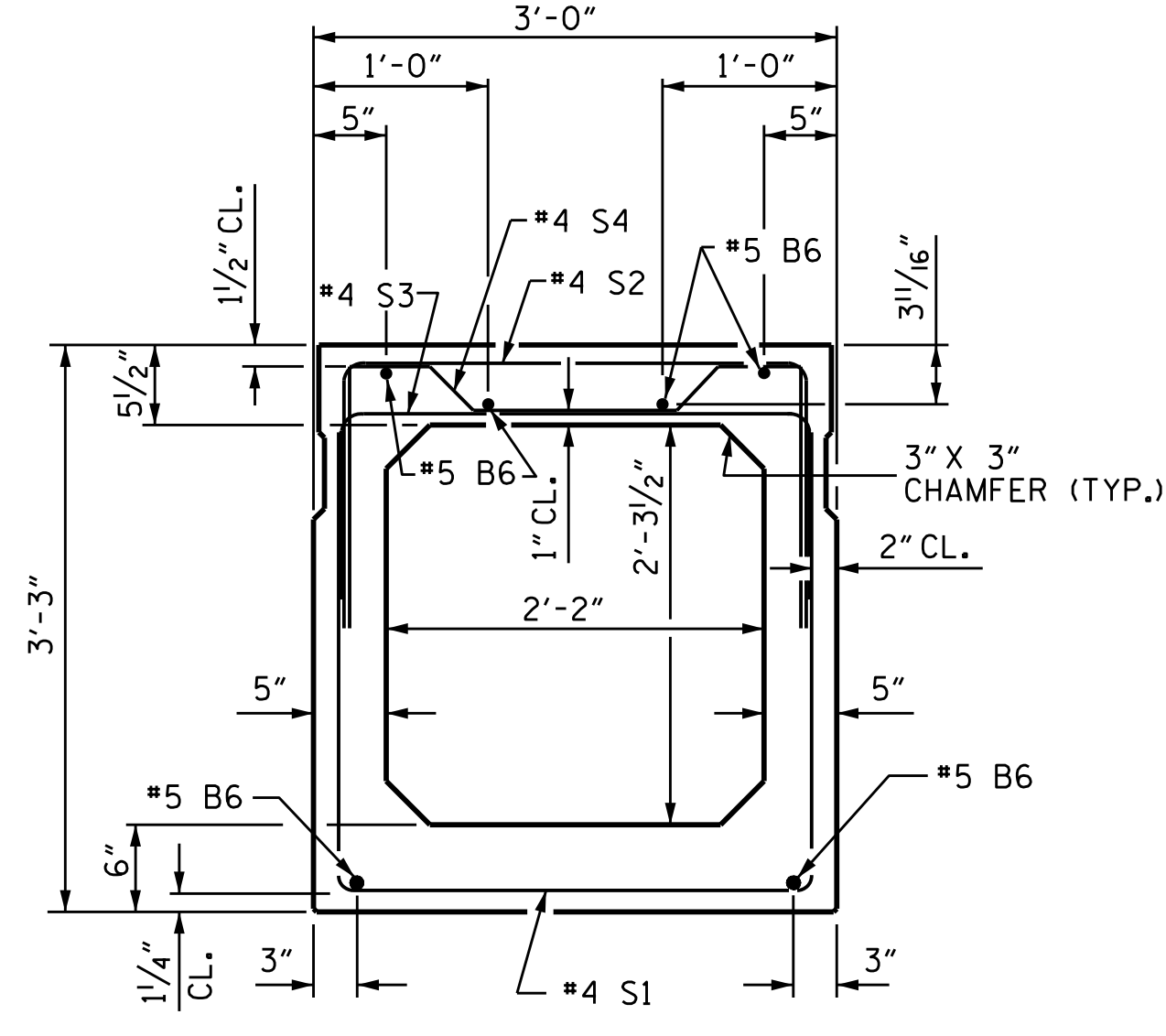
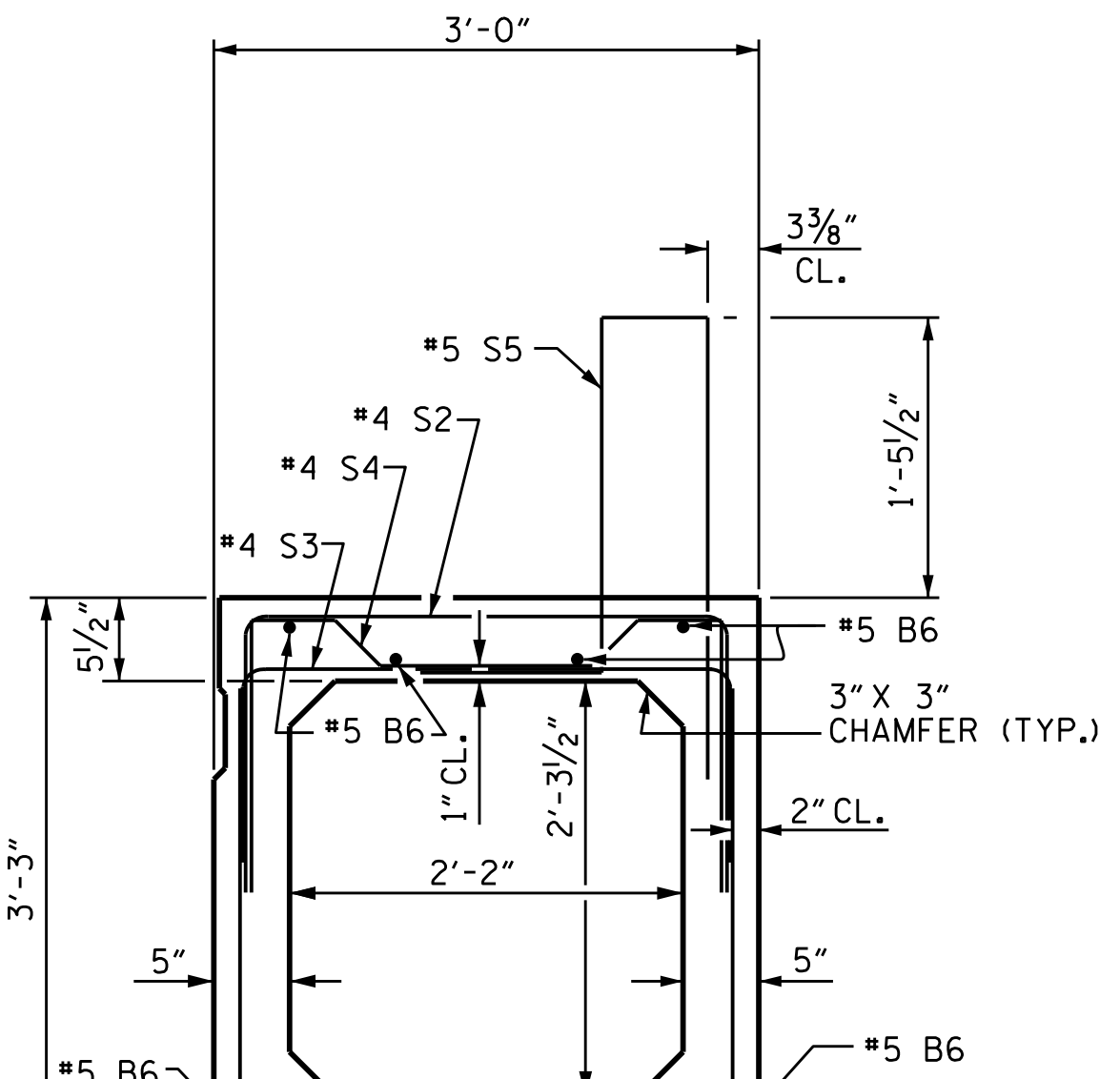


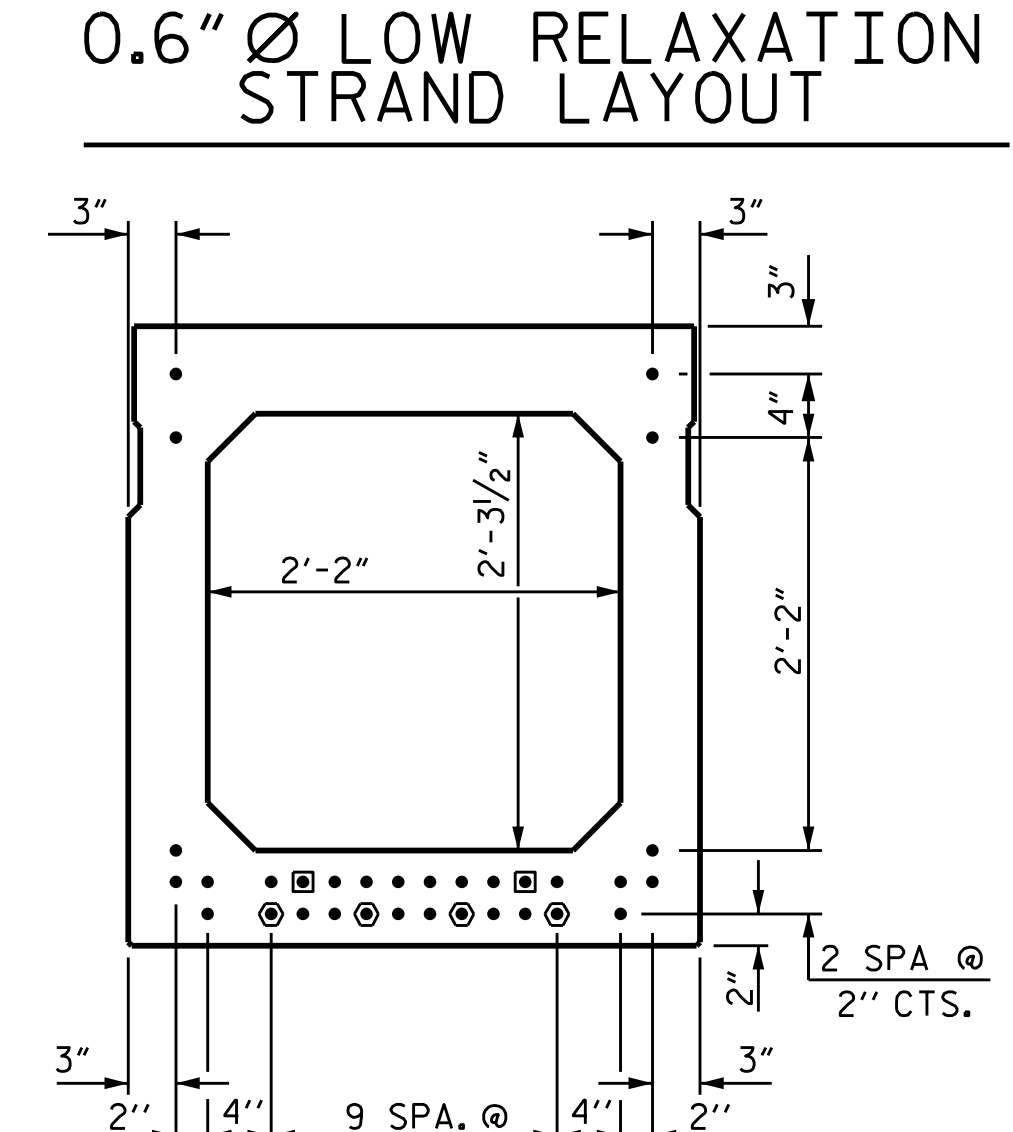
END ELEVATION
SHOWING PLACEMENT OF #5 & #4 "A" BARS AND LOCATION OF DOWEL HOLES. (INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION. STRAND LAYOUT NOT SHOWN.)



INTERIOR BOX BEAM SECTION
(STRAND LAYOUT NOT SHOWN)



EXTERIOR BOX BEAM SECTION
(STRAND LAYOUT NOT SHOWN)

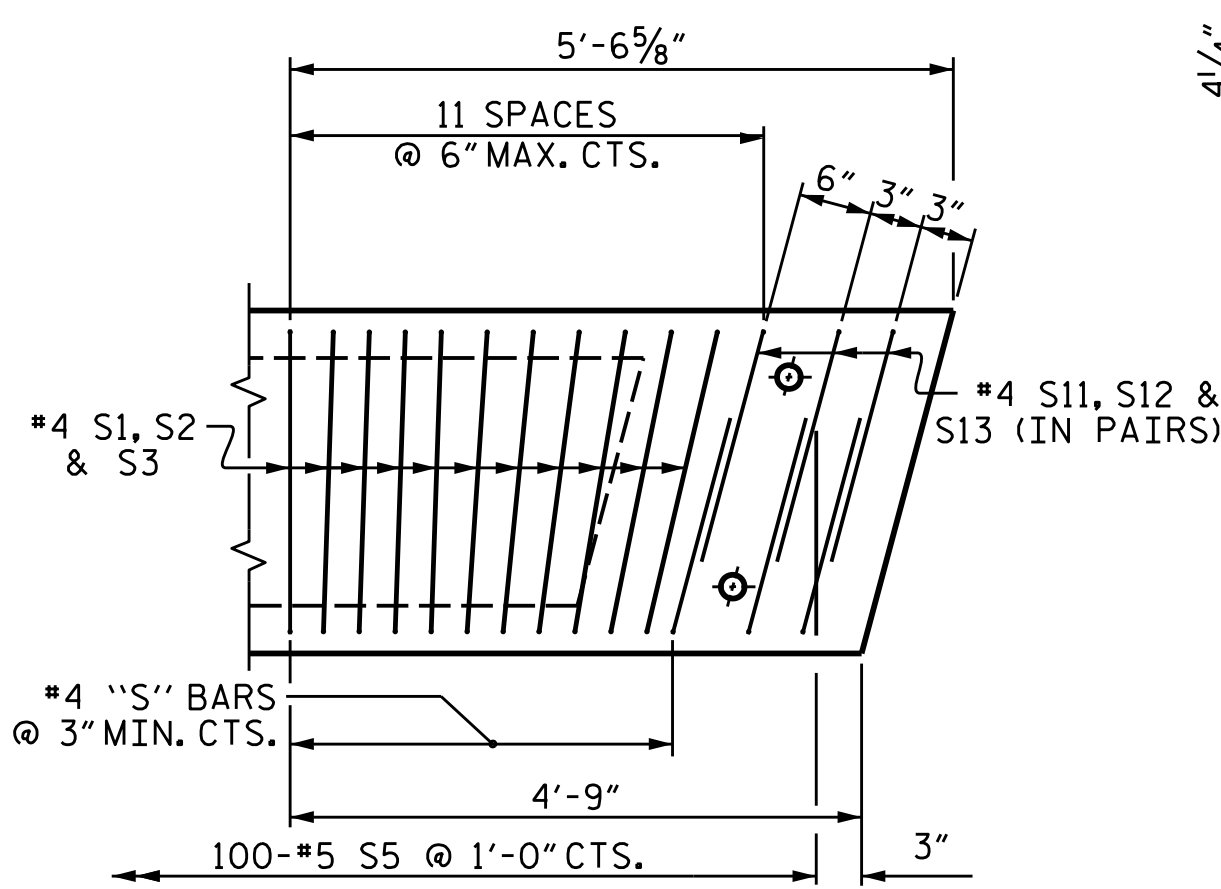


TYPICAL STRAND LOCATION
(32 STRANDS REQUIRED)

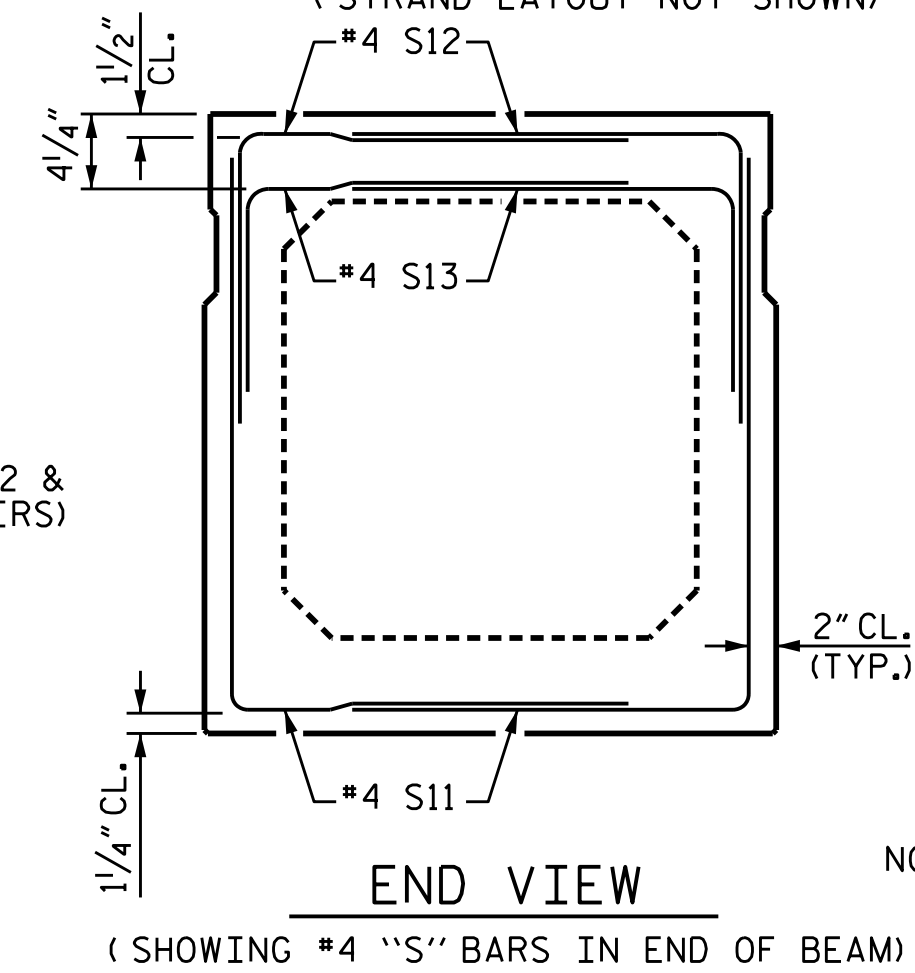
DEBONDING LEGEND

- FULLY BONDED STRANDS
- ◻ STRANDS DEBONDED FOR 4'-0" FROM END OF UNIT
- ◻ STRANDS DEBONDED FOR 12'-0" FROM END OF UNIT

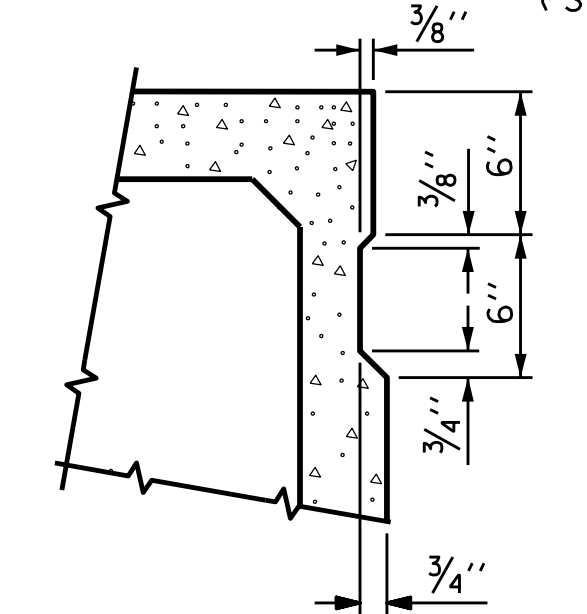
BOND SHALL BE BROKEN ON STRANDS AS SHOWN FOR THE SPECIFIED LENGTH FROM EACH END OF THE BOX BEAM. SEE STANDARD SPECIFICATIONS ARTICLE 1078-7.



DETAIL "B"
EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. "B" BARS AND "A" BARS NOT SHOWN.

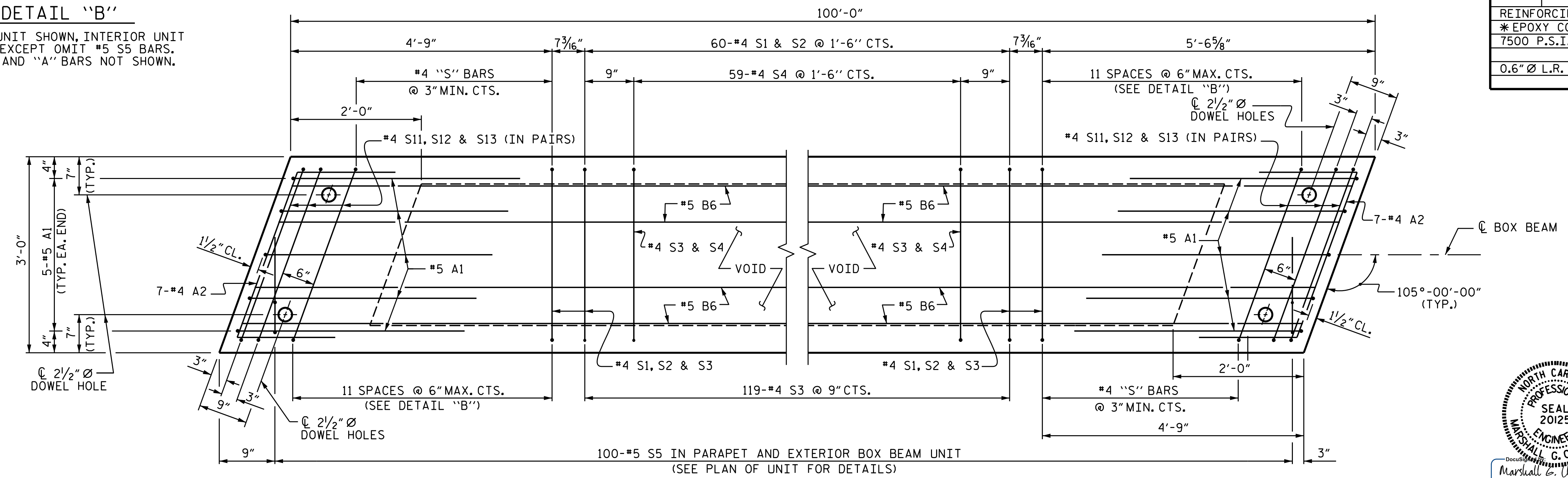


END VIEW
(SHOWING #4 "S" BARS IN END OF BEAM)



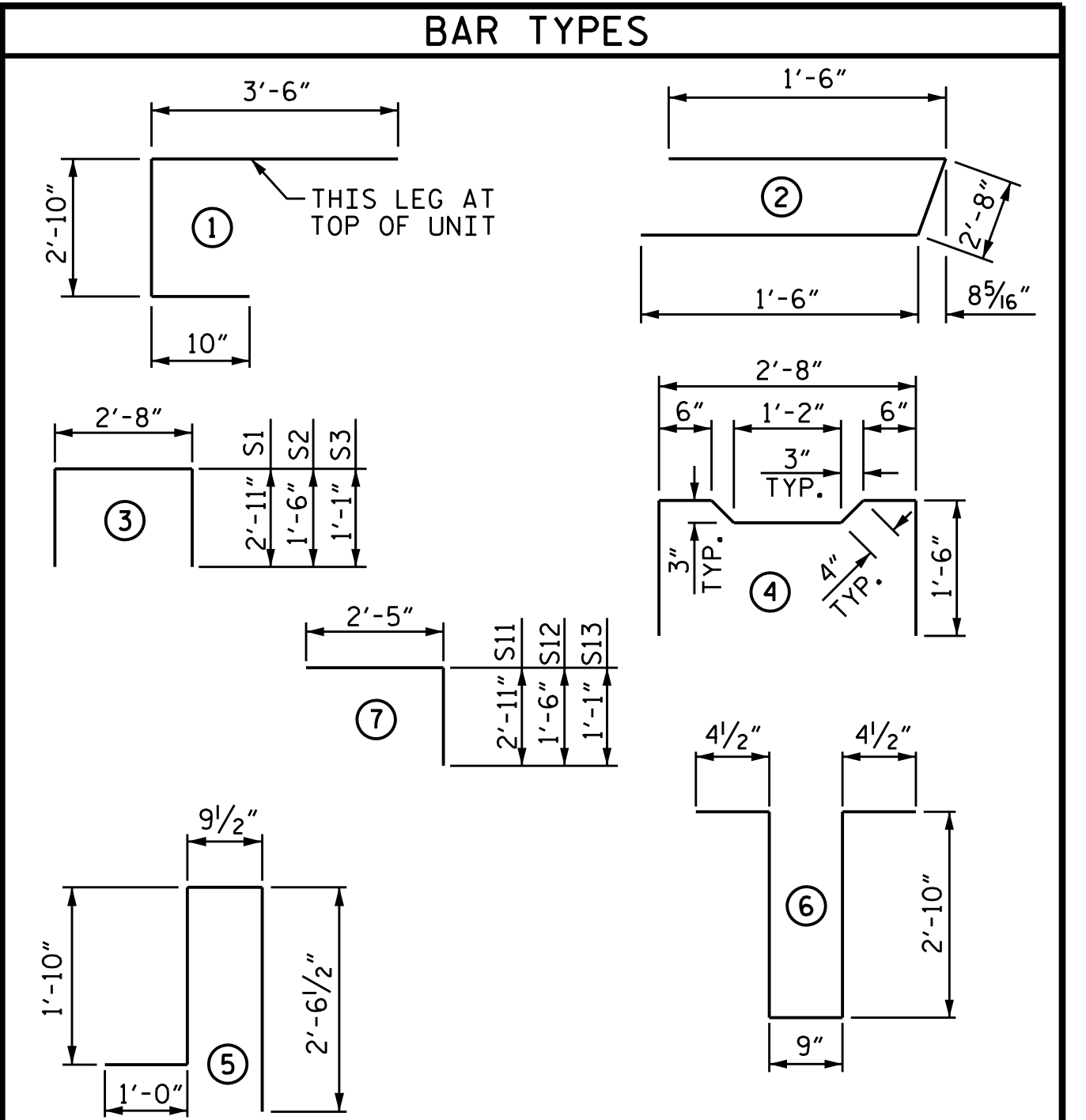
SHEAR KEY DETAIL
NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR BOX BEAMS.

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



PLAN OF BOX BEAM

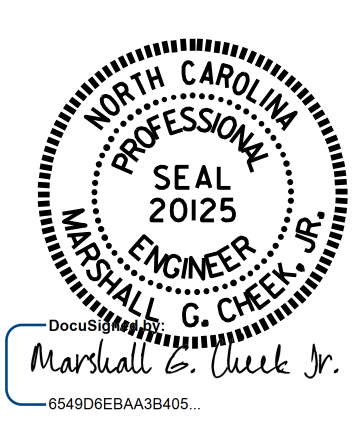
EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. FOR LOCATION OF DIAPHRAGMS, SEE "PLAN OF UNIT". FOR THREADED INSERTS, SEE "THREADED INSERT DETAIL". FOR REINFORCING STEEL IN DIAPHRAGMS, SEE "DOUBLE DIAPHRAGM DETAILS".



BILL OF MATERIAL FOR ONE BOX BEAM SECTION

BAR NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
			LENGTH	WEIGHT	LENGTH	WEIGHT
A1	#5	1	7'-2"	75	7'-2"	75
A2	#4	2	5'-8"	167	5'-8"	167
B6	#5	STR	50'-11"	637	50'-11"	637
K1	#4	6	7'-2"	72	7'-2"	72
K2	#4	STR	2'-7"	17	2'-7"	17
S1	#4	3	8'-6"	466	8'-6"	466
S2	#4	3	5'-8"	310	5'-8"	310
S3	#4	3	4'-10"	455	4'-10"	455
S4	#4	4	5'-10"	230	5'-10"	230
S11	#4	7	5'-4"	43	5'-4"	43
S12	#4	7	3'-11"	31	3'-11"	31
S13	#4	7	3'-6"	28	3'-6"	28
* S5	#5	5	6'-2"	643	--	--
REINFORCING STEEL			2531	LBS.	2531	LBS.
* EPOXY COATED REINF. STEEL			643	LBS.		
7500 P.S.I. CONCRETE			19.6	CU. YDS.	19.4	CU. YDS.
0.6" Ø L.R. STRANDS			No. 32		No. 32	

PROJECT NO. B-5397
RUTHERFORD COUNTY
STATION: 15+40.00 -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.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ASSEMBLED BY : B. A. DUKE DATE : 3-28-16
CHECKED BY : W. J. HARRIS DATE : 8-16
DRAWN BY : DGE 11/11 REV. 9/14 MAA/TMG
CHECKED BY : TMG 11/11