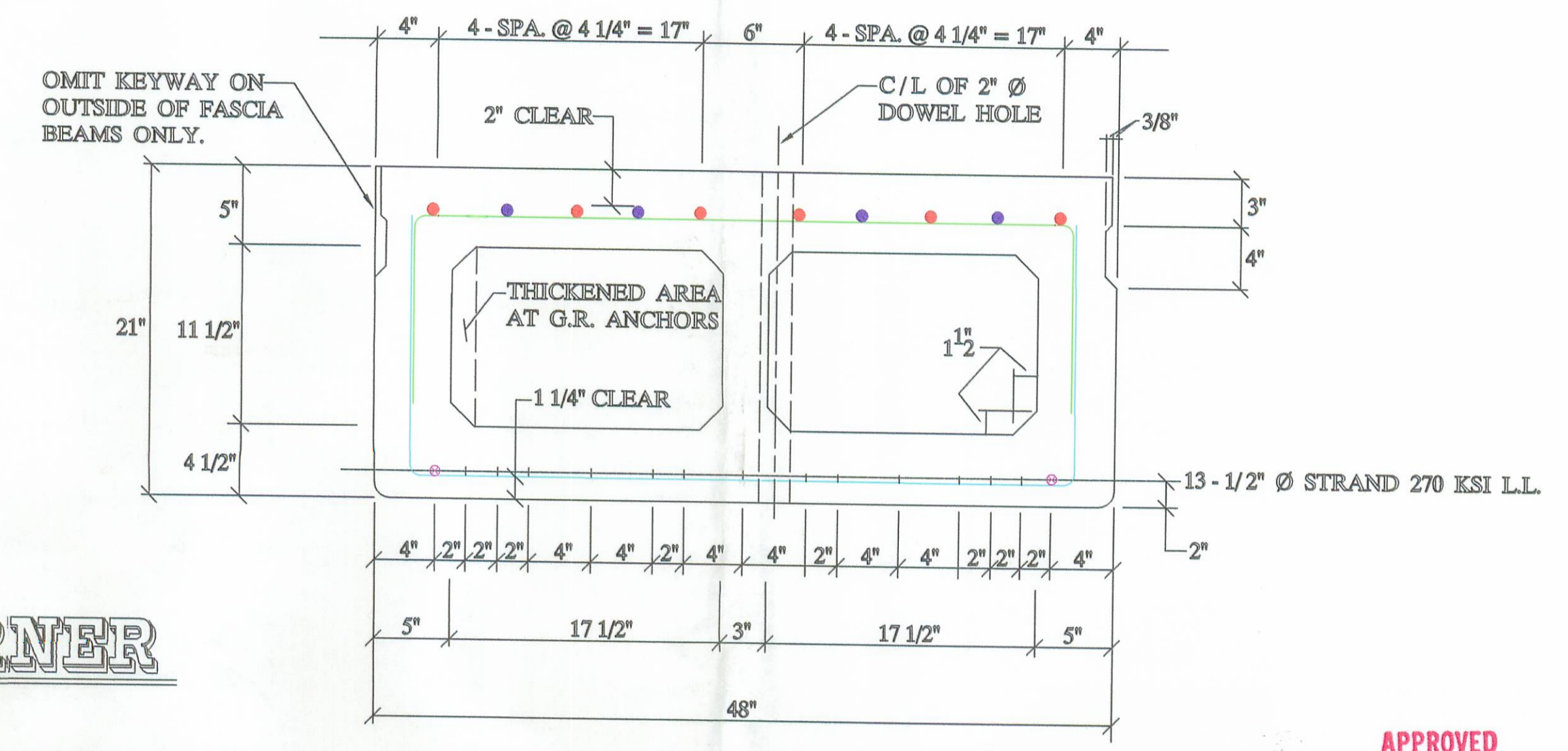


**DECK PLAN**

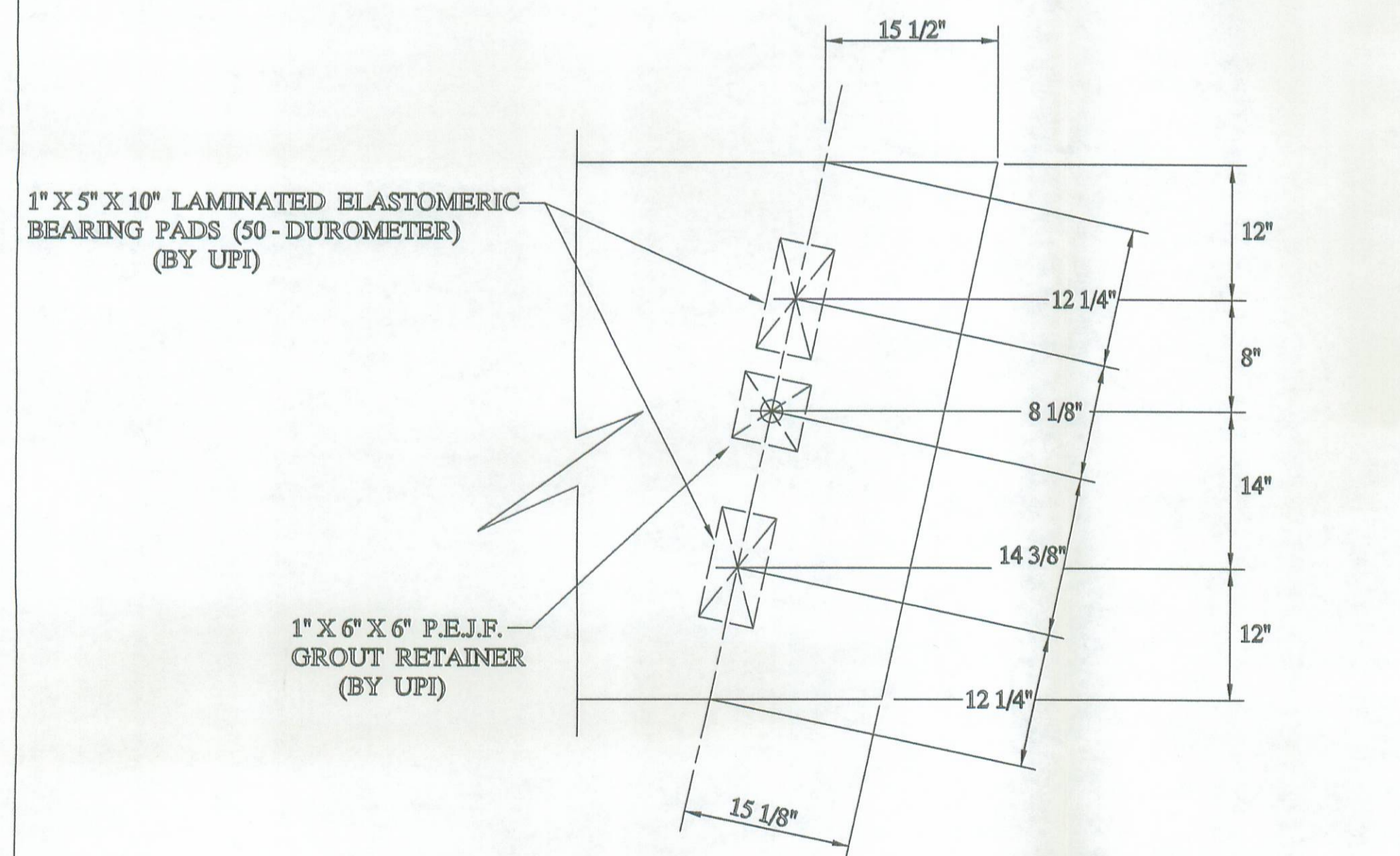


**(TYP.) ACUTE CORNER**

**B21-48**

- 6 - #4 BARS FULL LENGTH RUN (TOP) MKB404 MKB405 (BUTT SPLICE BAR)
- 4 - #4 ADDITIONAL BARS 7'-0" LONG AT EACH END OF BEAM (TOP) MKB406.
- ⊗ 2 - #5 BARS FULL LENGTH RUN (BOTTOM) MKB501 MKB502 (BUTT SPLICE BAR)

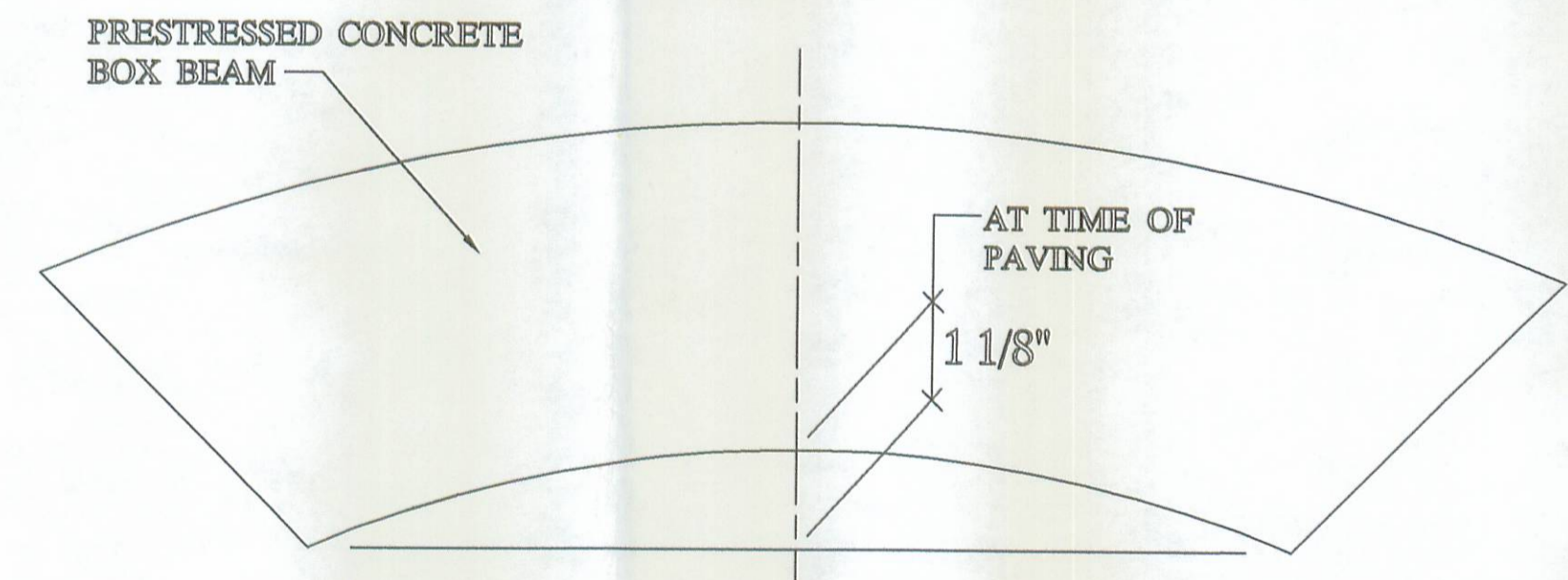
APPROVED  
BY LOGAN CO. ENGINEER  
*[Signature]*



**BEARING PAD LAYOUT**

**QUALITY CONTROL NOTE :**

- STRAND AREA IS .153 SQ. IN.
- STRAND IS LOW LAX.
- INITIAL LOAD IS 30,982 # / STRAND.
- REBAR IS ALL GRADE - 60.
- STIRRUPS UNDER STRAND.
- DOWEL HOLE PLACEMENT NOT TYPICAL.

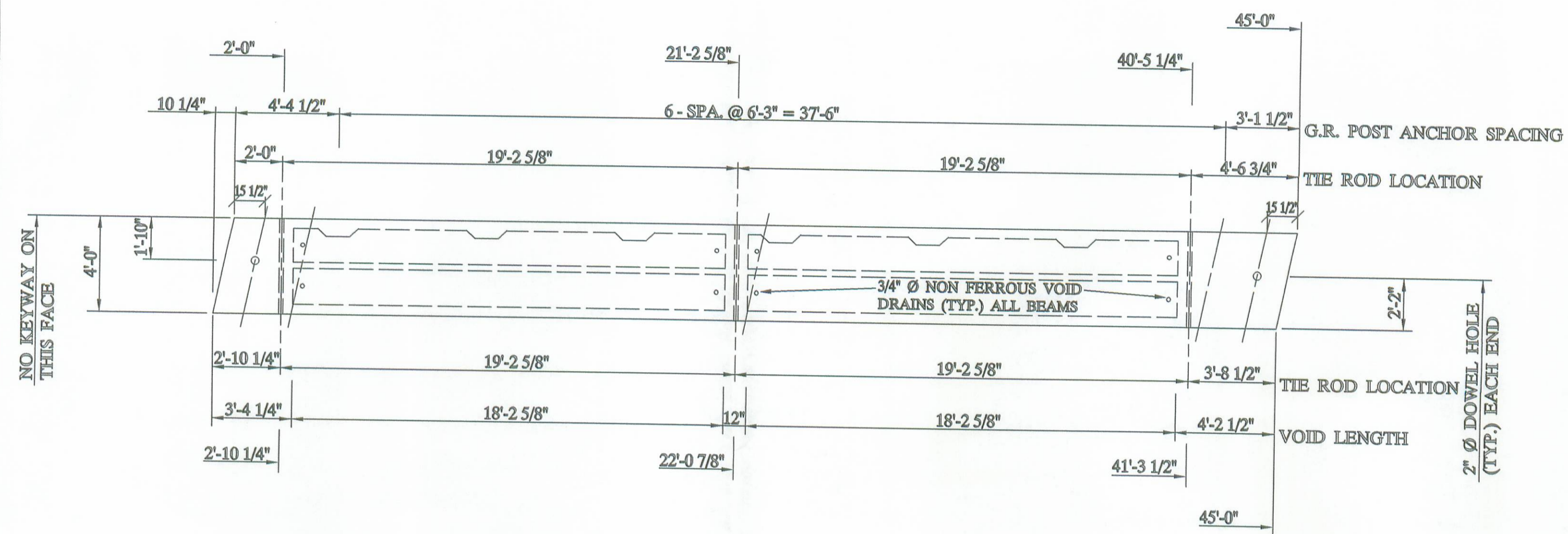


**CAMBER DETAIL**

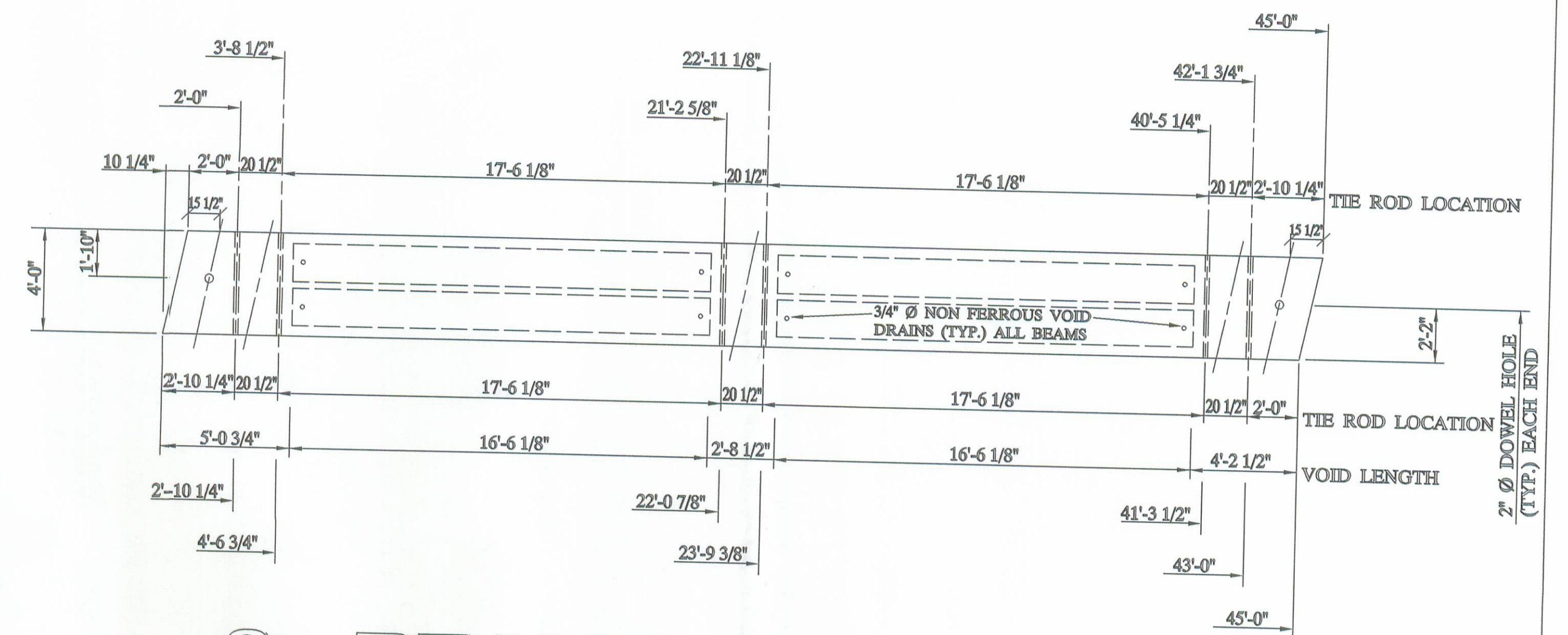
**BILL OF MATERIALS**

NO	ITEM	QTY / BEAM	NOTES	TOTAL
1	BEAM WEIGHT			
2	CONCRETE	8 CY.		56 CY.
3	CALCIUM NITRITE	32 GAL.	(D.C.I.) 4 - GAL / CY.	224 GAL.
4	STRAND		1/2" Ø STRAND 270 KSI LL.	6,160 L.F.
5	RE - STEEL		GRADE - 60	5,918 #
6	VOID		11 1/2" X 17 1/2"	515 L.F.
7	VOID DRAINS		3/4" Ø NON FERROUS	56 EA.
8	TIE ROD	12'-0"	1" Ø STEEL ROD	9 EA.
9	TIE ROD SLEEVES			108 L.F.
10	TYPE - B - ANCHORS			28 EA.
11	TYPE - C - ANCHORS			14 EA.
12	DOWELS & SLEEVES			14 EA.
13	INTERTUF - 132			0.6 GAL.
14	SILANE			2.1 GAL.
15	JUTE			270 L.F.
16	BEARING PADS		1" X 5" X 10" (2 - LAM.)	28 EA.
17	GUARDRAIL POST		TYPE - 2	14 EA.
18	GUARDRAIL ELEMENT			100 L.F.
19	TUBULAR BACK - UP			100 L.F.
20	POSTS OFF DECK		(SHIP LOOSE)	4 EA.
21	P.E.J.F.			14 S.F.
22	NON SHRINK GROUT ADDITIVE			9 LBS.

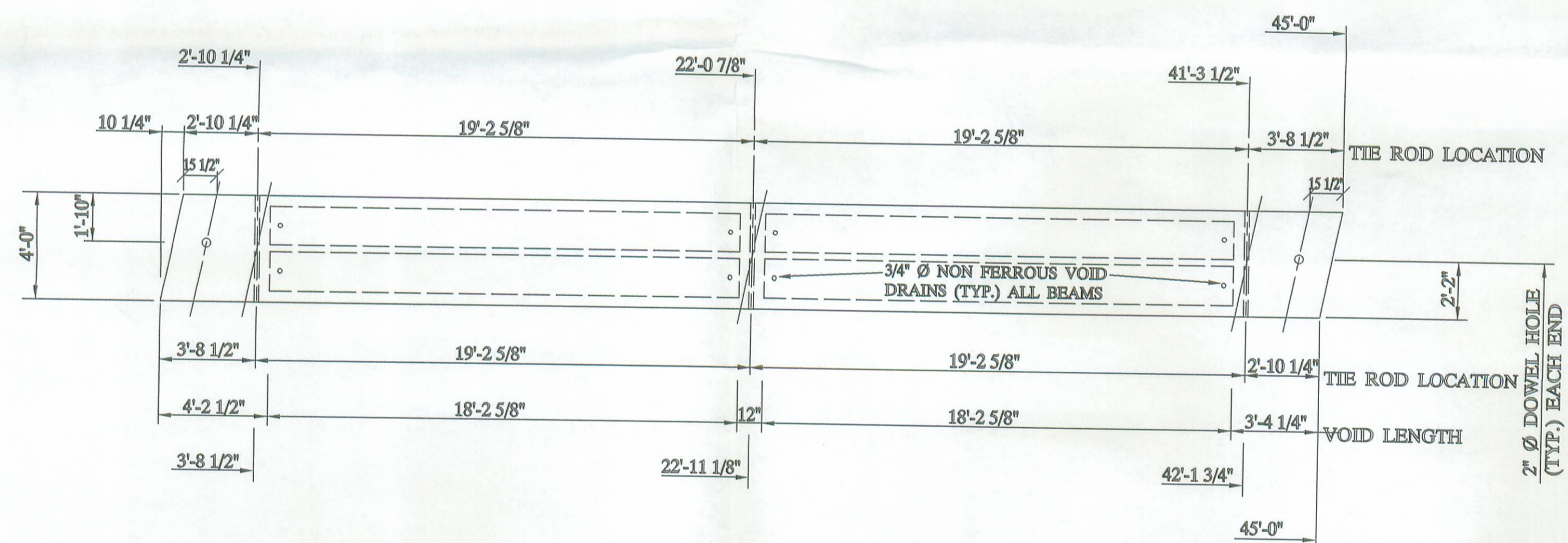
	<b>UNITED PRECAST INC.</b>	<b>DESCRIPTION :</b> BOX BEAM DETAILS		<b>SCALE :</b>	<b>DRAWN BY :</b>
	ADDRESS : ROUNDHOUSE LANE MOUNT VERNON , OHIO 43050	<b>JOB NAME :</b> ITEM 515 BRIDGE NO. 54 - 638 LOGAN COUNTY	<b>PROJECT NO. C.R. 54</b>		<b>PHIL</b>
	PHONE : (740) 393-1121 FAX : (740) 393-0044	<b>DATE :</b> MAY 2002	<b>APPROVED BY :</b> E.O.C.	<b>5 / 14 / 02</b>	<b>REVISED :</b>
					<b>DRAWING NO. 1 OF 4</b>



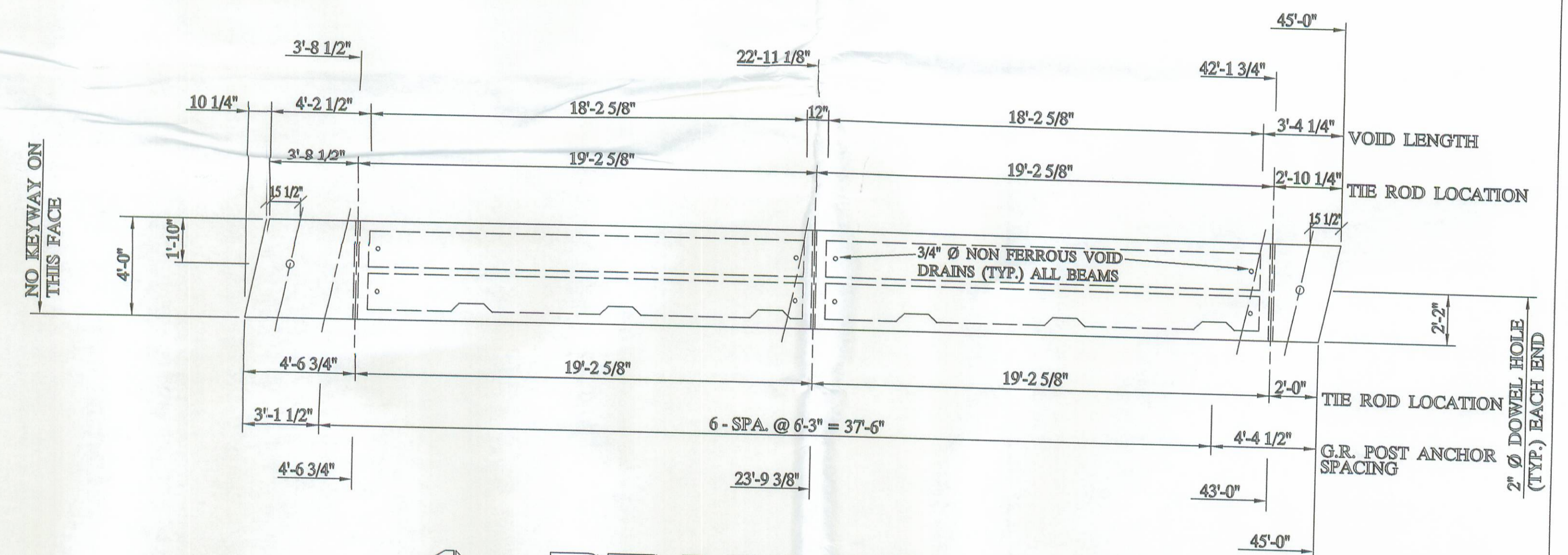
**1 - BEAM NO. B-1**



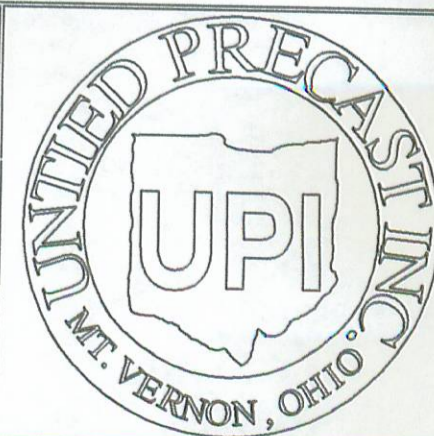
**2 - BEAM NO. B-3 & B-5**



**3 - BEAM NO. B-2, B-4, & B-6**



**1 - BEAM NO. B-7**

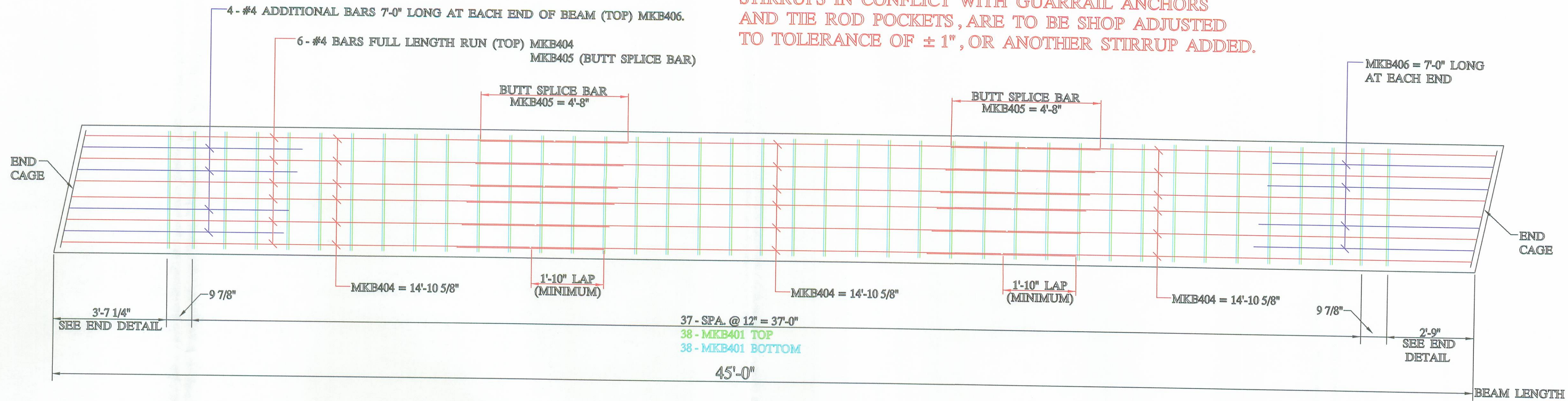


**UNITED PRECAST INC.**

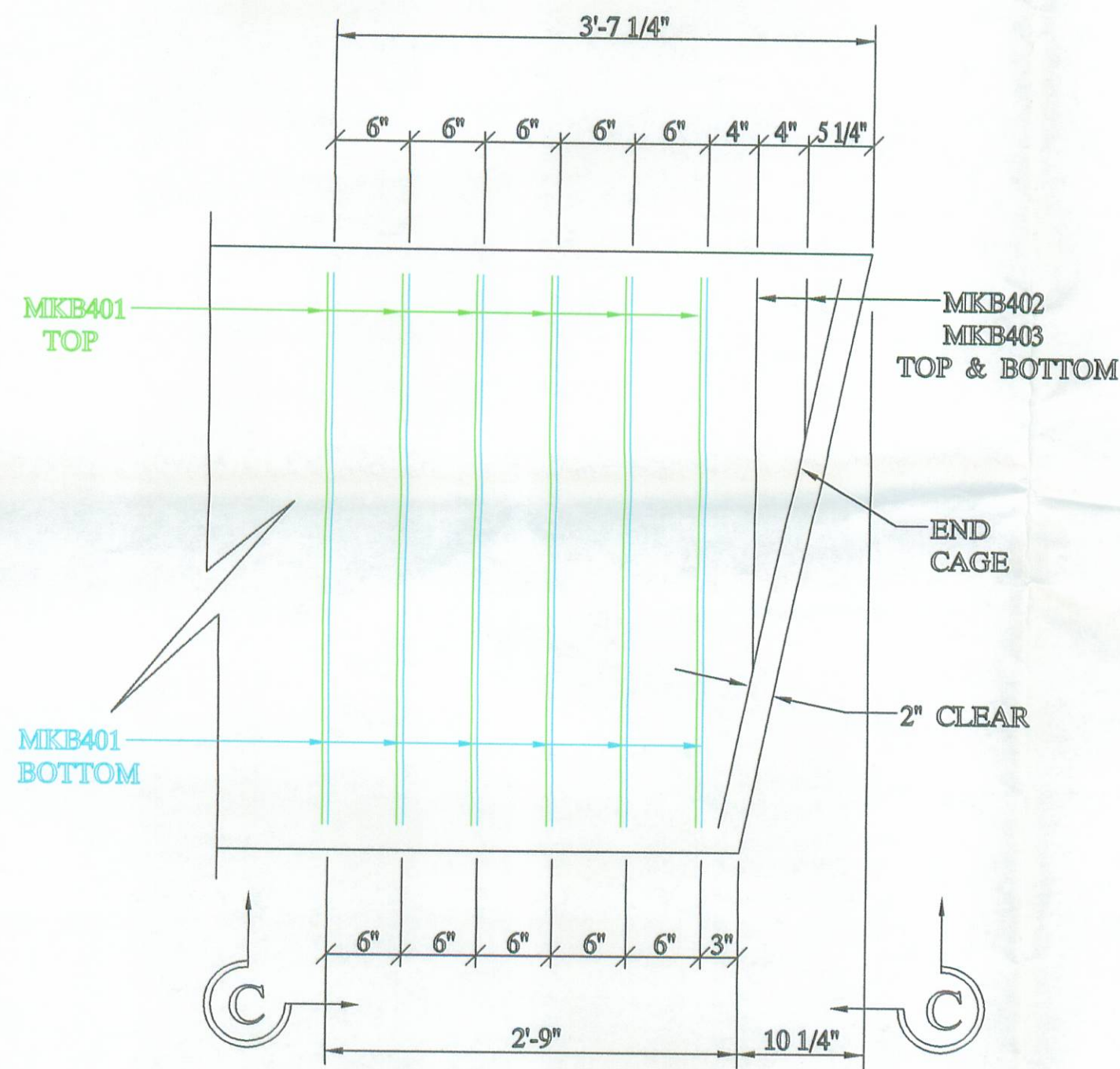
ADDRESS : ROUNDHOUSE LANE  
MOUNT VERNON, OHIO 43050  
PHONE : (740) 393-1121  
FAX : (740) 393-0044

DESCRIPTION :	BOX BEAM DETAILS		SCALE :	DRAWN BY :
JOB NAME :	ITEM 515	BRIDGE NO. 54 - 6.38	PROJECT NO. C.R. 54	PHIL
DATE :	MAY 2002	LOGAN COUNTY	APPROVED BY :	REVISID :
			E.O.C.	5/14/02
				DRAWING NO. 2 OF 4

**NOTE:**  
STIRRUPS IN CONFLICT WITH GUARRAIL ANCHORS AND TIE ROD POCKETS, ARE TO BE SHOP ADJUSTED TO TOLERANCE OF  $\pm 1"$ , OR ANOTHER STIRRUP ADDED.



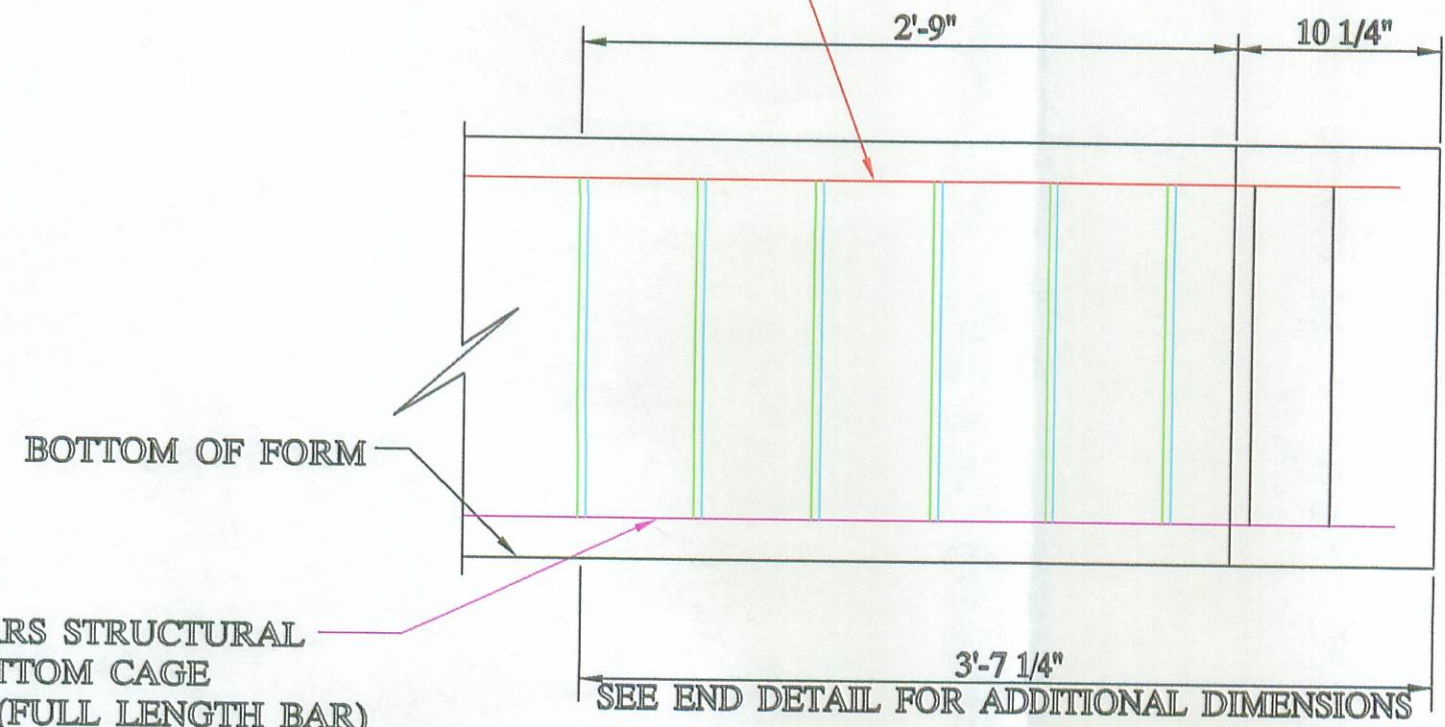
## REINFORCING LAYOUT



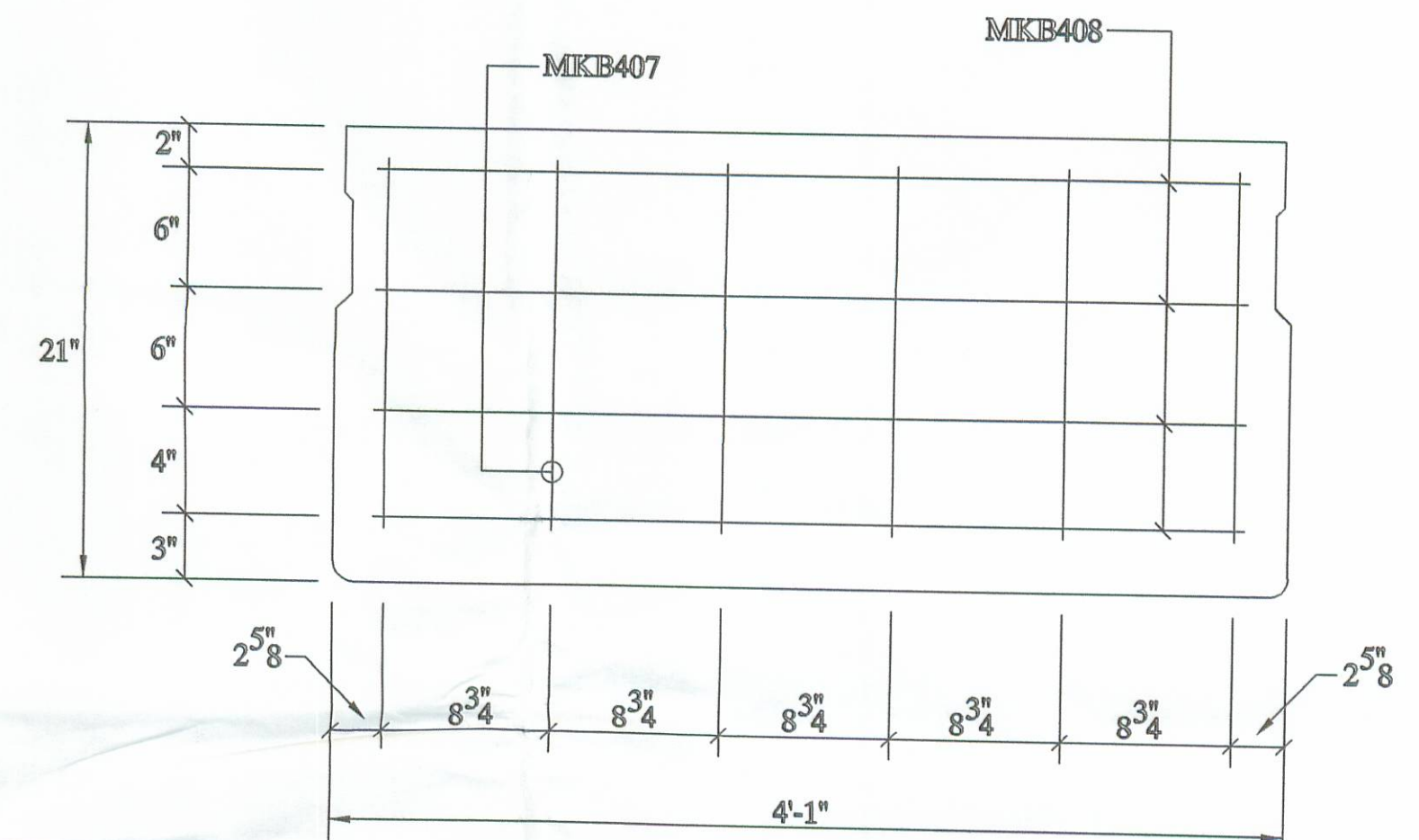
**(TYP.) END DETAIL  
(WITH SKEW)**

**NOTE:**  
MINIMUM BUTT SPlice LENGTH REQUIRED IF CAGE FIT UP IS PERFECT IS AS FOLLOWS:  
#4, UNCOATED 44" (22" EACH SIDE)  
#5, UNCOATED 58" (29" EACH SIDE)

TOP LONGITUDINAL BARS & TOP STIRRUPS ASSEMBLED IN TOP CAGE & PLACED IN BED IN UNITS OF VARIOUS LENGTH WITH TOP BARS BUTT SPICED AT INTERSECTIONS



**SECTION C-C**

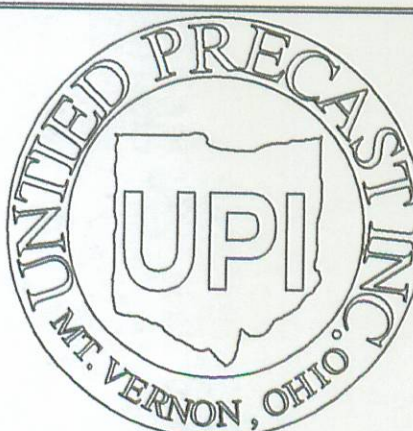


**BEAM END CAGE  
(WITH SKEW)**

7 - B21-48 X 45'-0" WITH 12° L.F. SKEW

## BAR LIST

MARK	SIZE	LENGTH	QUANTITY	SHAPE	A	B	C	D	E
B401	4	6'-2 1/2"	700	TYPE - 2	43"	17"			
B402	4	3'-8"	28	TYPE - 2	12 1/2"	17"			
B403	4	5'-3"	28	TYPE - 2	31 1/2"	17"			
B404	4	14'-10 5/8"	126	TYPE - 3	14'-10 5/8"				
B405	4	4'-8"	84	TYPE - 3	4'-8"				
B406	4	7'-0"	56	TYPE - 3	7'-0"				
B407	4	1'-5"	84	TYPE - 3	17"				
B408	4	3'-8 3/4"	56	TYPE - 3	44 3/4"				
B501	5	14'-10 5/8"	42	TYPE - 3	14'-10 5/8"				
B502	5	5'-10"	28	TYPE - 3	5'-10"				



**UNITED PRECAST INC.**

ADDRESS : ROUNDHOUSE LANE  
MOUNT VERNON, OHIO 43050  
PHONE : (740) 393-1121  
FAX : (740) 393-0044

DESCRIPTION :

REINFORCING LAYOUT

JOB NAME :

ITEM 515

BRIDGE NO. 54 - 6.38  
LOGAN COUNTY

PROJECT NO. C.R. 54

DATE :

MAY 2002

APPROVED BY :

E.O.C.

5/14/02

SCALE :

DRAWN BY :

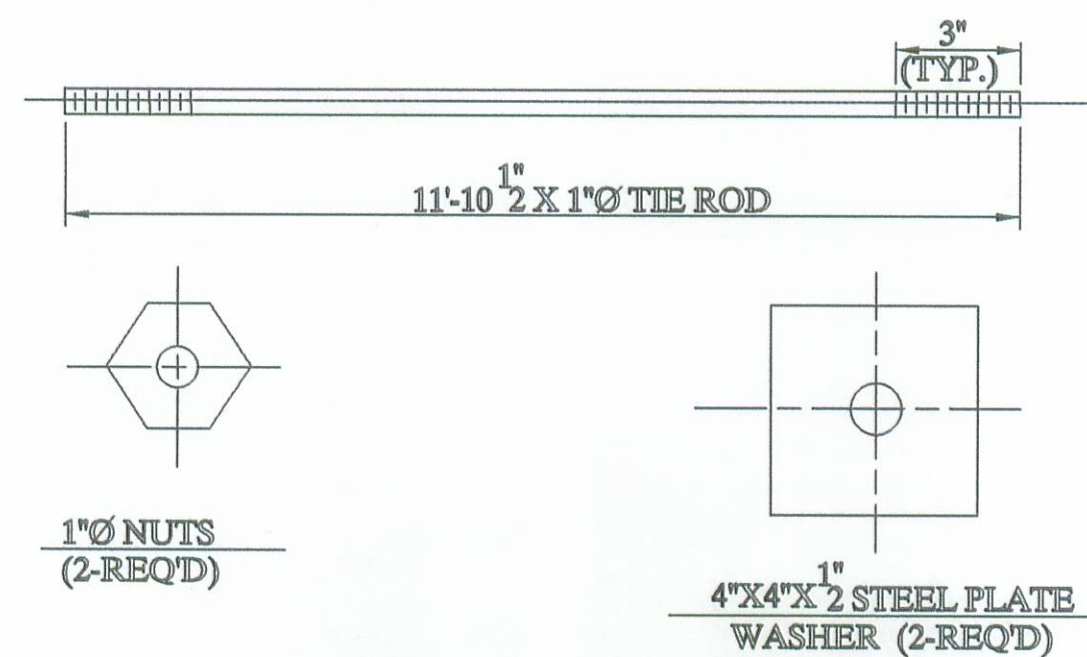
PHIL

REVISED :

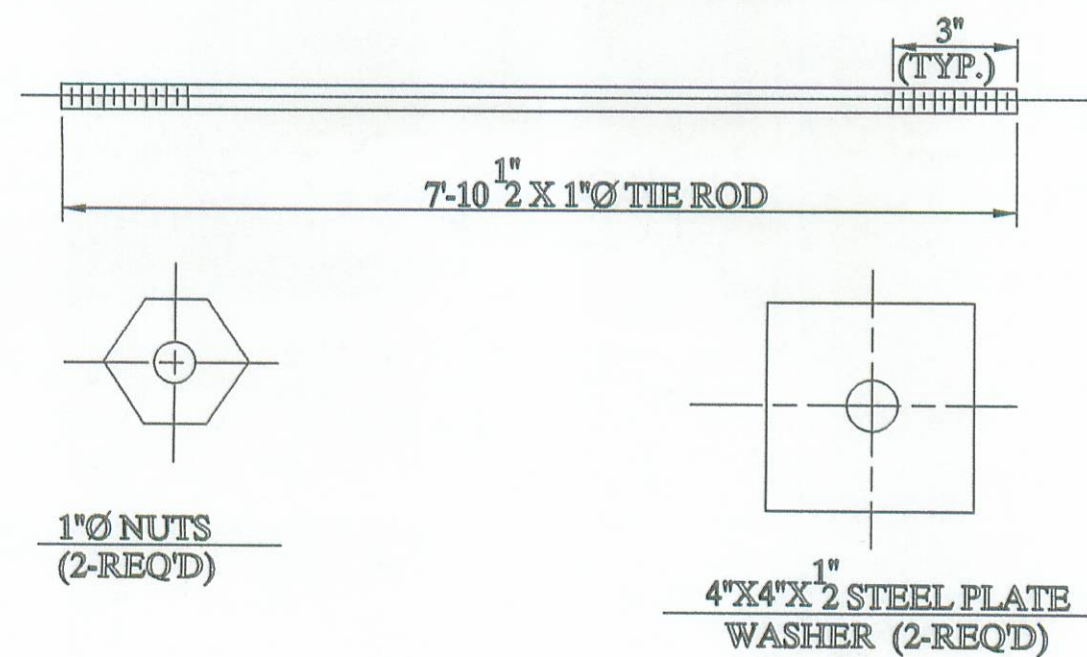
DRAWING NO.

3 OF 4

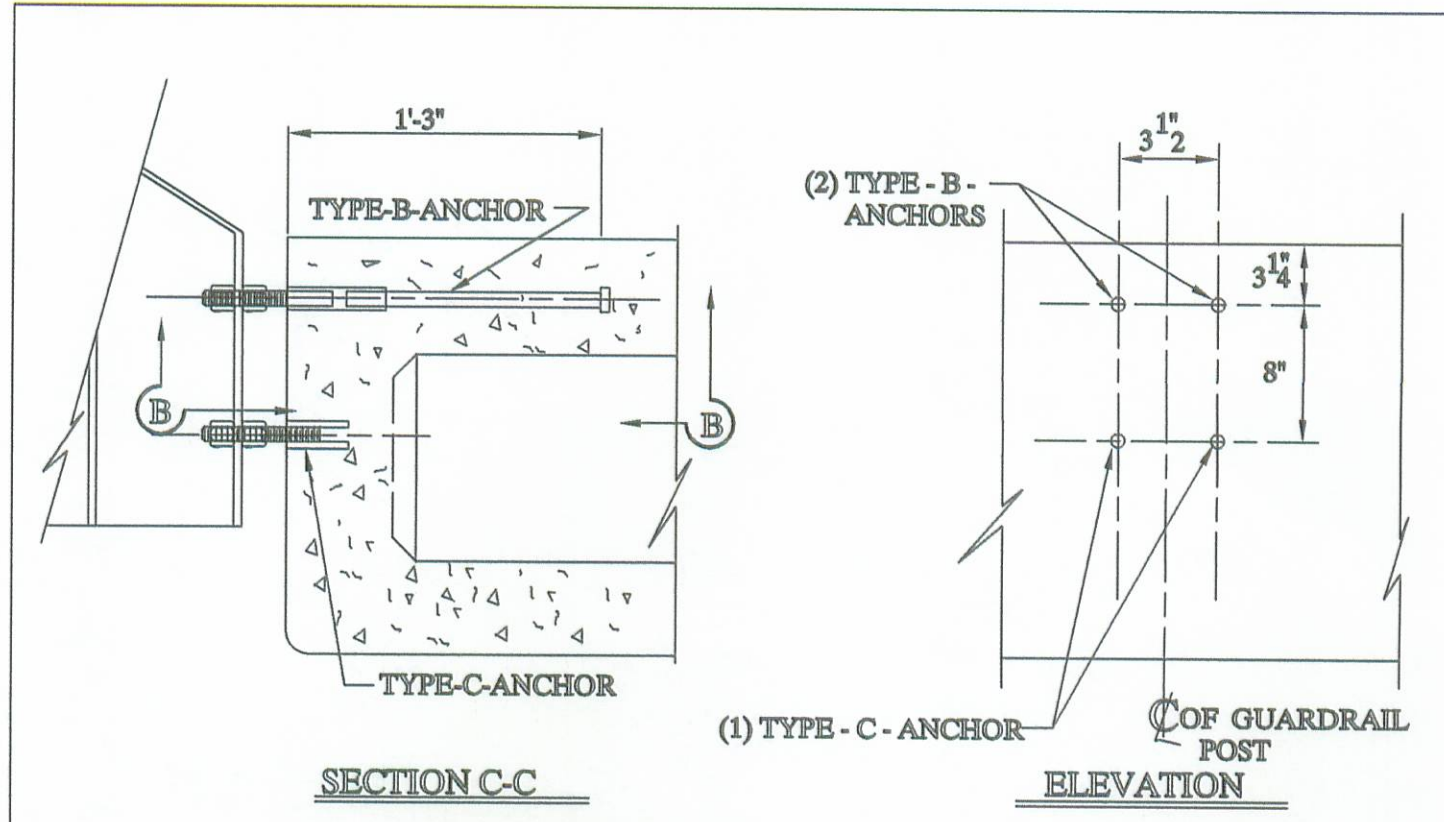
**12'-0" TIE ROD ASS'Y**



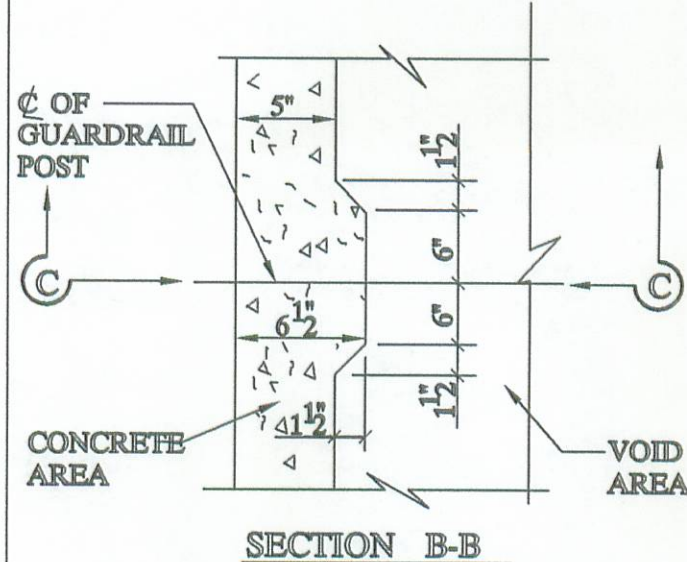
**8'-0" TIE ROD ASS'Y**



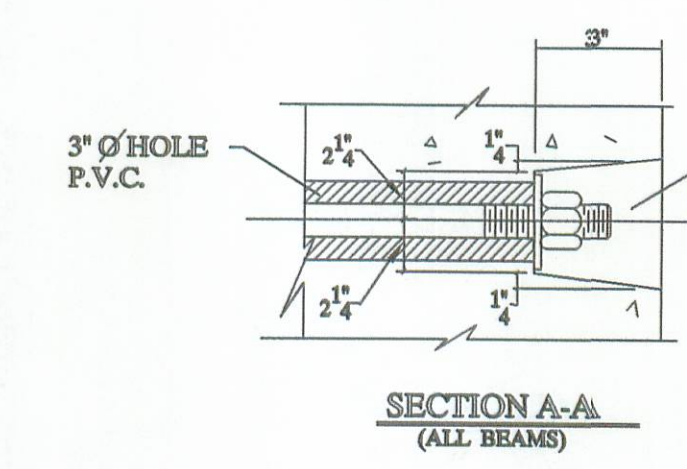
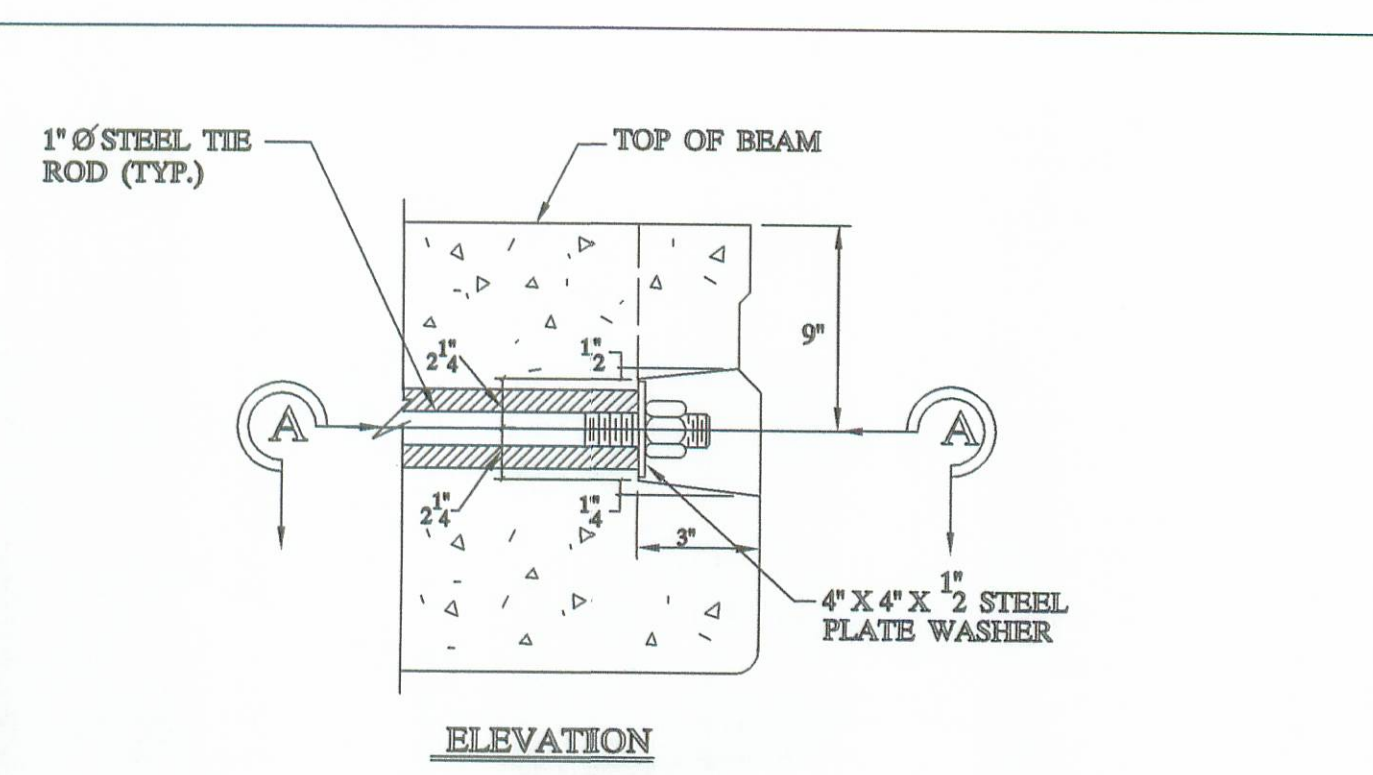
NOTE:  
ALL ITEMS INCLUDING TIE RODS ACCESSORIES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM-123 OR 153. PER CMS 711.02, UNLESS OTHERWISE NOTED.



NOTE:  
ONE TYPE 'C' ANCHOR PROVIDES FOR (2) STUDS (SEE BELOW).



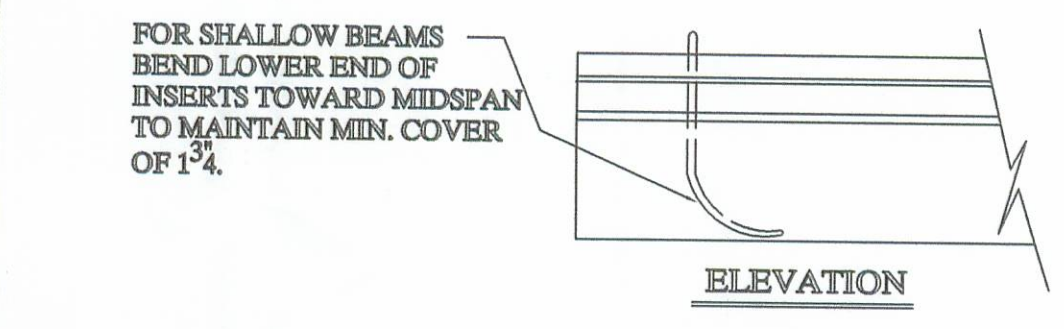
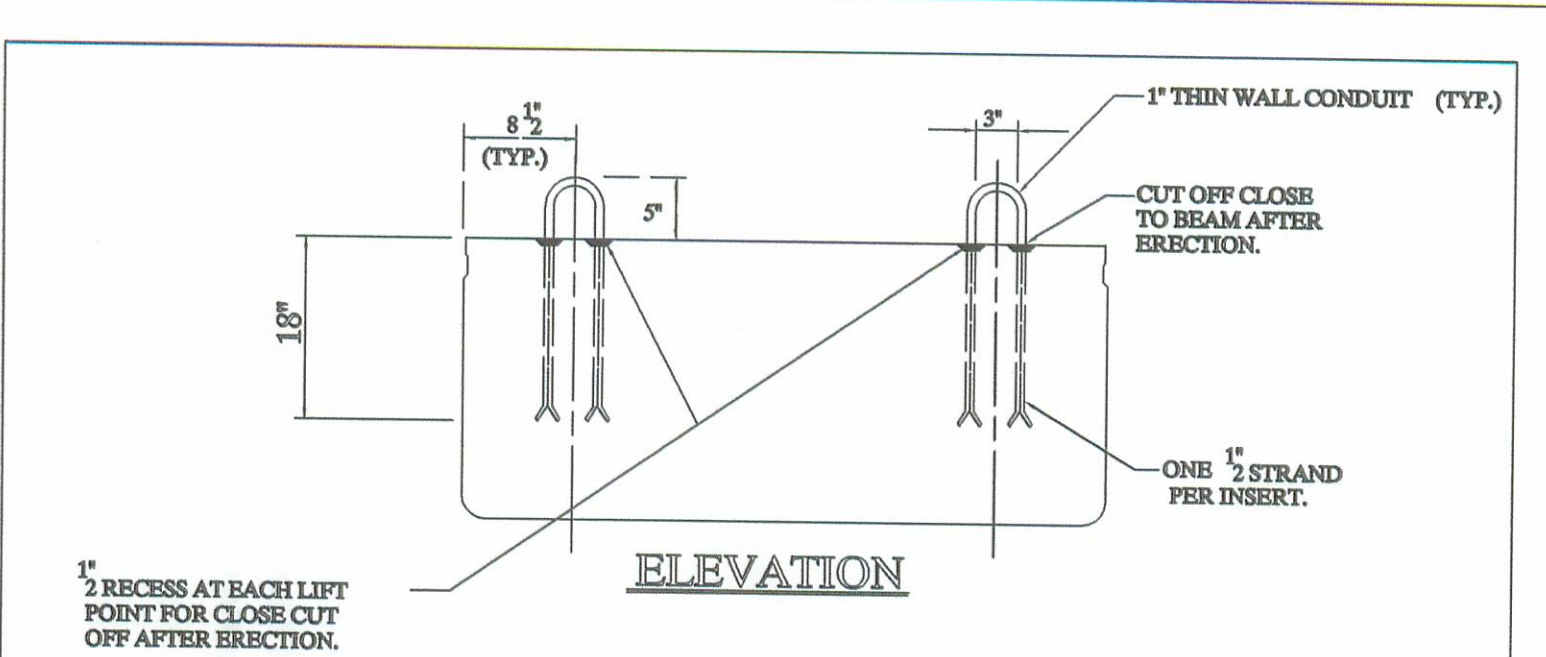
NOTE:  
TYPE B & C ANCHOR ASSEMBLIES SHALL CONFORM TO PHYSICAL PROPERTIES OF ASTM-A-325. EXCEPT MIN. ELONGATION SHALL BE 10%. THE CHEMICAL PROPERTIES ARE WAIVED.



NOTE:  
TIE RODS SHALL BE A311-G1018 STEEL, OR A-36 MODIFIED.

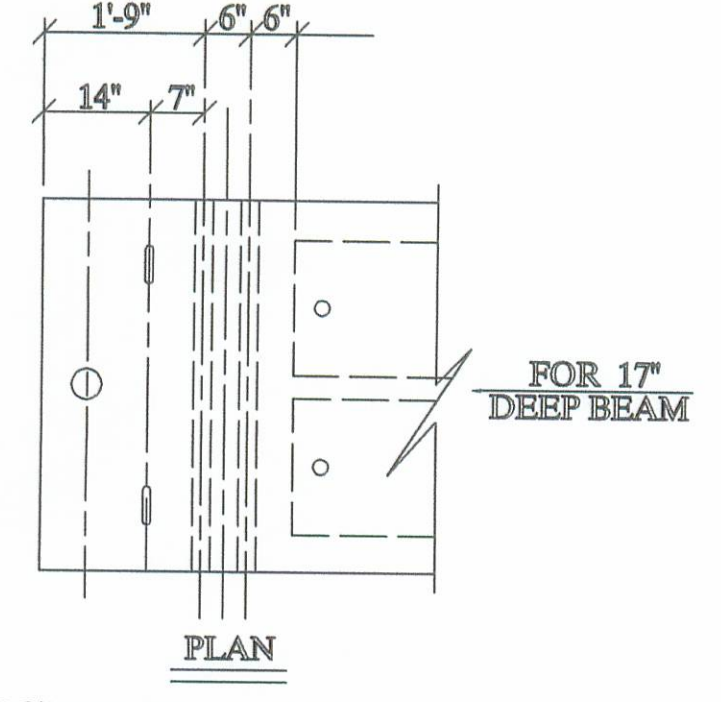
**END DETAIL OF TRANSVERSE TIE ROD ANCHORAGE**

NOTE:  
1) GALVANIZE ALL HARDWARE PER CMS. 711.02.  
2) PROVIDE A BROOM FINISH ON TOP SURFACE OF BEAM SUITABLE FOR WATERPROOFING.  
3) ADD D.C.I. TO CONCRETE (4 - GAL. / CUBIC YARD).  
4) WATERPROOF BEAM ENDS.  
5) DETENSION STRAND SYMETRICALLY ABOUT CENTERLINE.

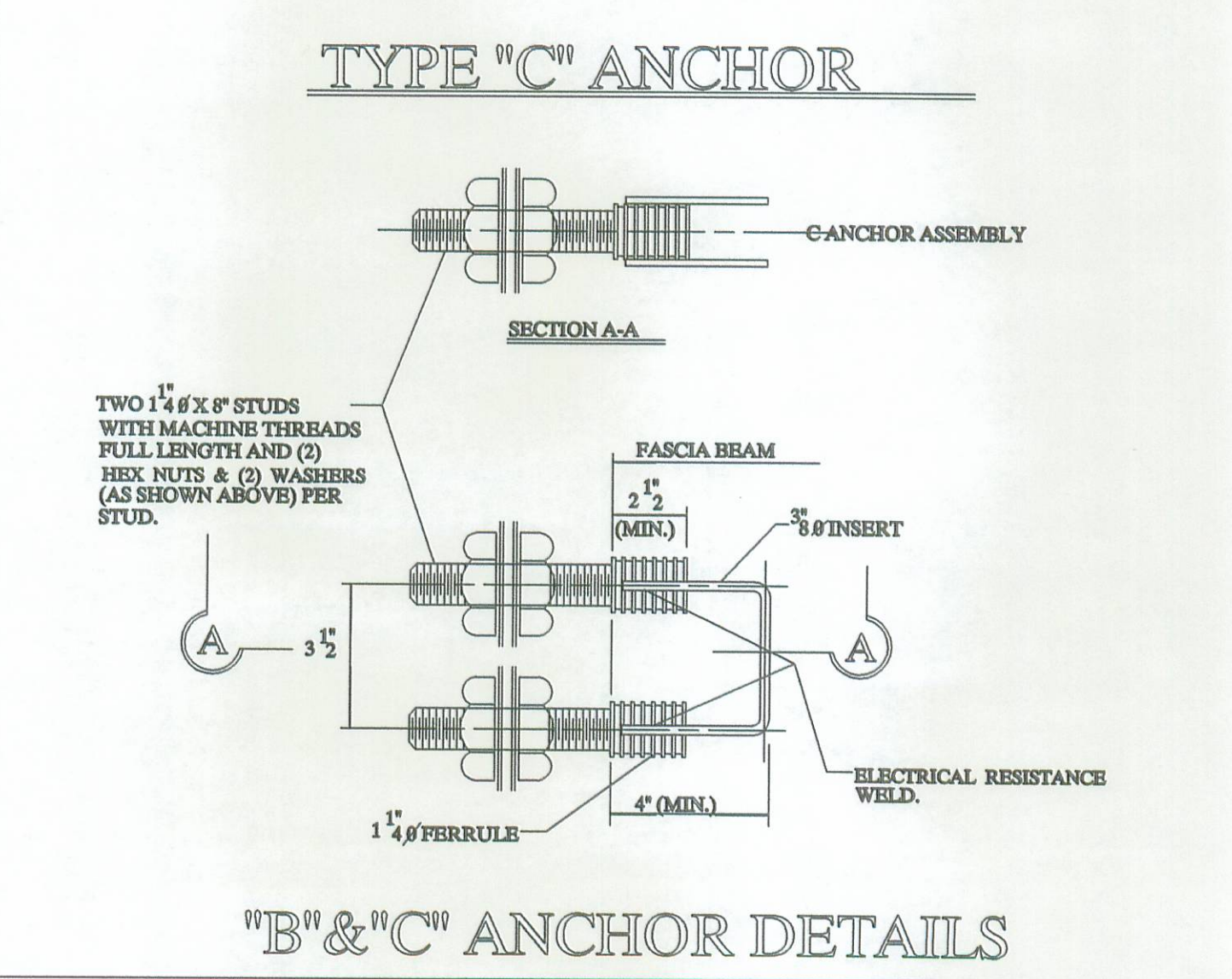
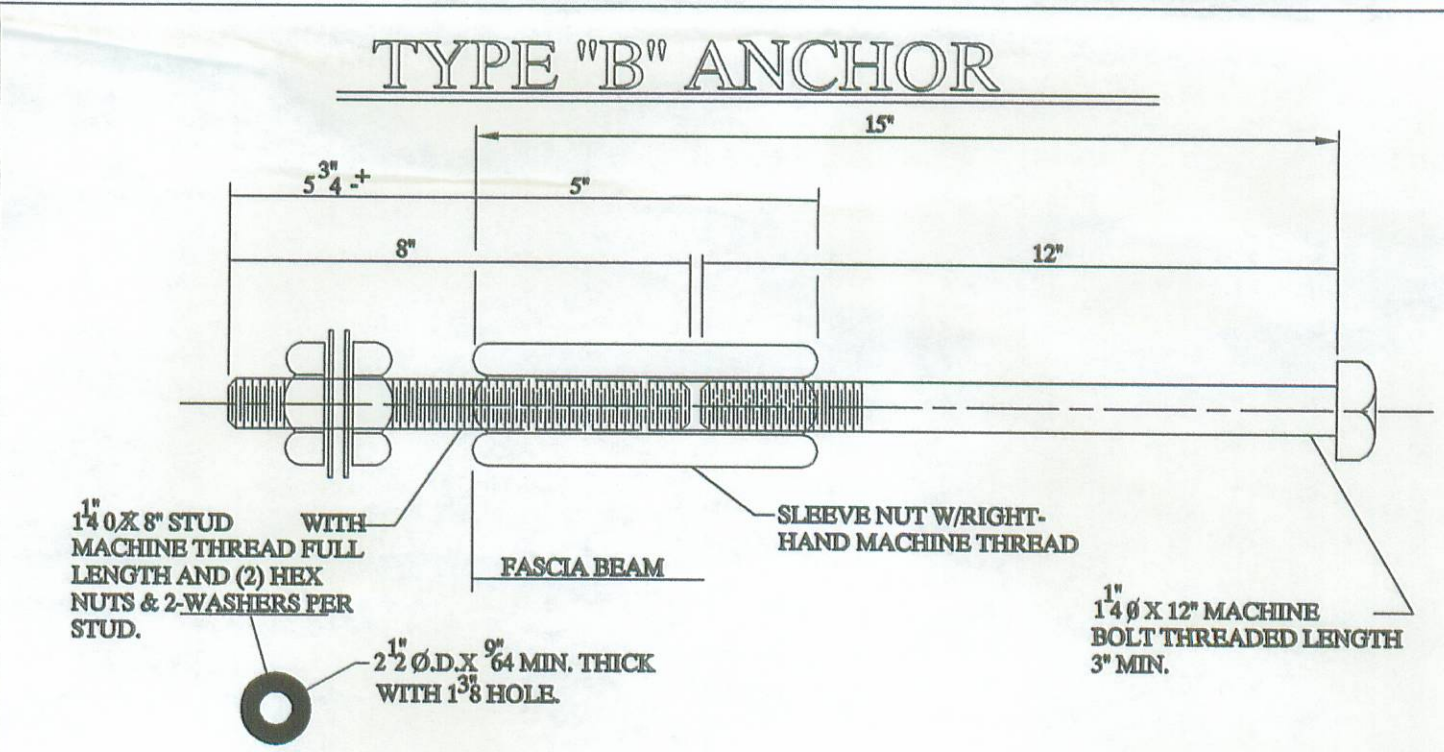


NOTE:  
LIFTING INSERTS ARE HAND PLACED IN THE FIELD AND ARE TO BE ADJUSTED TO CLEAR REINFORCEMENT, ANCHOR DOWEL SLEEVES, TIE ROD SLEEVES, OR ANY ADDITIONAL EMBEDDED ITEMS IN THIS REGION.

FOR 17" DEEP BEAM



**LIFTING INSERT DETAIL**



**SPECIFICATIONS**

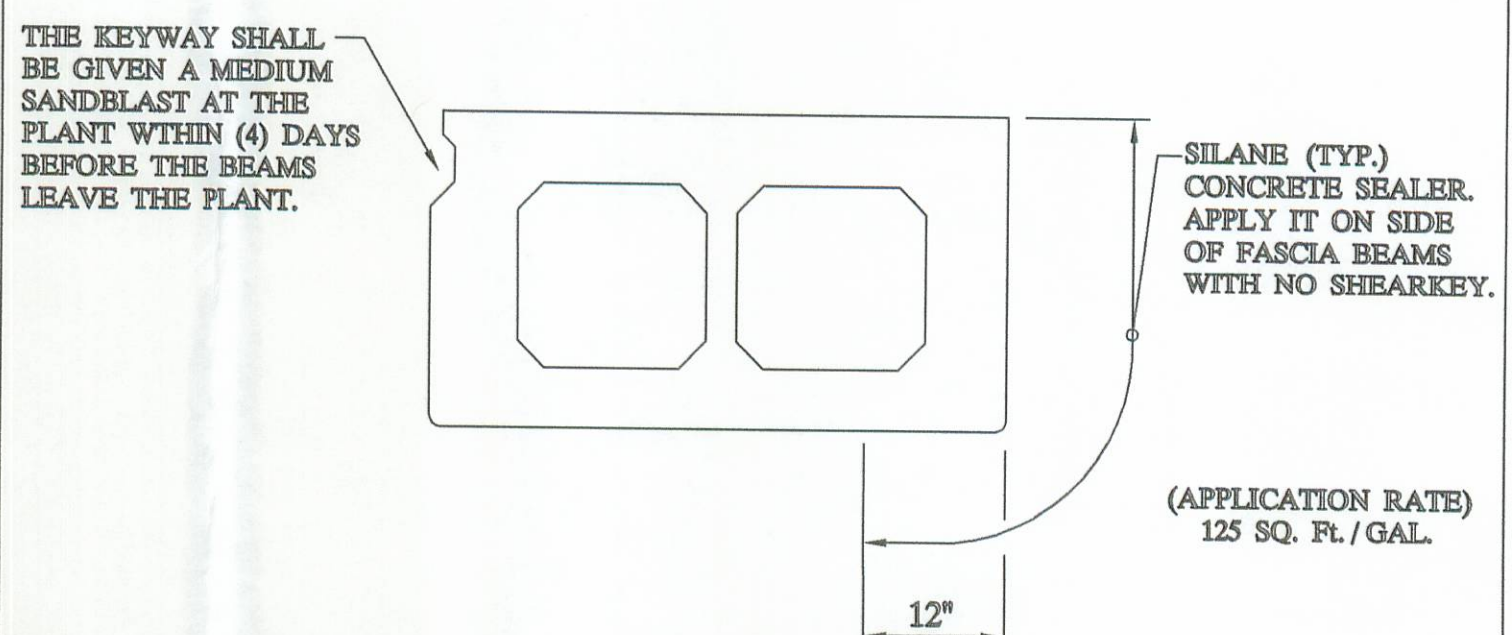
DESIGN LOADING: HS20-44 AND ALTERNATE MILITARY LOADING.

CONCRETE: COMPRESSIVE STRENGTH,  $f_c = 5500$  PSI @ 28 DAYS (SHIPPING),  $f_c = 4000$  PSI @ RELEASE.

PRESTRESSING STRAND: ASTM A-416 GRADE 270, 1/2" DIAMETER, SEVEN WIRE, UNCOATED LOW RELAXATION STRAND,  $A_s = .153$  in.  $f_s = 270$  KSI. INITIAL STRESS:  $0.75 f_s = 202.5$  KSI.

REINFORCING STEEL: GRADE - 60: ASTM A-615, ASTM A-616, ASTM A-617. UNIT STRESS 24,000 PSI.

NOTE:  
PRESTRESSED CONCRETE BEAMS AND APPURTENANCES CONFORM TO O.D.O.T. STANDARD BRIDGE DRAWINGS PSBD-1-93 SHEETS ONE, TWO, THREE, & FOUR.



**TYPICAL FASCIA BEAM**

BRIDGE NO. T 125-3.14 B MERCER COUNTY ITEM 515  
PROJECT NO. STELZER ROAD

**UNITED PRECAST INC.**

ROUNDHOUSE LANE  
MT. VERNON, OHIO 43050  
PHONE: (740) 393-1121, FAX: (740) 392-9708

DATE: MAY '02  
APPROVED BY: E.O.C.  
SCALE: ---  
DRAWN BY: PHIL  
REVISED  
DRAWING NO. 4 OF 4