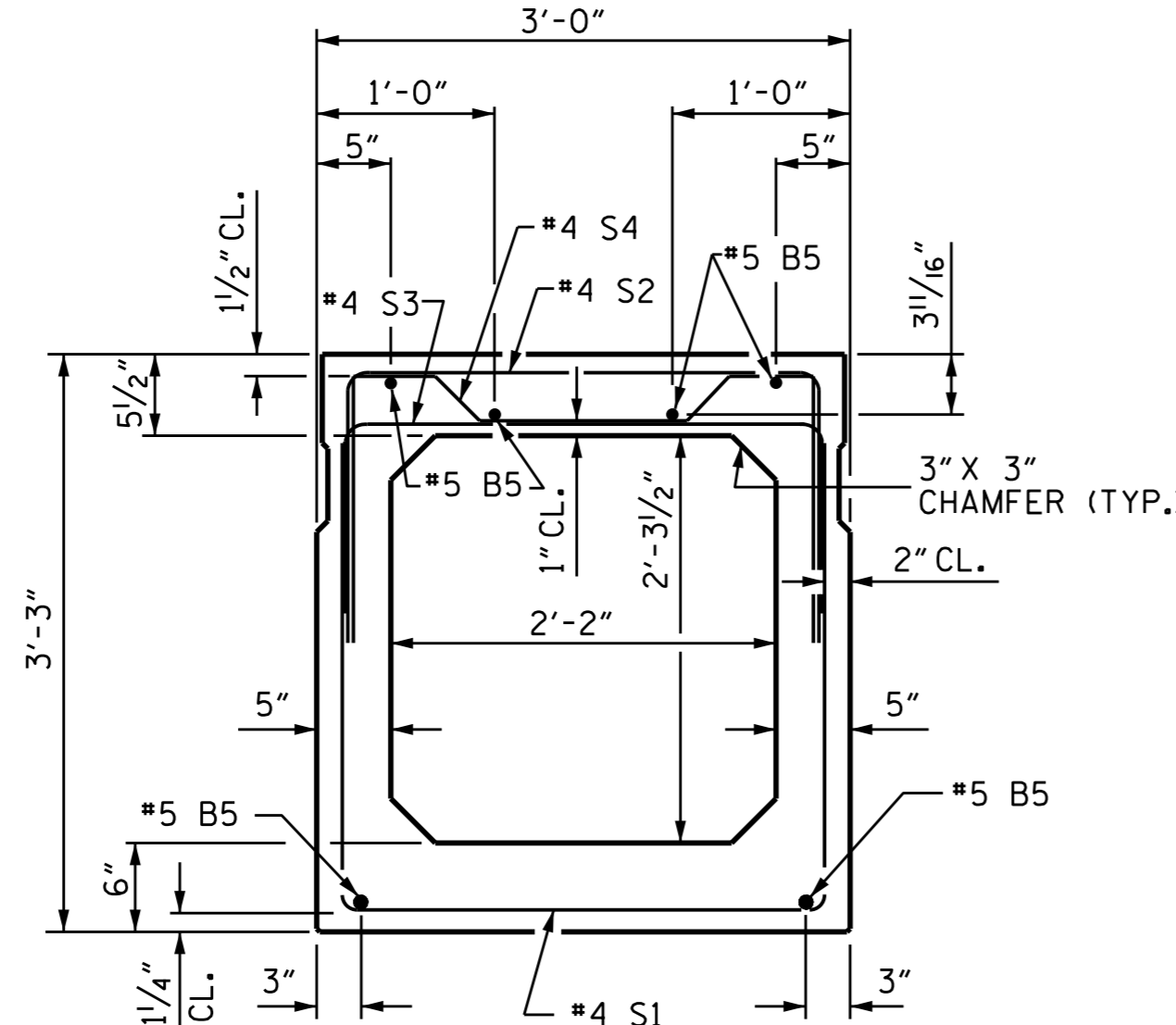


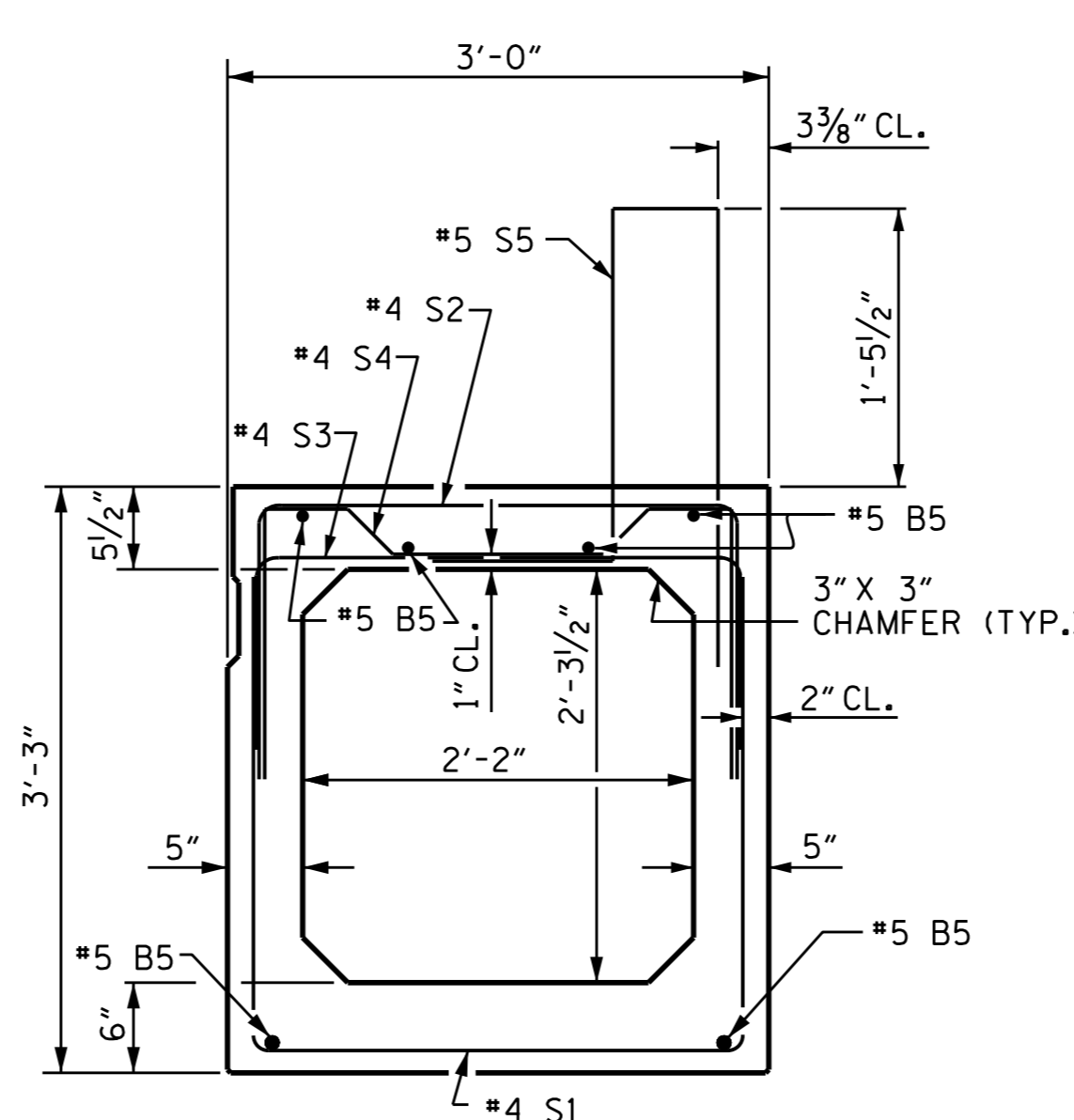
**END ELEVATION**

SHOWING PLACEMENT OF #5 & #4 "A" BARS AND LOCATION OF DOWEL HOLES. (INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION, STRAND LAYOUT NOT SHOWN.)



**INTERIOR BOX BEAM SECTION**

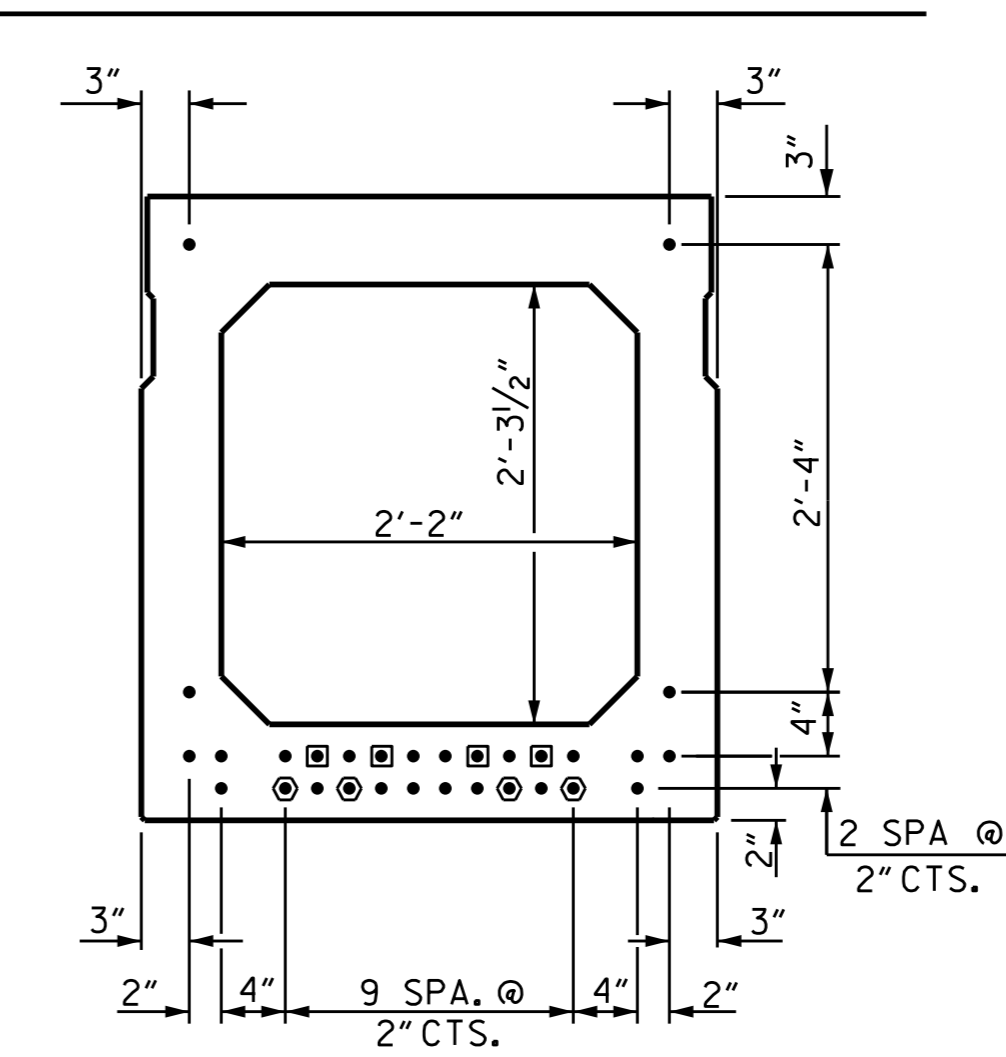
(STRAND LAYOUT NOT SHOWN)



**EXTERIOR BOX BEAM SECTION**

(STRAND LAYOUT NOT SHOWN)

**0.6" Ø LOW RELAXATION STRAND LAYOUT**



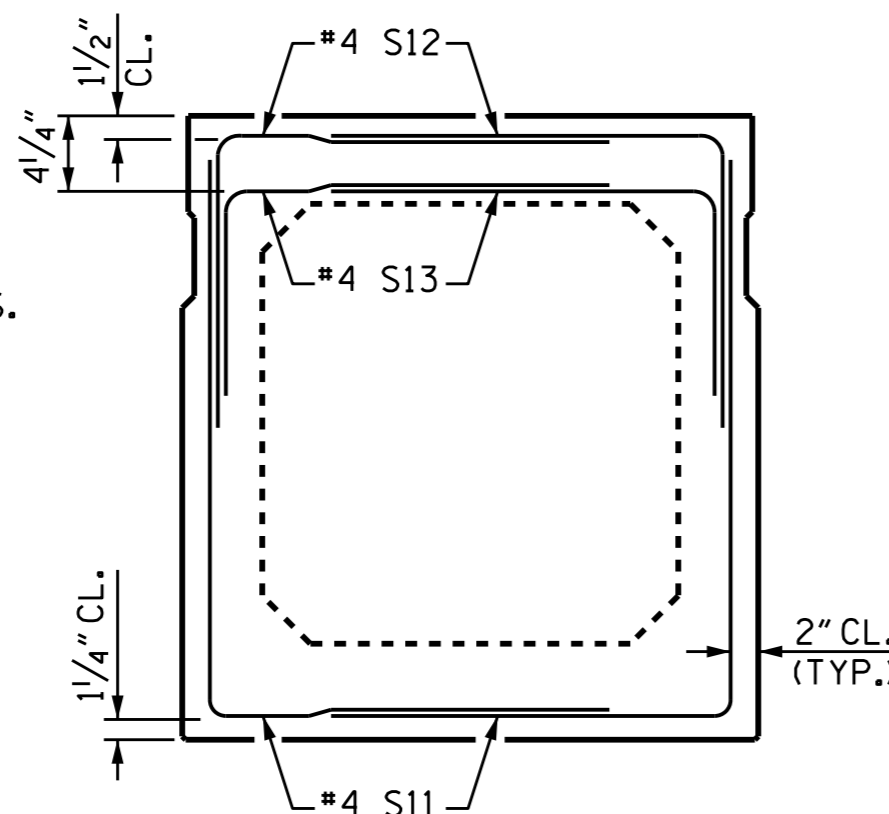
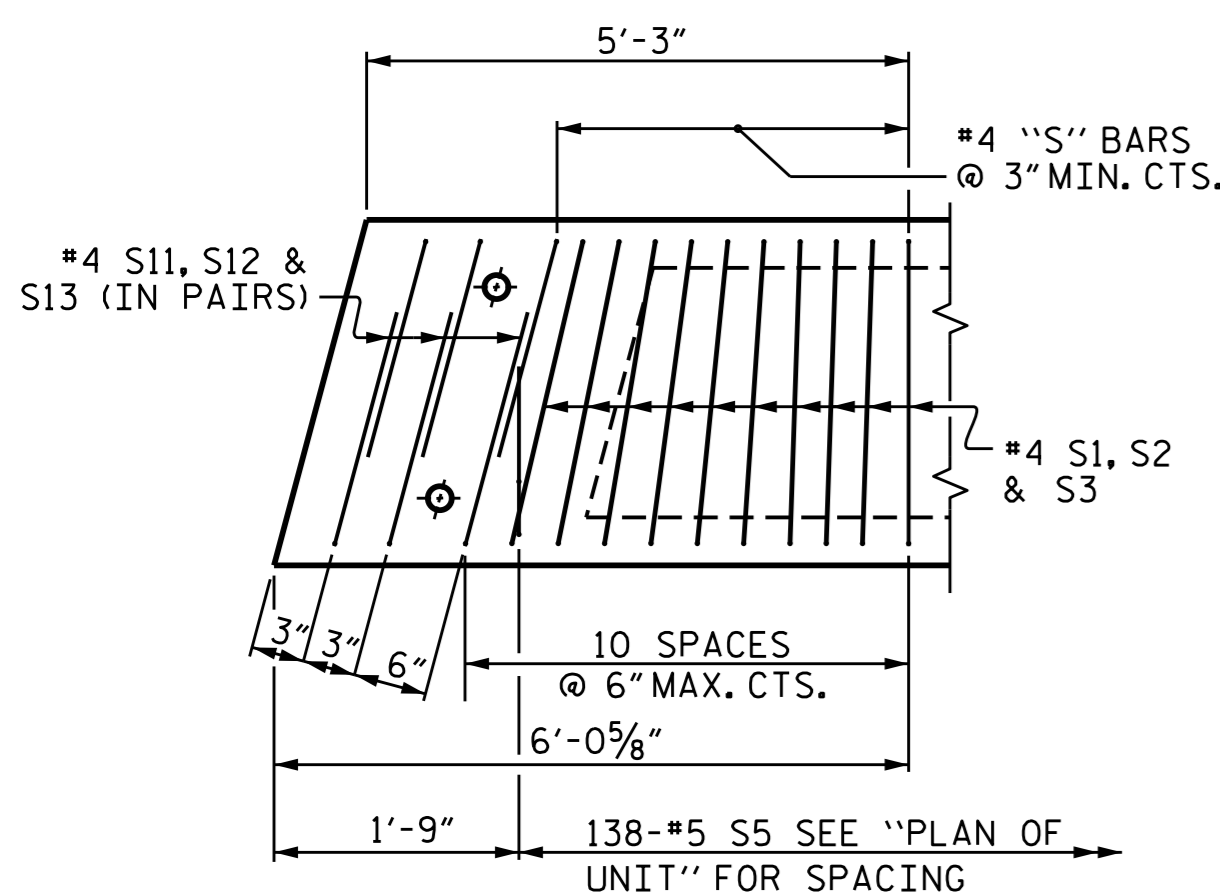
**TYPICAL STRAND LOCATION**

(30 STRANDS REQUIRED)

**DEBONDING LEGEND**

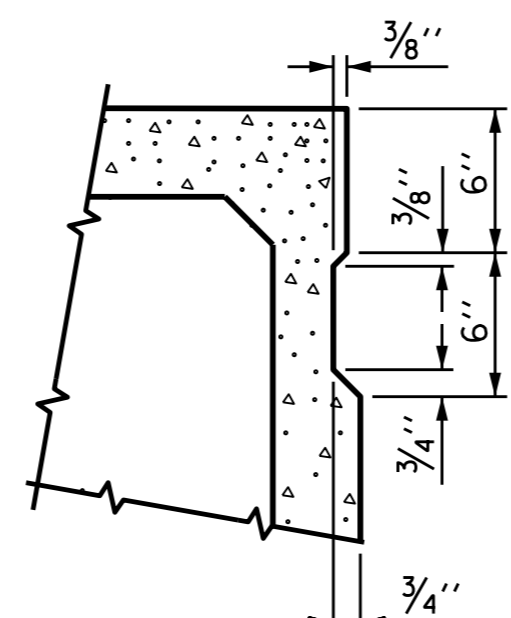
- FULLY BONDED STRANDS
- ◻ STRANDS DEBONDED FOR 6'-0" FROM END OF BOX BEAM
- ◻ STRANDS DEBONDED FOR 12'-0" FROM END OF BOX BEAM

BOND SHALL BE BROKEN ON STRANDS AS SHOWN FOR THE SPECIFIED LENGTH FROM EACH END OF THE BOX BEAM. SEE STANDARD SPECIFICATIONS ARTICLE 1078-7.



**END VIEW**

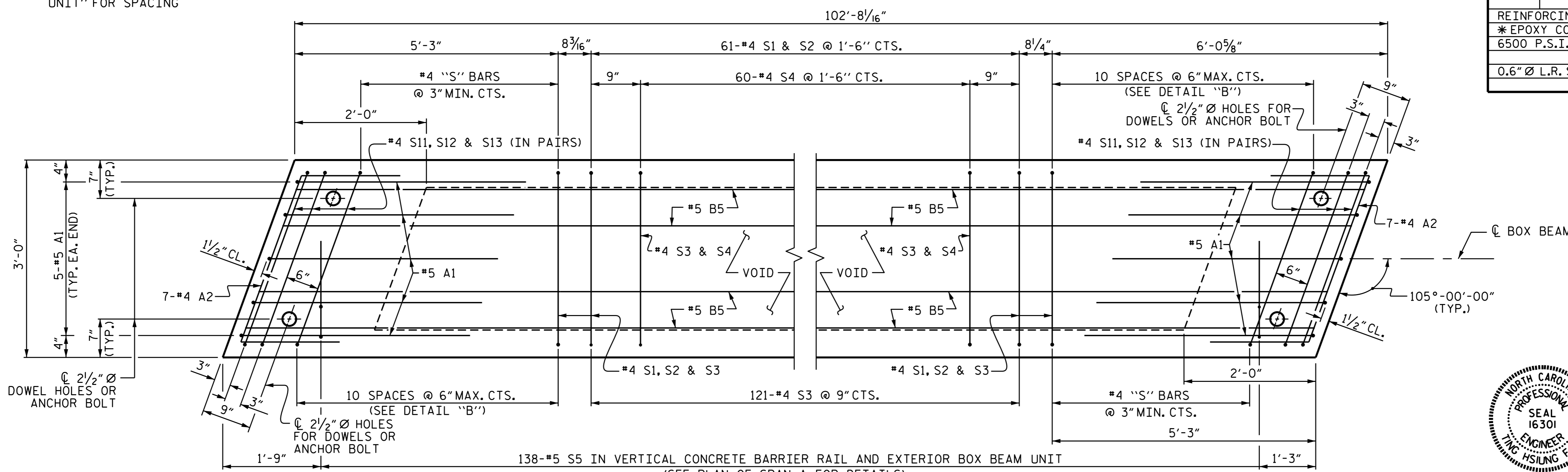
(SHOWING #4 "S" BARS IN END OF BEAM)



**SHEAR KEY DETAIL**

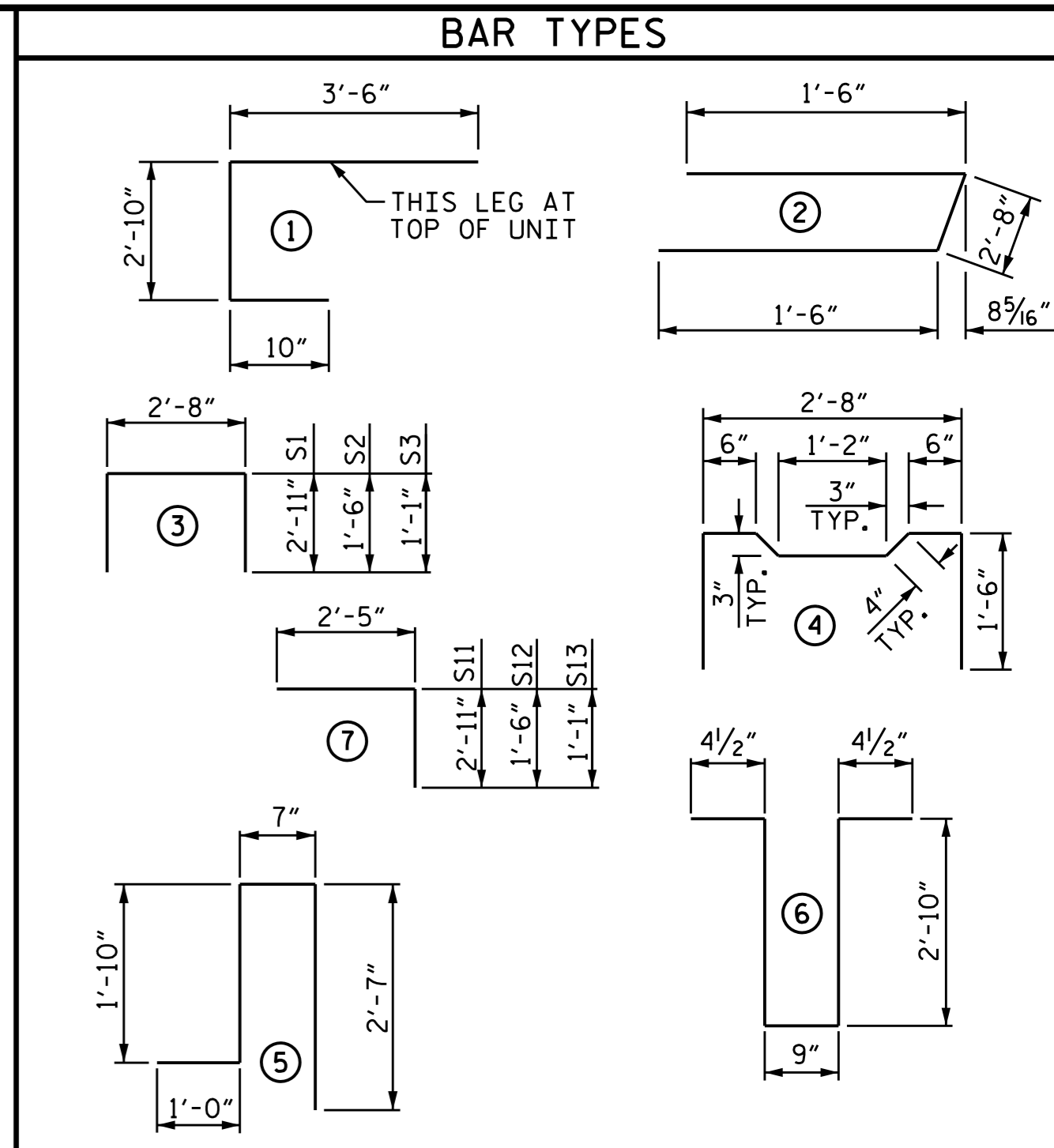
NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR BOX BEAMS.

GRADE 270 STRANDS	
AREA ( SQUARE INCHES )	0.217
ULTIMATE STRENGTH ( LBS. PER STRAND )	58,600
APPLIED PRESTRESS ( LBS. PER STRAND )	43,950



**PLAN OF BOX BEAM**

EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. FOR LOCATION OF DIAPHRAGMS, SEE PLAN OF UNIT. FOR REINFORCING STEEL IN DIAPHRAGMS, SEE DIAPHRAGM DETAILS.



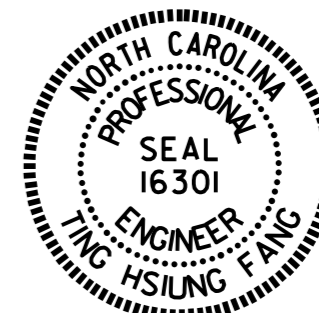
ALL BAR DIMENSIONS ARE OUT TO OUT

**BILL OF MATERIAL FOR ONE BOX BEAM SECTION**

BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	1	7'-2"	75	7'-2"	75
A2	44	#4	2	5'-8"	167	5'-8"	167
B5	12	#5	STR	53'-3"	654	53'-3"	654
K1	15	#4	6	7'-2"	72	7'-2"	72
K2	10	#4	STR	2'-7"	17	2'-7"	17
S1	81	#4	3	8'-6"	460	8'-6"	460
S2	81	#4	3	5'-8"	307	5'-8"	307
S3	141	#4	3	4'-10"	455	4'-10"	455
S4	60	#4	4	5'-10"	234	5'-10"	234
S11	12	#4	7	5'-4"	43	5'-4"	43
S12	12	#4	7	3'-11"	31	3'-11"	31
S13	12	#4	7	3'-6"	28	3'-6"	28
* S5	138	#5	5	6'-0"	864	--	--
REINFORCING STEEL				2543	LBS.	2543	LBS.
* EPOXY COATED REINF. STEEL				864	LBS.		
6500 P.S.I. CONCRETE				20.0	CU. YDS.	19.8	CU. YDS.
0.6" Ø L.R. STRANDS				No.	30	No.	30

PROJECT NO. B-5344  
 GUILFORD COUNTY  
 STATION: 17+21.00 -L-

SHEET 3 OF 5



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
 3'-0" X 3'-3"  
 PRESTRESSED CONCRETE  
 BOX BEAM UNIT

REVISIONS						SHEET NO. S-7
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			

ASSEMBLED BY : H. B. DESAI DATE : 05-18-15  
 CHECKED BY : D. J. POZOS DATE : 08-03-15  
 DRAWN BY : DGE II/II  
 CHECKED BY : TMG II/II