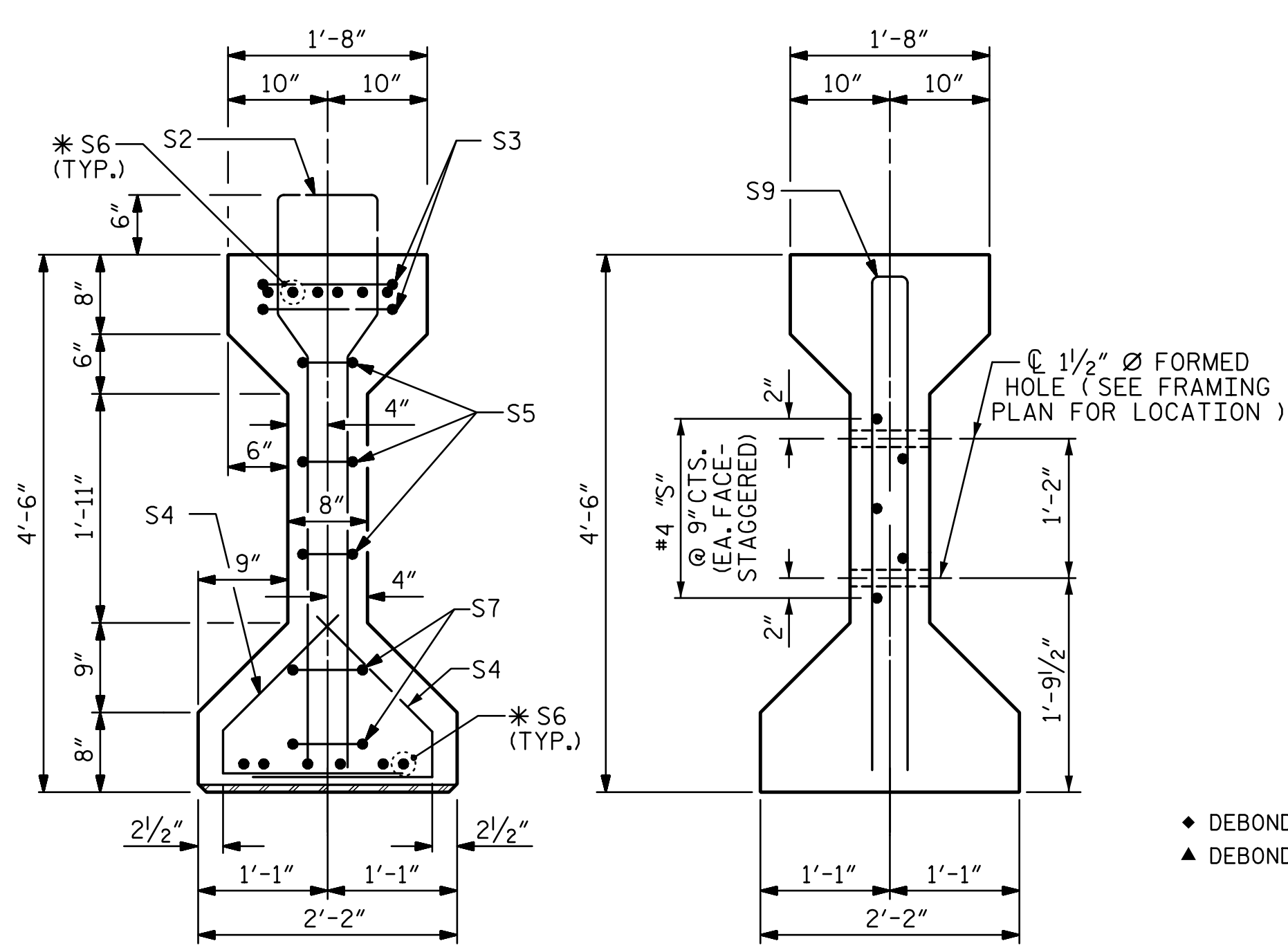
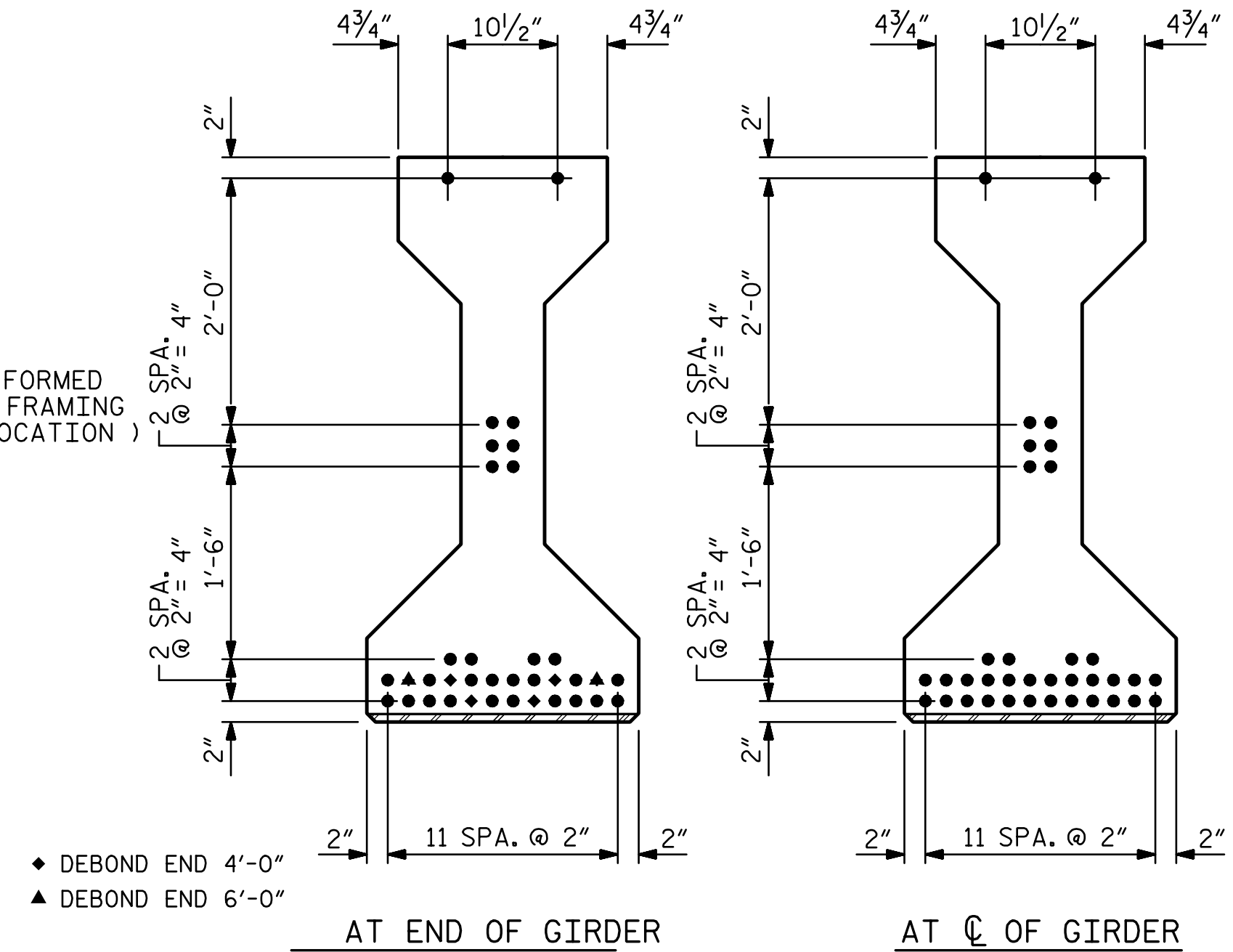


I:\Projects\255550\255550\0002\50_Deliverables & Submittals\R-2514D\Structures\Site 5\usta\Finals\Site 5 RL\410_OIL_R2514D_SMU_PCC.dgn 4/10/2015 9:23:06 AM

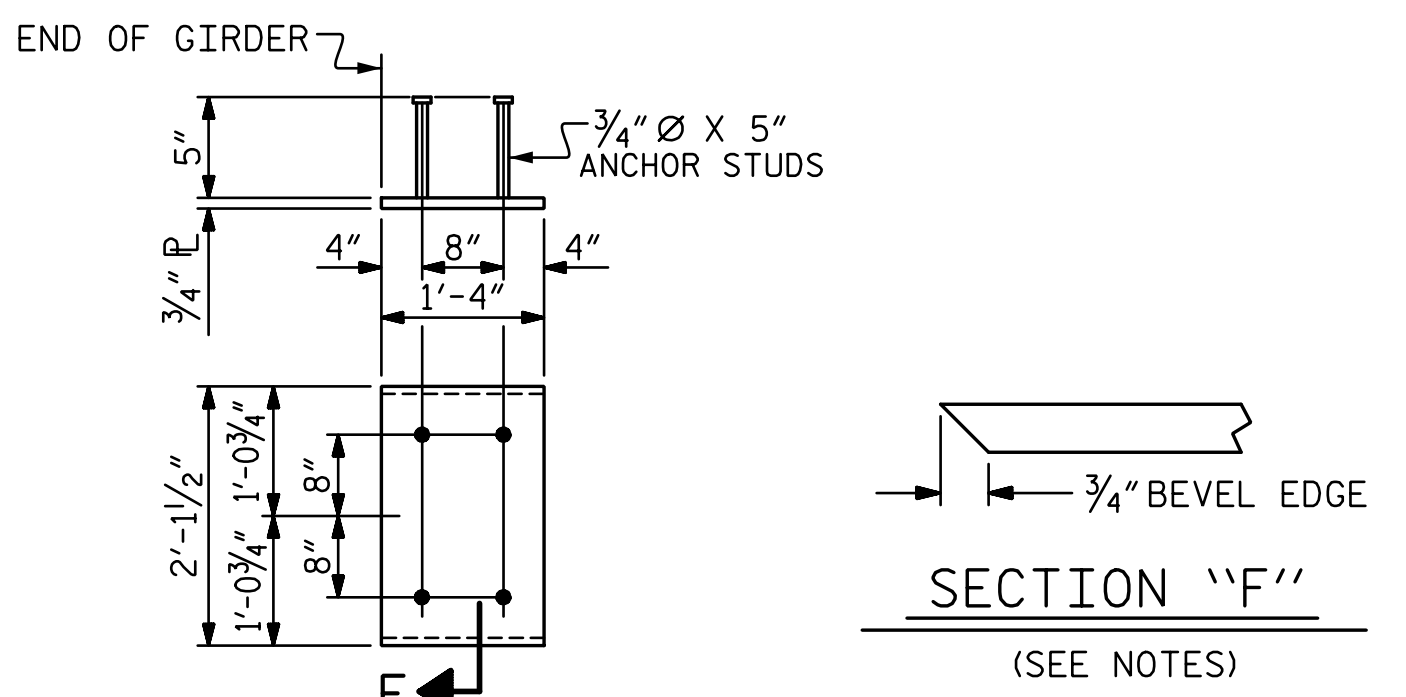


SECTION A-A
* FOR S6 BARS, SEE DETAIL "A"

SECTION C-C
(S1 BARS NOT SHOWN)



0.6" Ø LOW RELAXATION STRAND LAYOUT



EMBEDDED PLATE "B-1" DETAILS
TWO EMBEDDED PLATES "B-1" ARE REQUIRED FOR EACH 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 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.

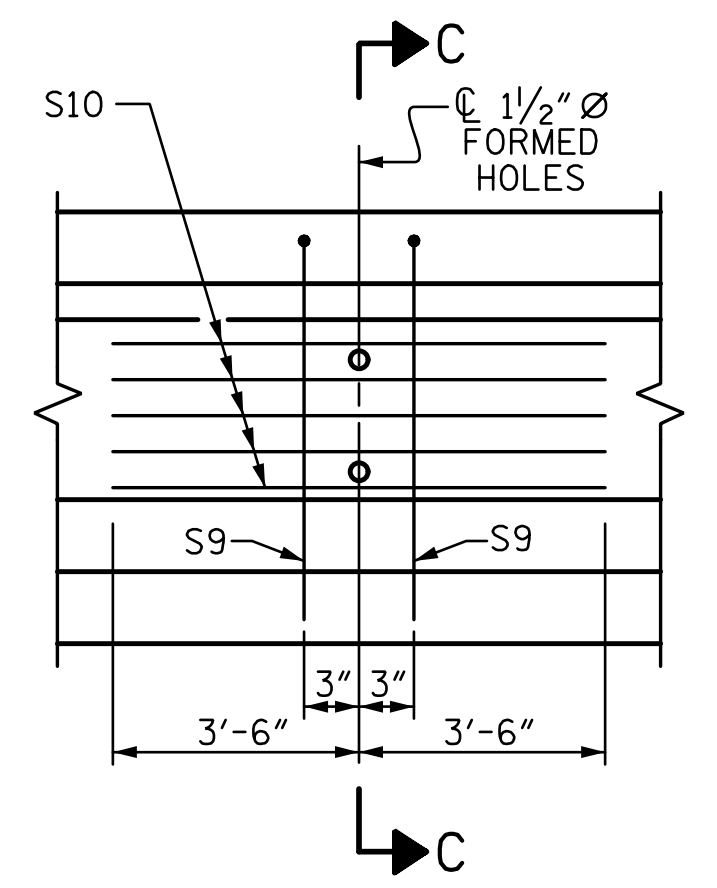
AT ENDS OF GIRDERS TO BE EMBEDDED IN END WALLS, PRESTRESSING STRANDS MAY EXTEND A MAXIMUM OF 2" BEYOND THE GIRDER ENDS, OTHERWISE, PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE GIRDER ENDS.

THE 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.

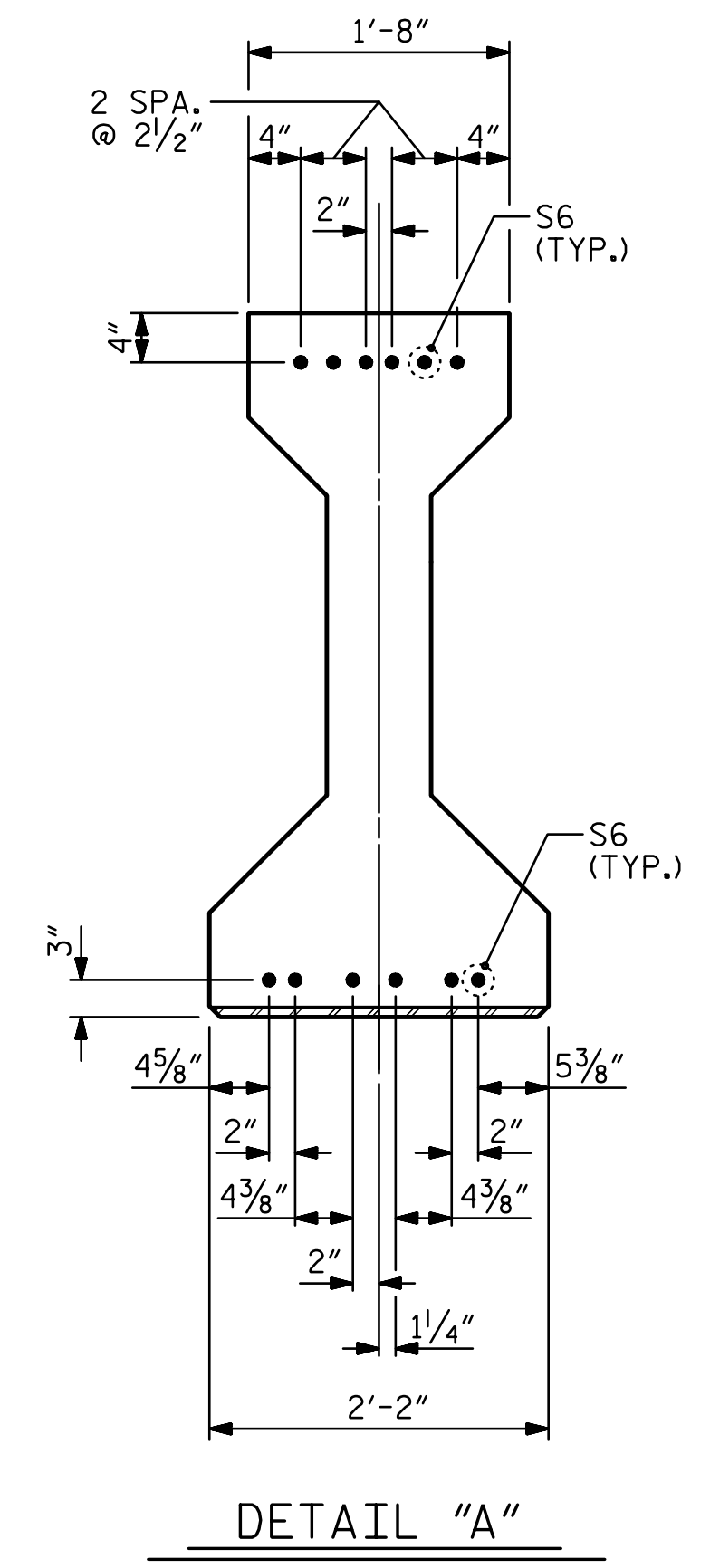
THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE GIRDER SHALL BE DONE WHEN CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 6,000 PSI.

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 SHALL BE RAKED TO A DEPTH OF 1/4" EXCEPT IN THE AREA BETWEEN THE STIRRUP AND THE EDGE OF THE GIRDER.



PARTIAL ELEVATION
SHOWING INTERMEDIATE DIAPHRAGM REINFORCING STEEL FOR ALL GIRDERS



DETAIL "A"

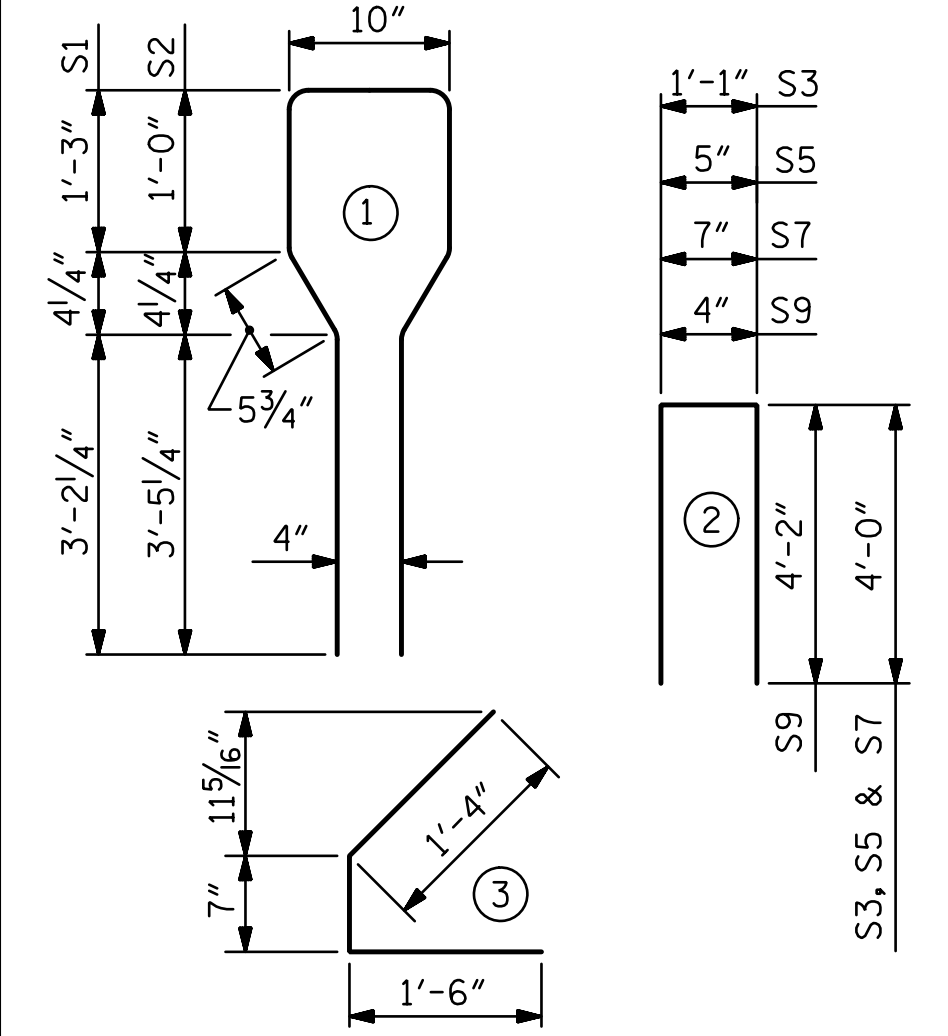
0.6" Ø L. R. GRADE 270 STRANDS		
AREA (SQ. INCHES)	ULTIMATE STRENGTH (LBS. PER STRAND)	APPLIED PRESTRESS (LBS. PER STRAND)
0.217	58,600	43,950

REINFORCING STEEL FOR ONE GIRDER					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
S1	81	#4	1	10'-8"	577
S2	18	#6	1	10'-8"	288
S3	4	#4	2	9'-1"	24
S4	76	#4	3	3'-5"	173
S5	6	#4	2	8'-5"	34
*S6	24	#5	STR	3'-8"	92
S7	4	#4	2	8'-7"	23
S8	2	#3	STR	1'-10"	1
S9	2	#5	2	8'-8"	18
S10	5	#4	STR	7'-0"	23
S11	2	#3	STR	1'-4"	1

* NOTE: S6 BARS SHALL BE BENT BEFORE SHIPMENT. HEAT BENDING SHALL NOT BE ALLOWED.

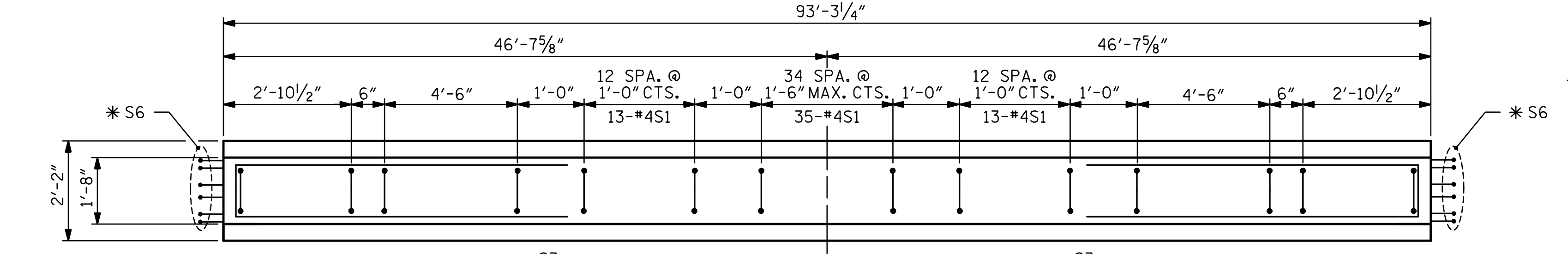
BAR TYPES

ALL BAR DIMENSIONS ARE OUT-TO-OUT

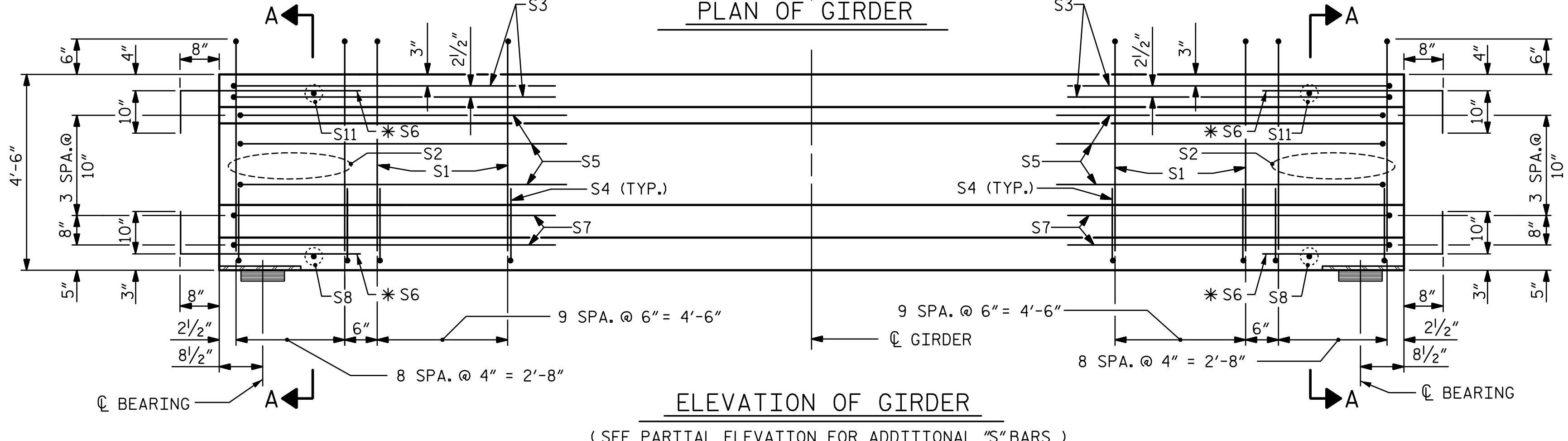


QUANTITIES FOR ONE GIRDER		
REINFORCING STEEL LB.	8,000 PSI CONCRETE C.Y.	0.6" Ø L. R. STRANDS No.
1,254	18.9	36

GIRDERS REQUIRED		
NUMBER	LENGTH	TOTAL LENGTH
5	93'-3/4"	466'-4/4"



PLAN OF GIRDER

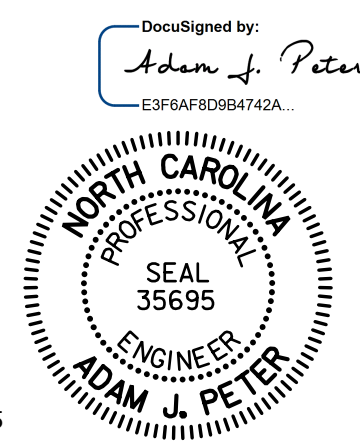


ELEVATION OF GIRDER

(SEE PARTIAL ELEVATION FOR ADDITIONAL "S" BARS)

DRAWN BY: VMW	DATE: 6-14	DESIGN ENGINEER OF RECORD: A. PETER	DATE: 6-14
CHECKED BY: MLO	DATE: 6-14		

STV / Ralph Whitehead Associates, Inc.
900 West Trade Street, Suite 715
Charlotte, NC 28202
NC License Number F-0991



4/10/2015

PROJECT NO. R-2514D
JONES & CRAVEN COUNTY
STATION: 428+53.58 -L-
= 13+04.09 -Y5-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
**AASHTO TYPE IV
PRESTRESSED CONCRETE GIRDER**

-RIGHT LANE-

REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

TOTAL SHEETS: 24