

DATE: 3/29/2022
TIME: 2:21:27 PM

USER: Bin.Tam.C.Hegdeck
DIR: R:\Structures\04 Drawings\01_0035_BR0044_LSMU_005.dgn

DEAD LOAD DEFLECTION TABLE FOR GIRDERS																						
0.6" DIA. LOW-RELAXATION STRANDS		SPAN E																				
		GIRDERS 1 & 4																				
TWENTIETH POINTS		BRG.	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑		0.000	0.011	0.021	0.031	0.040	0.048	0.055	0.061	0.064	0.067	0.068	0.067	0.064	0.061	0.055	0.048	0.040	0.031	0.021	0.011	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓		0.000	0.005	0.009	0.015	0.019	0.023	0.026	0.029	0.030	0.032	0.032	0.032	0.031	0.029	0.026	0.023	0.019	0.015	0.010	0.005	0.000
FINAL CAMBER ↑		0	1/16"	1/8"	3/16"	1/4"	5/16"	3/8"	3/8"	7/16"	7/16"	7/16"	7/16"	3/8"	3/8"	5/16"	5/16"	1/4"	3/16"	1/8"	1/16"	0

0.6" DIA. LOW-RELAXATION STRANDS		SPAN E																				
		GIRDERS 2 & 3																				
TWENTIETH POINTS		BRG.	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑		0.000	0.011	0.021	0.031	0.040	0.048	0.055	0.061	0.064	0.067	0.068	0.067	0.064	0.061	0.055	0.048	0.040	0.031	0.021	0.011	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓		0.000	0.005	0.010	0.015	0.019	0.023	0.026	0.029	0.031	0.032	0.032	0.032	0.031	0.029	0.027	0.023	0.019	0.015	0.010	0.005	0.000
FINAL CAMBER ↑		0	1/16"	1/8"	3/16"	1/4"	5/16"	3/8"	3/8"	3/8"	7/16"	7/16"	7/16"	3/8"	3/8"	5/16"	5/16"	1/4"	3/16"	1/8"	1/16"	0

* INCLUDES FUTURE WEARING SURFACE IN SUPERIMPOSED DEAD LOAD.

ALL VALUES ARE SHOWN IN FEET (DECIMAL FORM), EXCEPT "FINAL CAMBER", WHICH IS SHOWN IN INCHES (FRACTION FORM).

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW-RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL SHALL BE GRADE 60.

APPLY EPOXY PROTECTIVE COATING TO END OF GIRDER SURFACES INDICATED IN ELEVATION VIEW.

EMBEDDED PLATE "B-1" SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ANCHOR STUDS SHALL CONFORM TO AASHTO M169 GRADES 1010 THROUGH 1020 OR APPROVED EQUAL, AND SHALL MEET THE TYPE "B" REQUIREMENTS OF SUBSECTION 7.3 OF THE ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

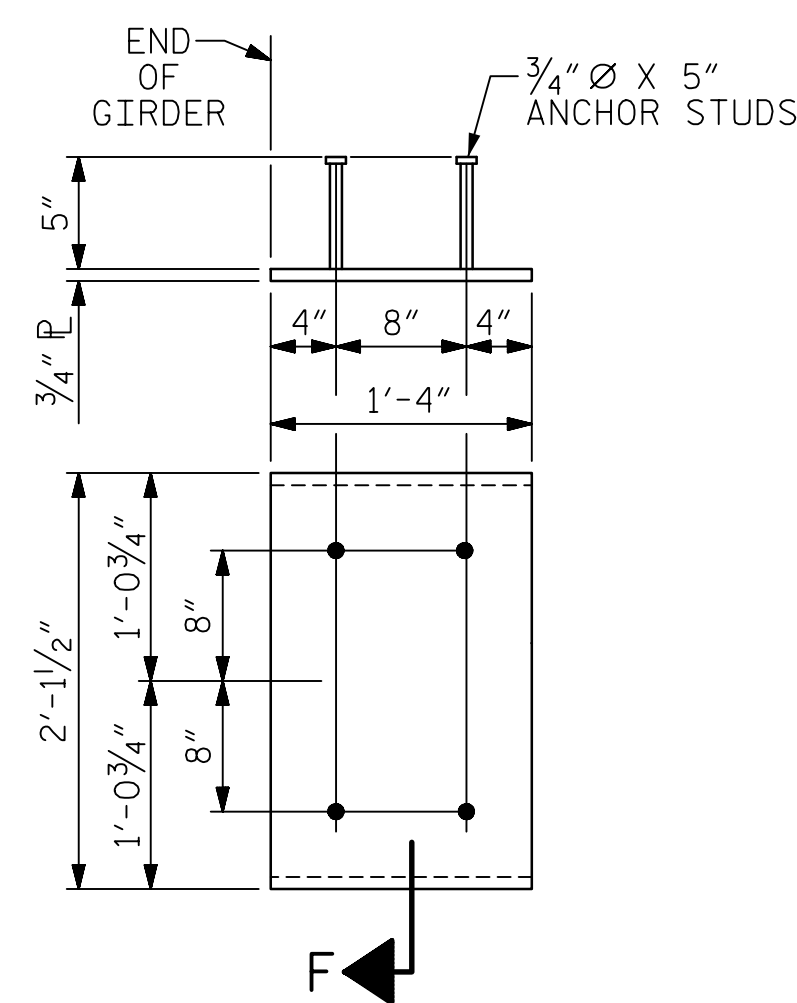
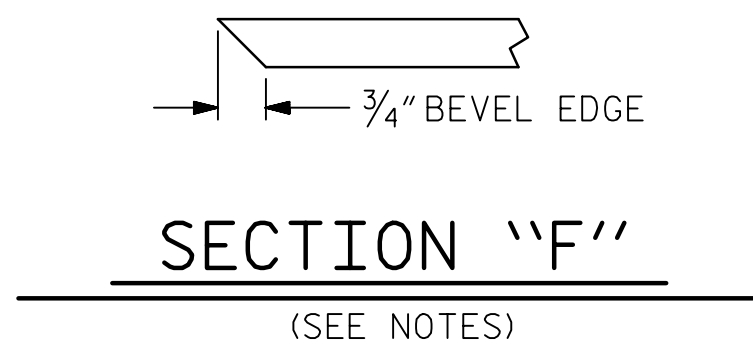
THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE GIRDER SHALL BE DONE WHEN CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 6,800 PSI. MIN.

DEPENDING ON THE TYPE OF SYSTEM USED TO SUPPORT THE DECK SLAB FORMS, PRESET ANCHORS MAY BE NECESSARY IN THE PRESTRESSED CONCRETE GIRDER.

THE TOP SURFACE OF THE GIRDER, EXCLUDING THE OUTSIDE 4", SHALL BE RAKED TO A DEPTH OF 1/4". THE TOP OF GIRDER IN THE REGION OF THE LINK SLAB SHALL BE SMOOTH (NOT RAKED) AND FREE OF STIRRUPS/STUDS, ANCHOR STUDS, DECK FORMWORK ATTACHMENTS, AND OVERHANG FALSEWORK/FORMWORK ATTACHMENTS.

A 2" x 2" CHAMFER IS ALLOWED AT THE INTERSECTION OF THE WEB AND THE BOTTOM FLANGE OF THE 63" AND 72" MODIFIED BULB TEES ONLY.

THE CONTRACTOR HAS THE OPTION TO PROVIDE, AT NO ADDITIONAL COST TO THE DEPARTMENT, 2 ADDITIONAL STRANDS AT THE TOP OF THE GIRDER TO FACILITATE TYING OF THE REINFORCING STEEL. THESE STRANDS SHALL BE PULLED TO A LOAD OF 4500 lbs.



PROJECT NO. BR-0044
ROCKINGHAM COUNTY
STATION: 21+97.00 -L-

SHEET 5 OF 6

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NORTH CAROLINA
PROFESSIONAL
SEAL
041343
GREGORY R. COL
5/15/2022

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUPERSTRUCTURE					
PRESTRESSED CONCRETE GIRDER DETAILS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-18
					TOTAL SHEETS 39

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : D.R. DRUM	DATE : 02/2022
CHECKED BY : G.R. COLS	DATE : 02/2022
DESIGNED BY : D.R. DRUM	DATE : 02/2022
DESIGN CHECKED BY : G.R. COLS	DATE : 02/2022