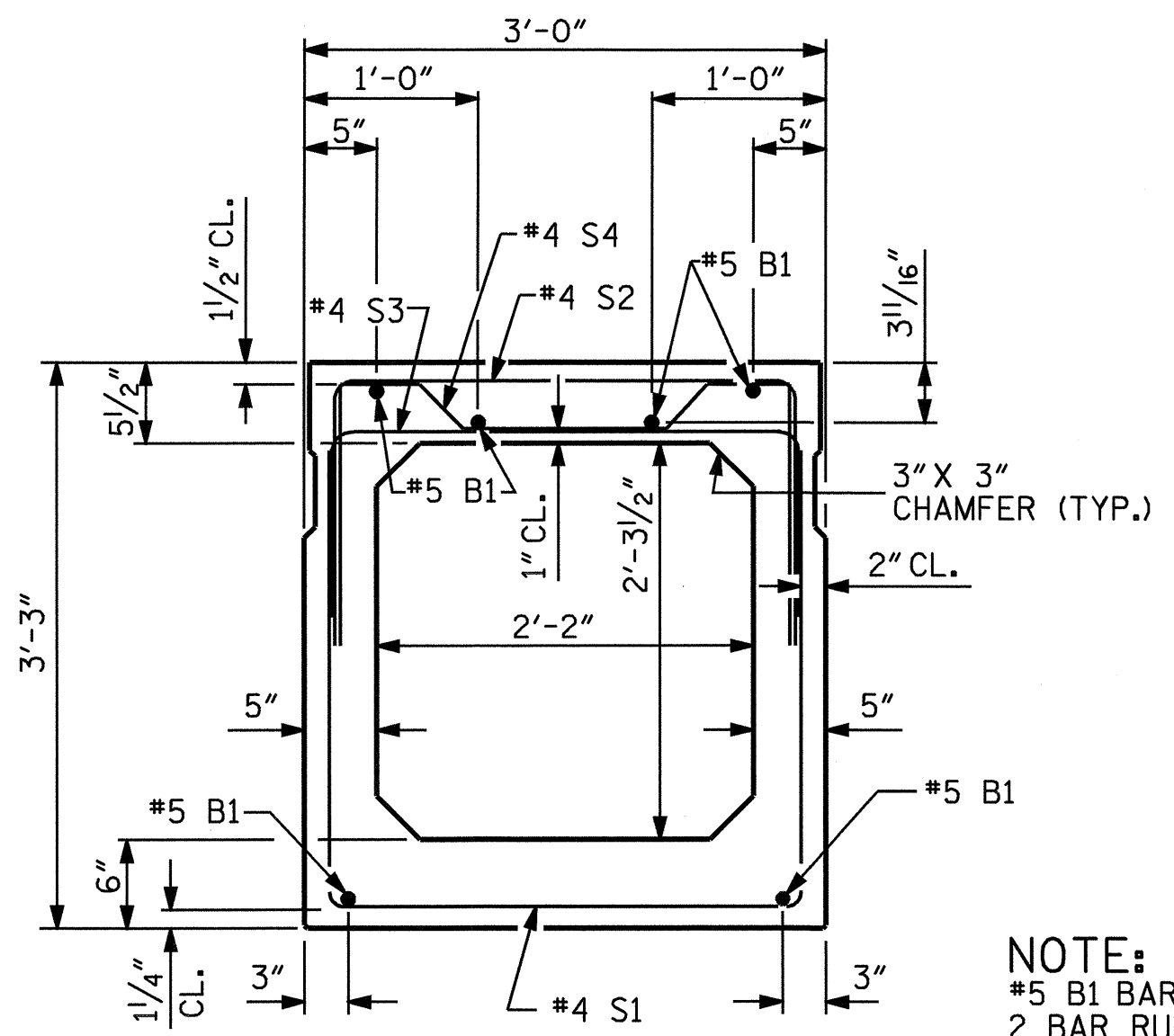


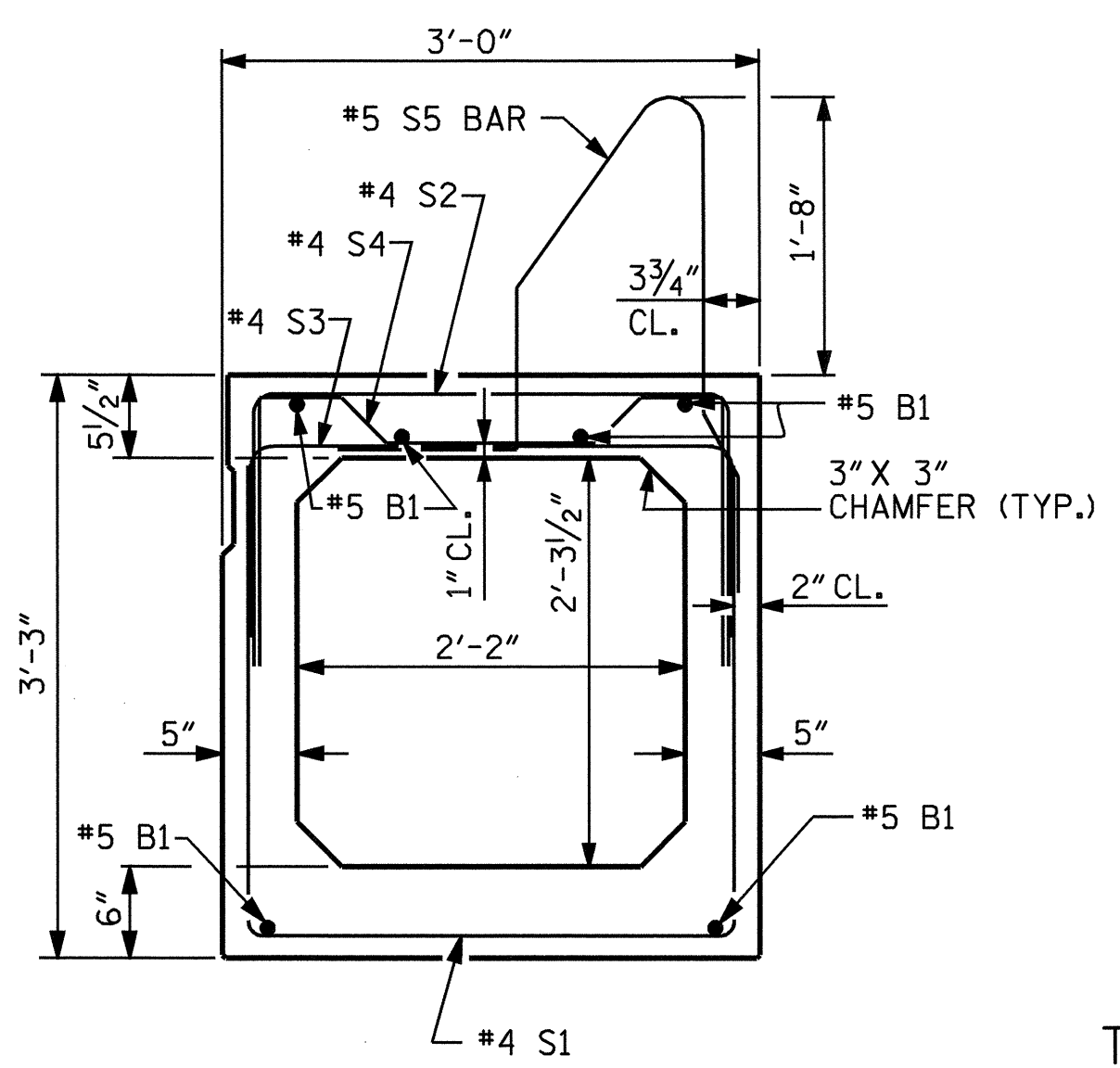
**END ELEVATION**

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**

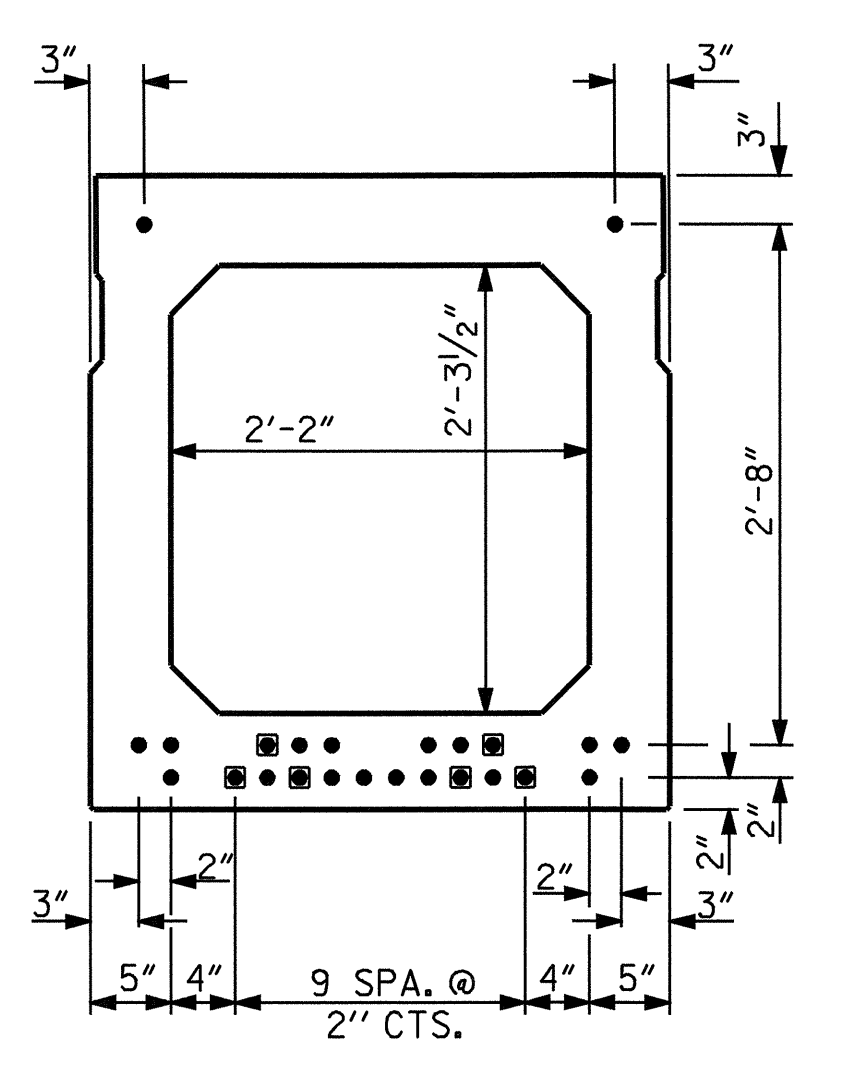
(STRAND LAYOUT NOT SHOWN)



**EXTERIOR BOX BEAM SECTION**

(STRAND LAYOUT NOT SHOWN)

**NOTE:**  
#5 B1 BARS ARE 2 BAR RUNS



**TYPICAL STRAND LOCATION**

(24 STRANDS REQUIRED)

(INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION)

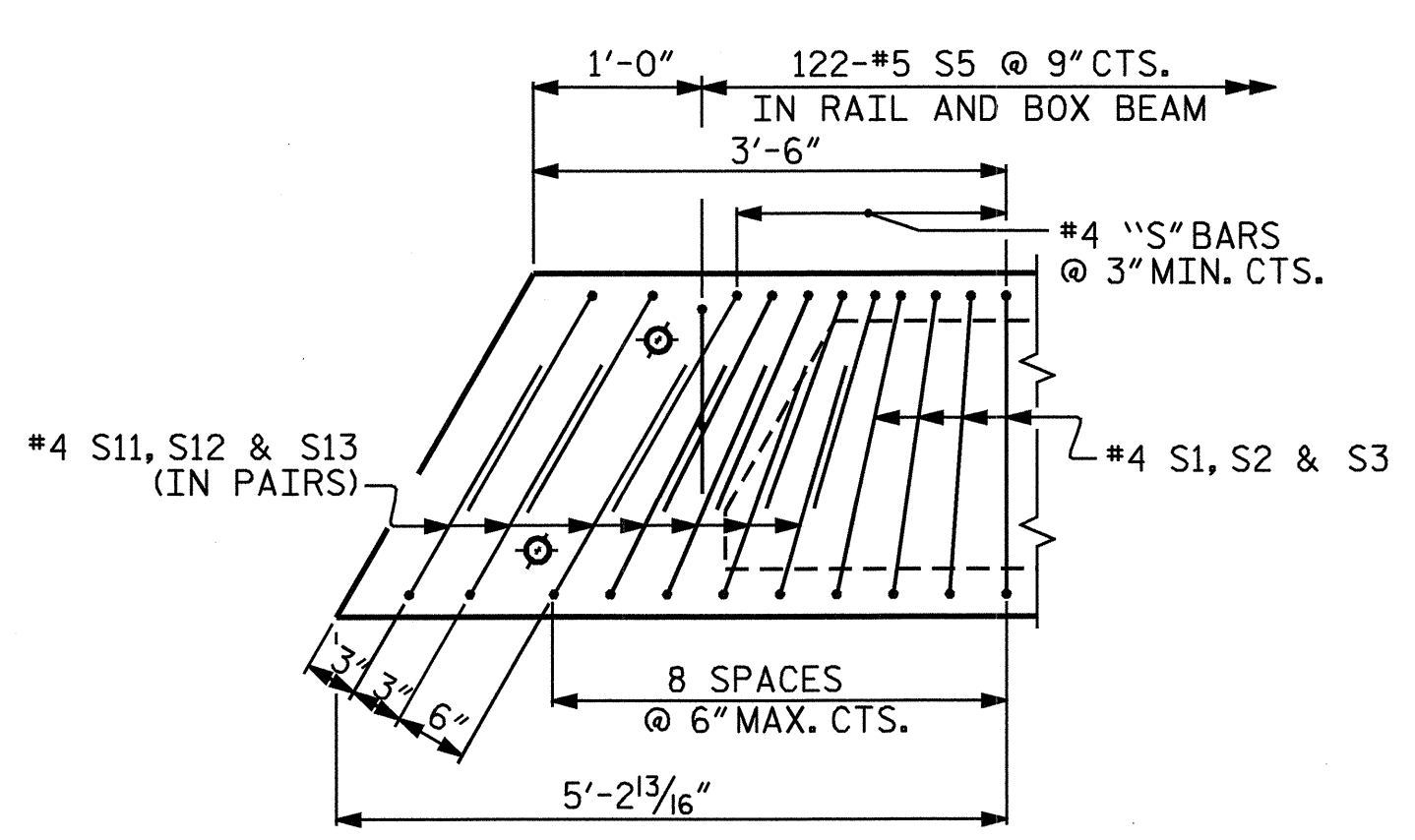
**DEBONDING LEGEND**

- FULLY BONDED STRANDS
- ◻ STRANDS DEBONDED FOR 6'-0" FROM END OF GIRDER

**0.6" Ø LOW RELAXATION STRAND LAYOUT**

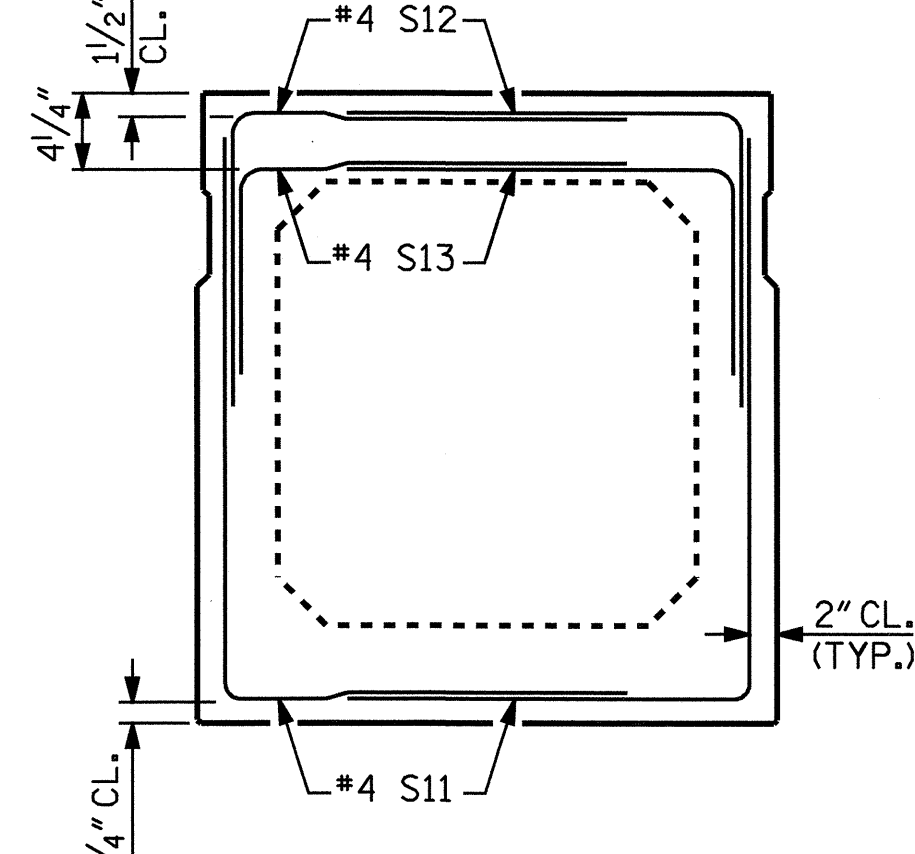
**GRADE 270 STRANDS**

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



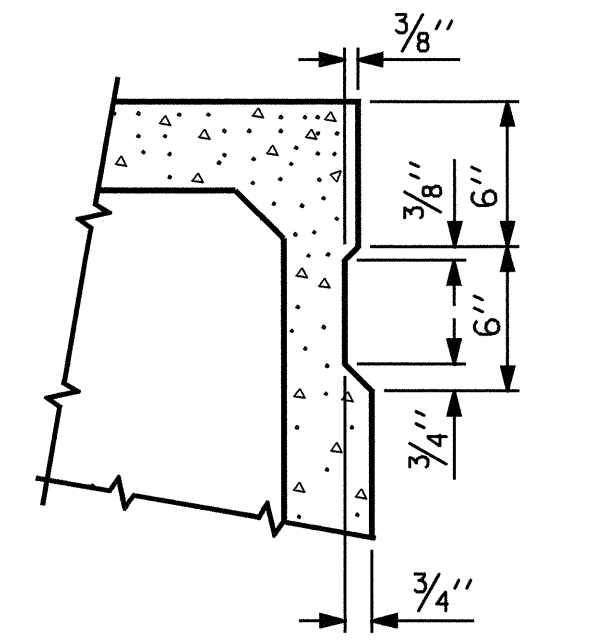
**DETAIL "B"**

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



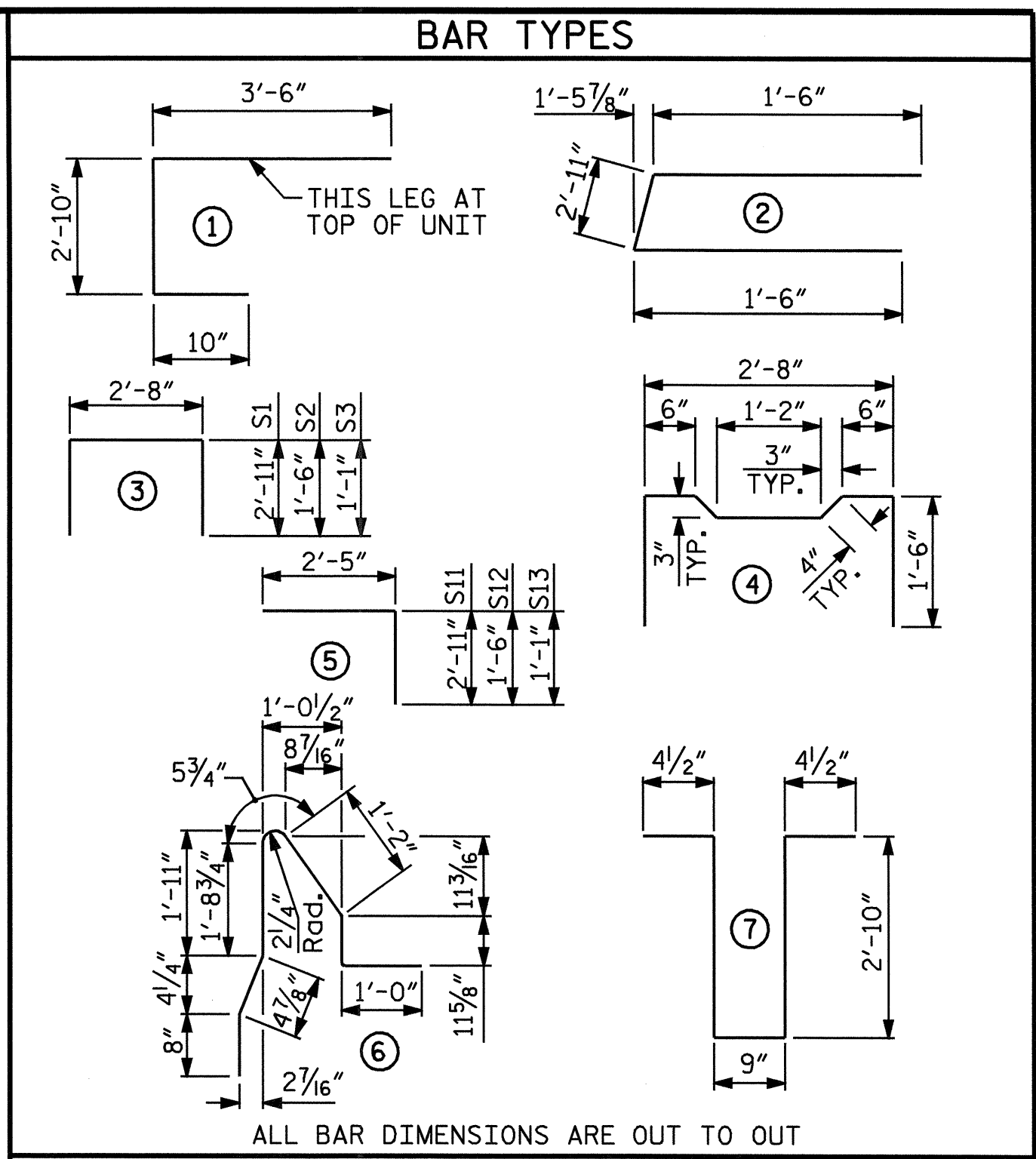
**END VIEW**

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



**SHEAR KEY DETAIL**

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



**BAR TYPES**

ALL BAR DIMENSIONS ARE OUT TO OUT

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

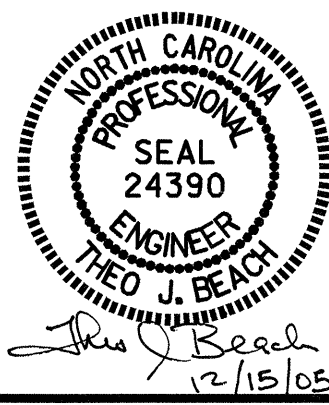
SPAN A		EXTERIOR UNIT		INTERIOR UNIT		
BAR NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	7'-2"	75	7'-2"	75
A2	44	#4	5'-11"	174	5'-11"	174
B1	12	#5	STR	603	48'-2"	603
K1	15	#4	7	72	7'-2"	72
K2	10	#4	STR	20	3'-0"	20
S1	64	#4	3	363	8'-6"	363
S2	64	#4	3	242	5'-8"	242
S3	119	#4	3	384	4'-10"	384
S4	55	#4	4	214	5'-10"	214
S11	28	#4	5	100	5'-4"	100
S12	28	#4	5	73	3'-11"	73
S13	28	#4	5	65	3'-6"	65
* S5	122	#5	6	816	--	--
REINFORCING STEEL				2385 LBS.		2385 LBS.
* EPOXY COATED REINF. STEEL				816 LBS.		--
6500 P.S.I. CONCRETE				18.9 CU. YDS.		18.9 CU. YDS.
0.6" Ø L.R. STRANDS			No. 24		No. 24	

SPAN A BOX BEAMS REQUIRE 6,500 PSI CONCRETE

PROJECT NO. B-4007  
ALLEGHANY COUNTY  
 STATION: 17+03.50 -L-

SHEET 4 OF 7

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



REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7	
1			3			TOTAL SHEETS 23	
2			4				

ASSEMBLED BY : N. PIERCE DATE : 4/05  
 CHECKED BY : MIKE BRITT DATE : 7/05

15-DEC-2005 07:48  
 RASTRUCT\2140407\NPIerce\B4007.dgn  
 npierce

EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. FOR LOCATION OF DIAPHRAGMS AND VOIDS, SEE "DIAPHRAGM AND VOID LAYOUT", SHEET 7 OF 7. FOR REINFORCING STEEL IN DIAPHRAGMS, SEE DIAPHRAGM DETAILS.

**PLAN OF BOX BEAM**

