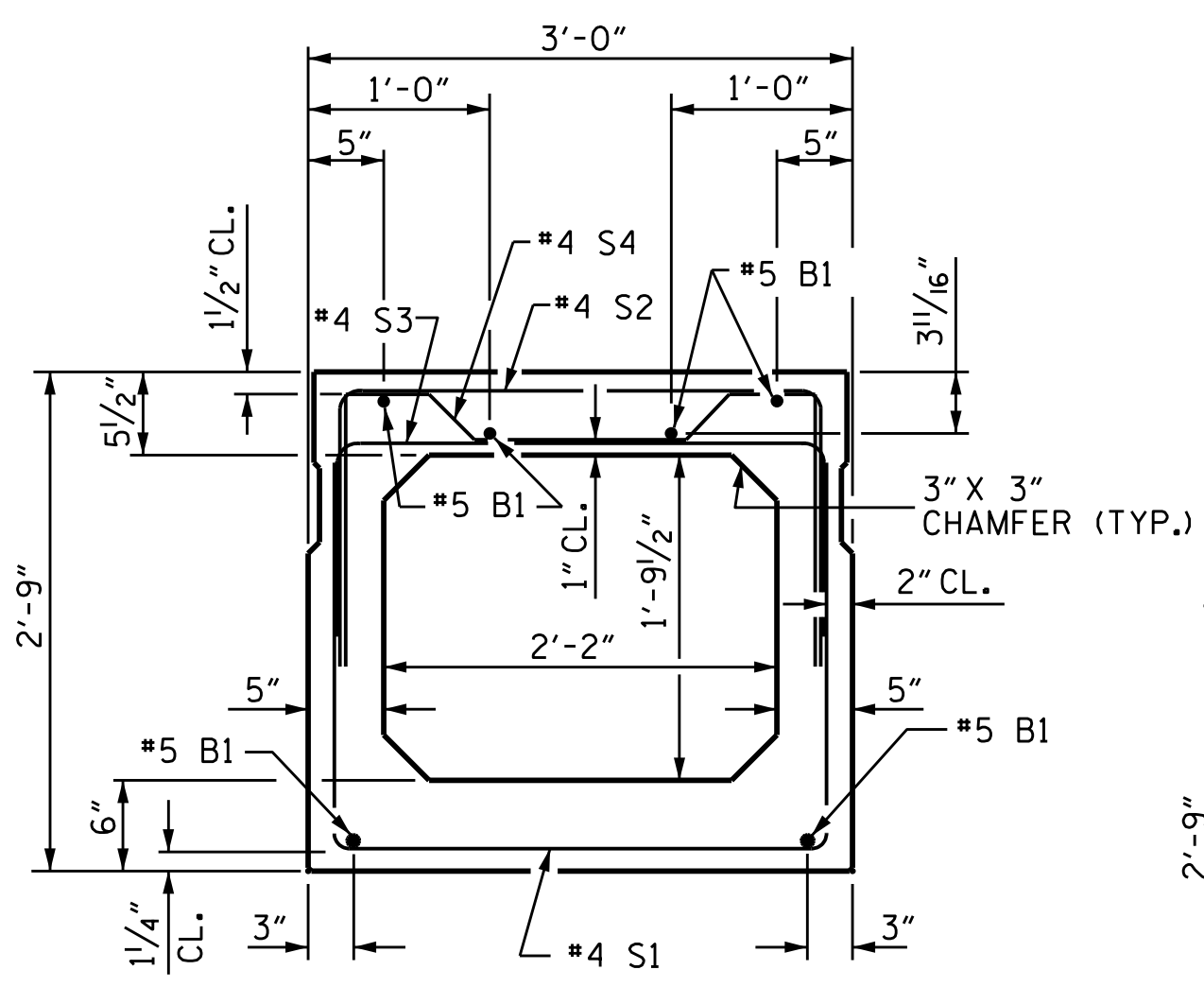


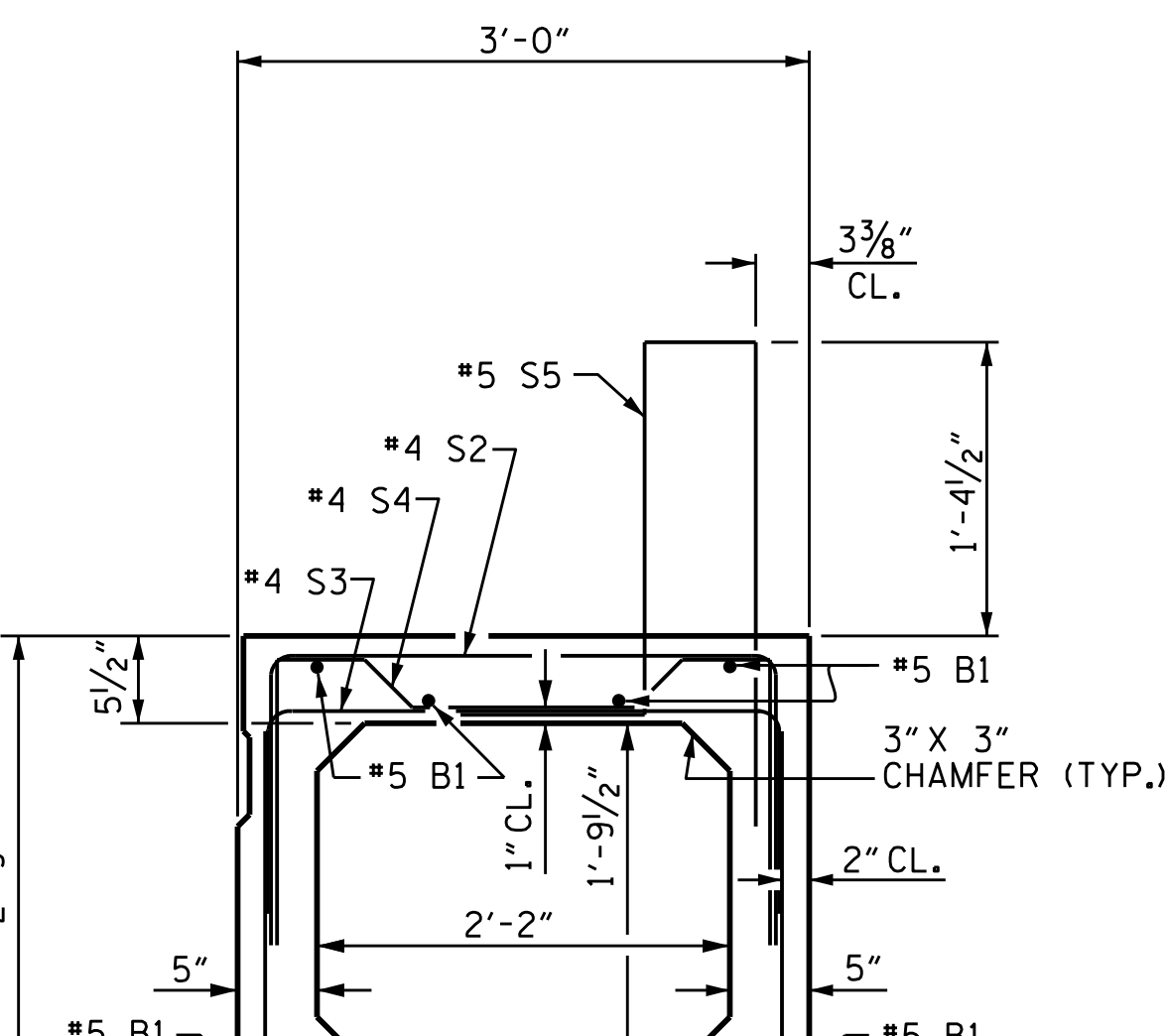
**END ELEVATION**

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**

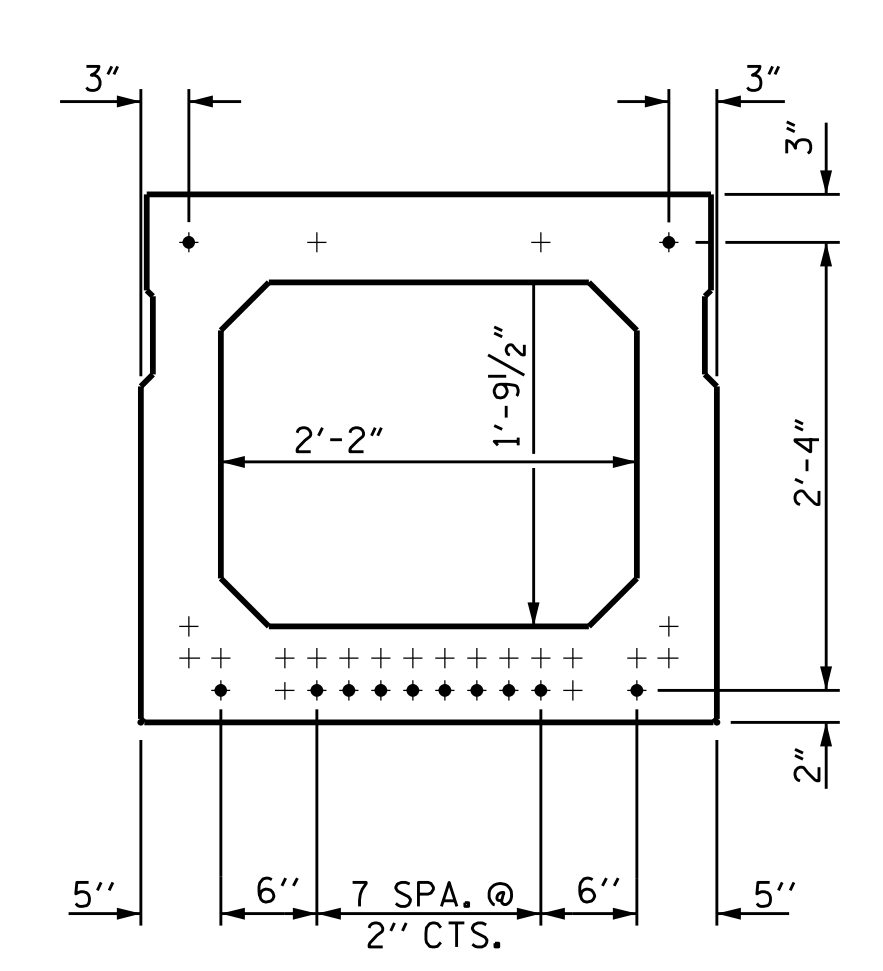
(STRAND LAYOUT NOT SHOWN)



**EXTERIOR BOX BEAM SECTION**

(STRAND LAYOUT NOT SHOWN)

**0.6" Ø LOW RELAXATION STRAND LAYOUT**

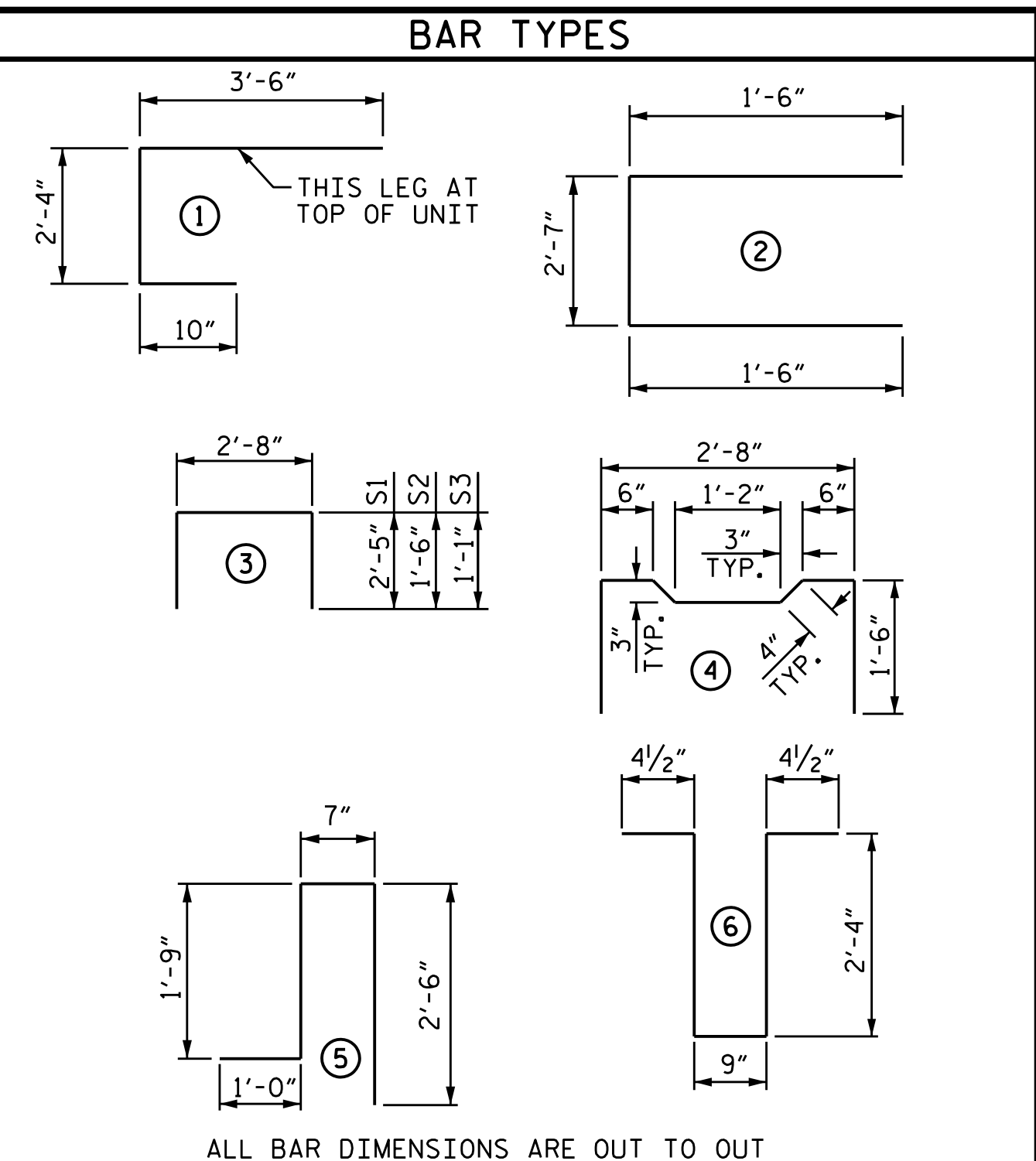


**TYPICAL STRAND LOCATION**

(12 STRANDS REQUIRED)

**DEBONDING LEGEND**

● FULLY BONDED STRANDS

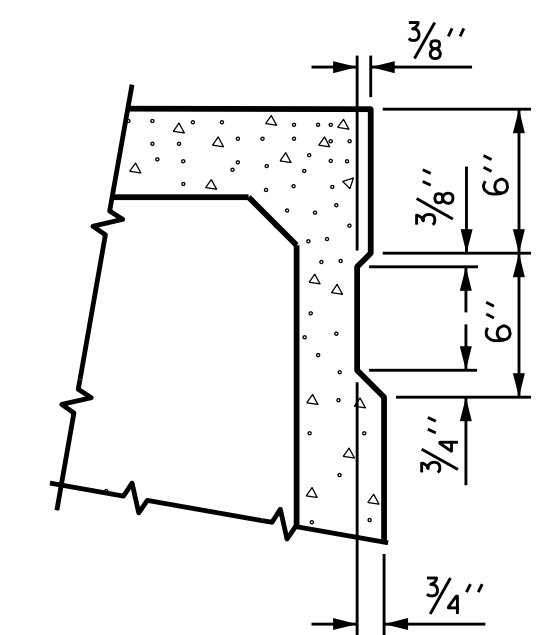


ALL BAR DIMENSIONS ARE OUT TO OUT

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

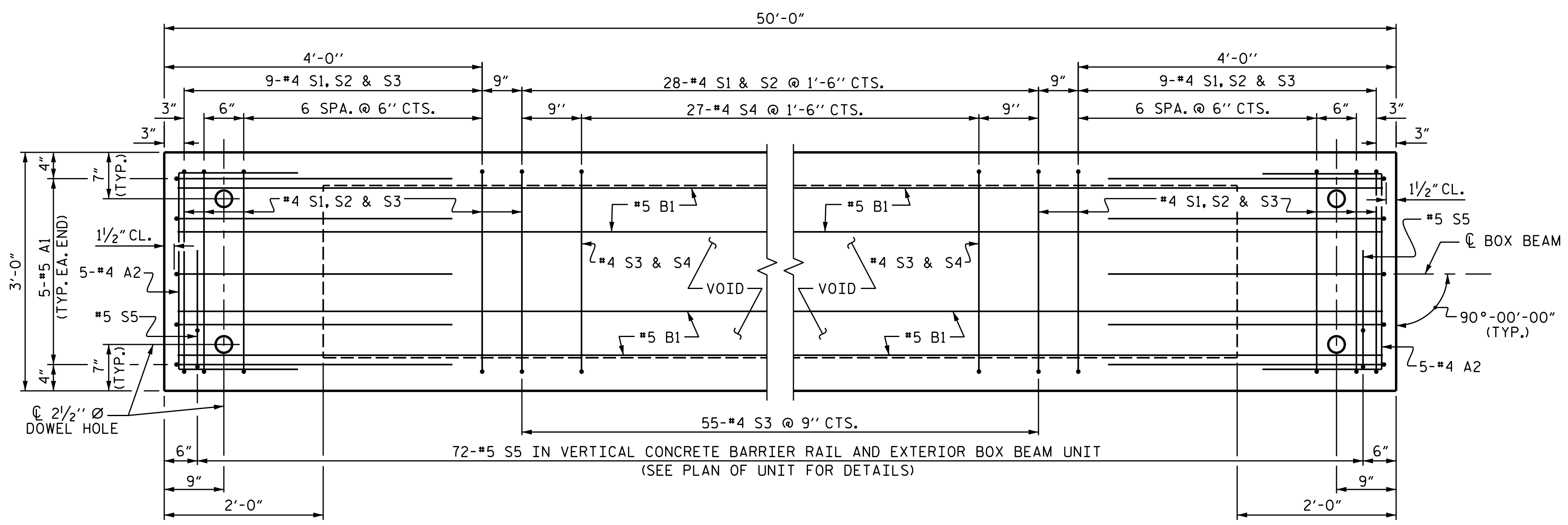
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	1	6'-8"	70	6'-8"	70
A2	40	#4	2	5'-7"	149	5'-7"	149
B1	6	#5	STR	49'-8"	311	49'-8"	311
K1	9	#4	6	6'-2"	37	6'-2"	37
K2	6	#4	STR	2'-7"	10	2'-7"	10
S1	46	#4	3	7'-6"	230	7'-6"	230
S2	46	#4	3	5'-8"	174	5'-8"	174
S3	73	#4	3	4'-10"	236	4'-10"	286
S4	27	#4	4	5'-10"	105	5'-10"	105
* S5	72	#5	5	5'-10"	438	--	--
REINFORCING STEEL				1322	LBS.	1322	LBS.
* EPOXY COATED REINF. STEEL				438	LBS.		
5000 P.S.I. CONCRETE				9.2	CU. YDS.	9.1	CU. YDS.
0.6" Ø L.R. STRANDS				No. 12		No. 12	

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



**SHEAR KEY DETAIL**

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



**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".

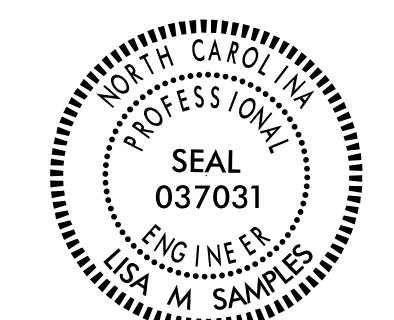
PROJECT NO. B-5398

BURKE COUNTY

STATION: 16+45.00 -L-

SHEET 4 OF 7

DocuSigned by:  
*Lisa M. Samples*  
5683D096A9B449C...  
7/4/2016



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**3'-0" X 2'-9" PRESTRESSED CONCRETE BOX BEAM UNIT**  
SPANS A & C

DRAWN BY : J.M. KEPICH DATE : 02/16  
CHECKED BY : L.M. SAMPLES DATE : 04/16  
DESIGN ENGINEER OF RECORD : L.M. SAMPLES DATE : 05/16

**ms consultants, inc.**  
920 Main Campus Drive  
Suite 430  
Raleigh, NC 27606  
NC License Number : C-3239

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TOTAL SHEETS 24