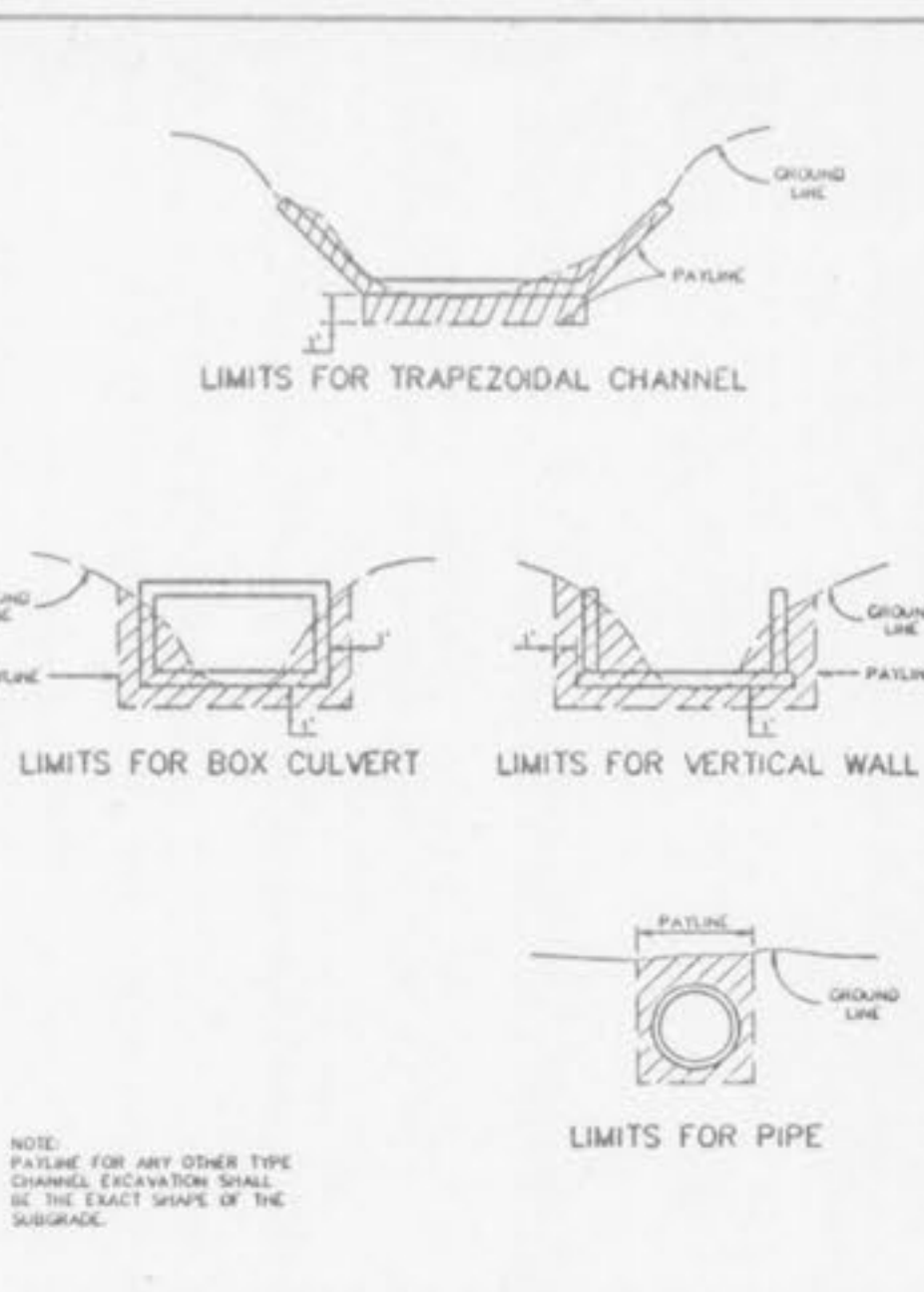
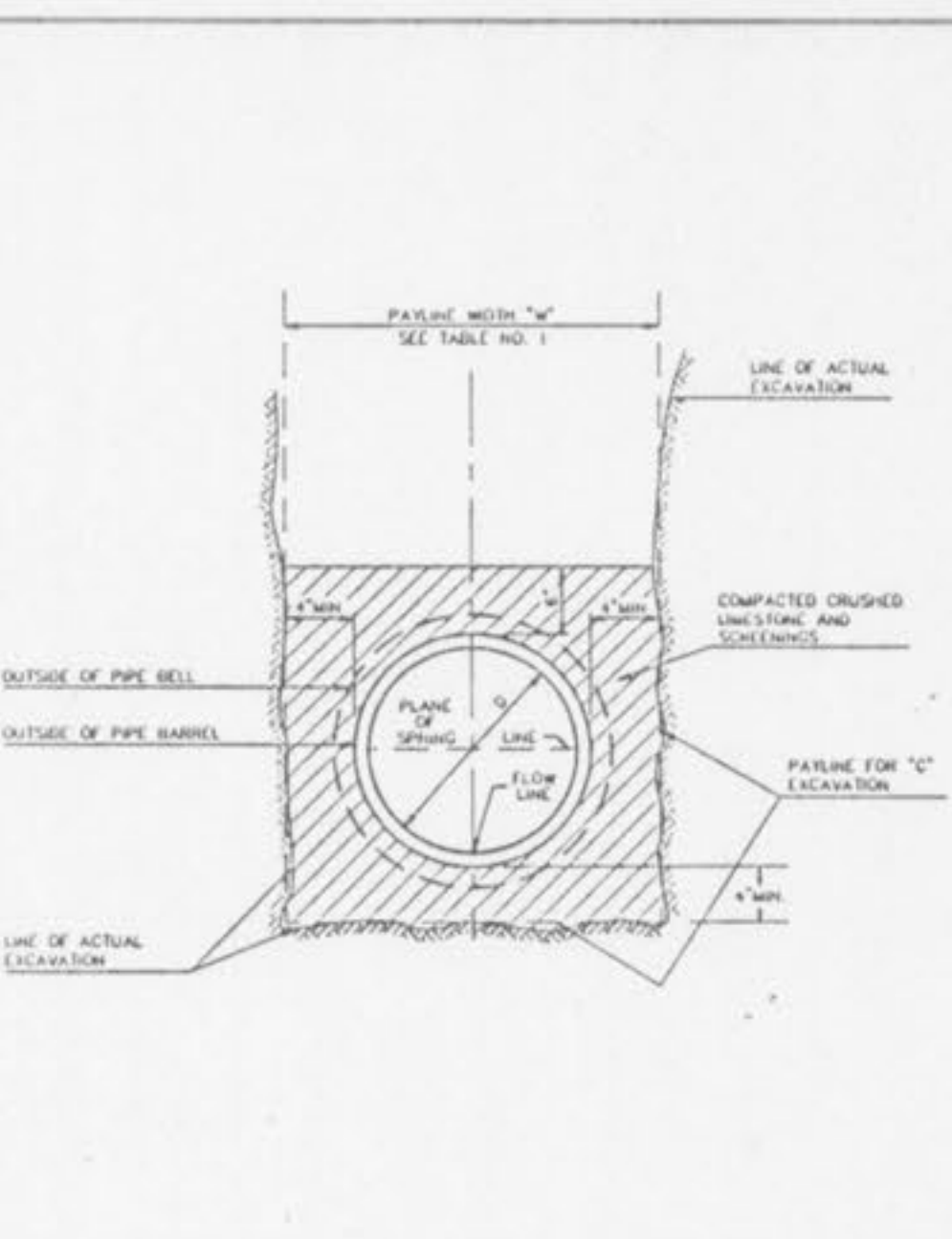


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
PIPE DIAMETER (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"H" PAYLINE WIDTH OF TRENCH (INCHES)	PAY-LINE VOLUME CU. FT. PER FT. OF TRENCH	DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"H" PAYLINE WIDTH OF TRENCH (INCHES)	PAY-LINE VOLUME CU. FT. PER FT. OF TRENCH
4	30	3.50	3.28				
6	30	2.50	3.58				
8	30	2.50	3.87				
10	30	2.50	4.06				
12	30	2.50	4.25				
15	36	3.00	5.50				
18	36	3.00	5.72	14 x 23	41	3.42	5.94
21	39	3.25	6.81				
24	42	3.50	7.39	19 x 30	49	4.06	7.48
27	45	3.75	8.18	22 x 34	53	4.42	8.81
30	48	4.06	8.30	24 x 38	58	4.83	9.70
33	51	4.42	10.53	27 x 42	62	5.17	10.71
36	54	4.83	11.43	29 x 45	68	5.50	11.72
39	57	5.17	12.15	32 x 49	71	5.92	13.14
42	60	5.50	13.36	34 x 53	75	6.25	14.05
45	63	5.83	15.07	36 x 60	83	6.92	16.18
48	66	6.25	16.15	40 x 66	92	7.87	18.81
51	69	6.67	17.32	44 x 74	101	8.42	21.58
54	72	7.08	18.45	48 x 81	106	8.98	24.25
57	75	7.50	19.57	52 x 87	110	9.52	27.45
60	78	7.92	20.67	56 x 94	118	10.00	30.50
63	81	8.33	21.75	60 x 100	124	10.50	33.50
66	84	8.75	22.81	64 x 106	130	11.00	36.50
69	87	9.17	23.87	68 x 112	136	11.50	39.50
72	90	9.58	24.91	72 x 118	142	12.00	42.50
75	93	10.00	25.95	76 x 124	148	12.50	45.50
78	96	10.42	26.98	80 x 130	154	13.00	48.50
81	99	10.83	28.00	84 x 136	160	13.50	51.50
84	102	11.25	29.01	88 x 142	166	14.00	54.50
87	105	11.67	30.01	92 x 148	172	14.50	57.50
90	108	12.08	31.00	96 x 154	178	15.00	60.50
93	111	12.50	31.98	100 x 160	184	15.50	63.50
96	114	12.92	32.95	104 x 166	190	16.00	66.50
99	117	13.33	33.91	108 x 172	196	16.50	69.50
102	120	13.75	34.87	112 x 178	202	17.00	72.50
105	123	14.17	35.81	116 x 184	208	17.50	75.50
108	126	14.58	36.75				
111	129	15.00	37.67				
114	132	15.42	38.58				
117	135	15.83	39.48				
120	138	16.25	40.37				
123	141	16.67	41.25				
126	144	17.08	42.12				
129	147	17.50	42.98				
132	150	17.92	43.83				
135	153	18.33	44.67				
138	156	18.75	45.50				
141	159	19.17	46.31				

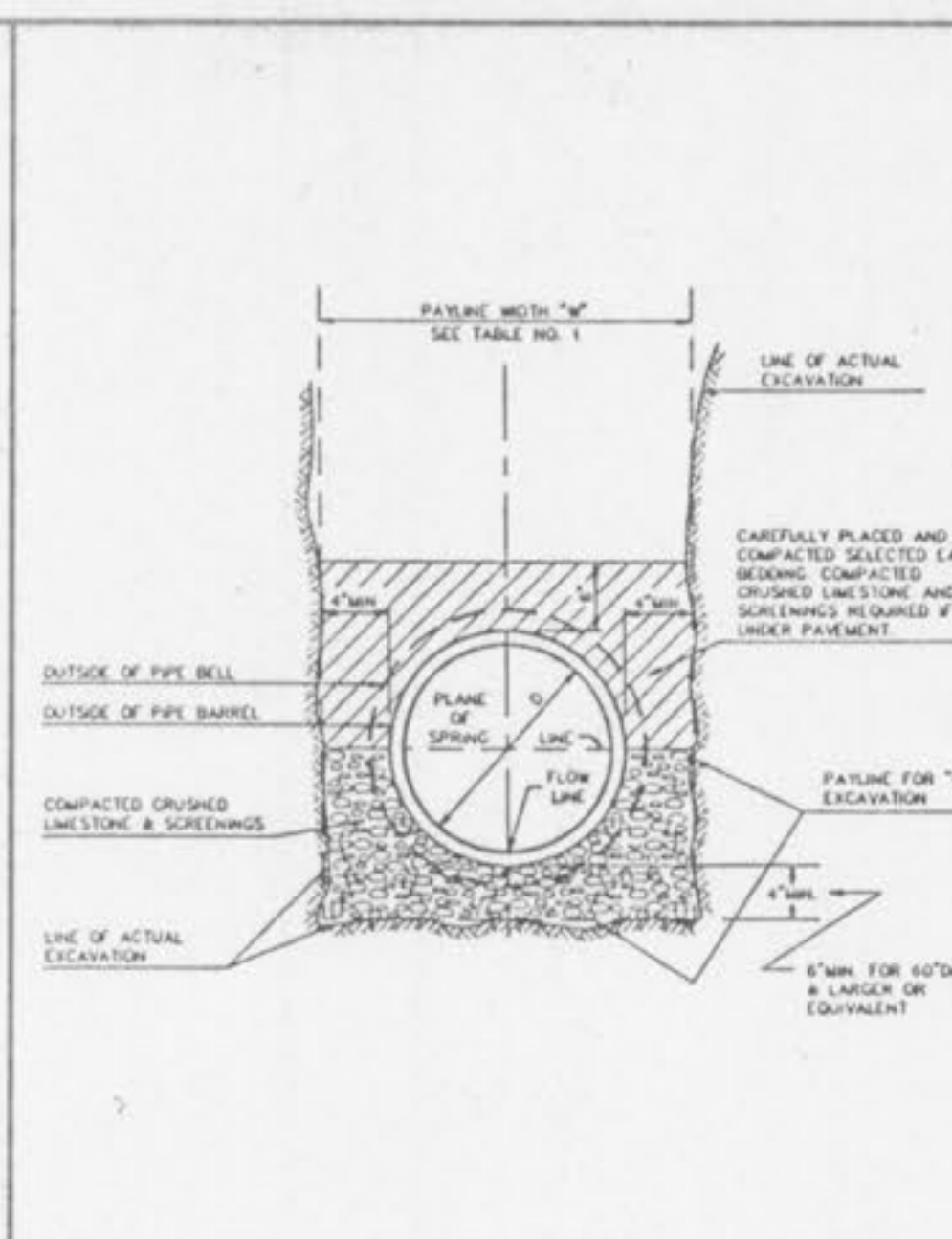
TABLE 1
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. B.E.B. 1992 SHEET 1
Ch. J.C.K.



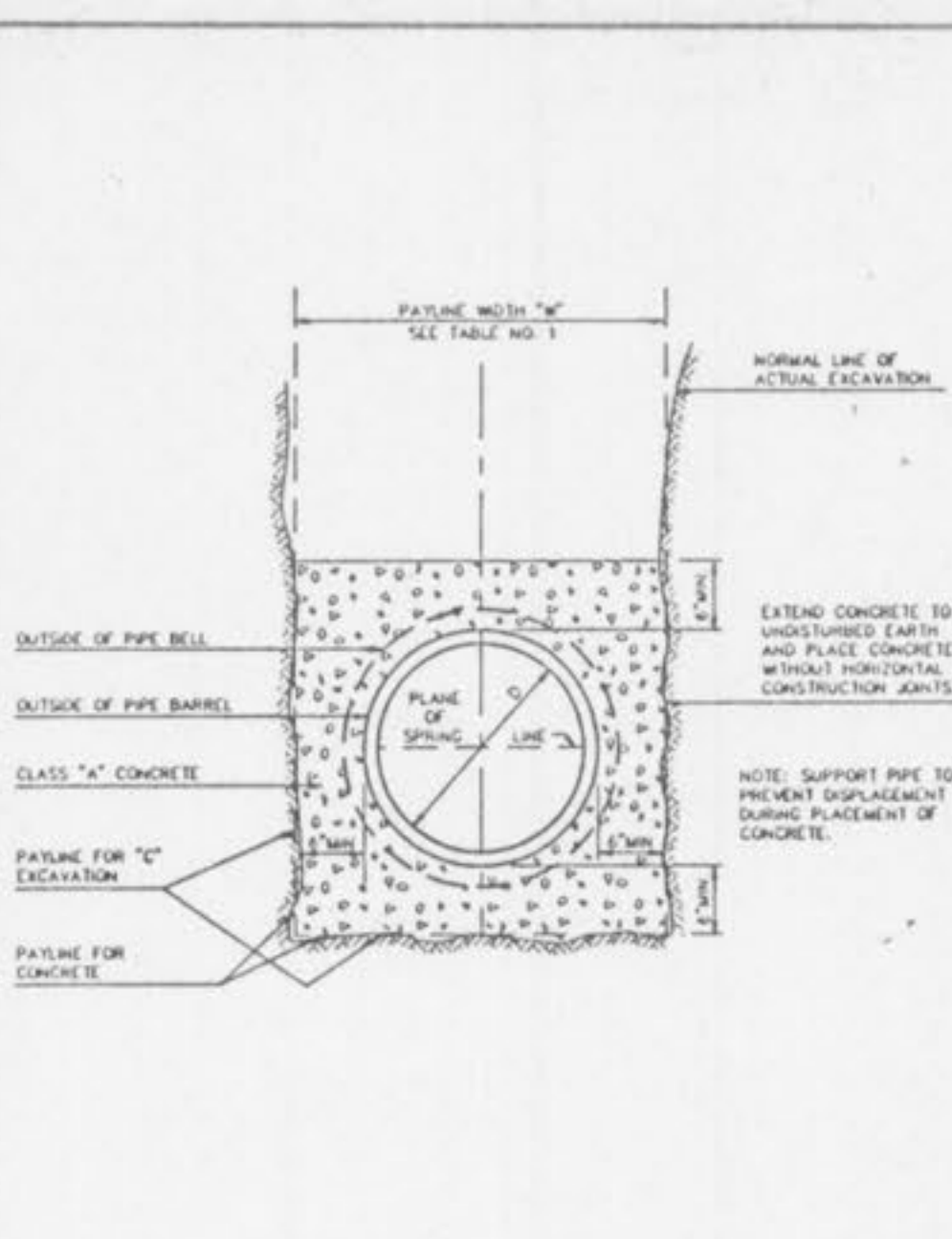
PAYLINE LIMITS FOR EXCAVATION
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 2
Ch. J.C.K.



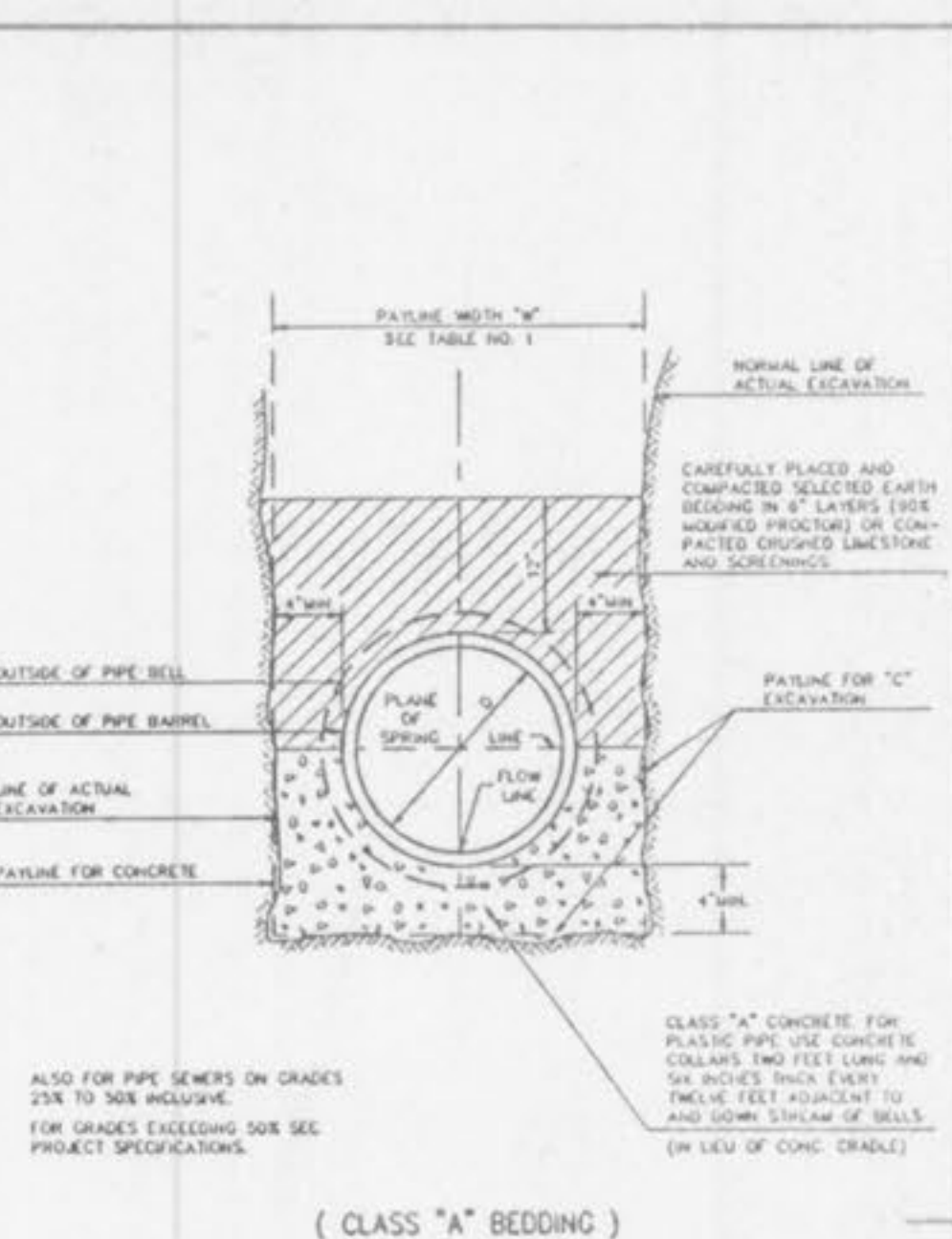
PIPE BEDDING CLASS "C"
(MODIFIED FOR REINFORCED CONCRETE PIPE)



CONCRETE ENCASEMENT
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 4
Ch. J.C.K.



CONCRETE CRADLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 5
Ch. J.C.K.



CONCRETE CRADLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 6
Ch. J.C.K.

SECTION OF MANHOLE	DIMENSION
TOP TRANSITION	UPPER 26 1/2" DIA. LOWER 42" DIA.
BOTTOM SECTION	8" THRU 24" DIA. PIPE 42" DIA.
BOTTOM SECTION	27" THRU 36" DIA. PIPE 42" SQUARE

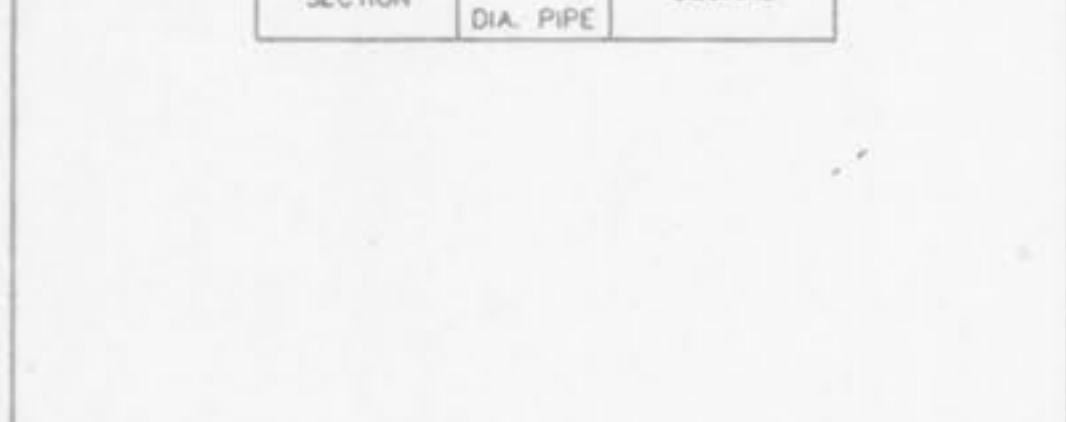
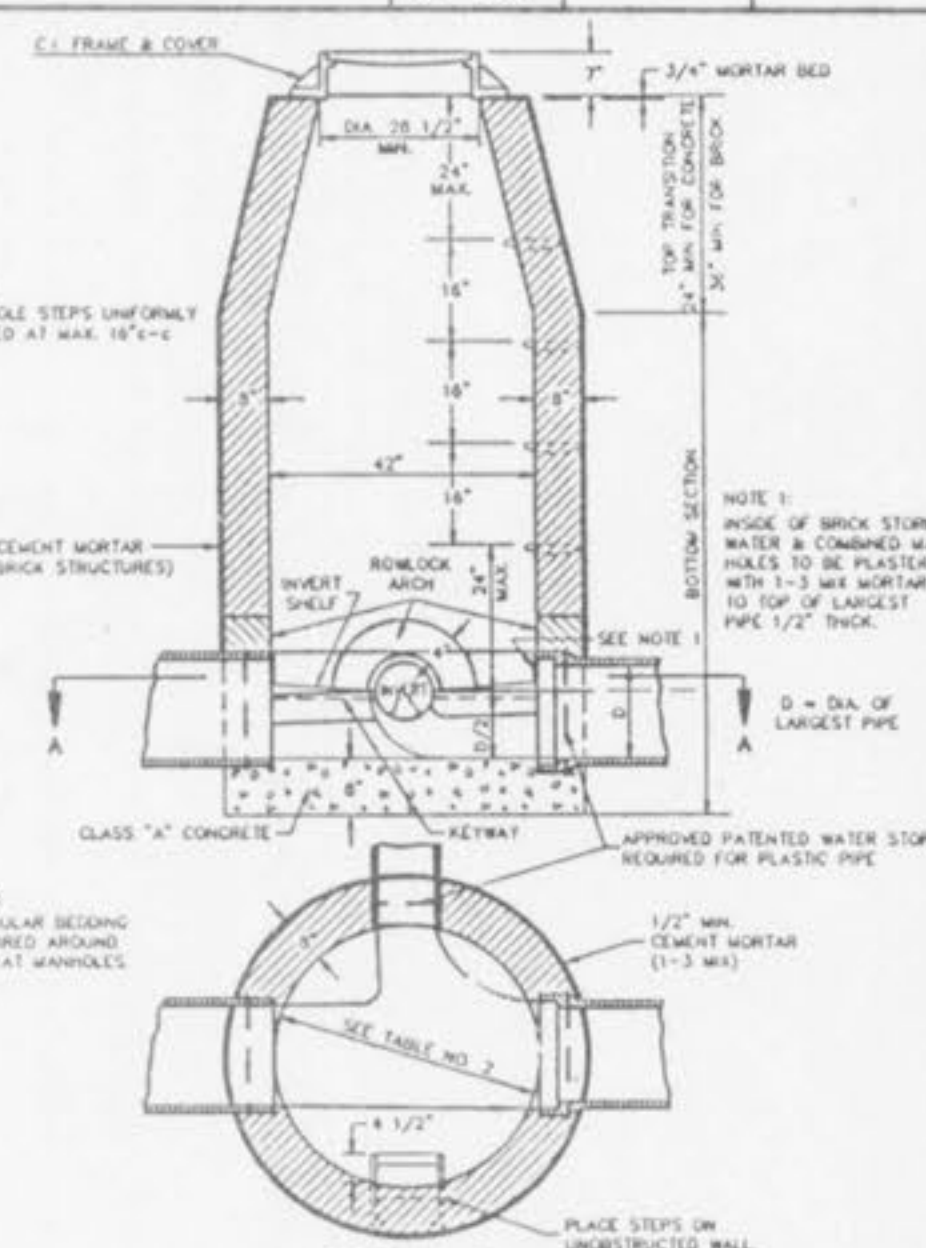
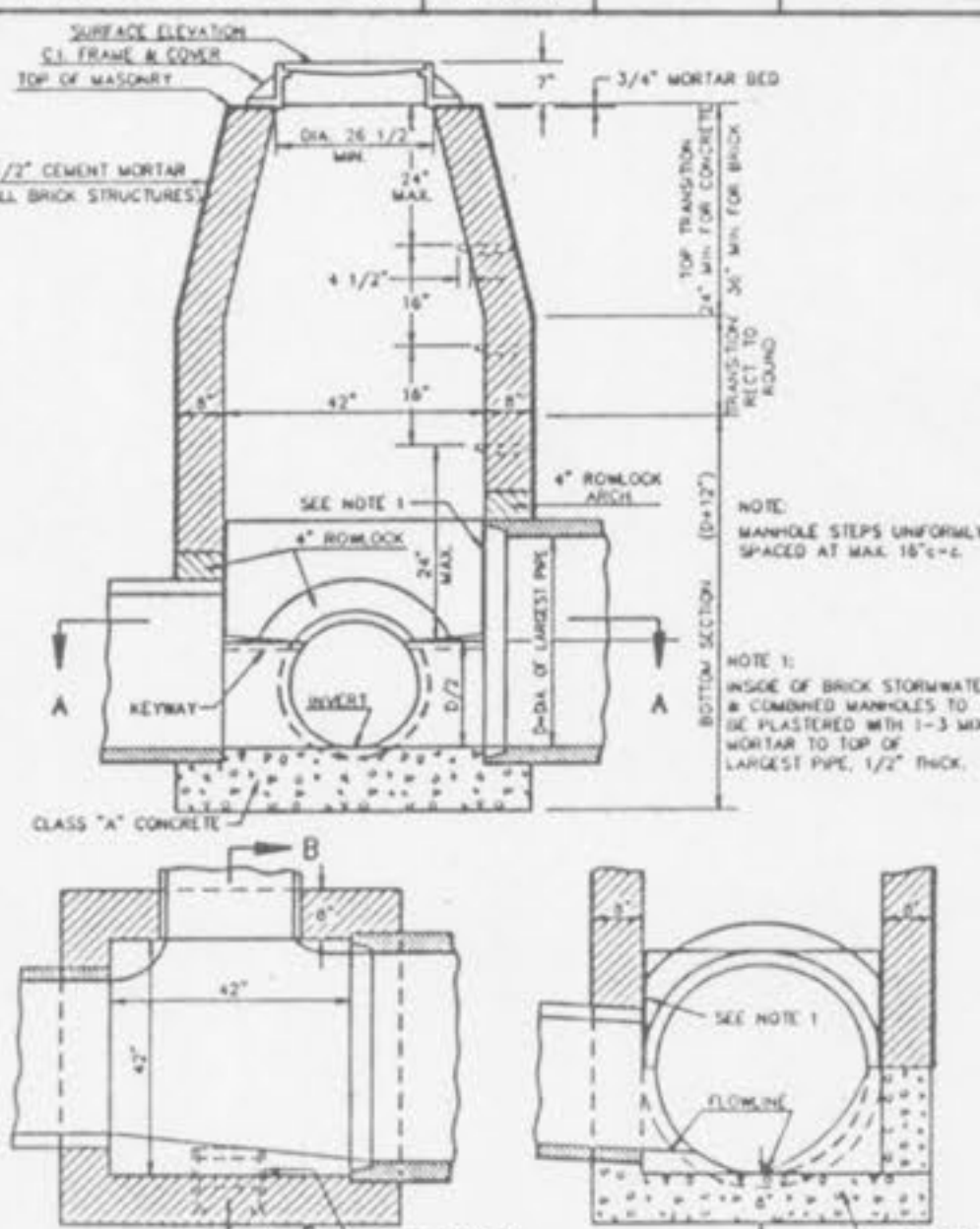


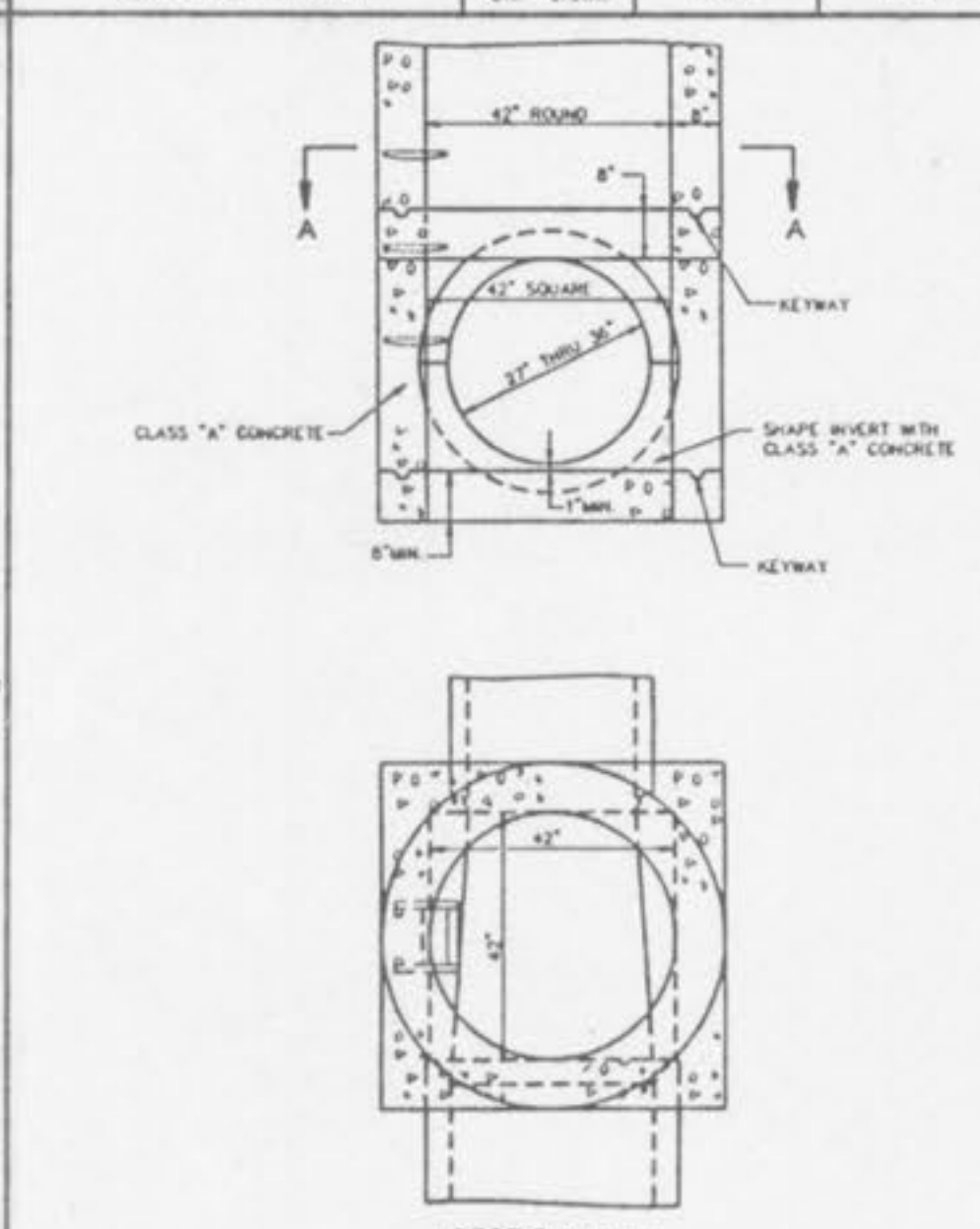
TABLE NO. 2
STANDARD MANHOLE DIMENSIONS
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.O.W. 1992 SHEET 7
Ch. J.C.K.



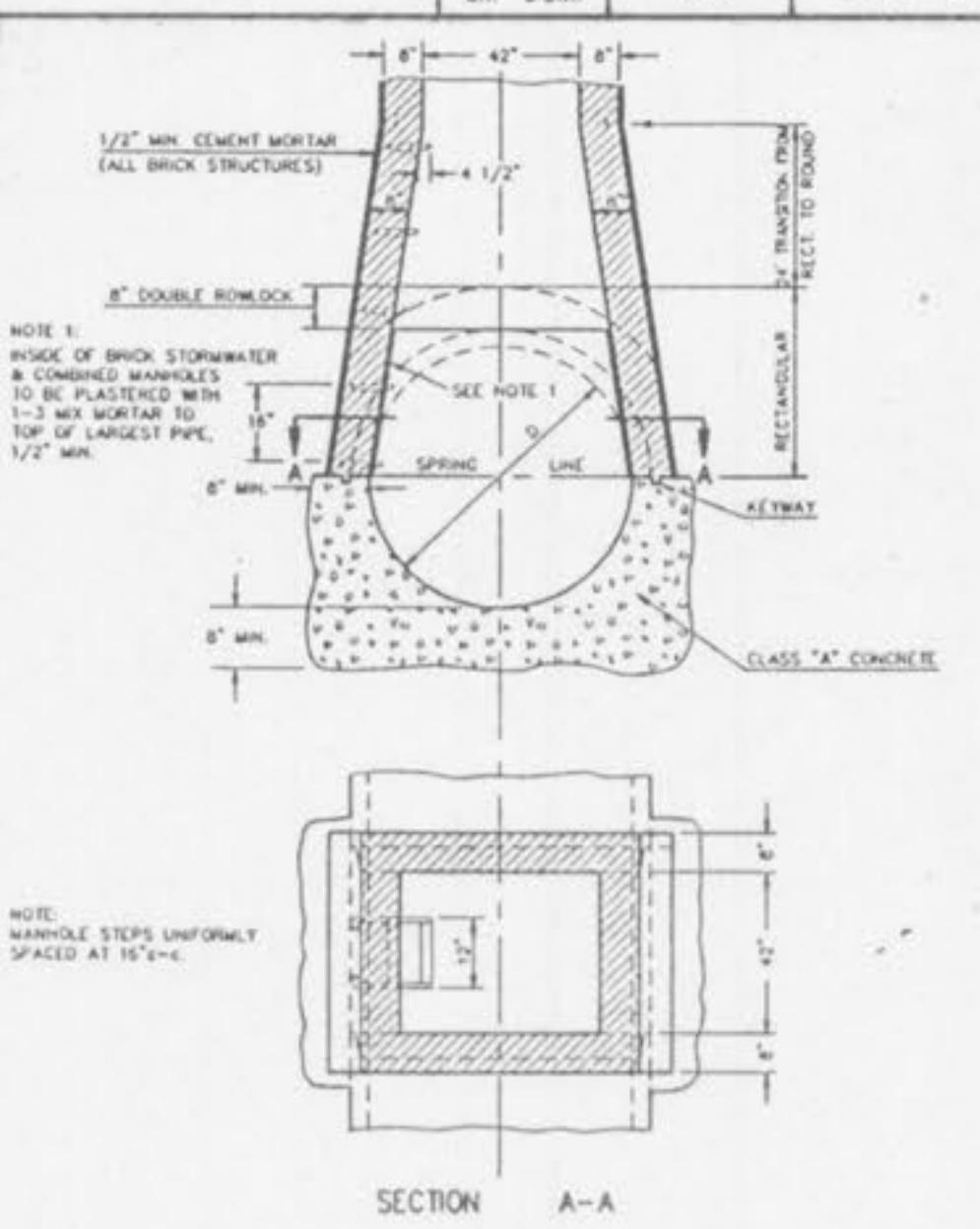
LINE MANHOLE
PIPE SEWERS 24"-48" DIA.
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 8
Ch. J.C.K.



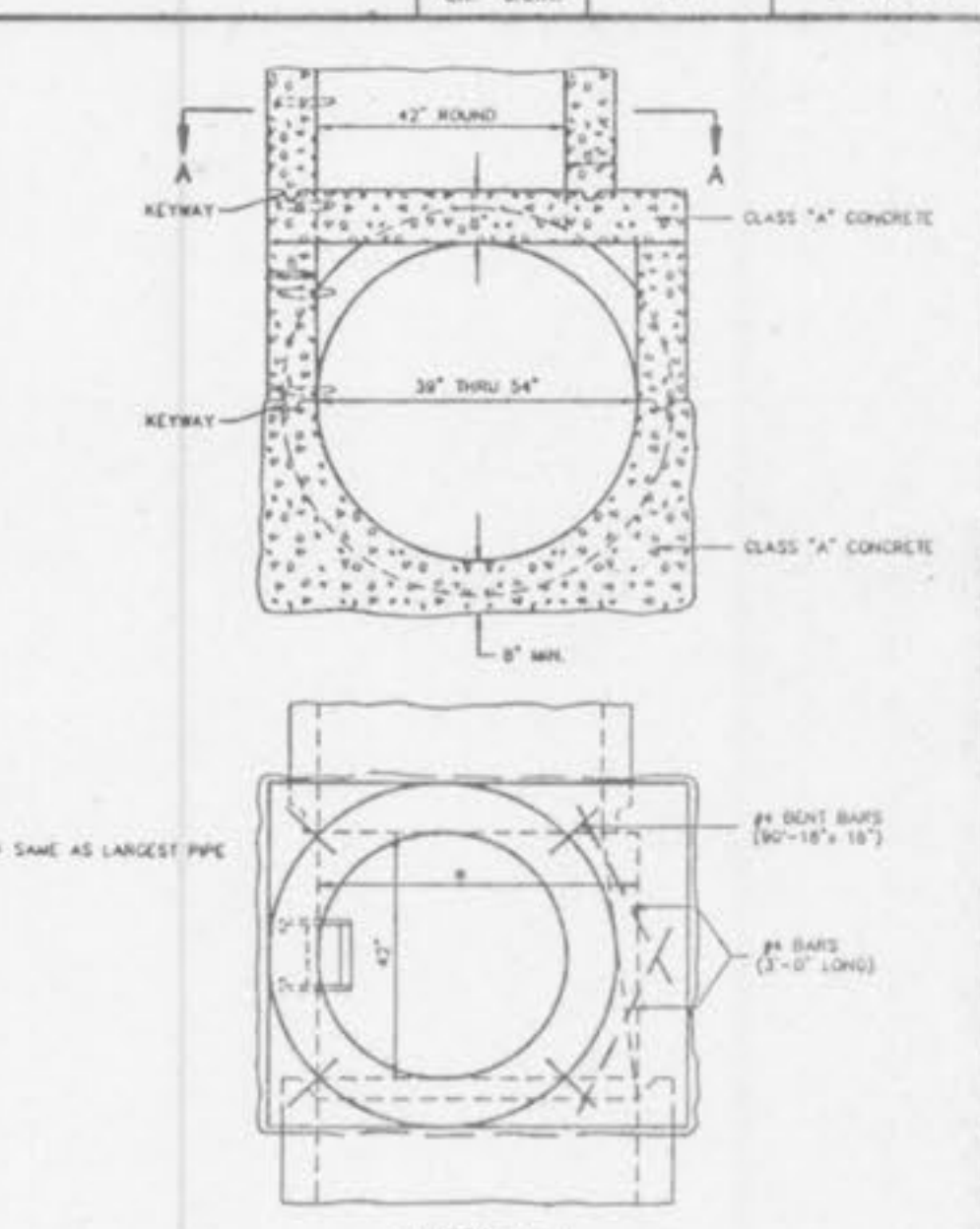
TYPICAL LINE MANHOLE
ON PIPE SEWER 27" THRU 36" DIA. DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 9
Ch. J.C.K.



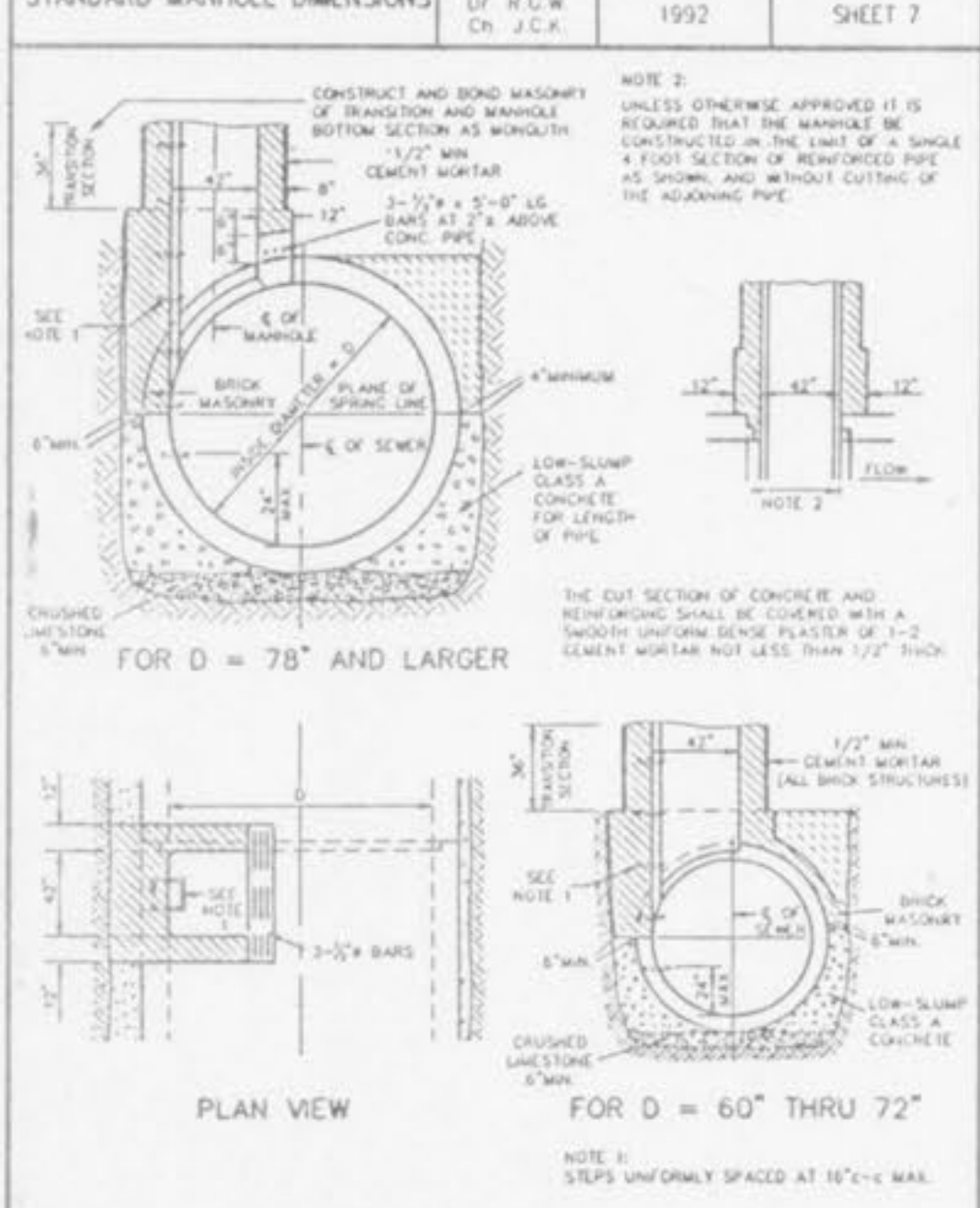
MANHOLE ON PIPE SEWER
27" THRU 36" (ALTERNATE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. D.A.B. 1992 SHEET 10
Ch. J.C.K.



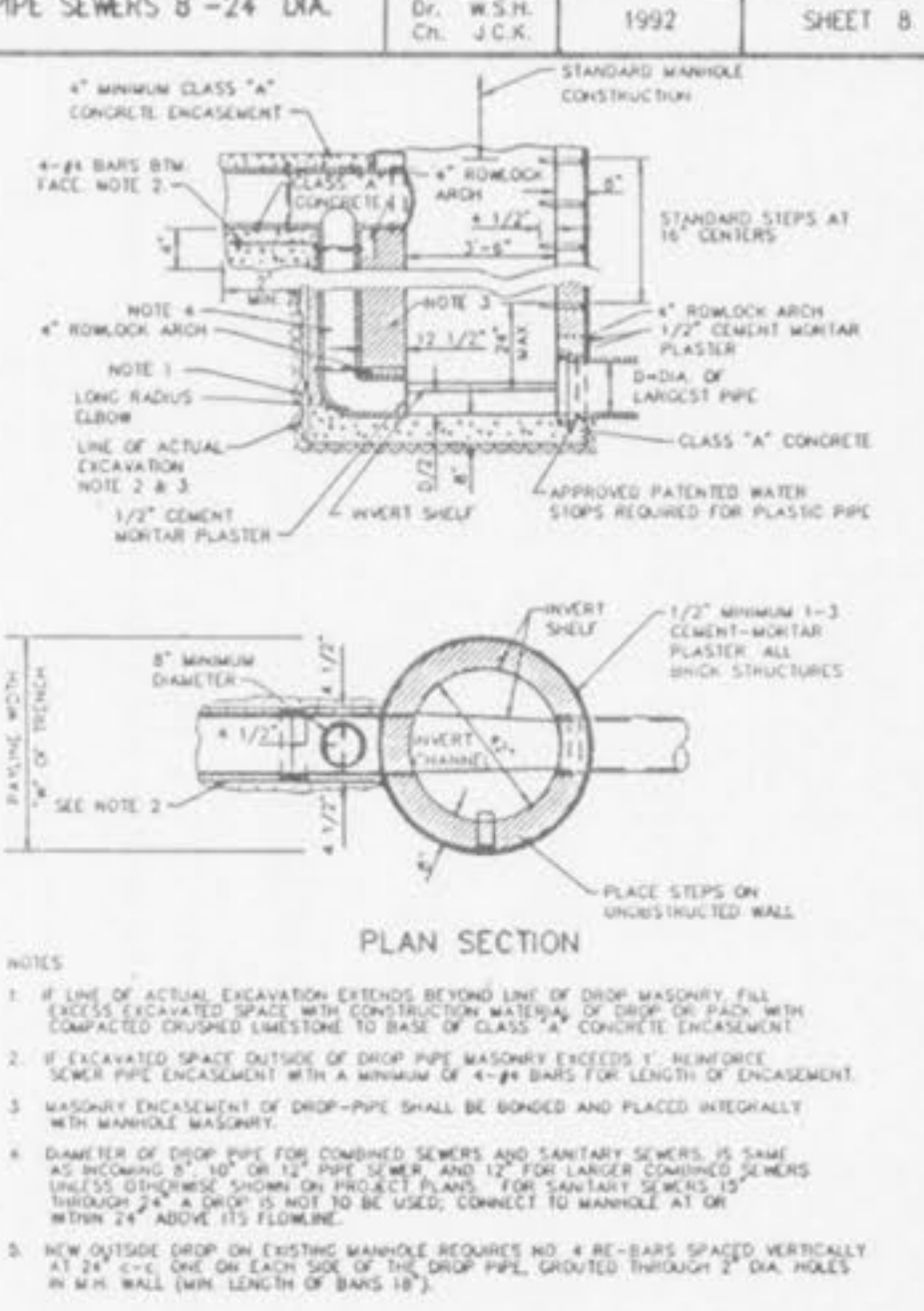
MANHOLE ON CONCRETE PIPE
SEWERS 39" THRU 54" DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 11
Ch. J.C.K.



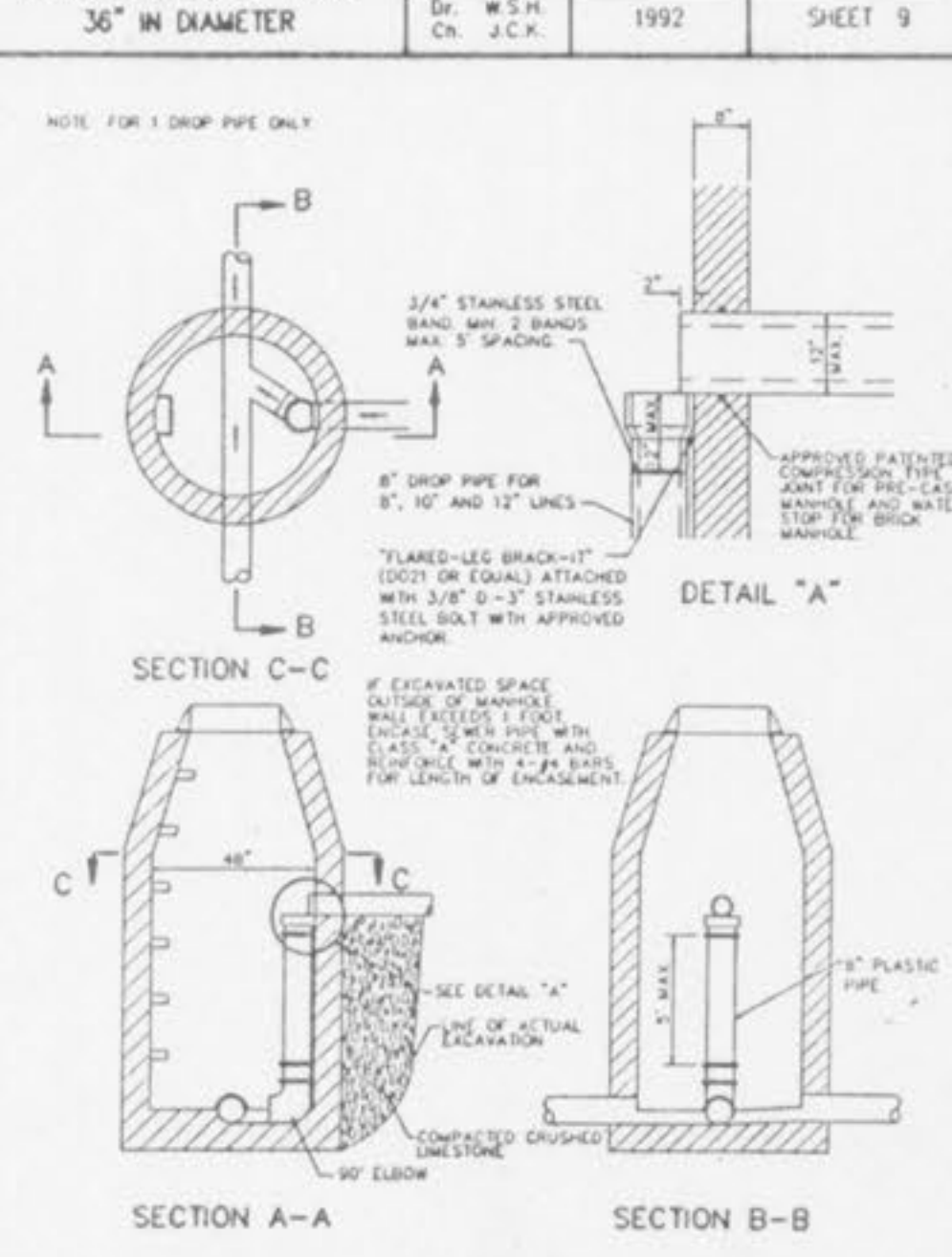
MANHOLE ON CONC. PIPE
39" THRU 54" (ALTERNATE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 12
Ch. J.C.K.



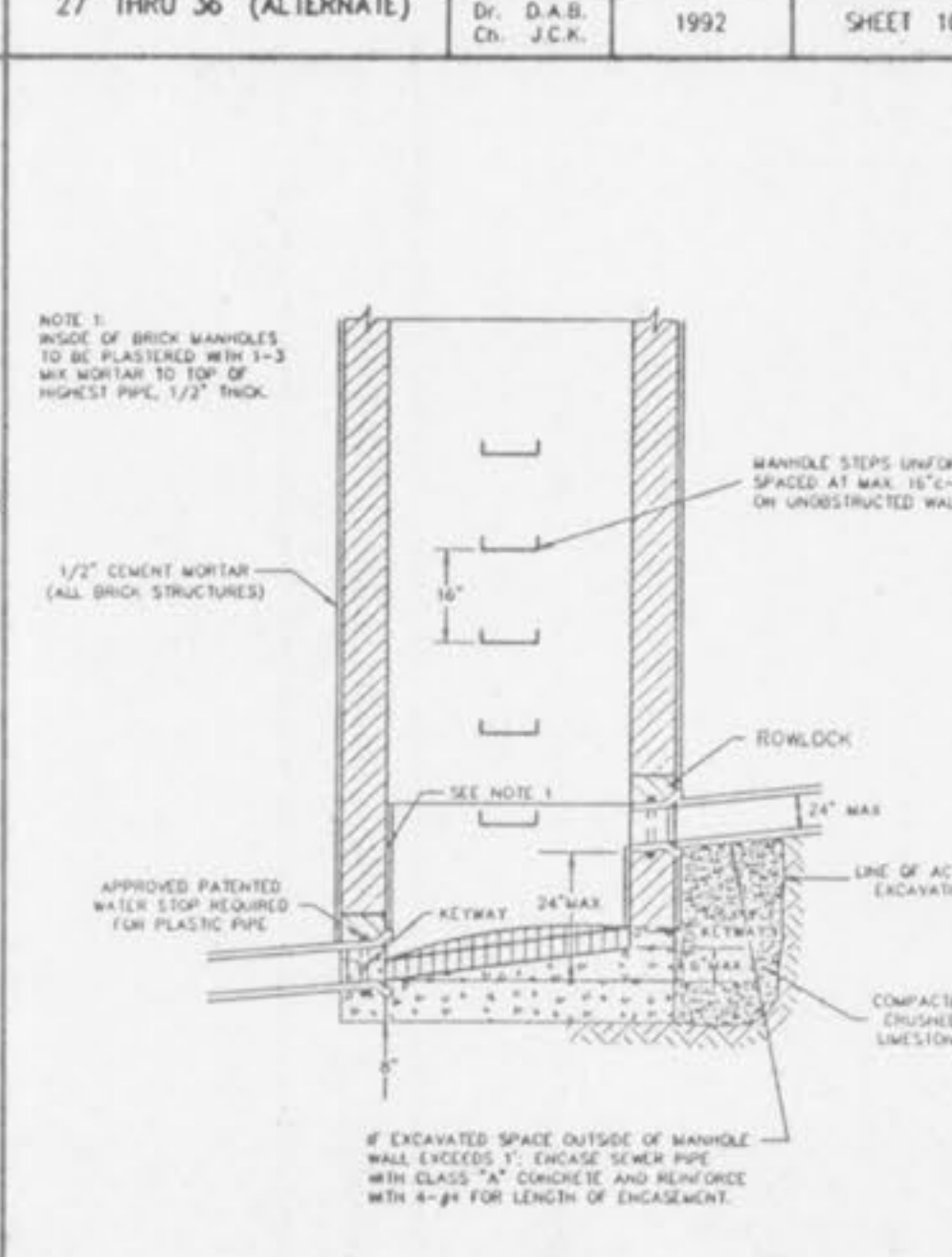
TYPICAL MANHOLE BASE
REINFORCED CONCRETE PIPE
SEWERS 60" AND LARGER
IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 13
Ch. J.C.K.



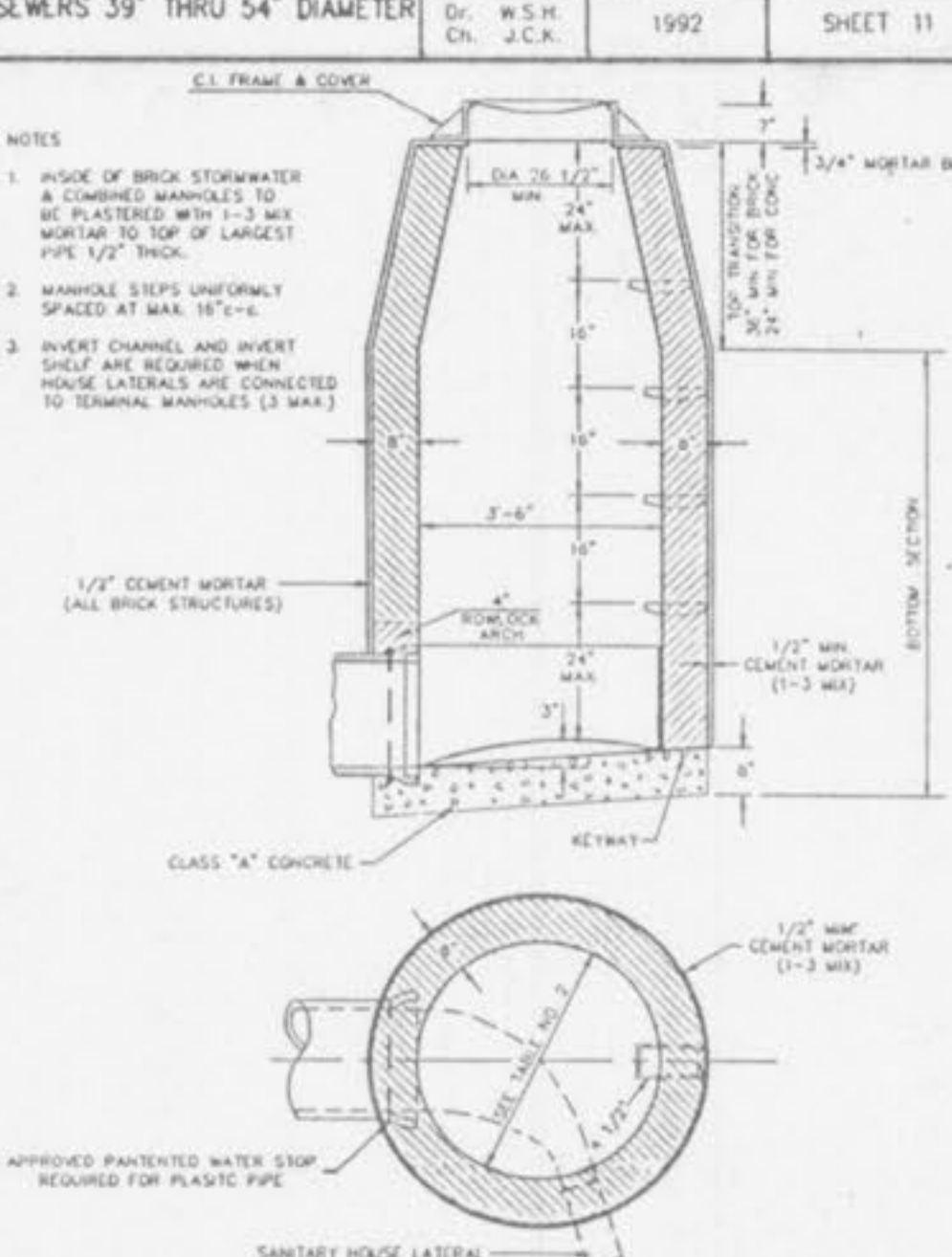
OUTSIDE FOULWATER
DROP MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.O.W. 1992 SHEET 14
Ch. J.C.K.



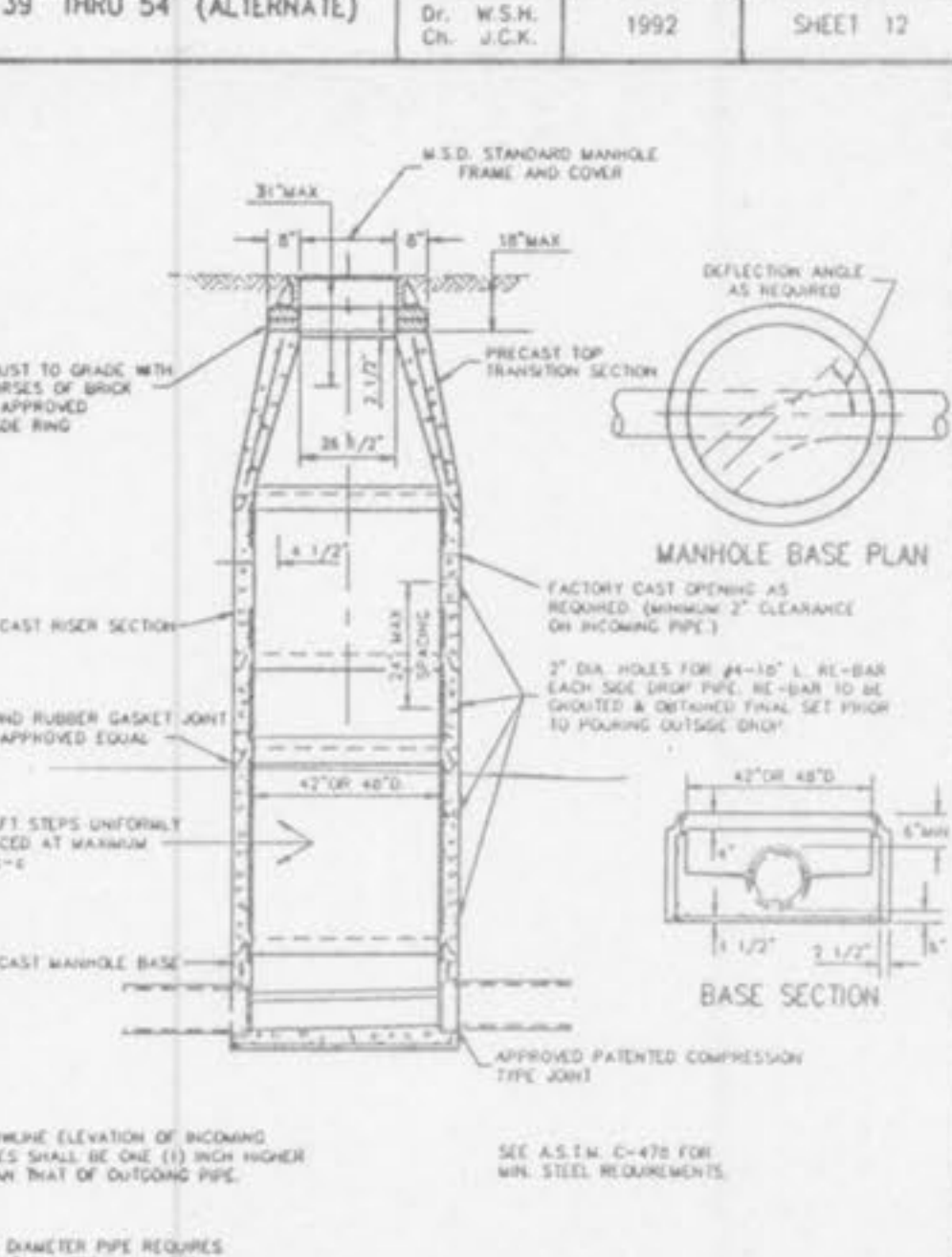
INSIDE FOULWATER
DROP MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.O.W. 1992 SHEET 15
Ch. J.C.K.



INSIDE FOULWATER
DROP MANHOLE
(FOR FREE-FALL)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 16
Ch. J.C.K.



TERMINAL MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 17
Ch. J.C.K.



PRE-CAST CONCRETE MANHOLE
FOR SEWERS
8" THROUGH 18"
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 1992 SHEET 18
Ch. J.C.K.