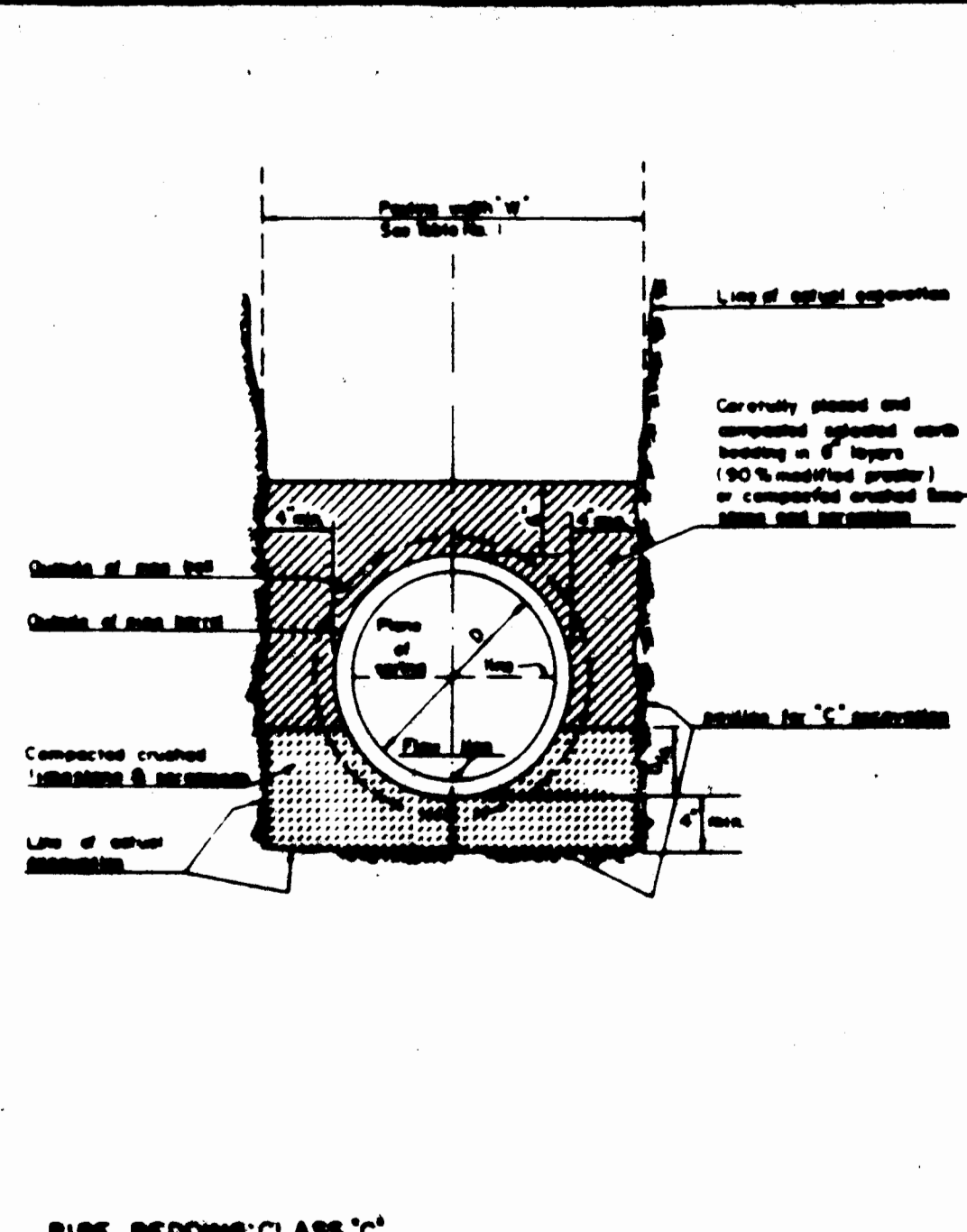
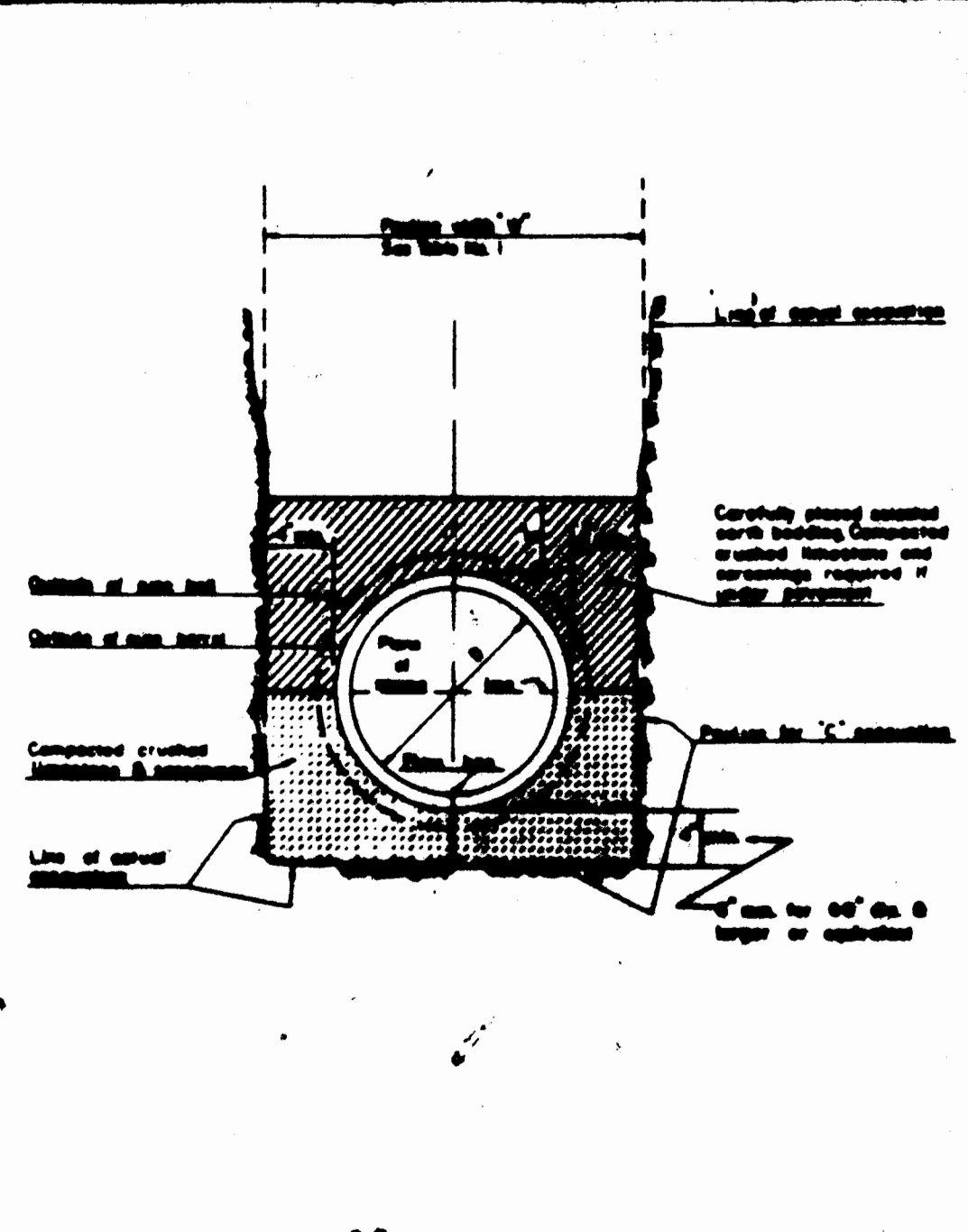


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
Inside Diameter of Pipe (Inches)	"w" Payline Width of Trench (Feet)	"w" Payline Width of Trench (Feet)	Pay-volume cu. ft. per ft. Concrete Encasement	Inside Diameter of Pipe (Inches)	"w" Payline Width of Trench (Feet)	"w" Payline Width of Trench (Feet)	Pay-volume cu. ft. per ft. Concrete Encasement
4	2.0	2.25	3.20				
6	2.6	2.85	3.66				
8	2.8	3.05	3.70				
10	2.8	3.05	3.66				
12	2.8	3.05	3.66				
16	3.2	3.47	4.09				
18	3.5	3.96	4.53	14 x 23	41	3.42	5.94
21	3.9	4.35	4.91				
24	4.2	4.65	5.29	18 x 30	49	4.00	7.00
27	4.6	5.04	5.67	22 x 34	53	4.42	8.61
30	4.9	5.28	5.90	24 x 38	58	4.83	9.70
33	5.3	5.62	6.28	27 x 42	62	5.17	10.71
36	5.6	5.87	6.51	29 x 45	66	5.50	11.72
39				32 x 49	71	5.82	12.74
42	6.3	6.55	7.20	34 x 52	75	6.25	14.00
48	7.0	7.20	7.86	38 x 58	83	6.86	15.16
54	7.7	7.92	8.52	42 x 64	89	7.47	16.31
60	8.4	8.58	9.18	46 x 70	95	8.08	17.46
66	9.1	9.24	9.78	50 x 76	100	8.69	18.61
72	9.8	9.96	10.38	54 x 82	106	9.30	19.76
78	10.5	10.65	10.98	58 x 88	112	9.91	20.91
84	11.2	11.34	11.64	62 x 94	118	10.52	22.06
90	11.9	12.06	12.24	66 x 100	124	11.13	23.21
96	12.6	12.78	12.96	70 x 106	130	11.74	24.36
102	13.3	13.44	13.62	74 x 112	136	12.35	25.51
108	14.0	14.16	14.40	78 x 118	142	12.96	26.66
114	14.7	14.82	15.06	82 x 124	148	13.57	27.81
120	15.4	15.54	15.78	86 x 130	154	14.18	28.96
126	16.1	16.26	16.50	90 x 136	160	14.79	30.11
132	16.8	16.92	17.04	94 x 142	166	15.40	31.26
138	17.5	17.64	17.78	98 x 148	172	16.01	32.41
144	18.2	18.36	18.54	102 x 154	178	16.62	33.56

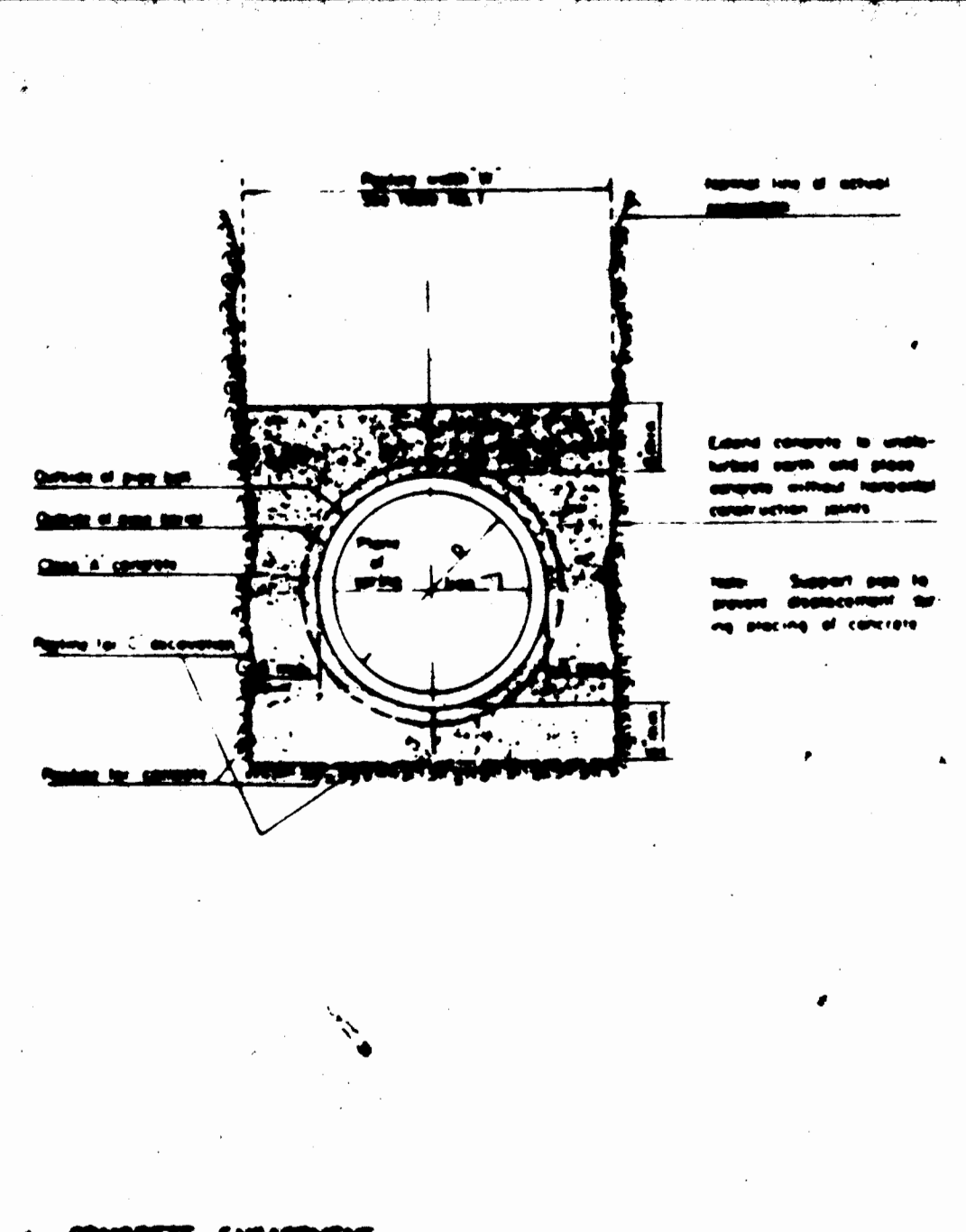
TABLE NO. 1
 PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE
 DETAIL 1



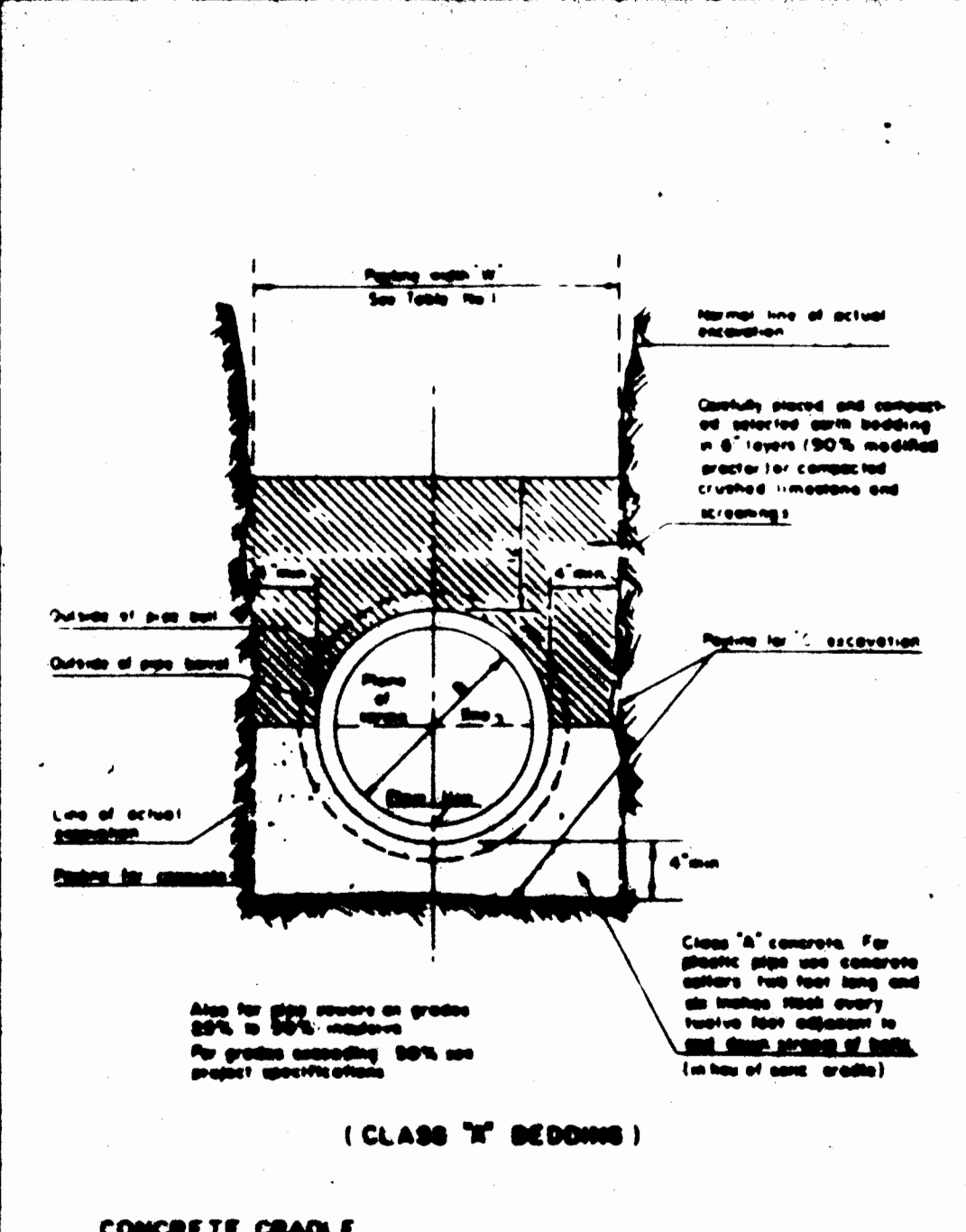
PIPE BEDDING CLASS "C"
 (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)
 DETAIL 2



PIPE BEDDING CLASS "B"
 (MODIFIED FOR REINFORCED CONCRETE PIPE)
 DETAIL 3



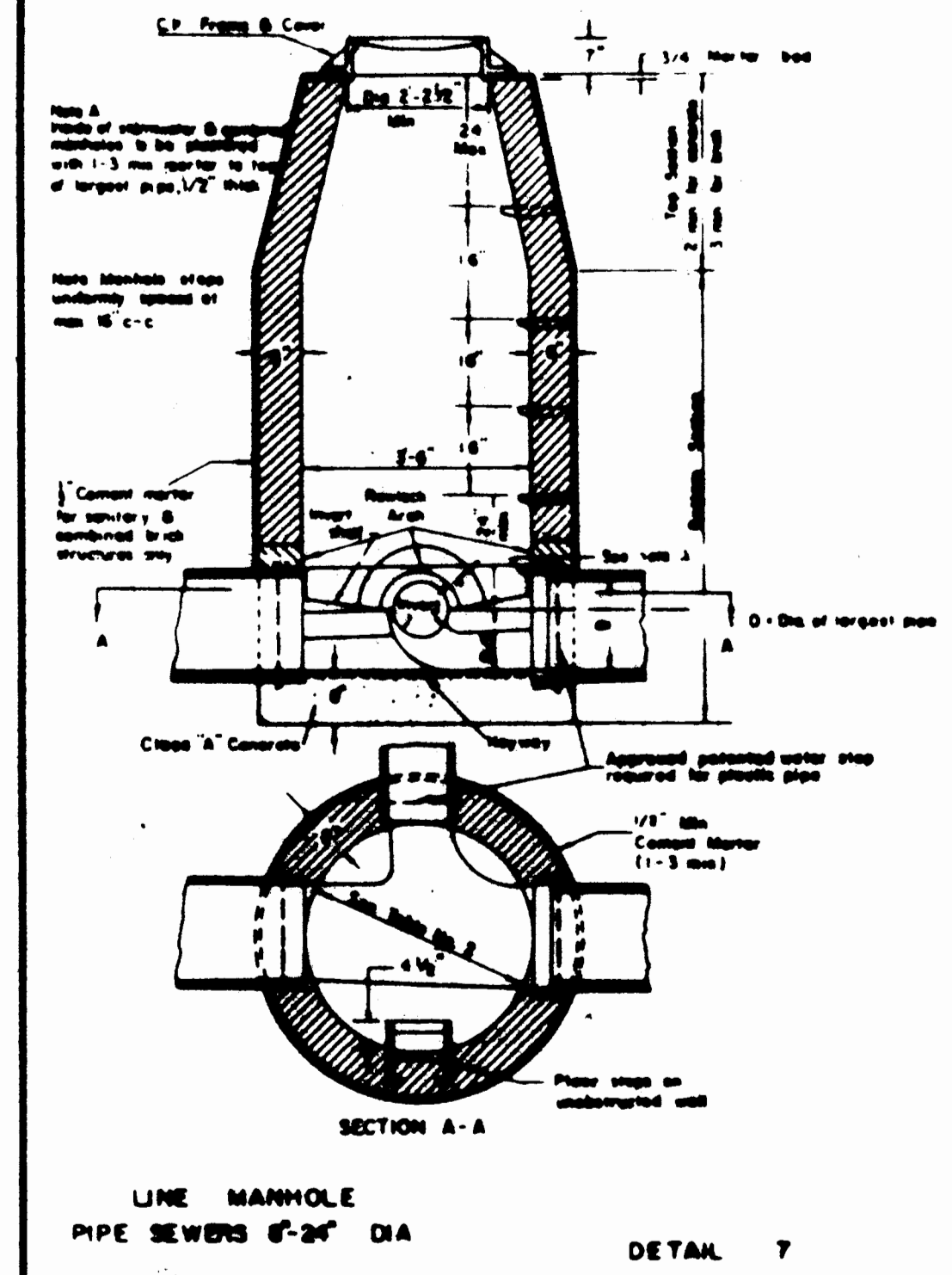
CONCRETE ENCASUREMENT
 DETAIL 4



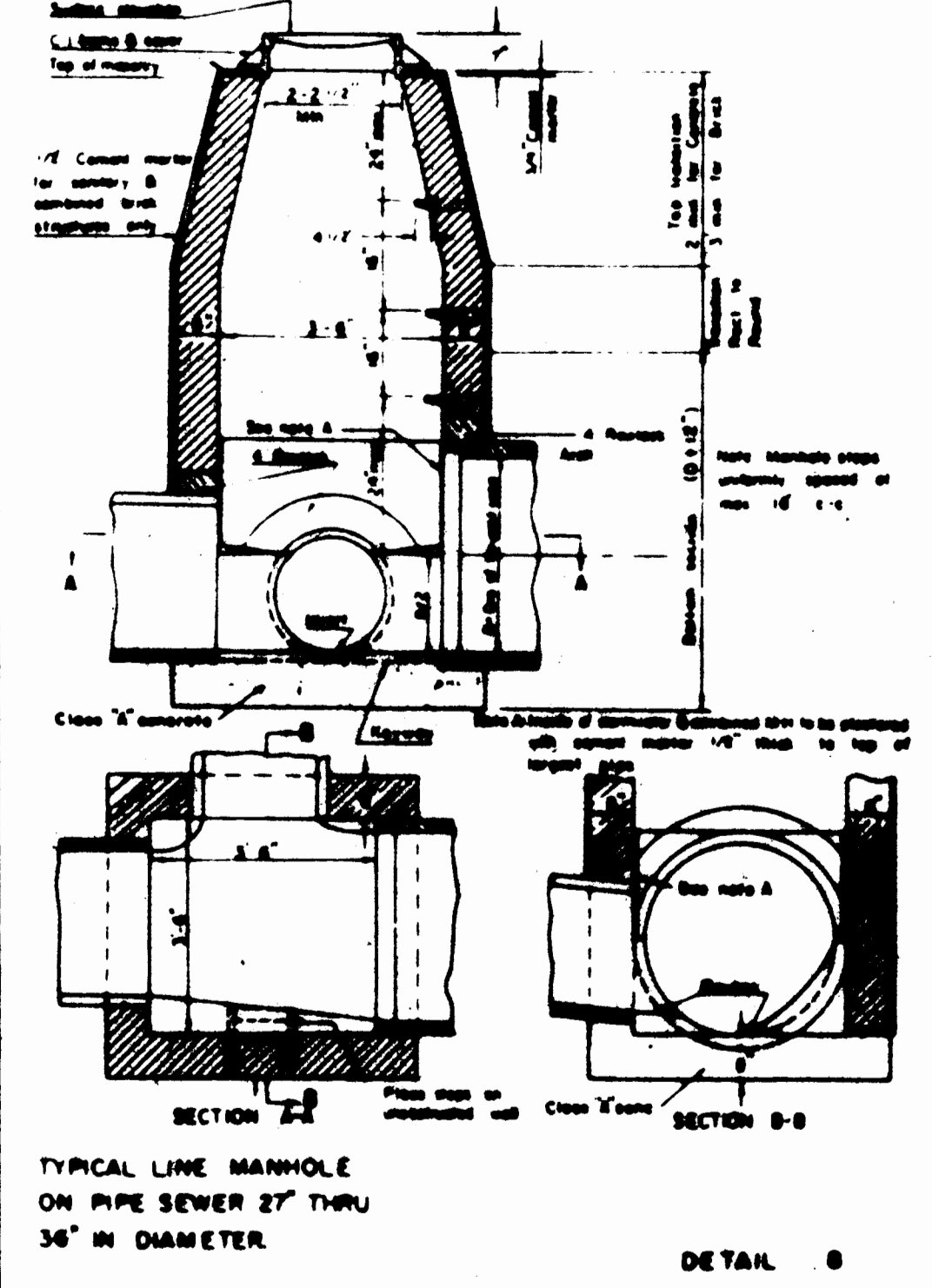
CONCRETE CRADLE
 DETAIL 5

Section of Manhole	Dimension
Top	Upper 2'-2 1/2" Dia
Transition	Lower 3'-6" Dia
Bottom Section	8" thru 24" Dia Pipe 3'-6" Dia
Bottom Section	27" thru 36" Dia Pipe 3'-6" Square

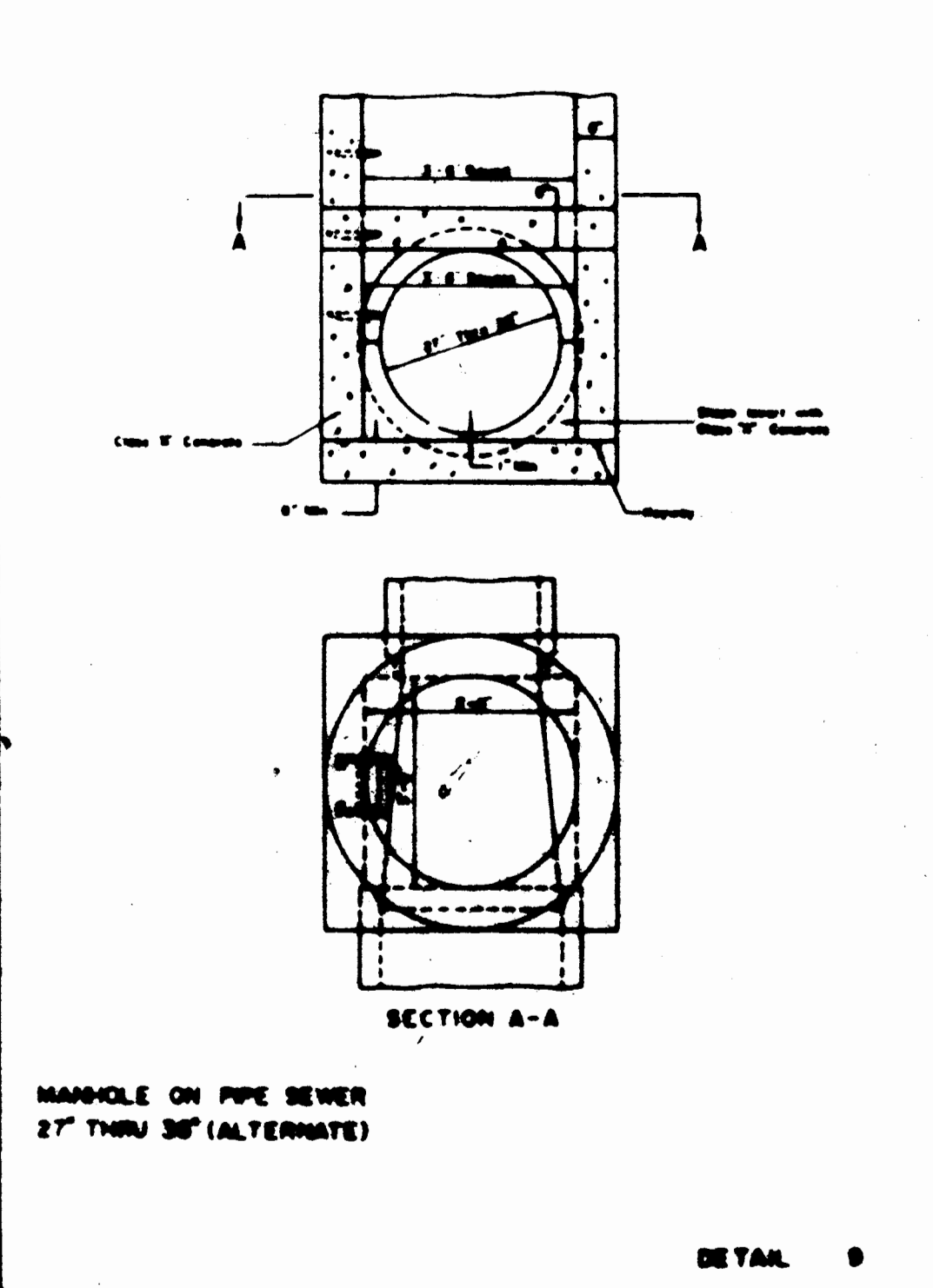
TABLE NO. 2
 STANDARD MANHOLE DIMENSIONS
 DETAIL 6



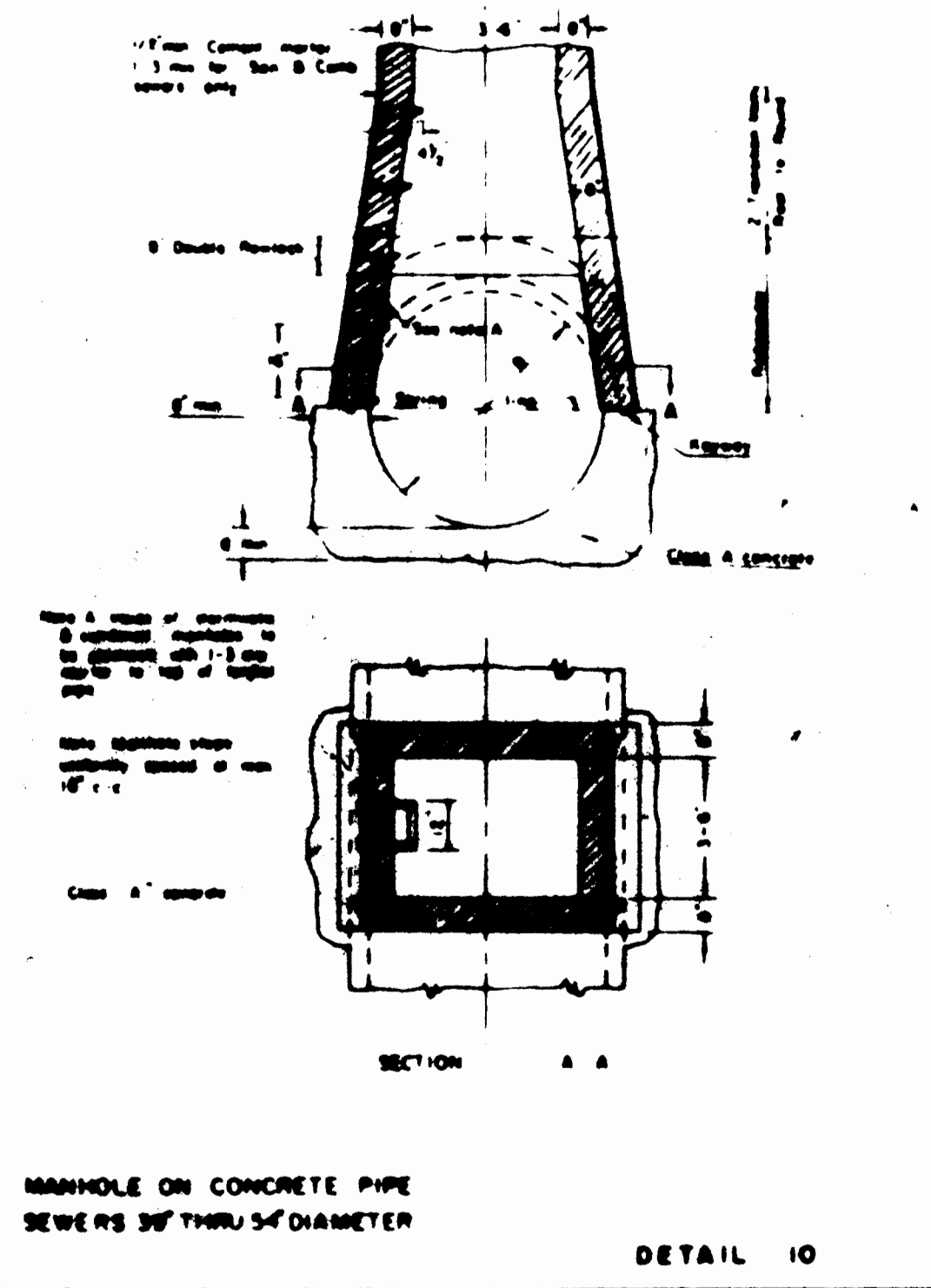
LINE MANHOLE
 PIPE SEWERS 6"-24" DIA
 DETAIL 7



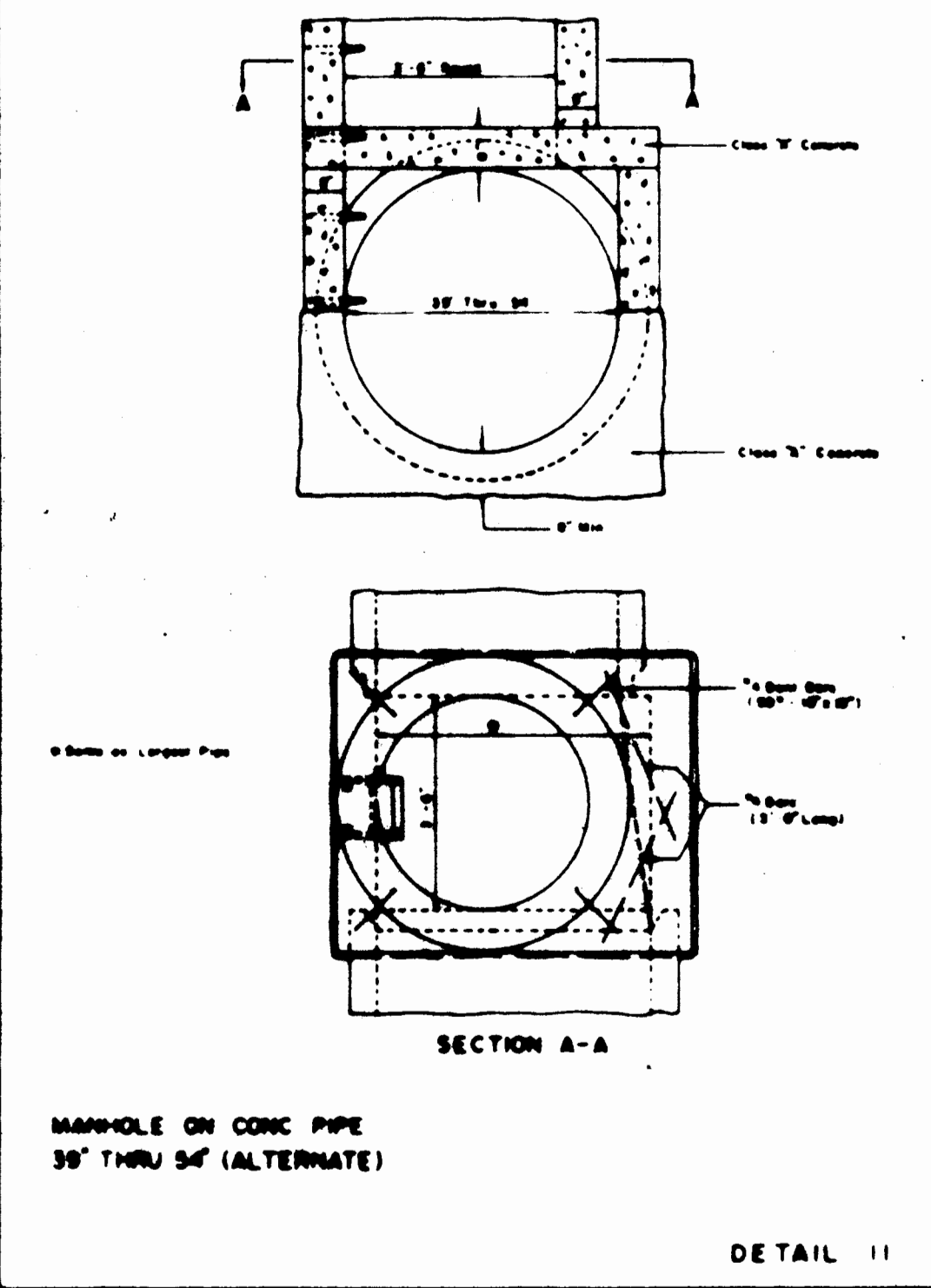
TYPICAL LINE MANHOLE
 ON PIPE SEWER 27" THRU
 36" IN DIAMETER
 DETAIL 8



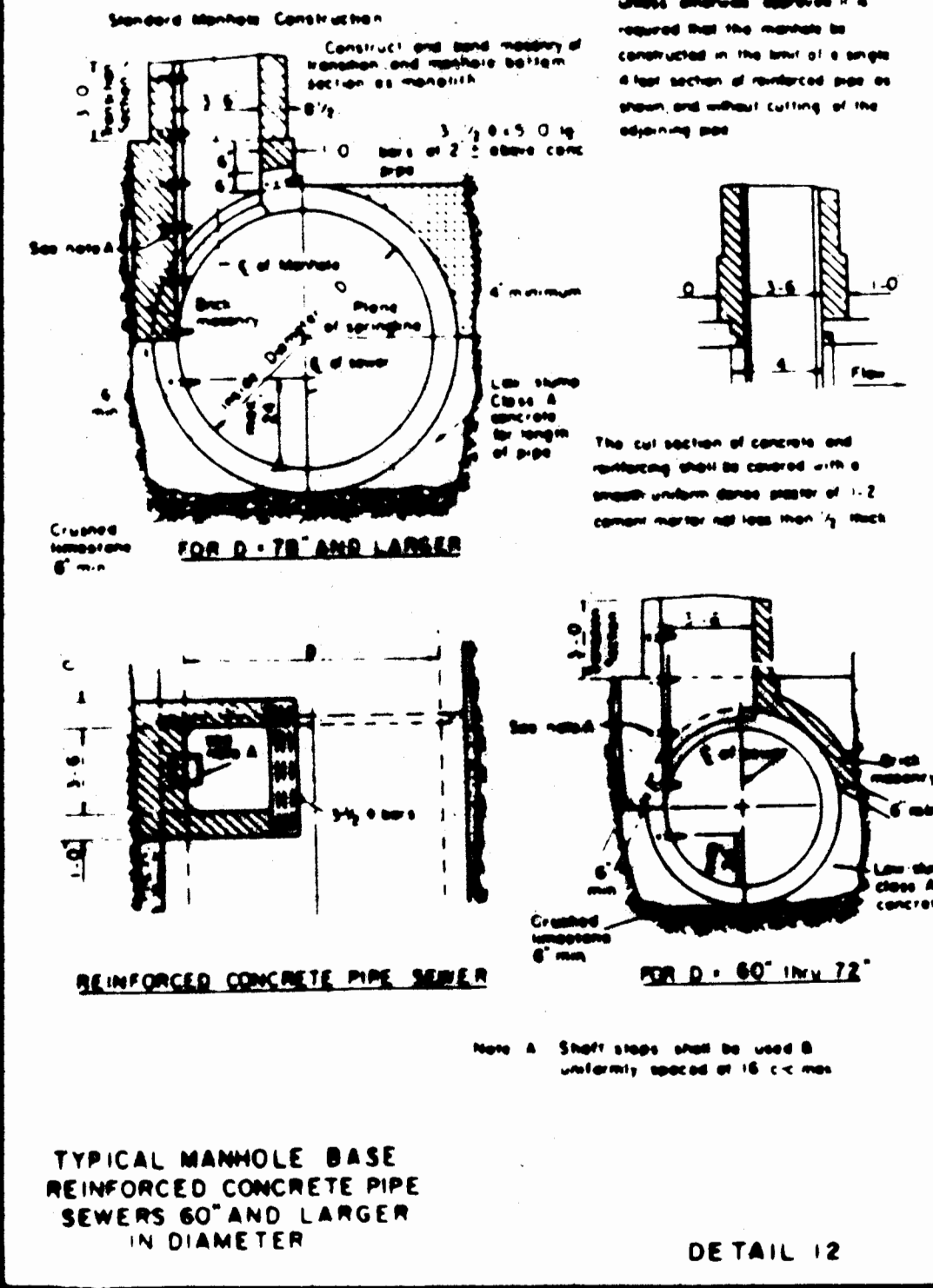
MANHOLE ON PIPE SEWER
 27" THRU 36" (ALTERNATE)
 DETAIL 9



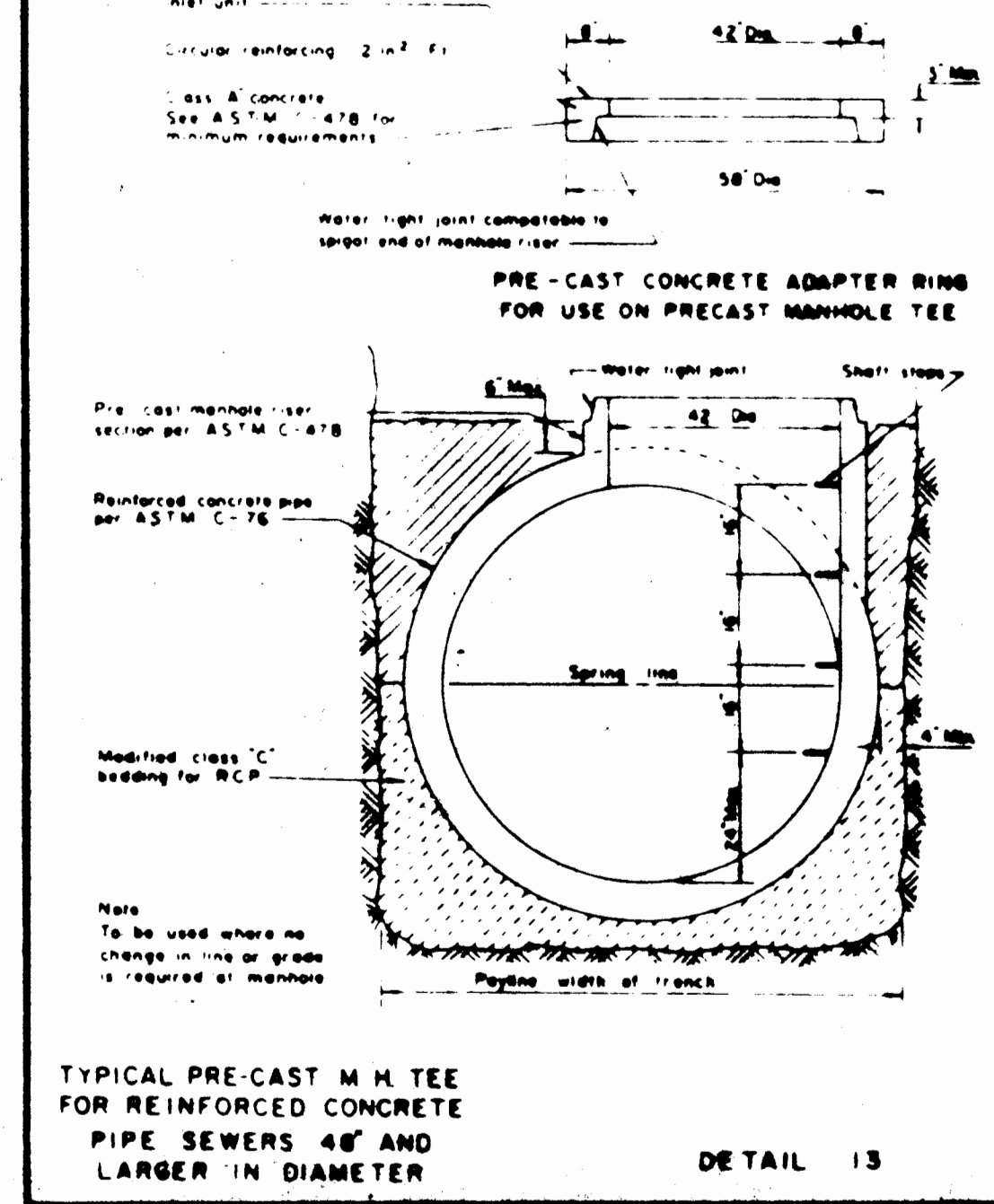
MANHOLE ON CONCRETE PIPE
 SEWERS 36" THRU 54" DIAMETER
 DETAIL 10



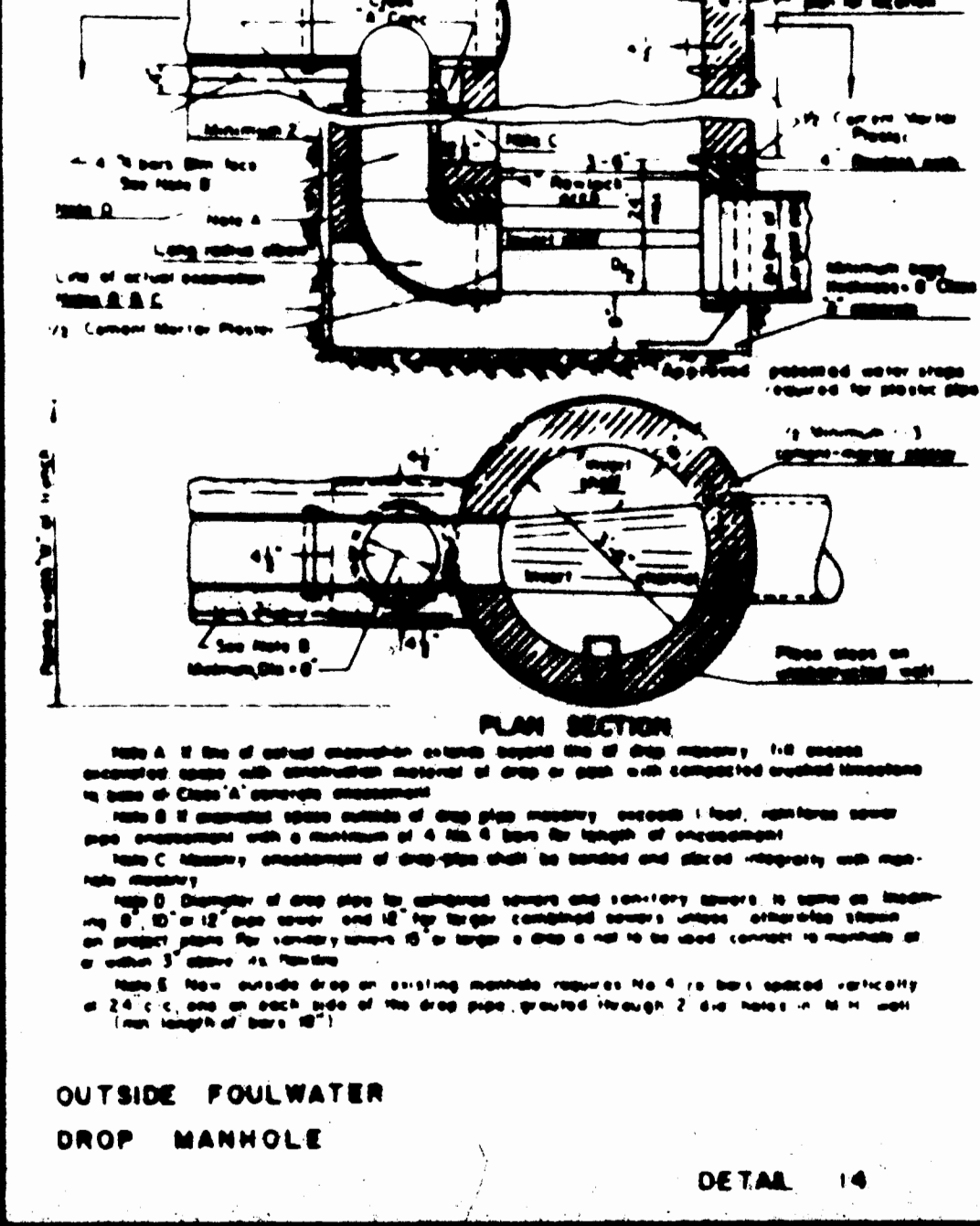
MANHOLE ON CONCRETE PIPE
 36" THRU 54" (ALTERNATE)
 DETAIL 11



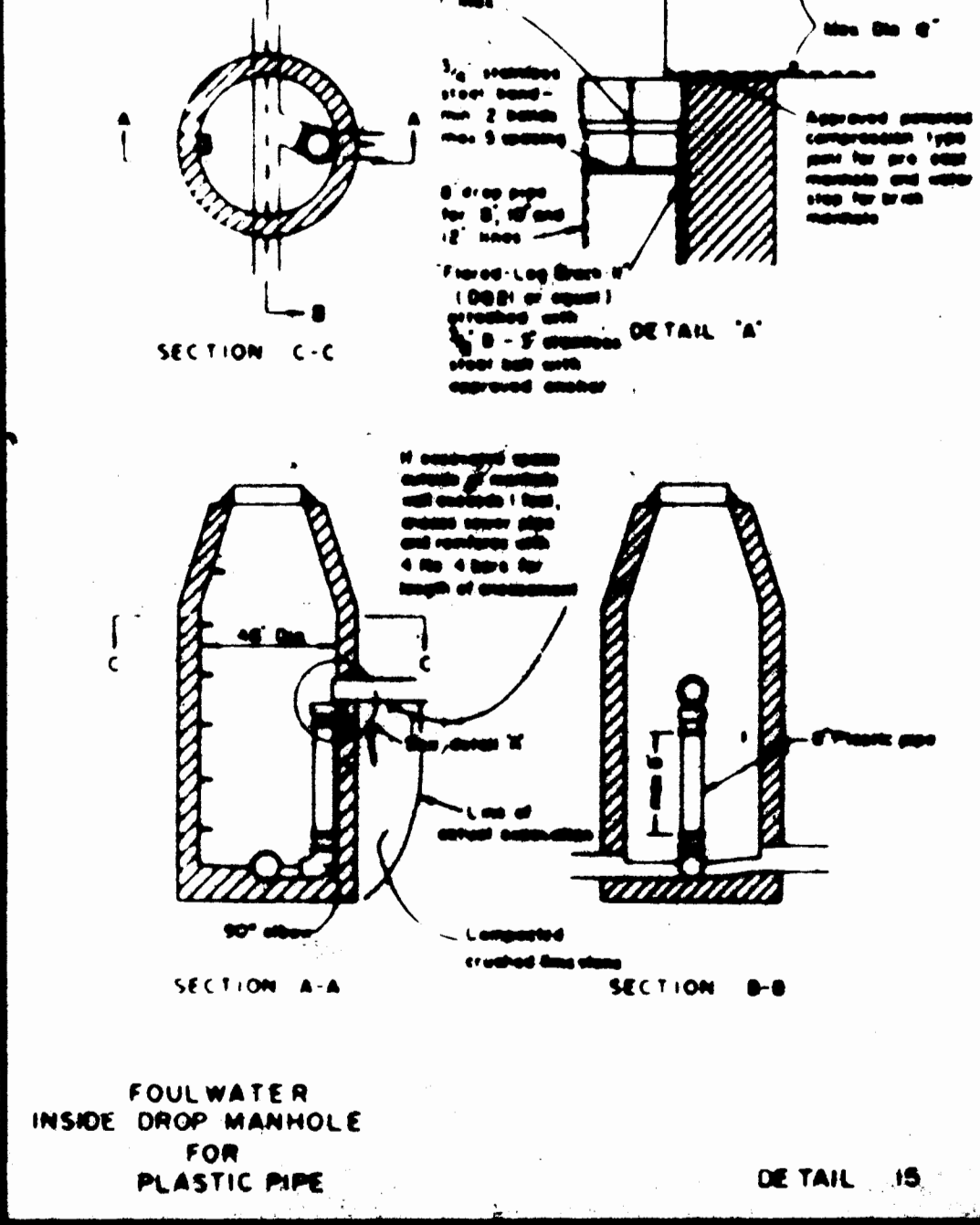
TYPICAL MANHOLE BASE
 REINFORCED CONCRETE PIPE
 SEWERS 60" AND LARGER
 IN DIAMETER
 DETAIL 12



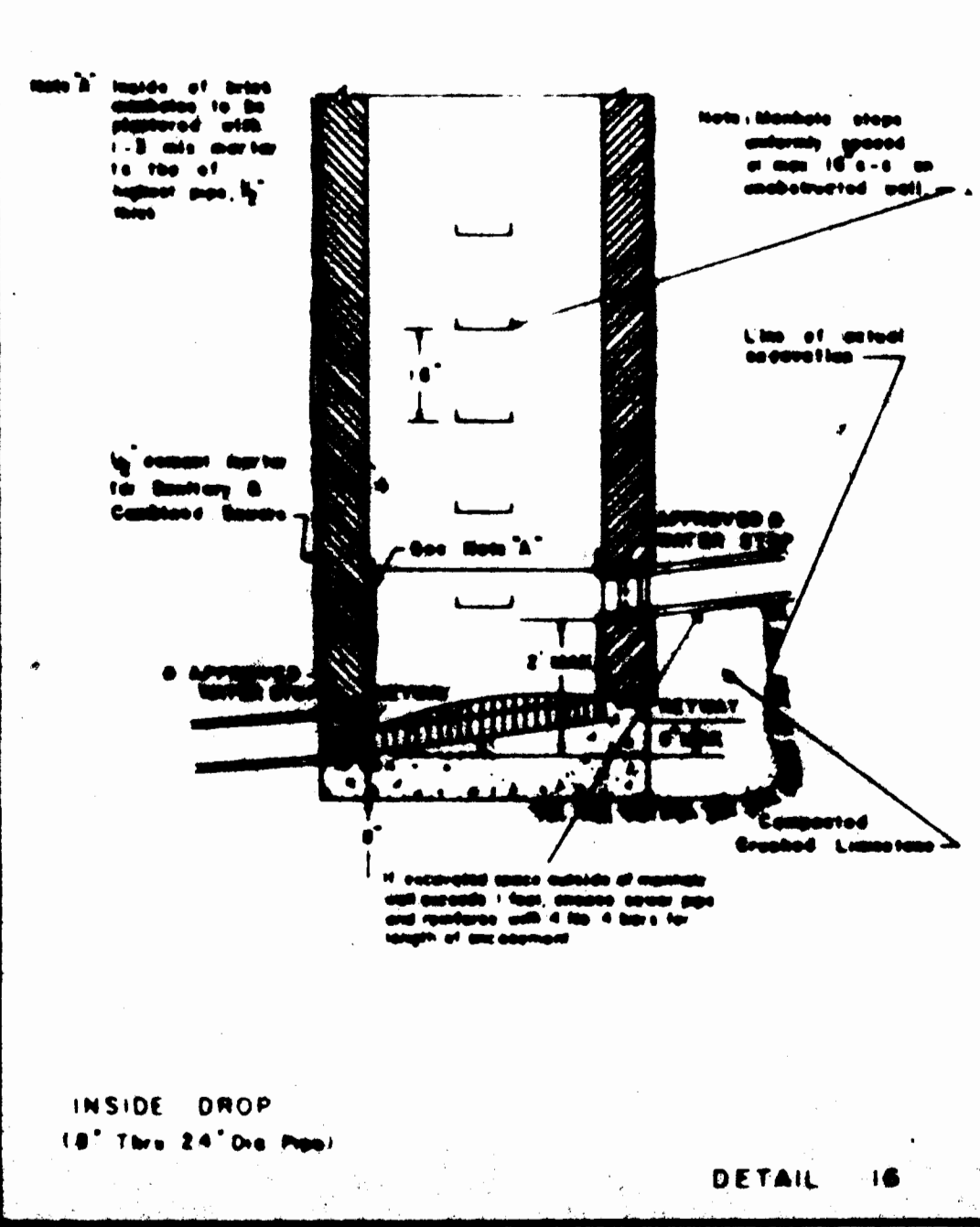
TYPICAL PRE-CAST M.H. TEE
 FOR REINFORCED CONCRETE
 PIPE SEWERS 48" AND
 LARGER IN DIAMETER
 DETAIL 13



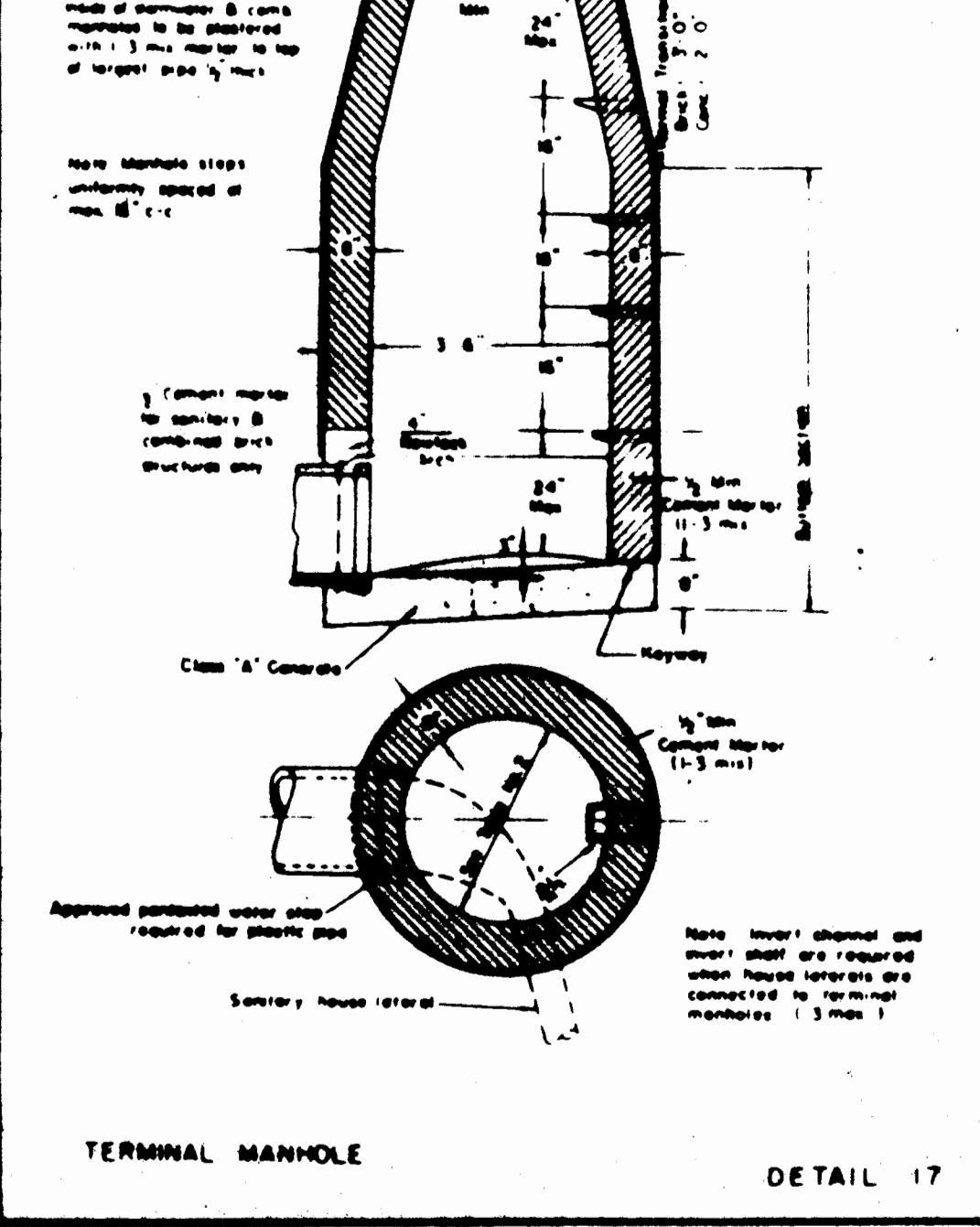
OUTSIDE FOULWATER
 DROP MANHOLE
 DETAIL 14



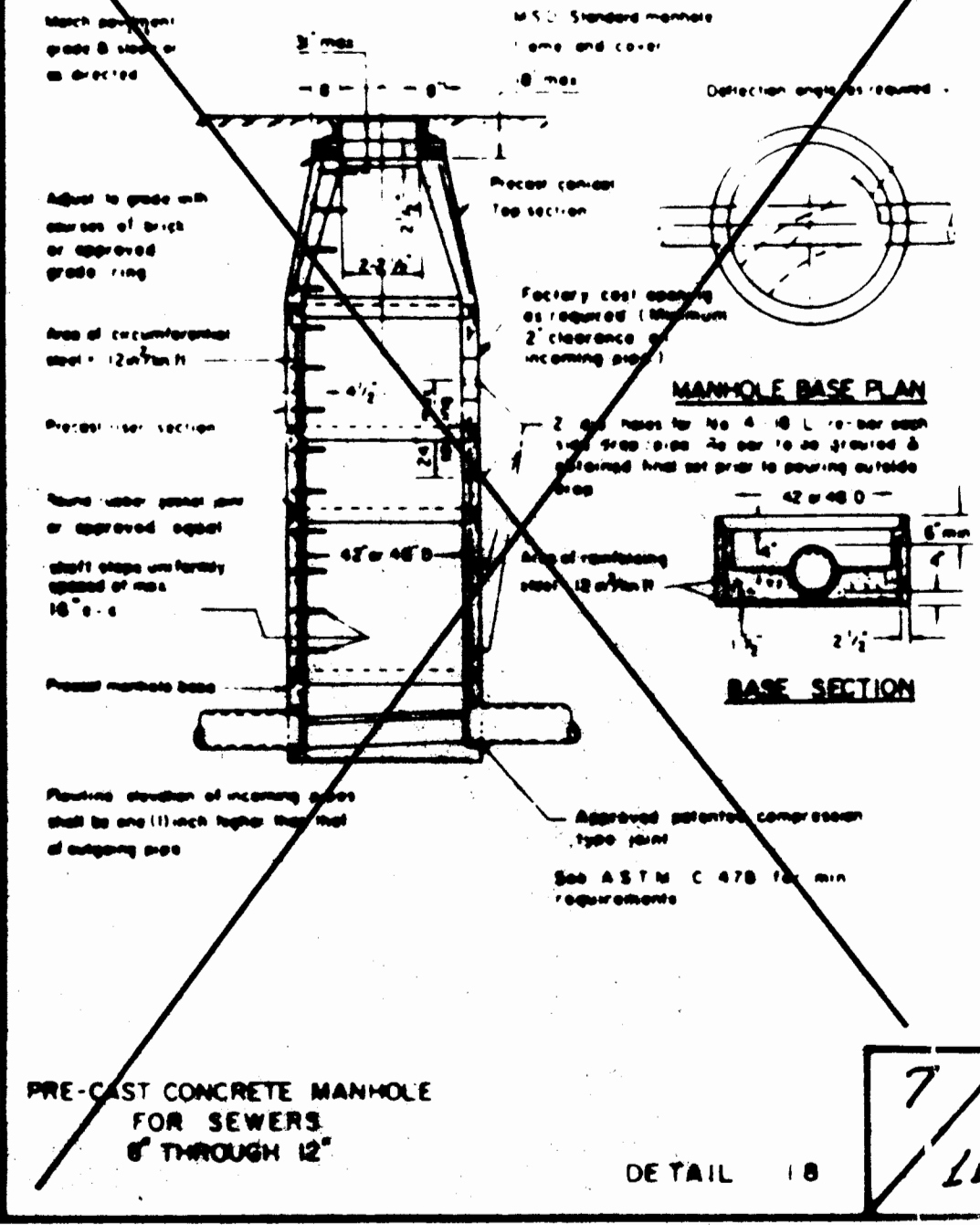
FOULWATER
 INSIDE DROP MANHOLE
 FOR PLASTIC PIPE
 DETAIL 15



INSIDE DROP
 (18" THRU 24" DIA PIPE)
 DETAIL 16



TERMINAL MANHOLE
 DETAIL 17



PRE-CAST CONCRETE MANHOLE
 FOR SEWERS 6" THROUGH 12"
 DETAIL 18