

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.

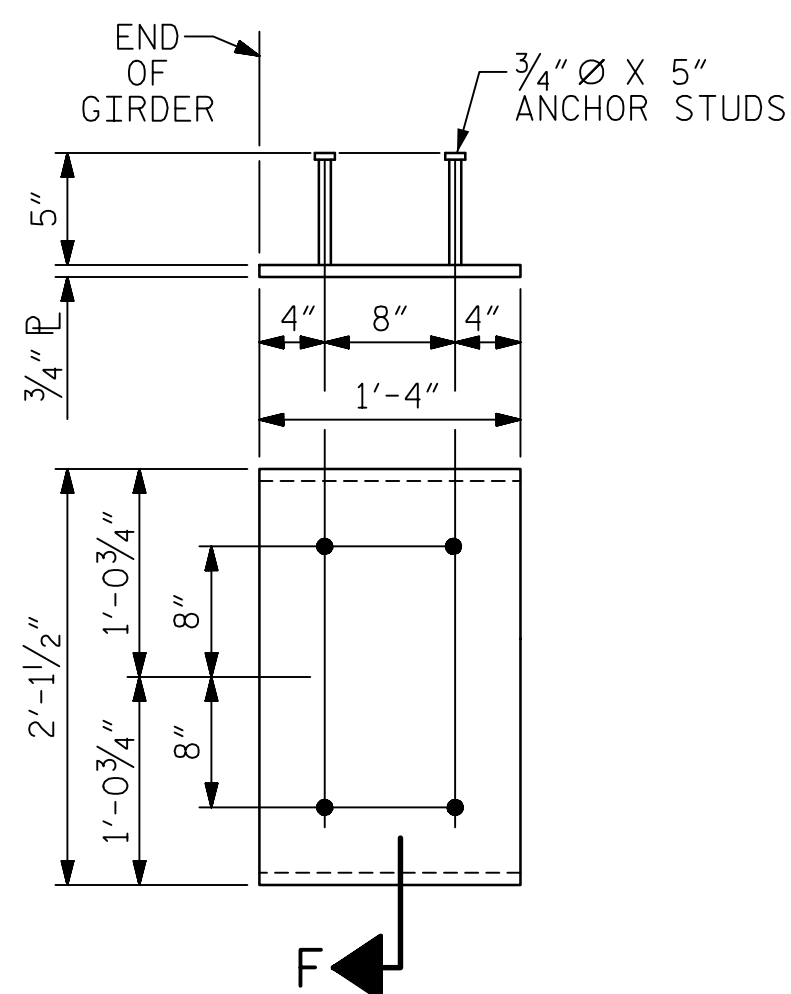
AT ENDS OF GIRDERS TO BE EMBEDDED IN CONCRETE DIAPHRAGMS OR END WALLS, PRESTRESSING STRANDS MAY EXTEND A MAXIMUM OF 2" BEYOND THE GIRDER ENDS. OTHERWISE, PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE GIRDER ENDS.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE GIRDER SHALL BE DONE WHEN CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 5500 PSI.

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

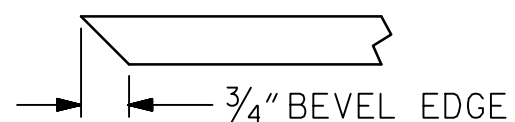
THE TOP SURFACE OF THE GIRDER, EXCLUDING THE OUTSIDE 4" AND THE SHADED AREA NEAR BENTS, SHALL BE RAKED TO A DEPTH OF 1/4".

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.



EMBEDDED PLATE "B-1" DETAILS FOR AASHTO TYPE IV GIRDER

(2 REQ'D PER GIRDER)



SECTION "F"

(SEE NOTES)

DEAD LOAD DEFLECTION TABLE FOR GIRDERS OF SPAN A

0.6" DIA. LOW-RELAXATION		GIRDERS 1 & 7																			
TWENTIETH POINTS	BRG.	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.023	0.045	0.066	0.085	0.102	0.117	0.129	0.137	0.142	0.144	0.142	0.137	0.129	0.117	0.102	0.085	0.066	0.045	0.023	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.013	0.026	0.038	0.051	0.061	0.070	0.077	0.083	0.085	0.087	0.085	0.083	0.077	0.070	0.061	0.051	0.038	0.026	0.013	0.000
FINAL CAMBER ↑	0	1/8	1/4	5/16	7/16	1/2	9/16	5/8	5/8	11/16	11/16	11/16	5/8	5/8	9/16	1/2	7/16	5/16	1/4	1/8	0
0.6" DIA. LOW-RELAXATION		GIRDERS 2, 3 & 4																			
TWENTIETH POINTS	BRG.	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.023	0.045	0.066	0.085	0.102	0.117	0.129	0.137	0.142	0.144	0.142	0.137	0.129	0.117	0.102	0.085	0.066	0.045	0.023	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.014	0.029	0.043	0.057	0.068	0.079	0.086	0.093	0.096	0.098	0.096	0.093	0.086	0.079	0.068	0.057	0.043	0.029	0.014	0.000
FINAL CAMBER ↑	0	1/8	3/16	1/4	5/16	7/16	7/16	1/2	1/2	9/16	9/16	9/16	1/2	1/2	7/16	7/16	5/16	1/4	3/16	1/8	0
0.6" DIA. LOW-RELAXATION		GIRDERS 5 & 6																			
TWENTIETH POINTS	BRG.	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.023	0.045	0.066	0.085	0.102	0.117	0.129	0.137	0.142	0.144	0.142	0.137	0.129	0.117	0.102	0.085	0.066	0.045	0.023	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.011	0.022	0.033	0.044	0.053	0.061	0.067	0.072	0.074	0.076	0.074	0.072	0.067	0.061	0.053	0.044	0.033	0.022	0.011	0.000
FINAL CAMBER ↑	0	1/8	1/4	3/8	1/2	5/8	11/16	3/4	3/4	13/16	13/16	13/16	3/4	3/4	11/16	5/8	1/2	3/8	1/4	1/8	0

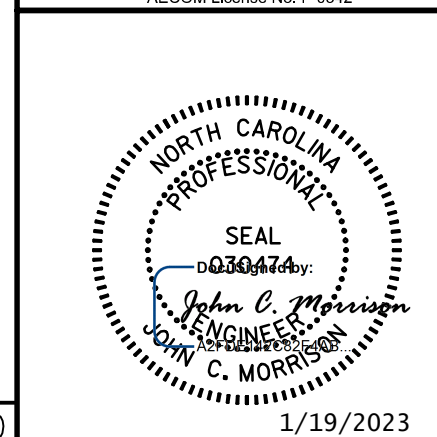
DEAD LOAD DEFLECTION TABLE FOR GIRDERS OF SPAN B

0.6" DIA. LOW-RELAXATION		GIRDERS 1 & 7																			
TWENTIETH POINTS	BRG.	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.023	0.045	0.066	0.085	0.102	0.117	0.129	0.137	0.142	0.144	0.142	0.137	0.129	0.117	0.102	0.085	0.066	0.045	0.023	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.018	0.035	0.053	0.070	0.083	0.097	0.105	0.114	0.117	0.120	0.117	0.114	0.105	0.097	0.083	0.070	0.053	0.035	0.018	0.000
FINAL CAMBER ↑	0	1/16	1/8	3/16	3/16	1/4	1/4	1/4	1/4	5/16	5/16	5/16	1/4	1/4	1/4	1/4	3/16	3/16	1/8	1/16	0
0.6" DIA. LOW-RELAXATION		GIRDERS 2, 3 & 4																			
TWENTIETH POINTS	BRG.	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.023	0.045	0.066	0.085	0.102	0.117	0.129	0.137	0.142	0.144	0.142	0.137	0.129	0.117	0.102	0.085	0.066	0.045	0.023	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.020	0.040	0.059	0.078	0.078	0.109	0.118	0.128	0.131	0.134	0.131	0.128	0.118	0.109	0.093	0.078	0.059	0.040	0.020	0.000
FINAL CAMBER ↑	0	1/16	1/16	1/16	1/16	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/16	1/16	1/16	1/16	0
0.6" DIA. LOW-RELAXATION		GIRDERS 5 & 6																			
TWENTIETH POINTS	BRG.	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0.000	0.023	0.045	0.066	0.085	0.102	0.117	0.129	0.137	0.142	0.144	0.142	0.137	0.129	0.117	0.102	0.085	0.066	0.045	0.023	0.000
* DEFLECTION DUE TO SUPERIMPOSED DL ↓	0.000	0.016	0.032	0.047	0.063	0.075	0.087	0.095	0.103	0.105	0.108	0.105	0.103	0.095	0.087	0.075	0.063	0.047	0.032	0.016	0.000
FINAL CAMBER ↑	0	1/16	3/16	1/4	1/4	5/16	3/8	3/8	7/16	7/16	7/16	7/16	7/16	3/8	3/8	5/16	1/4	1/4	3/16	1/16	0

* INCLUDES FUTURE WEARING SURFACE.
ALL VALUES ARE SHOWN IN FEET (DECIMAL FORM), EXCEPT "FINAL CAMBER", WHICH IS GIVEN IN INCHES (FRACTION FORM).

PROJECT NO. B-4654
WAKE COUNTY
 STATION: 22+71.80 -L-

SHEET 3 OF 3



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

**PRESTRESSED CONCRETE GIRDER
 DETAILS AND DEAD LOAD
 DEFLECTIONS**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-17
1			3			TOTAL SHEETS
2			4			49

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DATE: 1/19/2023
 TIME: 10:56:57 AM

USER: muench
 DN: /c=us/e=vmorri@ncdot.com/f=samf@ncdot.com/ou=USRAL3/ou=Vp/ou=Projects/ou=60436195-b-4654/ou=K9/CAD/CAD_V0_MCDOT_TIP/Structures/04_Drawing/400_33_SIT_B4654_SKU_L_P005.dgn

ASSEMBLED BY : K. MUENCH	DATE : 05/2022
CHECKED BY : J.C. MORRISON	DATE : 05/2022
DRAWN BY : ELR 11/91	REV. 1/15 MAA/TMG
CHECKED BY : GRP 11/91	REV. 2/15 MAA/TMG
	REV. 12/17 MAA/THC