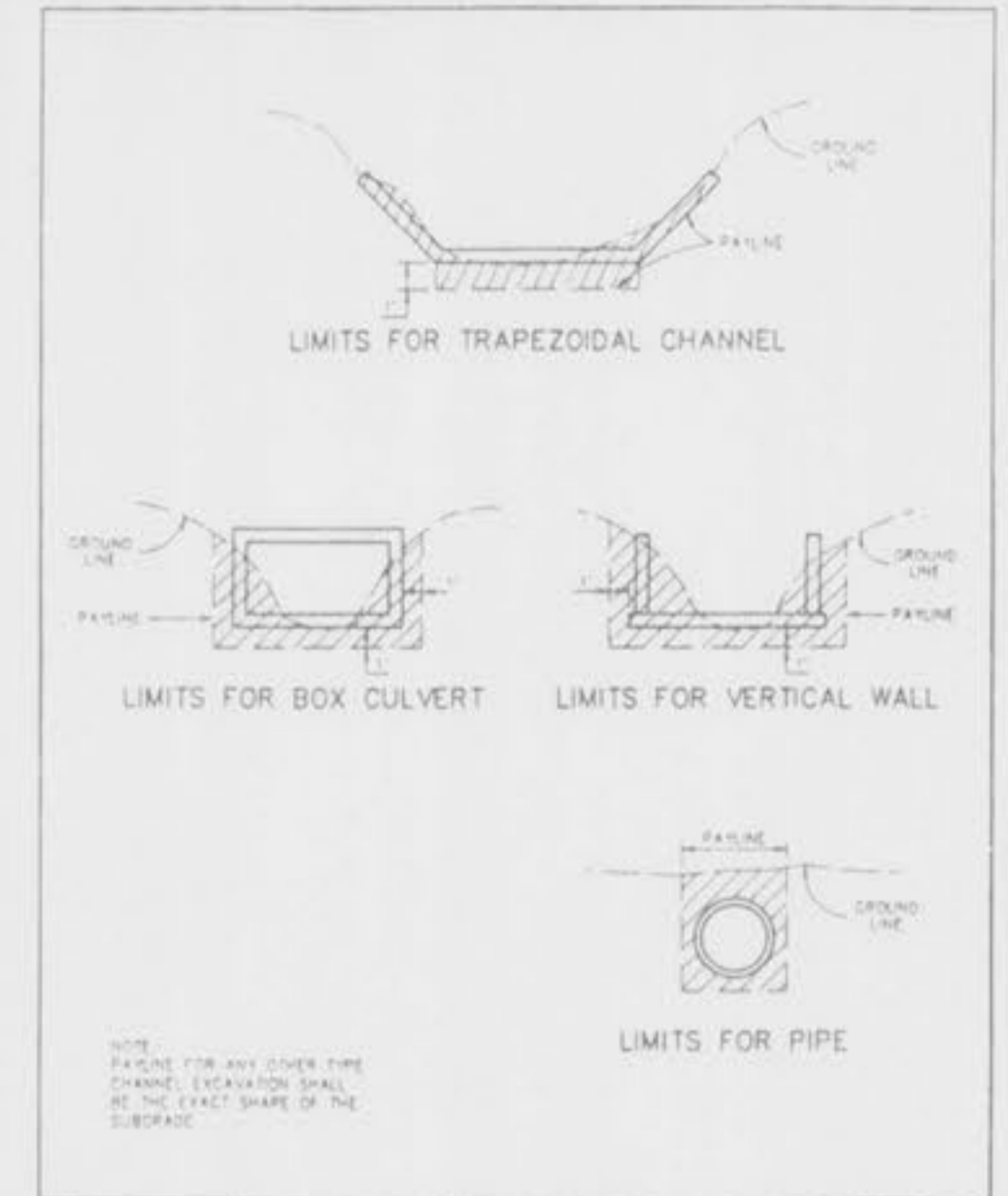
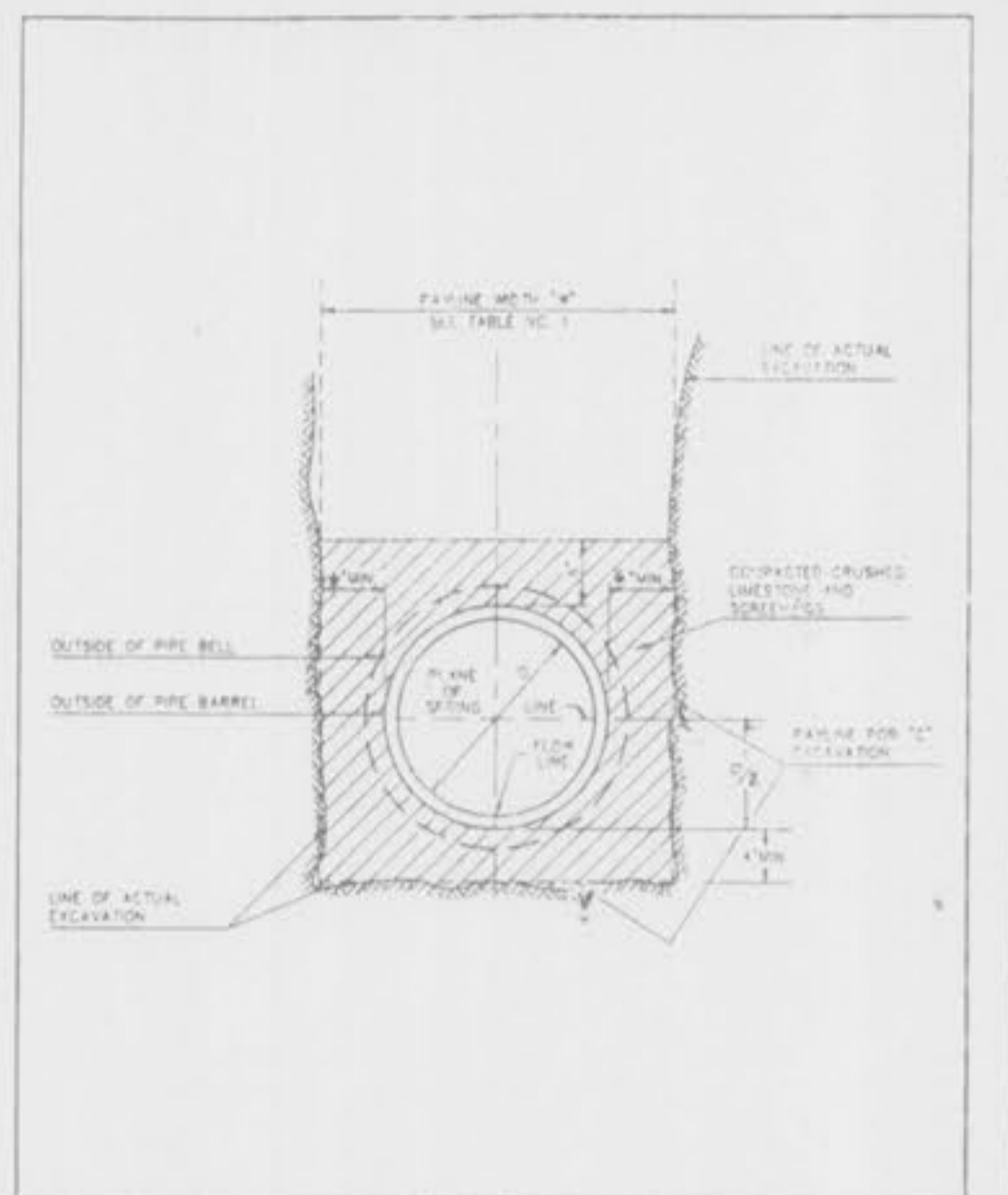


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	PAYLINE WIDTH OF TRENCH (FEET)	PAYLINE WIDTH OF TRENCH (INCHES)	PAYLINE WIDTH OF TRENCH (FEET)	INSIDE DIAMETER OF PIPE (INCHES)	PAYLINE WIDTH OF TRENCH (FEET)	PAYLINE WIDTH OF TRENCH (INCHES)	PAYLINE WIDTH OF TRENCH (FEET)
4	30	2.50	3.58				
6	30	2.50	3.58				
8	30	2.50	3.58				
10	30	2.50	3.58				
12	30	2.50	3.58				
15	36	3.00	4.08				
18	36	3.00	4.08				
21	36	3.00	4.08				
24	42	3.50	4.58				
27	42	3.50	4.58				
30	42	3.50	4.58				
33	42	3.50	4.58				
36	48	4.00	5.08				
39	48	4.00	5.08				
42	48	4.00	5.08				
45	54	4.50	5.58				
48	54	4.50	5.58				
51	54	4.50	5.58				
54	60	5.00	6.08				
57	60	5.00	6.08				
60	60	5.00	6.08				
63	66	5.50	6.58				
66	66	5.50	6.58				
69	66	5.50	6.58				
72	72	6.00	7.08				
75	72	6.00	7.08				
78	72	6.00	7.08				
81	78	6.50	7.58				
84	78	6.50	7.58				
87	78	6.50	7.58				
90	84	7.00	8.08				
93	84	7.00	8.08				
96	84	7.00	8.08				
99	90	7.50	8.58				
102	90	7.50	8.58				
105	90	7.50	8.58				
108	96	8.00	9.08				
111	96	8.00	9.08				
114	96	8.00	9.08				
117	102	8.50	9.58				
120	102	8.50	9.58				
123	102	8.50	9.58				
126	108	9.00	10.08				
129	108	9.00	10.08				
132	108	9.00	10.08				
135	114	9.50	10.58				
138	114	9.50	10.58				
141	114	9.50	10.58				

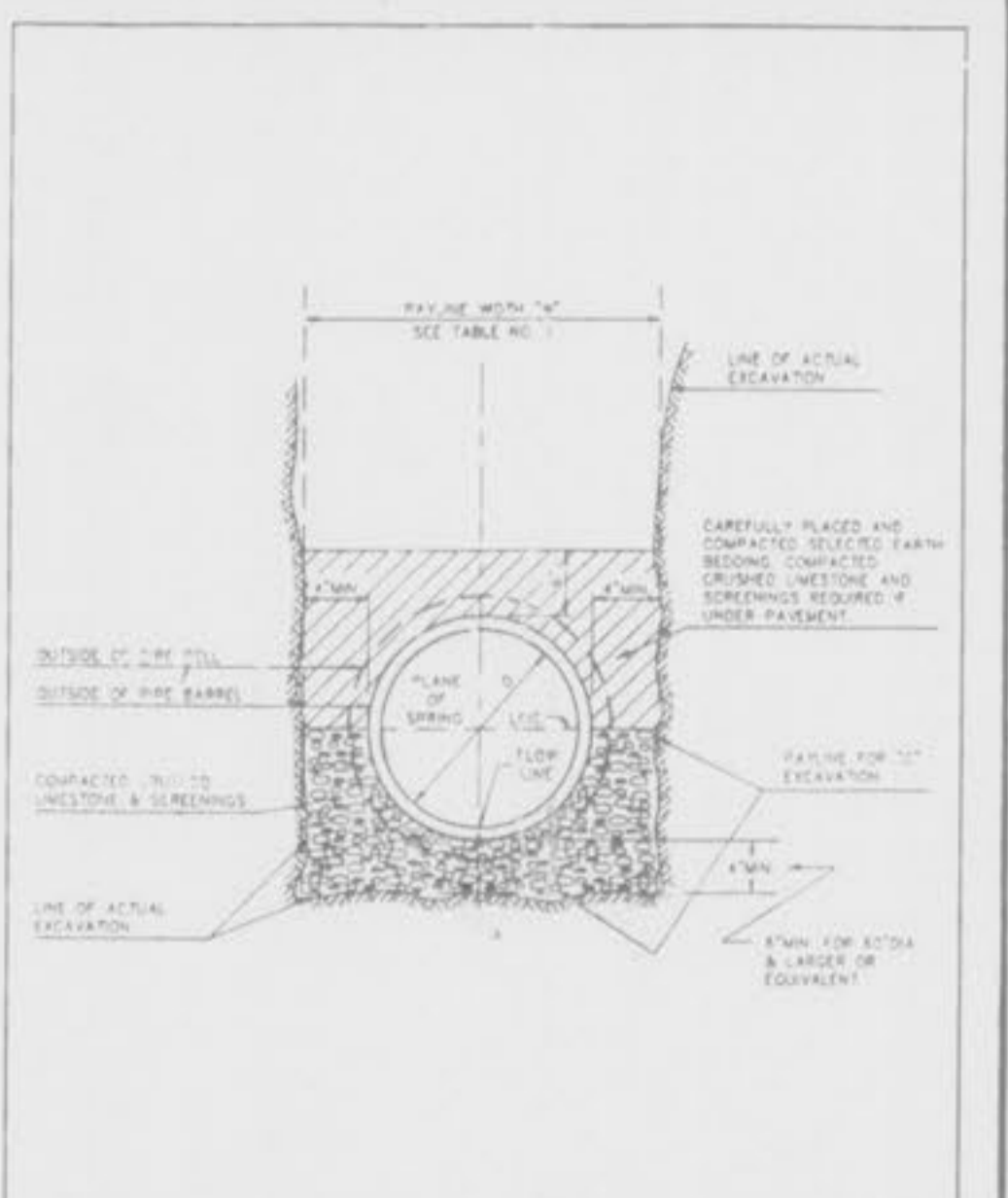
TABLE 1  
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE



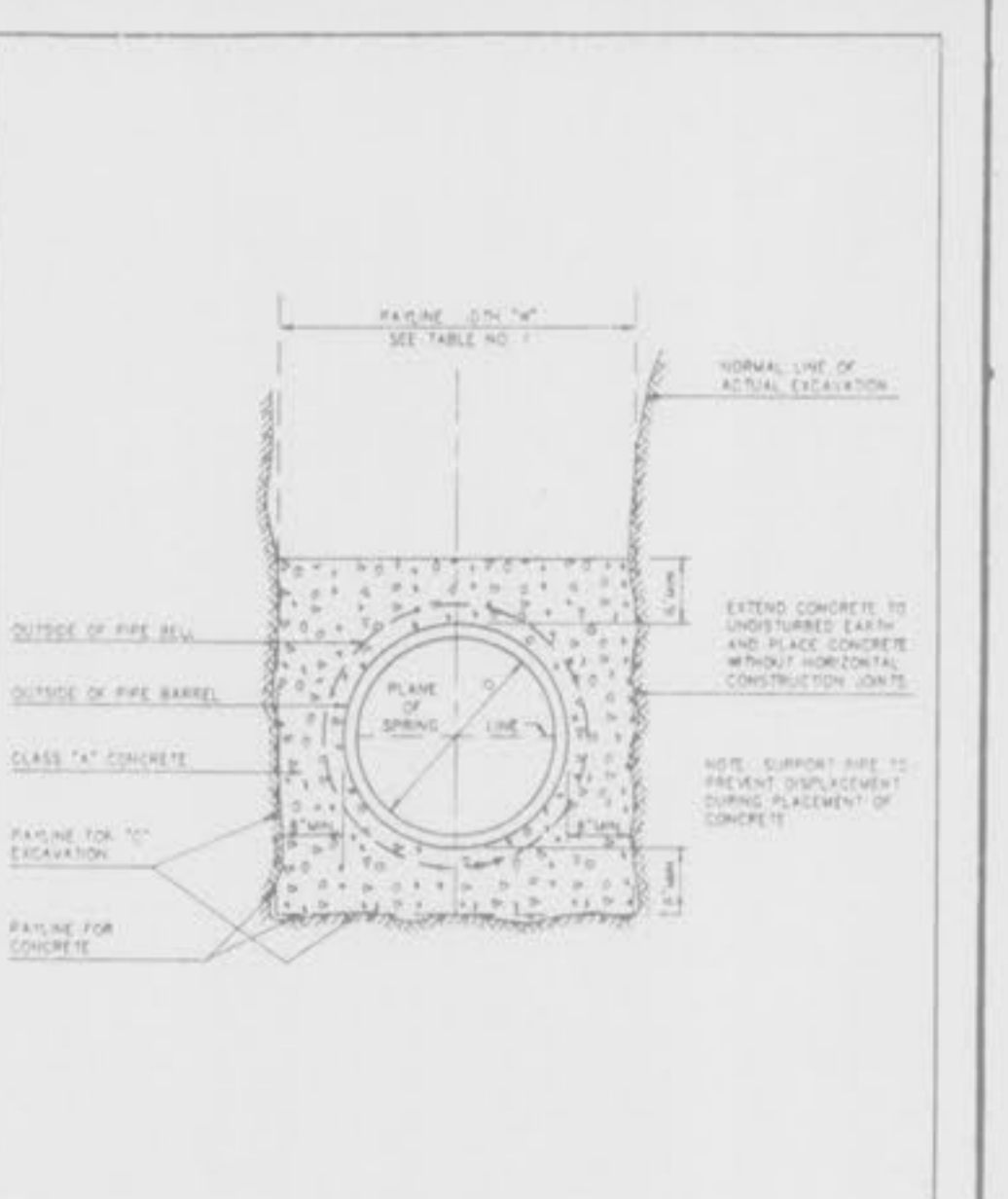
PAYLINE LIMITS FOR EXCAVATION



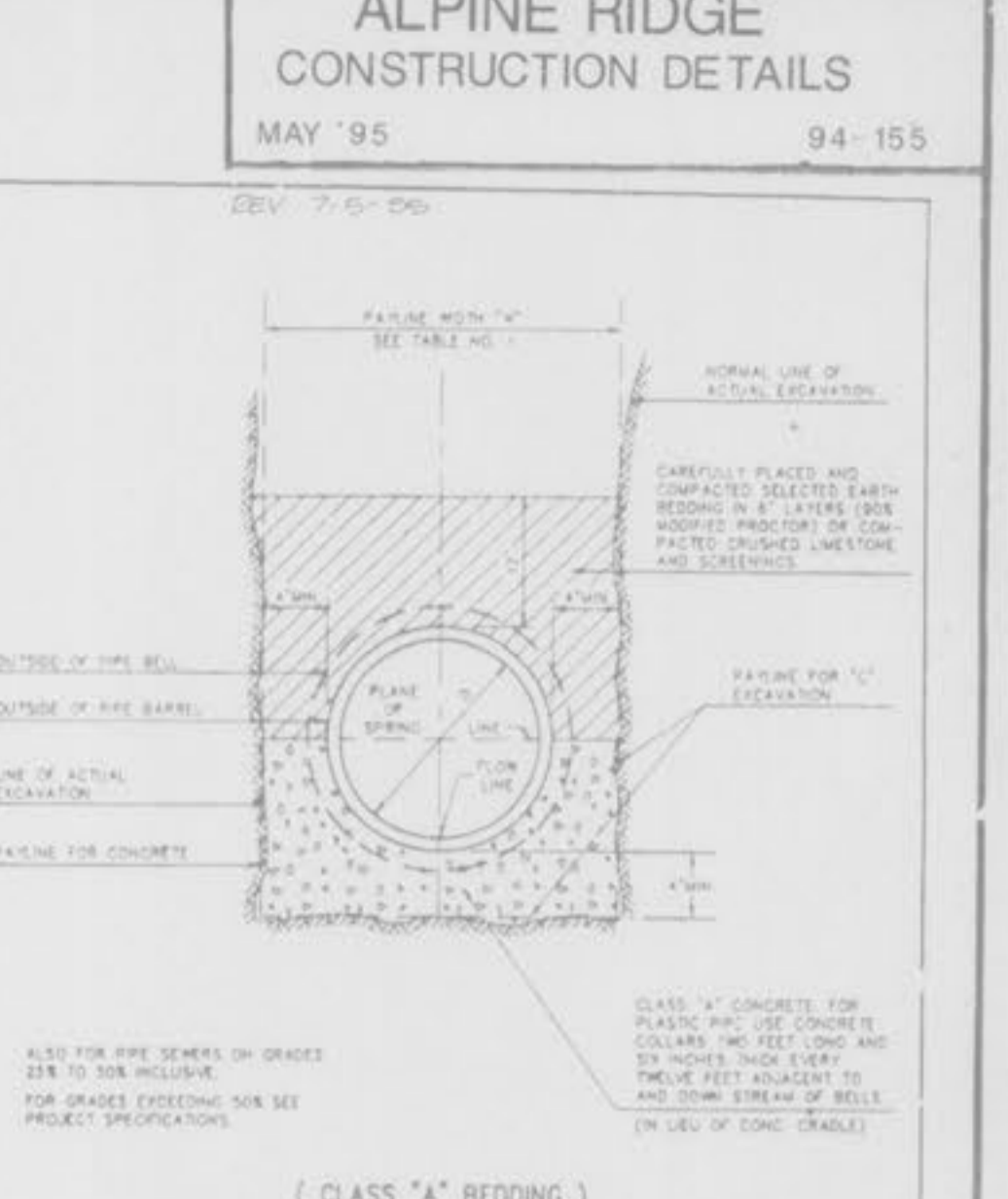
PIPE BEDDING CLASS "C" (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)



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



CONCRETE ENCASEMENT

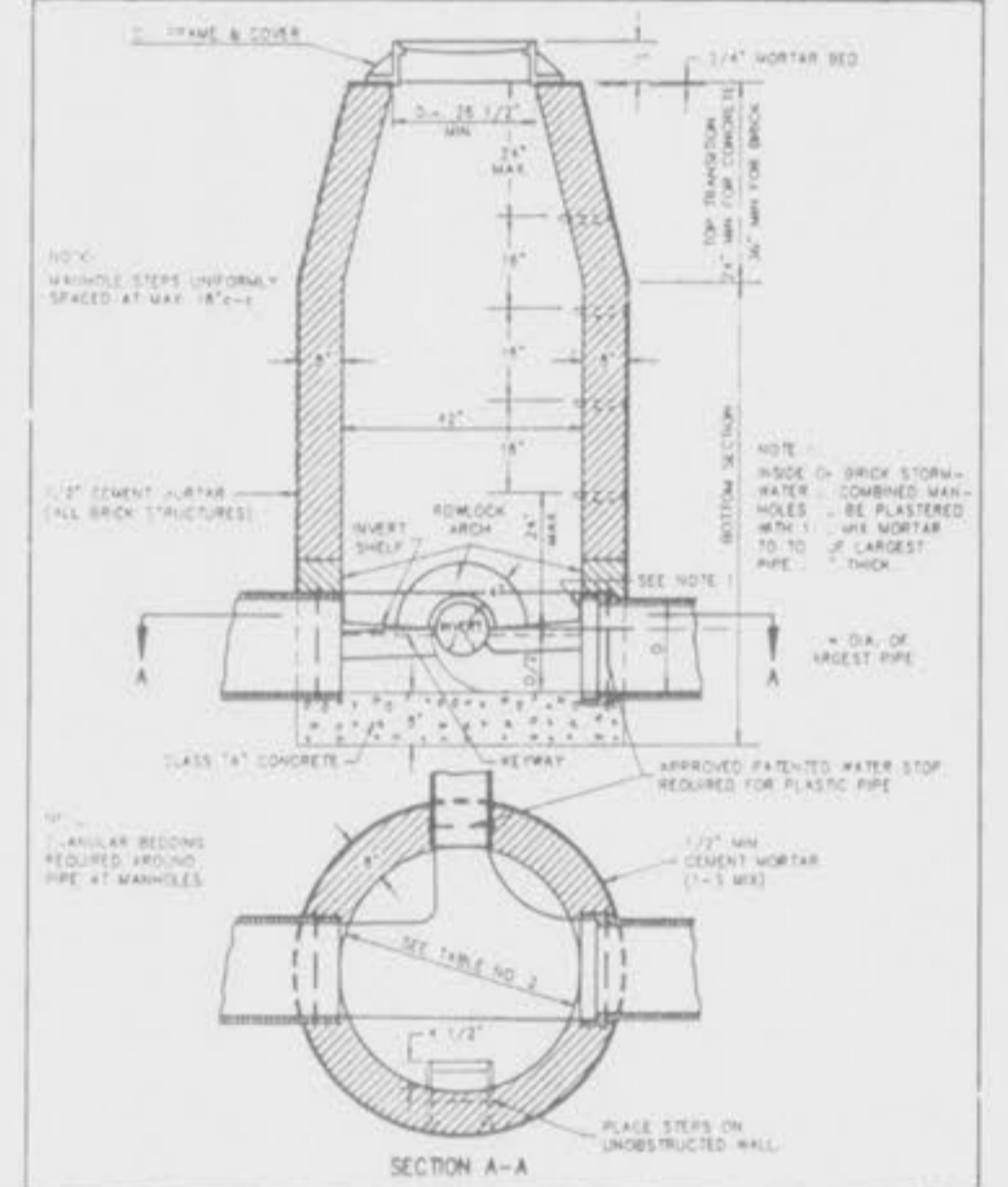


CONCRETE CRADLE

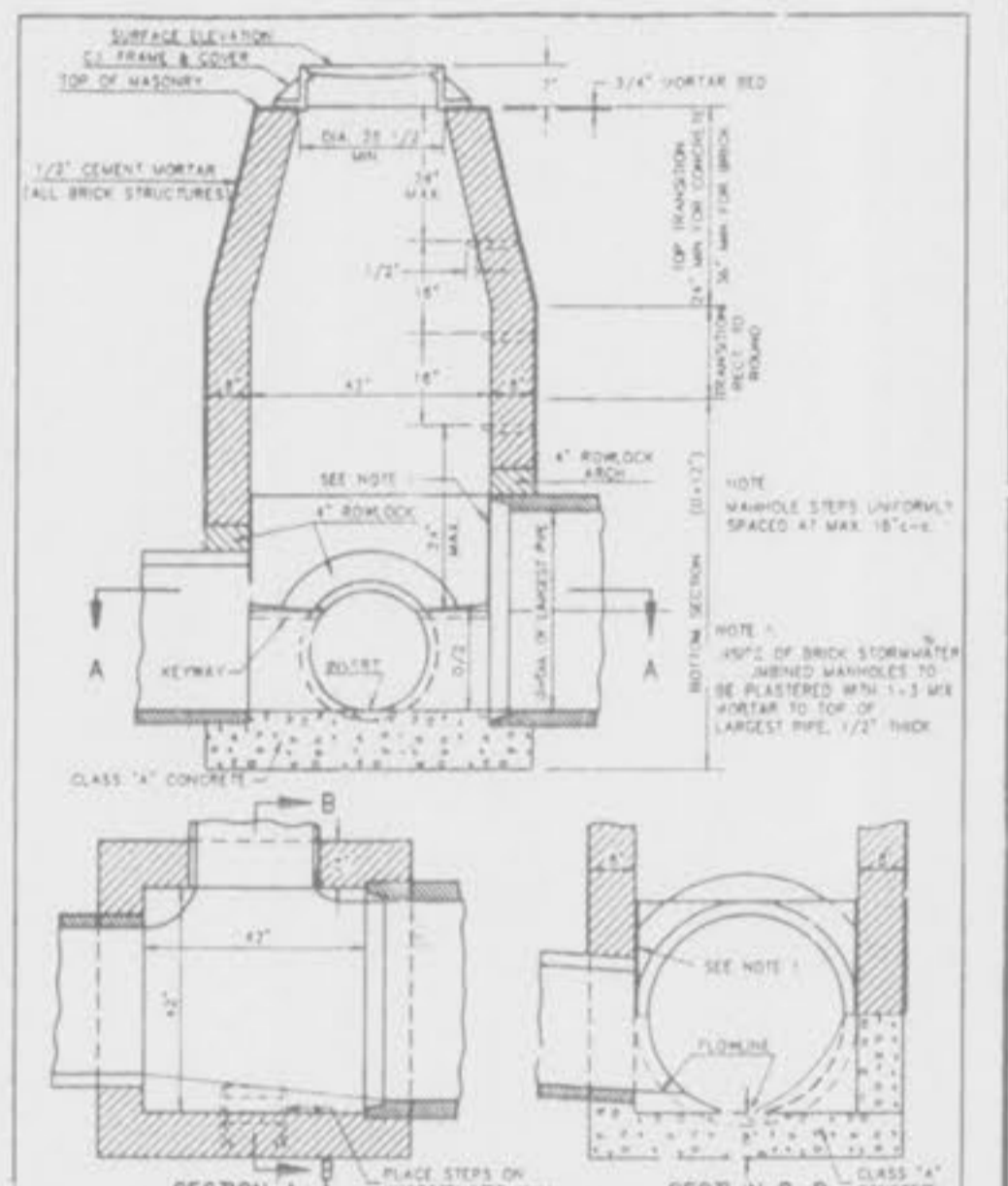
ALPINE RIDGE CONSTRUCTION DETAILS  
MAY '95 94-155

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

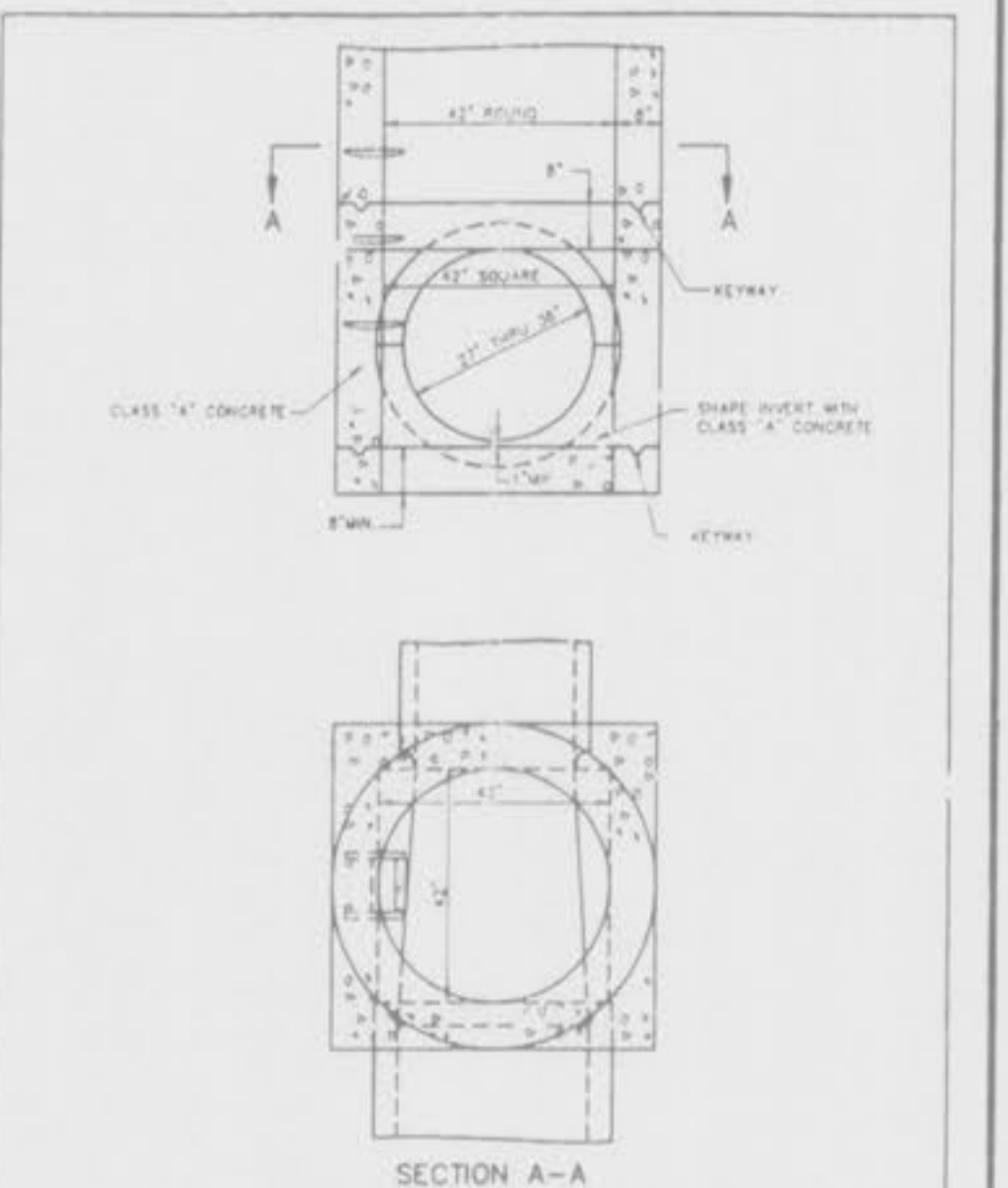
TABLE NO. 2  
STANDARD MANHOLE DIMENSIONS



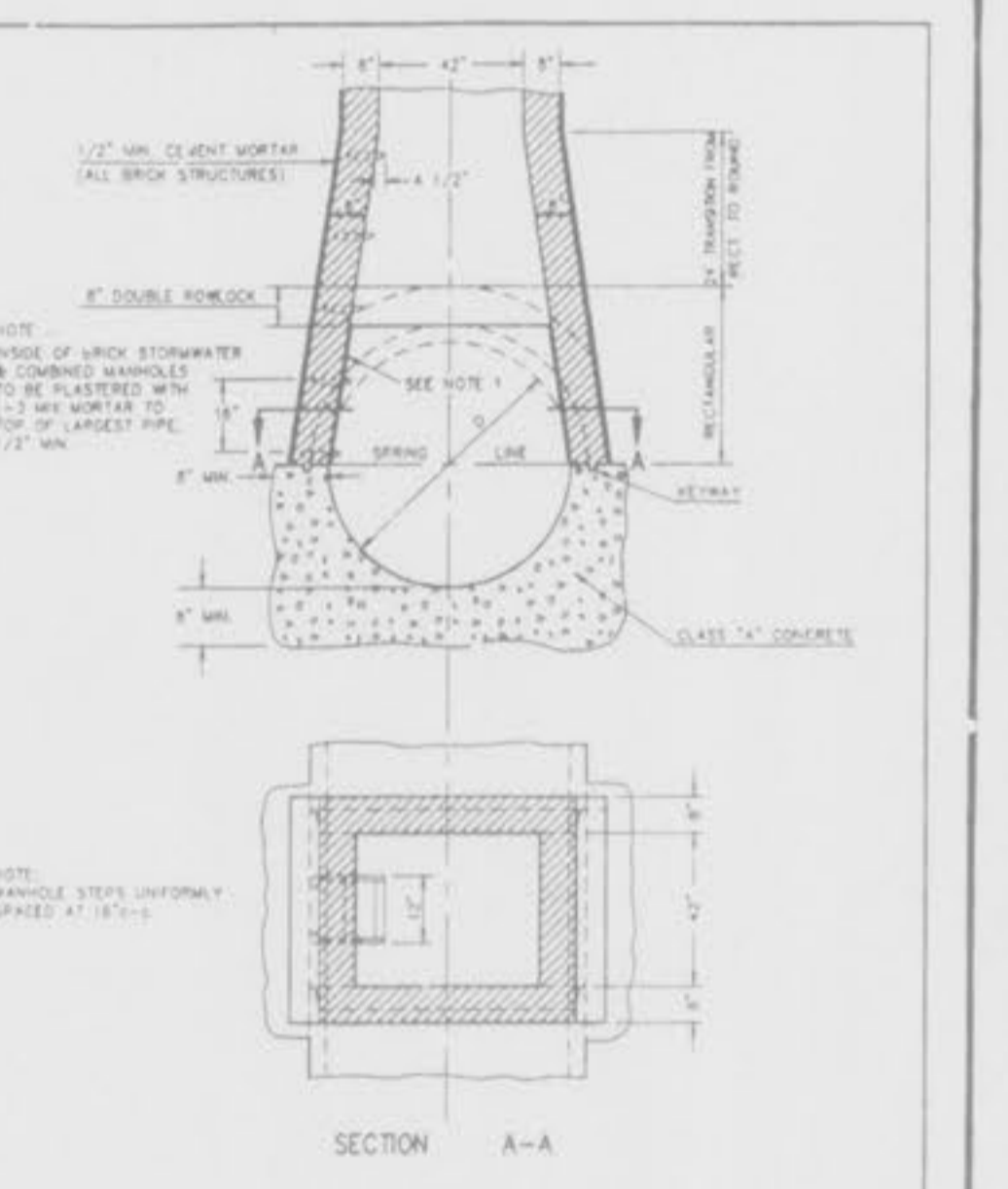
LINE MANHOLE ON PIPE SEWERS 8" THRU 24" DIA.



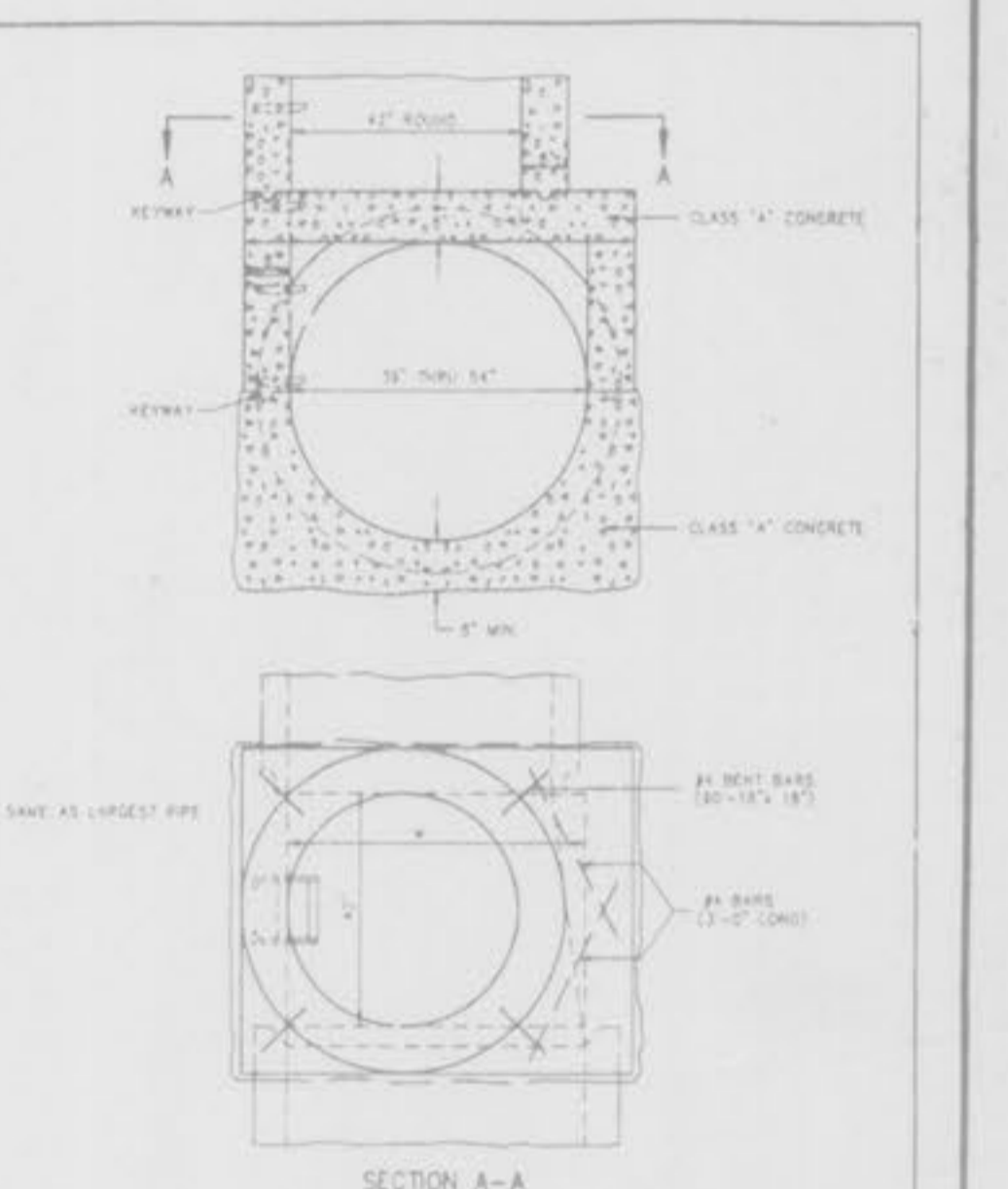
TYPICAL LINE MANHOLE ON PIPE SEWER 27" THRU 36" IN DIAMETER



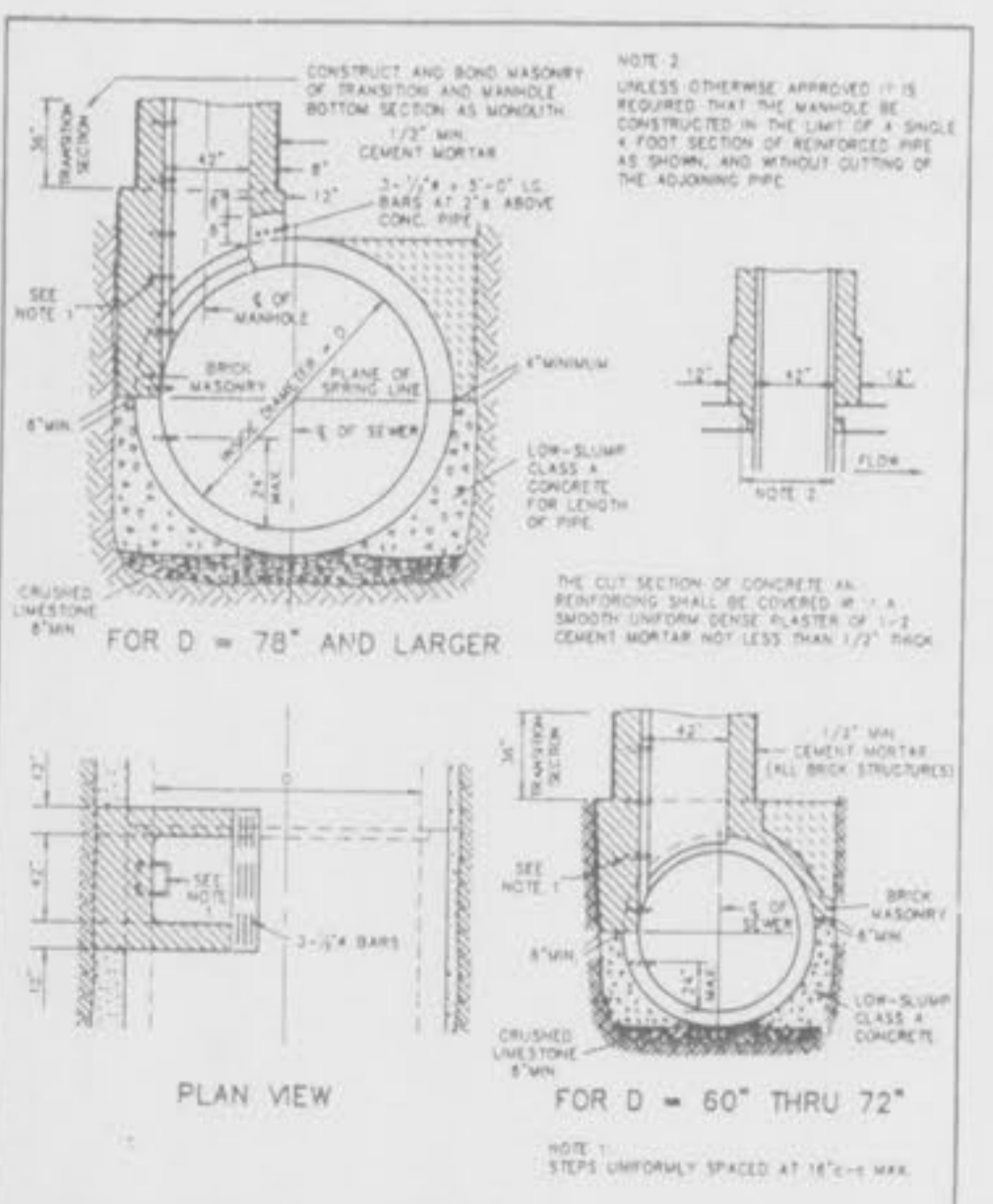
MANHOLE ON PIPE SEWER 27" THRU 36" (ALTERNATE)



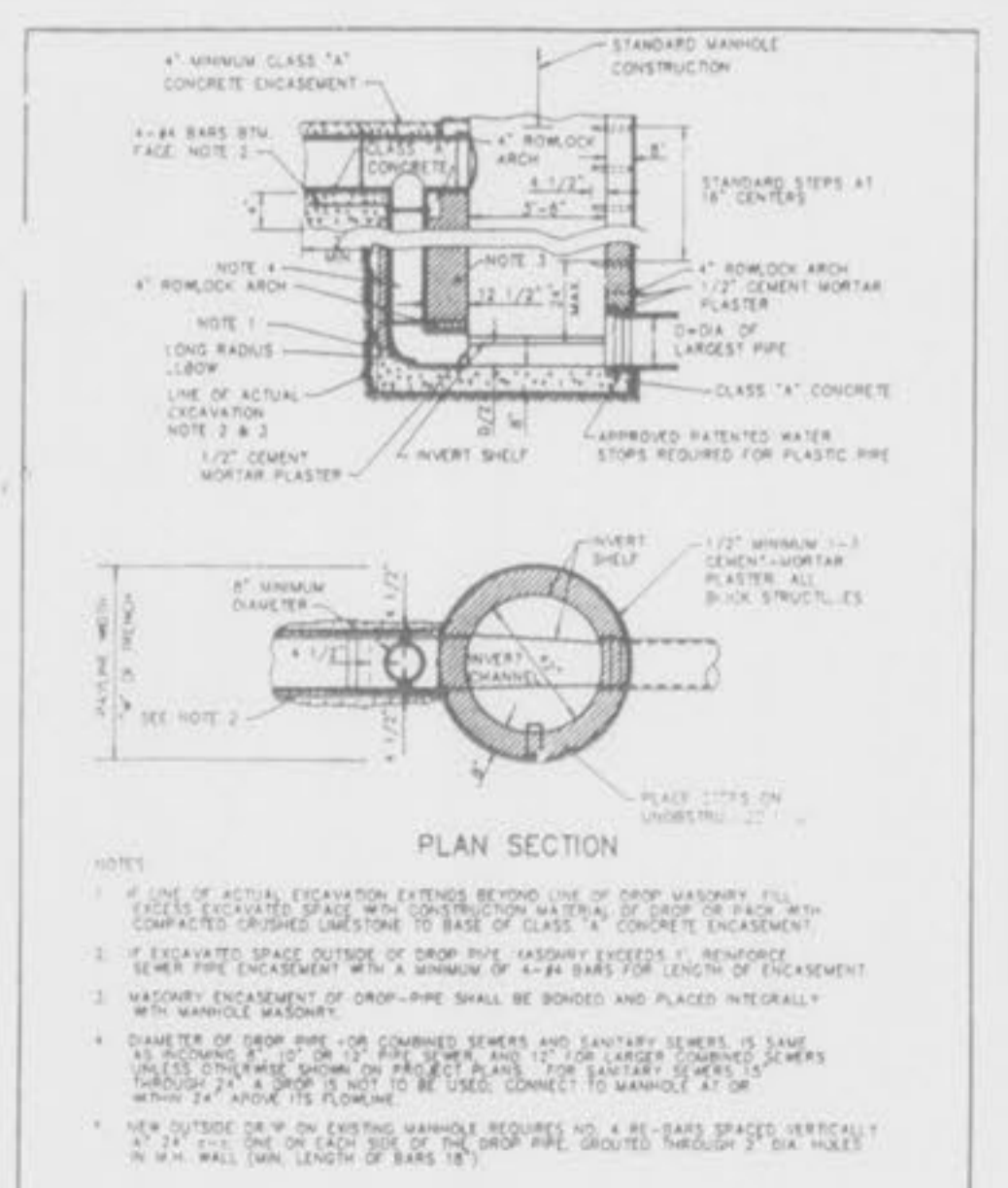
MANHOLE ON CONCRETE PIPE SEWERS 39" THRU 54" DIAMETER



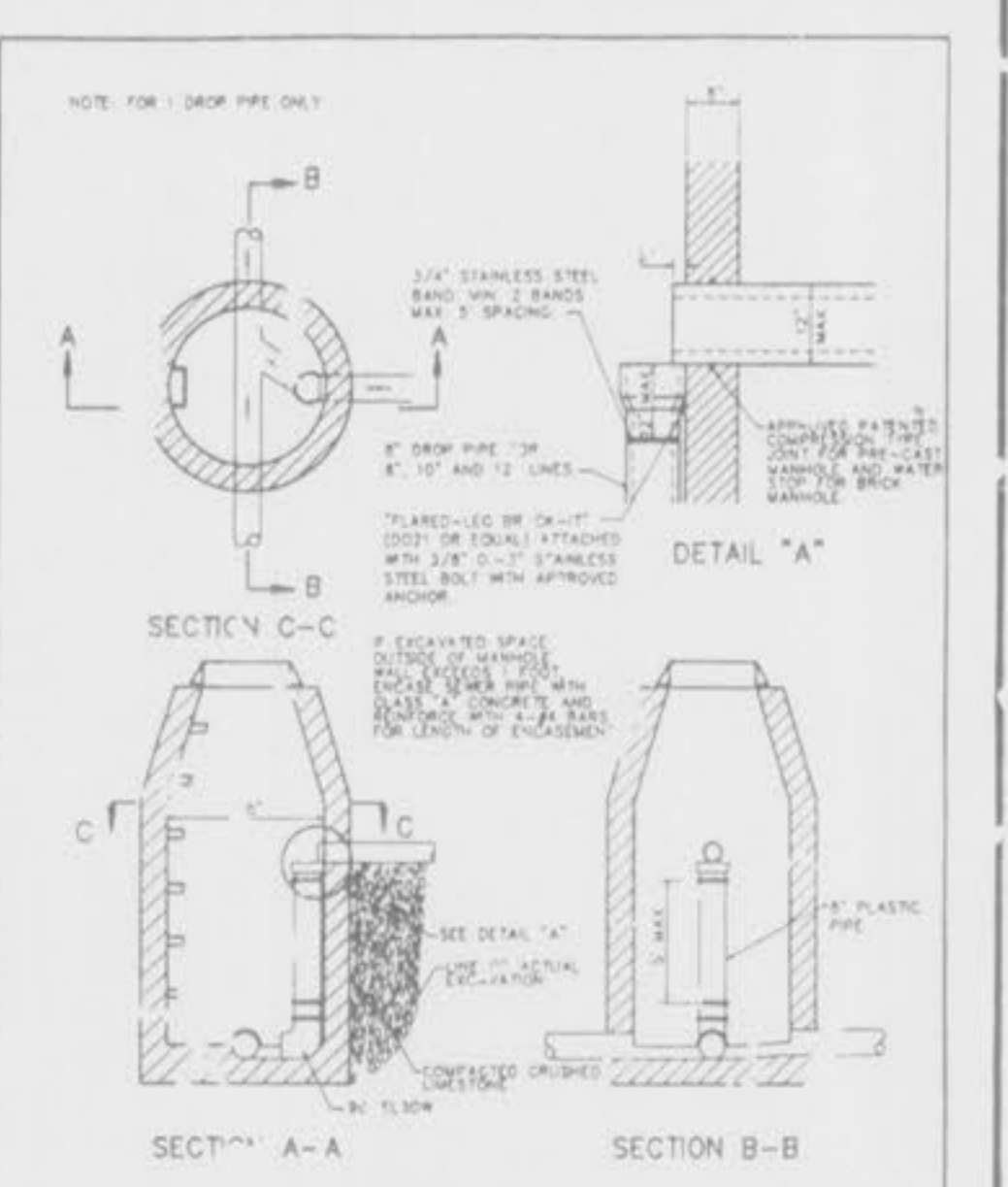
MANHOLE ON CONCRETE PIPE 39" THRU 54" (ALTERNATE)



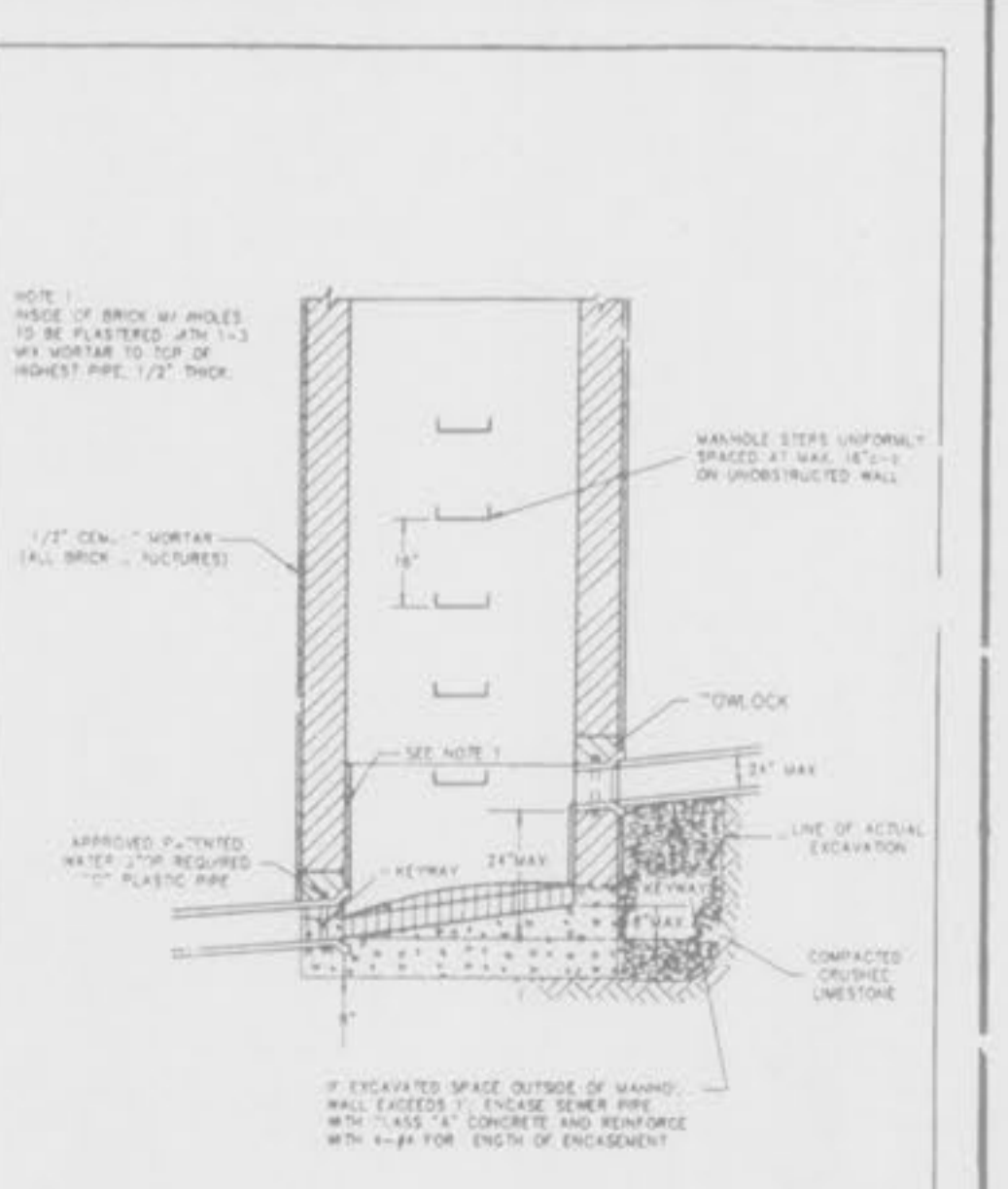
TYPICAL MANHOLE BASE REINFORCED CONCRETE PIPE SEWERS 60" AND LARGER IN DIAMETER



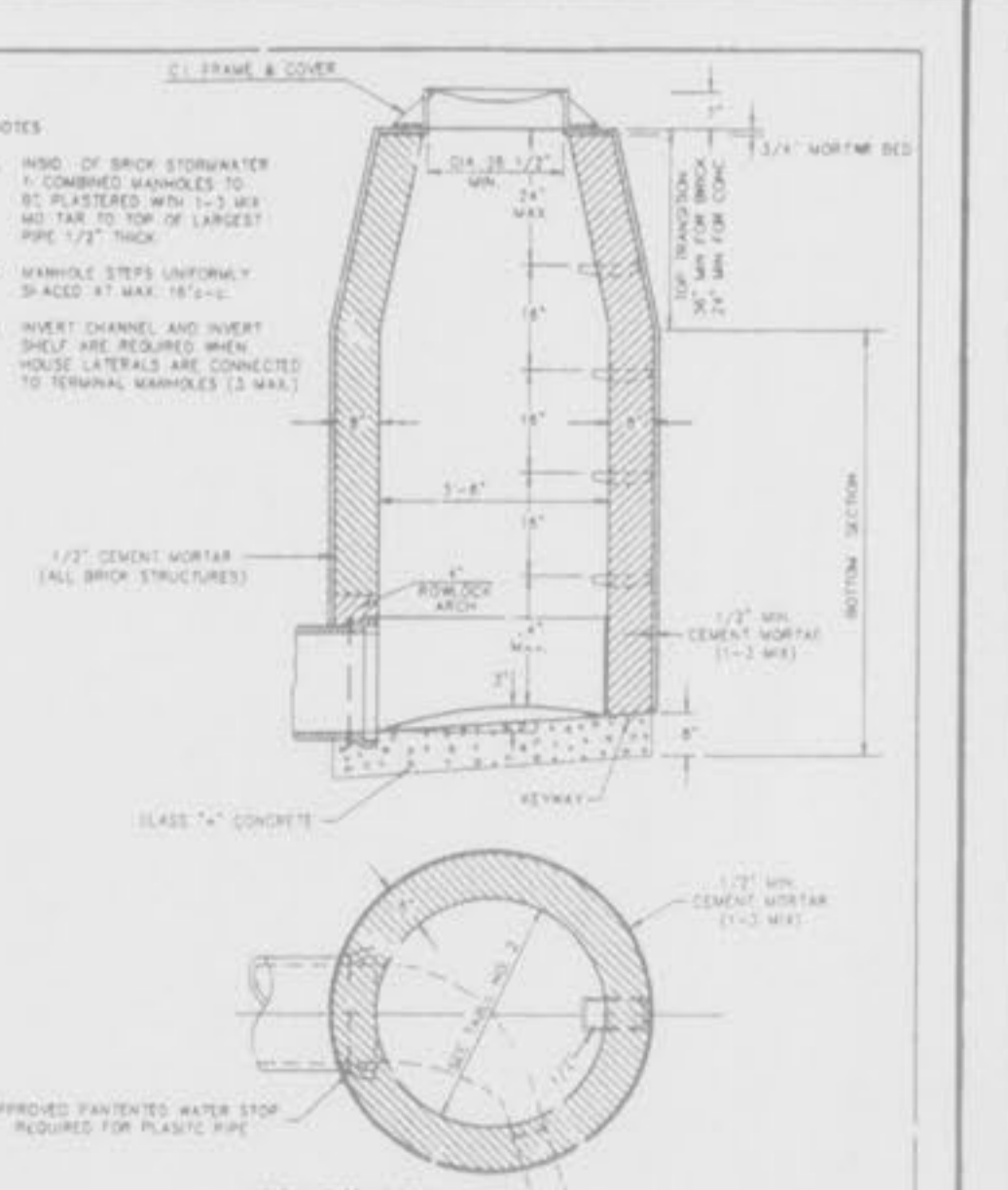
OUTSIDE FOULWATER DROP MANHOLE



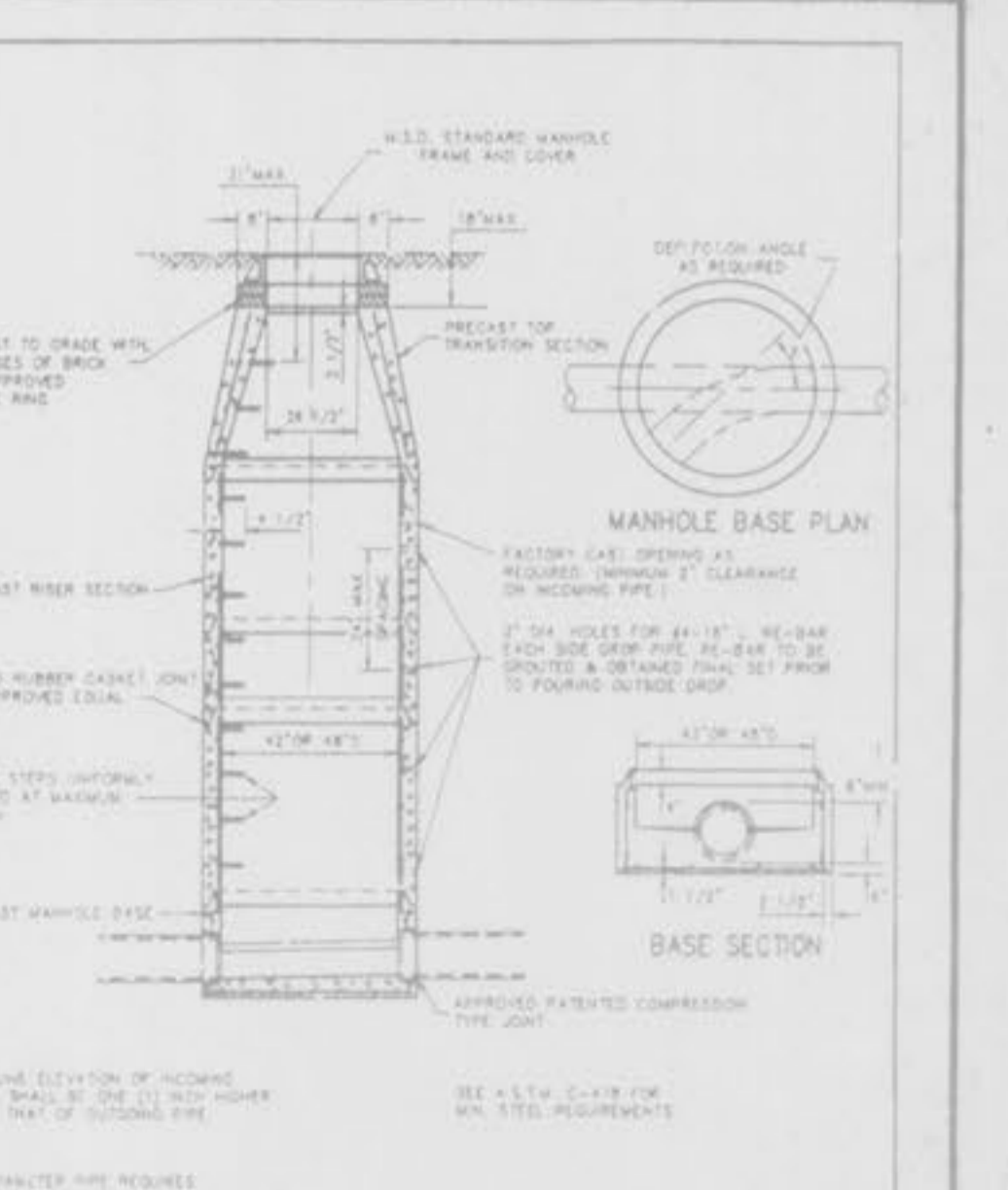
INSIDE FOULWATER DROP MANHOLE



INSIDE FOULWATER DROP MANHOLE (FOR FREE-FALL)



TERMINAL MANHOLE



PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 18"