

PRESTRESSED CONCRETE BEAMS REQUIRED STD. 33" DOUBLE BOX - B.E.S. 2081					
NO. OF BEAMS REQUIRED				"L"	MINIMUM NO. OF STRANDS PER BEAM
WITH CURB	WITH CURB AND WALK	WITH SPECIAL CURB	WITHOUT CURB AND WALK		
2	4	2	-	27'-10	34

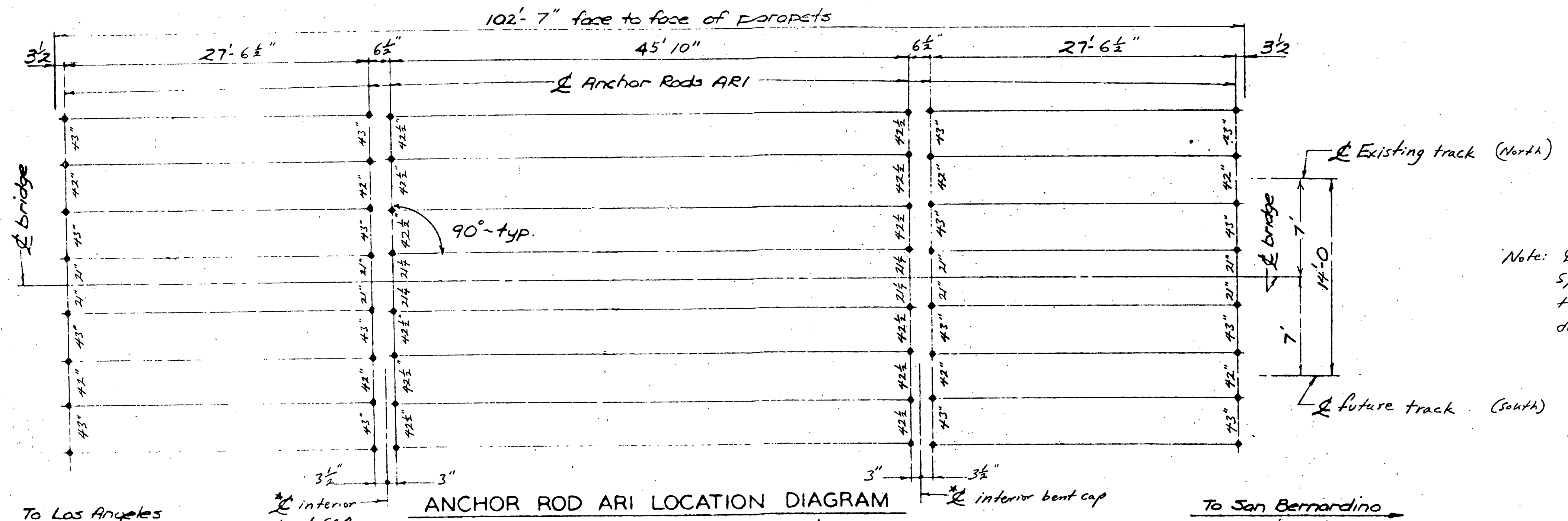
  

PRESTRESSED CONCRETE BEAMS REQUIRED STD. SINGLE BOX - B.E.S. 2082						
NO. OF BEAMS REQUIRED				"L"	"N"	MINIMUM NO. OF STRANDS PER BEAM
WITH CURB	WITH CURB AND WALK	WITH SPECIAL CURB	WITHOUT CURB AND WALK			
1	2	1	4	46'2"	3'6"	36

LIST OF DRAWINGS

SHEET NO.	TITLE
1	GENERAL PLAN
2	End span detail
3	End span detail
4	End span detail
5	Interior bent detail
6	Interior bent detail
7	Interior span detail
8	Interior span detail
9	Misc. details

**AS BUILT DRAWINGS**



**ANCHOR ROD ARI LOCATION DIAGRAM**  
 Note: Anchor Rods ARI must be within 1/4" of plan location or prestressed concrete beams will not fit.

\* Note: Centerline of interior cap is not the same as centerline of piles.

1-28' 1-46'2" & 1-28' Prestressed Concrete Spans - 2 Tracks

SHEET 1 OF DRAWINGS

THE A. T. & S. F. RY. COMPANY  
 BR. 15.3, THIRD DIST., LOS ANGELES DIV.  
 GENERAL PLAN

SCALE: NONE

INDEXED 1-22-2001 LHT

File: R-3385

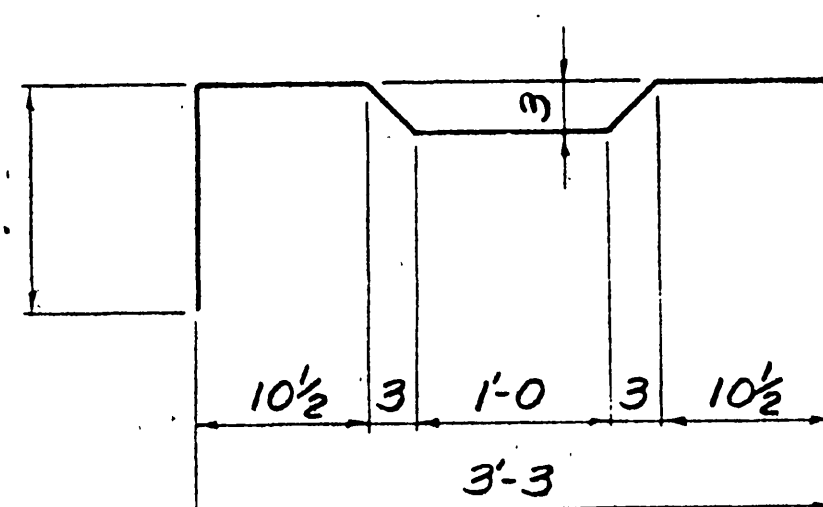
Revised 11/26/94

PRESTRESSING STRANDS FOR BEAMS WITH HARP STRANDS

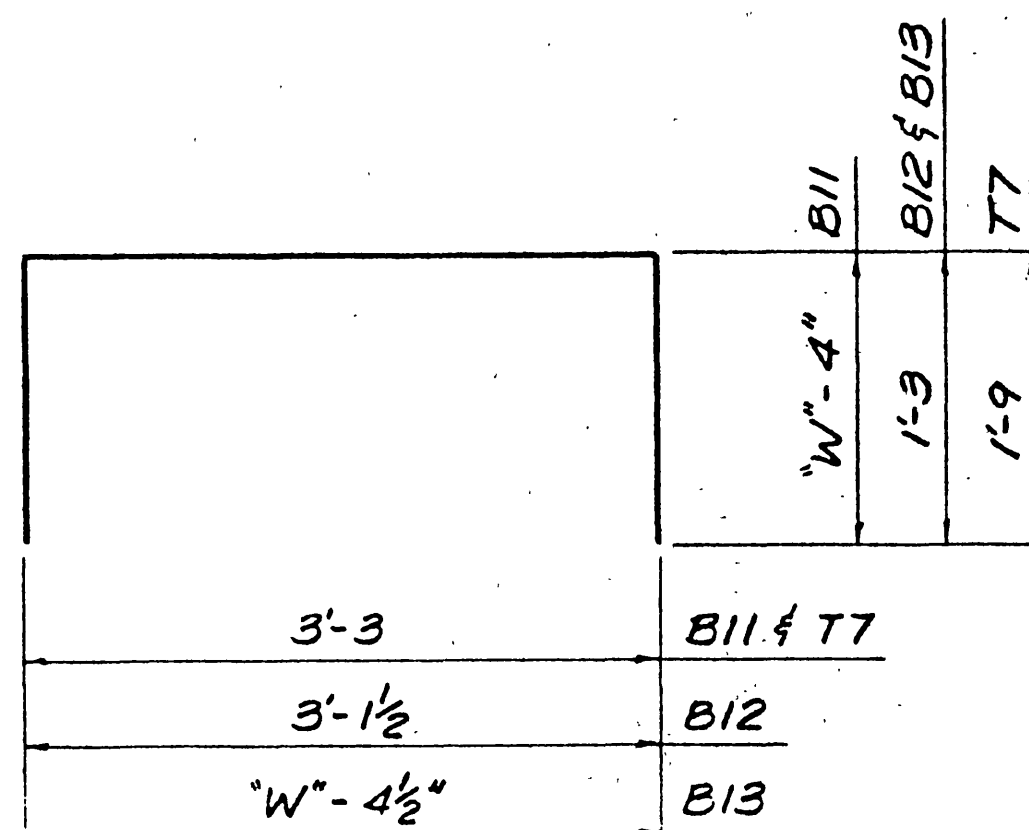
"L" NOT GREATER THAN	"L" NOT LESS THAN	NO. REQUIRED	"e" BTWN. HARP POINTS (IN.)	"e" AT ENDS (IN.)	STAND PATTERN BETWEEN HARP POINTS			STRAND PATTERN AT END			"W"
66'-9"	63'-9"	42	23.70	17.85	ABCDEF(2,4)	H(2,4,6)	J(4,6,8,55)	ABCDEF(2,4)	H(2,4,6)	J(45,47,49,55)	3'-0"
68'-11"	66'-1"	46	23.27	16.10	ABCDEF(2,4)	H(2,4,6)	J(4,6,8,10,12,55)	ABCDEF(2,4)	H(2,4,6)	J(37,39,41,43,45,55)	3'-0"
72'-3"	68'-11"	44	26.25	18.43	ABCDEF(2,4)	H(2,4,6)	J(4,6,8,10,61)	ABCDEF(2,4)	H(2,4,6)	J(47,49,51,53,61)	3'-3"
74'-11"	70'-2"	48	25.71	16.46	ABCDEF(2,4)	H(2,4,6)	J(4,6,8,10,12,14,61)	ABCDEF(2,4)	H(2,4,6)	J(41,43,45,47,49,51,61)	3'-3"
78'-10"	74'-1"	48	28.46	17.96	ABCDEF(2,4)	H(2,4,6)	J(4,6,8,10,12,14,67)	ABCDEF(2,4)	H(2,4,6)	J(45,47,49,53,55,57,67)	3'-6"
80'-8"	73'-7"	52	27.71	17.98	ABCDEF(2,4)	H(2,4,6)	J(4,6,8,10,12,14,16,18,67)	ABCDEF(2,4)	H(2,4,6)	J(4,41,43,45,49,51,53,55,67)	3'-6"

PRESTRESSING STRANDS FOR BEAMS WITH STRAIGHT STRANDS ONLY

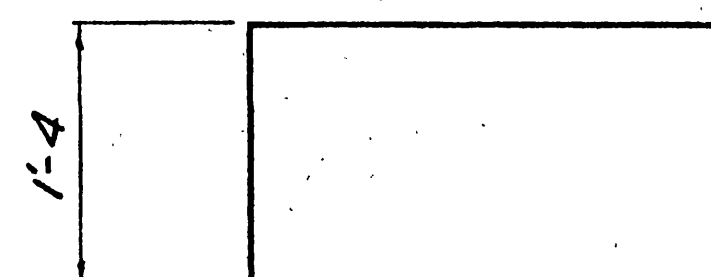
"L" NOT GREATER THAN	NO. REQUIRED	"e" (IN.)	STRAND PATTERN	
37'-7"	28	11.25	ABDFGH(2,4)	J(24,31)
40'-1"	32	11.19	ABDFGH(2,4)	J(6,8,24,31)
41'-0"	30	12.32	ABDFGH(2,4)	J(10,24,34)
43'-4"	34	12.19	ABDFGH(2,4)	J(4,10,12,24,34)
44'-3"	32	13.19	ABDFGH(2,4)	J(8,12,28,37)
46'-2"	36	12.58	ABDFGH(2,4)	J(8,10,12,16,28,37)
47'-8"	34	14.13	ABDFGH(2,4)	J(8,10,14,30,40)
49'-4"	38	13.30	ABDFGH(2,4)	J(4,8,10,14,28,30,40)
49'-9"	34	15.10	ABDFGH(2,4)	J(6,14,16,32,43)
52'-5"	38	15.07	ABDFGH(2,4)	J(6,8,10,14,16,32,43)
53'-1"	36	15.92	ABDFGH(2,4)	J(8,12,16,20,30,46)
55'-4"	40	15.75	ABDFGH(2,4)	J(4,8,12,16,18,20,30,46)
56'-2"	38	16.80	ABDFGH(2,4)	J(6,10,14,18,22,34,49)
58'-2"	42	16.23	ABDFGH(2,4)	J(6,10,12,14,18,20,22,34,49)
61'-5"	40	18.60	ABDFGH(2,4)	J(6,12,14,18,22,24,36,55)
63'-9"	44	18.43	ABDFGH(2,4)	J(6,10,12,14,16,18,22,24,36,55)



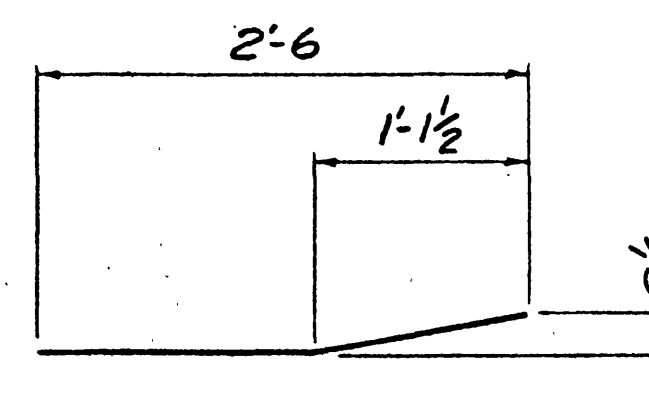
BAR T9



BARS B11, B12, B13 & T7



BAR W1



BAR C1

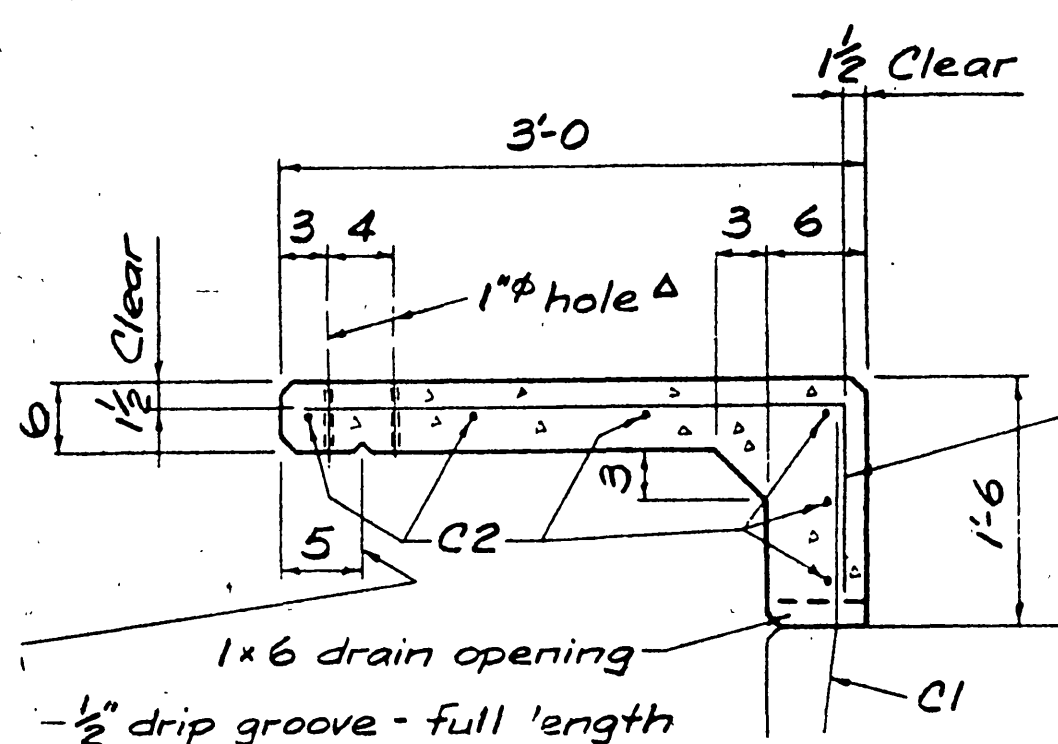
REINFORCING STEEL							
MARK	SIZE	LENGTH	SHAPE	MARK	SIZE	LENGTH	SHAPE
B11	#4	2W + 31"	SEE DETAIL	D3	#4	W-4"	STRAIGHT
B12	#5	5'-8"	SEE DETAIL	L1	#4	L-4"AA	STRAIGHT
B13	#5	W + 26"	SEE DETAIL	T7	#5	6'-9"	SEE DETAIL
C1	#5	2'-6"	SEE DETAIL	T8	#5	3'-3"	STRAIGHT
D2	#4	3'-2"	STRAIGHT	T9	#5	5'-10"	SEE DETAIL
D2	#4	3'-2"	STRAIGHT	W1	#5	4'-0"	SEE DETAIL

⊙ LENGTH OF CURB SECTION - 4"

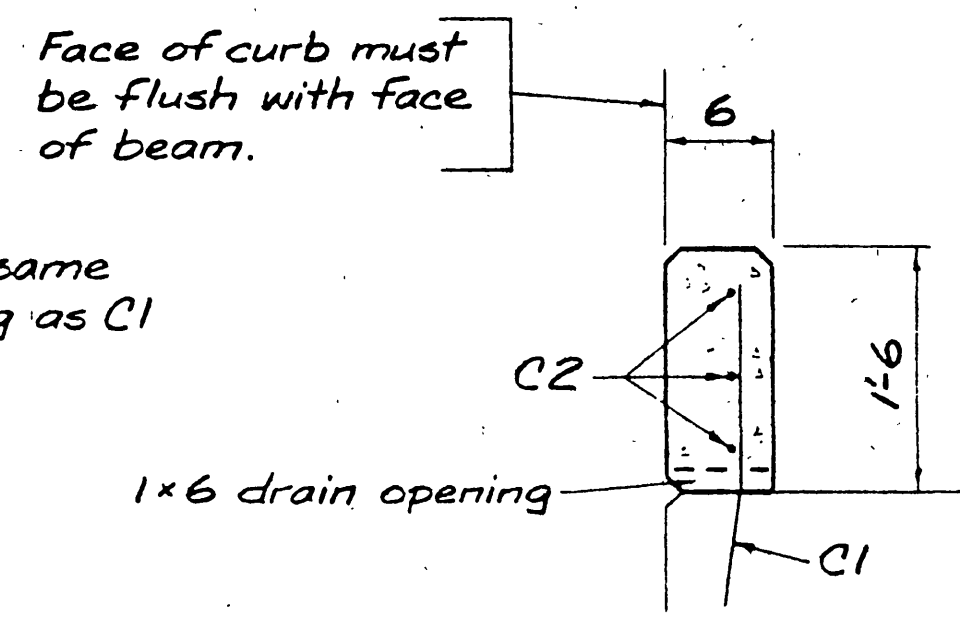
AA MINIMUM LAP OF L1 BARS WHEN SPLICED SHALL BE 13"

All dimensions are out to out of bars. Bend #4 bars around 3" pin and #5 bars around 3 3/4" pin.

AS BUILT DRAWINGS



WALK AND CURB DETAIL



CURB DETAIL

CURB OR CURB AND WALK TO BE CAST ON PRESTRESSED BEAM AFTER STRANDS ARE DETENSIONED. BOND NEW CONCRETE TO PRESTRESSED BEAM BY COATING CONTACT AREA WITH SIKADUR HI-MOD, MADE BY SIKA CHEMICAL CORP., OR EQUAL. FRESH CONCRETE MUST BE PLACED WHILE BOND COAT IS STILL TACKY.

PREFORMED 1/2" X 6" ASPHALT EXPANSION BOARD TO BE PLACED AS TO DIVIDE CURB INTO THE NUMBER OF EQUAL SEGMENTS SHOWN BELOW LEAVING A 1/2" JOINT IN WALK. A 1" X 6" DRAIN OPENING SHALL BE FORMED AT THE CENTER OF EACH EXPANSION BOARD AND AT THE CENTER OF EACH CURB SEGMENT.

FOR L LESS THAN 52'-11":

DIVIDE CURB INTO THREE EQUAL SEGMENTS.

△ TWO 1" HOLES SHALL BE LOCATED 17", 17"+R, 17"+2R, 17"+3R, 17"+4R AND 17"+5R FROM ONE END OF BEAM. R = (L-34")/5.

FOR L FROM 52'-11 TO 72'-10":

DIVIDE CURB INTO FOUR EQUAL SEGMENTS.

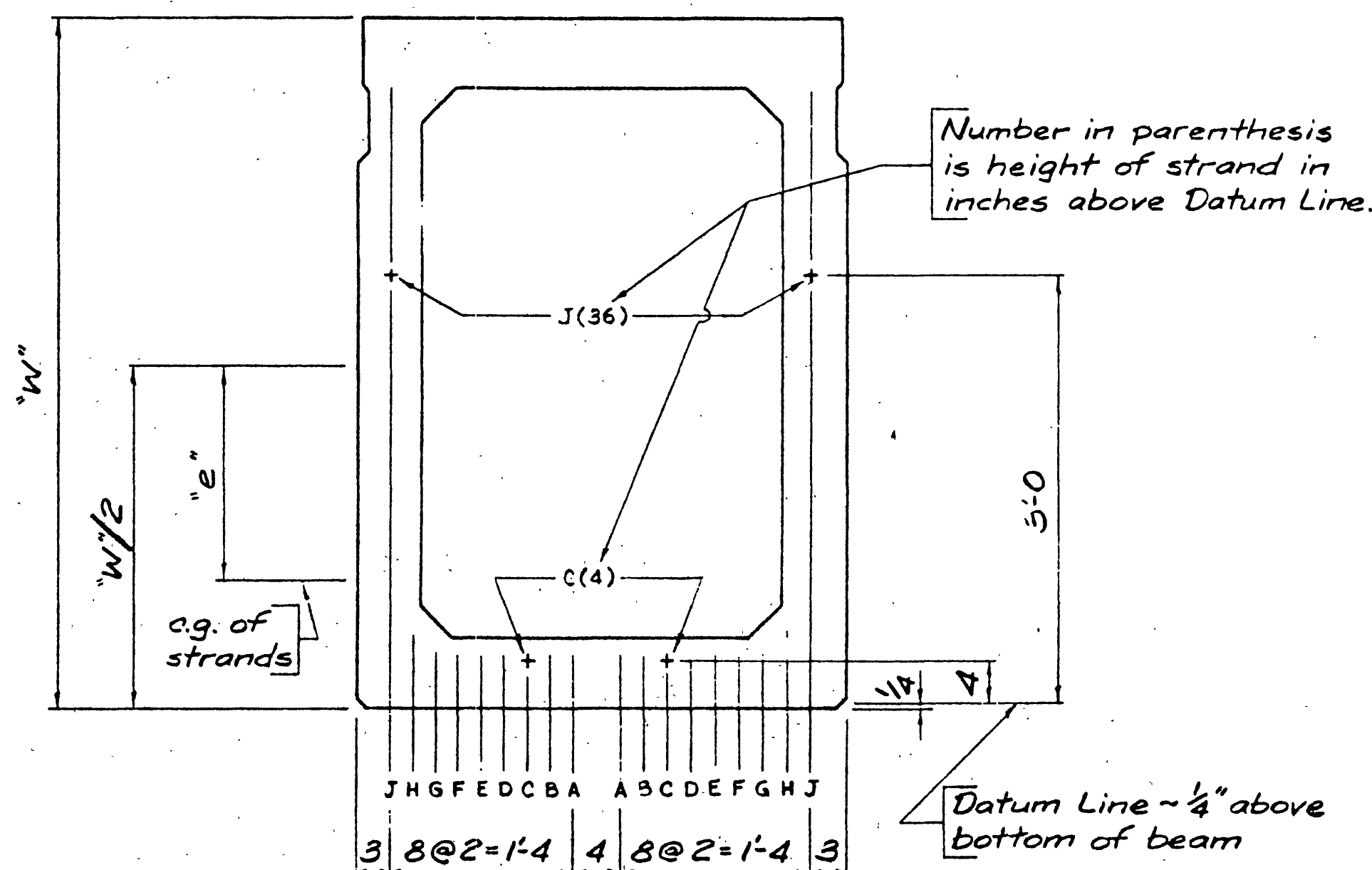
△ TWO 1" HOLES SHALL BE LOCATED 17", 17"+R, 17"+2R, 17"+3R, 17"+4R, 17"+5R, 17"+6R AND 17"+7R FROM ONE END OF BEAM. R = (L-34")/7.

FOR L GREATER THAN 72'-10":

DIVIDE CURB INTO FIVE EQUAL SEGMENTS.

△ TWO 1" HOLES SHALL BE LOCATED 17", 17"+R, 17"+2R, 17"+3R, 17"+4R, 17"+5R, 17"+6R, 17"+7R, 17"+8R AND 17"+9R FROM ONE END OF BEAM. R = (L-34")/9.

△ 1" HOLES MUST BE IN PROPER LOCATION OR HANDRAIL WILL NOT FIT.



STRAND PATTERN DIAGRAM FOR EXTERIOR AND INTERIOR BEAMS

REVISIONS	
Date	Description
10/90	Walk and curb detail
7/92	C1 spacing

Work Sheets 1 and 2 together.

SHEET 2 OF 2 DRAWINGS

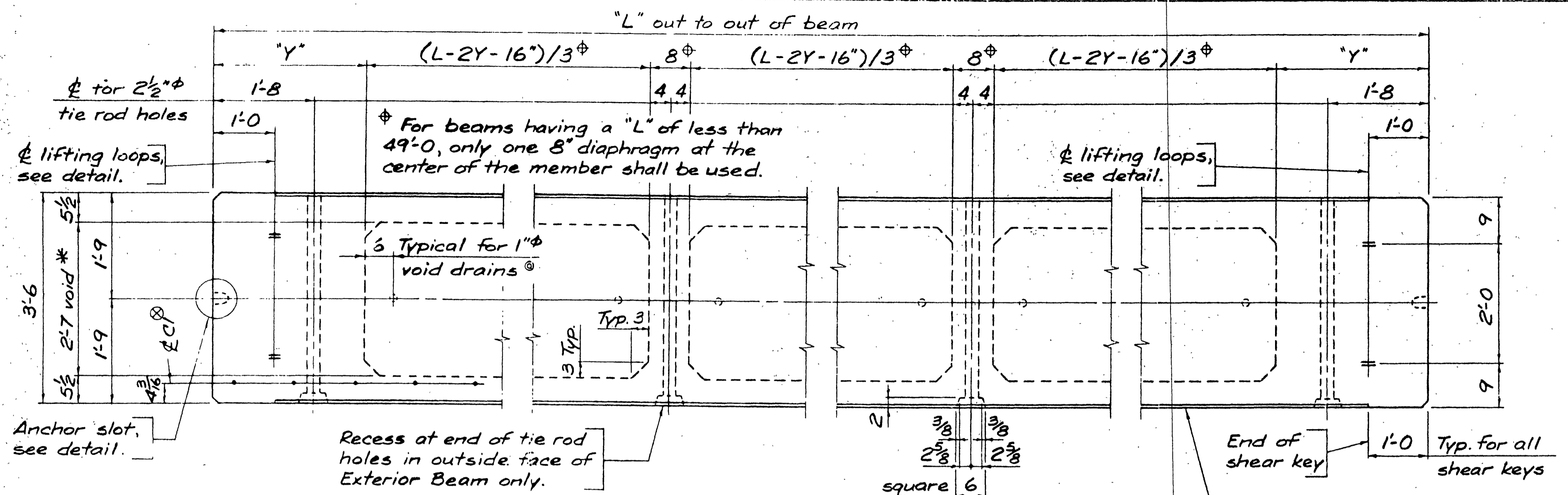
B.E.S. 2082  
 THE A. T. & S. F. RY. COMPANY  
 STANDARD PRESTRESSED  
 CONCRETE SINGLE BOX BEAMS  
 SCALE: NONE  
 CHICAGO, ILL., OCTOBER 1984  
 CORRECT:  
 APPROVED:  
 C. E. Williams  
 ASST. CHIEF ENGINEER - STRUCTURES  
 H. E. Williams  
 CHIEF ENGINEER

MADE BY: VVT  
 CHECKED BY: PH  
 EXAMINED BY: CRW

INDEXED 1-22-2001

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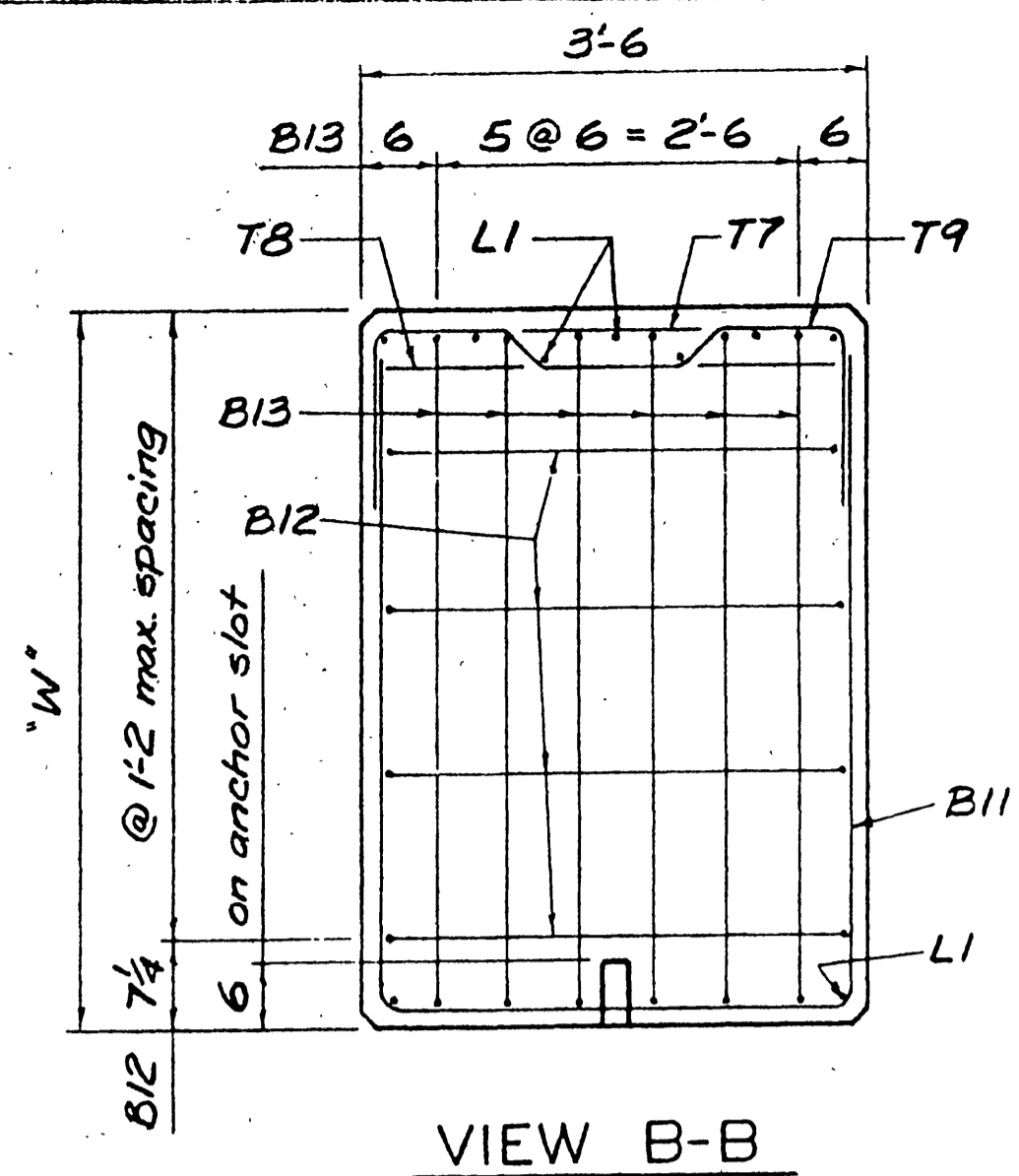


PLAN - EXTERIOR AND INTERIOR BEAMS

\* Note: Void dimensions shown are maximum and must not be exceeded at any point including splices of void forms.

Note: All steel to have a minimum of 1/2" concrete cover except at shear keys and anchor slots.

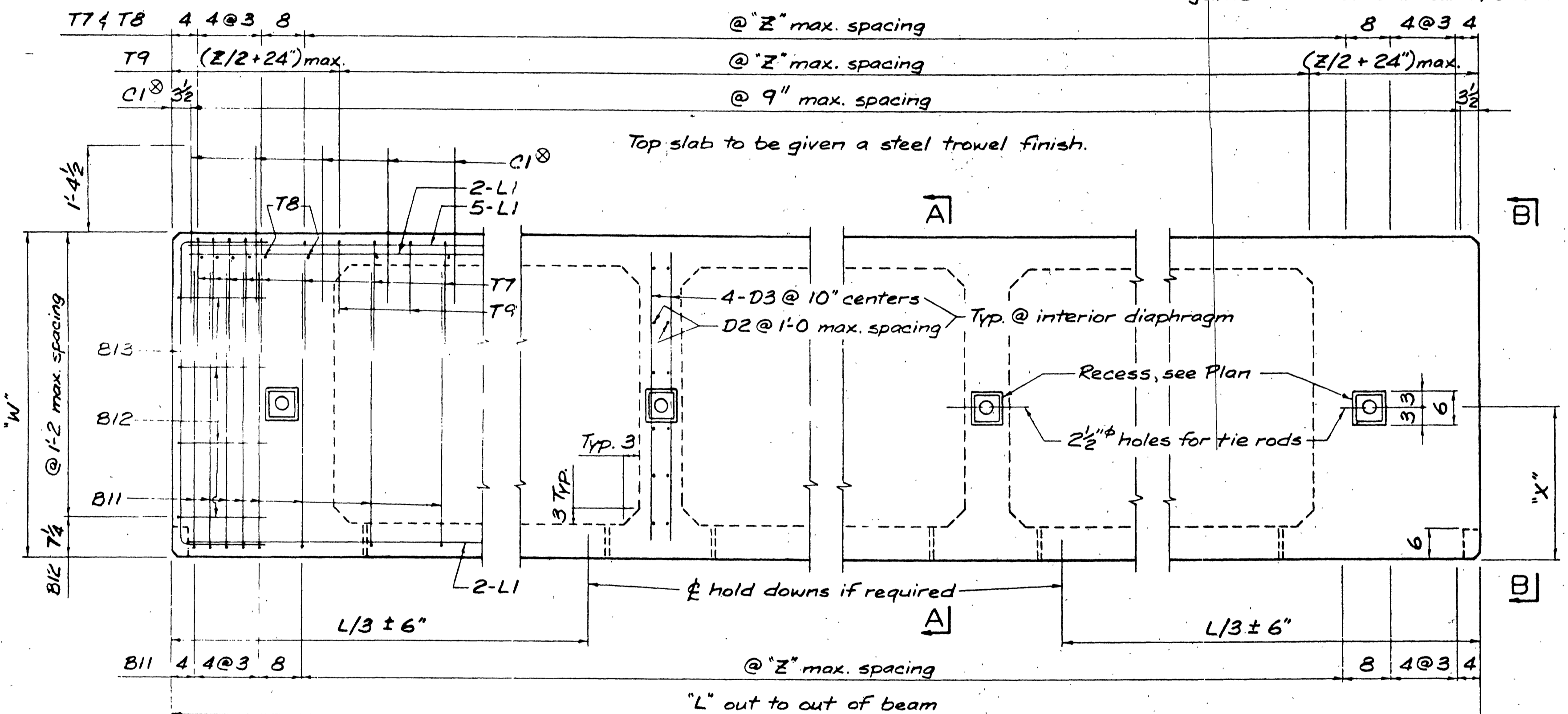
Bars C1 to be placed in outside face of Exterior Beam only. Bars C1 may be set after slab is soressed. Place to miss joints and drains in curb, see Sheet 2.



VIEW B-B

C1 for Exterior Beam not shown.

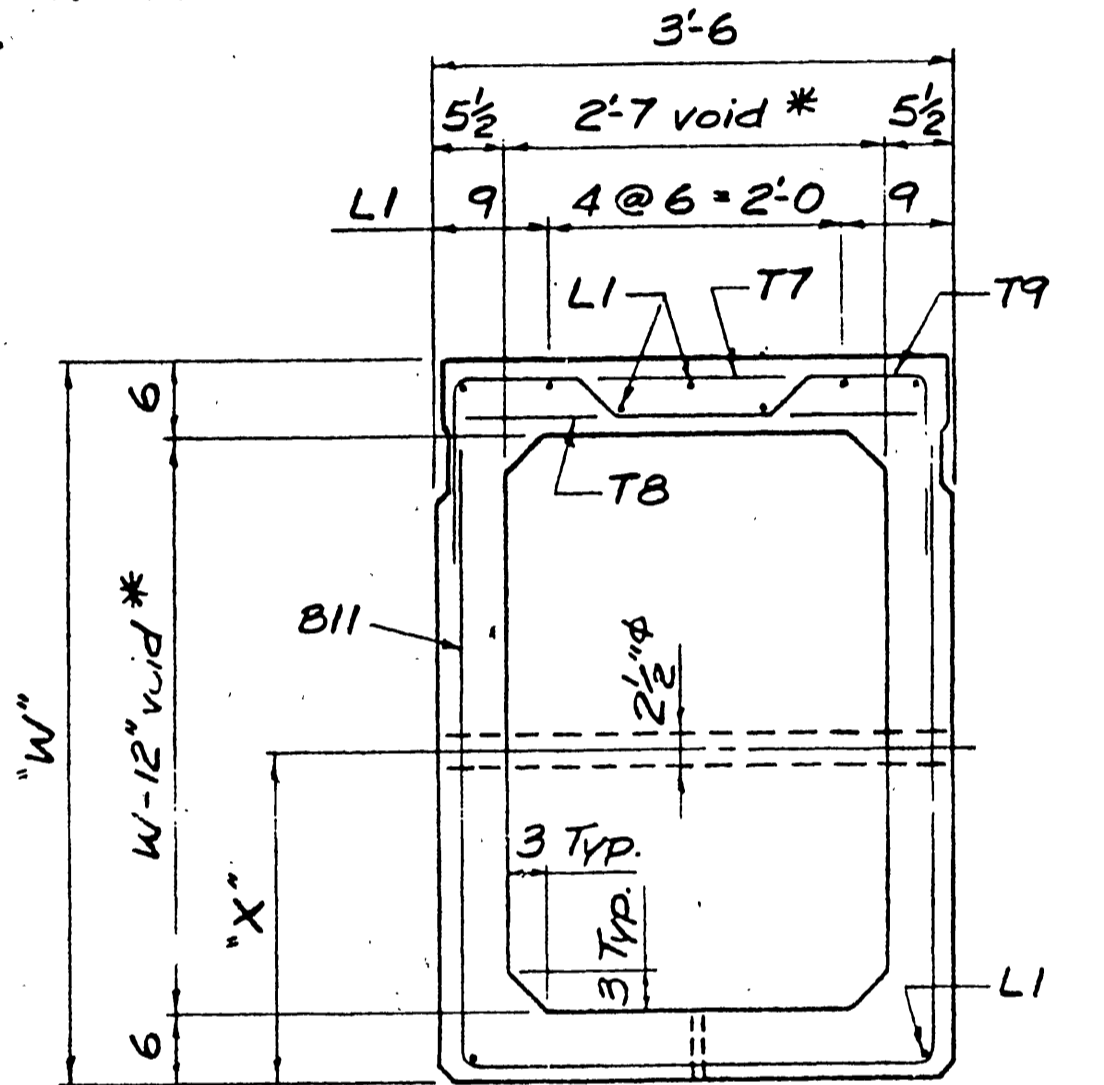
GENERAL NOTES:  
 DESIGN, MATERIAL AND CONSTRUCTION OF PRESTRESSED CONCRETE BEAMS SHALL BE IN ACCORDANCE WITH THE CURRENT A.R.E.A. MANUAL FOR RAILWAY ENGINEERING, CHAPTER 8, PART 17 - PRESTRESSED CONCRETE DESIGN.  
 ULTIMATE COMPRESSIVE CYLINDER STRENGTH OF BEAM CONCRETE SHALL BE NOT LESS THAN 4,500 p.s.i. AT TRANSFER OF PRESTRESSING FORCE, AND 5,500 p.s.i. IN 28 DAYS.  
 ULTIMATE COMPRESSIVE CYLINDER STRENGTH OF CURB AND WALK CONCRETE SHALL BE NOT LESS THAN 3,500 p.s.i. IN 28 DAYS.  
 CONCRETE SHALL BE AIR-ENTRAINED CONTAINING NOT LESS THAN 4% NOR MORE THAN 6% AIR BY VOLUME.  
 MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE ONE INCH.  
 ALL PRESTRESSING STRANDS SHALL BE 1/2" dia, 7 WIRE UNCOATED, LOW-RELAXATION, WITH MINIMUM  $f_p = 270,000$  p.s.i. AND OTHERWISE MEETING THE REQUIREMENTS OF CURRENT A.S.T.M. DESIGNATION: A416.  
 INITIAL PRESTRESS SHALL BE  $0.789 f_p = 32,600$  LBS. PER STRAND.  
 NON-PRESTRESSED REINFORCEMENT SHALL BE DEFORMED BARS MEETING CURRENT A.S.T.M. DESIGNATION: A615, GRADE 60. FABRICATION OF REINFORCING STEEL SHALL BE AS PER CHAPTER 7 OF THE CURRENT C.R.S.I. MANUAL OF STANDARD PRACTICE.  
 DEAD LOAD: (ASSUMED-LBS. PER LIN. FT. OF TRACK)  
 TRACK 350  
 BALLAST 1560  
 CURB, WALK & HR 630  
 BEAMS AS APPLICABLE  
 LI 3 LOAD: COOPER'S E80 INCREASED 15 PERCENT TO PROVIDE FOR CENTRIFUGAL FORCE AND OFFSET OF CENTER LINE OF TRACK OF UP TO SIX INCHES FROM CENTER LINE OF BEAMS.  
 IMPACT: FOR  $z \leq 60'$ ,  $I = 35 - z^2/500$  PER CENT;  
 FOR  $z > 60'$ ,  $I = 14 + 800/(z-2)$  PER CENT;  
 WHERE  $z = L-16'$   
 ALL CONCRETE FORMS EXCEPT VOID FORMS SHALL BE FILLETED 3/4 INCHES AT CORNERS AND EDGES.  
 SPECIAL NOTES TO MANUFACTURER:  
 PRODUCTION PROCEDURES AND DIMENSIONAL TOLERANCES FOR THE MANUFACTURE OF PRECAST, PRESTRESSED BEAMS SHALL BE IN ACCORDANCE WITH THE PRESTRESSED CONCRETE INSTITUTE'S CURRENT MANUAL MNL-116 FOR QUALITY CONTROL.  
 MANUFACTURER SHALL FURNISH ASST. CHIEF ENGINEER - STRUCTURES THREE SETS OF DETAIL DRAWINGS FOR APPROVAL PRIOR TO CASTING BEAMS. IN ADDITION TO THE DESIGN LENGTH OF THE BEAM, THE DRAWINGS SHALL SHOW THE PRE-TRANSFER CAST LENGTH REQUIRED TO CORRECT FOR THE ELASTIC SHORTENING, SHRINKAGE AND CREEP OF THE CONCRETE. COMPUTATIONS FOR THESE CORRECTIONS SHALL ACCOMPANY THE DRAWINGS.  
 AN ALTERNATE STRAND PATTERN BETTER SUITED TO THE MANUFACTURER'S FACILITIES WHICH HAS THE SAME ECCENTRICITY AS THE PATTERN SHOWN ON THIS PLAN WILL BE CONSIDERED FOR APPROVAL UPON SUBMISSION BY THE MANUFACTURER OF COMPUTATIONS WITH THE DETAIL DRAWINGS. HOWEVER, NO CHANGE IN THE LOCATION OF THE TOP ROW OF STRANDS WILL BE PERMITTED.  
 L1 BARS MAY BE ADDED IN THE BEAM WALLS TO FACILITATE NON-PRESTRESSED REINFORCEMENT PLACEMENT, ONLY IF A 1-1/2 INCH MINIMUM CLEARANCE CAN BE MAINTAINED BETWEEN THE L1 BARS AND THE PRESTRESSING STRANDS.  
 TACK WELDING OF NON-PRESTRESSED REINFORCEMENT IS PROHIBITED.  
 IF REINFORCING BAR SUPPORTS ARE USED, THEY SHALL BE CLASS 1, PLASTIC PROTECTED, IN ACCORDANCE WITH CHAPTER 3 OF THE CURRENT C.R.S.I. MANUAL OF STANDARD PRACTICE.  
 MANUFACTURER SHALL BURN BACK PRESTRESSING STRANDS TO A DEPTH OF ONE INCH BELOW SURFACE OF CONCRETE ON END OF BEAM. RESULTING RECESSES SHALL BE FILLED WITH EPOXY GROUT.  
 A 1" dia VOID DRAIN SHALL BE PLACED AT THE CENTER AND AT 6" FROM EACH END OF EACH VOID ALONG THE CENTERLINE OF THE BEAM. FORMS FOR THESE VOID DRAINS SHALL BE REMOVED PRIOR TO SHIPMENT SO DRAINS MAY ACT AS WITNESS HOLES.



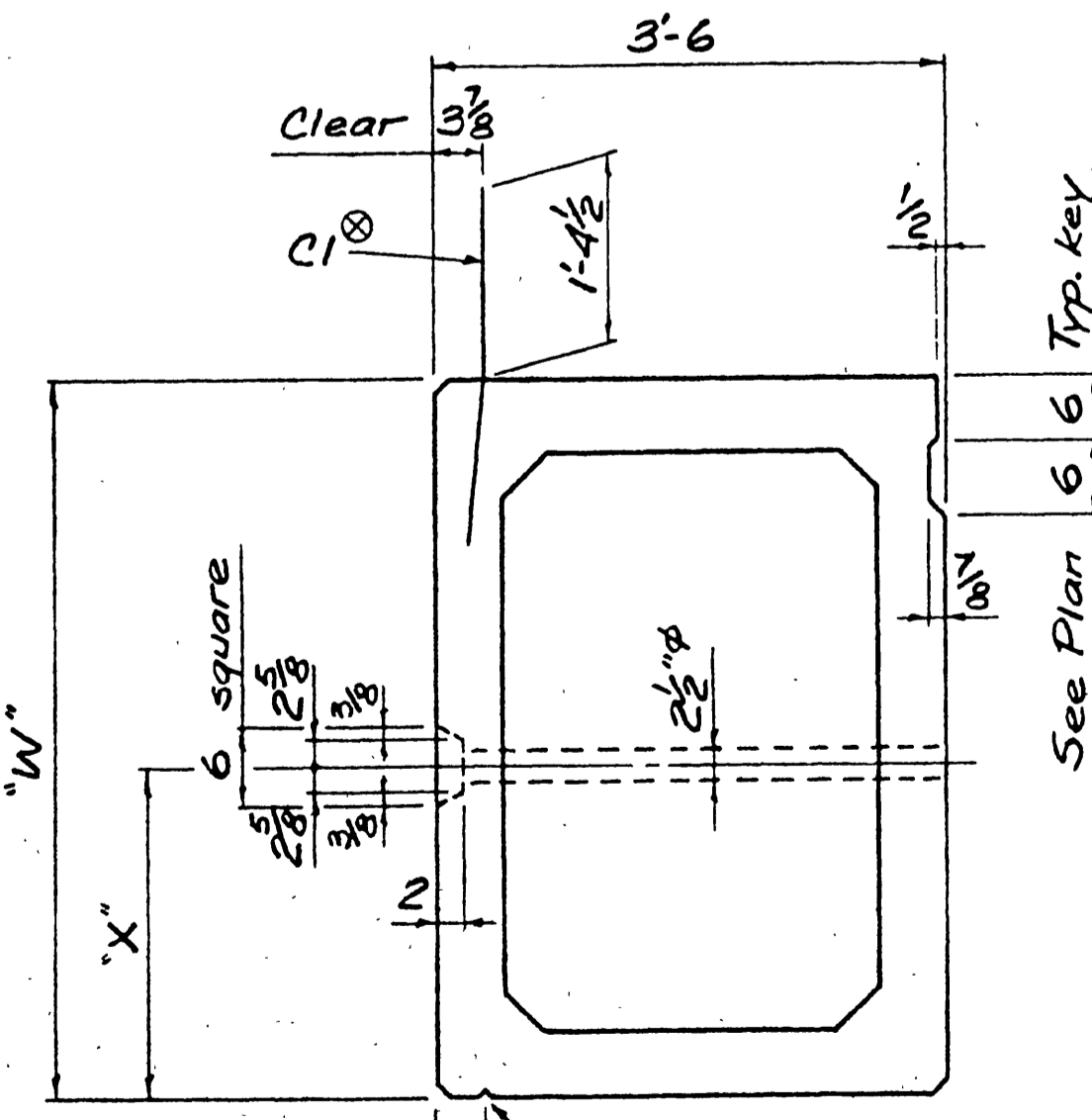
ELEVATION - EXTERIOR AND INTERIOR BEAMS

Note: Bars B11 to be shifted as required to clear 6" recesses and 1" dia void drains.

Shear key not shown, see Section A-A.



SECTION A-A FOR INTERIOR BEAM

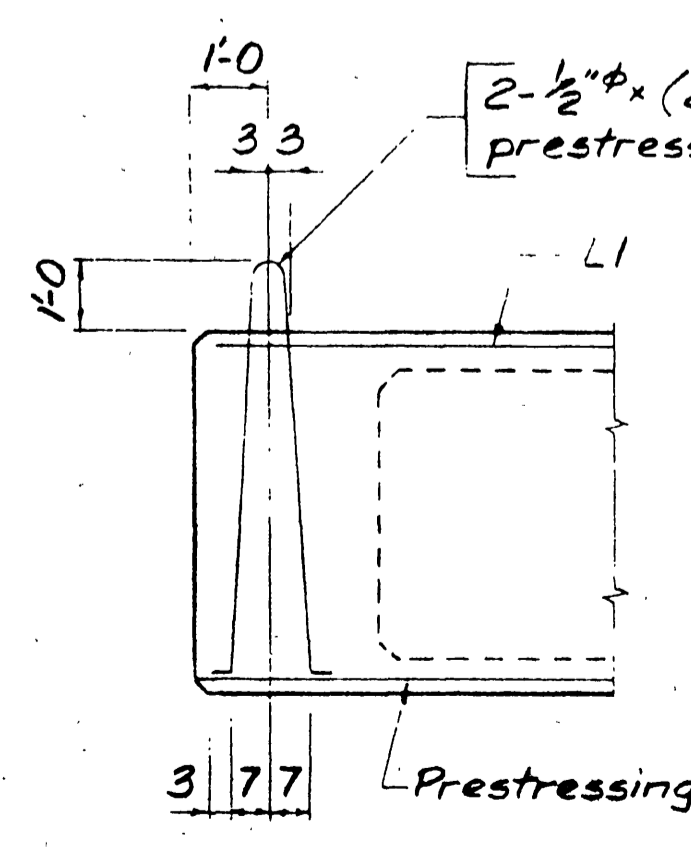


SECTION A-A FOR EXTERIOR BEAM

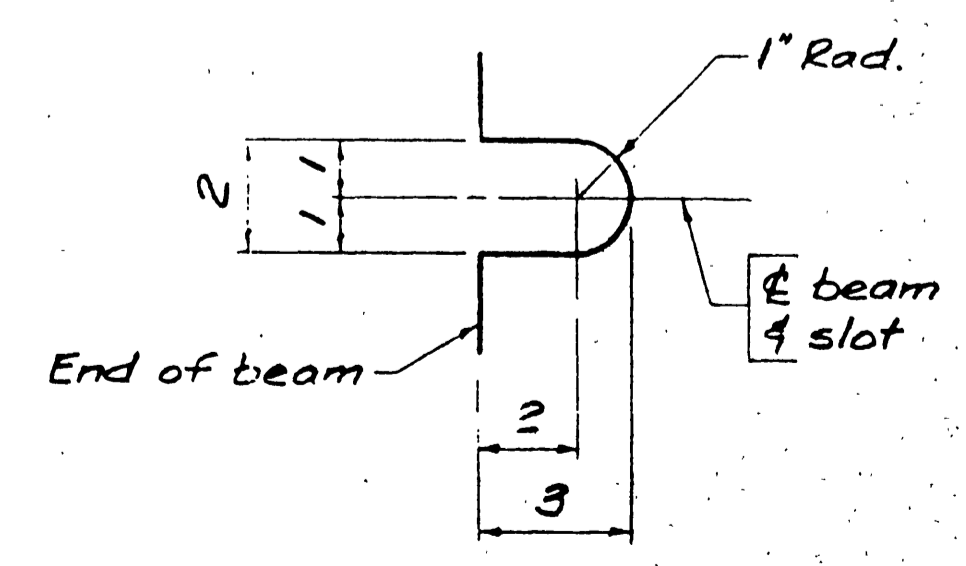
Mild steel reinforcing and other details not shown same as Interior Beam.

BEAM DIMENSIONS AND SECTION PROPERTIES

"W"	"X"	"Y"	"Z"	SECTION AT VOID	
				AREA (IN <sup>2</sup> )	I (IN <sup>4</sup> )
STRAIGHT STRANDS ONLY					
3'-0"	1'-5"	2'-0"	0'-10"	786	129,771
3'-3"	1'-7"	2'-0"	0'-10-1/2"	819	159,590
3'-6"	1'-9"	2'-0"	0'-10-1/2"	852	193,095
3'-9"	1'-11"	2'-0"	0'-11"	885	230,434
4'-0"	2'-0"	2'-0"	0'-11-1/2"	918	271,755
4'-3"	2'-1"	2'-3"	1'-0"	951	317,208
4'-6"	2'-3"	2'-3"	1'-0"	984	366,939
5'-0"	2'-7"	2'-6"	1'-1"	1050	479,835
HARPED STRANDS					
5'-0"	2'-4"	2'-6"	1'-1-1/2"	1050	479,835
5'-6"	2'-10"	2'-9"	1'-2-1/2"	1116	611,631
6'-0"	2'-10"	3'-0"	1'-2-1/2"	1182	763,515



LIFTING LOOP DETAIL



ANCHOR SLOT DETAIL

AS BUILT DRAWINGS

Work Sheets 1 and 2 together.

SHEET 1 OF 2 DRAWINGS

B.E.S. 2082  
 THE A. T. & S. F. RY. COMPANY  
 STANDARD PRESTRESSED  
 CONCRETE SINGLE BOX BEAMS

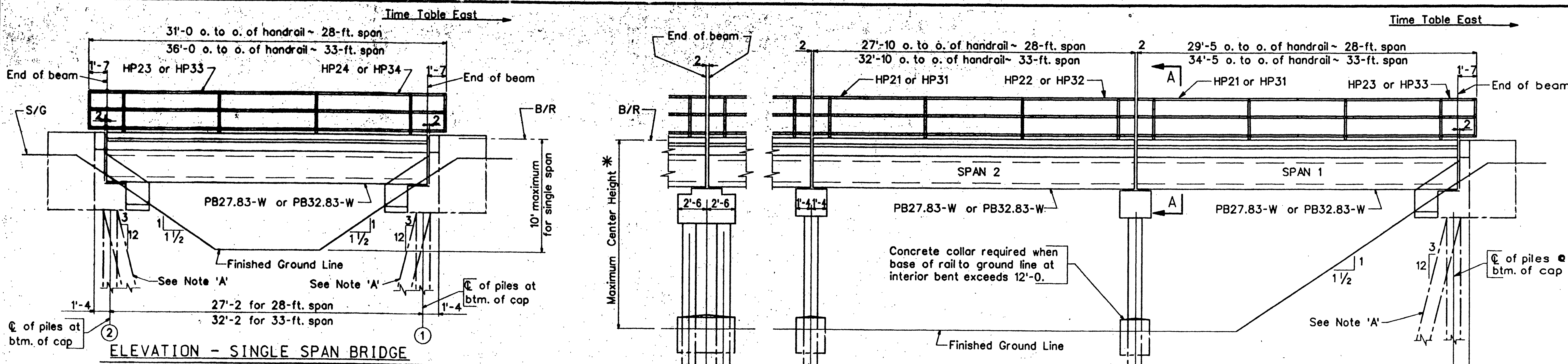
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 CORRECT:  
 CHICAGO, ILL., OCTOBER 1984  
 APPROVED:

C. E. Hillier  
 ASST. CHIEF ENGINEER - STRUCTURES  
 H. L. ...  
 CHIEF ENGINEER

MADE BY: VVT  
 CHECKED BY: PH  
 EXAMINED BY: CRW

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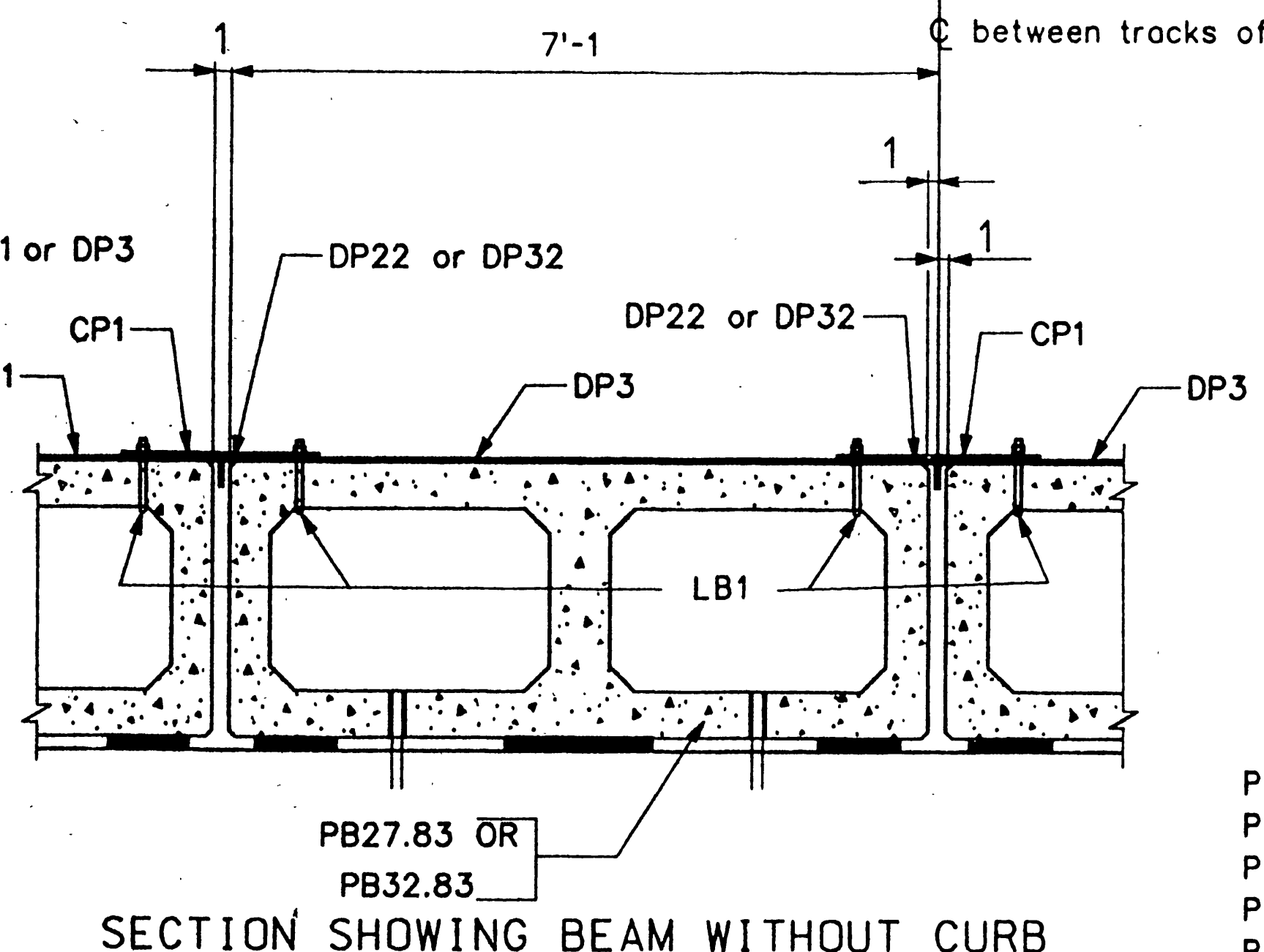
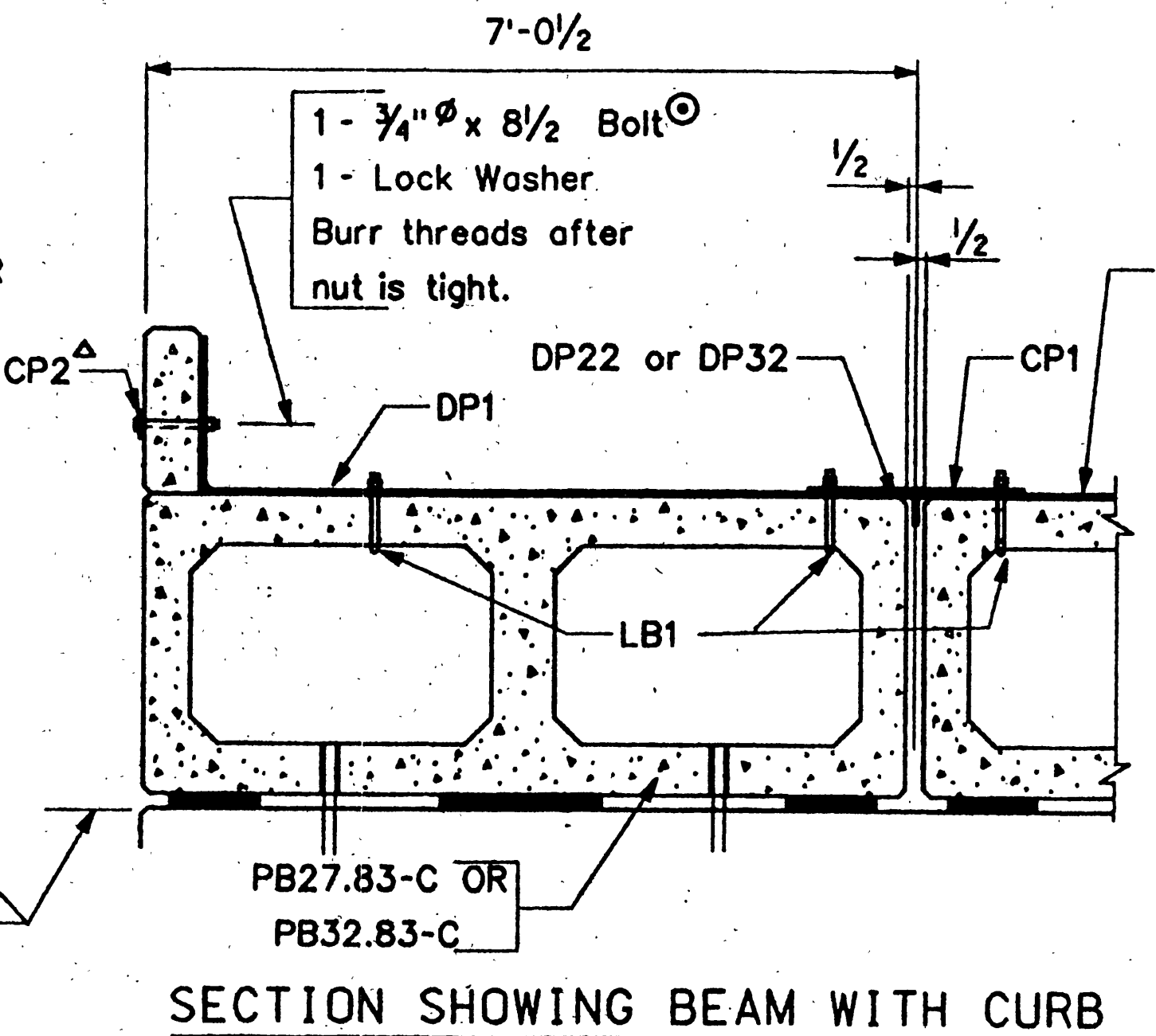
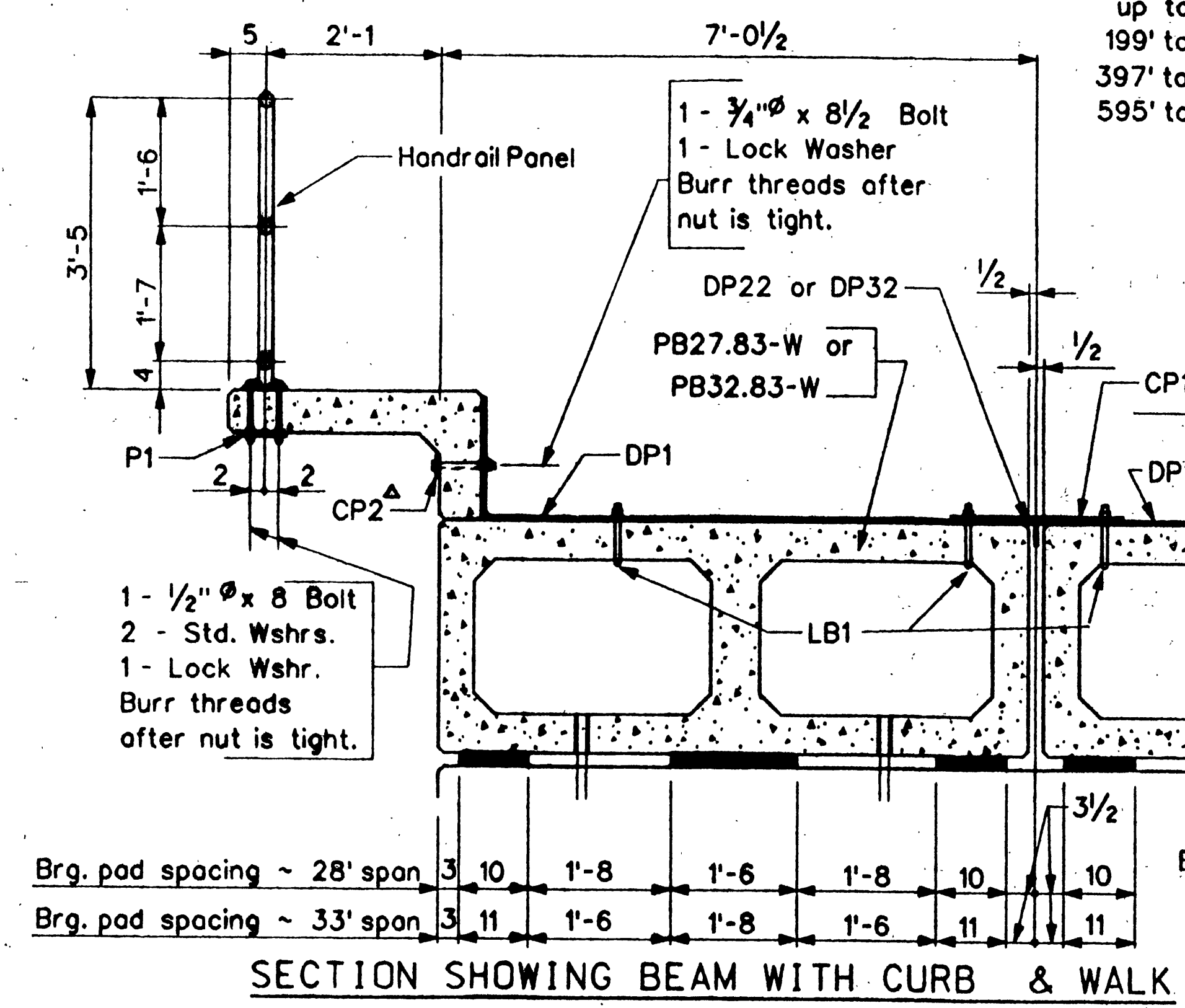




Where walk and handrail are not required, substitute PB27.83-C for PB27.83-W and PB32.83-C for PB32.83-W. See 'Typical Half Sections A-A'.

**Double Bent Requirements**

Lin. Ft. of Bridge	Min. No. of Dbl. Bents Req'd.
up to 198'	None
199' to 396'	One
397' to 594'	Two
595' to 792'	Three



**AS BUILT DRAWINGS**

**LIFTING WEIGHTS**

PB32.83-W	= 27.83 TONS
PB32.83-C	= 24.66 TONS
PB32.83	= 22.82 TONS
PB27.83-W	= 23.59 TONS
PB27.83-C	= 20.90 TONS
PB27.83	= 19.34 TONS

**TYPICAL HALF SECTIONS A-A**

**Notes:**  
 After erection of beams, burn off lifting loops one inch below surface of concrete and patch resulting recesses with epoxy mortar.  
 Two span bridge consists of two end spans.  
 At end bents, substitute Curb Angle CA2 for Curb Plate CP2. See 'Bearing Details' on Sheet 2.  
 For Type IV, V and VI Beam Arrangements, a 3/4" x 16 1/2 bolt shall be substituted to retain Deck Plates DP1 tight against curbs located between tracks of a double track bridge, and CP2 or CA2 shall be omitted.

**Note 'A':**  
 When necessary to clear an existing pile, piles battered in the direction of the track may also be battered slightly in the direction normal to the track.

- 17'-0 for two spans
- 21'-0 for three spans
- 30'-0 for four spans
- 40'-0 for five or more spans

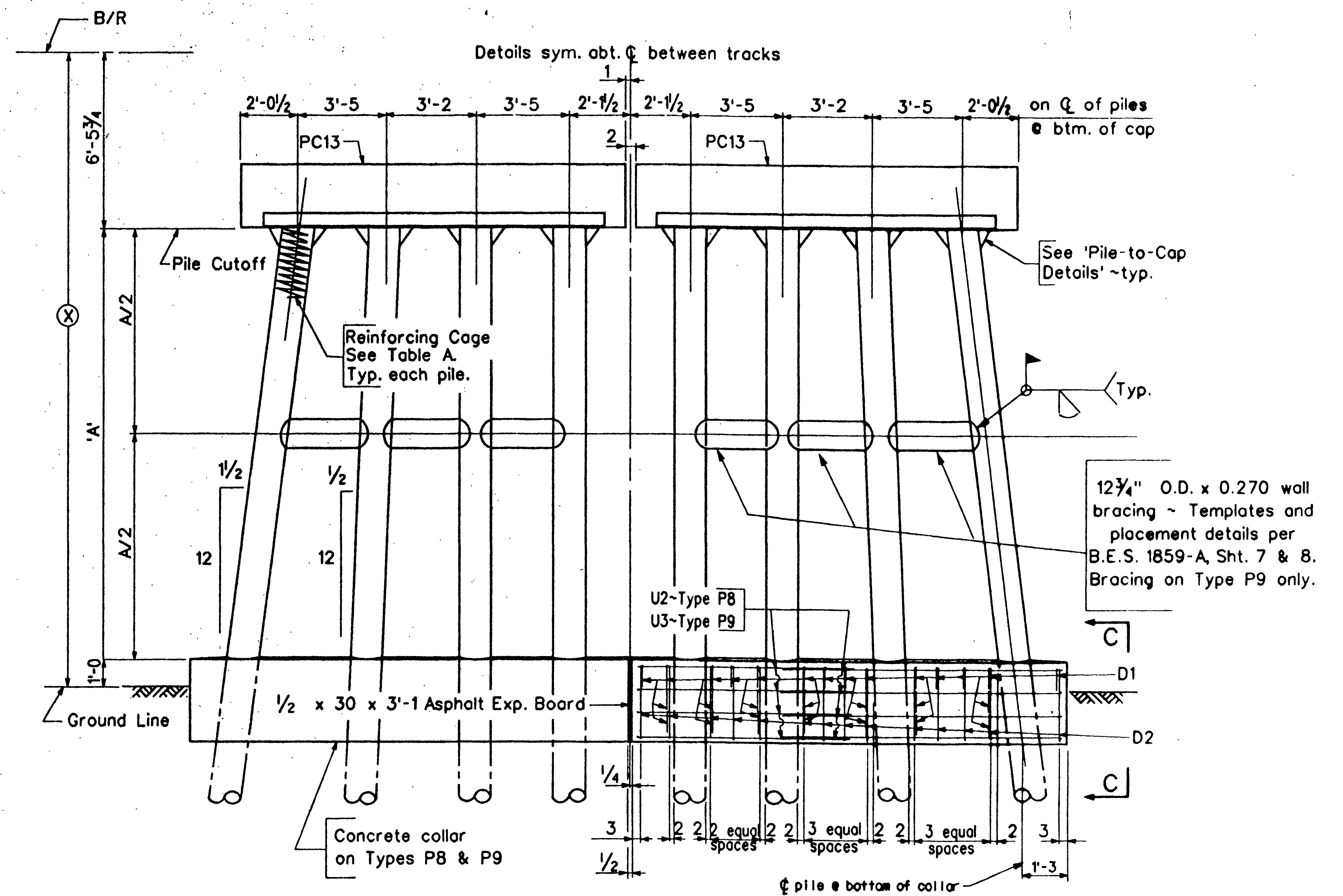
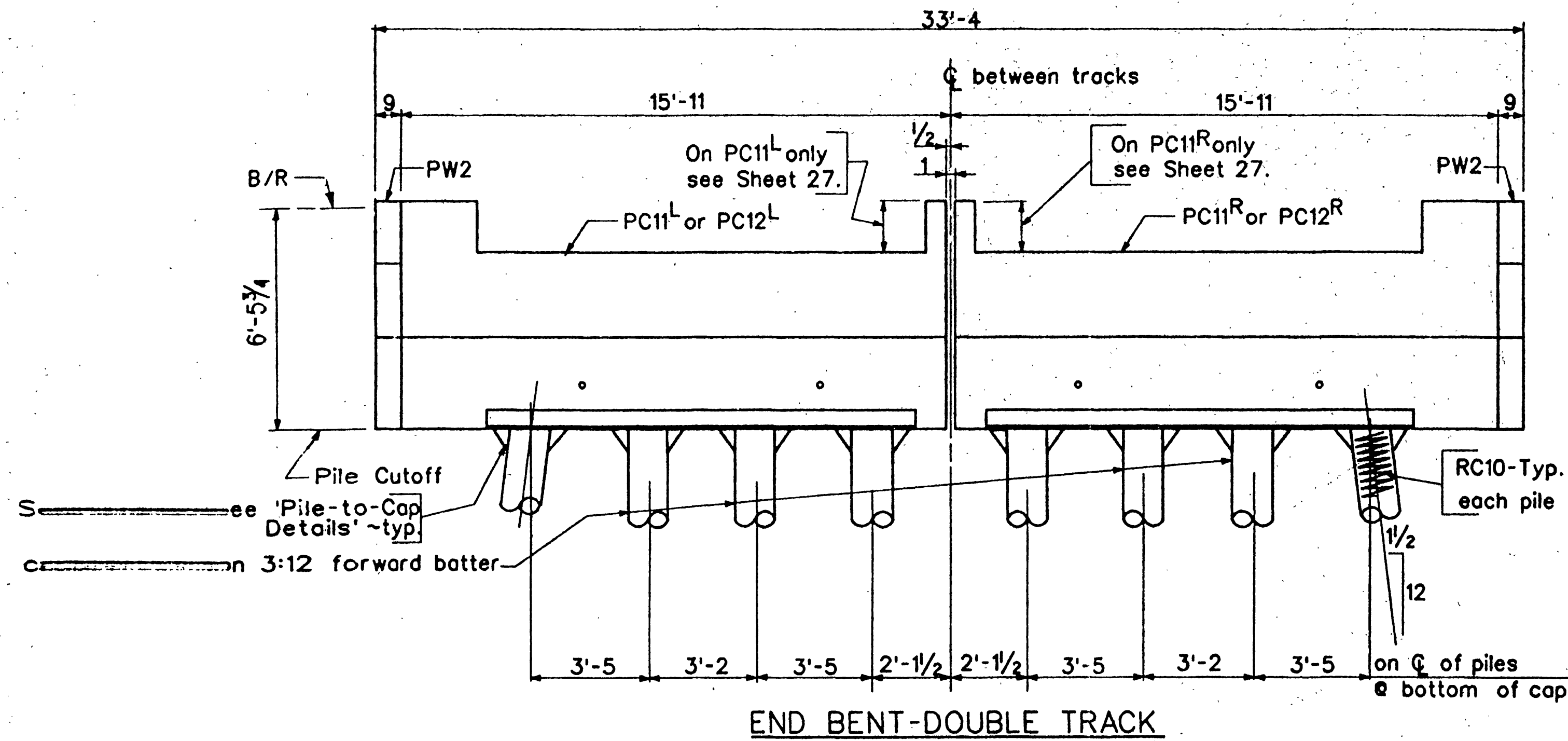
See Sheet 32 for those drawings required for each individual project. Sheets 5, 7, 8, 9, 11 and 13 thru 24 are not required for any 1994 Capital Projects.

**LIST OF DRAWINGS**

SHEET NO.	TITLE
1	GENERAL PLAN
2	MISCELLANEOUS DETAILS
3 thru 9	METAL SHELL PILE BENTS
10 thru 24	STEEL BEARING PILE BENTS
25	METAL SHELL PILE BENT DETAILS
26	STEEL BEARING PILE BENT DETAILS
27 & 28	PRECAST CONCRETE MEMBERS
29 & 30	STEEL DETAILS
31	REINFORCING STEEL DETAILS & GENERAL NOTES
32 thru 35	BILL OF MATERIAL

B.E.S. 2944-A  
 The A.T. & S.F. Railway Company  
 28-FT. & 33-FT. PRESTRESSED CONCRETE SPANS  
 PRECAST CONCRETE CAPS ON STEEL PILES  
 GENERAL PLAN

Made By: DRP	Date: Jan., 1994
Chk'd. By:	Sheet 1 of
Ex'd. By:	35 Drawings



Reinf. Cage	'X'
RC10	up to 12'-0
RC11	12'-1 to 17'-0
RC12	17'-1 to 22'-0
RC13	22'-1 to 27'-0
RC14	27'-1 to 30'-0

BENT TYPE		REINFORCING STEEL MARK
P8	P9	D1
28	28	D2
16	-	U2
-	16	U3

BENT TYPE	REINFORCING STEEL (LBS.)
P8	471
P9	492

The following formula will give estimated quantities of concrete in the concrete collars in cubic yards.

$$\text{Bents P8 \& P9 } 0.07 \cdot X + 6.3$$

where "X" is the distance from Base of Rail to Ground Line in feet.

**SINGLE BENT-DOUBLE TRACK**

- TYPE P7-'X' UP TO 12'-0 (No Collar or Bracing)
- TYPE P8-'X' = 12'-1 TO 20'-0 (Collar, no Bracing)
- TYPE P9-'X' = 20'-1 TO 30'-0 (Collar and Bracing)

**Notes:**

All piles are 14" O. D. x 0.250 wall metal shell piles, each containing a reinforcing cage centered in the pile and flush with top of pile. Each pile is to be filled with 3000 p.s.i. concrete.

Estimated quantity of 3000 p.s.i. concrete in metal shell piles: 0.0368 cu. yd. per lin. ft. of pile.

After precast concrete members are set, fill recesses at lift anchors with cement grout to top of surrounding concrete.

For 'Alternate Pile Splice Details,' 'Pile-to-Cap Details,' 'Wing Wall to End Cap Detail,' 'Head of Bank Details' and 'View C-C,' see Sheet 25.

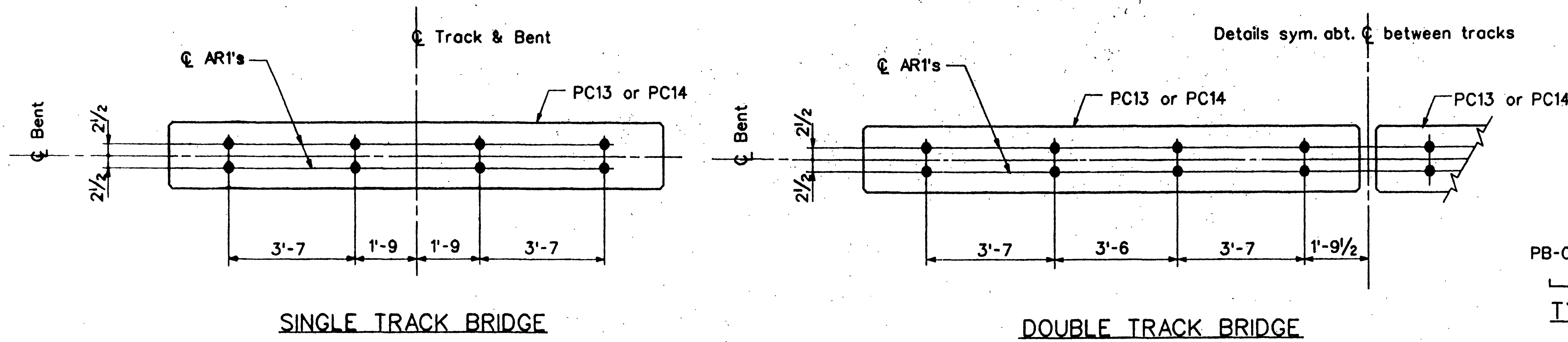
**AS BUILT DRAWINGS**

B.E.S. 2944-A  
 The A.T. & S.F. Railway Company  
 28-FT. & 33-FT. PRESTRESSED CONCRETE SPANS  
 PRECAST CONCRETE CAPS ON STEEL PILES  
 METAL SHELL PILE BENTS

Made By: DRP	Date: Jan., 1994
Chk'd. By:	Sheet 4 of
Ex'd. By:	35 Drawings

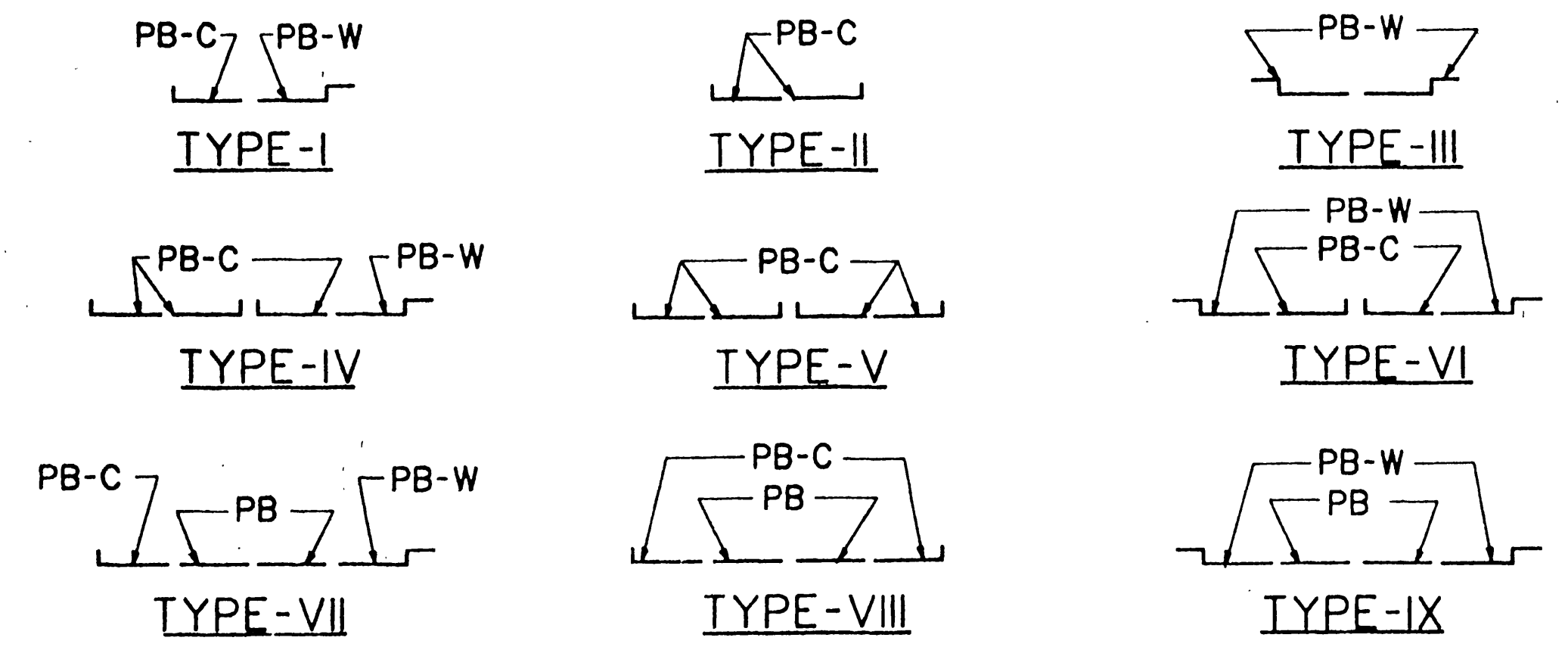
Director Structures  
Kansas City, KS





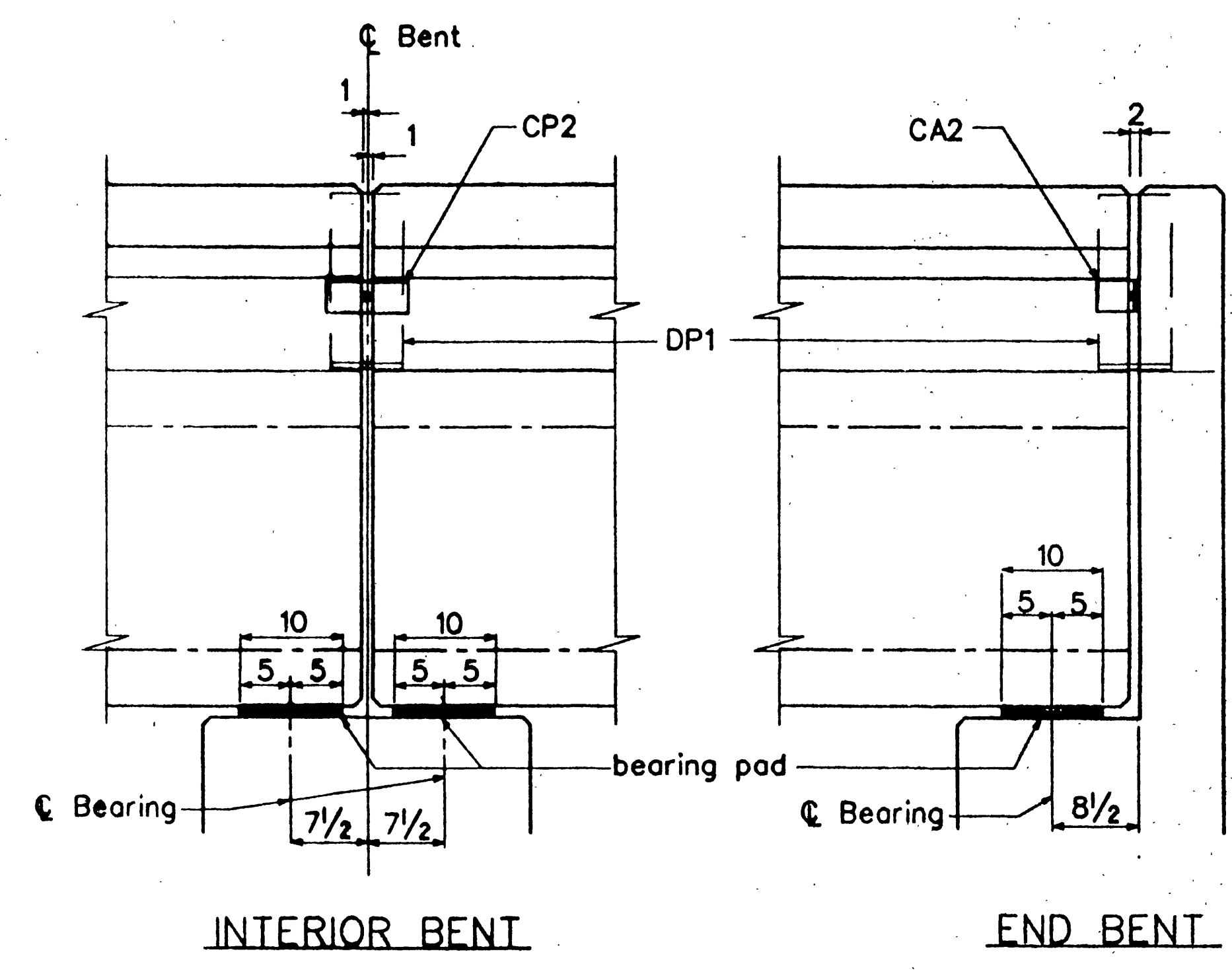
**ANCHOR ROD LOCATION PLANS**

Note: Anchor rods AR1 must be placed within 1/4" of plan location or beams will not fit.



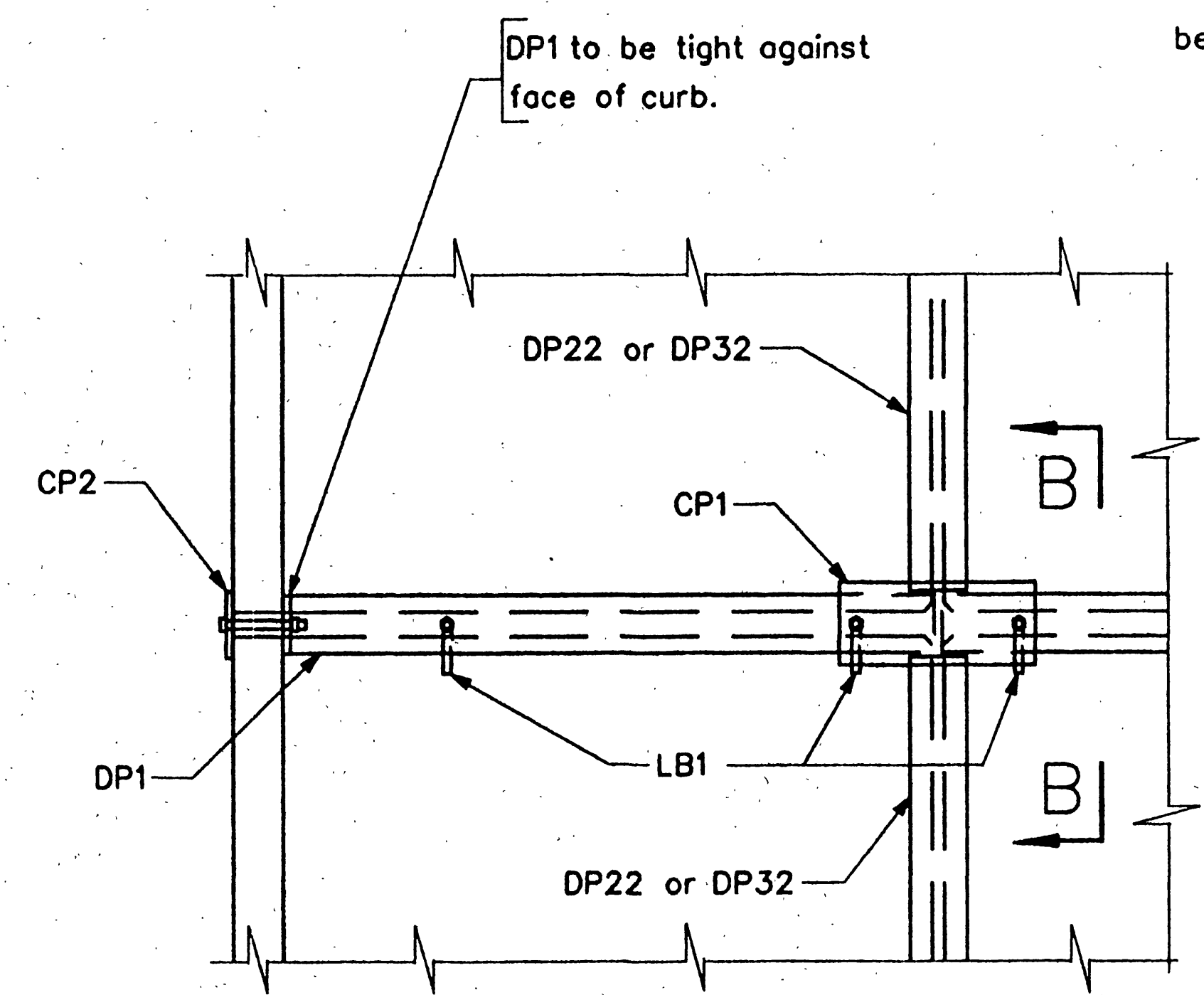
**BEAM ARRANGEMENT DIAGRAMS**

PB denotes beam without curb or walk. PB-C denotes beam with curb only. PB-W denotes beam with curb and walk.



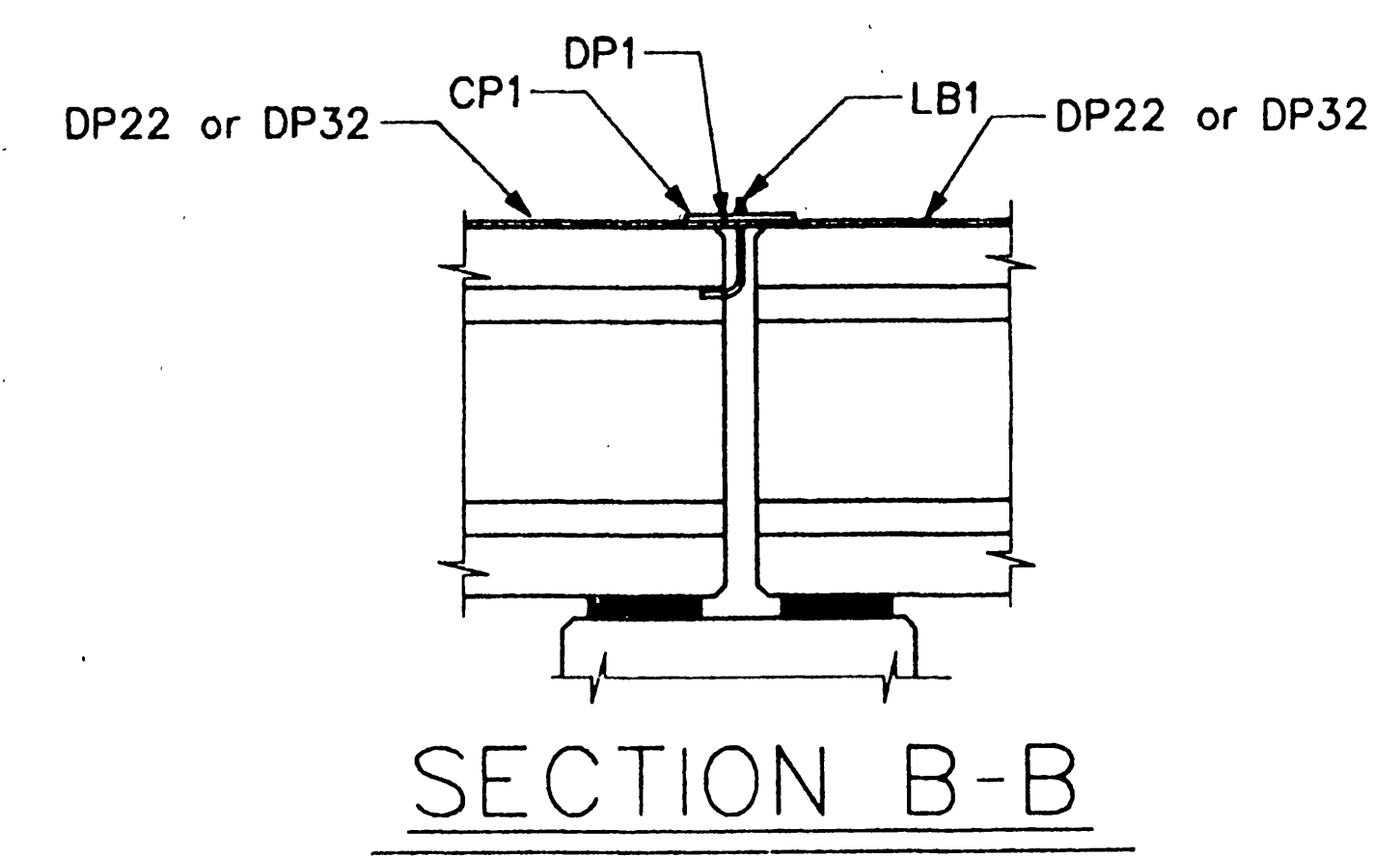
**BEARING DETAILS**

Note: Handrails not shown.



**TYP. PLACEMENT OF DECK PLATES**

Assemble complete transverse line of deck plates by placing CP1's and LB1's. Turn leg of LB1's to permit placement between beams or between beam and parapet wall and then turn LB1's as shown and tighten nut. Burn off projecting portion of bolt after nut is tight.



**SECTION B-B**

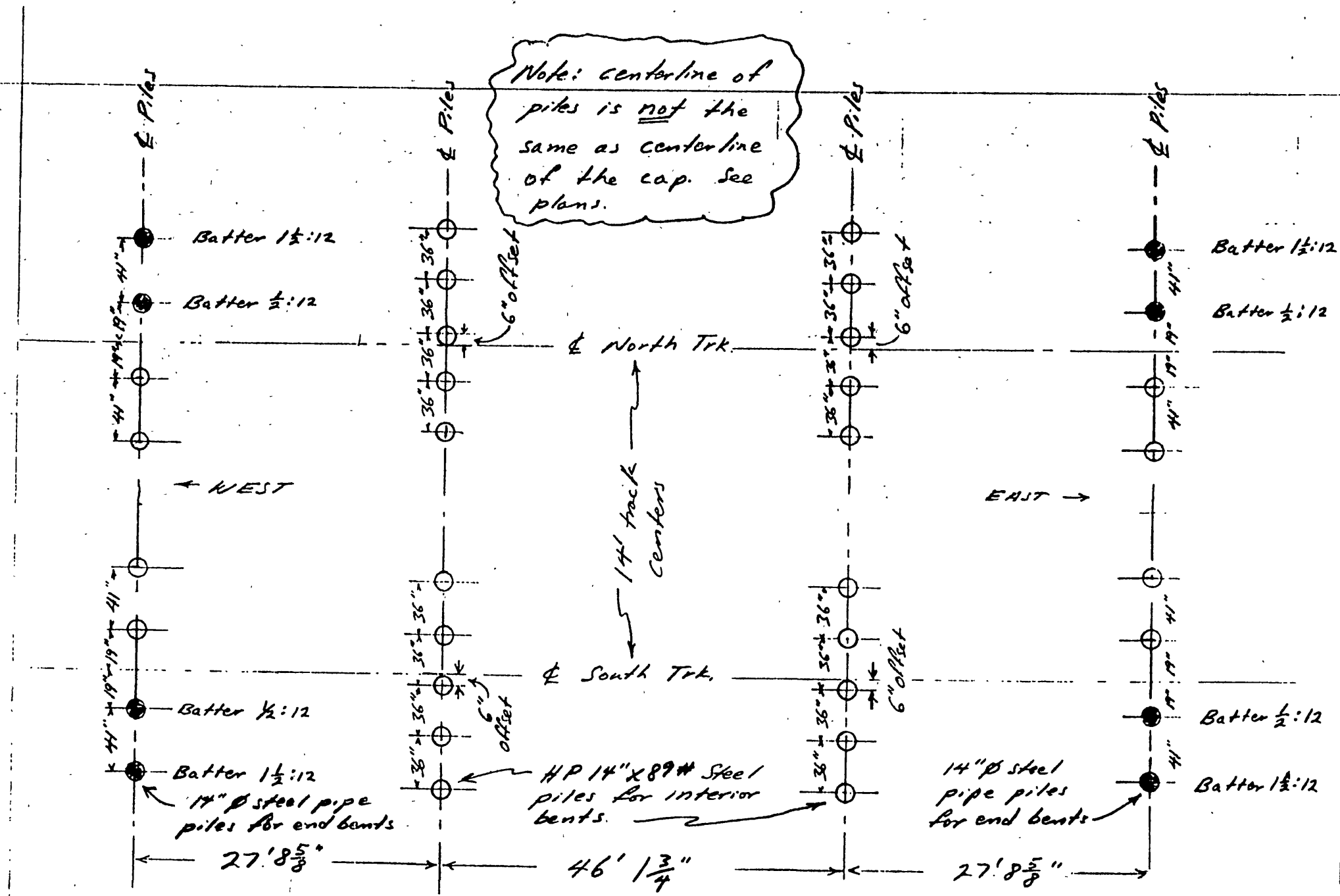
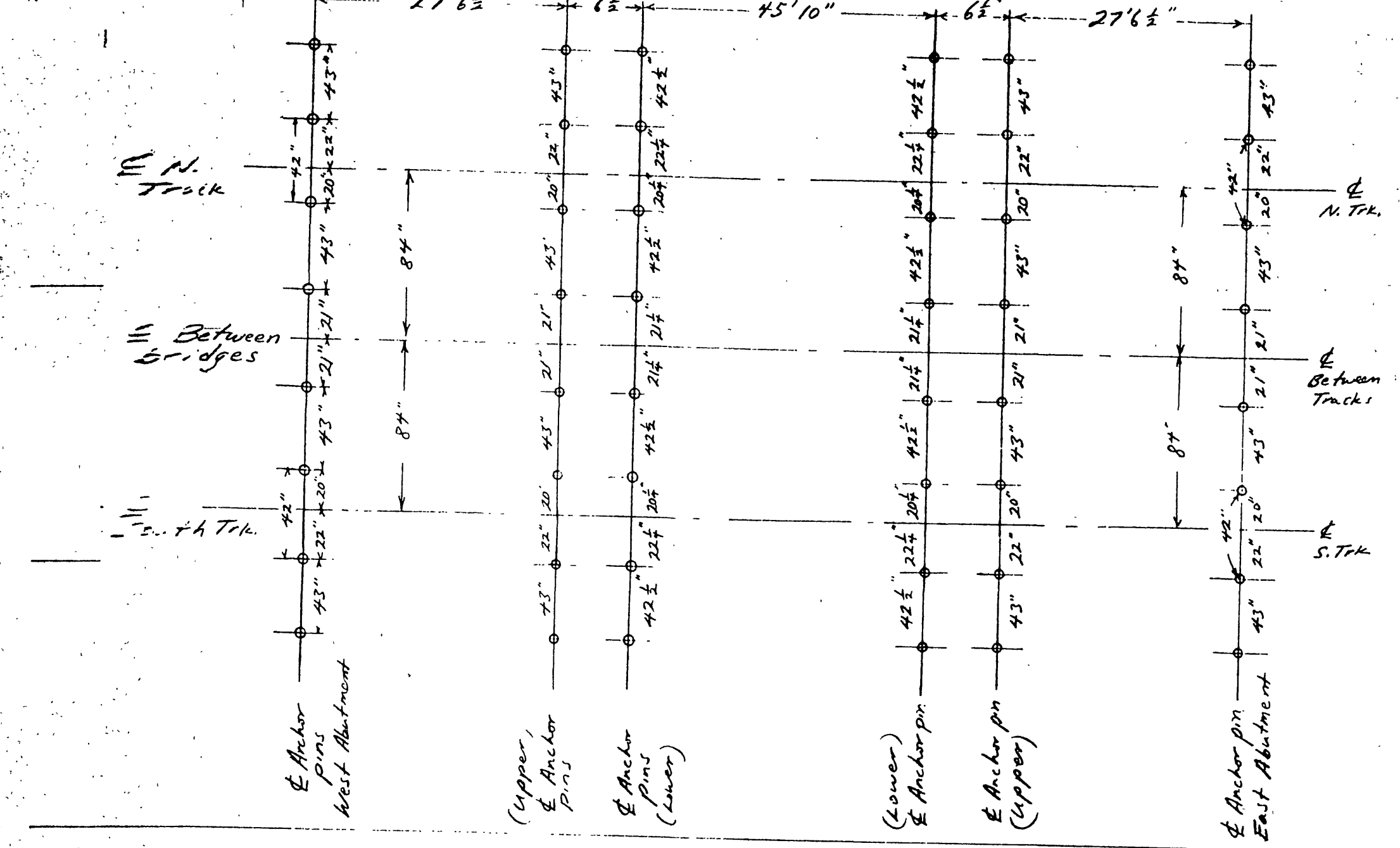
**AS BUILT DRAWINGS**

B.E.S. 2944-A		
The A.T. & S.F. Railway Company		
28-FT. & 33-FT. PRESTRESSED CONCRETE SPANS		
PRECAST CONCRETE CAPS ON STEEL PILES		
MISCELLANEOUS DETAILS		
Made By: DRP	Director Structures Kansas City, KS	Date: Jan., 1994
Chk'd. By:		Sheet 2 of
Ex'd. By:		35 Drawings

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Monroe St. Br. No. 15.3 Revised 11/26/94  
Anchor Pin Layout Diagram Using  $\pm$  Track as Baselines



Schematic for pile layout (@ entall' elevation) Revised 10/20/94

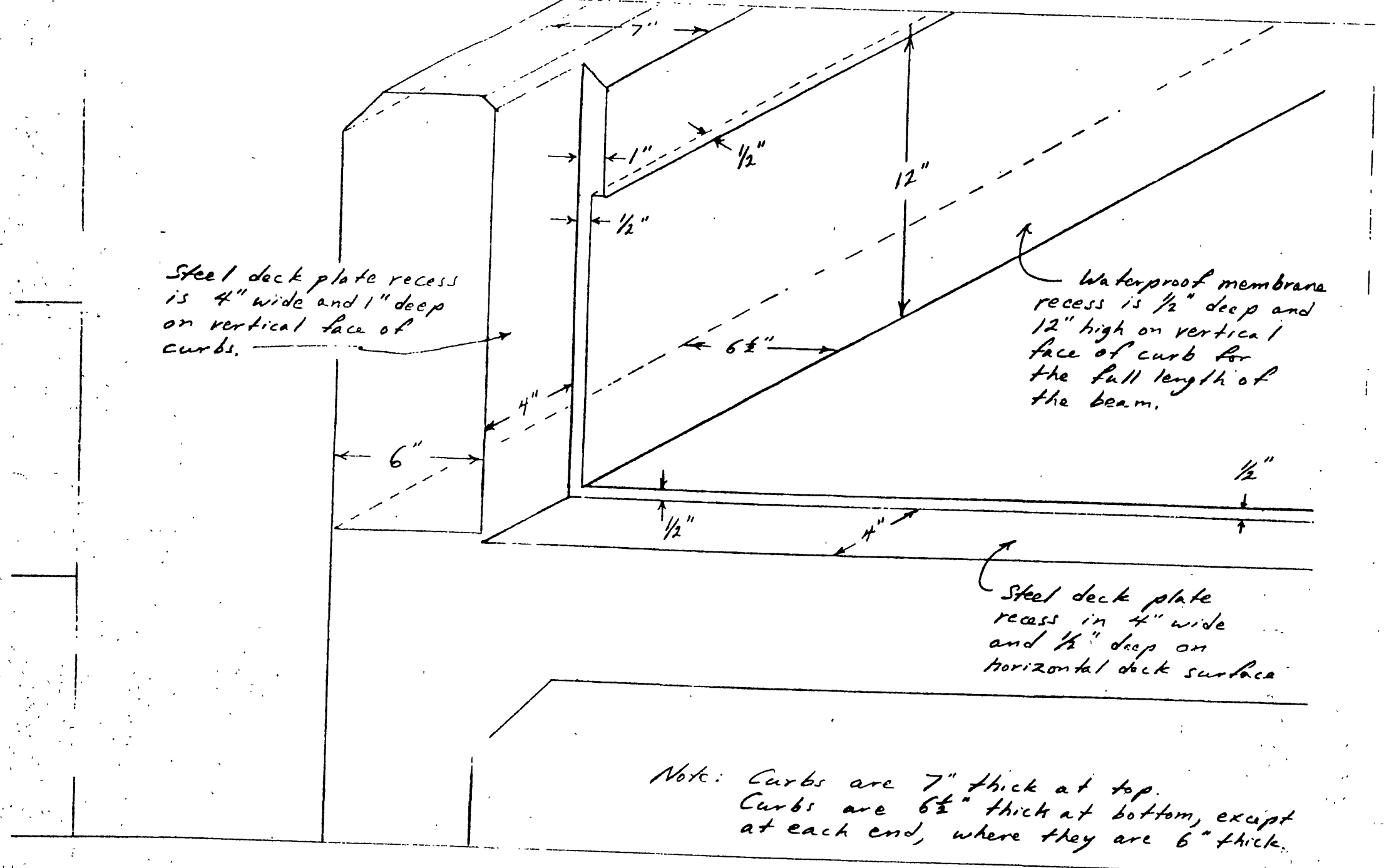
walkway	walkway	walkway
PB 27.83-W	46'2" B.E.S. 2082 curb & walkway	PB 27.83-W
	46'2" B.E.S. 2082	
PB 27.83-C	46'2" B.E.S. 2082	PB 27.83-C
	46'2" B.E.S. 2082 curb	
PB 27.83-C	46'2" B.E.S. 2082 curb	PB 27.83-C
	46'2" B.E.S. 2082	
PB 27.83-W	46'2" B.E.S. 2082	PB 27.83-W
	46'2" B.E.S. 2082 curb & walkway	
walkway	walkway	walkway

Monroe St. Br. No. 15.3 - Beam layout schematic  
No scale Revised 10/20/94 11/22/94

Note: All beams to be recessed to accommodate waterproof membrane materials and steel deck plates. See attached detail sheets.

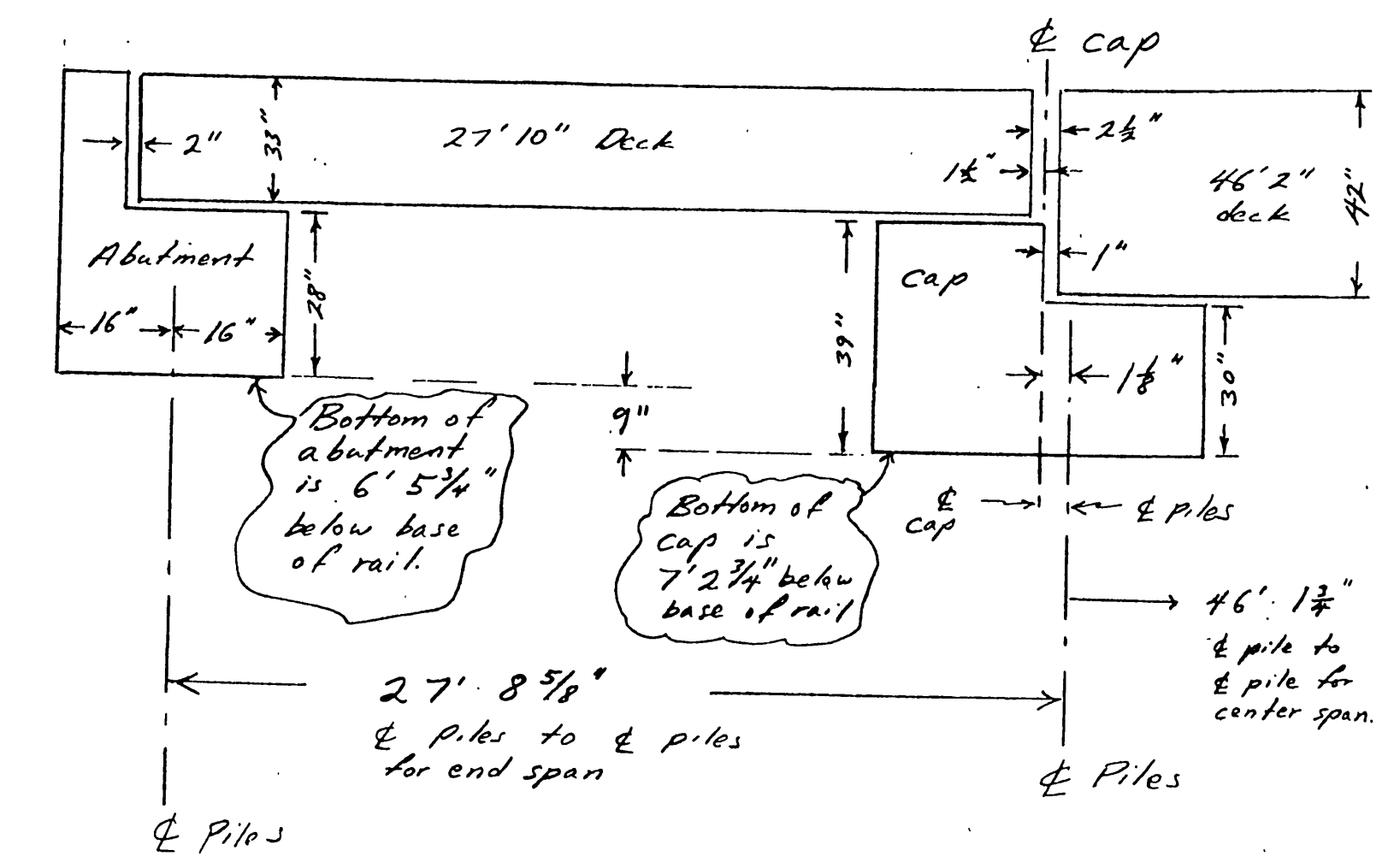
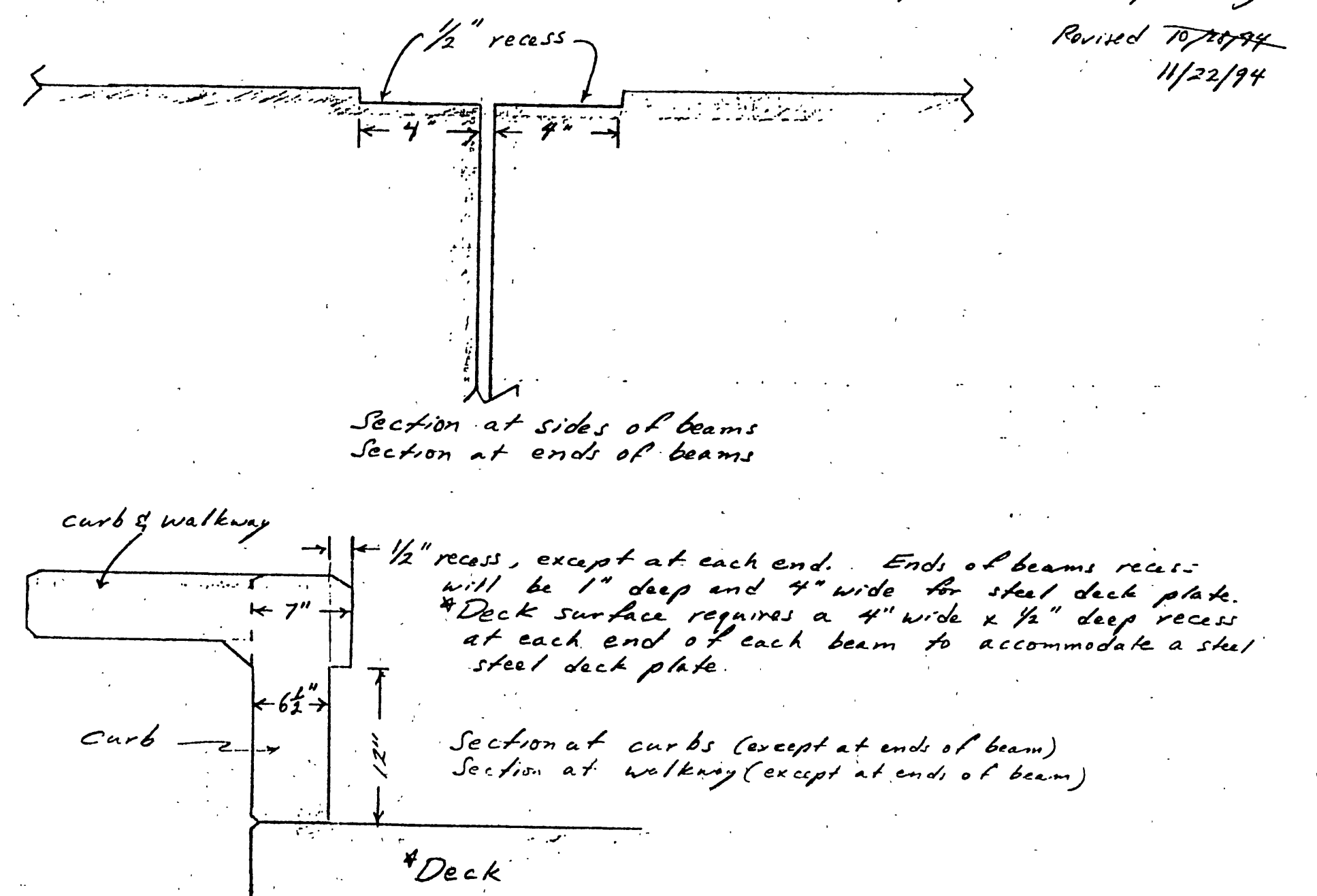
AS BUILT DRAWINGS

Monroe St. Br. 15.3 - RECESS DETAIL Revised 11/22/93



Note: Curbs are 7" thick at top. Curbs are 6" thick at bottom, except at each end, where they are 6" thick.

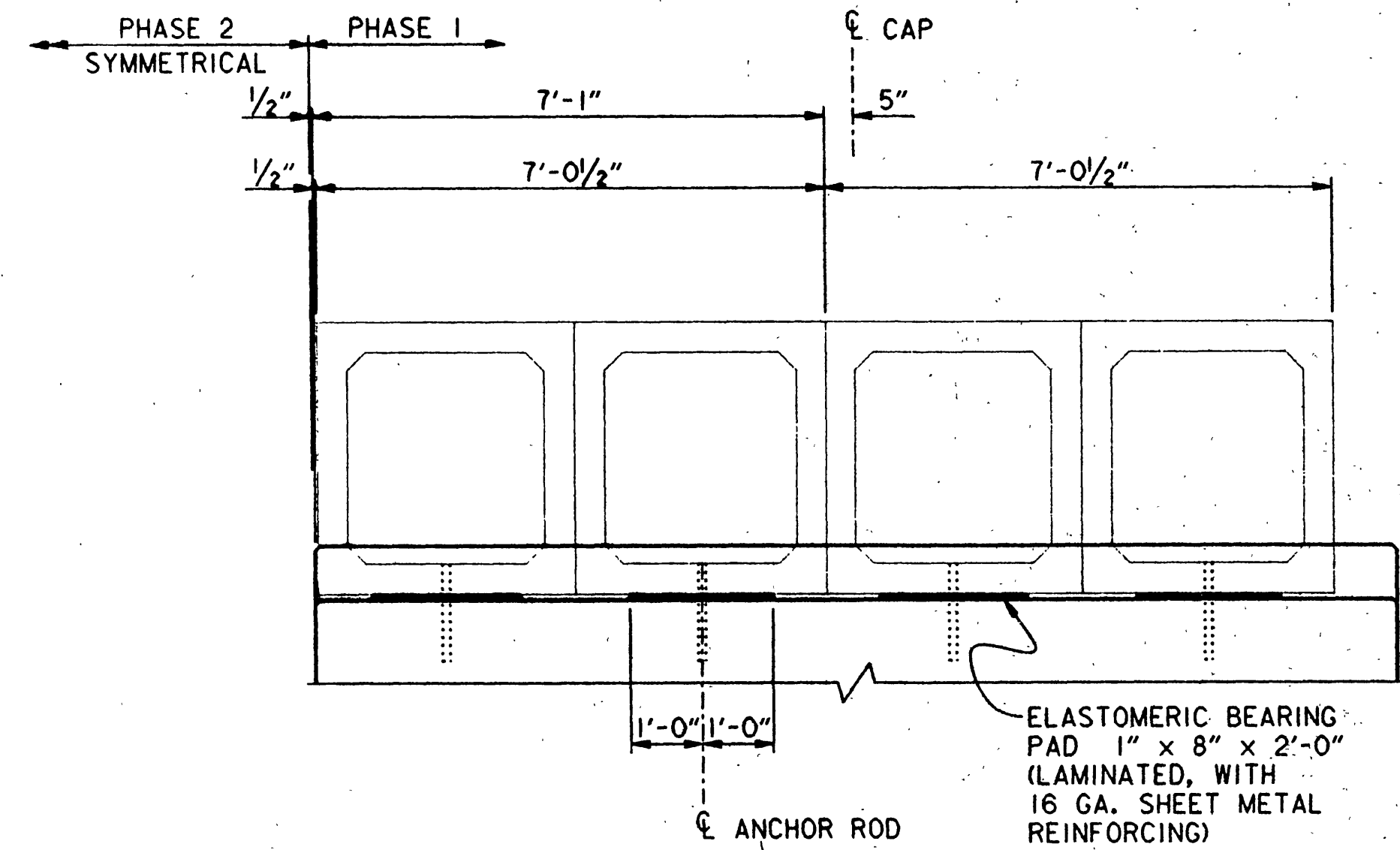
Monroe St. Br. No. 15.3 - Recess for deck plates & waterproofing Revised 10/20/94 11/22/94



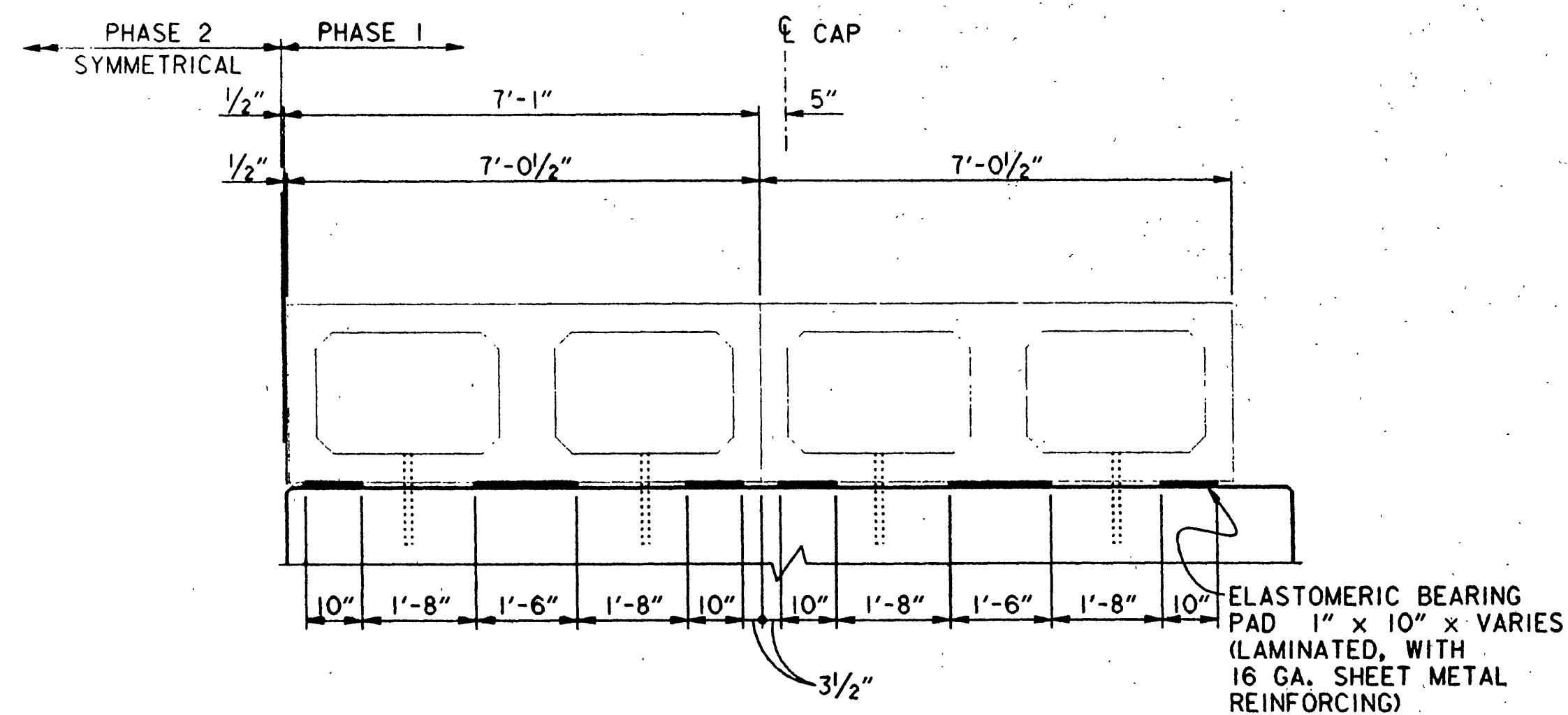
Schematic of bent layout  
Monroe St. Br. No. 15.3 Revised 10/20/94



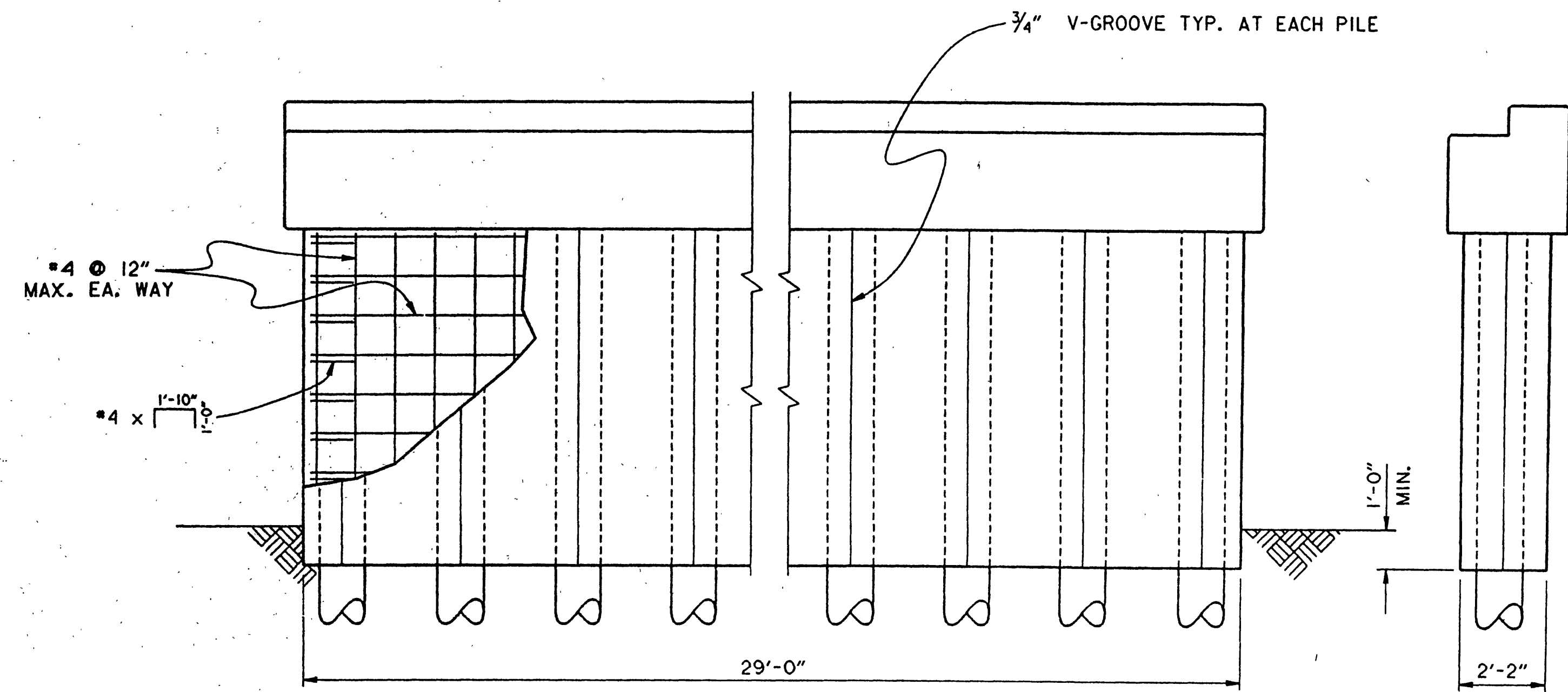




LOWER SEAT



UPPER SEAT BEARING PAD LAYOUT



Note: 14" x 89" H-pile substituted for pipe pile for AS-BUILT

ELEVATION

SECTION C-C

NOTE: CONSTRUCT COLLAR AFTER COMPLETION OF PHASE 2 BENT PORTION.

CONCRETE COLLAR DETAILS

AS BUILT DRAWINGS



NO.	DATE	REVISIONS	BY	CHKD.	APP'D	DATE
1	10-12-94	PER AT&SF COMMENTS				

**MORRISON KNUDSEN CORPORATION**  
TRANSPORTATION AND WATER RESOURCES GROUP  
180 HOWARD STREET, SAN FRANCISCO, CALIFORNIA 94105

**THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY**

SOUTHERN CALIFORNIA COMMUTER PROJECT  
WEST RIVERSIDE - ARLINGTON  
MONROE STREET BRIDGE  
BENT DETAILS - 2

DWG. NO.	
SHEET	2 OF 2
REV	
CONTRACT PACKAGE	

cad file no.: W:\PROJECTS\BRIDGE\ACAD\1298 # 48BRG248PRD02-.dgn

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