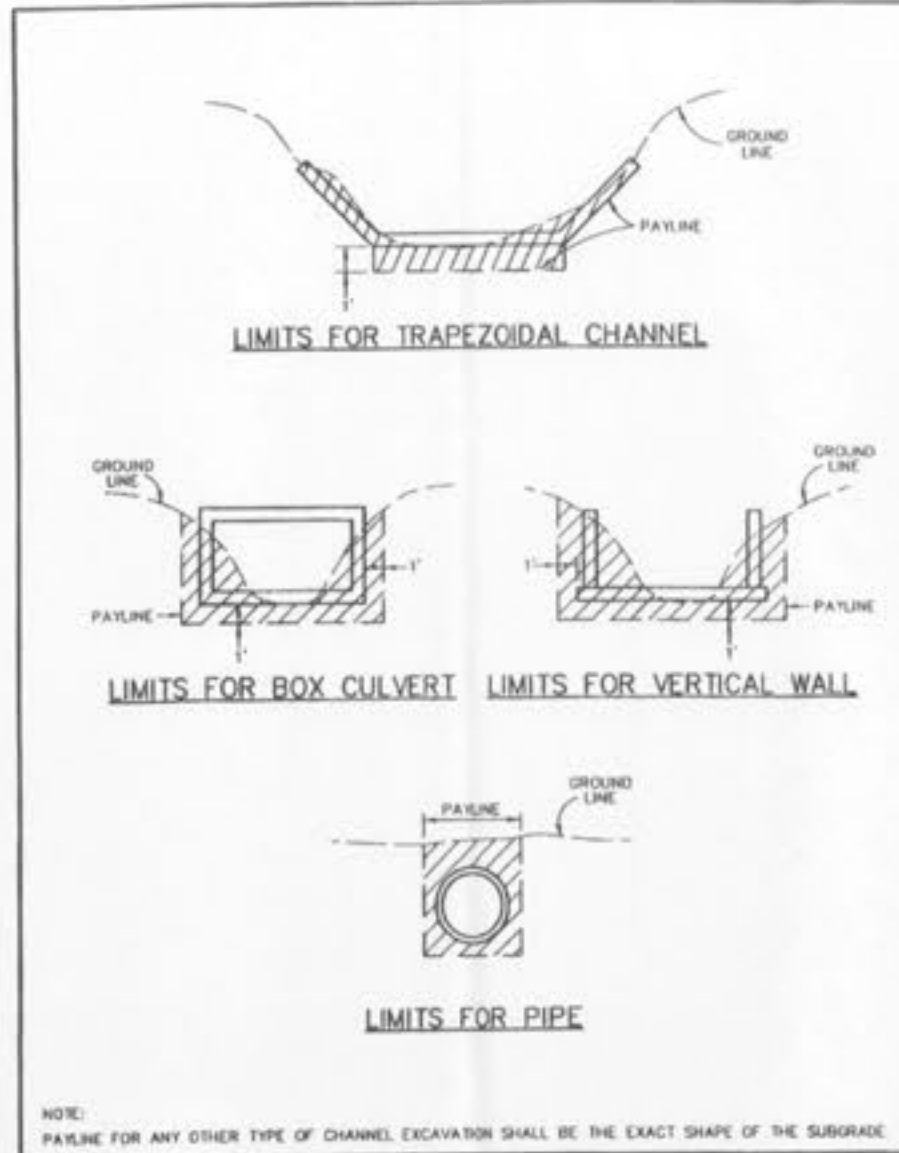
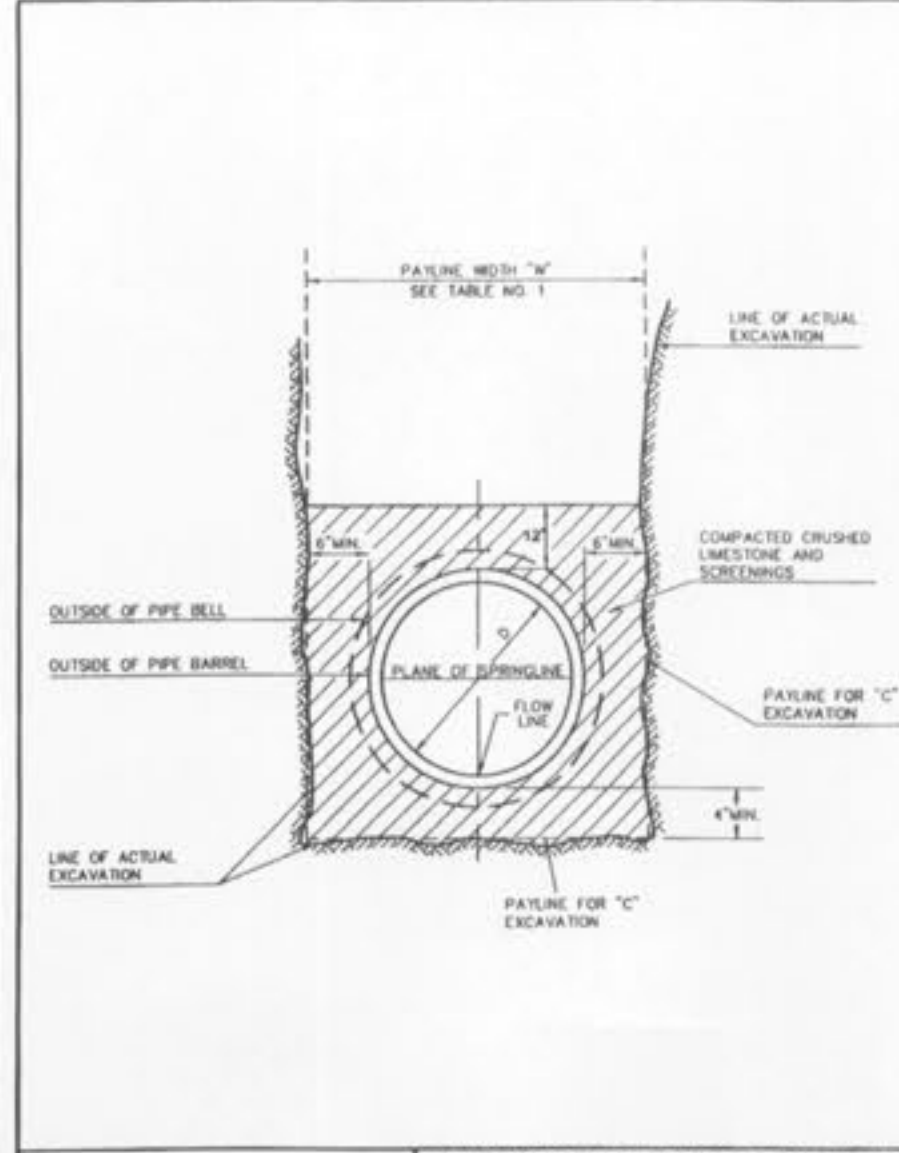


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
PIPE DIAMETER (INCHES)	4" PAYLINE WIDTH OF TRENCH (INCHES)	4" PAYLINE WIDTH OF TRENCH (FEET)	PAV. VOLUME SQ. FT. PER FT.	4" PAYLINE WIDTH OF PIPE (INCHES)	4" PAYLINE WIDTH OF TRENCH (FEET)	4" PAYLINE WIDTH OF TRENCH (FEET)	PAV. VOLUME SQ. FT. PER FT.
4	30	2.50	3.28				
6	30	2.50	3.59				
8	30	2.50	3.87				
10	30	2.50	4.09				
12	30	2.50	4.25				
15	36	3.00	5.55				
18	36	3.00	5.77	14 x 23	41	3.42	5.94
21	39	3.25	6.61				
24	42	3.50	7.36	18 x 30	49	4.08	7.68
27	42	3.50	7.96	22 x 34	55	4.42	8.61
30	48	4.00	9.30	24 x 38	58	4.83	9.70
33	53	4.42	10.53	27 x 42	62	5.17	10.71
36	56	4.67	11.43	29 x 45	66	5.50	11.72
39	60	5.00	12.50	32 x 48	71	5.92	13.14
42	63	5.25	13.38	34 x 53	75	6.25	14.00
48	70	5.83	15.67	38 x 60	83	6.92	16.18
54	77	6.42	18.15	43 x 66	92	7.67	18.81
60	84	7.00	20.73	48 x 76	101	8.42	21.59
66	91	7.58	23.43	53 x 83	109	9.08	24.35
72	98	8.17	26.37	58 x 91	118	9.83	27.43
78	105	8.75	29.38	63 x 98	126	10.50	30.50
84	112	9.33	32.57	68 x 106	135	11.25	33.81
90	119	9.92	35.90	72 x 113	143	11.92	36.99
96	126	10.50	38.37	77 x 121	152	12.67	40.89
102	133	11.08	42.99	82 x 128	160	13.33	44.43
108	140	11.67	46.73	87 x 136	168	14.00	47.79
114	147	12.25	50.60	92 x 143	176	14.67	51.70
120	154	12.83	54.72	97 x 151	185	15.42	56.01
126	161	13.42	58.92				
132	168	14.00	63.27	106 x 166	202	16.83	64.48
144	182	15.17	72.40	118 x 180	218	18.17	73.59

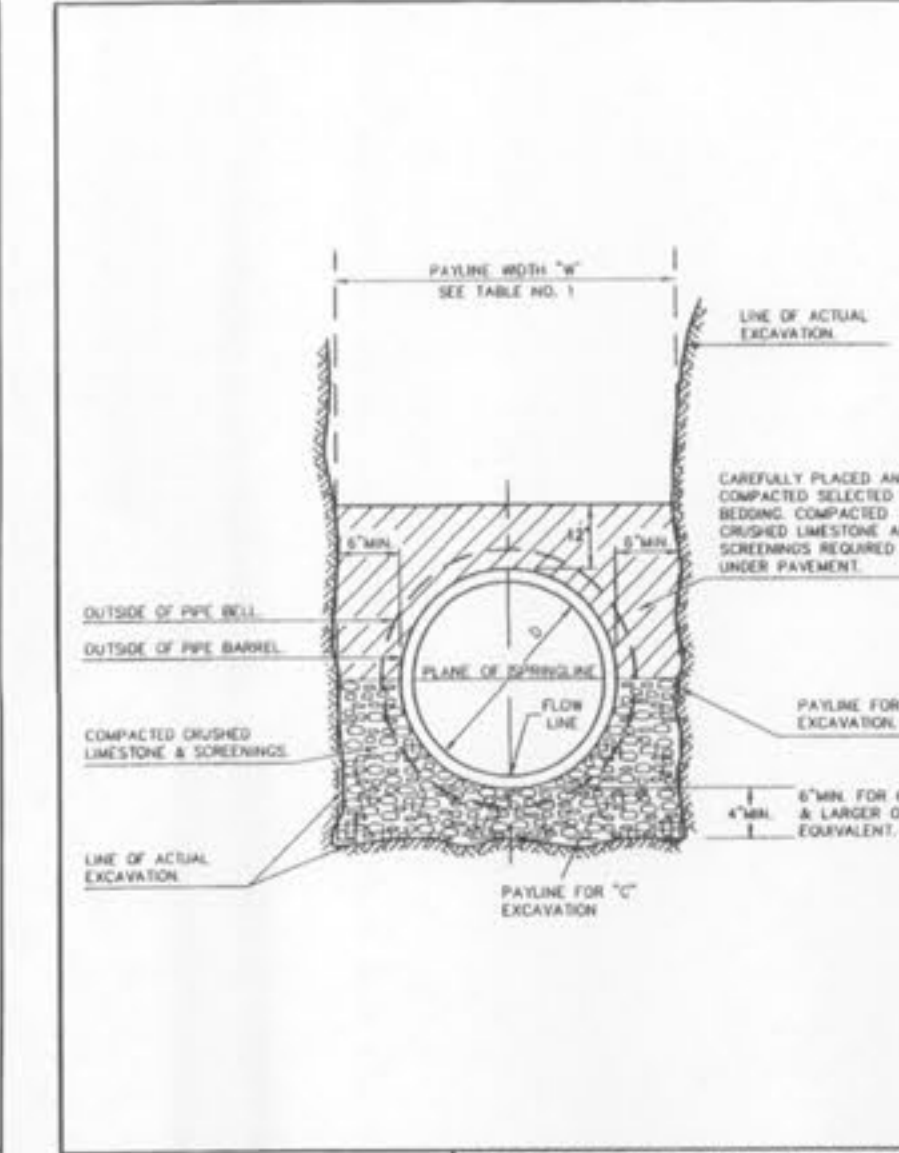
TABLE 1
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. B.C.B. 2000
Ch. J.C.K. SHEET 1



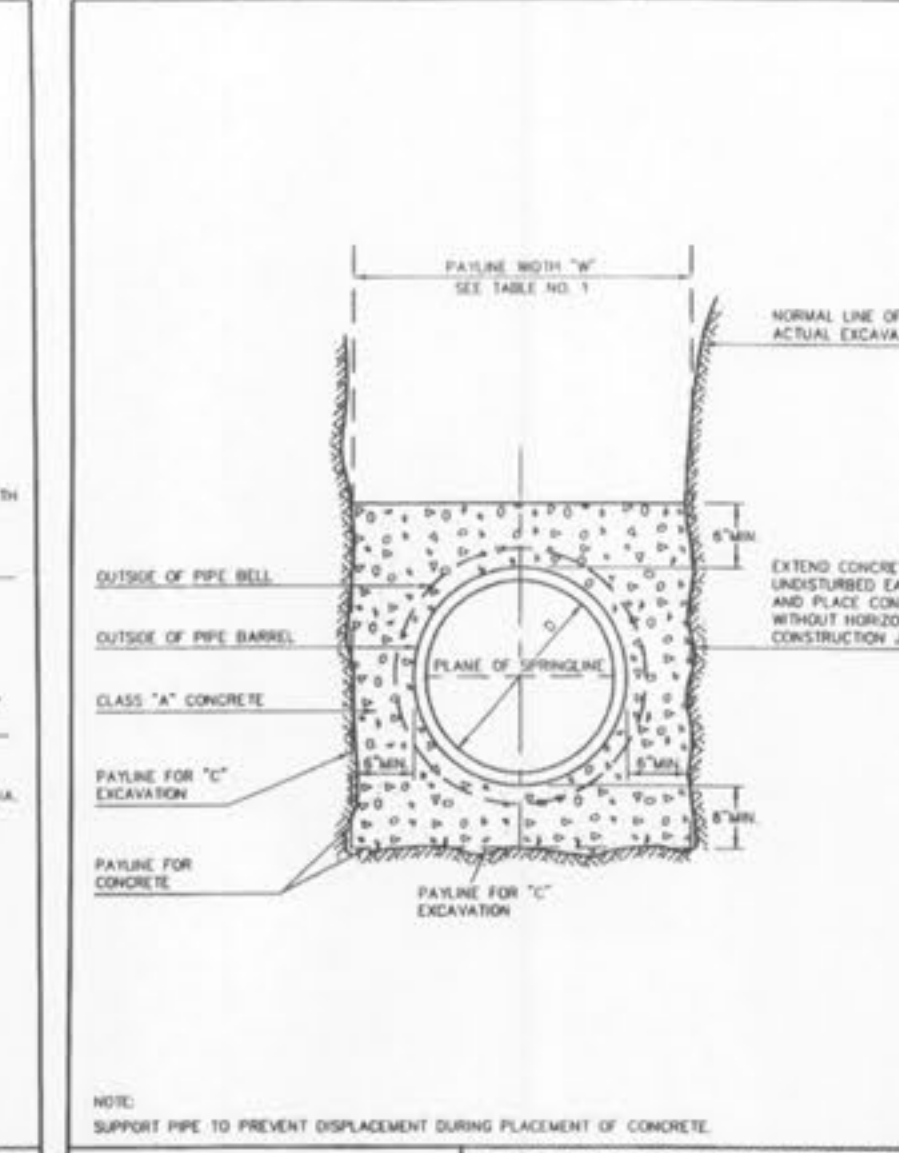
NOTE: PAYLINE FOR ANY OTHER TYPE OF CHANNEL EXCAVATION SHALL BE THE EXACT SHAPE OF THE SUBGRADE.
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 2000
Ch. J.C.K. SHEET 2



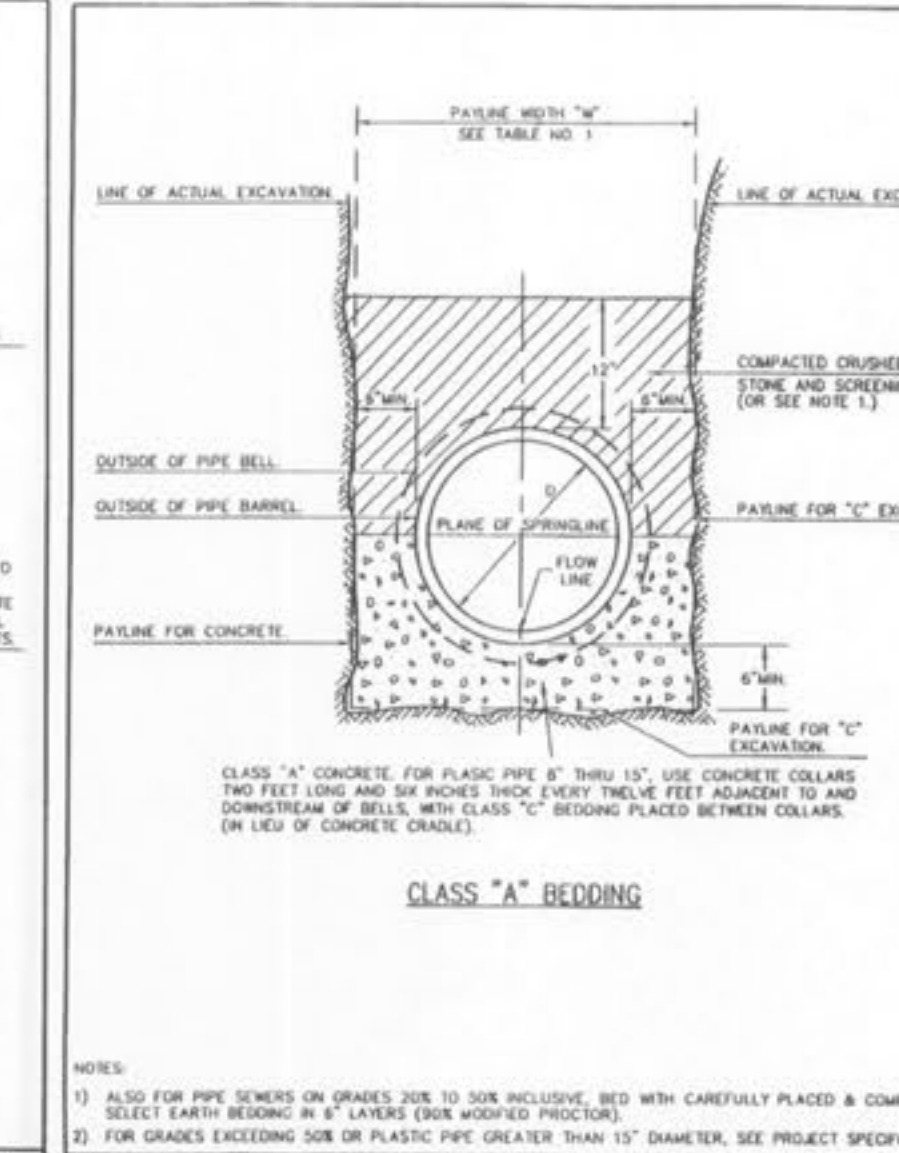
PIPE BEDDING CLASS "C" (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 2000
Ch. J.C.K. SHEET 4



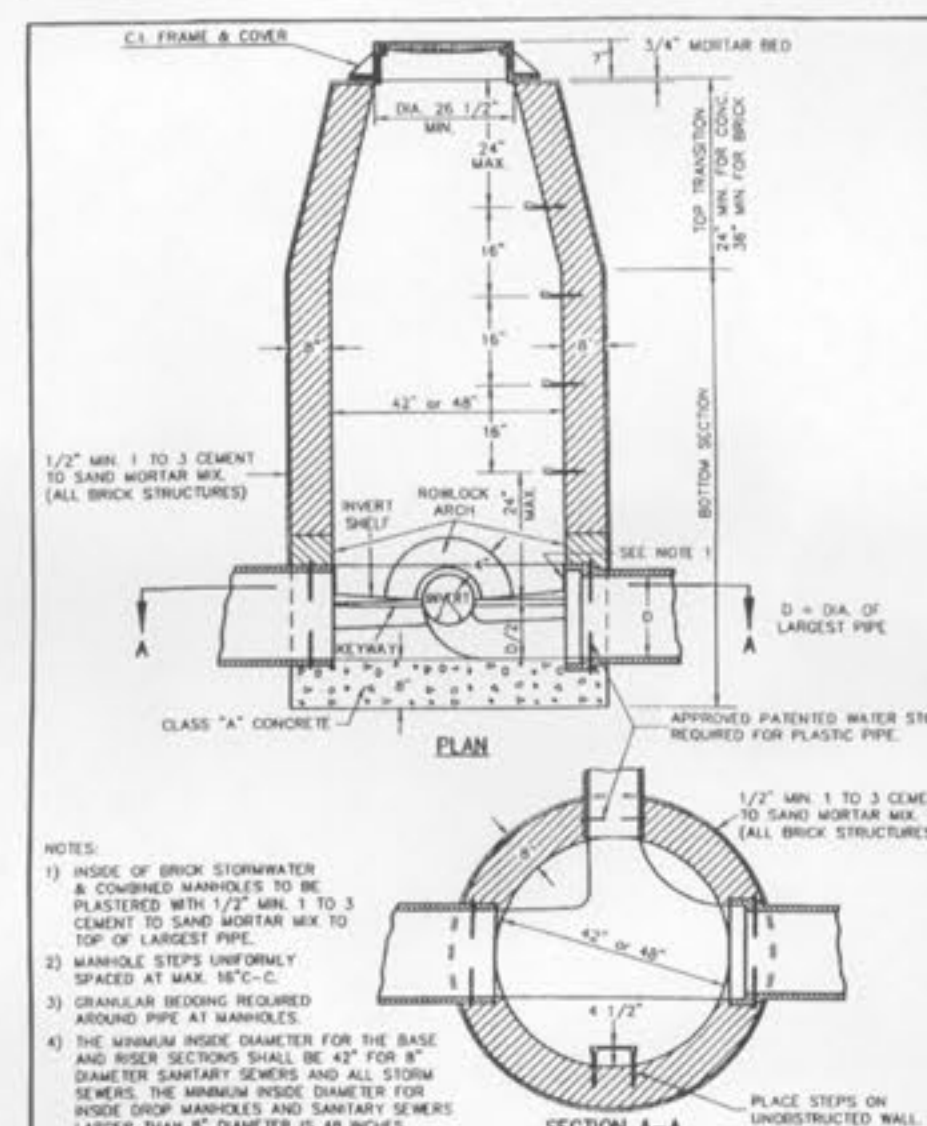
PIPE BEDDING CLASS "C" (MODIFIED FOR REINFORCED CONCRETE PIPE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 2000
Ch. J.C.K. SHEET 5



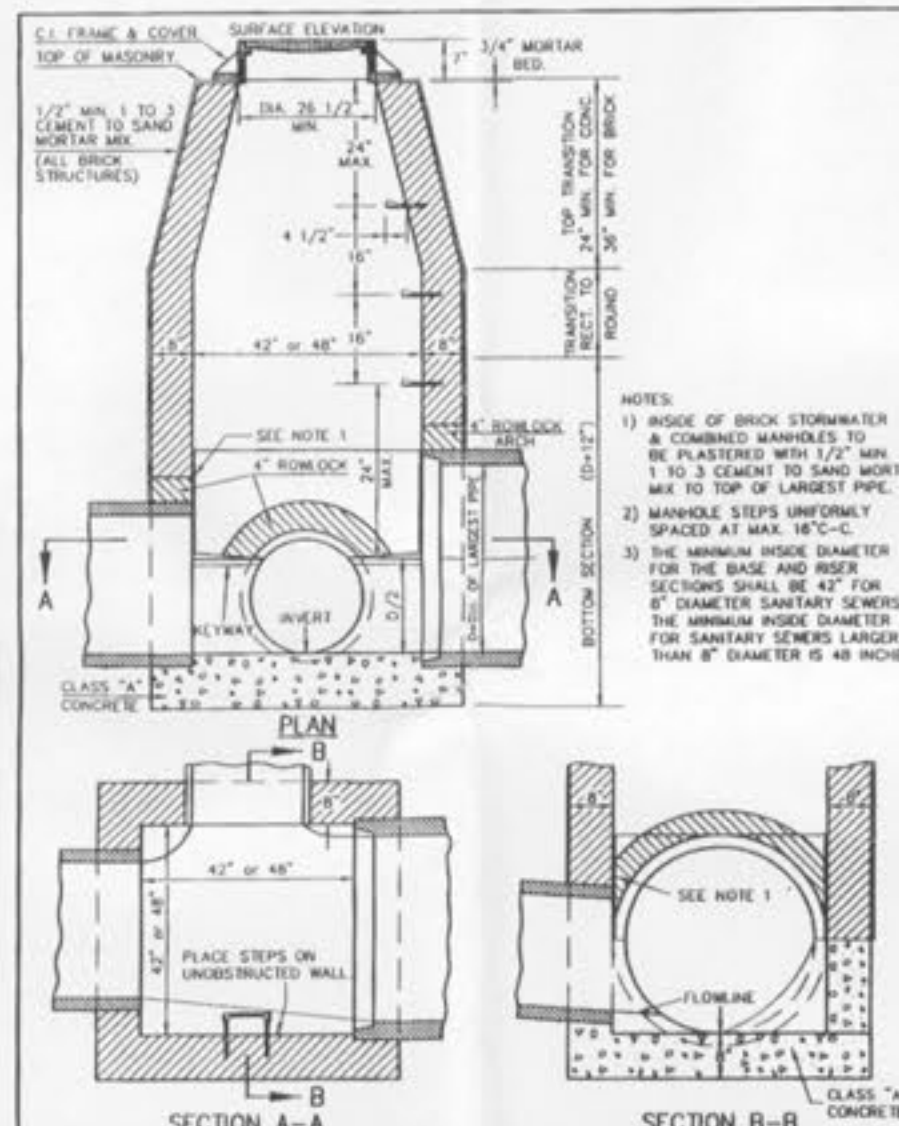
CONCRETE ENCASEMENT
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 2000
Ch. J.C.K. SHEET 8



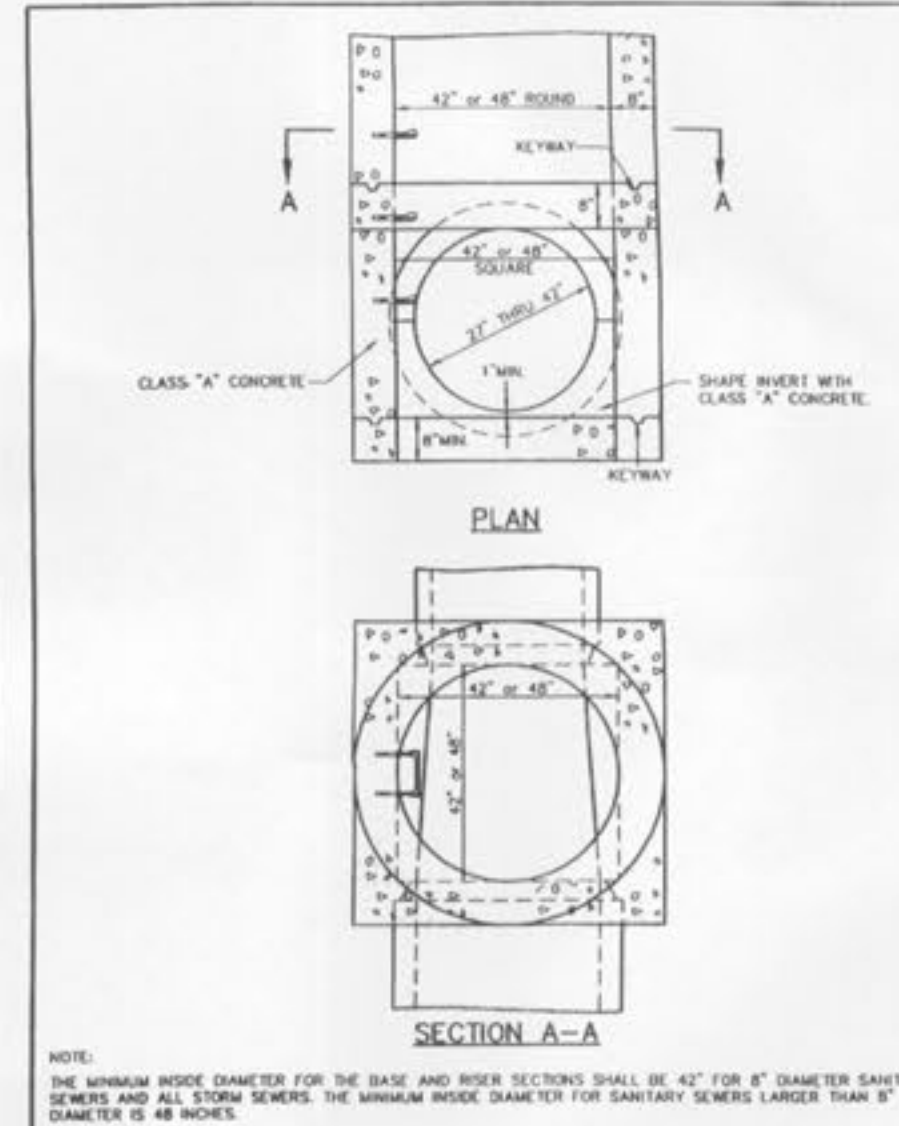
CONCRETE CRADLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 2000
Ch. J.C.K. SHEET 9



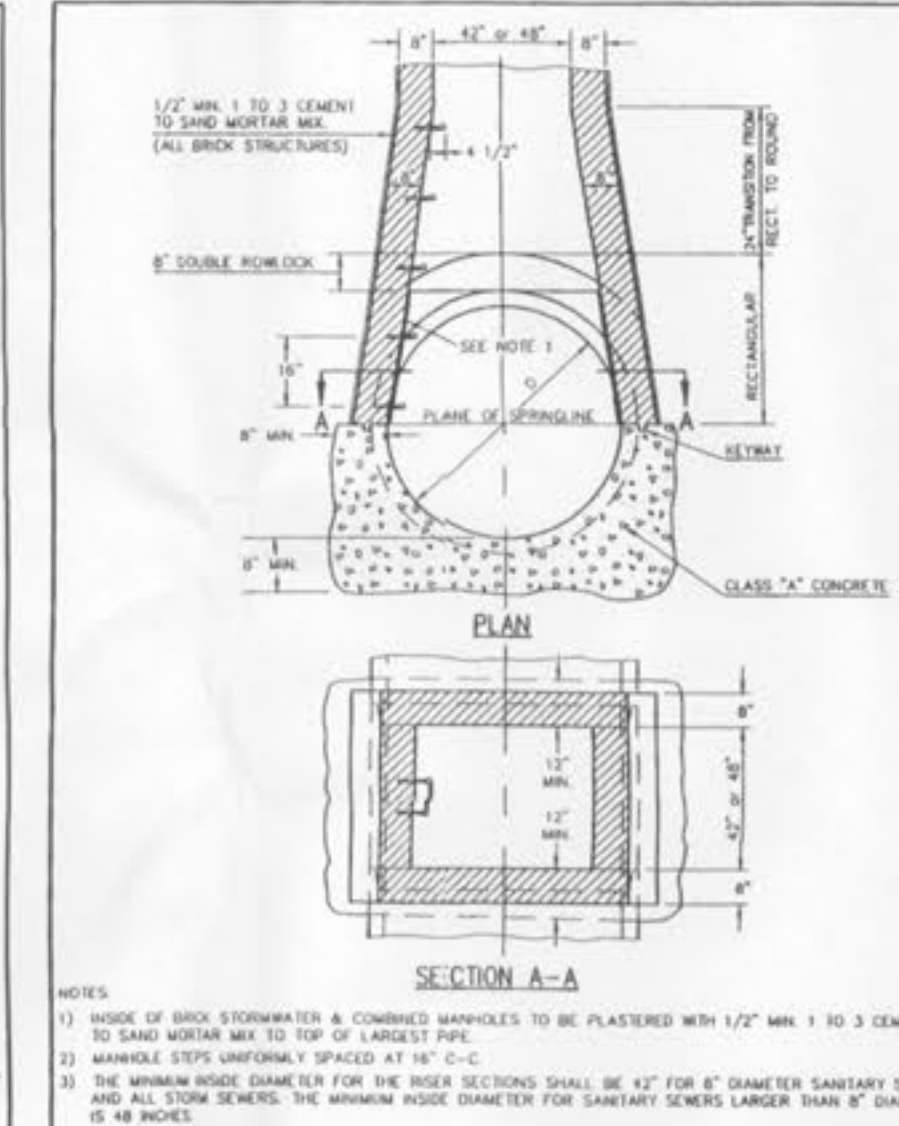
LINE MANHOLE PIPE SEWERS 8"-24" DIA.
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H./S.A.M. 2000
Ch. J.C.K. SHEET 10



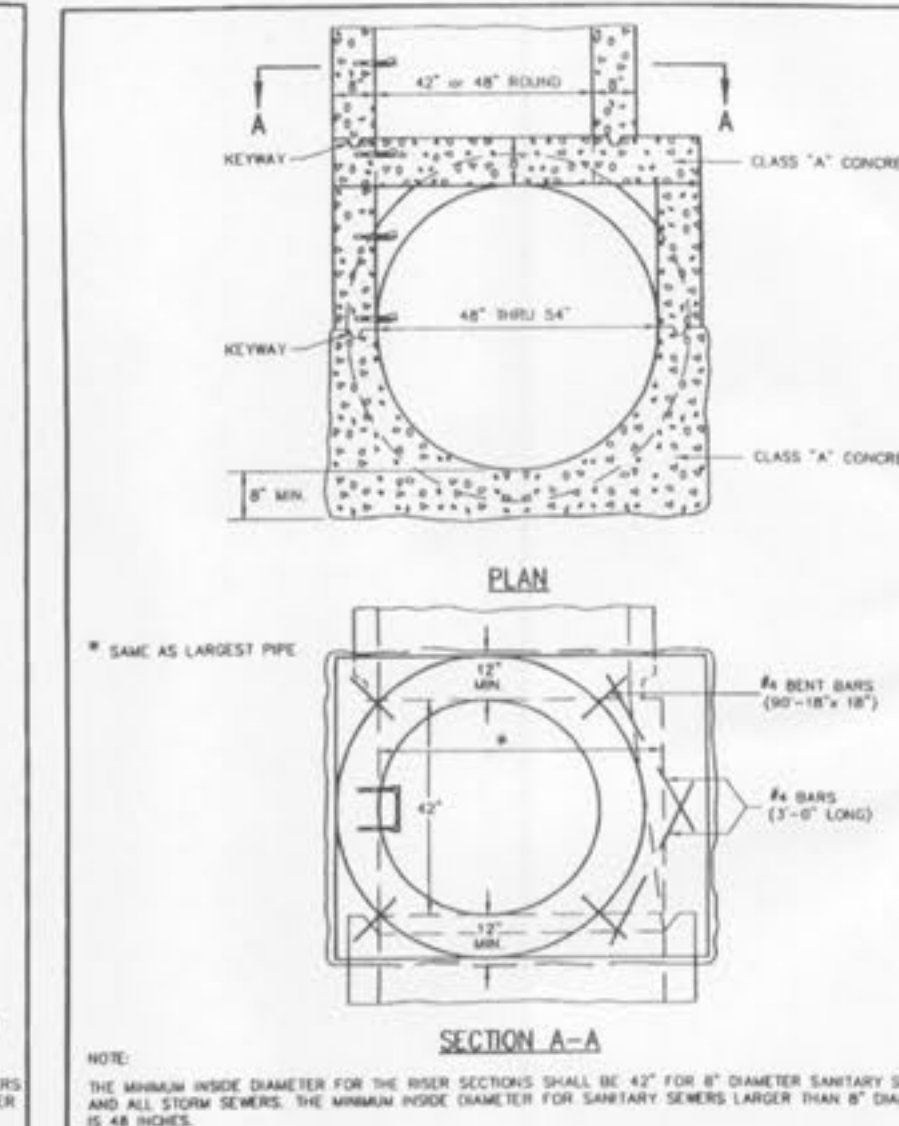
TYPICAL MANHOLE ON PIPE SEWER 27" THRU 42" IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H./S.A.M. 2000
Ch. J.C.K. SHEET 11



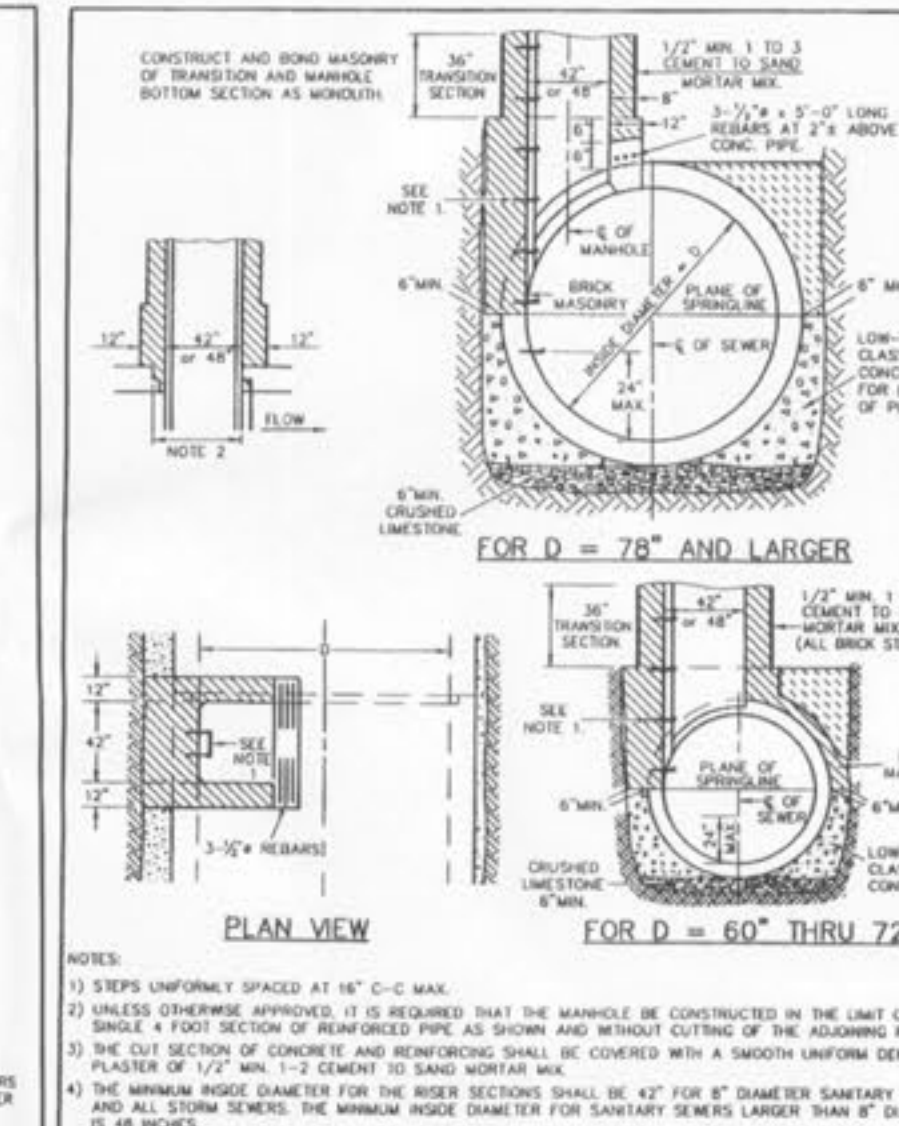
MANHOLE ON PIPE SEWER 27" THRU 42" (ALTERNATE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. D.A.B./S.A.M. 2000
Ch. J.C.K. SHEET 12



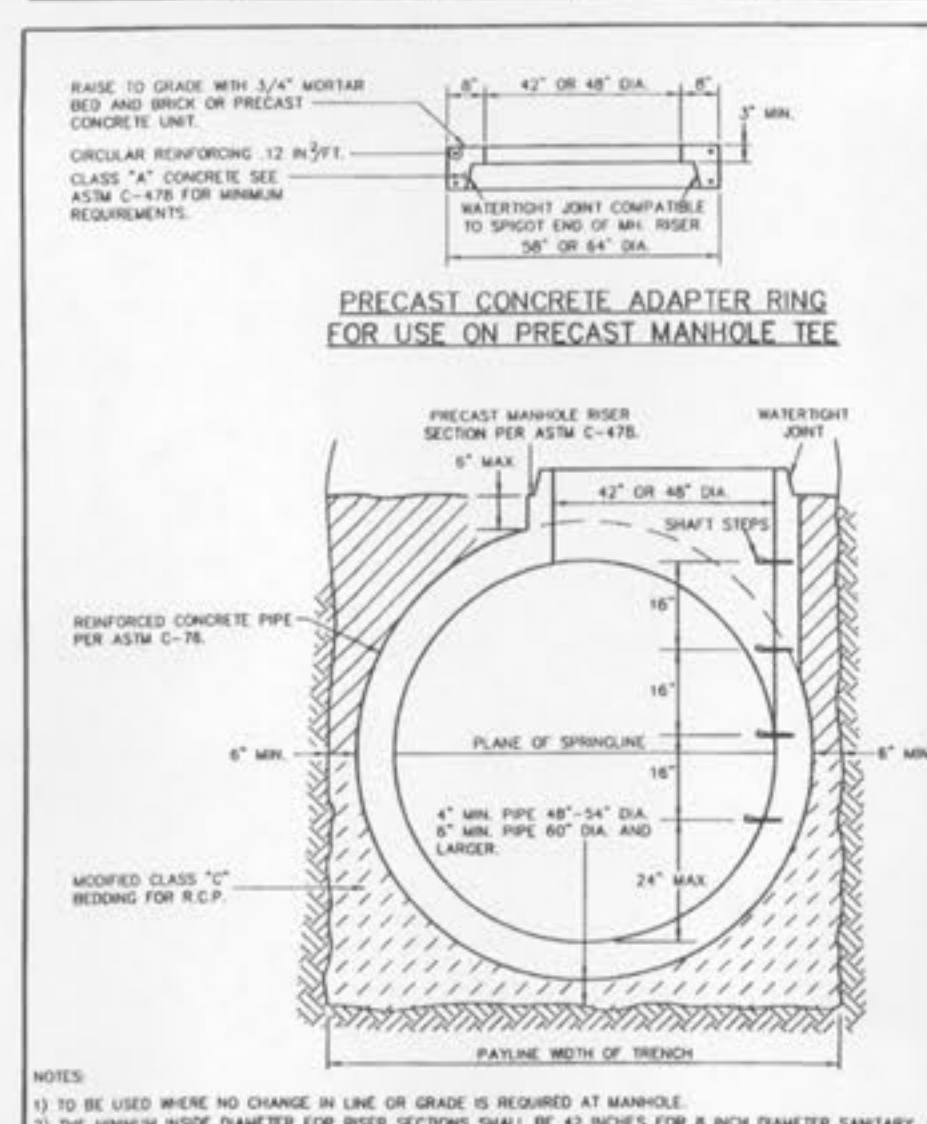
MANHOLE ON CONCRETE PIPE SEWERS 48" THRU 54" DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H./S.A.M. 2000
Ch. J.C.K. SHEET 13



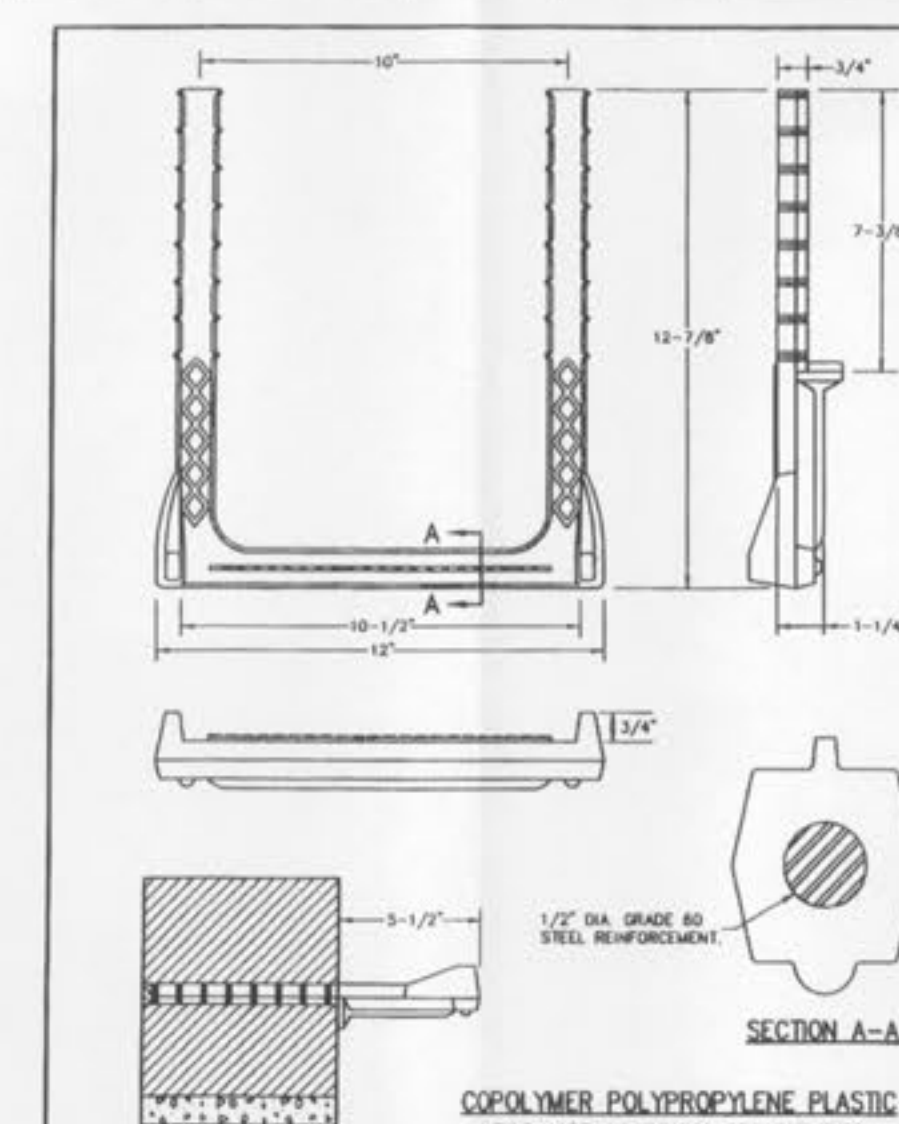
MANHOLE ON CONC. PIPE 48" THRU 54" (ALTERNATE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H./S.A.M. 2000
Ch. J.C.K. SHEET 14



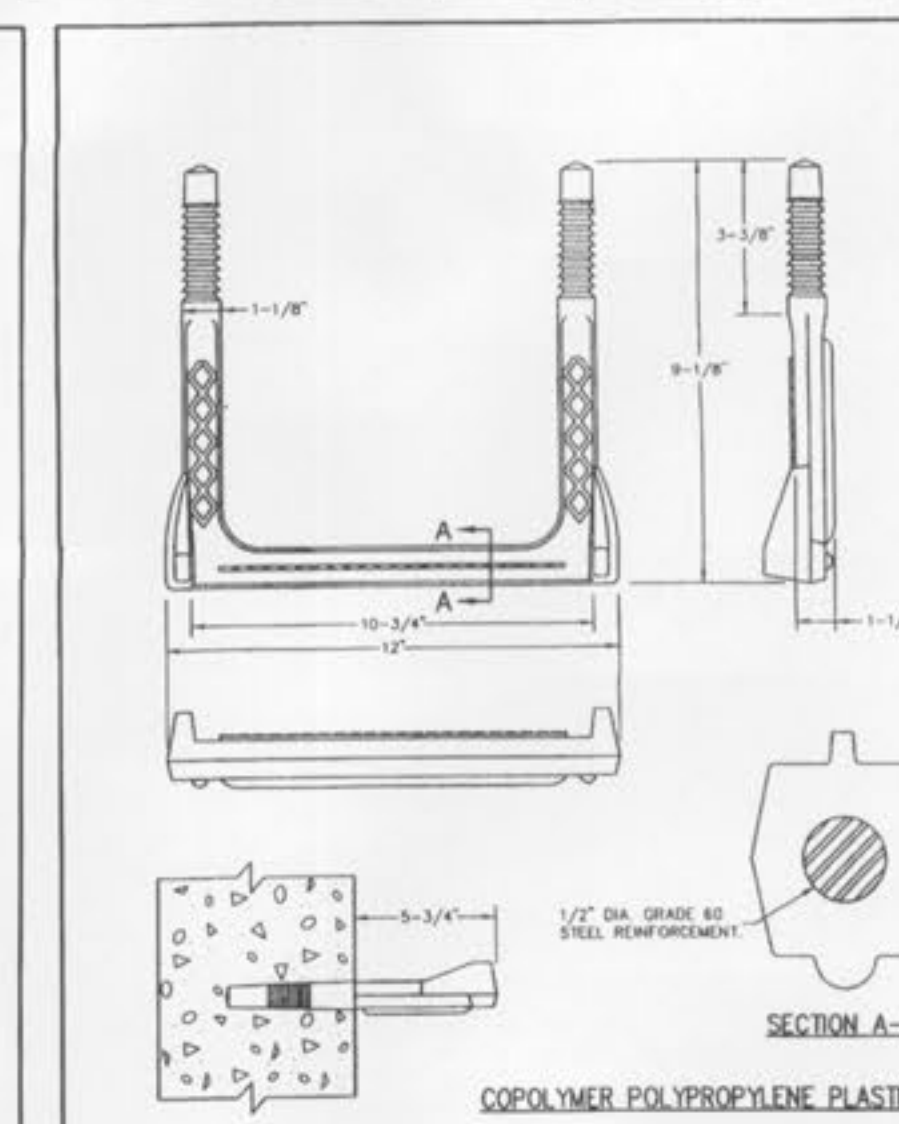
TYPICAL MANHOLE BASE REINFORCED CONCRETE PIPE SEWERS 60" AND LARGER IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H./S.A.M. 2000
Ch. J.C.K. SHEET 15



TYPICAL PRECAST MANHOLE TEE FOR REINFORCED CONCRETE PIPE SEWERS 48 INCH AND LARGER IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H./S.A.M. 2000
Ch. J.C.K. SHEET 24



PSI-B MANHOLE STEP INTO JOINT
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. 2000
Ch. J.C.K. SHEET 57



MANHOLE STEP FOR PRECAST & CAST-IN-PLACE MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. D.A.B. 2000
Ch. J.C.K. SHEET 58

Provide a marking on all storm sewer inlets. The City will allow the following markers and adhesive procedures only as shown in the table below or an approved equal by aometek industries. "Peel and stick" adhesive pads will not be allowed.

MANUFACTURER	SIZE	ADHESIVE	STYLE	MESSAGE (PART#)	WEBSITE
ACP INTERNATIONAL	3 7/8"	epoxy	crystal cap	no dumping drains to waterways (sd-w-cs)	www.acpinternational.com
DAS MANUFACTURING, Inc.	4"	epoxy	Standard style	no dumping drains to stream (sds)	www.dasmanufacturing.com

STORM SEWER DETAILS
FOR CHRISTIAN
BROTHERS AUTOMOTIVE

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63801
TEL: (636) 947-0607 FAX: (636) 947-2448



ORDER NO. 08-0643-01
DATE 02-20-09
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