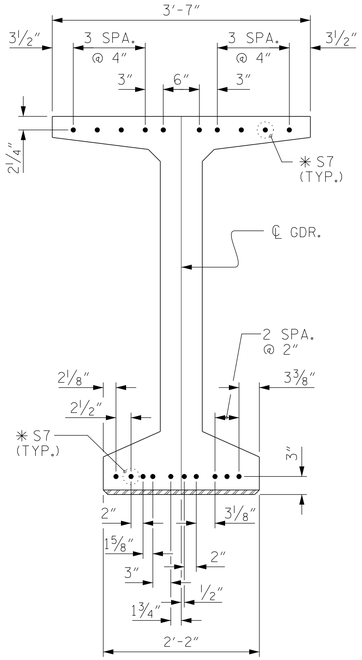
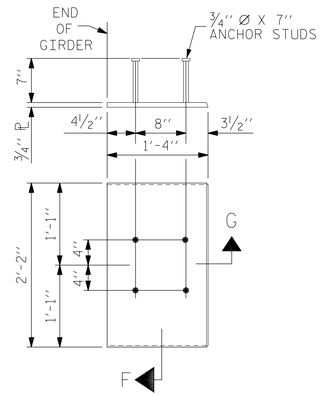


DETAIL "C"

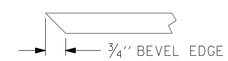
(FOR 63" & 72" MODIFIED BULB TEES)



EMBEDDED PLATE "B-1" DETAILS FOR AASHTO TYPE IV GIRDER AND 63" & 72" MODIFIED BULB TEES

(2 REQ'D PER GIRDER)

SECTION "G"



SECTION "F"

(SEE NOTES)

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. 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 6400 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", SHALL BE RAKED TO A DEPTH OF 1/4".

WHEN DRAPED STRANDS ARE DETAILED, THE LONGITUDINAL LOCATION OF THE HOLD DOWN DEVICES SHALL BE WITHIN 6" OF THE LOCATION SHOWN AND THE CENTER OF GRAVITY OF THE GROUP OF DRAPED STRANDS SHALL BE LOCATED WITHIN 1/2" OF THE THEORETICAL LOCATION SHOWN.

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.

DEAD LOAD DEFLECTION TABLE - EXTERIOR A1 & A5

0.6 Ø LOW RELAXATION																					
20TH POINTS	℄ BRG.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0	.047	.092	.135	.175	.210	.239	.263	.280	.290	.294	.290	.280	.263	.239	.210	.175	.135	.092	.047	0
* DEFLECTION DUE TO SUPERIMPOSED D.L. ↓	0	.025	.050	.074	.098	.116	.135	.147	.159	.163	.167	.163	.159	.147	.135	.116	.098	.074	.050	.025	0
FINAL CAMBER ↑	0	1/4"	1/2"	3/4"	15/16"	1 1/8"	1 1/4"	1 3/8"	1 7/16"	1 1/2"	1 1/2"	1 1/2"	1 7/16"	1 7/16"	1 1/4"	1 1/8"	15/16"	3/4"	1/2"	1/4"	0

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

DEAD LOAD DEFLECTION TABLE - INTERIOR A2, A3 & A4

0.6 Ø LOW RELAXATION																					
20TH POINTS	℄ BRG.	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	℄ BRG.
CAMBER (GIRDER ALONE IN PLACE) ↑	0	.047	.092	.135	.175	.210	.239	.263	.280	.290	.294	.290	.280	.263	.239	.210	.175	.135	.092	.047	0
* DEFLECTION DUE TO SUPERIMPOSED D.L. ↓	0	.027	.054	.080	.106	.126	.147	.160	.173	.178	.182	.178	.173	.160	.147	.126	.106	.080	.054	.027	0
FINAL CAMBER ↑	0	1/4"	1/2"	11/16"	7/8"	1"	1 3/16"	1 5/16"	1 3/8"	1 7/16"	1 7/16"	1 7/16"	1 3/8"	1 5/16"	1 3/16"	1"	7/8"	11/16"	1/2"	1/4"	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. I-0914BA

VANCE COUNTY

STATION: 421+29.07 -NBL- POT
13+36.32 -Y7- POT

SHEET 1 OF 1

NORTH CAROLINA PROFESSIONAL SEAL 11725 ENGINEER DAVID R. RUGGLES

DocuSigned by: David Ruggles 11/21/2014
C46276BDF412422

DWG. 13 OF 26

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STEWART

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PRESTRESSED CONCRETE GIRDER CONTINUOUS FOR LIVE LOAD DETAILS & SUPERSTRUCTURE DEAD LOAD DEFLECTIONS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-164
1			3			TOTAL SHEETS
2			4			177

DRAWN BY: J. LOFTUS DATE: 05/14
CHECKED BY: D. RUGGLES DATE: 05/14
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 04/14

SITE IV (-NBL-)