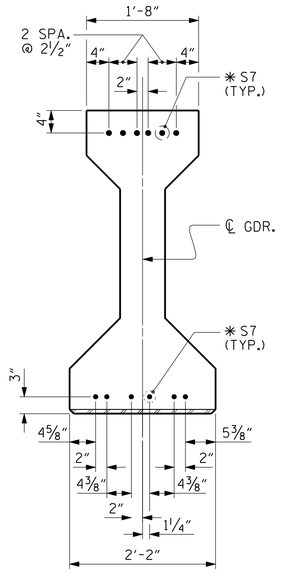
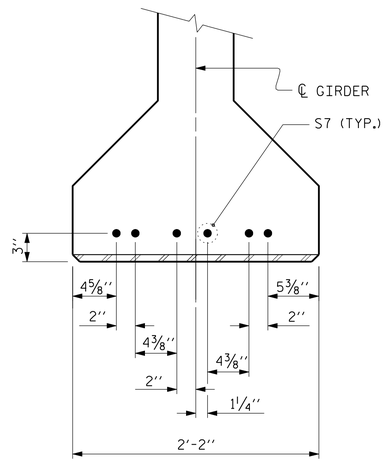


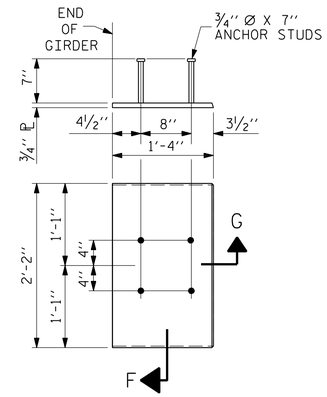
DETAIL "A"

(FOR AASHTO TYPE IV GIRDERS AT INTEGRAL END BENTS)



DETAIL "B"

(FOR AASHTO TYPE IV GIRDERS)



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

(2 REQ'D PER GIRDER)

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.

EMBEDDED PLATE "B-1" SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. BEVEL EDGES OF PLATE "B-1" TO GIVE CLOSE FIT BUT NOT TIGHT FIT TO STEEL CASTING FORM.

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.

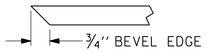
THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE GIRDER SHALL BE DONE WHEN CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 6800 PSI FOR GIRDERS IN SPAN A AND 4500 PSI FOR GIRDERS IN SPANS B & C.

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 ¼".

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.

SECTION "G"



SECTION "F"

(SEE NOTES)

DEAD LOAD DEFLECTION TABLE FOR GIRDERS - SPAN A

0.6"Ø LOW RELAXATION	GIRDERS 1 & 5																				
TWENTIETH POINTS	0	.05	.1	.15	.2	.25	.3	.35	.4	.45	.5	.55		.65	.7	.75	.8	.85	.9	.95	0
CAMBER (GIRDER ALONE IN PLACE) ▲	0.0	0.049	0.099	0.138	0.177	0.201	0.224	0.238	0.253	0.258	0.262	0.258	0.253	0.238	0.224	0.201	0.177	0.138	0.099	0.049	0.0
✱ DEFLECTION DUE TO SUPERIMPOSED D.L. ▼	0.0	0.024	0.049	0.072	0.096	0.114	0.132	0.144	0.156	0.160	0.164	0.160	0.156	0.144	0.132	0.114	0.096	0.072	0.049	0.024	0.0
FINAL CAMBER ▲	0.0	5/16"	5/8"	13/16"	1"	1 1/16"	1 1/8"	1 1/8"	1 3/16"	1 3/16"	1 3/16"	1 3/16"	1 3/16"	1 1/8"	1 1/8"	1 1/16"	1"	13/16"	5/8"	5/16"	0.0
0.6"Ø LOW RELAXATION	GIRDERS 2 - 4																				
TWENTIETH POINTS	0	.05	.1	.15	.2	.25	.3	.35	.4	.45	.5	.55	.6	.65		.75	.8	.85	.9	.95	0
CAMBER (GIRDER ALONE IN PLACE) ▲	0.0	0.049	0.099	0.138	0.177	0.201	0.224	0.238	0.253	0.258	0.262	0.258	0.253	0.238	0.224	0.201	0.177	0.138	0.099	0.049	0.0
✱ DEFLECTION DUE TO SUPERIMPOSED D.L. ▼	0.0	0.025	0.051	0.075	0.099	0.119	0.138	0.150	0.162	0.166	0.170	0.166	0.162	0.150	0.138	0.119	0.099	0.075	0.051	0.025	0.0
FINAL CAMBER ▲	0.0	5/16"	9/16"	3/4"	15/16"	1"	1 1/16"	1 1/16"	1 1/16"	1 1/8"	1 1/8"	1 1/8"	1 1/16"	1 1/16"	1 1/16"	1"	15/16"	3/4"	9/16"	5/16"	0.0

DEAD LOAD DEFLECTION TABLE FOR GIRDERS - SPANS B & C

0.6"Ø LOW RELAXATION	GIRDERS 1 & 5											GIRDERS 2 - 4										
TENTH POINTS	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0
CAMBER (GIRDER ALONE IN PLACE) ▲	0.0	0.049	0.084	0.107	0.120	0.124	0.120	0.107	0.084	0.049	0.0	0.0	0.049	0.084	0.107	0.120	0.124	0.120	0.107	0.084	0.049	0.0
✱ DEFLECTION DUE TO SUPERIMPOSED D.L. ▼	0.0	0.020	0.040	0.056	0.066	0.069	0.066	0.056	0.040	0.020	0.0	0.0	0.021	0.042	0.058	0.068	0.072	0.068	0.058	0.042	0.021	0.0
FINAL CAMBER ▲	0.0	3/8"	1/2"	5/8"	5/8"	11/16"	5/8"	5/8"	1/2"	3/8"	0.0	0.0	5/16"	1/2"	9/16"	5/8"	5/8"	5/8"	9/16"	1/2"	5/16"	0.0

✱ INCLUDES FUTURE WEARING SURFACE

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

PROJECT NO. U-2579B

FORSYTH COUNTY

STATION: 26+60.00 -Y4RPBD-

SHEET 4 OF 5

PLANS PREPARED BY:

MULKEY ENGINEERS & CONSULTANTS
PO BOX 33127
RALEIGH, N.C. 27636
(919) 851-1912
(919) 851-1918 (FAX)
WWW.MULKEYINC.COM
NC LICENSE NO. C-1021

THIS STANDARD DRAWING REVIEWED & ADOPTED FOR USE AT THE REFERENCED LOCATION BY THE UNDERSIGNED:

NORTH CAROLINA PROFESSIONAL SEAL 034352 ENGINEER TIMOTHY R. PETERSON

DocuSigned by: Tim R Peterson 5/27/2014
6DC4171647CD40F...

DWG. NO. RPBD-17

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

PRESTRESSED CONCRETE GIRDER CONTINUOUS FOR LIVE LOAD DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-414
1			3			TOTAL SHEETS
2			4			707

STR #11

STD. NO. PCG9

ASSEMBLED BY : W. B. ALLEN DATE : 4/13
CHECKED BY : T. R. PETERSON DATE : 6/13

DRAWN BY : ELR 11/91
CHECKED BY : GRP 11/91

REV. 7/10/01RR LES/RDR
REV. 5/1/06 TLA/GM
REV. 10/1/11 MAA/GM

5/27/2014 10:55:42 AM R:\Structures\U-2579B Ramp BD\U-2579B_RPBD_S0_G2_0.dgn