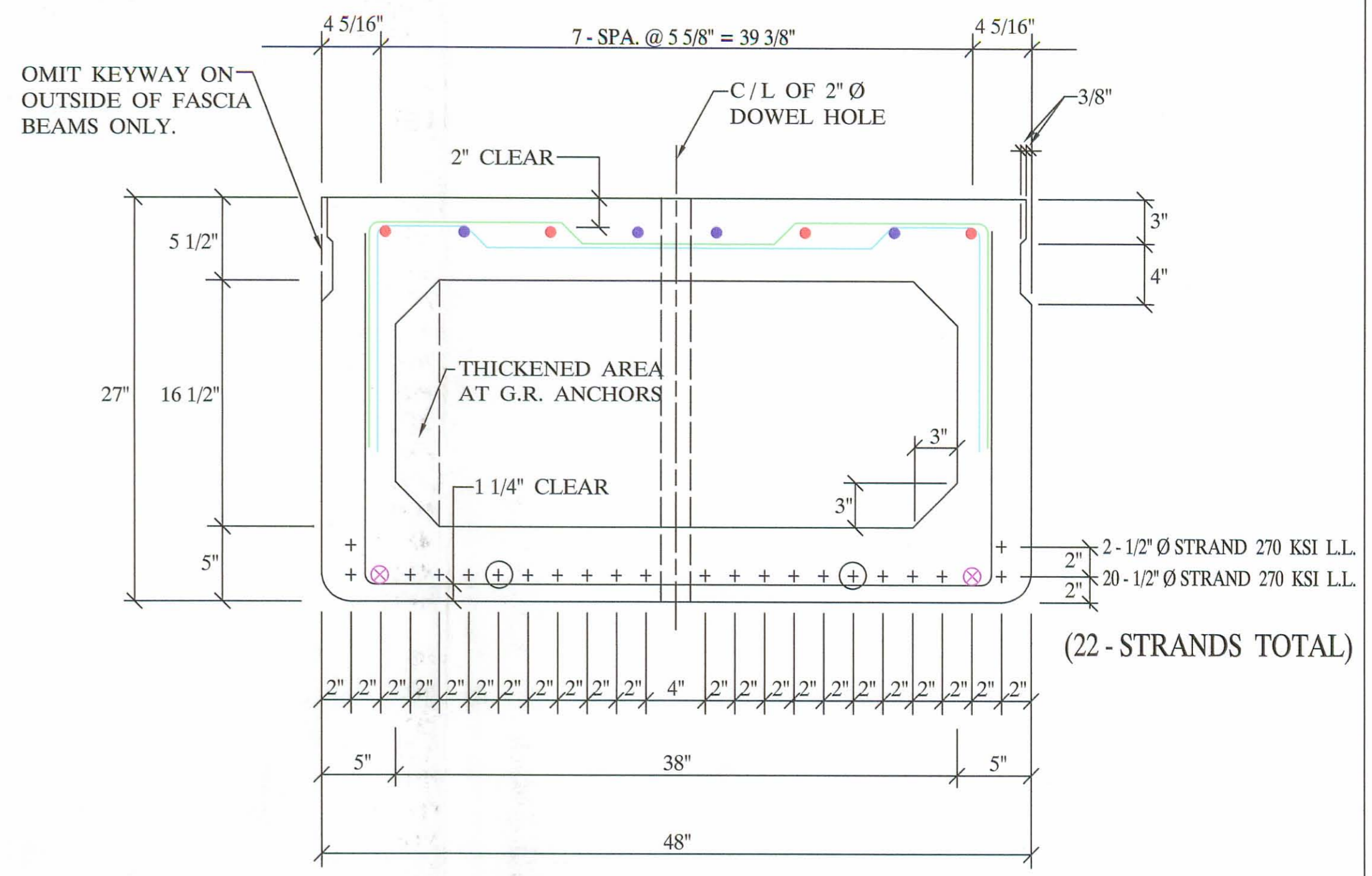


**DECK PLAN**



**B27-48**

- 4 - #5 BARS FULL LENGTH RUN (TOP)
- 4 - #5 ADDITIONAL BARS 10'-0" LONG AT EACH END OF BEAM (TOP)
- ⊗ 2 - #6 BARS FULL LENGTH RUN (BOTTOM)
- ⊕ DEBOND STRAND 2'-6" AT EACH END OF BEAM

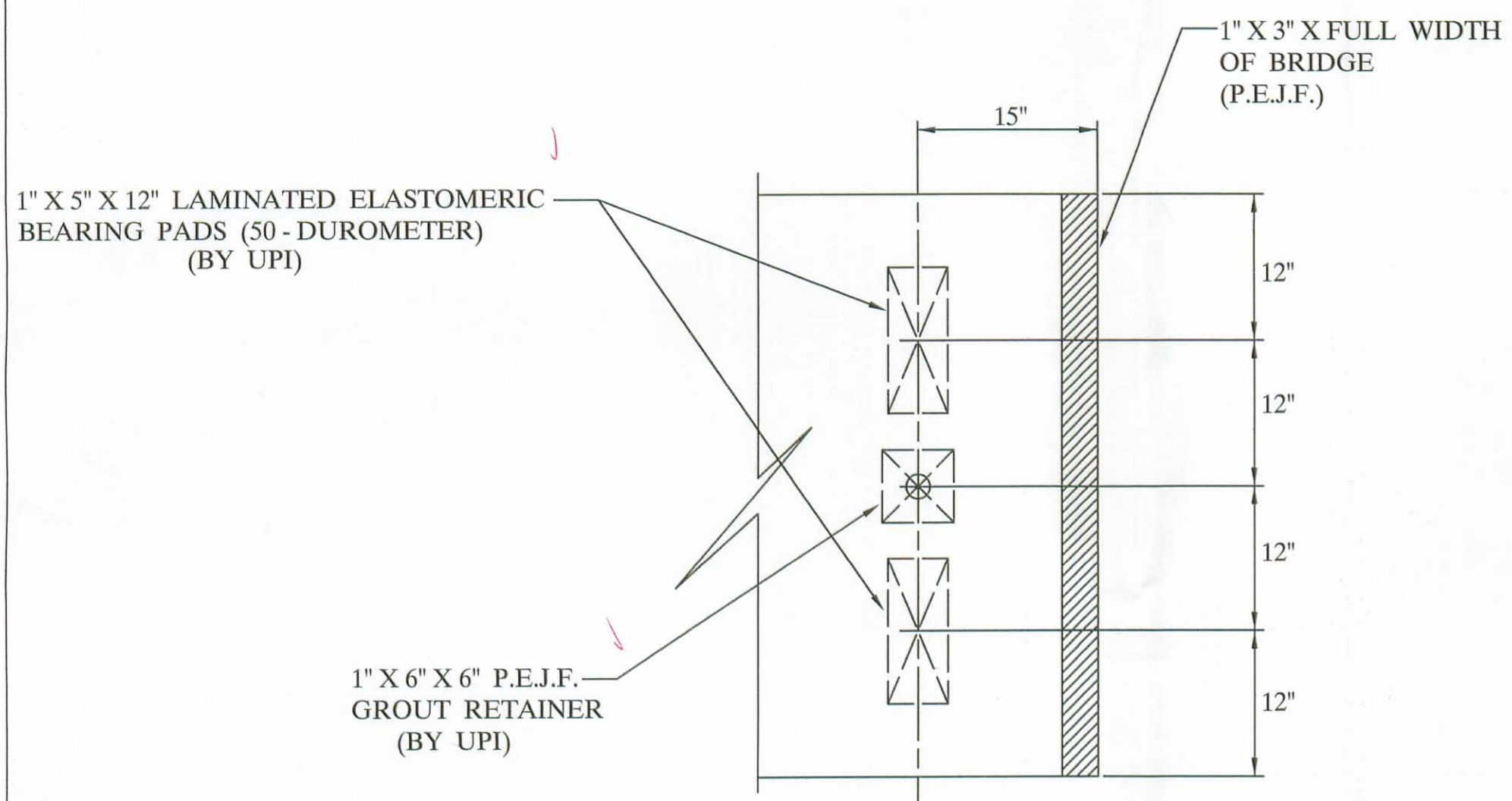
**QUALITY CONTROL NOTE :**

- STRAND AREA IS .153 SQ. IN.
- STRAND IS LOW LAX.
- INITIAL LOAD IS 30,982 # / STRAND.
- REBAR IS ALL GRADE - 60.
- STIRRUPS UNDER STRAND.
- CONCRETE STRENGTHS: 5500 PSI AT 28 DAYS  
4000 PSI AT RELEASE

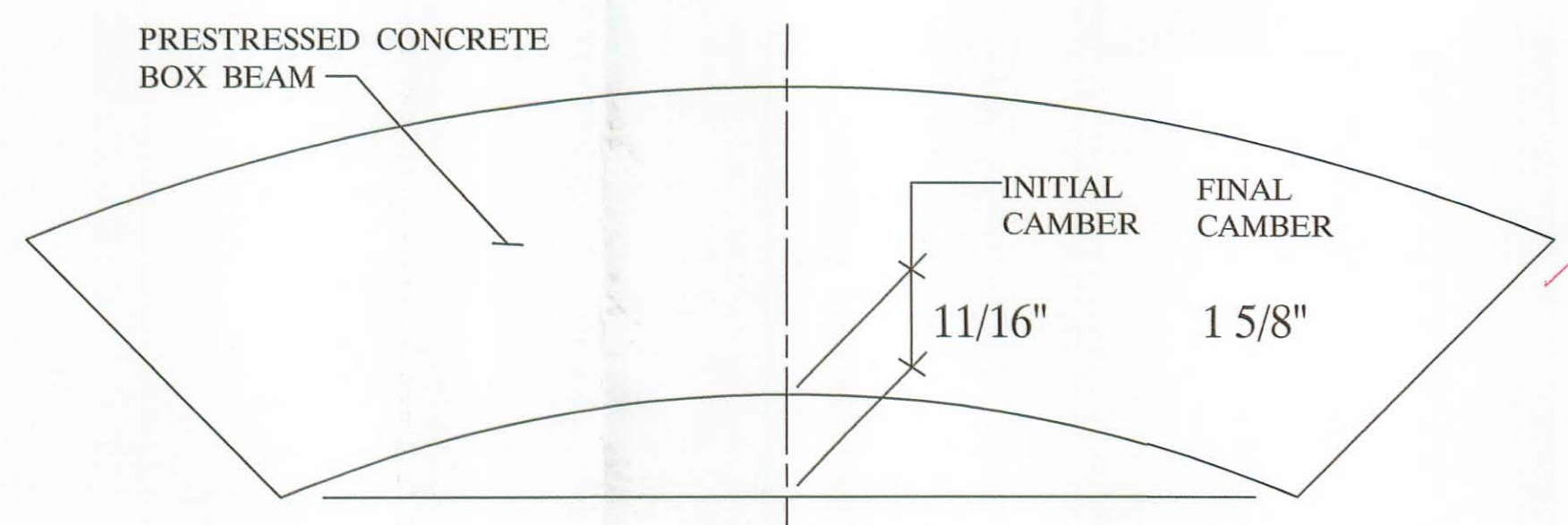
APPROVED  
BY LOGAN CO. ENGINEER  
*Scott Clark* 8-26-03

**BILL OF MATERIALS**

NO	ITEM	QTY / BEAM	NOTES	TOTAL
1	BEAM WEIGHT		52,438 #	75 CY.
2	CONCRETE	12.5 CY.		300 GAL.
3	CALCIUM NITRITE	50 GAL.	(D.C.I.) 4 - GAL. / CY.	9,680 L.F.
4	STRAND		1/2" Ø STRAND 270 KSI LL.	318 L.F.
5	RE - STEEL		GRADE - 60	8,940 #
6	VOID		16 1/2" X 38"	318 L.F.
7	VOID DRAINS		3/4" Ø NON FERROUS	36 EA.
8	TIE ROD	12'-0" 8'-0"	1" Ø STEEL ROD	8 EA.
			1" Ø STEEL ROD	4 EA.
9	TIE ROD SLEEVES			128 L.F.
10	TYPE - B - ANCHORS			40 EA.
11	TYPE - C - ANCHORS			20 EA.
12	DOWELS & SLEEVES			12 EA.
13	INTERTUF - 132			0.7 GAL.
14	SILANE			3.4 GAL.
15	JUTE			313 L.F.
16	BEARING PADS		1" X 5" X 12", 2-LAM. TYPE - 2	24 EA.
17	GUARDRAIL POST			20 EA.
18	OFF OF DECK POSTS			4 EA.
19	GUARDRAIL ELEMENT			150 L.F.
20	TUBULAR BACK - UP			150 L.F.
21	P.E.J.F.			12 S.F.
22	NON SHRINK GROUT ADDITIVE			



**BEARING PAD LAYOUT**  
(PLAN VIEW)



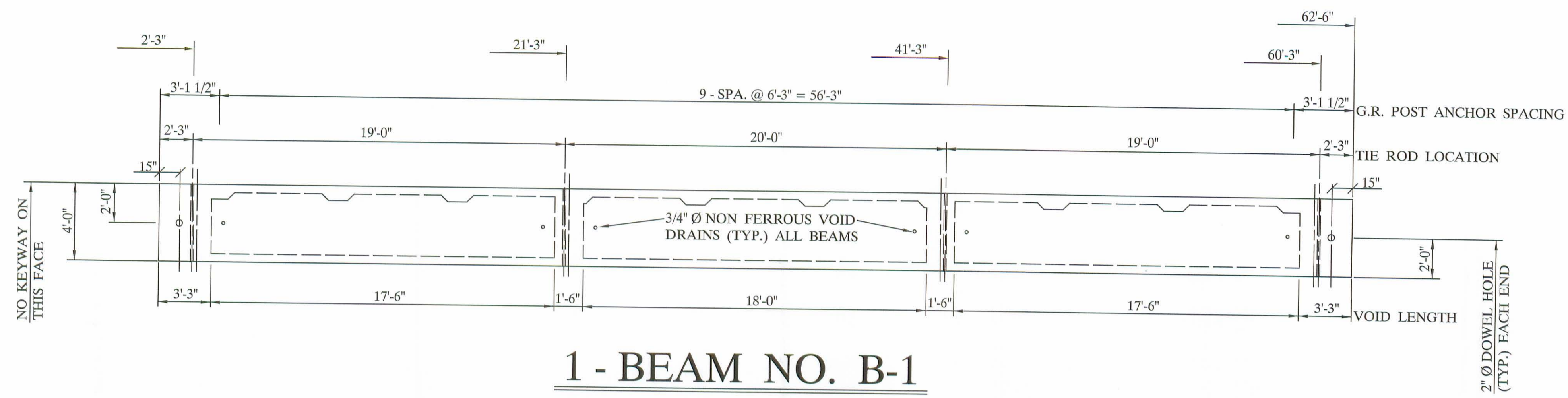
**CAMBER DETAIL**  
(ELEVATION)



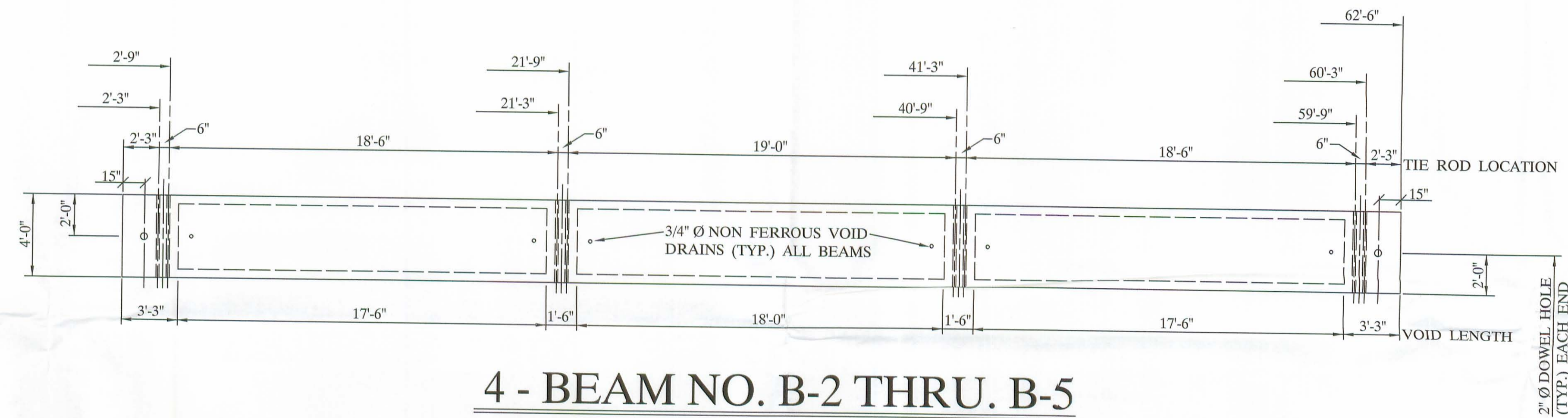
**UNITED PRECAST INC.**  
 ROUNDHOUSE LANE  
 MOUNT VERNON, OHIO 43050  
 PHONE : (740) 393-1121  
 FAX : (740) 392-9708

DESCRIPTION:	BOX BEAM DETAILS	SCALE:	DRAWN BY:
JOB NAME:	ITEM 515 BRIDGE NO. 201 - 1.41 LOGAN COUNTY	PROJECT NO. T.R. 201	PHIL
DATE:	AUGUST 2003	APPROVED BY:	REVISED:
		E.O.C. 8/16/03	DRAWING NO. 1 OF 4

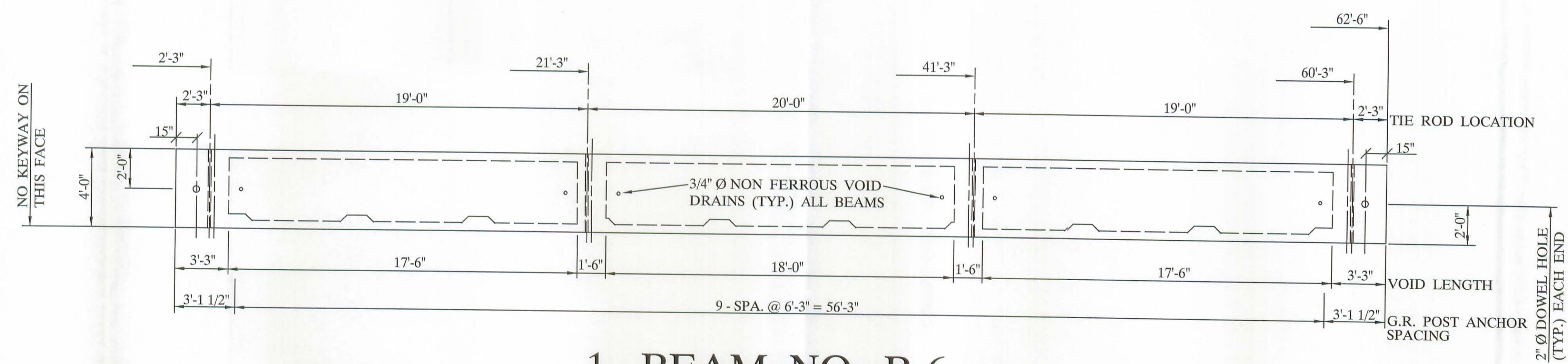




**1 - BEAM NO. B-1**



**4 - BEAM NO. B-2 THRU. B-5**



**1 - BEAM NO. B-6**

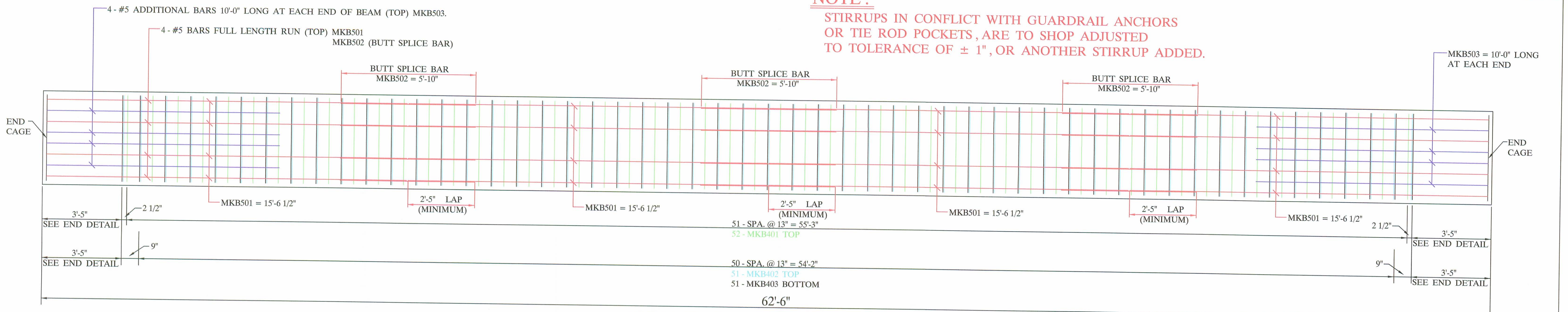


**UNITED PRECAST INC.**  
 ROUNDHOUSE LANE  
 MOUNT VERNON, OHIO 43050  
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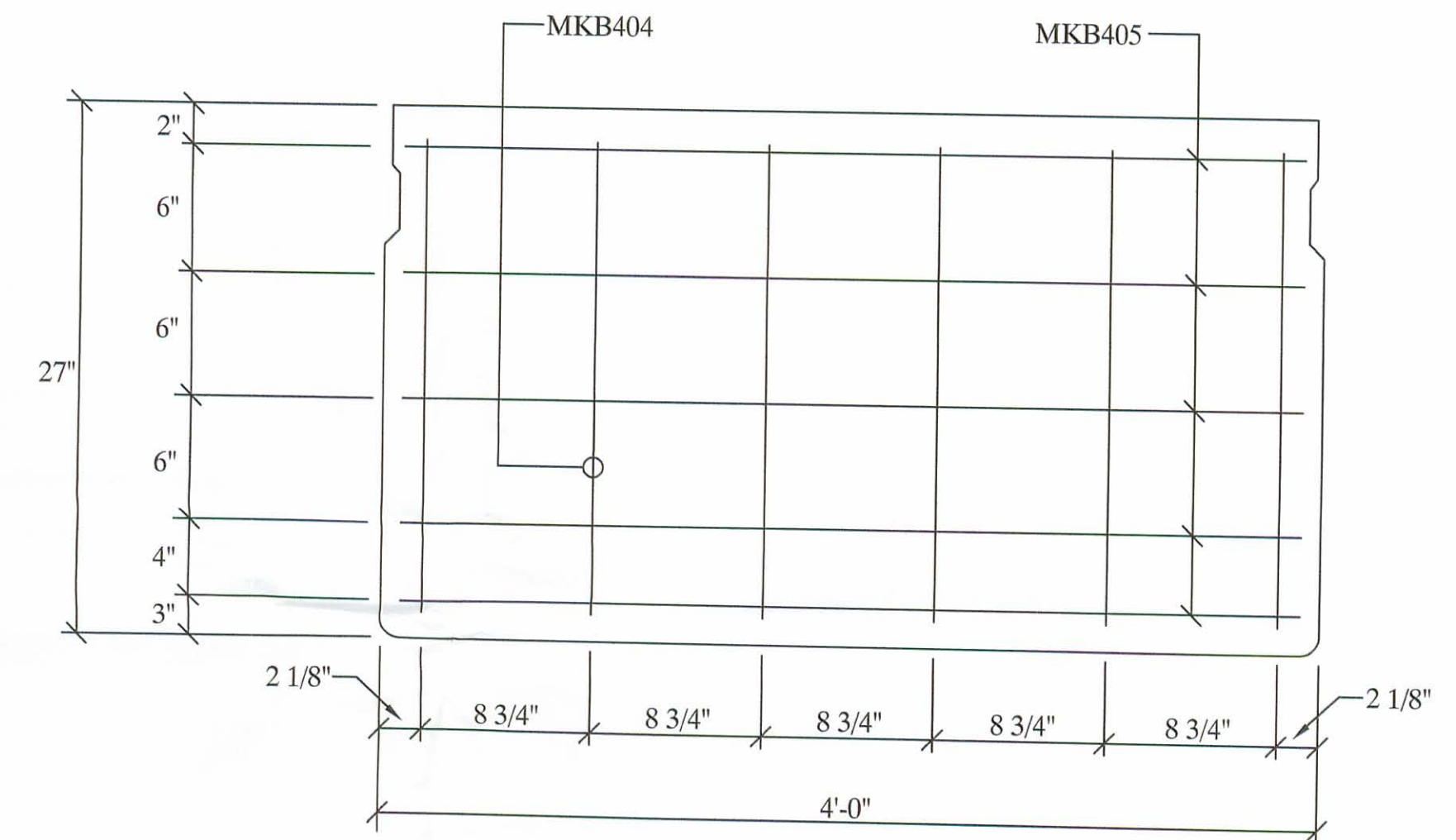
DESCRIPTION:	BOX BEAM DETAILS		SCALE:	DRAWN BY:
JOB NAME:	ITEM 515	BRIDGE NO. 201 - 1.41	PROJECT NO. T.R. 201	PHIL
DATE:	AUGUST 2003	APPROVED BY:	E.O.C. 8/16/03	REVISED:
				DRAWING NO. 2 OF 4



**NOTE :**  
 STIRRUPS IN CONFLICT WITH GUARDRAIL ANCHORS OR TIE ROD POCKETS, ARE TO SHOP ADJUSTED TO TOLERANCE OF ± 1", OR ANOTHER STIRRUP ADDED.

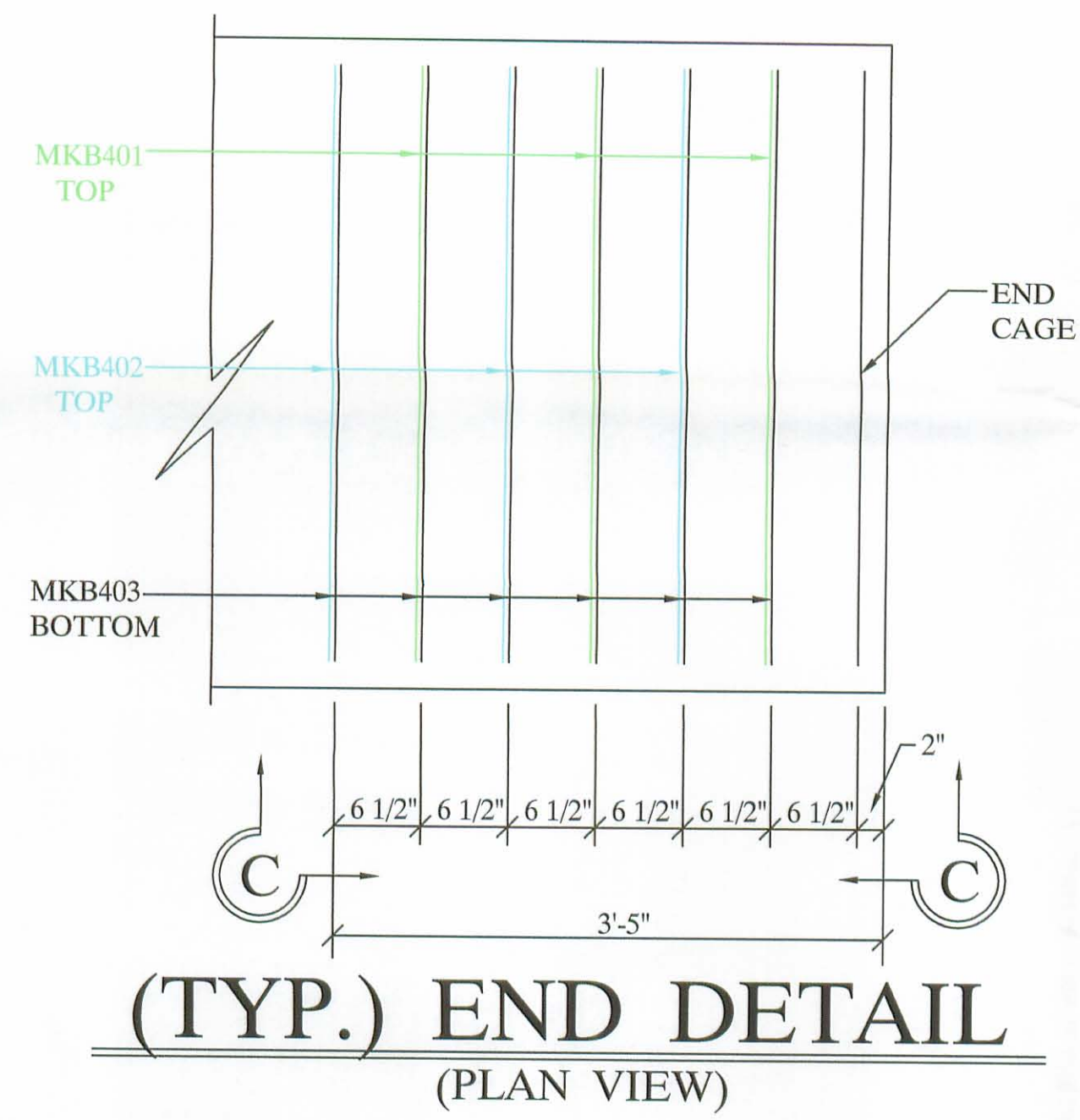


**REINFORCING LAYOUT**  
 (ELEVATION)

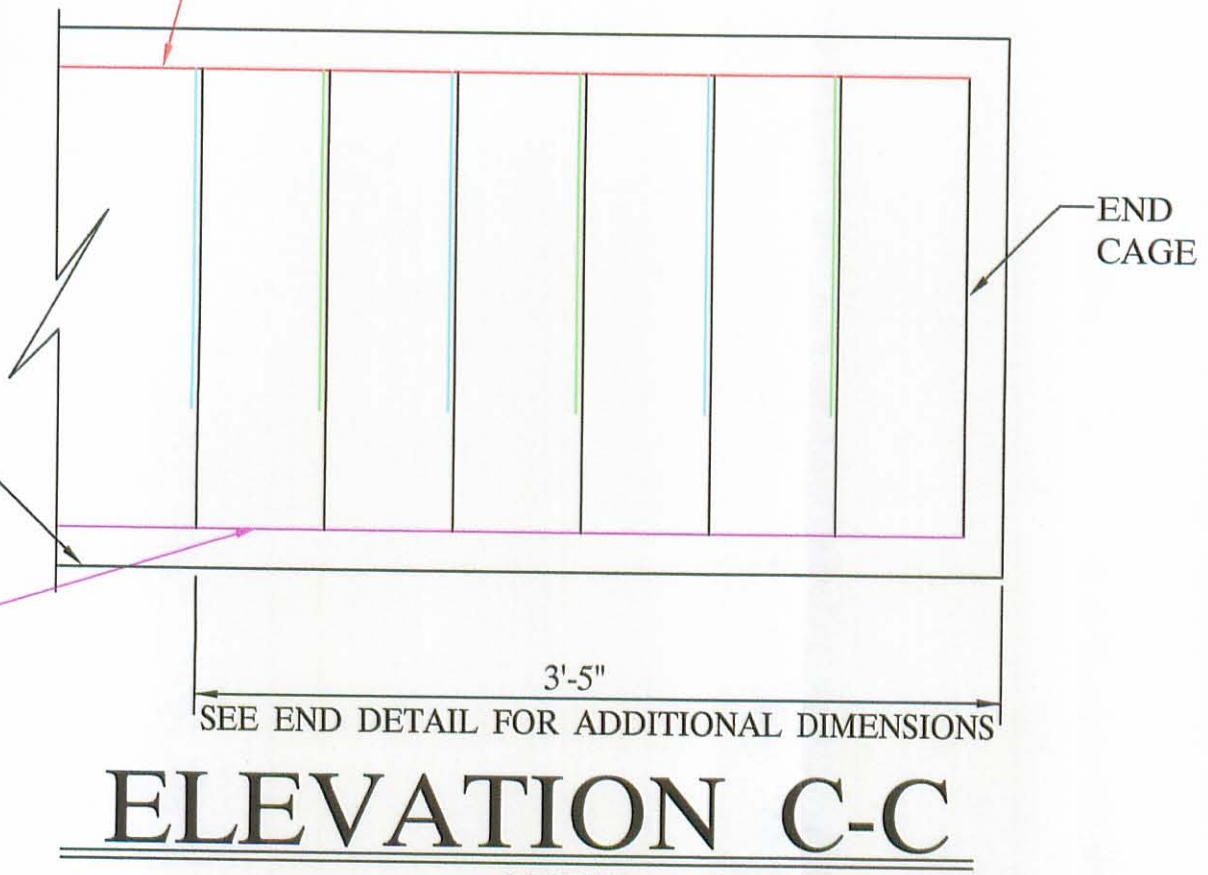


**BEAM END CAGE**  
 (ELEVATION)

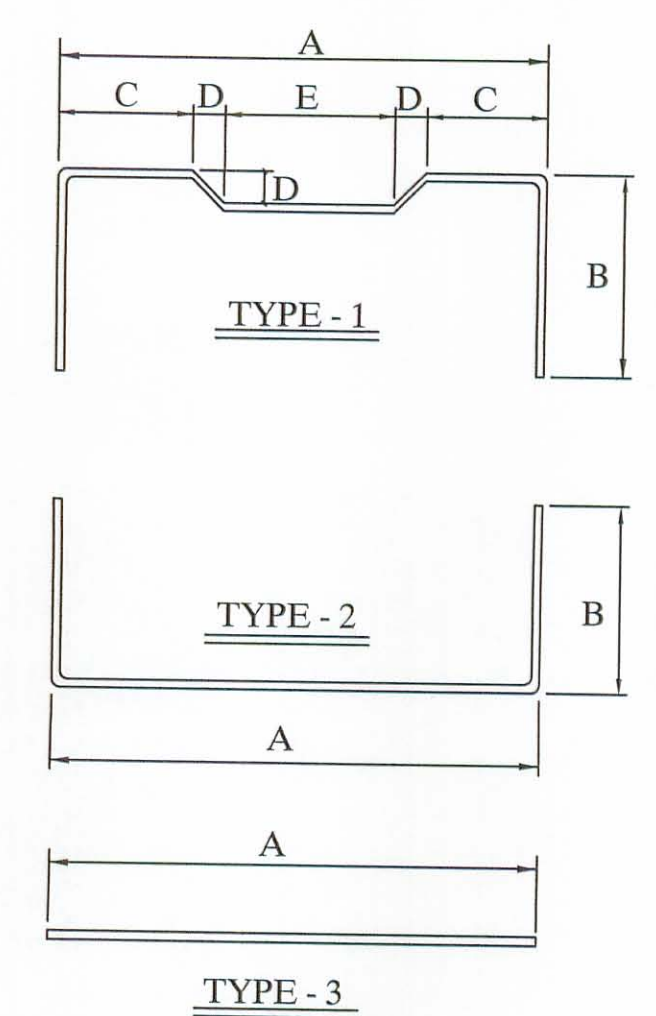
**NOTE :**  
 MINIMUM BUTT SPLICE LENGTH REQUIRED IF CAGE FIT UP IS PERFECT IS AS FOLLOWS:  
 #5, UNCOATED 58", (29" EACH SIDE)  
 #6, UNCOATED 68", (34" EACH SIDE)



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



**ELEVATION C-C**



**6 - B27-48 X 62'-6" WITH NO SKEW**  
**BAR LIST**

MARK	SIZE	LENGTH	QUANTITY	SHAPE	A	B	C	D	E
B401	4	6'-2 1/2"	348	TYPE - 1	43"	17"	13"	2"	13"
B402	4	6'-2 1/2"	342	TYPE - 1	43"	17"	7"	2"	25"
B403	4	7'-2 1/2"	378	TYPE - 2	43"	23"			
B404	4	1'-11"	72	TYPE - 3	23"				
B405	4	3'-8 3/4"	60	TYPE - 3	44 3/4"				
B501	5	15'-6 1/2"	96	TYPE - 3	15'-6 1/2"				
B502	5	5'-10"	72	TYPE - 3	5'-10"				
B503	5	10'-0"	48	TYPE - 3	10'-0"				
B601	6	15'-6 1/2"	48	TYPE - 3	15'-6 1/2"				
B602	6	6'-8"	36	TYPE - 3	6'-8"				

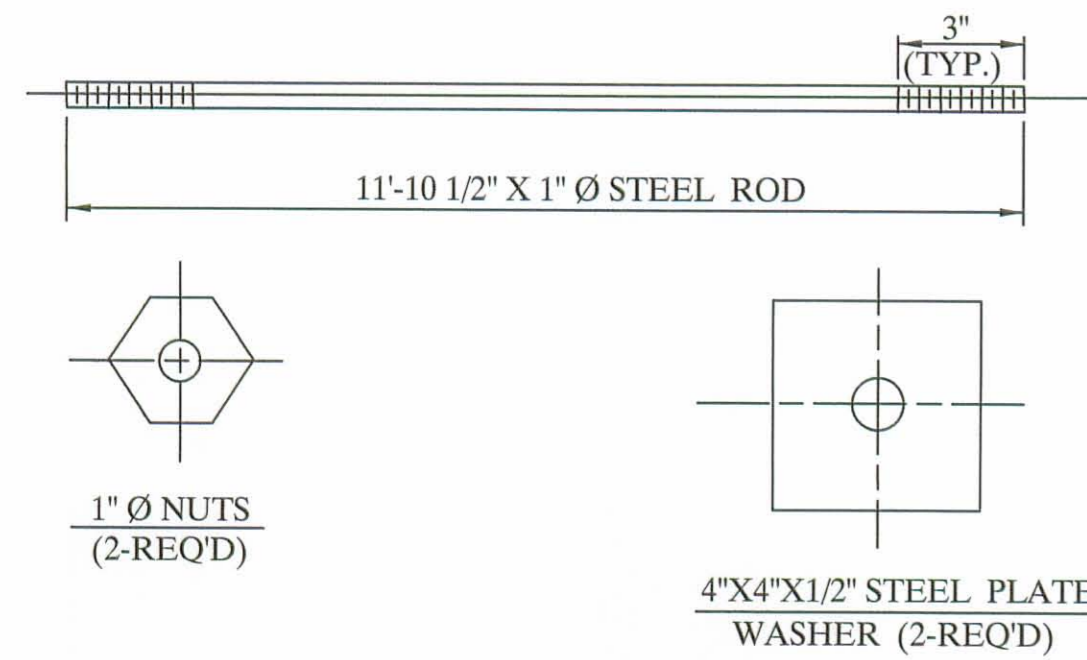


**UNITED PRECAST INC.**  
 ROUNDHOUSE LANE  
 MOUNT VERNON, OHIO 43050  
 PHONE : (740) 393-1121  
 FAX : (740) 392-9708

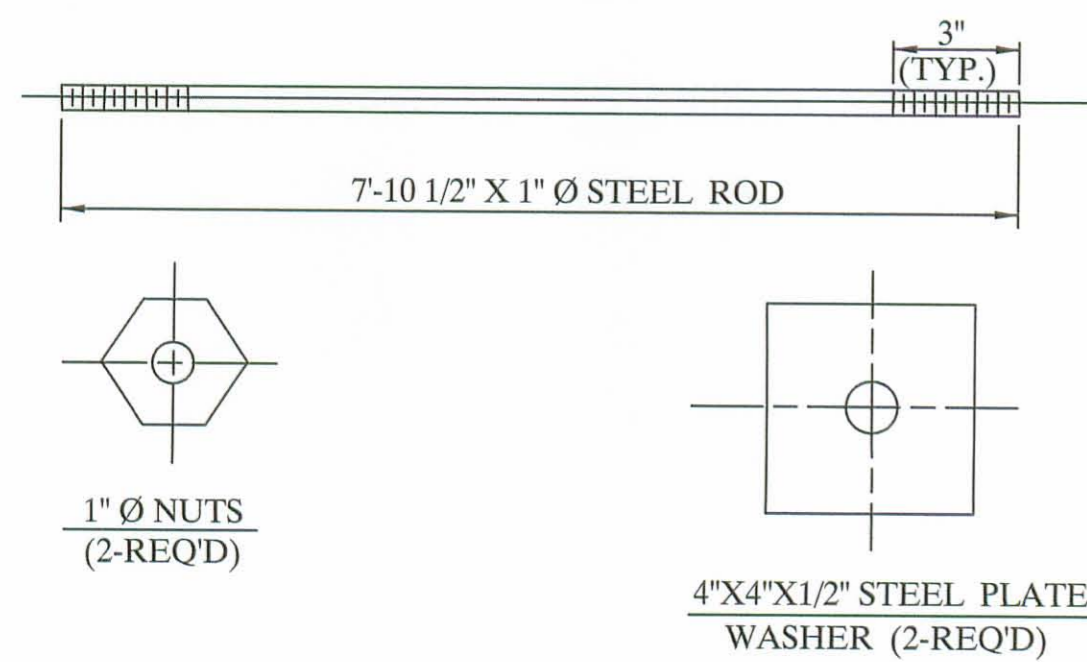
DESCRIPTION: <b>REINFORCING DETAILS</b>	SCALE: -----	DRAWN BY: PHIL
JOB NAME: ITEM 515 BRIDGE NO. 201 - 1.41 LOGAN COUNTY	PROJECT NO. T.R. 201	REVISED:
DATE: AUGUST 2003	APPROVED BY: E.O.C. 8/16/03	DRAWING NO. 3 OF 4



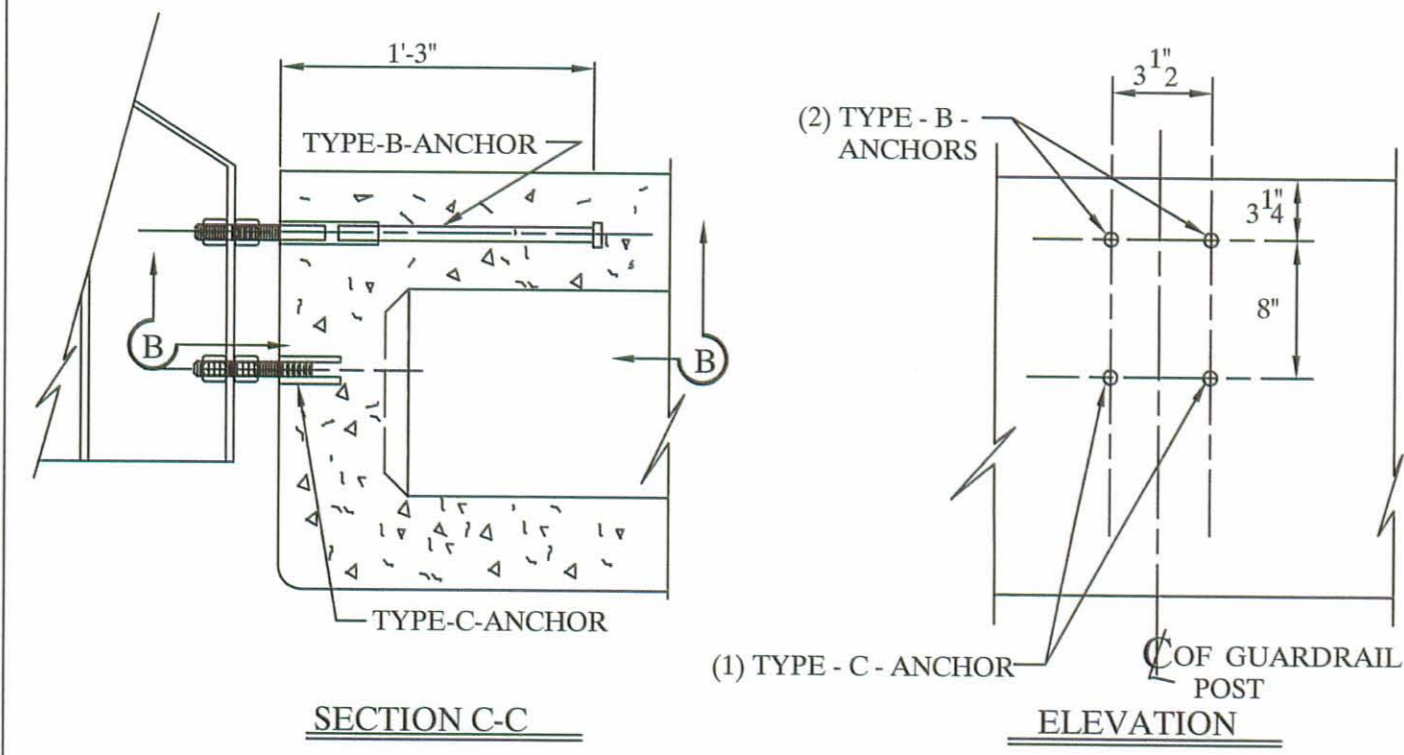
### 12'-0" TIE ROD ASS'Y



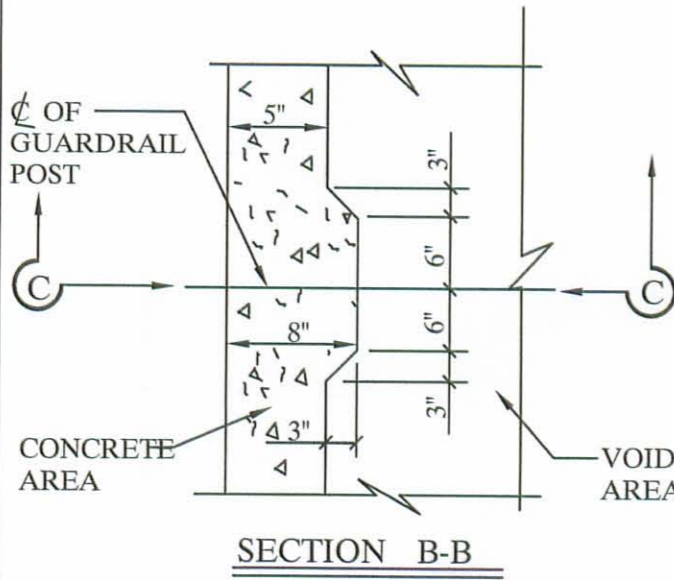
### 8'-0" TIE ROD ASS'Y



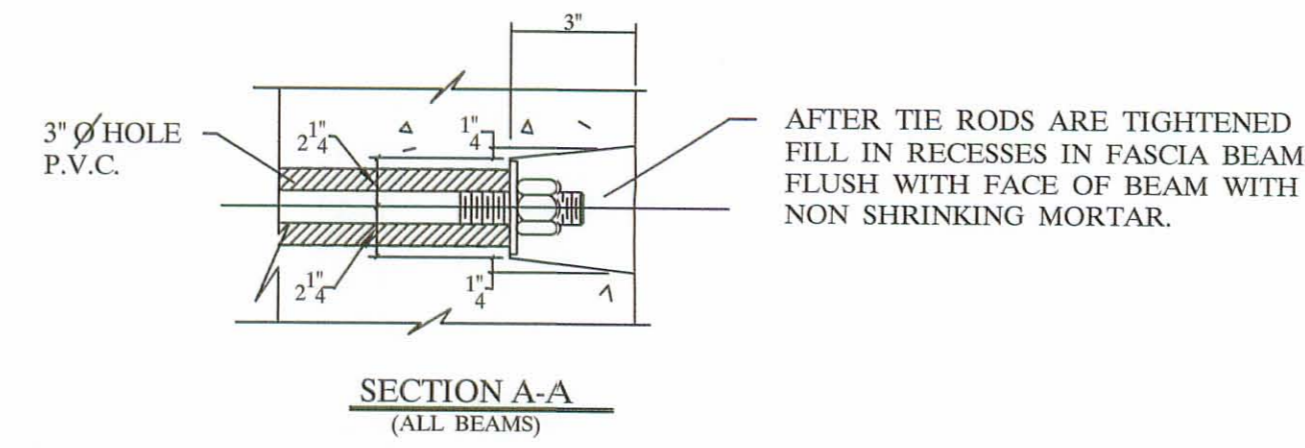
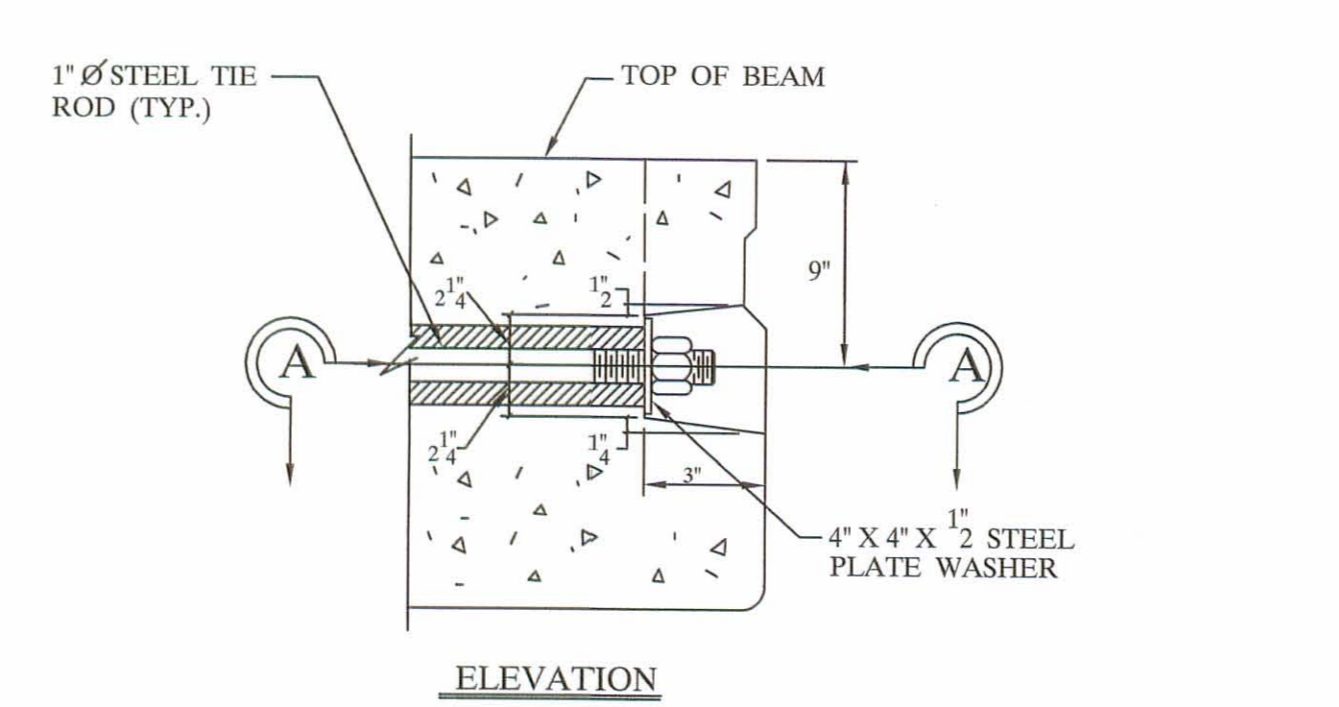
NOTE:  
ALL ITEMS INCLUDING TIE RODS ACCESSORIES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM-123 OR 153. PER CMS 711.02, UNLESS OTHERWISE NOTED.



NOTE:  
ONE TYPE "C" ANCHOR PROVIDE S FOR (2) STUDS (SEE BELOW).

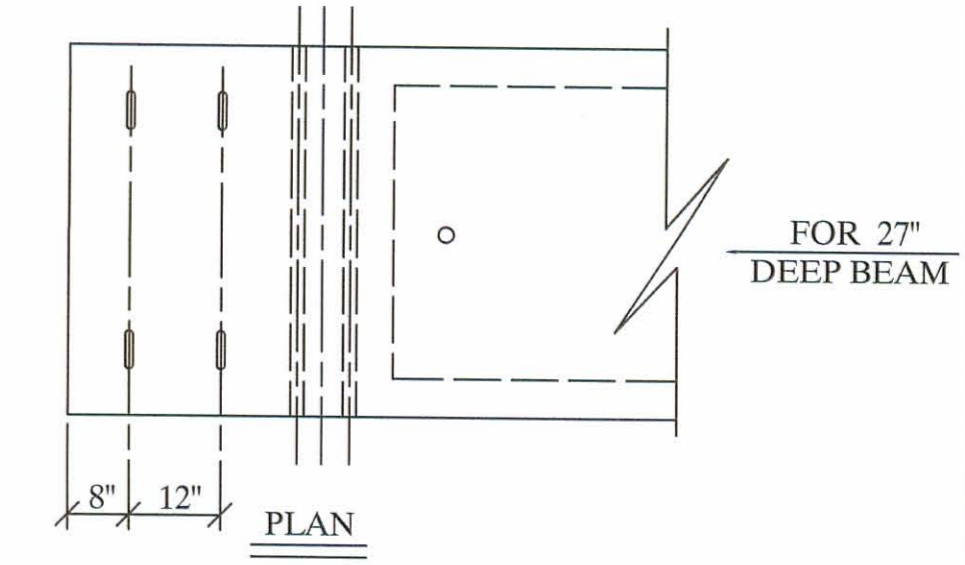
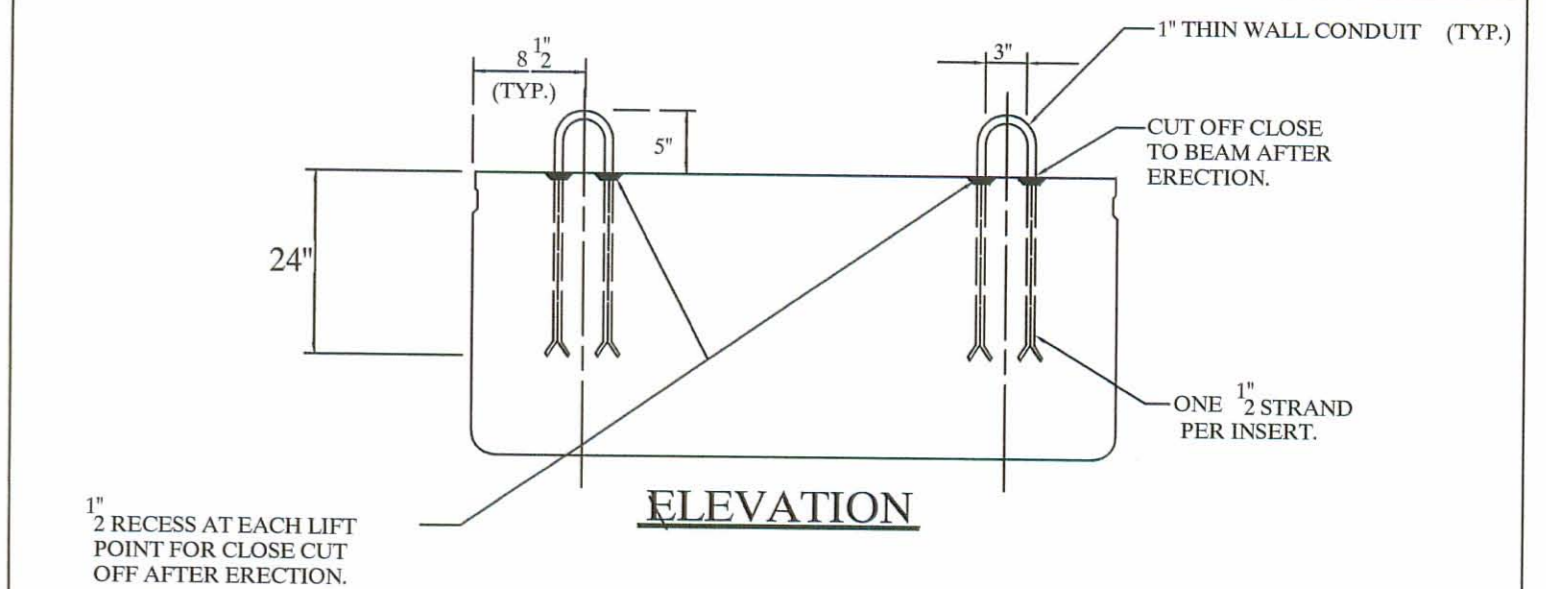


NOTE:  
TYPE B & C ANCHOR ASSEMBLIES SHALL CONFORM TO PHYSICAL PROPERTIES OF ASTM-A-325. EXCEPT MIN. ELONGATION SHALL BE 10%. THE CHEMICAL PROPERTIES ARE WAIVED.



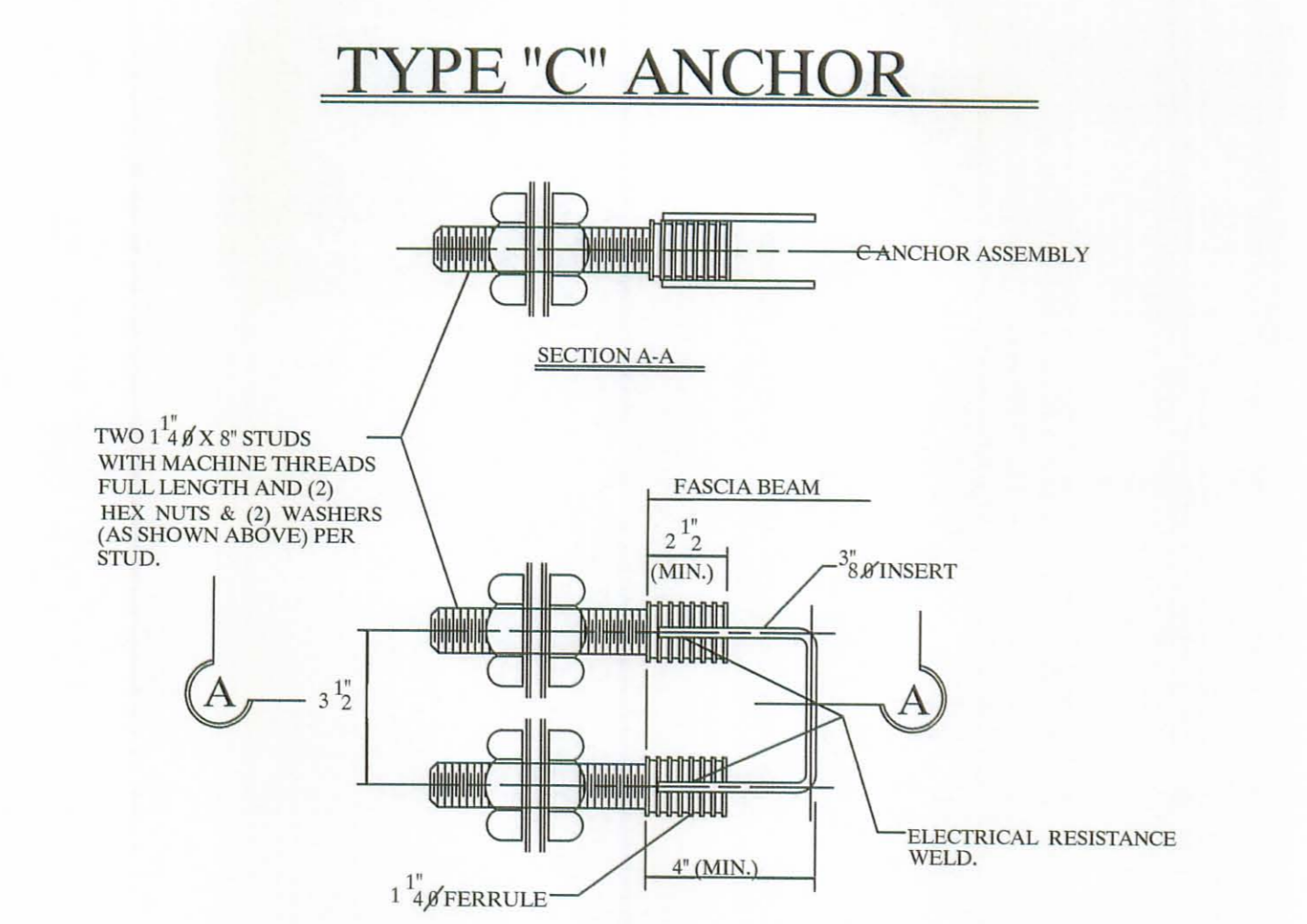
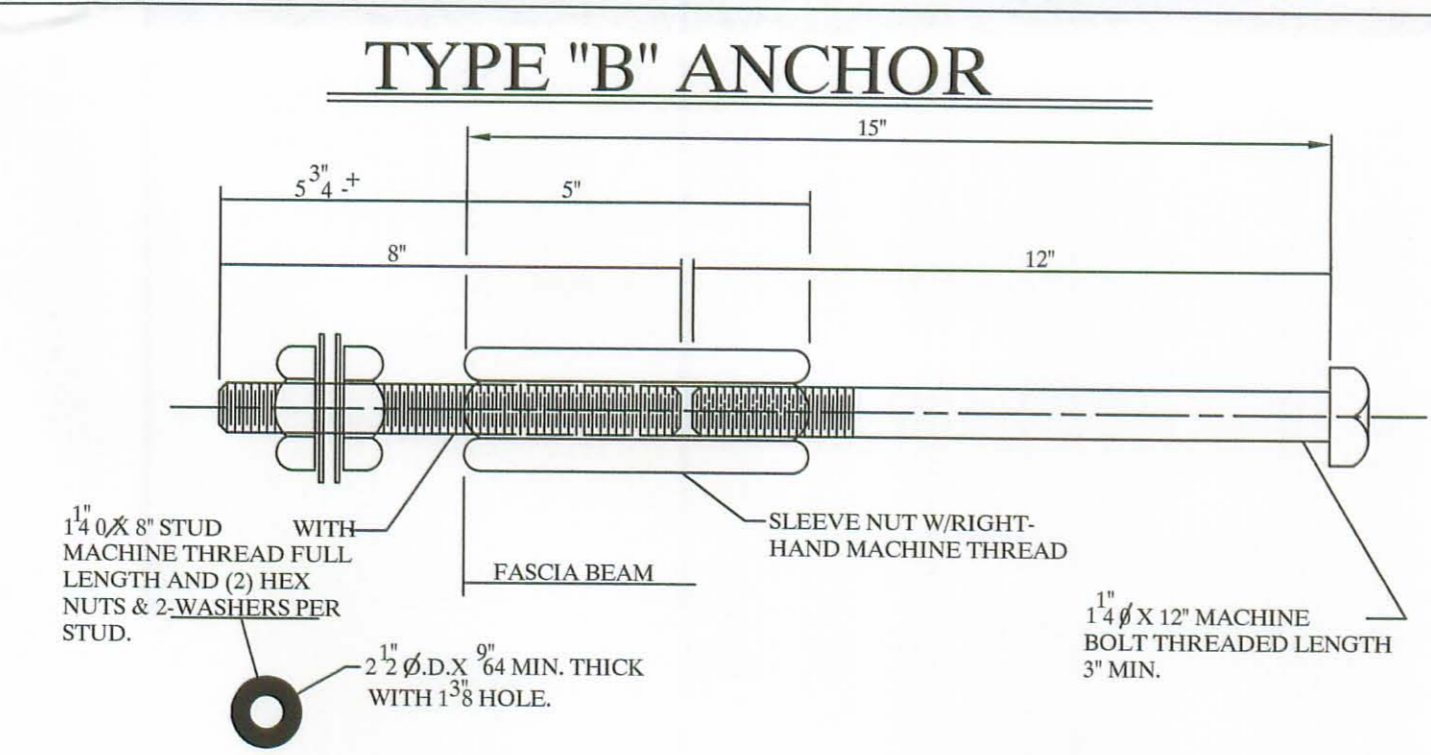
### END DETAIL OF TRANSVERSE TIE ROD ANCHORAGE

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



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

### LIFTING INSERT DETAIL

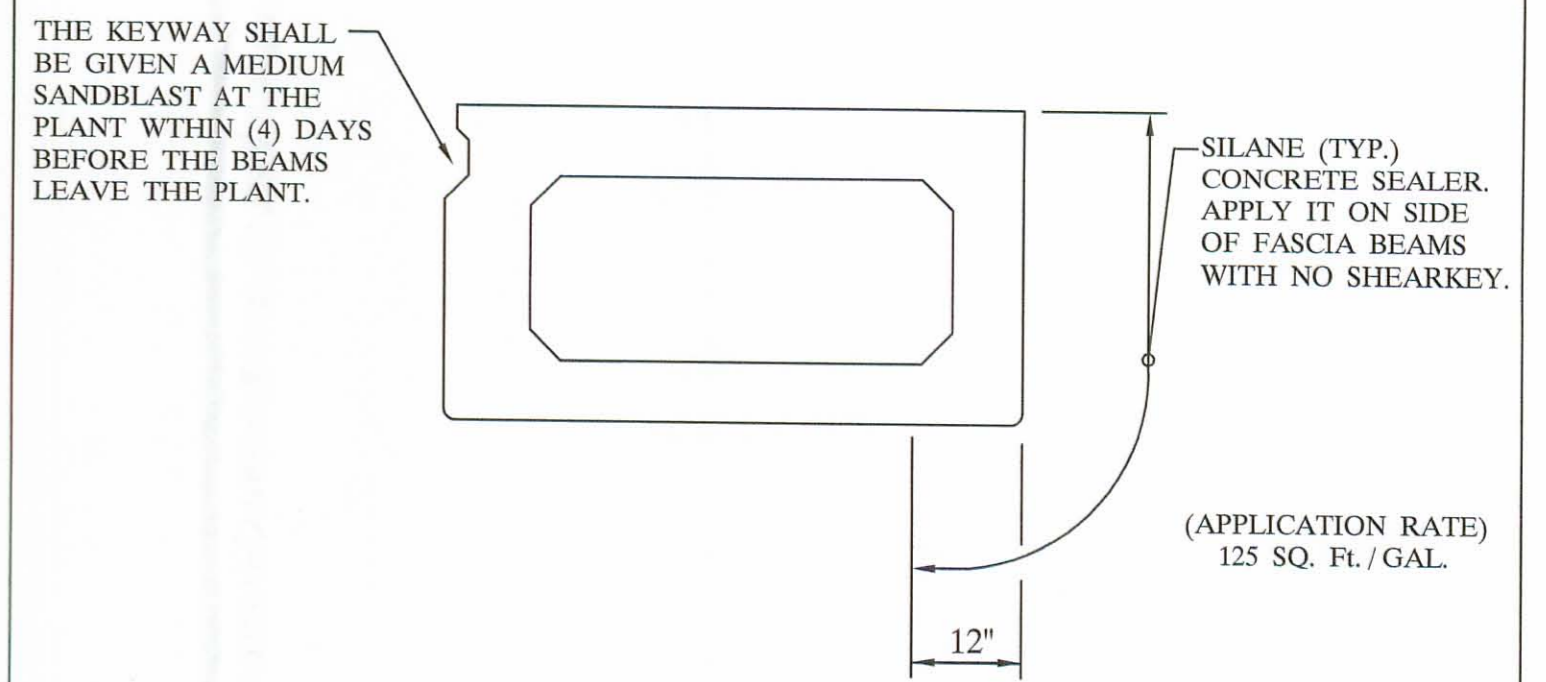


### "B" & "C" ANCHOR DETAILS

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.

**SPECIFICATIONS**  
DESIGN LOADING: HS20-44 AND ALTERNATIVE 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. 201 - 1.41	ITEM 515
LOGAN COUNTY	PROJECT NO. T.R. 201
<b>UNITED PRECAST INC.</b>	
ROUNDHOUSE LANE MT. VERNON, OHIO 43050 PHONE: (740) 393-1121, FAX: (740) 392-9708	SCALE DRAWN BY: PHIL REVISED
DATE AUGUST '03	APPROVED BY: E.O.C. 8 / 16 / 03 DRAWING NO. 4 OF 4



**LETTER OF TRANSMITTAL**

**UNITED PRECAST, INC.**

**P.O. BOX 991 / ROUNDHOUSE LANE, MOUNT VERNON, OH 43050**

**740/393-1121**

**800-366-8740**

**FAX: 740-393-0044**

TO: LOGAN COUNTY ENGINEER P.O. BOX 427 BELLEFONTAINE, OHIO 43311 - 0427 ATTN : SCOTT COLEMAN	DATE: 8 / 18 / 03 JOB NO. 201 - 1.41 RE: LOGAN COUNTY T.R. 201
---	---

GENTLEMEN: WE ARE SENDING YOU,

ATTACHED       UNDER SEPARATE COVER VIA () THE FOLLOWING ITEMS

SHOP DRAWINGS     PRINTS    PLANS    SAMPLES    SPECIFICATIONS

COPY OF LETTER     CHANGE ORDER     ()

NO. OF PRINTS	TRANS CODE	DRAWING NUMBER	DESCRIPTION
3	A	SHT. 1 THRU. 4	PRESTRESSED CONCRETE BOX BEAM DETAILS

TRANSMITTAL CODE

- |   |   |  |
|---|---|--|
| A X FOR APPROVAL                          | E <input type="checkbox"/> APPROVED AS SUBMITTED    | I <input type="checkbox"/> REVISE & RESUBMIT() COPIES FOR APPROVAL   |
| B <input type="checkbox"/> FINAL APPROVAL | F <input type="checkbox"/> APPROVED AS NOTED        | K <input type="checkbox"/> REVISE & SUBMIT() COPIES FOR DISTRIBUTION |
| C <input type="checkbox"/> FOR YOUR USE   | G <input type="checkbox"/> RETURNED FOR CORRECTIONS | L <input type="checkbox"/> RELEASE MATERIAL IMMEDIATELY              |
| D <input type="checkbox"/> AS REQUESTED   | H <input type="checkbox"/> NOT APPROVED             | M <input type="checkbox"/> FOR REVIEW AND YOUR COMMENT               |

REMARKS: PLEASE RETURN (1) ONE COPY OF APPROVED SHOP DRAWINGS.


COPY TO: FILE

SIGNED:   
 PHILLIP T. DURBAN

**"IF YOU WANT IT TO LAST-USE UNITED PRECAST"**

