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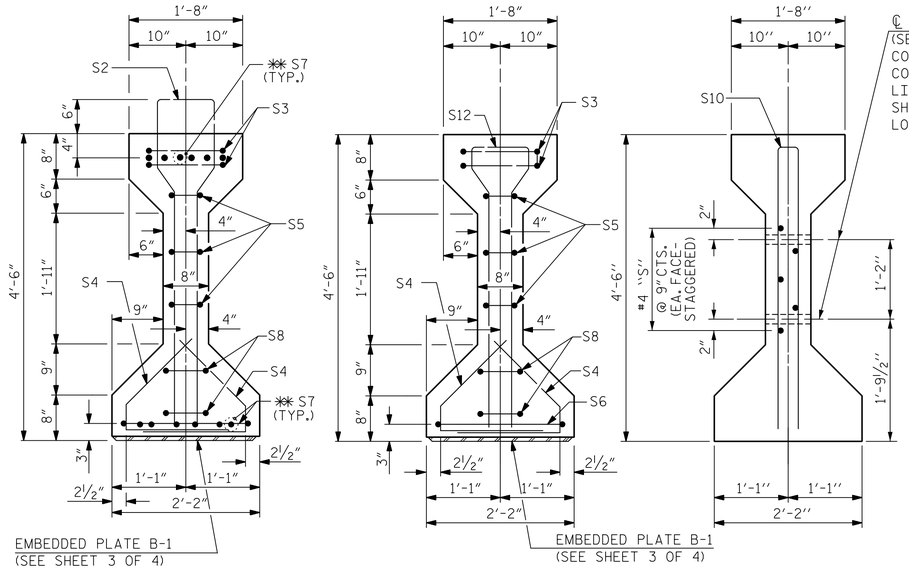


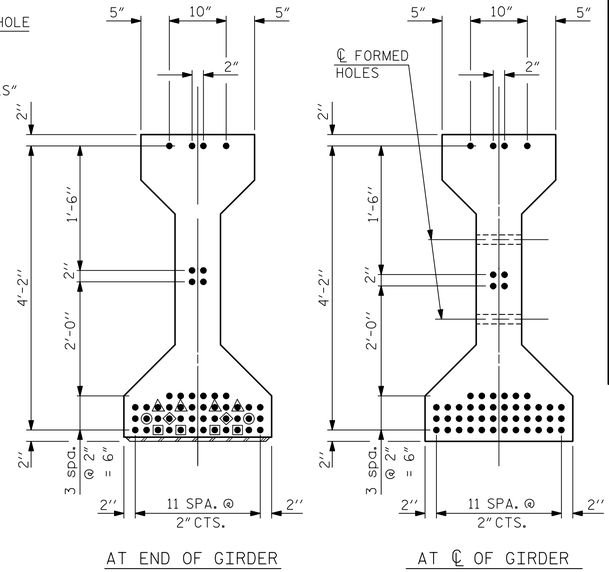
SECTION A-A

SECTION B-B

SECTION C-C

(S1 BARS NOT SHOWN)

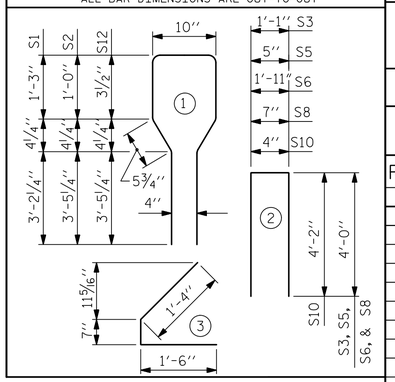
✻✻ FOR S7 BARS, AT INTEGRAL END BENT, SEE DETAIL "A" ON SHEET 3 OF 4



AT END OF GIRDER

AT ℄ OF GIRDER

0.6" Ø LOW RELAXATION STRAND LAYOUT



DEBONDING LEGEND

- • FULLY BONDED STRANDS
- ◬ STRANDS DEBONDED FOR 4'-0" FROM END OF GIRDER
- ▣ STRANDS DEBONDED FOR 12'-0" FROM END OF GIRDER
- ⊙ STRANDS DEBONDED FOR 22'-0" FROM END OF GIRDER
- ◈ STRANDS DEBONDED FOR 30'-0" FROM END OF GIRDER

0.6" Ø L. R. GRADE 270 STRANDS

AREA (SQUARE INCHES)	ULTIMATE STRENGTH (LBS. PER STRAND)	APPLIED PRESTRESS (LBS. PER STRAND)
0.217	58,600	43,950

REINFORCING STEEL FOR ONE GIRDER

BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
S1	71	#4	1	10'-8"	506
S2	21	#6	1	10'-8"	336
S3	4	#4	2	9'-1"	24
S4	64	#4	3	3'-5"	146
S5	6	#4	2	8'-5"	34
S6	1	#4	2	9'-11"	7
✻ S7	12	#5	STR	3'-8"	46
S8	4	#4	2	8'-7"	23
S9	1	#3	STR	1'-10"	1
S10	4	#5	2	8'-8"	36
S11	10	#4	STR	7'-0"	47
S12	11	#6	1	9'-3"	153

✻ NOTE: S7 BARS SHALL BE BENT BEFORE SHIPMENT. HEAT BENDING SHALL NOT BE ALLOWED.

QUANTITIES FOR ONE GIRDER

	REINFORCING STEEL	9,000 PSI CONCRETE	0.6" Ø L.R. STRANDS
	LB.	C.Y.	No.
GA1-GA4	1,359	20.8	50
GC1-GC4	1,359	20.8	50

GIRDERS REQUIRED

NUMBER	LENGTH	TOTAL LENGTH
4 (GA1-GA4)	102'-3⅞"	409.29'
4 (GC1-GC4)	102'-4⅛"	409.38'

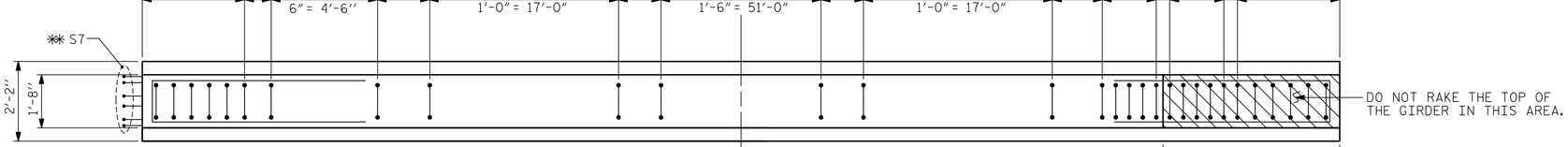
NOTES:

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE GIRDER SHALL BE DONE WHEN CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 6,750 PSI FOR SPAN A AND SPAN C GIRDERS.

GIRDER CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 9,000 PSI AT THE AGE OF 28 DAYS.

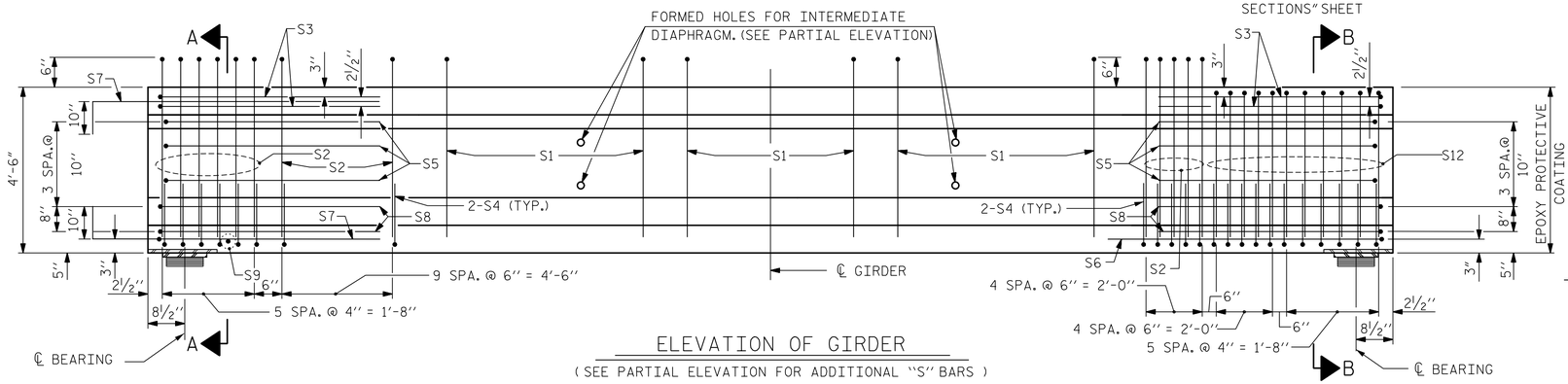
PRESTRESSED CONCRETE GIRDERS ARE DESIGNED FOR 0 PSI TENSION IN THE PRECOMPRESSED TENSILE ZONE UNDER ALL LOADING CONDITIONS.

PRESTRESSED CONCRETE GIRDERS SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR.



PLAN OF GIRDER

FOR ROOF FELT LIMITS, SEE "TYPICAL SECTIONS" SHEET



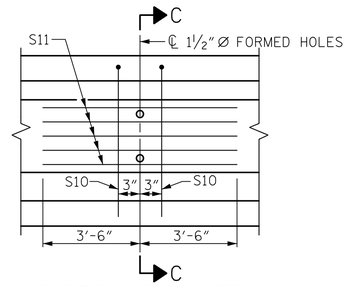
FIXED INTEGRAL END BENT (END BENT 1 AND END BENT 2)

ELEVATION OF GIRDER

(SEE PARTIAL ELEVATION FOR ADDITIONAL "S" BARS)

GIRDER	"A"	"B"	"C"
GA1	102'-3⅞"	51'-1 15⁄16"	9 7⁄16"
GA2	102'-3⅞"	51'-1 15⁄16"	9 7⁄16"
GA3	102'-3⅞"	51'-1 15⁄16"	9 7⁄16"
GA4	102'-3⅞"	51'-1 15⁄16"	9 7⁄16"
GC1	102'-4⅛"	51'-2 1⁄16"	9 9⁄16"
GC2	102'-4⅛"	51'-2 1⁄16"	9 9⁄16"
GC3	102'-4⅛"	51'-2 1⁄16"	9 9⁄16"
GC4	102'-4⅛"	51'-2 1⁄16"	9 9⁄16"

EXP. (BENT 1 END @ SPAN "A") (BENT 2 END @ SPAN "C")



PARTIAL ELEVATION

SHOWING INTERMEDIATE DIAPHRAGM REINFORCING STEEL FOR GIRDER GA1 - GA4 AND GIRDERS GC1 - GC4

NORTH CAROLINA PROFESSIONAL SEAL 12916 ENGINEER PAUL J. BARBER

DocuSigned by: Paul J. Barber 18CF1B5736874 1E...

8/31/2021

PROJECT NO. R-5021

BRUNSWICK COUNTY

STATION: POC 390+15.00 -L-

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

AASHTO TYPE IV PRESTRESSED CONCRETE GIRDER SPANS A & C

RIGHT LANE

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S6-13
1			3			TOTAL SHEETS
2			4			39

HNTB NORTH CAROLINA, P.C.
NC License No. C-1554
343 E. Six Forks Rd., Suite 200, Raleigh, N.C. 27609

DRAWN BY M. WRIGHT DATE 7/21
CHECKED BY P. BARBER DATE 7/21
DESIGN ENGINEER OF RECORD P. BARBER DATE 7/21

DWG. NO. 13

ASSEMBLED BY : BN DATE : 5/17
CHECKED BY : BE DATE : 8/17

DRAWN BY : ELR 8/91
CHECKED BY : GRP 8/91

REV. 5/1/06R TLA/GM
REV. 10/1/11 MAA/GM
REV. 1/15 MAA/TMG

STD. NO. PCG6