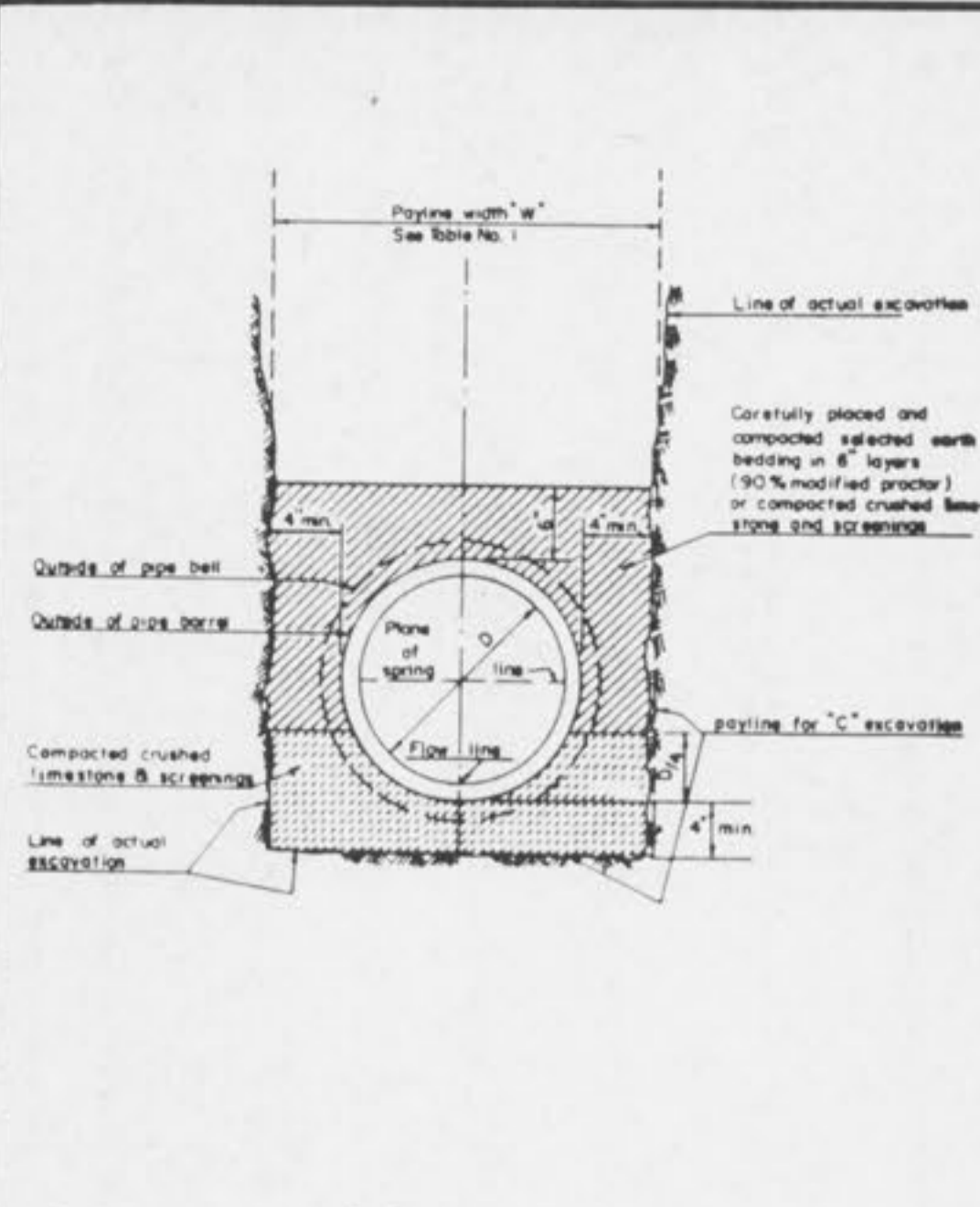


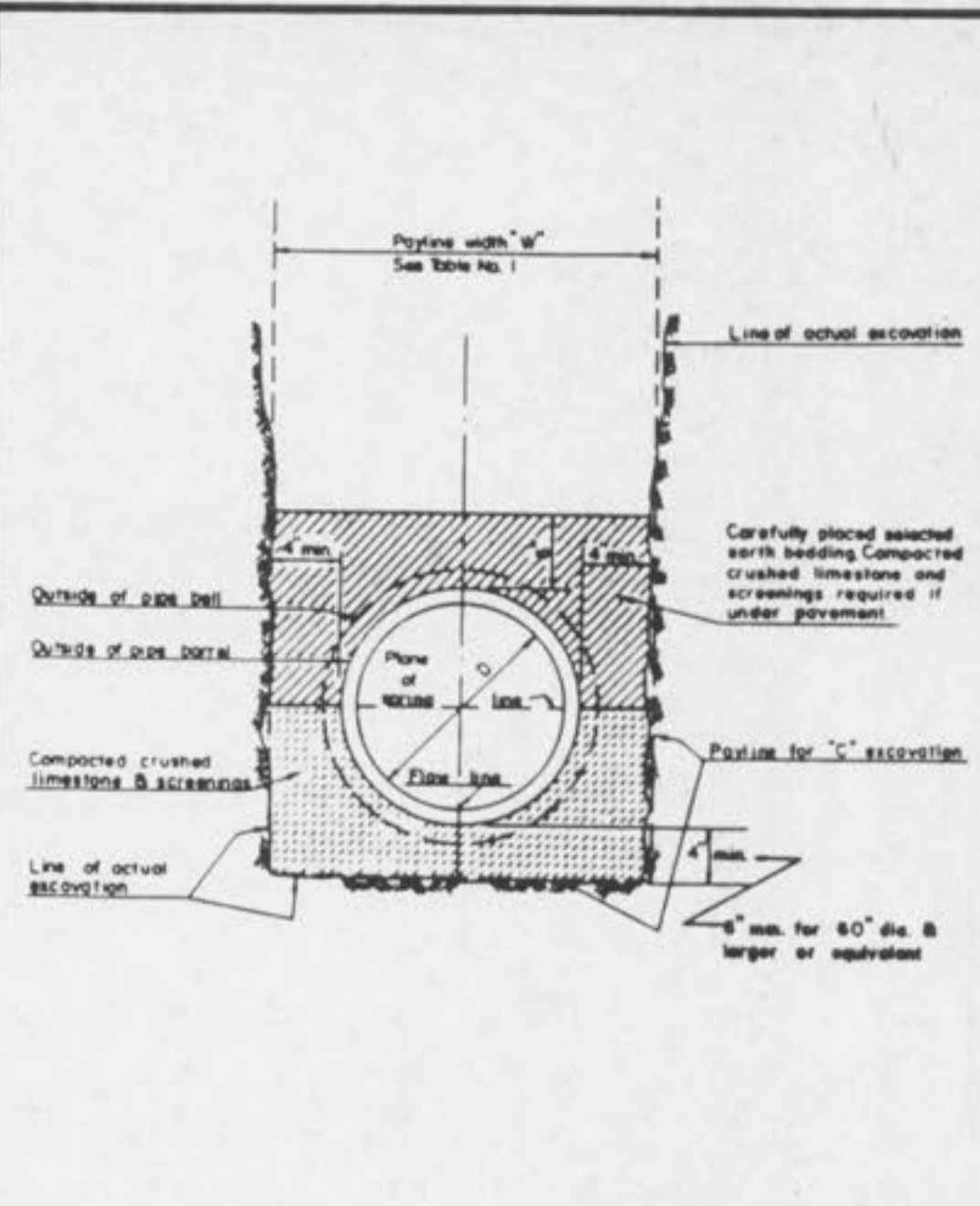
REV 10-88-BB JT  
REV 5-88-B9 PER CLIENT  
REV 1-80-90 PER CLIENT

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)	Inside Dimensions of Pipe (Inches)	"w" Payline Width of Trench (Feet)	"w" Payline Width of Trench (Feet)	Pay-volume (cu ft per ft)
4	28	233	3.20				
6	28	233	3.46				
8	28	233	3.70				
10	28	233	3.86				
12	28	233	3.98				
15	32	267	4.89				
18	35	292	5.83	14 x 23	41	3.42	5.84
21	39	325	6.61				
24	42	350	7.39	19 x 30	49	4.08	7.88
27	45	375	8.18	22 x 34	53	4.42	8.81
30	49	408	9.30	24 x 38	58	4.83	9.70
33	53	442	10.53	27 x 42	62	5.17	10.71
36	56	467	11.43	29 x 45	66	5.50	11.72
39	DISCONTINUED			32 x 49	71	5.82	13.14
42	63	525	13.38	34 x 53	75	6.25	14.05
48	70	583	15.67	38 x 60	83	6.92	16.18
54	77	642	18.15	43 x 68	92	7.67	18.81
60	84	700	20.73	48 x 76	101	8.42	21.98
66	91	758	23.45	53 x 83	109	9.08	24.30
72	98	817	26.37	58 x 91	118	9.83	27.45
78	105	875	29.39	63 x 98	126	10.50	30.50
84	112	933	32.57	68 x 106	135	11.25	33.91
90	119	992	35.90	72 x 113	143	11.92	36.99
96	126	1050	39.37	77 x 121	152	12.67	40.69
102	133	1108	42.99	82 x 128	160	13.33	44.40
108	140	1167	46.75	87 x 136	168	14.00	47.78
114	147	1225	50.66	92 x 143	176	14.67	51.70
120	154	1283	54.72	97 x 151	185	15.42	56.01
126	161	1342	58.92				
132	168	1400	63.27	106 x 166	202	16.83	64.48
144	182	1517	72.40	116 x 180	218	18.17	73.59

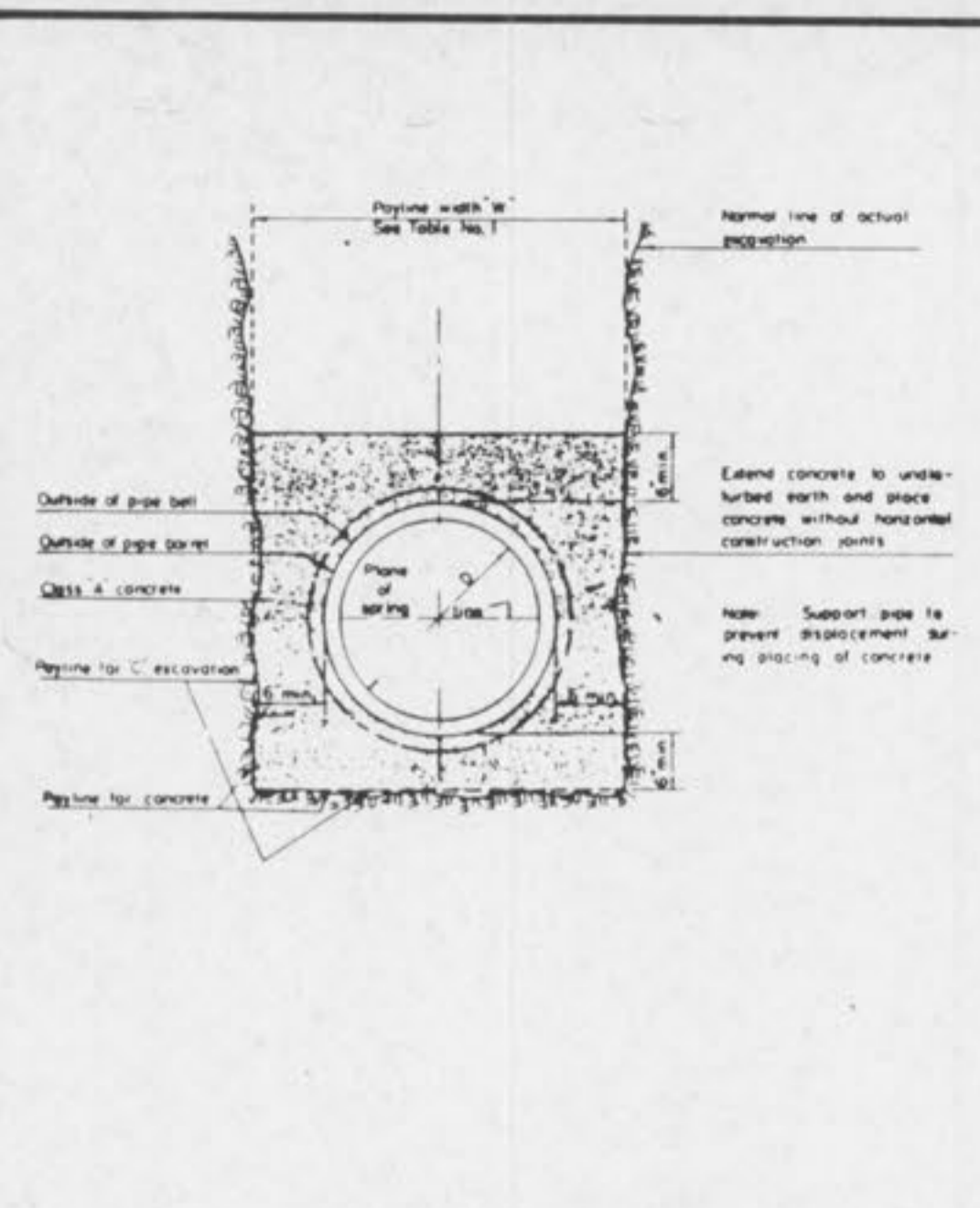
TABLE NO. 1  
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE



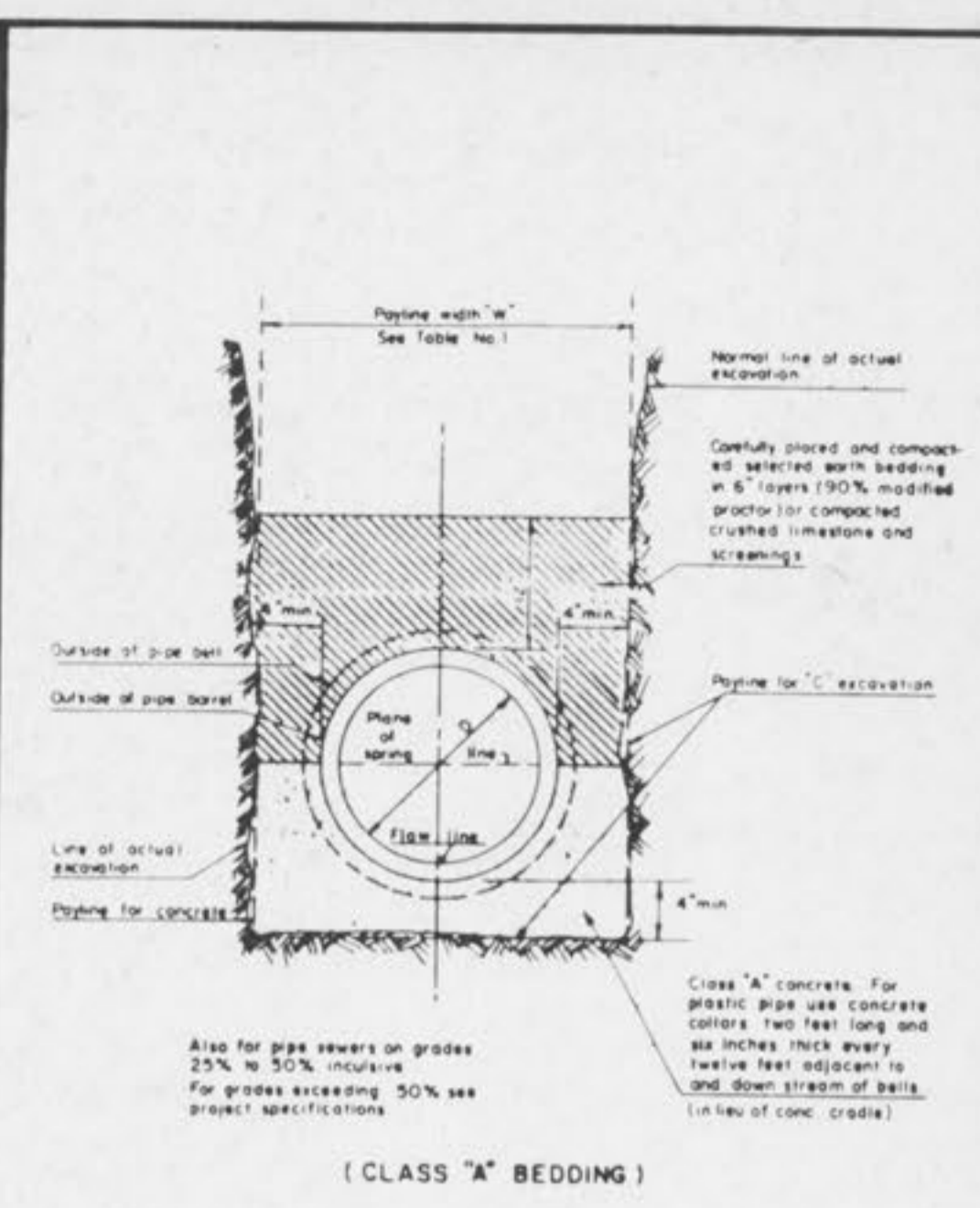
PIPE BEDDING CLASS "C"  
(FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)



PIPE BEDDING CLASS "C"  
(MODIFIED FOR REINFORCED CONCRETE PIPE)



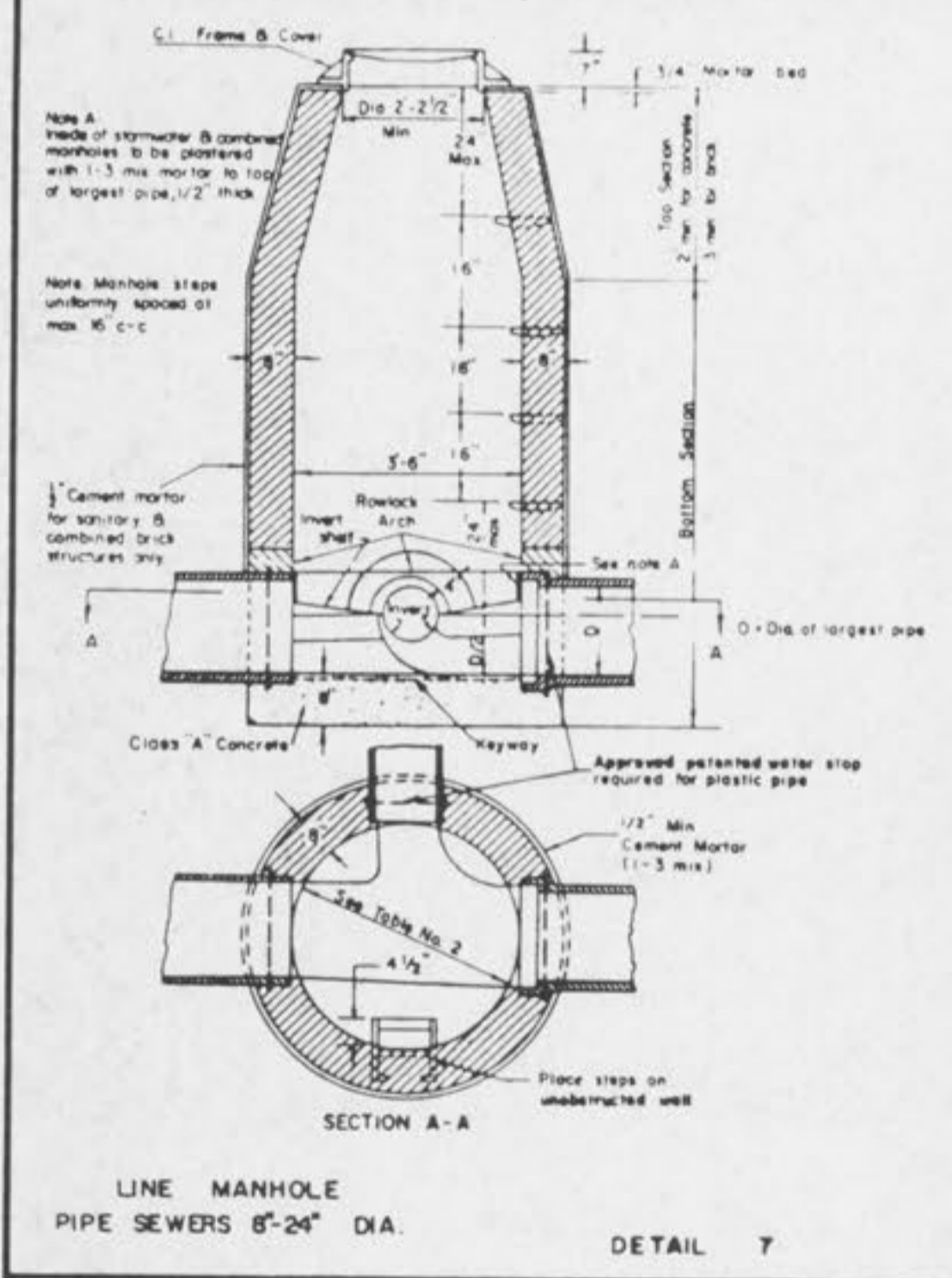
CONCRETE ENCASUREMENT



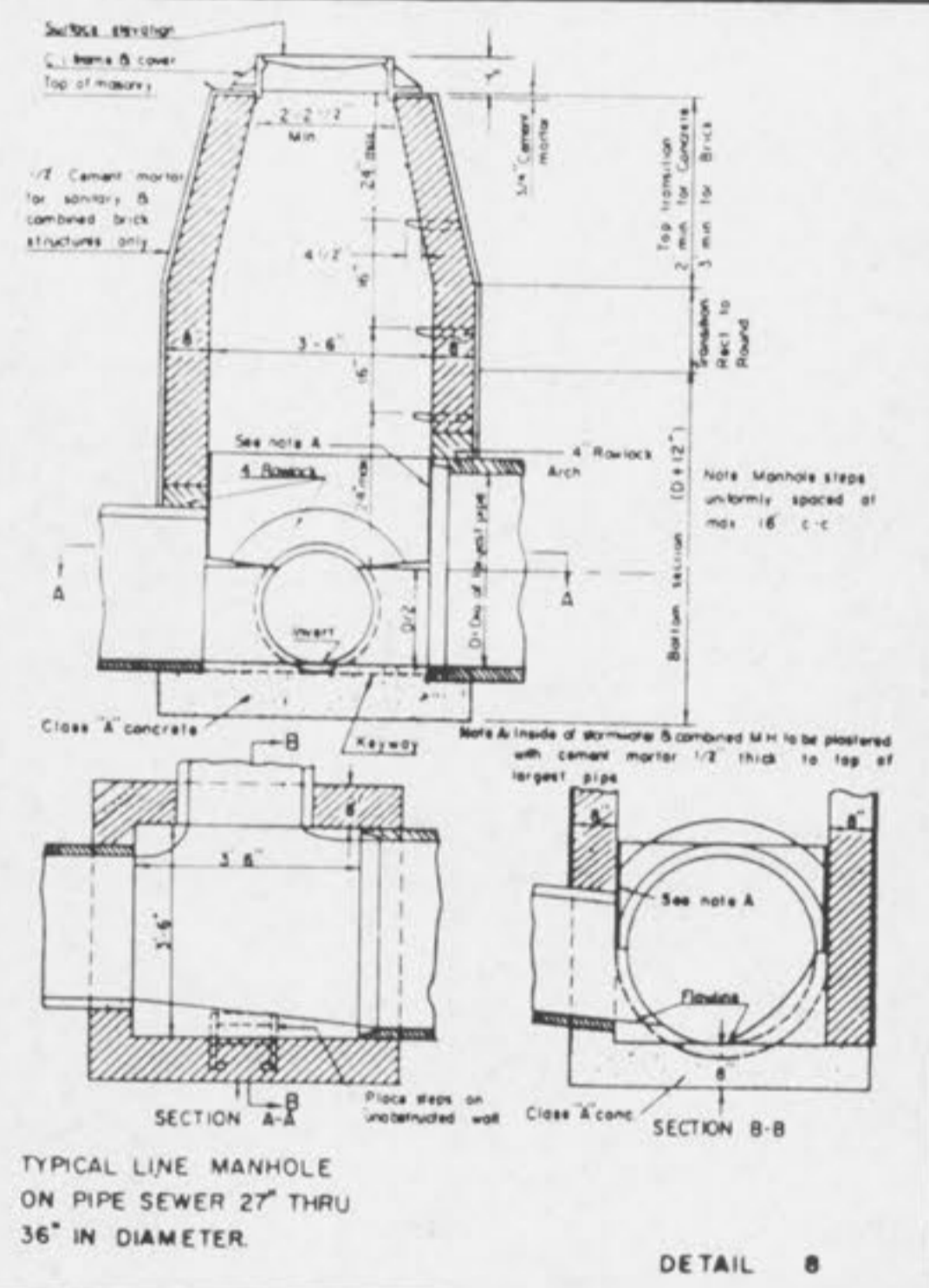
CONCRETE CRADLE

TABLE NO. 2  
STANDARD MANHOLE DIMENSIONS

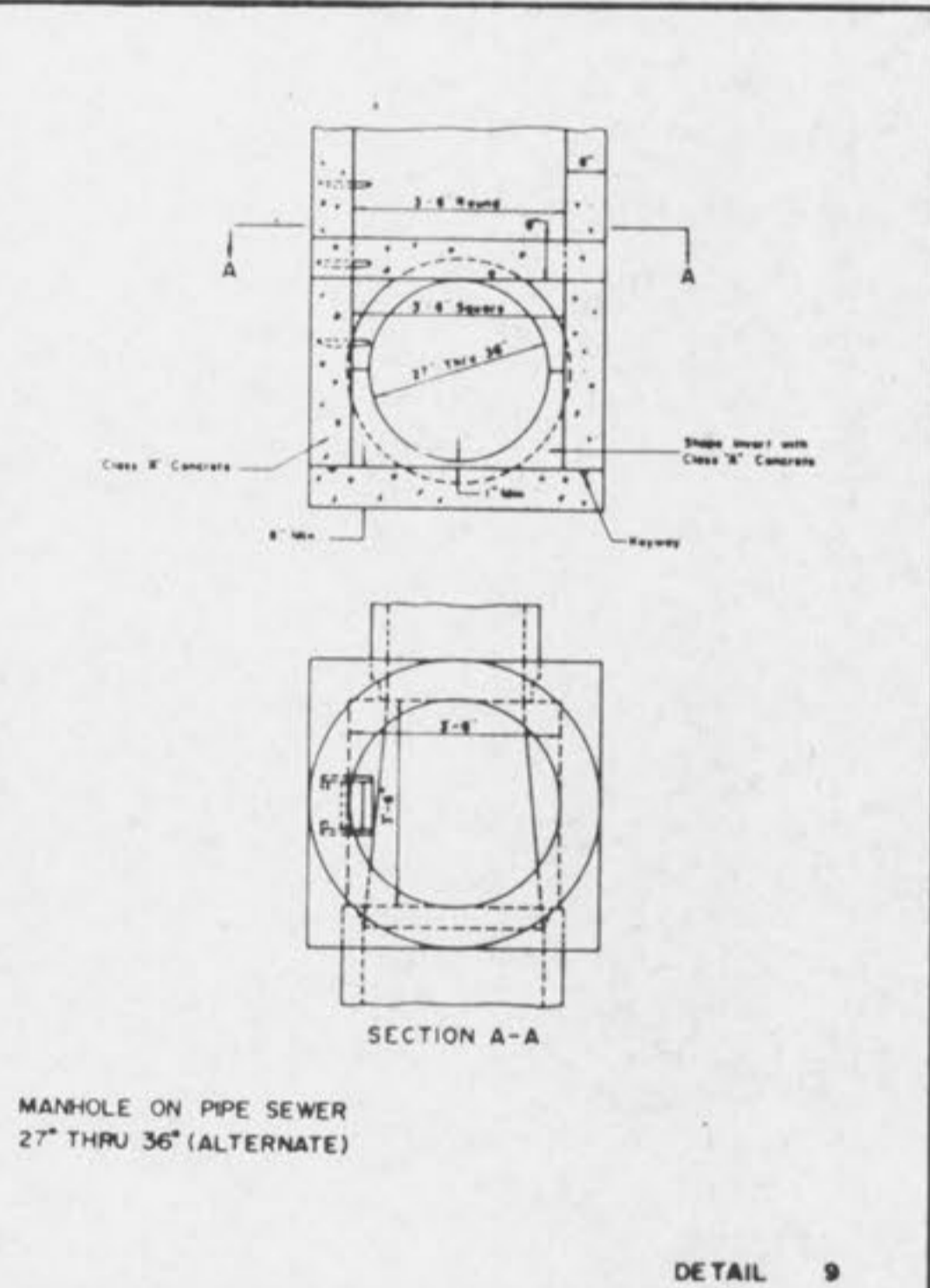
Section of Manhole	Dimension
Top	Upper 2'-2 1/2" Dia
Transition	Lower 3'-6" Dia
Bottom Section	8" thru 24" Dia. Pipe 3'-6" Dia.
Bottom Section	27" thru 36" Dia. Pipe 3'-6" Square



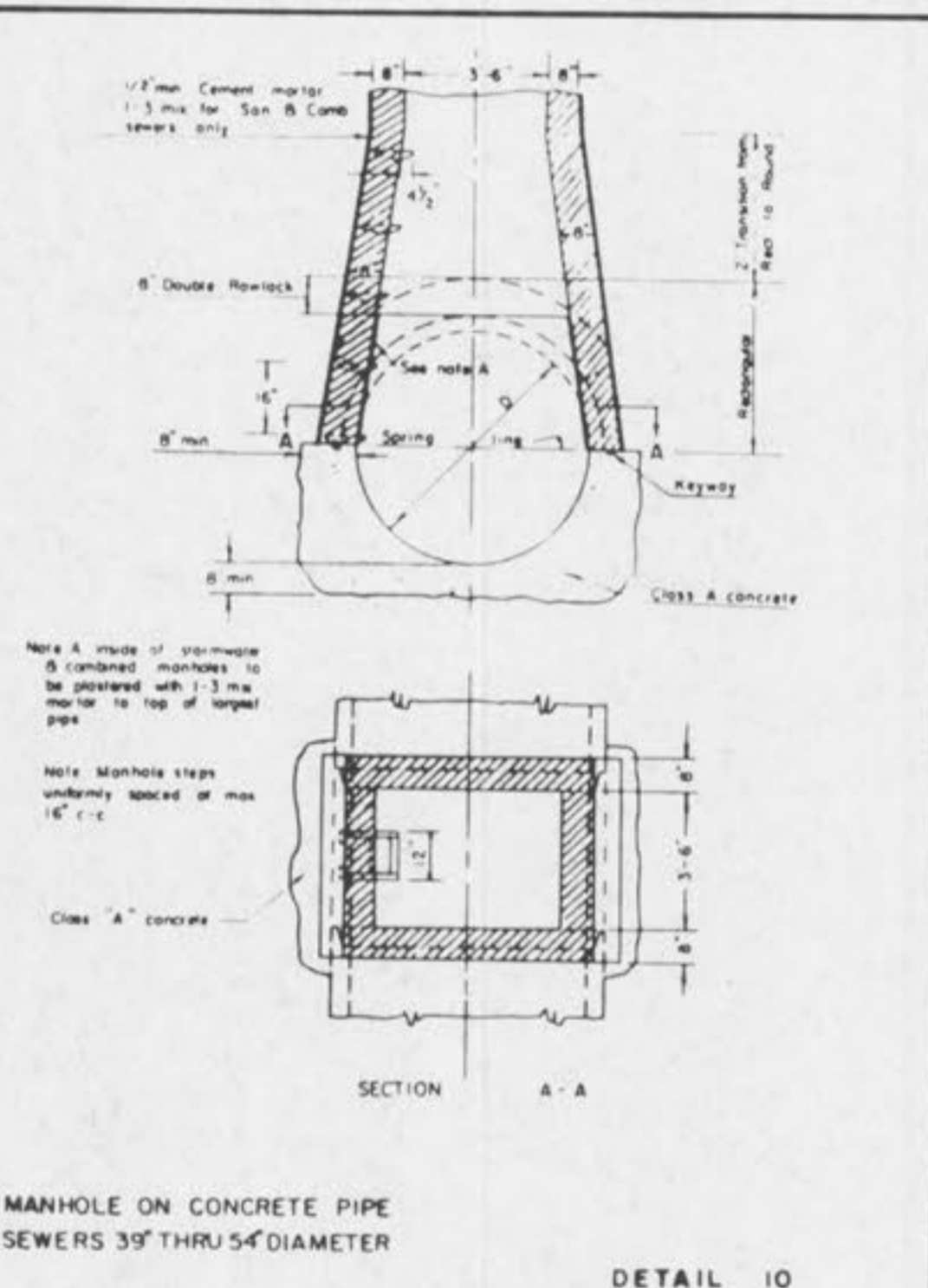
LINE MANHOLE  
PIPE SEWERS 8" - 24" DIA.



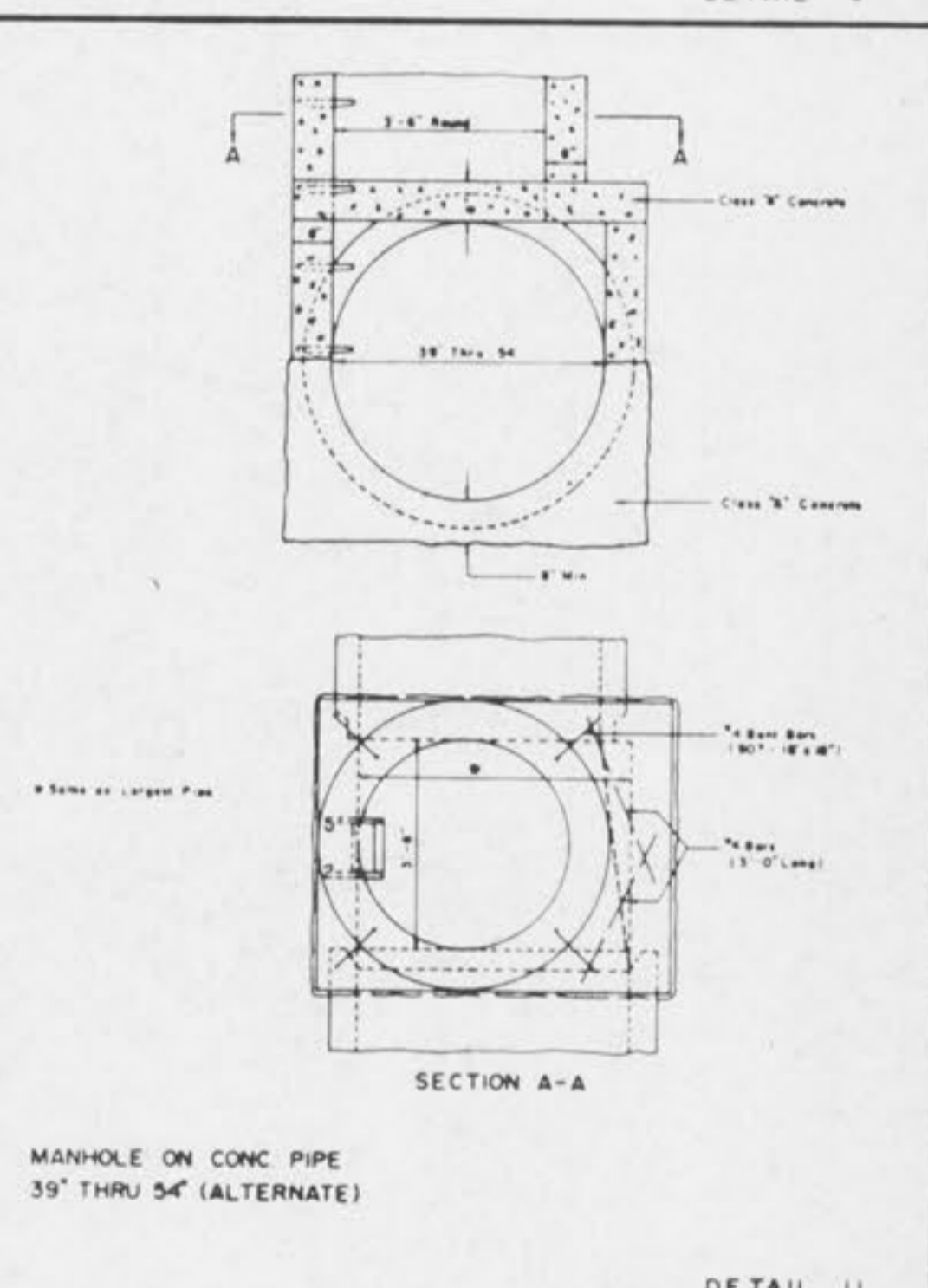
TYPICAL LINE MANHOLE  
ON PIPE SEWER 27" THRU  
36" IN DIAMETER



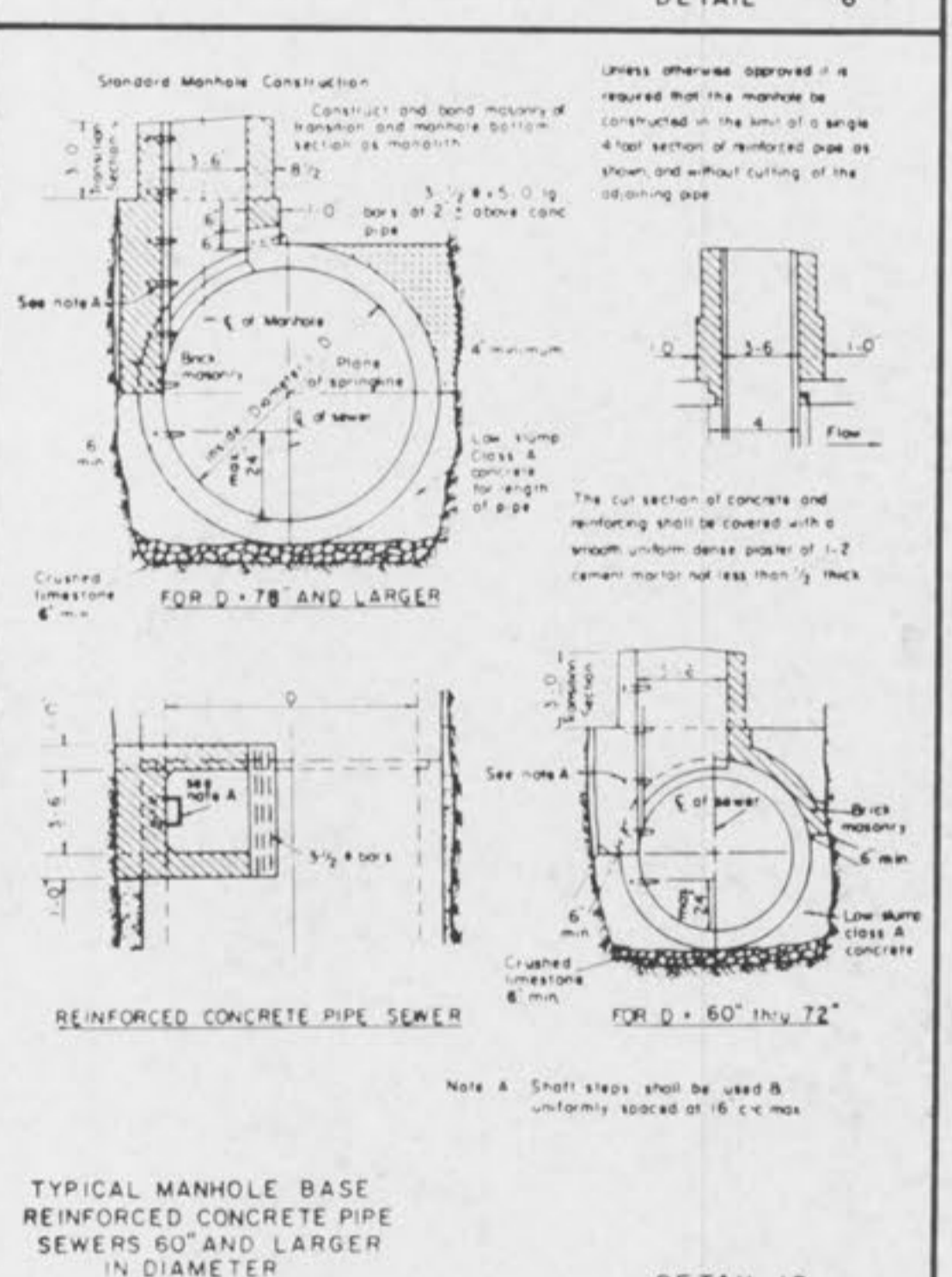
MANHOLE ON PIPE SEWER  
27" THRU 36" (ALTERNATE)



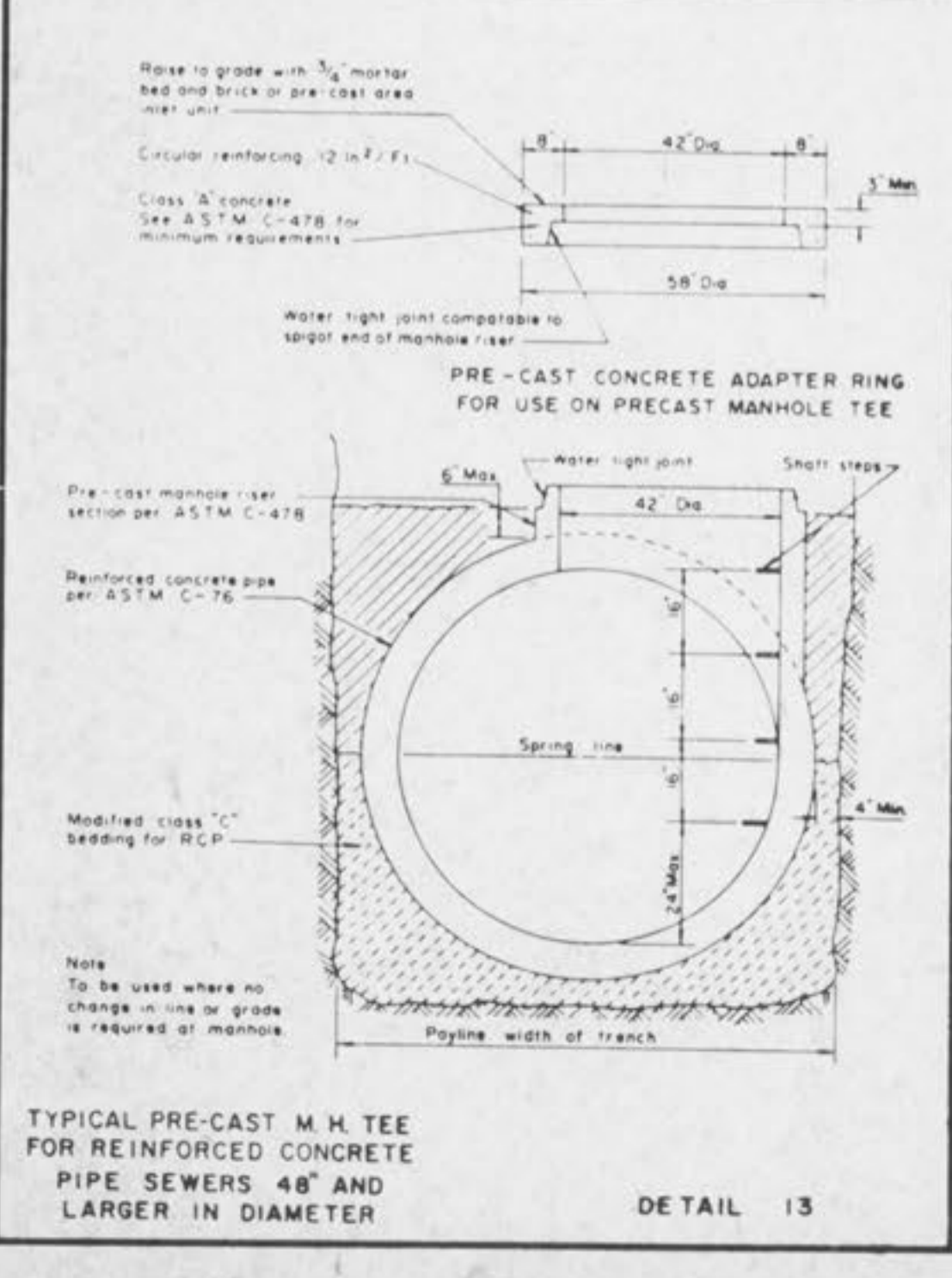
MANHOLE ON CONCRETE PIPE  
SEWERS 39" THRU 54" DIAMETER



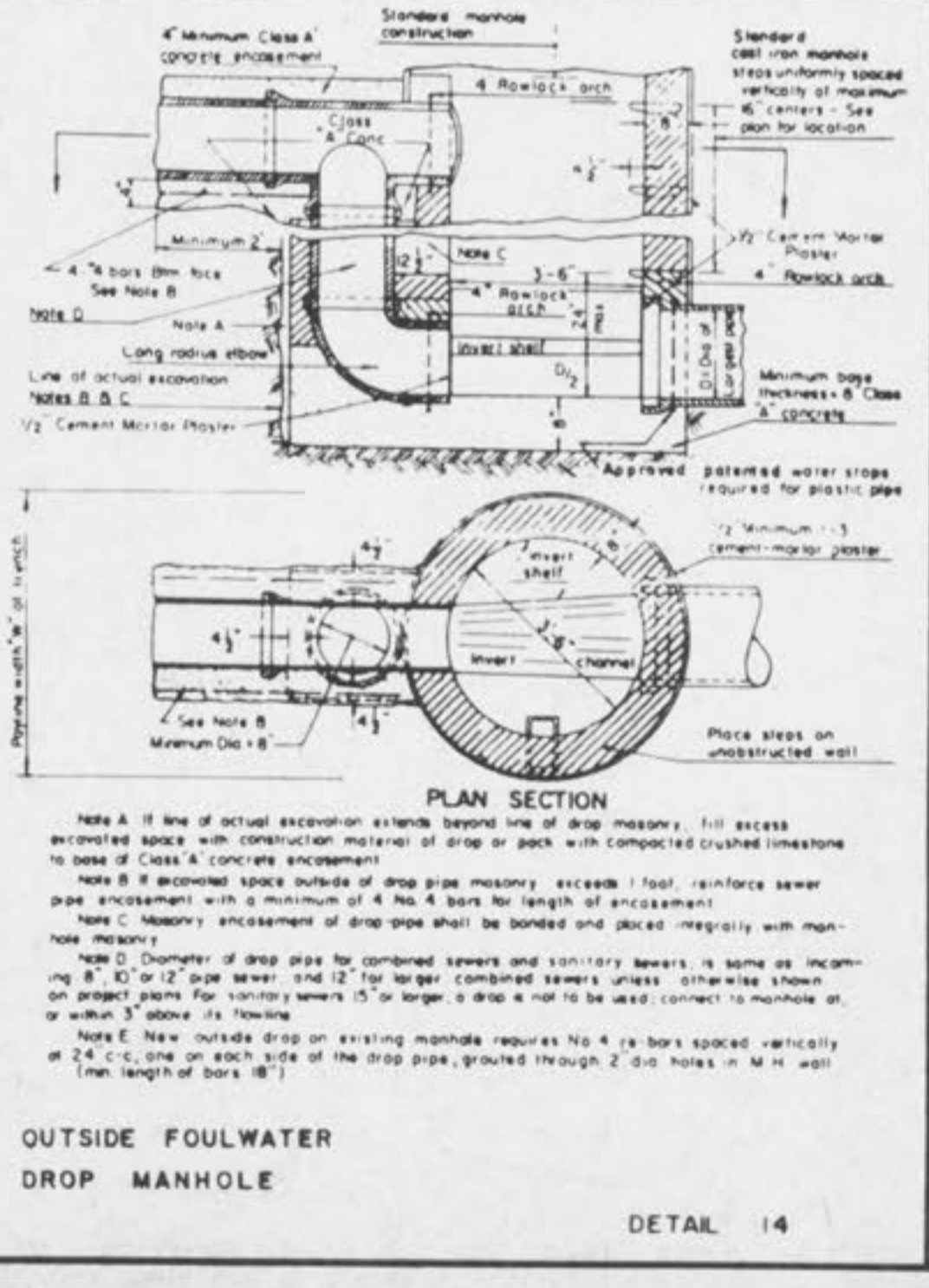
MANHOLE ON CONC PIPE  
39" THRU 54" (ALTERNATE)



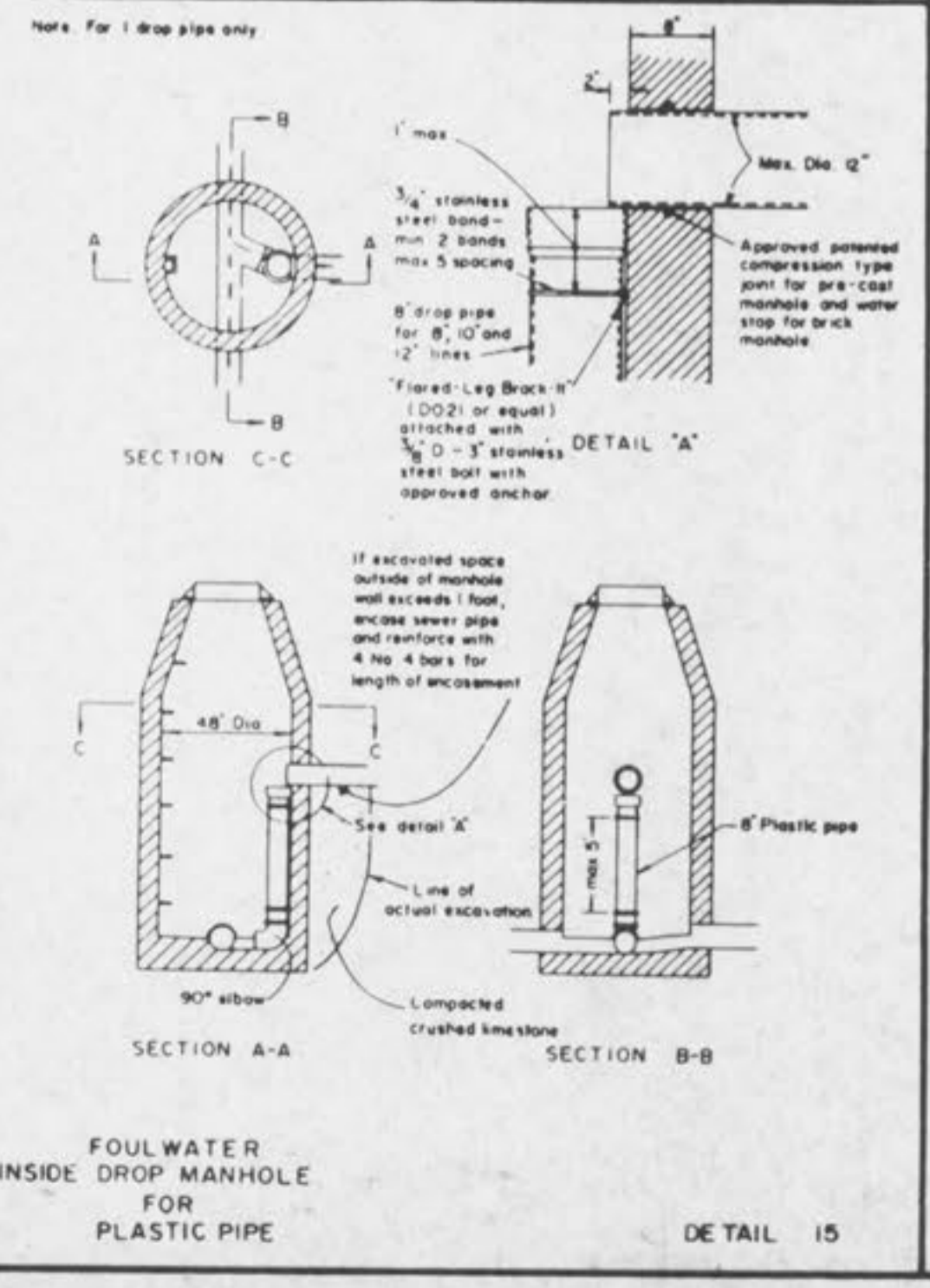
TYPICAL MANHOLE BASE  
REINFORCED CONCRETE PIPE  
SEWERS 60" AND LARGER  
IN DIAMETER



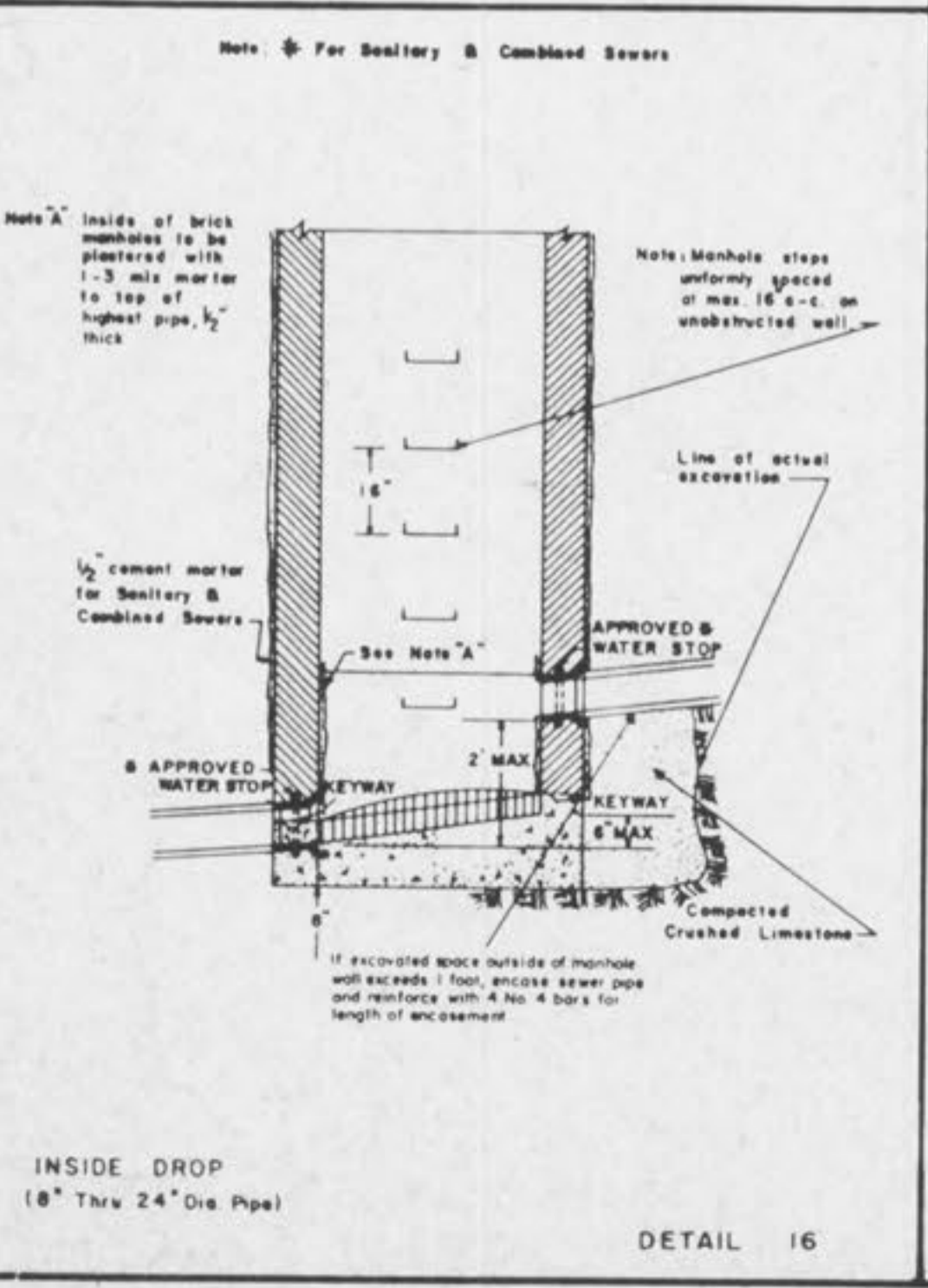
TYPICAL PRE-CAST M.H. TEE  
FOR REINFORCED CONCRETE  
PIPE SEWERS 48" AND  
LARGER IN DIAMETER



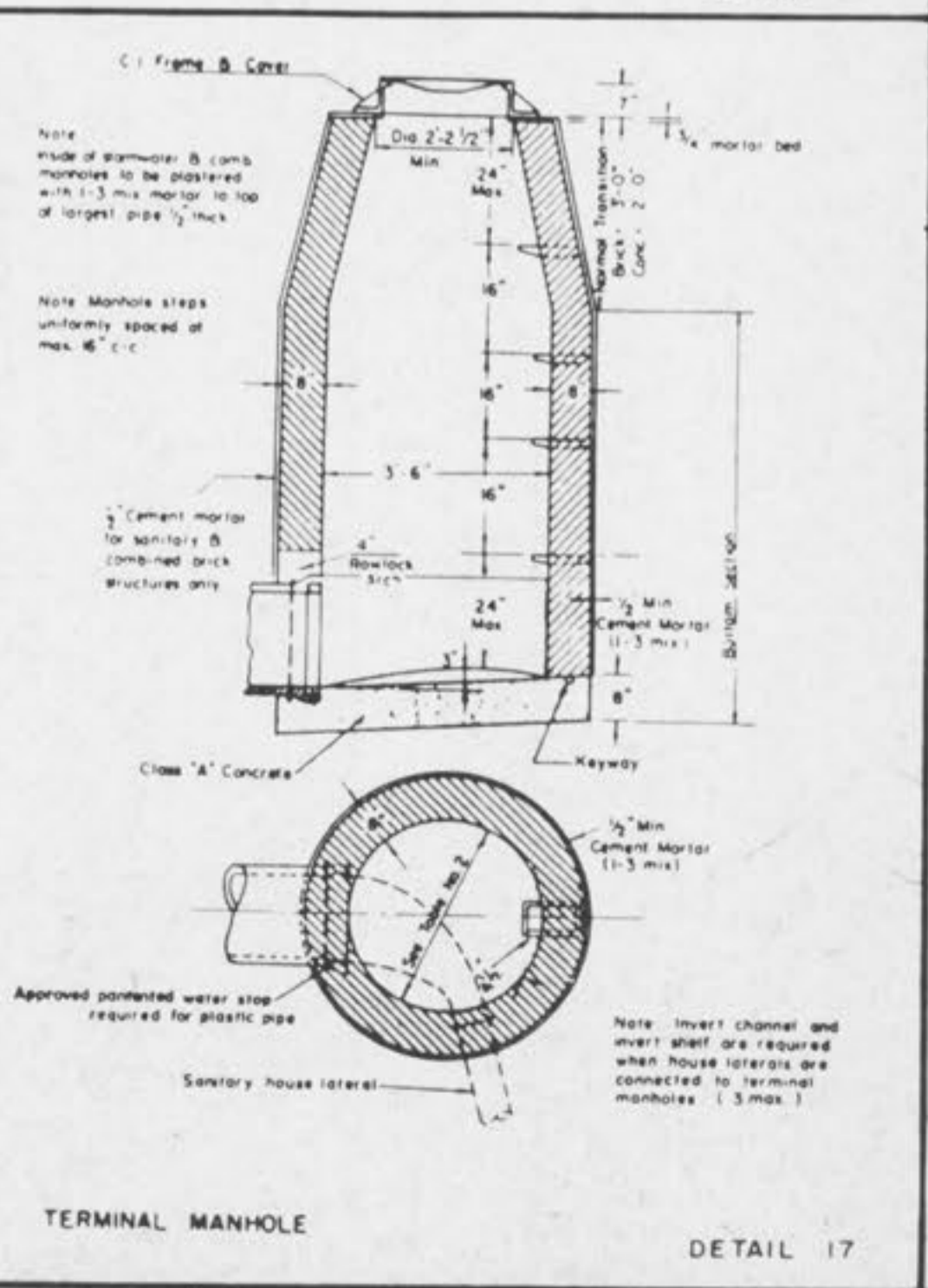
OUTSIDE FOULWATER  
DROP MANHOLE



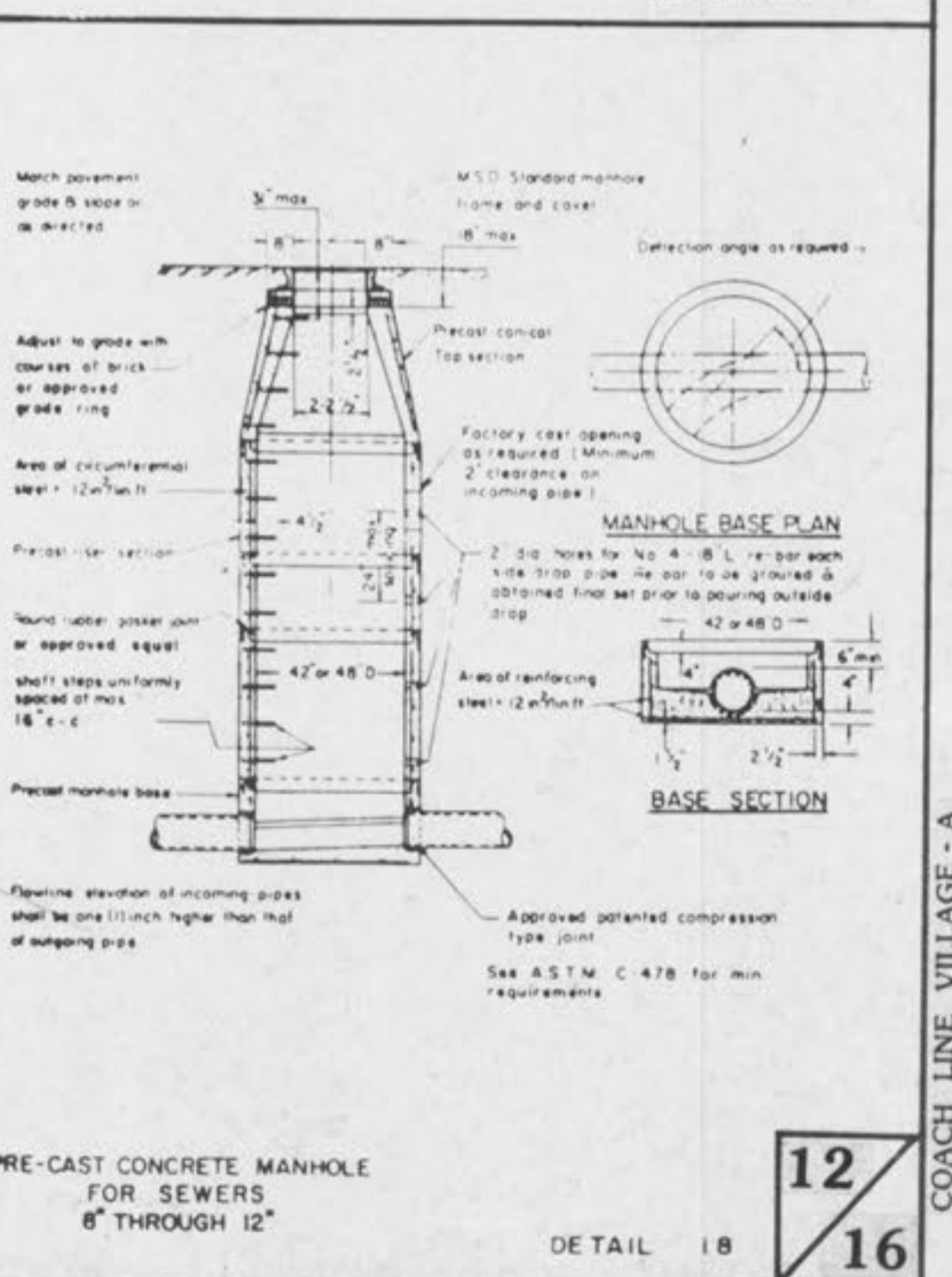
FOULWATER  
INSIDE DROP MANHOLE  
FOR  
PLASTIC PIPE



INSIDE DROP  
(8" Thru 24" Dia. Pipe)



TERMINAL MANHOLE



PRE-CAST CONCRETE MANHOLE  
FOR SEWERS  
8" THROUGH 12"