

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW-RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203M EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

TIE ROD ASSEMBLY SHALL BE AASHTO M270 GRADE 250 STRUCTURAL STEEL.

ALL REINFORCING STEEL SHALL BE GRADE 420.

APPLY EPOXY PROTECTIVE COATING TO END OF GIRDER SURFACES INDICATED IN ELEVATION VIEW. FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

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

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE GIRDER SHALL BE DONE WHEN CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 33.1 MPa FOR GIRDERS WITH DRAPED DEBONDED STRANDS AND NOT LESS THAN 40.1 MPa FOR GIRDERS WITH STRAIGHT DEBONDED STRANDS.

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 100mm, SHALL BE RAKED TO A DEPTH OF 6mm.

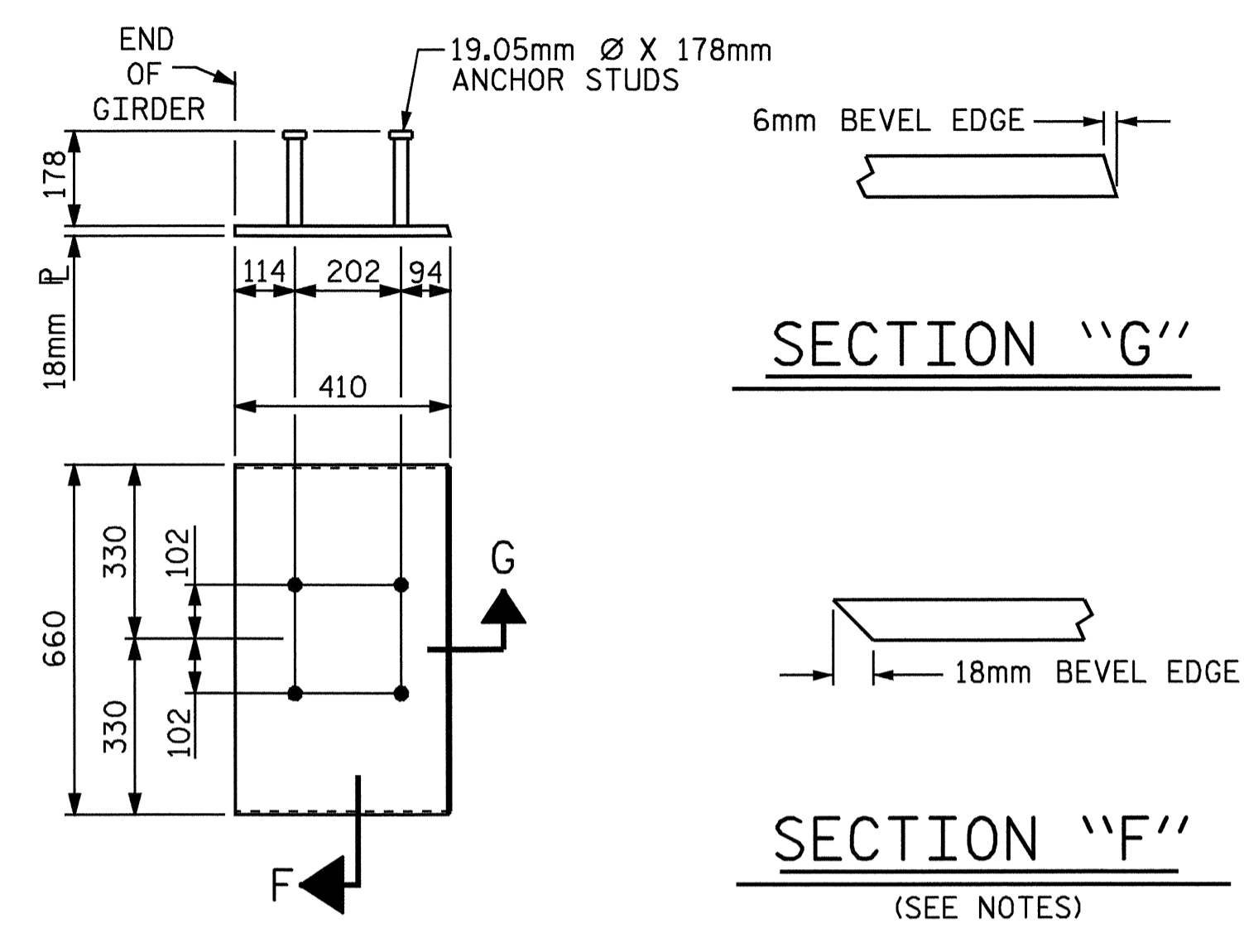
WHEN DRAPED STRANDS ARE DETAILED, THE LONGITUDINAL LOCATION OF THE HOLD DOWN DEVICES SHALL BE WITHIN 150mm OF THE LOCATION SHOWN AND THE CENTER OF GRAVITY OF THE GROUP OF DRAPED STRANDS SHALL BE LOCATED WITHIN 13mm OF THE THEORETICAL LOCATION SHOWN.

FOR VERTICAL CRACKS IN PRESTRESSED CONCRETE GIRDERS PRIOR TO DETENSIONING, SEE SPECIAL PROVISIONS.

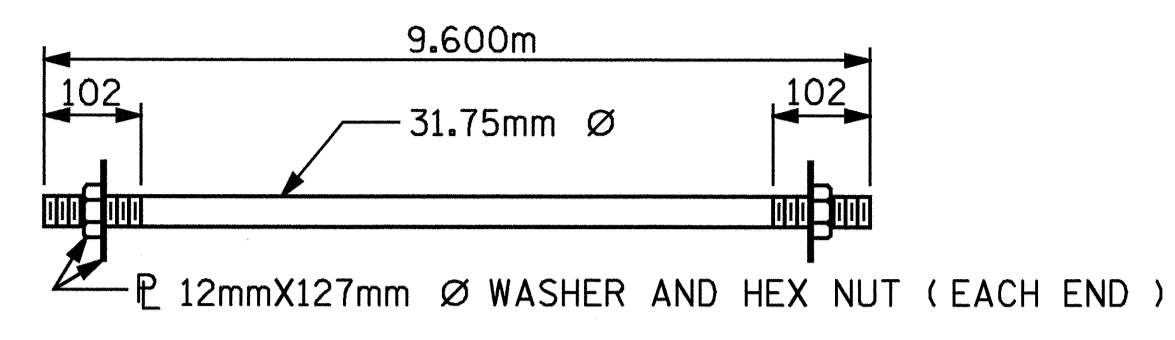
A 50mm x 50mm CHAMFER IS ALLOWED AT THE INTERSECTION OF THE WEB AND THE BOTTOM FLANGE OF THE 1600mm MODIFIED BULB TEES ONLY.

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 20 Kn.

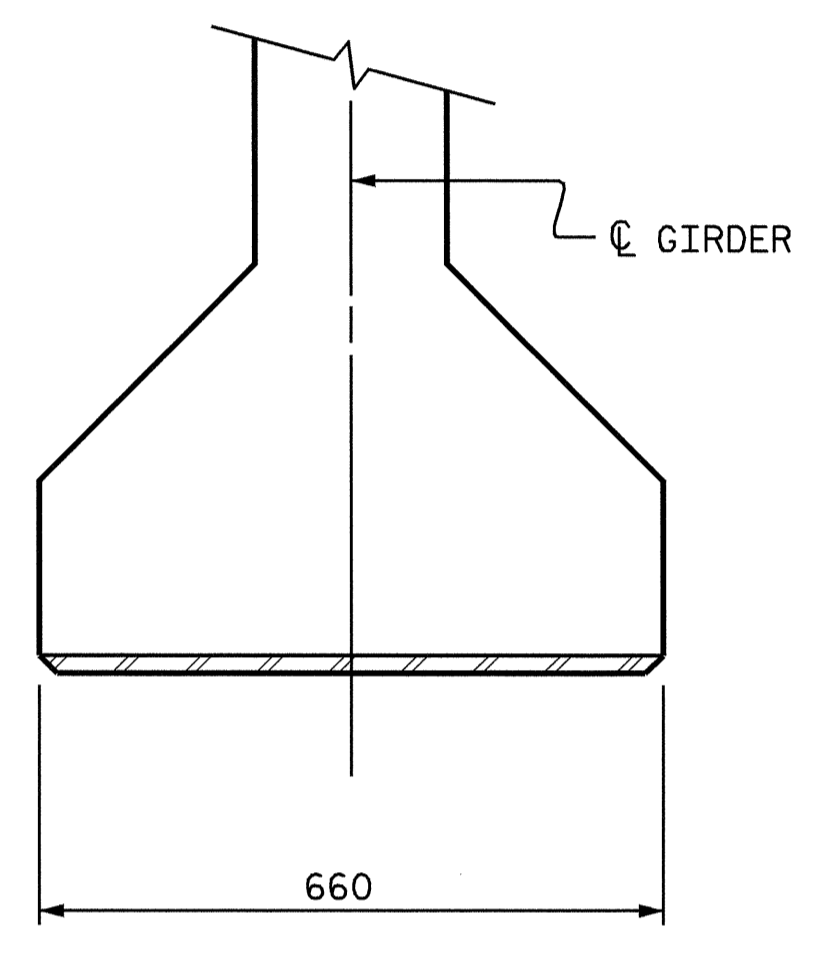
FOR PRECAST CONCRETE GIRDERS SEE SPECIAL PROVISIONS.



EMBEDDED PLATE "B-1" DETAILS FOR 1600 MODIFIED BULB TEE
 (2 REQ'D PER GIRDER)



31.75mm Ø TIE ROD ASSEMBLY
 (1 COMPLETE ASSEMBLY REQUIRED)
 FOR SPANS 'A'



DETAIL "A"
 (FOR 1600 MODIFIED BULB TEE)

DEAD LOAD DEFLECTION TABLE FOR GIRDERS											
12.70 Ø LOW RELAXATION	SPAN A										
	GIRDERS 1 THRU 5										
TENTH POINTS	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0
CAMBER (GIRDER ALONE IN PLACE)	↑ 0	0.029	0.055	0.076	0.089	0.093	0.089	0.076	0.055	0.029	0
* DEFLECTION DUE TO SUPERIMPOSED D.L.	↓ 0	0.012	0.023	0.032	0.037	0.040	0.037	0.032	0.023	0.012	0
FINAL CAMBER	↑ 0	17	32	44	52	53	52	44	32	17	0

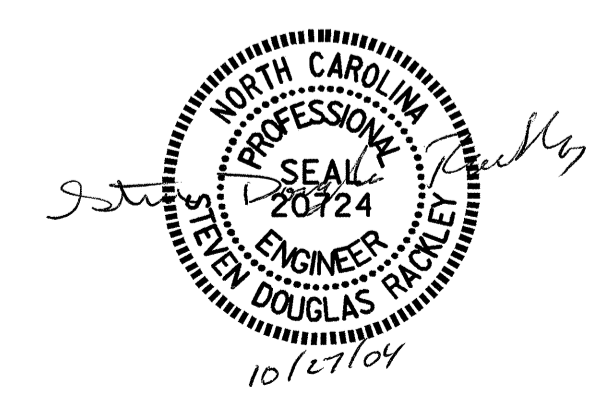
DEAD LOAD DEFLECTION TABLE FOR GIRDERS											
15.24 Ø LOW RELAXATION	SPAN A										
	GIRDERS 1 THRU 5										
TENTH POINTS	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0
CAMBER (GIRDER ALONE IN PLACE)	↑ 0	.025	.048	.065	.076	.080	.076	.065	.048	.025	0
* DEFLECTION DUE TO SUPERIMPOSED D.L.	↓ 0	.012	.023	.032	.037	.040	.037	.032	.023	.012	0
FINAL CAMBER	↑ 0	13	25	33	39	40	39	33	25	13	0

* INCLUDES FUTURE WEARING SURFACE
 ALL VALUES ARE SHOWN IN METERS, EXCEPT "FINAL CAMBER" WHICH IS SHOWN IN MILLIMETERS.

PROJECT NO. B-3376
WAKE COUNTY
 STATION: 12+90.000 -L-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD
 PRESTRESSED CONCRETE
 GIRDER DETAILS



DRAWN BY : A. K. PATEL DATE : 6-28-04
 CHECKED BY : M. K. BEARD DATE : 7-14-04

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			23