS MUST BE ATTACHED.
- THE LOCATION OF THE TEMPORARY BENTS SHOWN ON SHEET 1 ARE APPROXIMATE LOCATIONS AND SHALL BE ADJUSTED BY THE CONTRACTOR AS NECESSARY.
- PLANS FOR TEMPORARY BENTS, ERECTION SEQUENCE AND TEMPORARY BENT REMOVAL SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- TEMPORARY BENTS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED WORKING DRAWINGS AND CALCULATIONS TO THE ENGINEER FOR APPROVAL.
- FOR TEMPORARY BENTS, SEE SPECIAL PROVISIONS.
- DURING THE GIRDER ERECTION PROCEDURE, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY LATERAL BRACING AND OTHER MEANS OF SUPPORT, AS REQUIRED, TO ENSURE STABILITY OF THE GIRDERS, AVOID UPLIFT OF THE GIRDERS AT THE END BENTS AND TEMPORARY ERECTION BENTS AND ENSURE PLUMBNESS OF THE GIRDER WEBS IN THE FINAL POSITION.
- NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR PROVIDING THE TEMPORARY BENTS, TEMPORARY LATERAL BRACING AND OTHER MEANS OF SUPPORT. THE COST FOR ALL MATERIALS, EQUIPMENT, TOOLS, AND LABOR NECESSARY TO PROVIDE THE TEMPORARY SUPPORTS SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM BID PRICE FOR STRUCTURAL STEEL.
- THE CONTRACTOR'S ERECTION PLAN SHALL INCLUDE A METHOD OF TEMPORARY BENT REMOVAL THAT WILL UNIFORMLY APPLY THE STRUCTURAL STEEL WEIGHT TO THE DIAPHRAGMS AND ENSURE THE GIRDERS WILL REMAIN IN THE CAMBERED POSITION.
- THE CONTRACTOR MAY SUBMIT ALTERNATE ERECTION METHODS. PLANS FOR SUCH ERECTION METHODS SHALL BE APPROVED BY THE ENGINEER.

TOTAL BILL OF MATERIAL

LOCATION	PDA TESTING	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	STRUCTURAL STEEL	HP 12 x 53 STEEL PILES		CONCRETE BARRIER RAIL	4" SLOPE PROTECTION	DISC BEARINGS	EXPANSION JOINT SEALS	CONCRETE BARRIER RAIL WITH MOMENT SLAB
	EACH	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM	LBS.	APPROX. LBS.	NO.	LIN. FT.	LIN. FT.	SQ. YDS.	LUMP SUM	LUMP SUM	LIN. FT.
SUPERSTRUCTURE		14,286	15,750		LUMP SUM		895,790			471.7		LUMP SUM	LUMP SUM	
END BENT 1				71.6		14,481		20	1,100		15.5			297.0
END BENT 2				71.6		14,477		20	750		15.5			164.8
TOTAL	1	14,286	15,750	143.2	LUMP SUM	28,958	895,790	40	1,850	471.7	31.0	LUMP SUM	LUMP SUM	461.8

PROJECT NO. U-2524D
GUILFORD COUNTY
 STATION: 495+22.00 -LREV-
18+84.00 -Y8-
 SHEET 4 OF 5

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DRAWN BY: C.E.M./N.B.S. DATE: 8-7-15
 CHECKED BY: B. J. BELL DATE: 3-23-16

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

7/18/2016

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON GREENSBORO WESTERN URBAN LOOP OVER LAWNDALE DRIVE BETWEEN SR 2347 AND SR 1001

RIGHT LANES

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			35

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