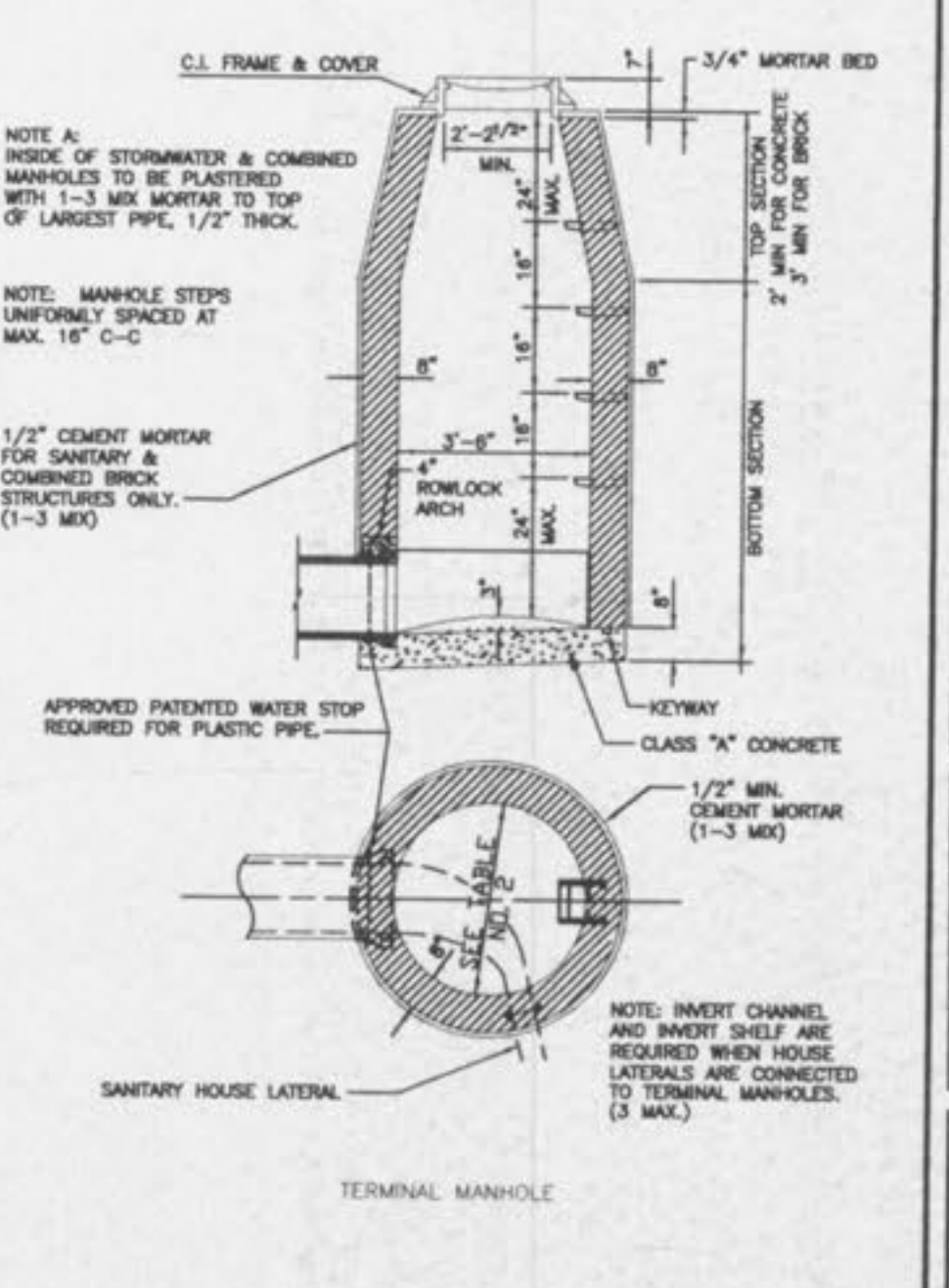
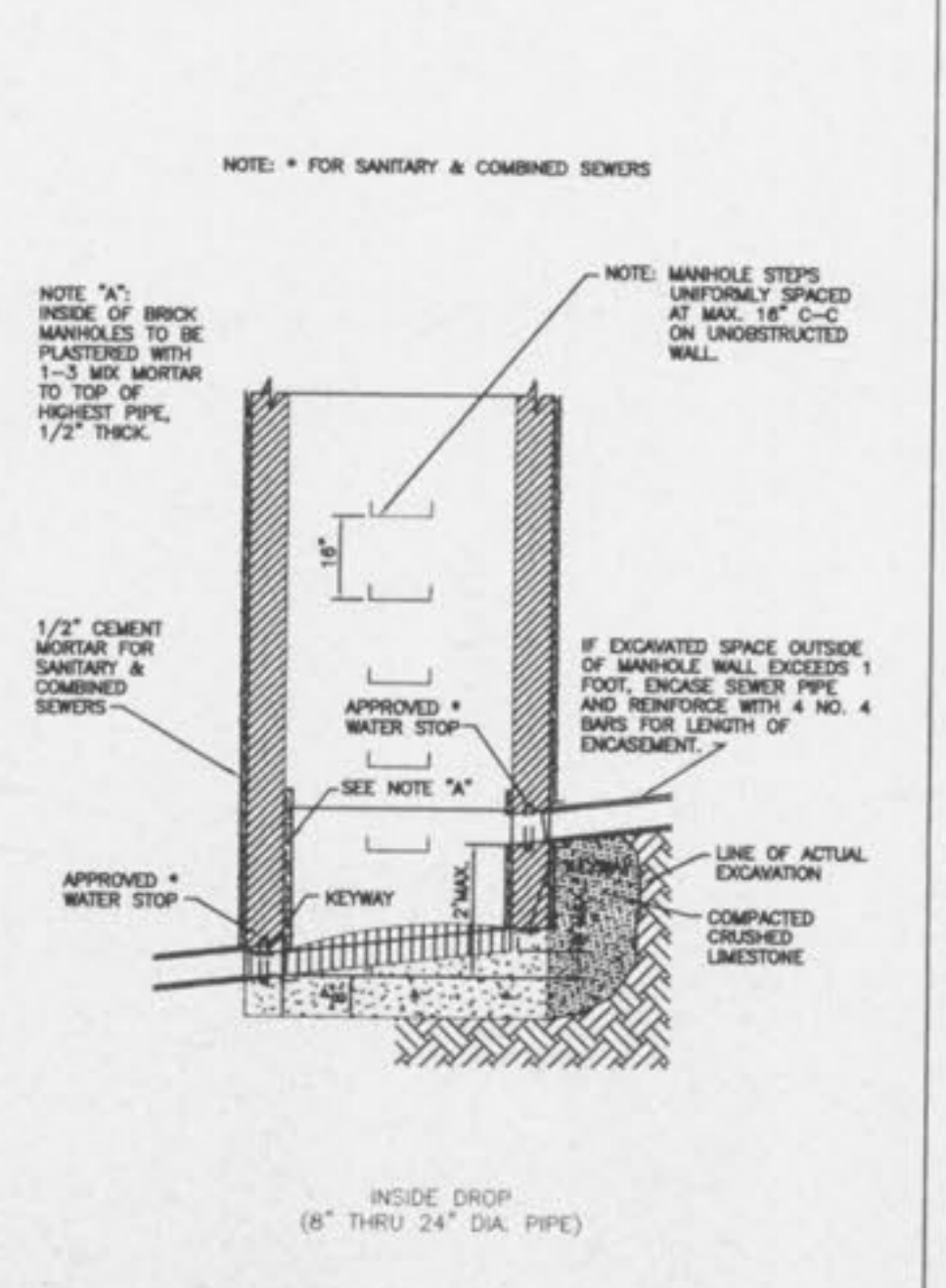
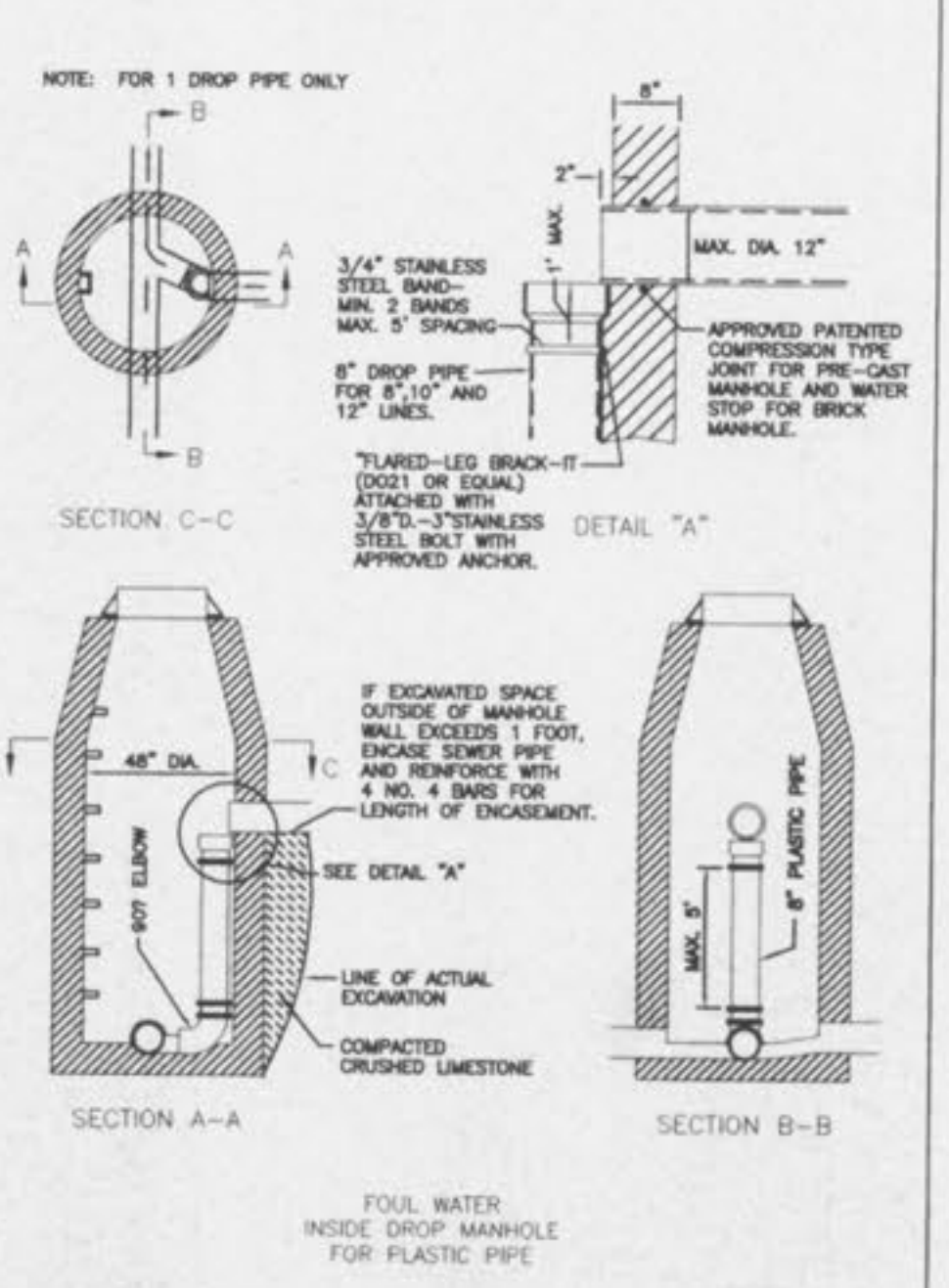
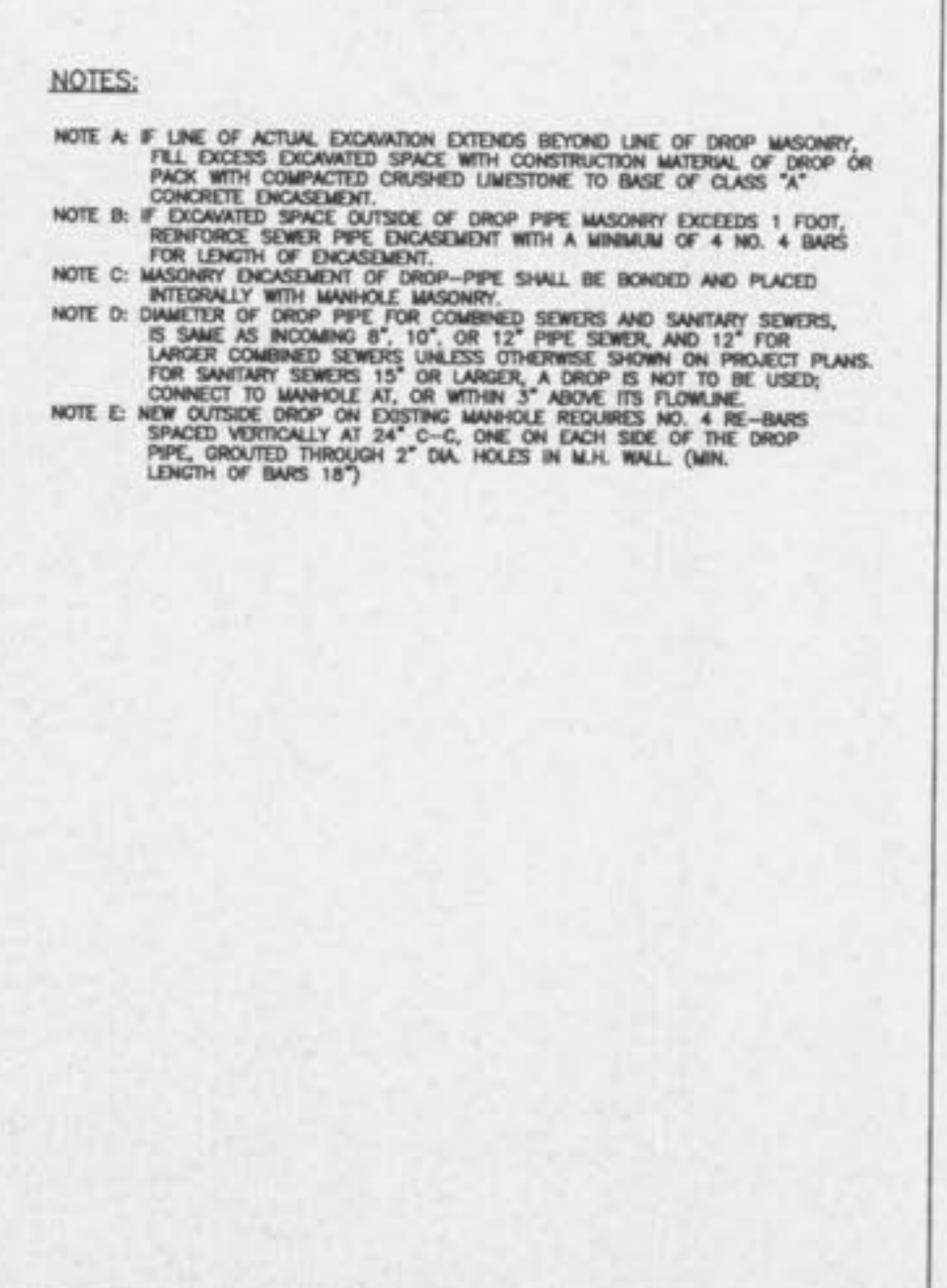
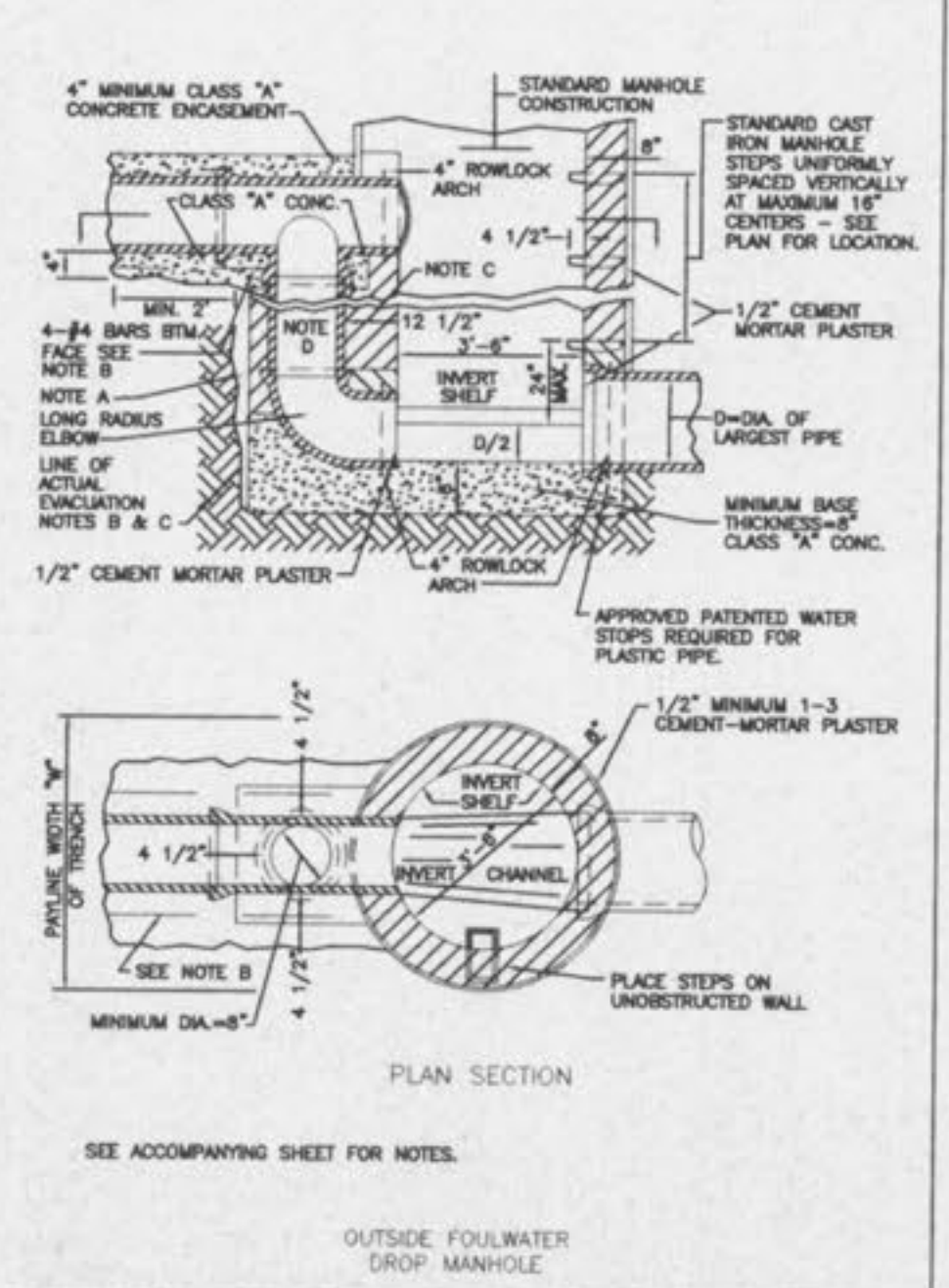
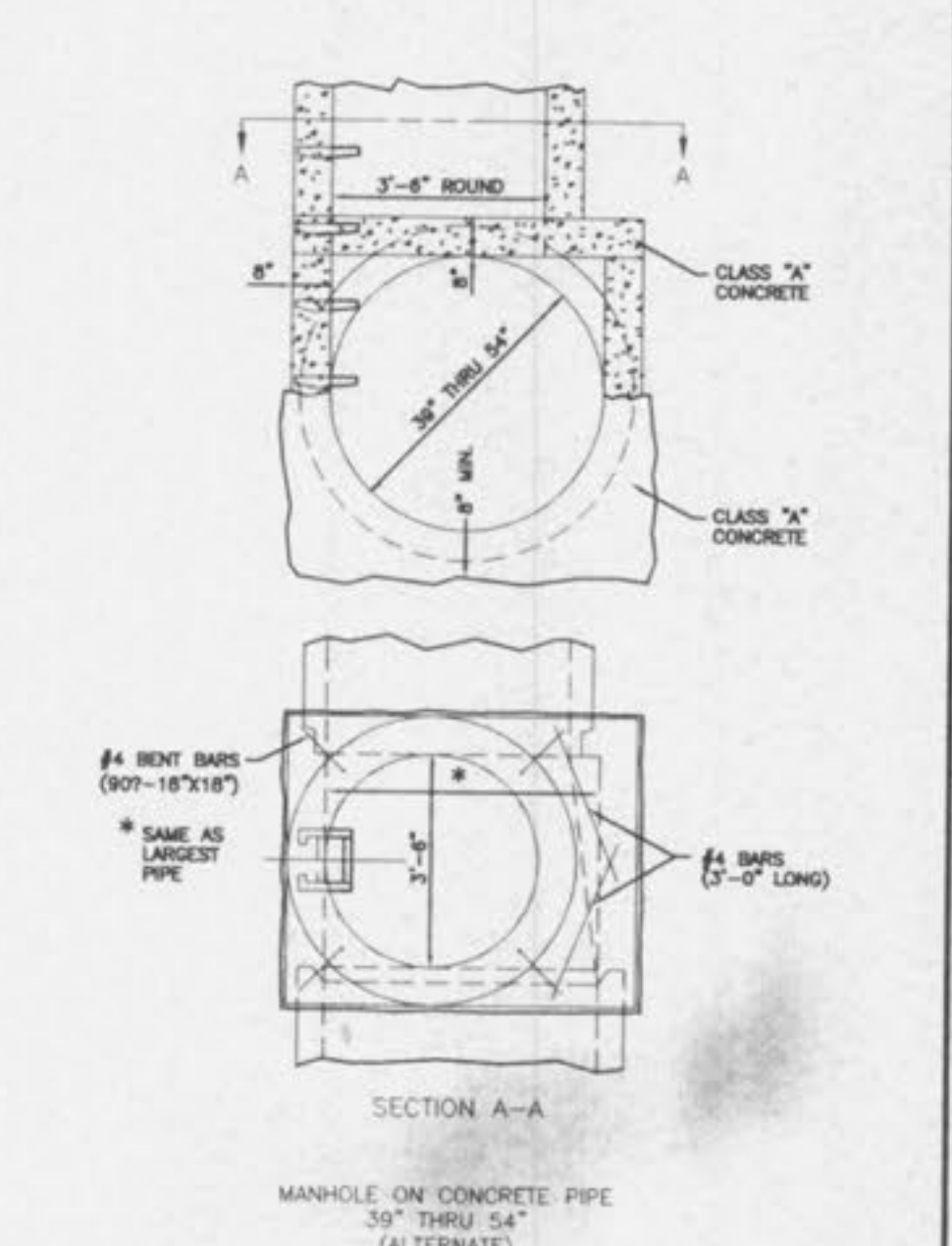
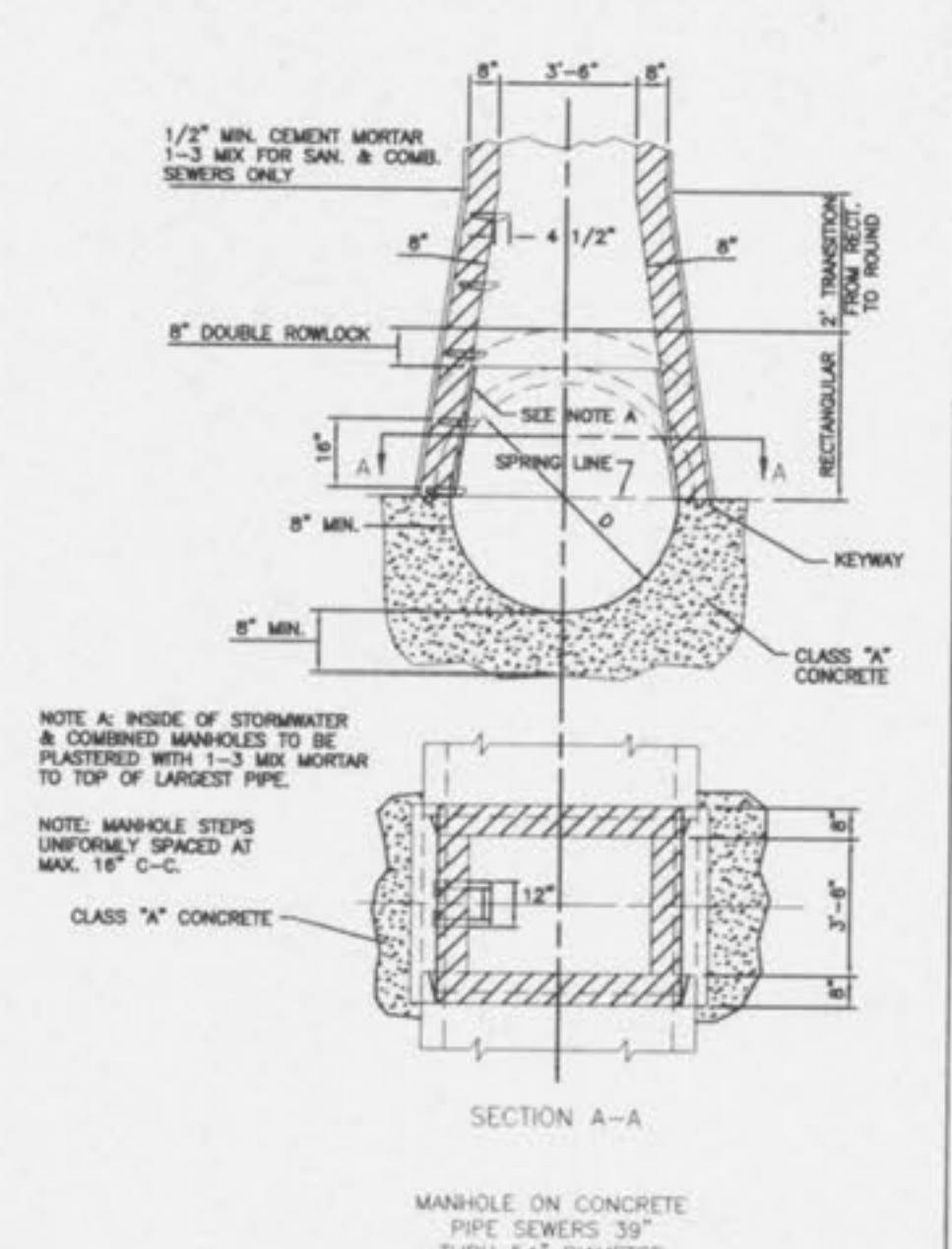
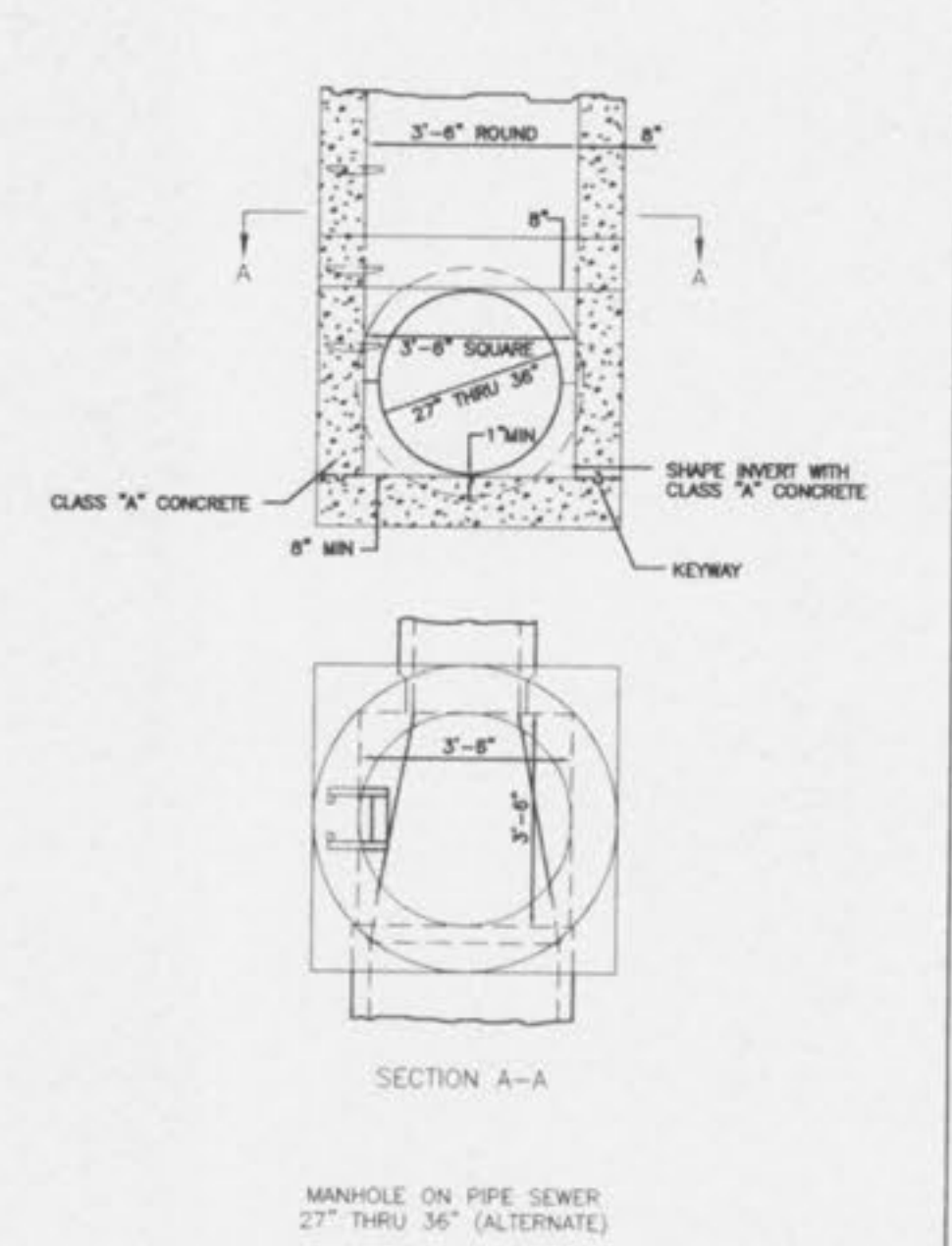
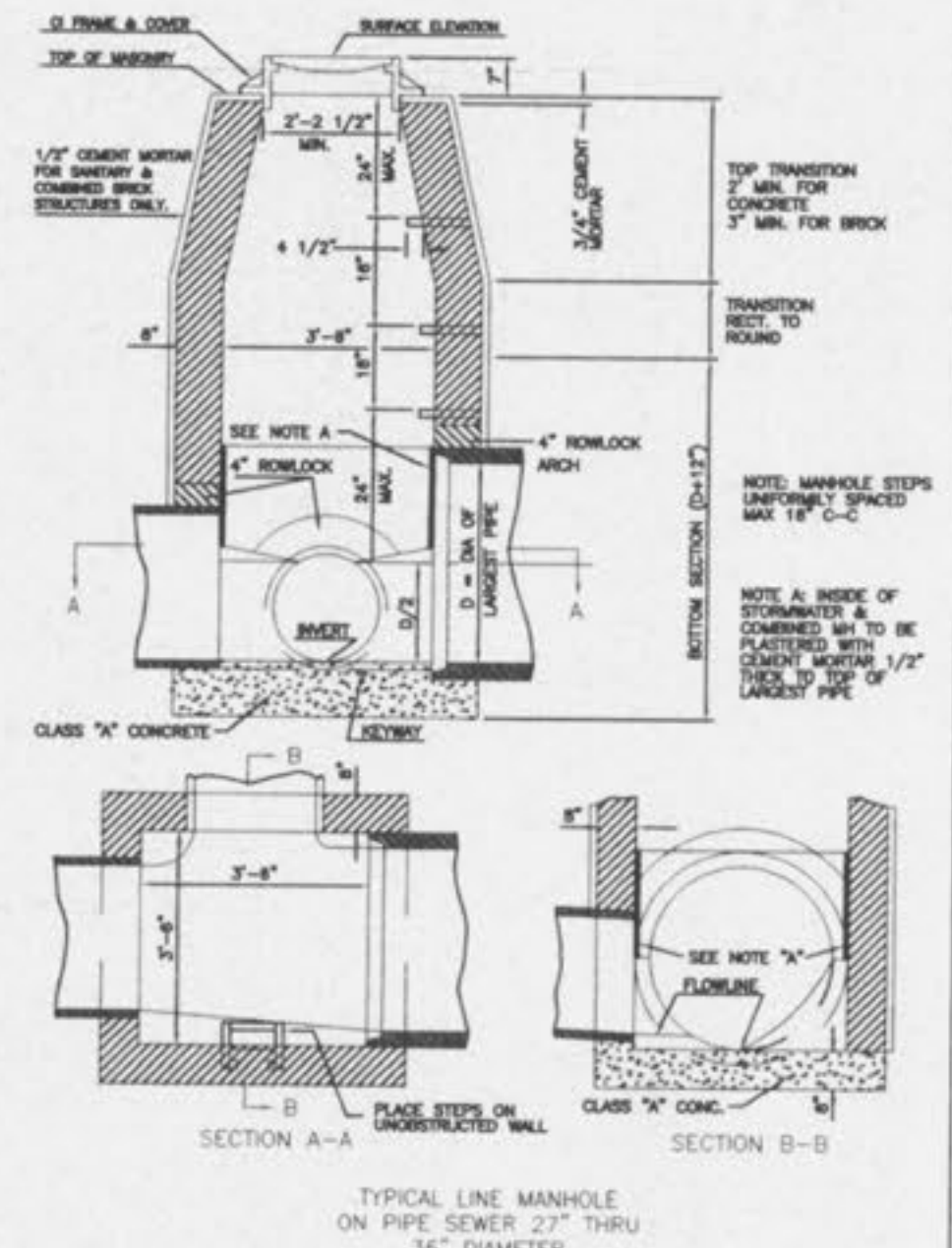
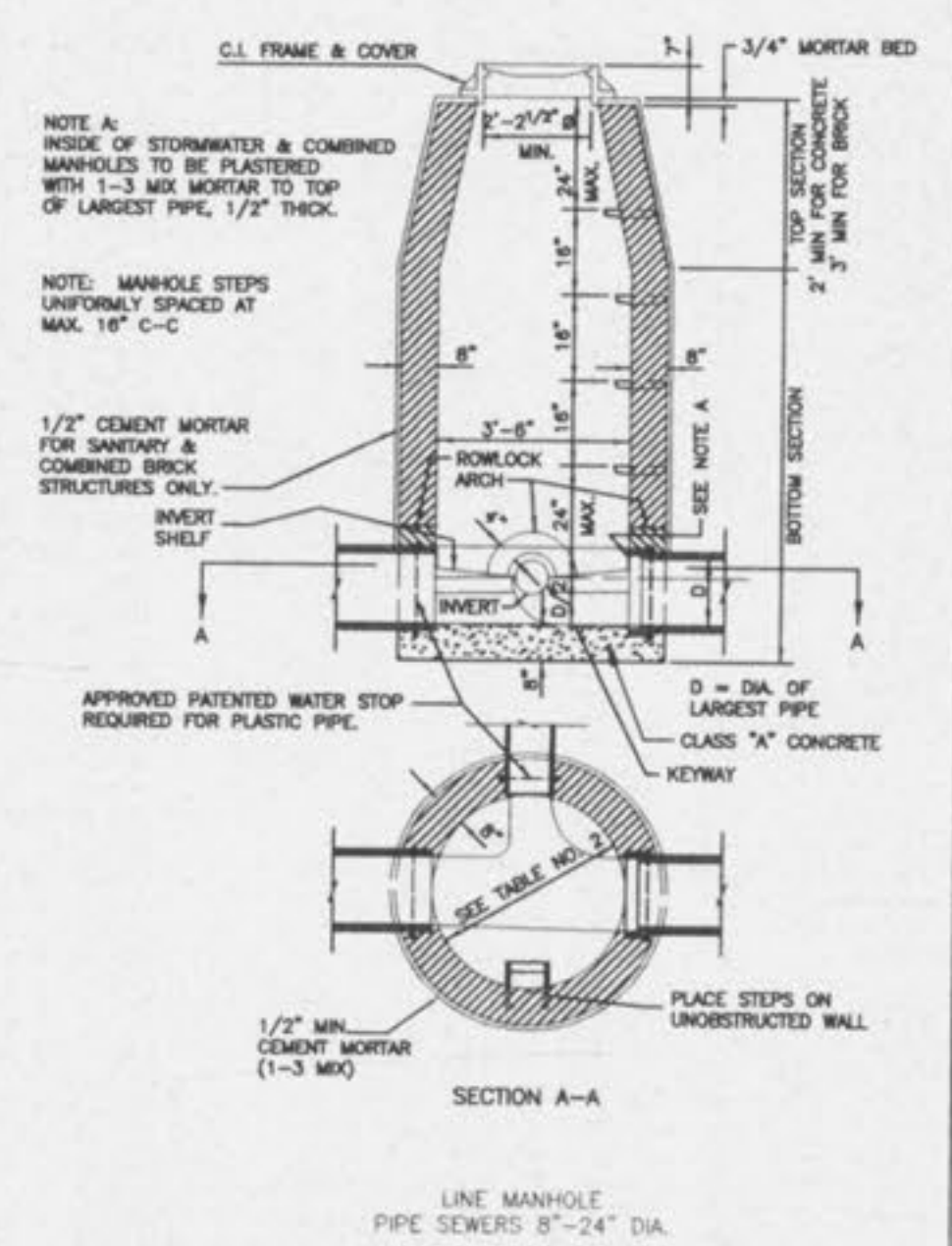
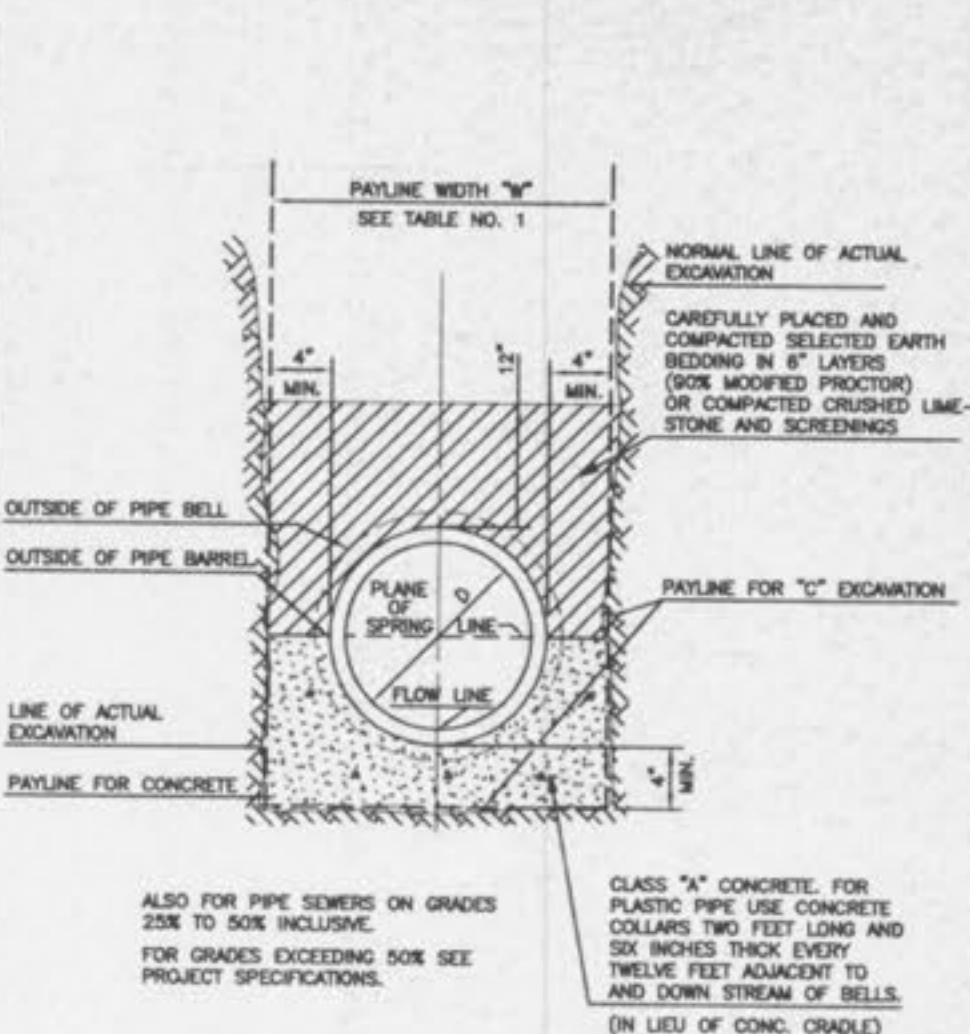
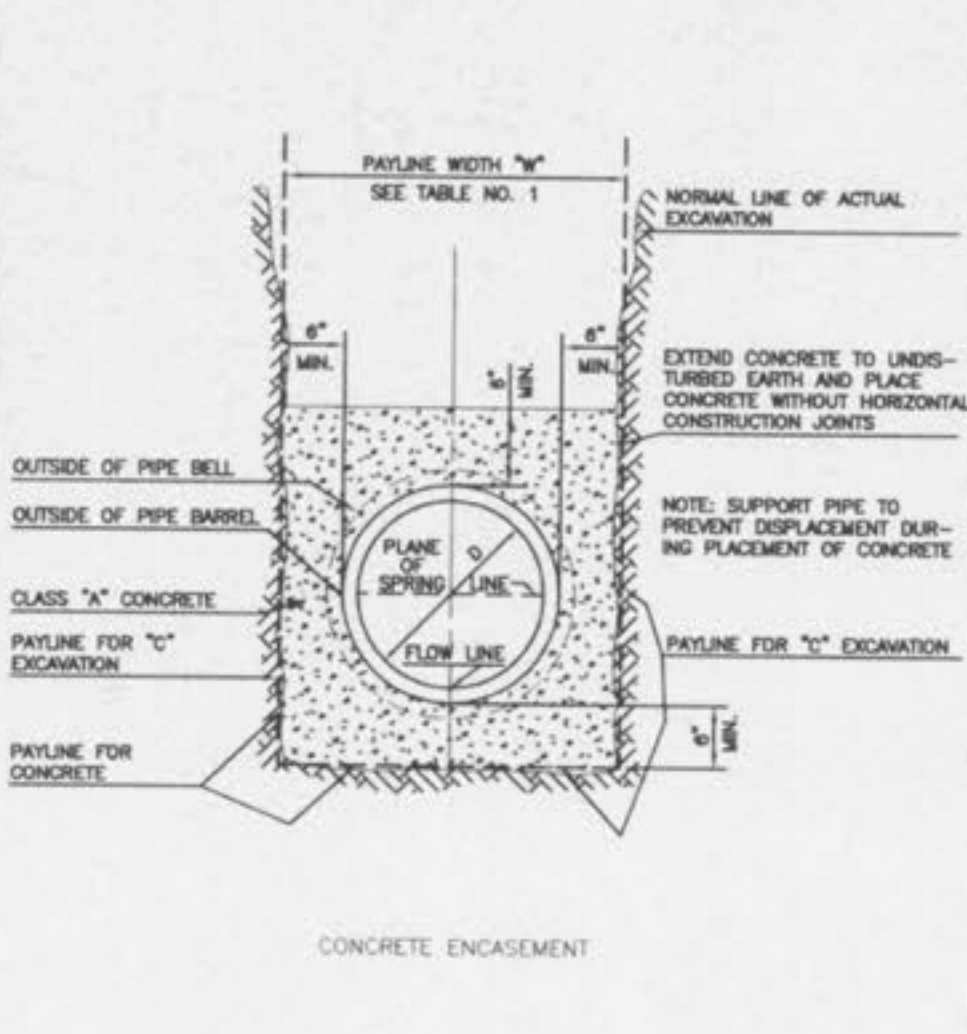
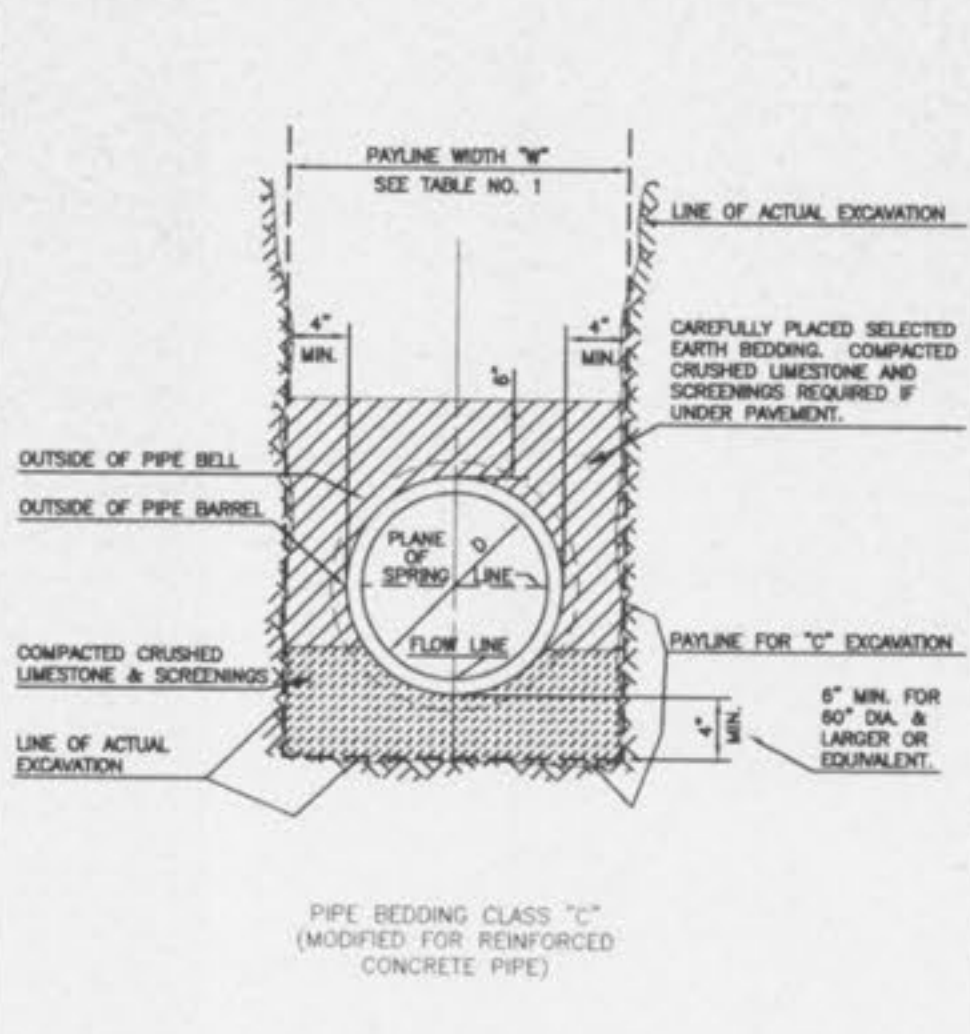
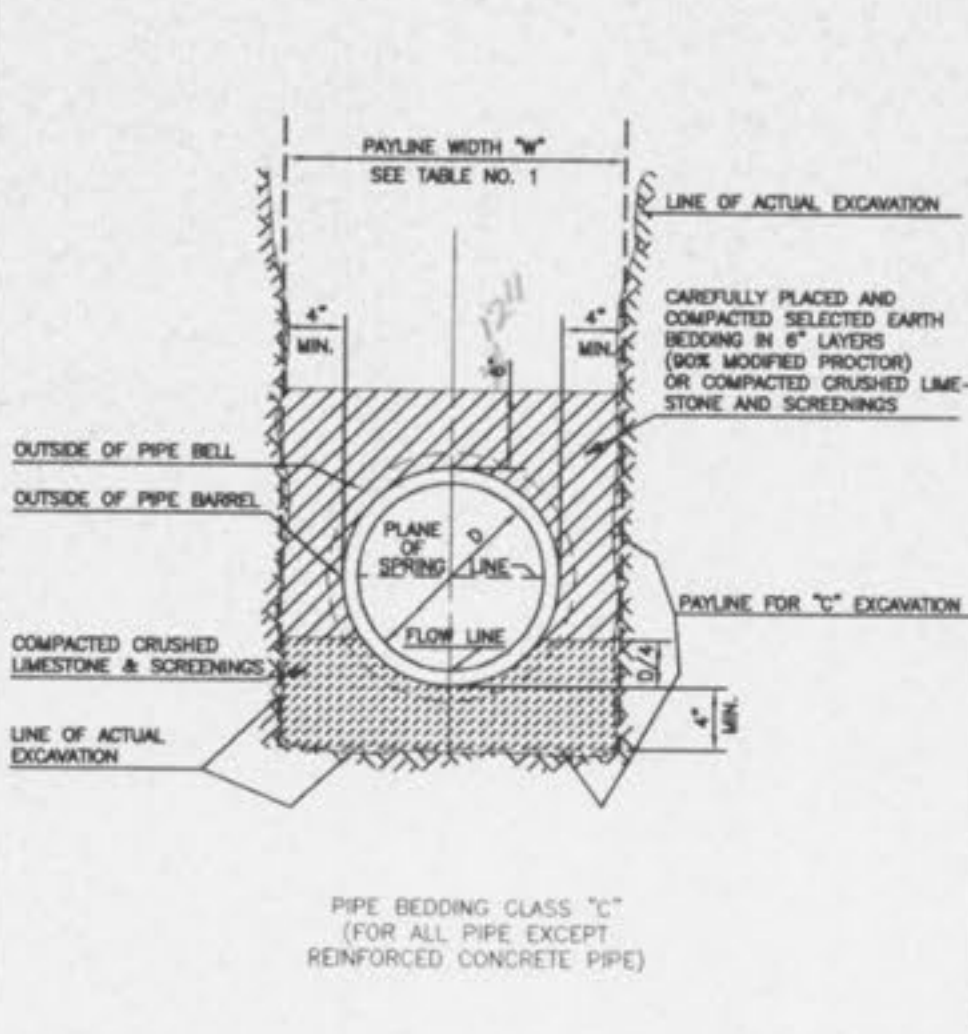
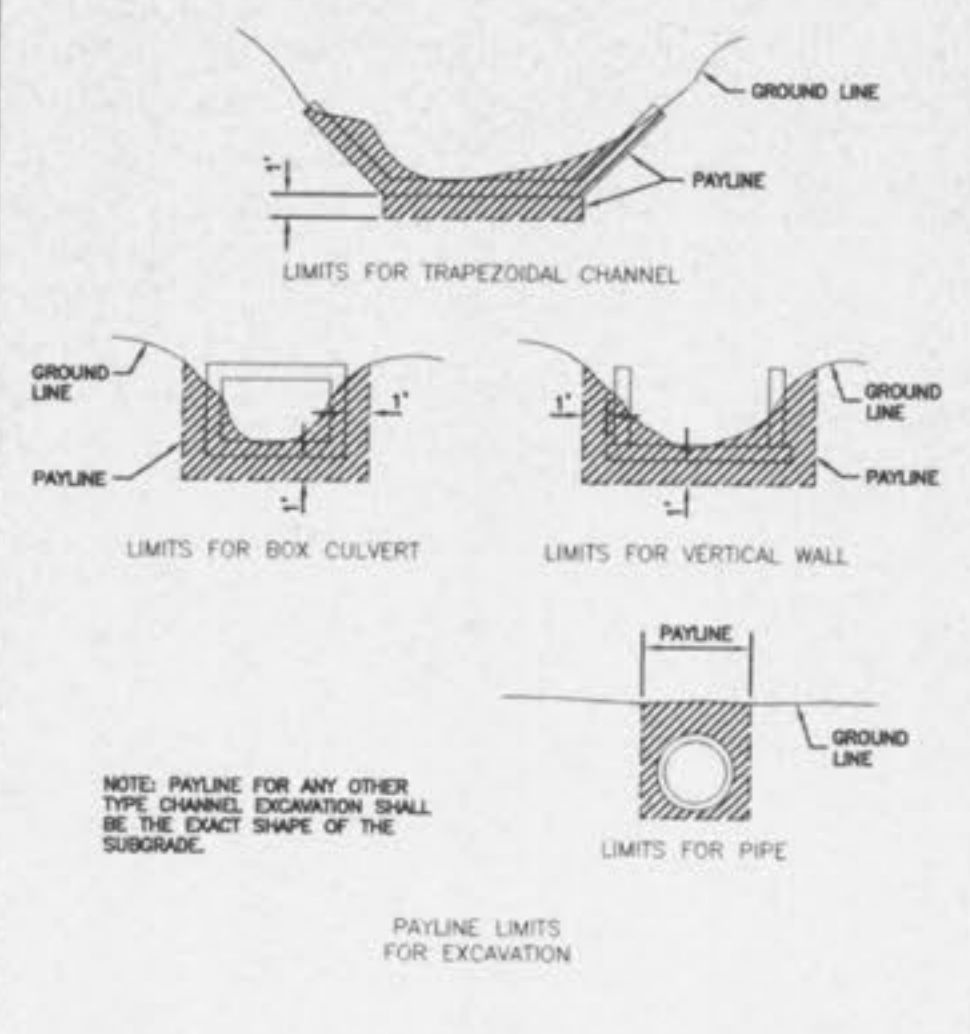


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
Inside Diameter of Pipe (Inches)	Payline Width of Trench (Feet)	Payline Width of Trench (Feet)	Payline Width of Trench (Feet)	Payline Width of Trench (Feet)	Payline Width of Trench (Feet)	Payline Width of Trench (Feet)	Payline Width of Trench (Feet)
4	3.0	2.50	3.28				
6	3.0	2.50	2.78				
8	3.0	2.50	3.87				
10	3.0	2.50	4.08				
12	3.0	2.50	4.25				
15	3.0	3.00	5.55				
18	3.0	3.00	5.77	14 X 23	41	3.42	5.94
21	3.0	3.25	6.61				
24	4.2	3.50	7.38	19 X 30	40	4.08	7.88
27	4.2	3.75	8.18	22 X 34	53	4.42	8.61
30	4.2	4.00	8.30	24 X 38	56	4.83	9.70
33	4.2	4.25	10.53	27 X 42	82	5.17	10.71
36	4.2	4.50	11.43	28 X 45	88	5.50	11.72
39	4.2	4.75	11.43	32 X 48	71	5.82	13.14
42	4.2	5.00	13.38	34 X 53	78	6.25	14.05
45	4.2	5.25	15.67	38 X 60	83	6.82	16.18
48	4.2	5.50	18.18	43 X 68	92	7.87	18.81
51	4.2	5.75	20.73	48 X 78	101	8.42	21.08
54	4.2	6.00	23.46	53 X 83	108	9.08	24.26
57	4.2	6.25	26.27	58 X 91	118	9.83	27.45
60	4.2	6.50	29.28	63 X 98	128	10.50	30.30
63	4.2	6.75	32.87	68 X 106	135	11.25	33.91
66	4.2	7.00	35.90	72 X 113	143	11.82	36.99
69	4.2	7.25	39.37	77 X 121	152	12.87	40.89
72	4.2	7.50	42.89	82 X 128	160	13.33	44.45
75	4.2	7.75	46.75	87 X 136	168	14.00	47.79
78	4.2	8.00	50.86	92 X 143	176	14.67	51.70
81	4.2	8.25	54.72	97 X 151	185	15.42	56.01
84	4.2	8.50	58.82	106 X 166	202	16.83	64.48
87	4.2	8.75	63.27	116 X 180	218	18.17	73.59

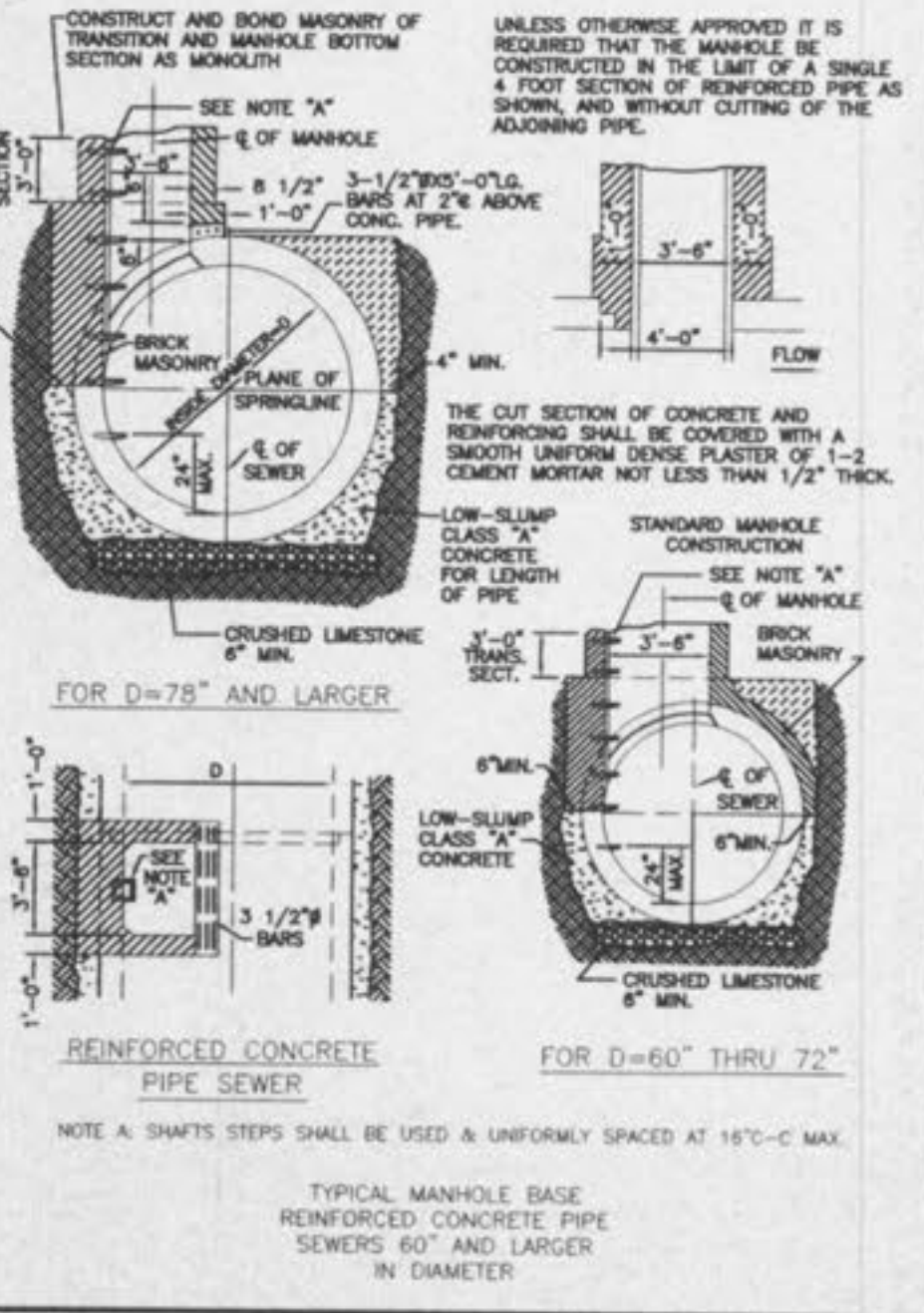
TABLE NO. 1
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE



NOTES:
NOTE A: IF LINE OF ACTUAL EXCAVATION EXTENDS BEYOND LINE OF DROP MASONRY, FILL EXCESS EXCAVATED SPACE WITH CONSTRUCTION MATERIAL OF DROP OR PACK WITH COMPACTED CRUSHED LIMESTONE TO BASE OF CLASS "A" CONCRETE ENCASUREMENT.
NOTE B: IF EXCAVATED SPACE OUTSIDE OF DROP PIPE MASONRY EXCEEDS 1 FOOT, REINFORCE SEWER PIPE ENCASUREMENT WITH A MINIMUM OF 4 NO. 4 BARS FOR LENGTH OF ENCASUREMENT.
NOTE C: MASONRY ENCASUREMENT OF DROP-PIPE SHALL BE BONDED AND PLACED INTERNALLY WITH MANHOLE MASONRY.
NOTE D: DIAMETER OF DROP PIPE FOR COMBINED SEWERS AND SANITARY SEWERS, IS SAME AS INCLUDING 8", 10" OR 12" PIPE SEWER, AND 12" FOR LARGER COMBINED SEWERS UNLESS OTHERWISE SHOWN ON PROJECT PLANS. FOR SANITARY SEWERS, A DROP IS NOT TO BE USED, CONNECT TO MANHOLE AT OR WITHIN 3' ABOVE ITS FLOWLINE.
NOTE E: NEW OUTSIDE DROP ON EXISTING MANHOLE REQUIRES NO. 4 RE-BARS PLACED THROUGH 2" DIA. HOLES IN M.W. WALL. (MIN. LENGTH OF BARS 18")

SECTION OF MANHOLE	DIMENSION
TOP TRANSITION	UPPER 2'-2 1/2" DIA. LOWER 3'-6" DIA.
BOTTOM SECTION	8" THRU 24" DIA. PIPE 3'-6" DIA.
BOTTOM SECTION	27" THRU 54" DIA. PIPE 3'-6" SQUARE

TABLE NO. 2
STANDARD MANHOLE DIMENSIONS



NOTE: A SHAFTS STEPS SHALL BE USED & UNIFORMLY SPACED AT 16" C-C MAX.

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WHITEGATE VILLAS
ADDITION
CONSTRUCTION DETAILS

Prepared For:
SUMMIT POINTE L.C.

219 FOX HILL ROAD
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NO.	DATE	REV.	PER CITY OF OTTAWA	REV.	PER CITY OF OTTAWA
1	09-08-02	REV.	PER CITY OF OTTAWA	REV.	PER CITY OF OTTAWA
2	09-20-02	REV.	PER CITY OF OTTAWA	REV.	PER CITY OF OTTAWA

ENGINEERS AUTHENTICATION
The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions after this date unless reauthenticating.

PICKETT, RAY & SILVER, INC.
HAROLD J. BARTCH
REGISTERED PROFESSIONAL ENGINEER
E-17751

DRAWN: ABK DATE: 07-15-02
CHECKED: DMD DATE: 07-15-02
PROJECT # 02041.SUPO.01R
TASK # 2 FIELD BOOK