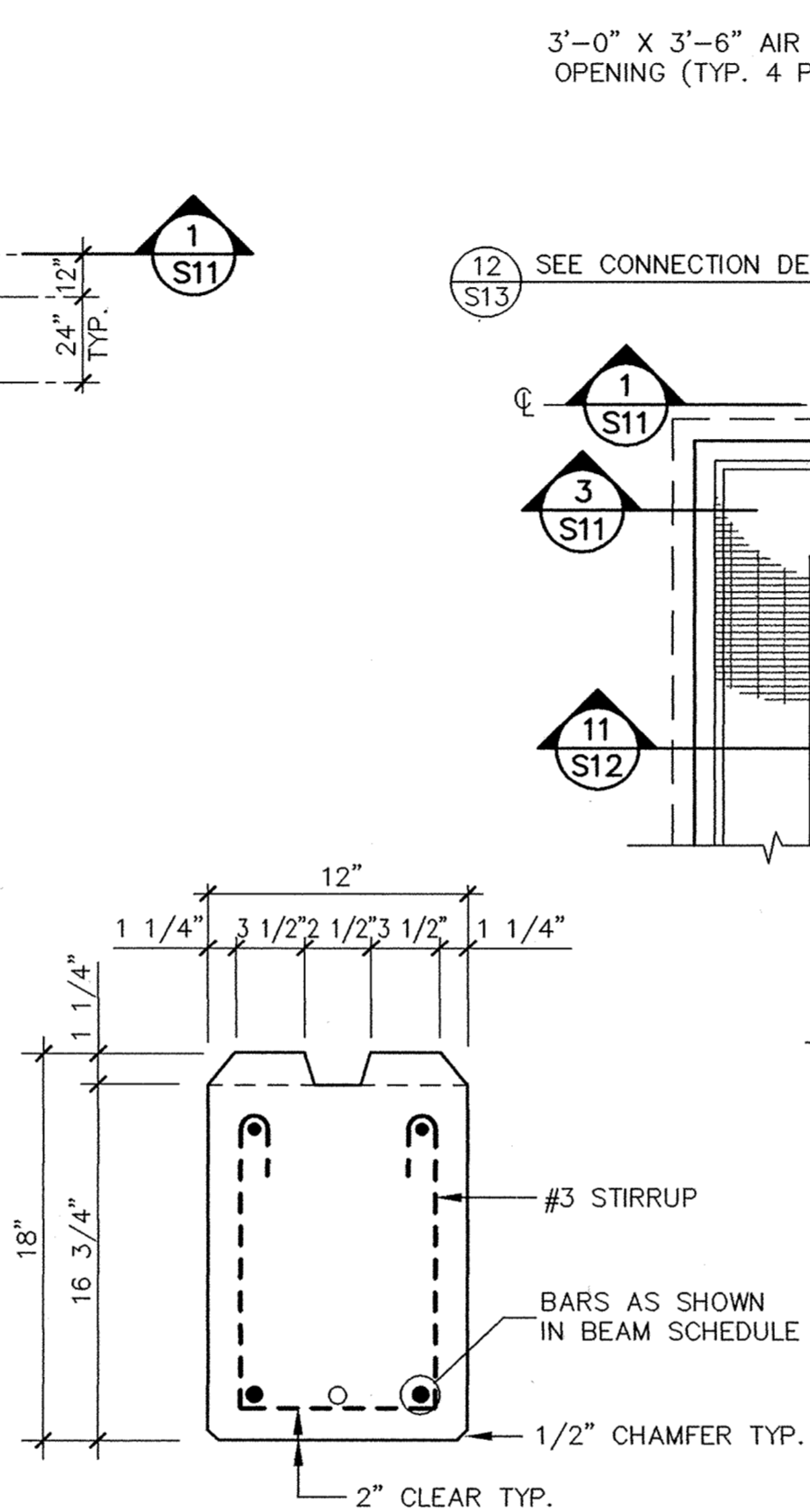


**TRICKLING FILTER MEDIA SUPPORT BEAM PLAN**

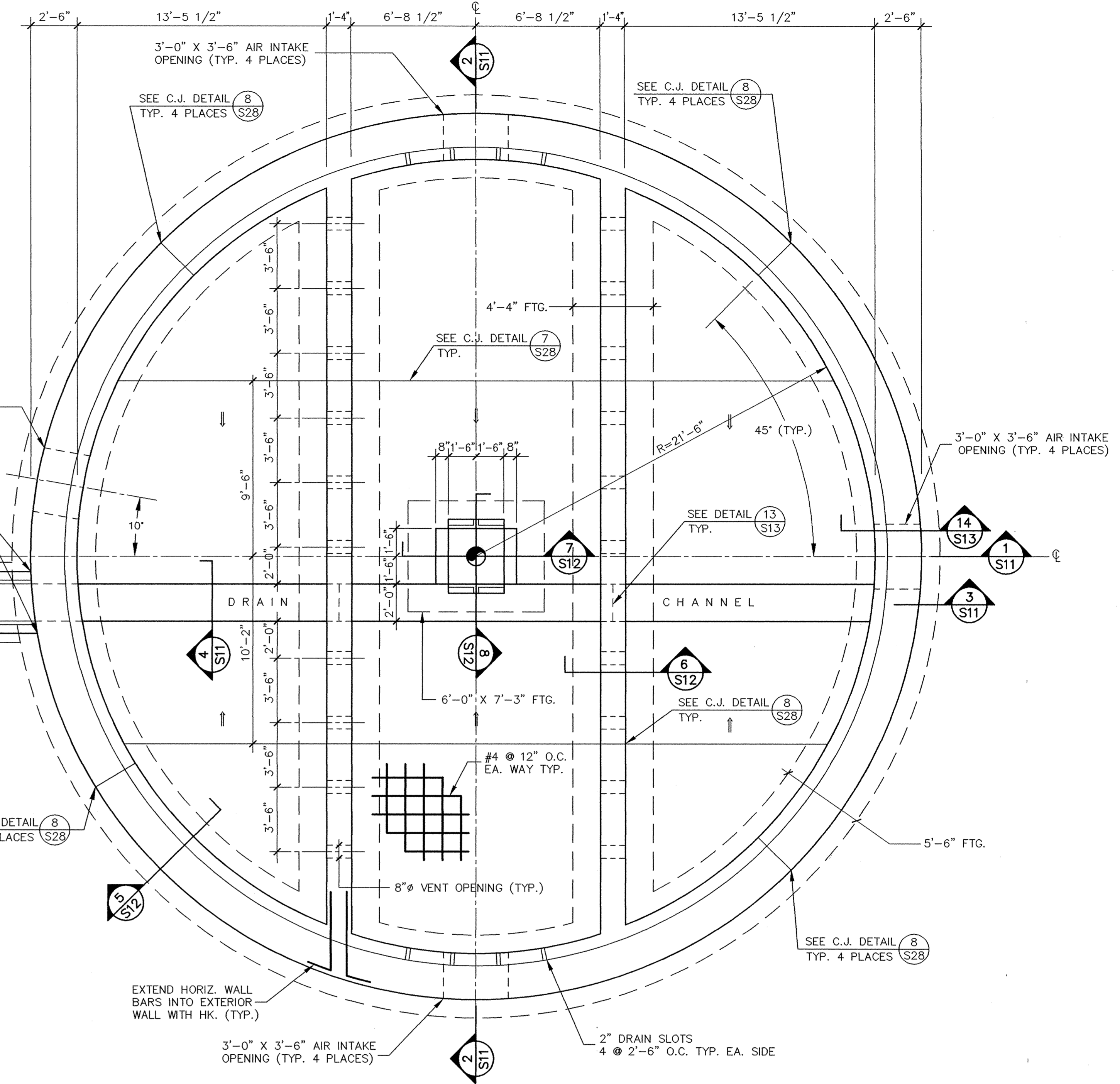
Scale: 1/4" = 1'-0"

- NOTES**
- SEE BEAM SCHEDULE BELOW FOR C.I.P. DIMENSIONS & REINFORCING.
  - THE CONTRACTOR MAY SUBMIT ALTERNATE DESIGNS FOR C.I.P. MEDIA SUPPORT BEAMS SHOWN. ACCEPTABLE ALTERNATE DESIGNS SHALL BE PRECAST SIMPLE BEAMS WITH LENGTHS AS SHOWN OR PRECAST CONTINUOUS BEAMS WITH ADDITIONAL CROSS SLOTS OVER INTERIOR FOUNDATION WALLS.
  - BEAM DESIGN CRITERIA**
    - DESIGN SERVICE LIVE LOADS:  
MEDIA BIOTA GROWTH + TRANSIENT WATER = 15.6 PCF X 26 FT. = 406 PSF
    - LIMIT LONG TERM MID SPAN DEFLECTION TO 1/8" MAXIMUM.
    - SEE SPECIFICATIONS FOR ADDITIONAL DESIGN INFORMATION.
  - SEE SHOP DRAWINGS BY PRECAST SUPPLIER FOR 316SS EMBEDDED WELD PLATE PLACEMENT.



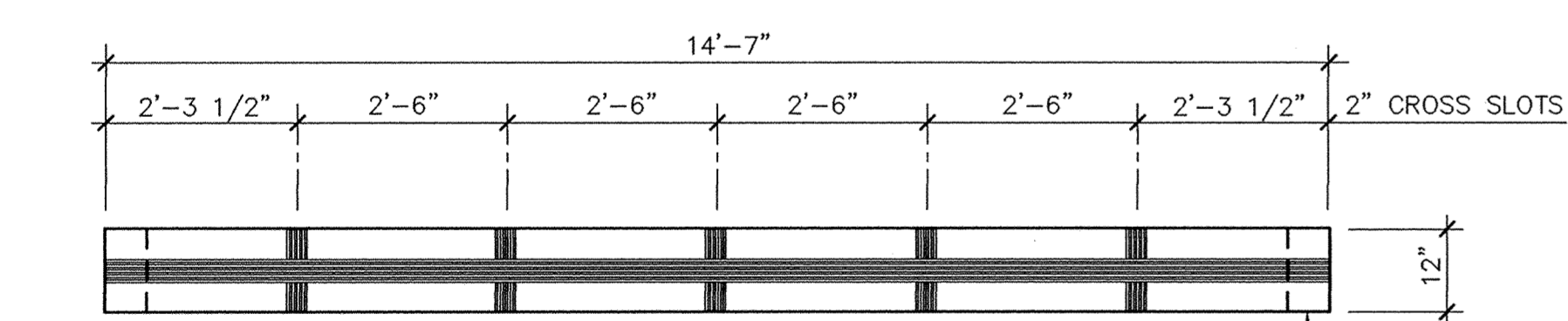
**TYPICAL BEAM SECTION**

Scale: 1 1/2" = 1'-0"



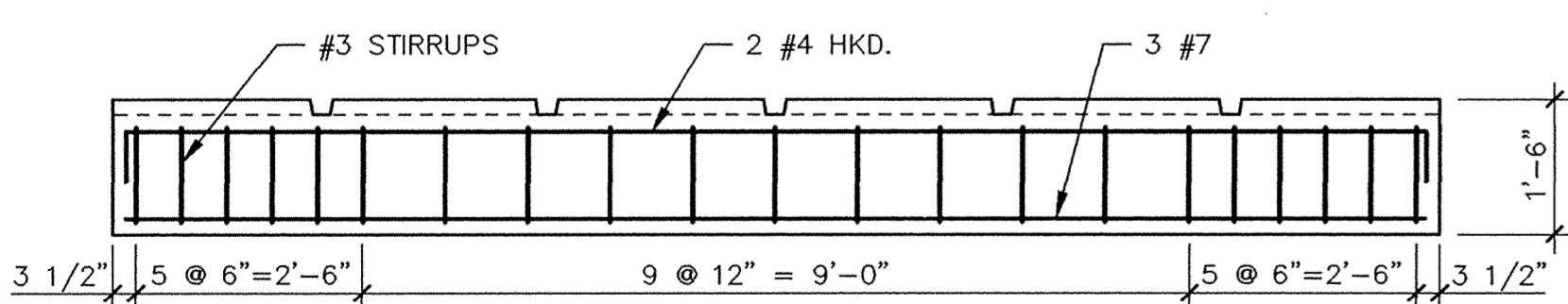
**TRICKLING FILTER FOUNDATION PLAN**

Scale: 1/4" = 1'-0"



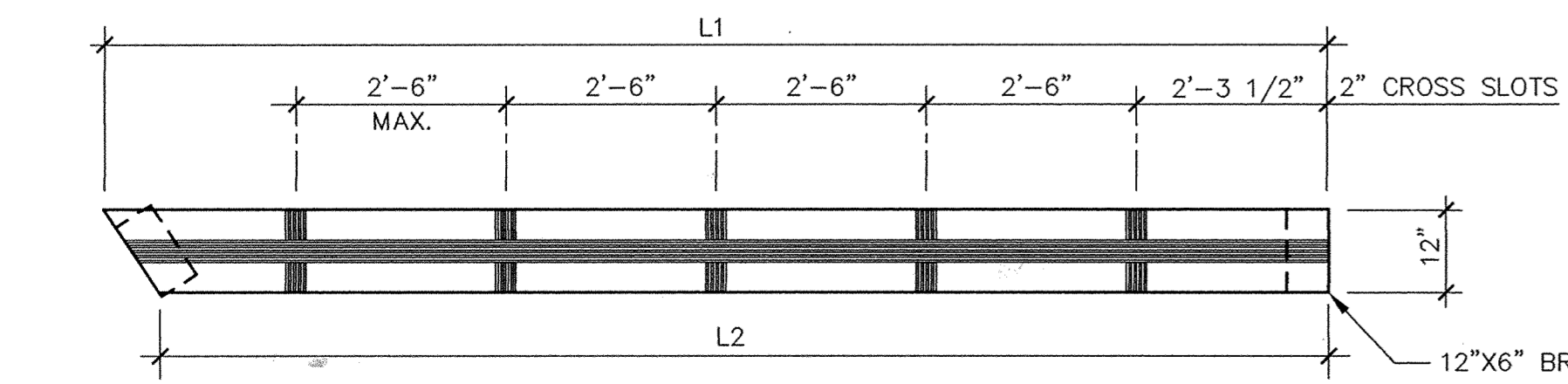
**BM B1 PLAN**

Scale: 1/2" = 1'-0"



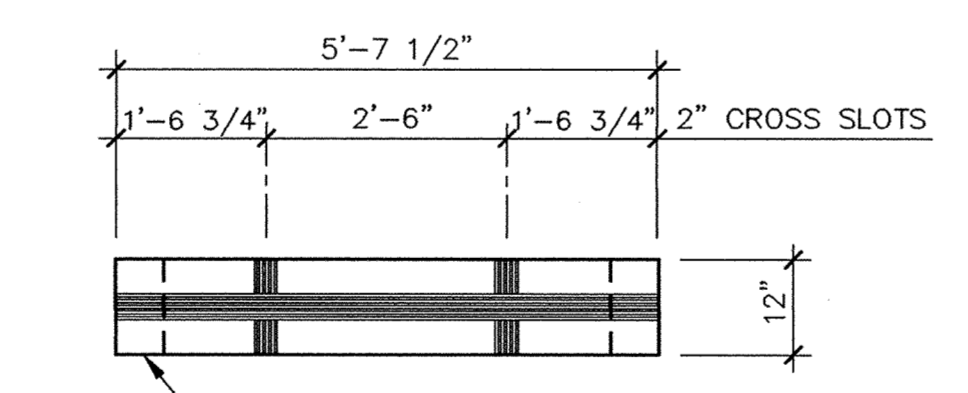
**BM B1 ELEVATION**

Scale: 1/2" = 1'-0"



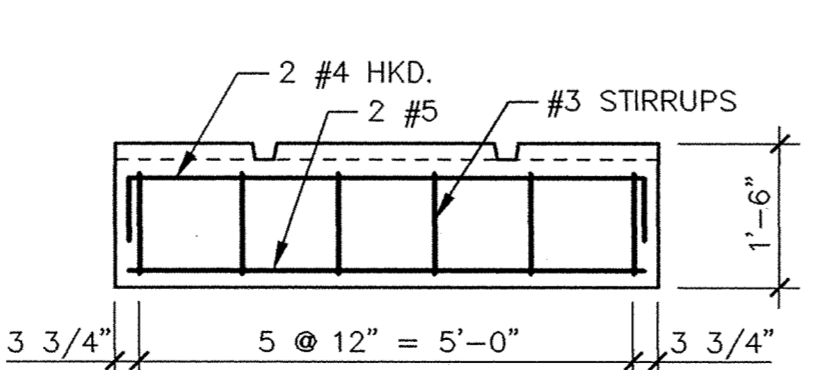
**BM B4 THRU B23 PLAN**

Scale: 1/2" = 1'-0"



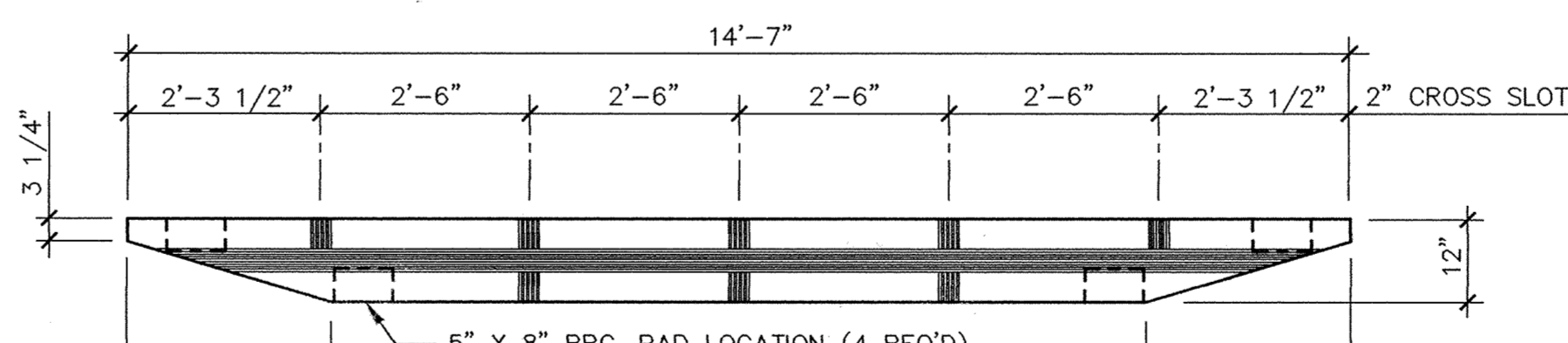
**BM B2 PLAN**

Scale: 1/2" = 1'-0"



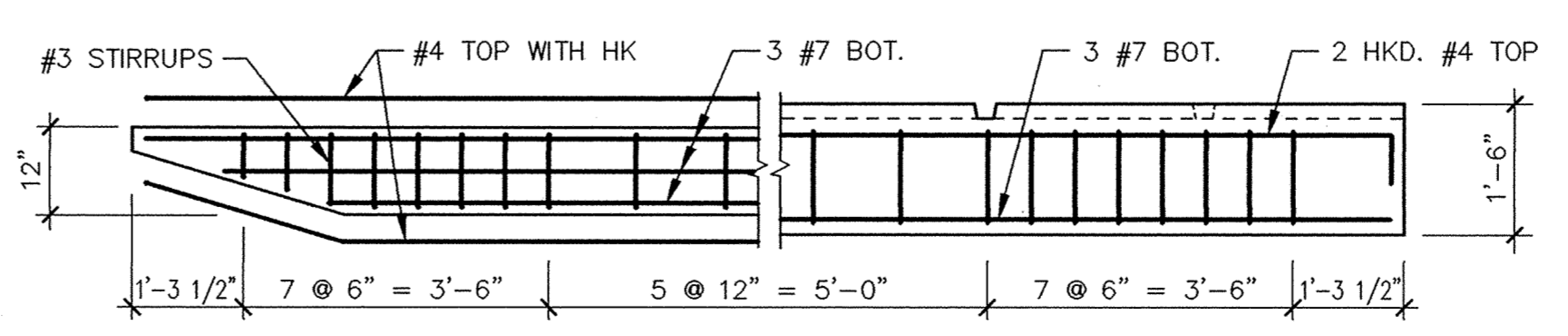
**BM B2 ELEVATION**

Scale: 1/2" = 1'-0"



**BM B3 PLAN**

Scale: 1/2" = 1'-0"



**BM B3 ELEVATION**

Scale: 1/2" = 1'-0"

MEDIA SUPPORT BEAM SCHEDULE							
BM NO.	QUANT	L1	L2	TOP BARS	BOT. BARS	#3 STIRRUPS	NO. I
B-1	18	14'-7"	14'-7"	2 #4 HK	3 #7	SEE BEAM DETAILS	20
B-2	4	5'-8"	5'-8"	2 #4 HK	2 #5	SEE BEAM DETAILS	6
B-3	2	9'-8 1/2"	14'-7"	2 #4 HK	3 #7	SEE BEAM DETAILS	20
B-4	2	14'-6 1/4"	14'-7"	2 #4 HK	3 #7	1 @ 3", 5 @ 6" E.E. + 9 @ EQ. SP.	20
B-5	2	14'-3 1/2"	14'-5 1/4"	2 #4 HK	3 #7	1 @ 3", 5 @ 6" E.E. + 9 @ EQ. SP.	20
B-6	2	13'-10 1/2"	14'-1 1/4"	2 #4 HK	3 #7	1 @ 3", 4 @ 6" E.E. + 10 @ EQ. SP.	19
B-7	2	13'-3 1/4"	13'-7 1/4"	2 #4 HK	3 #7	1 @ 3", 4 @ 6" E.E. + 9 @ EQ. SP.	18
B-8	2	12'-5 1/4"	12'-10 1/2"	2 #4 HK	3 #7	1 @ 3", 3 @ 6" E.E. + 9 @ EQ. SP.	16
B-9	2	11'-4"	11'-4"	2 #4 HK	3 #5	1 @ 3", 2 @ 6" E.E. + 9 @ EQ. SP.	14
B-10	2	9'-11 1/2"	10'-8 1/4"	2 #4 HK	3 #5	1 @ 3", 1 @ 6" E.E. + 9 @ EQ. SP.	12
B-11	2	8'-2 1/2"	9'-1 1/2"	2 #4 HK	3 #5	1 @ 3" E.E. + 9 @ EQ. SP.	10
B-12	2	5'-11 1/4"	7'-1 3/4"	2 #4 HK	2 #5	1 @ 3" E.E. + 7 @ EQ. SP.	8
B-13	2	2'-9 3/4"	4'-6 1/4"	2 #4 HK	2 #5	1 @ 3" E.E. + 4 @ EQ. SP.	5
B-14	2	14'-7"	14'-6 1/4"	2 #4 HK	3 #7	1 @ 3", 5 @ 6" E.E. + 9 @ EQ. SP.	20
B-15	2	14'-5 1/4"	14'-3 1/2"	2 #4 HK	3 #7	1 @ 3", 5 @ 6" E.E. + 9 @ EQ. SP.	20
B-16	2	14'-1 1/4"	13'-10 1/2"	2 #4 HK	3 #7	1 @ 3", 4 @ 6" E.E. + 10 @ EQ. SP.	19
B-17	2	13'-7 1/4"	13'-3 1/4"	2 #4 HK	3 #7	1 @ 3", 4 @ 6" E.E. + 9 @ EQ. SP.	18
B-18	2	12'-10 1/2"	12'-5 1/4"	2 #4 HK	3 #7	1 @ 3", 3 @ 6" E.E. + 9 @ EQ. SP.	16
B-19	2	11'-11"	11'-4"	2 #4 HK	3 #5	1 @ 3", 2 @ 6" E.E. + 9 @ EQ. SP.	14
B-20	2	10'-8 1/4"	9'-11 1/2"	2 #4 HK	3 #5	1 @ 3", 1 @ 6" E.E. + 9 @ EQ. SP.	12
B-21	2	9'-1 1/2"	8'-2 1/2"	2 #4 HK	3 #5	1 @ 3" E.E. + 9 @ EQ. SP.	10
B-22	2	7'-1 3/4"	5'-11 1/4"	2 #4 HK	2 #5	1 @ 3" E.E. + 7 @ EQ. SP.	8
B-23	2	4'-6 1/4"	2'-9 3/4"	2 #4 HK	2 #5	1 @ 3" E.E. + 4 @ EQ. SP.	5

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*David L. Cappel*  
DATE: 11/29/95 REG. NO. 22222



1326 ENERGY PARK DRIVE  
ST. PAUL, MINNESOTA 55108  
(612) 644-4389

9800 SHELARD PARKWAY  
MINNEAPOLIS, MINNESOTA 55441  
(612) 546-0432

DATE	DESCRIPTION	DESIGNED	DLC	GG
		CHECKED	LJL	
		DRAWN	GG	
		GRAPHIC SCALE		
		0 HORIZ.	4	
		0 VERT.	4	

CITY OF ELK RIVER  
WASTEWATER TREATMENT FACILITY UPGRADE  
TRICKLING FILTER  
FOUNDATION & BEAM PLANS

DATE: OCT. 1995 SHEET 29 OF 112 SHEETS PROJECT NO. 230-151

**S9**