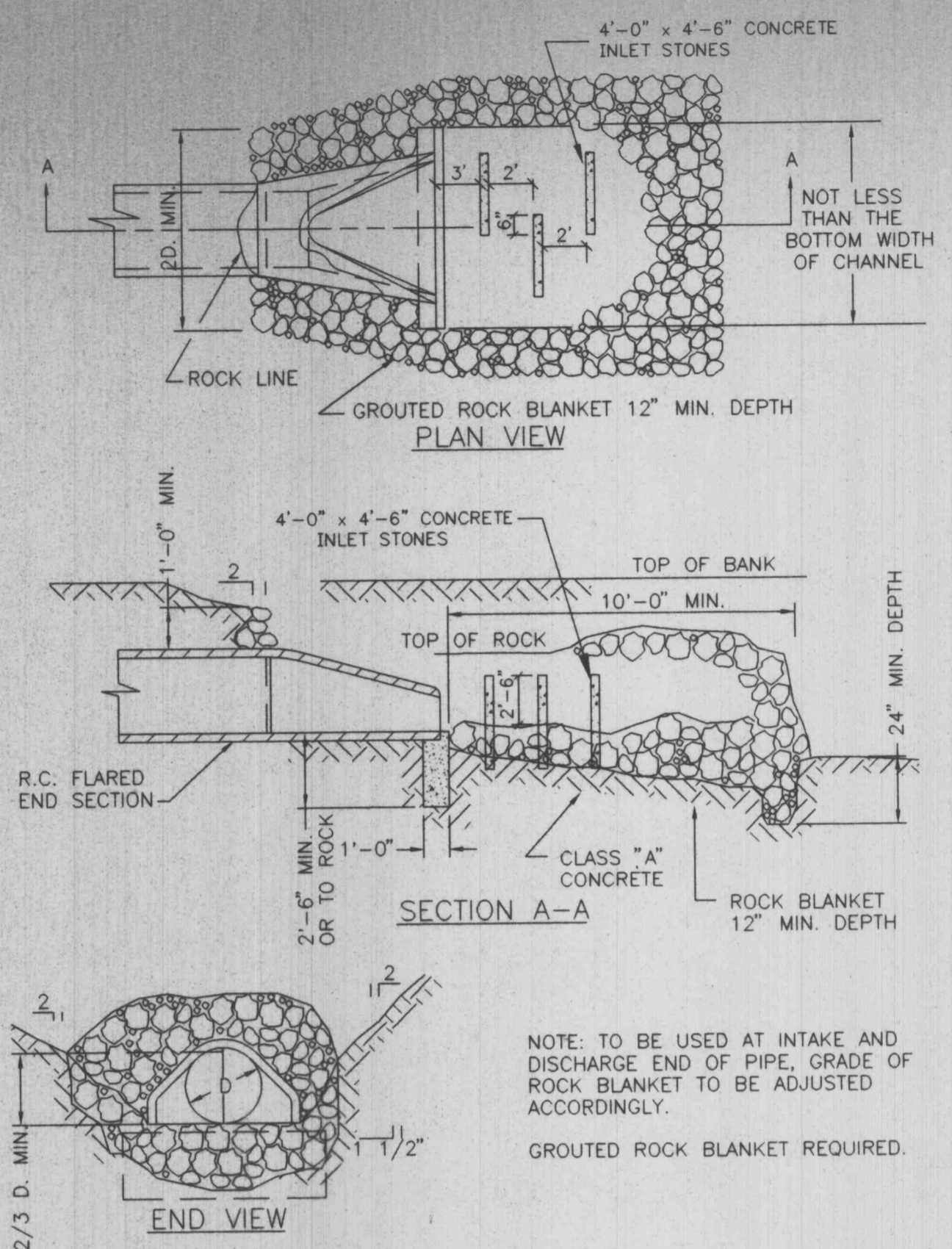
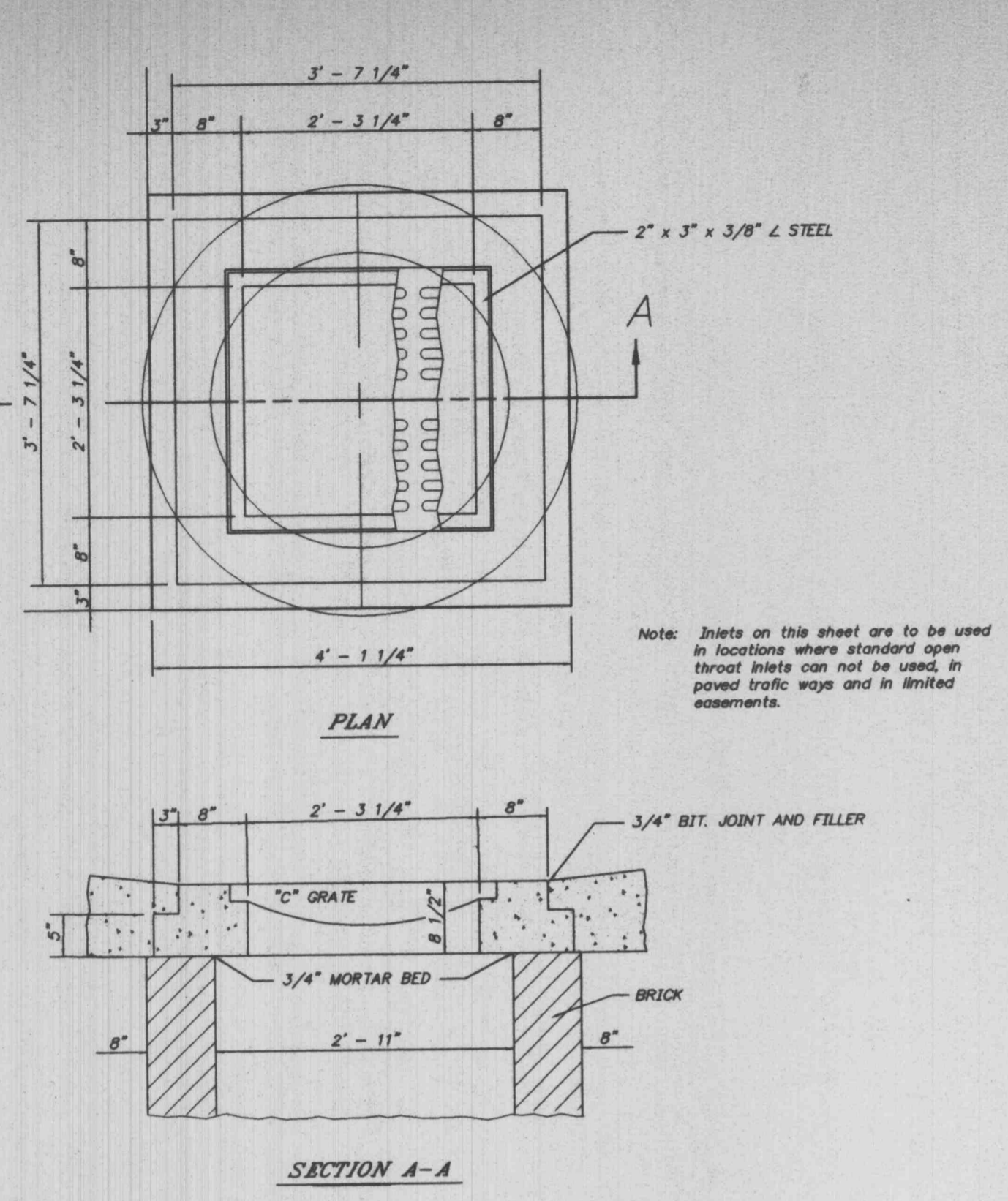


DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

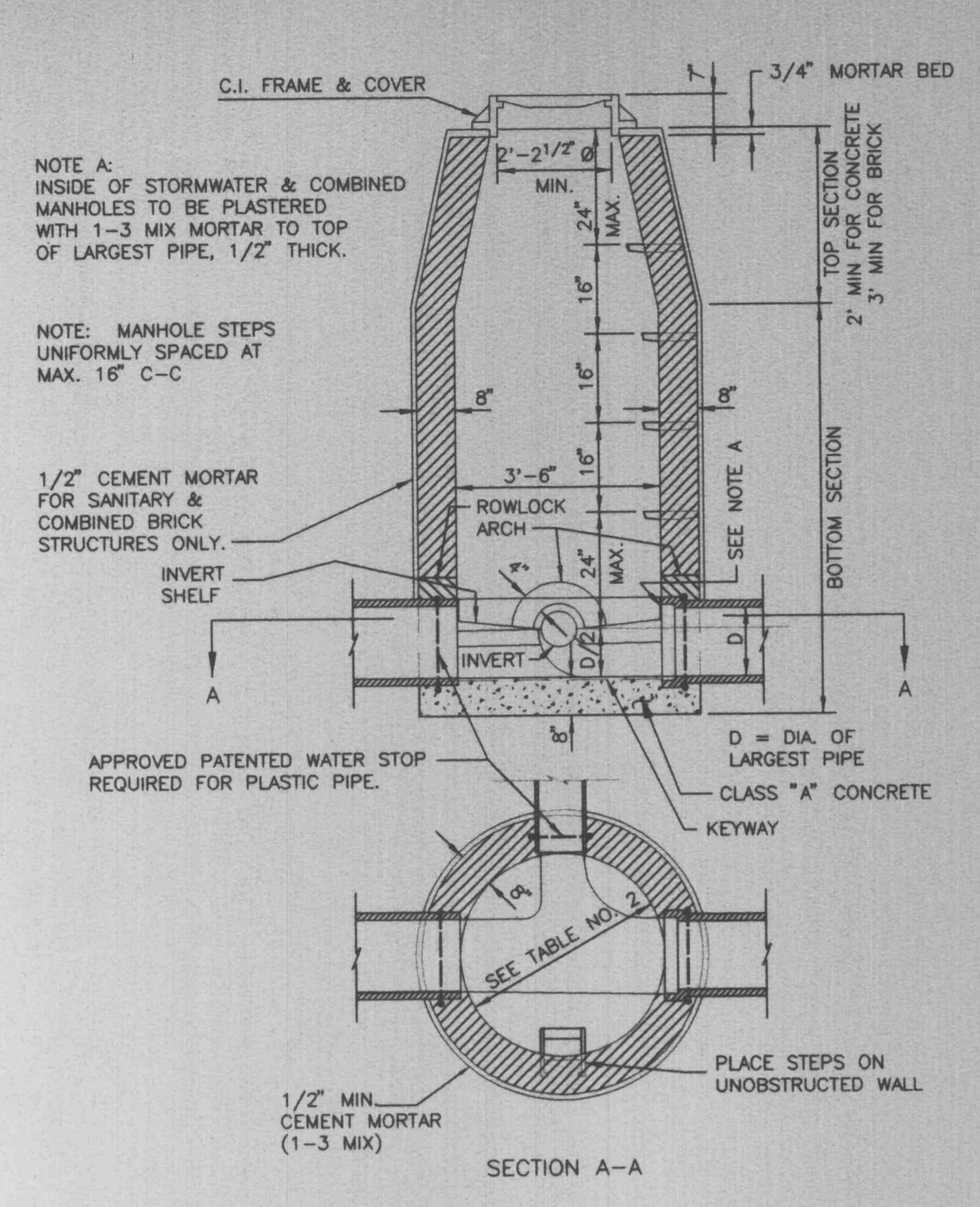
- Underground utilities have plotted from available information and therefore, location shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor and shall be located prior to any grading or construction of improvements.
- Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary and storm sewers, including house laterals.
- All existing site improvement disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
- All fill including places under proposed storm and sanitary sewer lines and paved including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the "Modified AASHTO T-180 Compaction Test (ASTM D1557)". All test shall be verified by a Soils Engineer concurrent with grading and backfilling operations. The compacted fill shall be free of rutting and shall be non-yielding and non-pumping during proof rolling and compaction.
- The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
- All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
- Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat.
- All construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
- The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination and inspection.
- All sanitary sewer building connections have been designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding building connection is not less than the diameter of the pipe plus the vertical distance of 2-1/2 feet.
- All exterior sanitary sewer manholes shall be waterproofed on the exterior in accordance Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
- All PVC sanitary sewer pipe is to be SDR-35 or equal with "clean" 2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe.
- All sanitary and storm sewer trench backfills shall be water settled. Granular backfill will be used under pavement areas.
- All pipe shall have positive drainage through manholes. No flat base structure are allowed.
- All creek crossings shall be grouted rip-rap as directed by District Inspectors. (All grout shall be high slump ready-mix concrete).
- Brick shall not be used on sanitary sewer manholes.



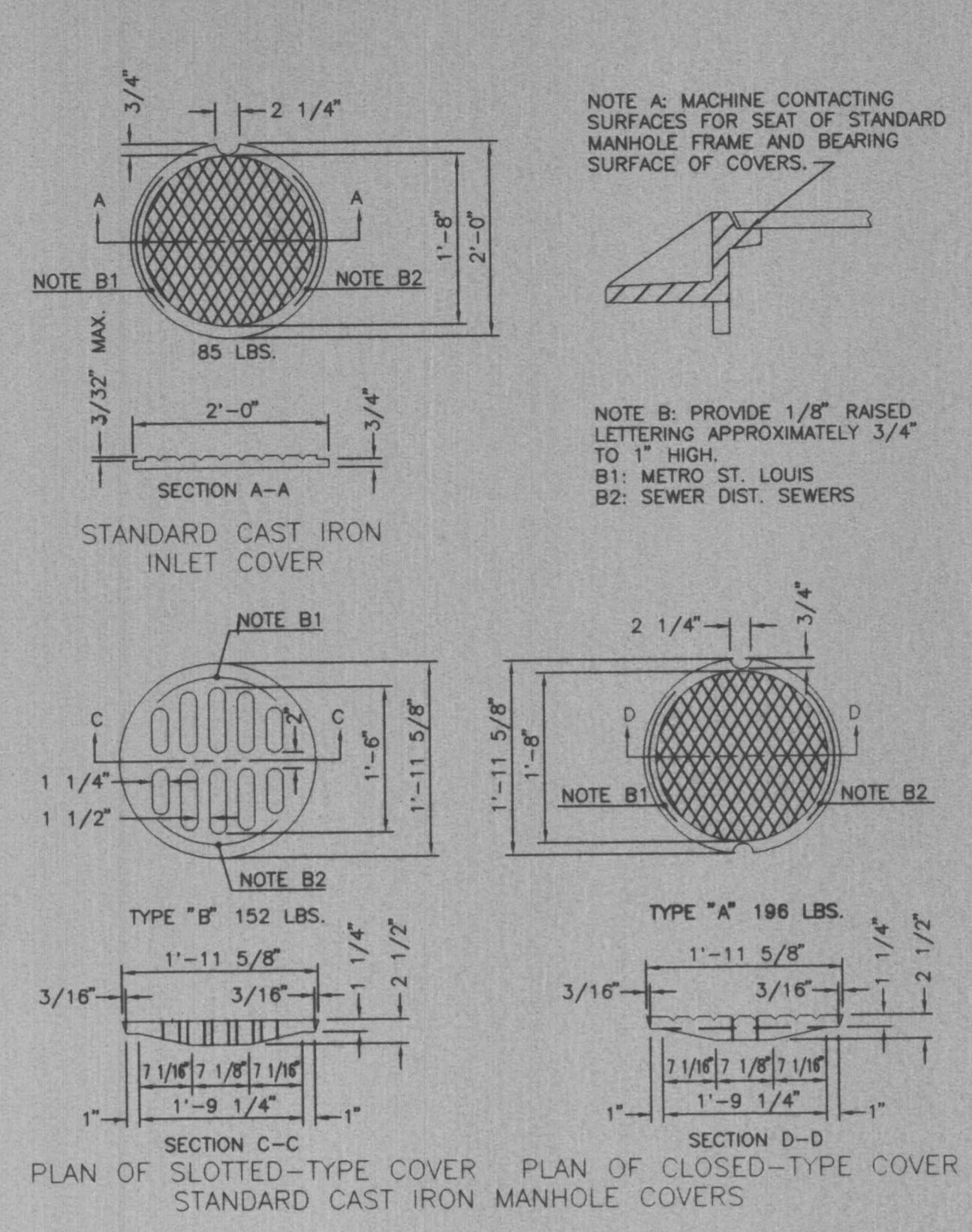
FLARED END SECTION  
w/ENERGY DISSIPATOR



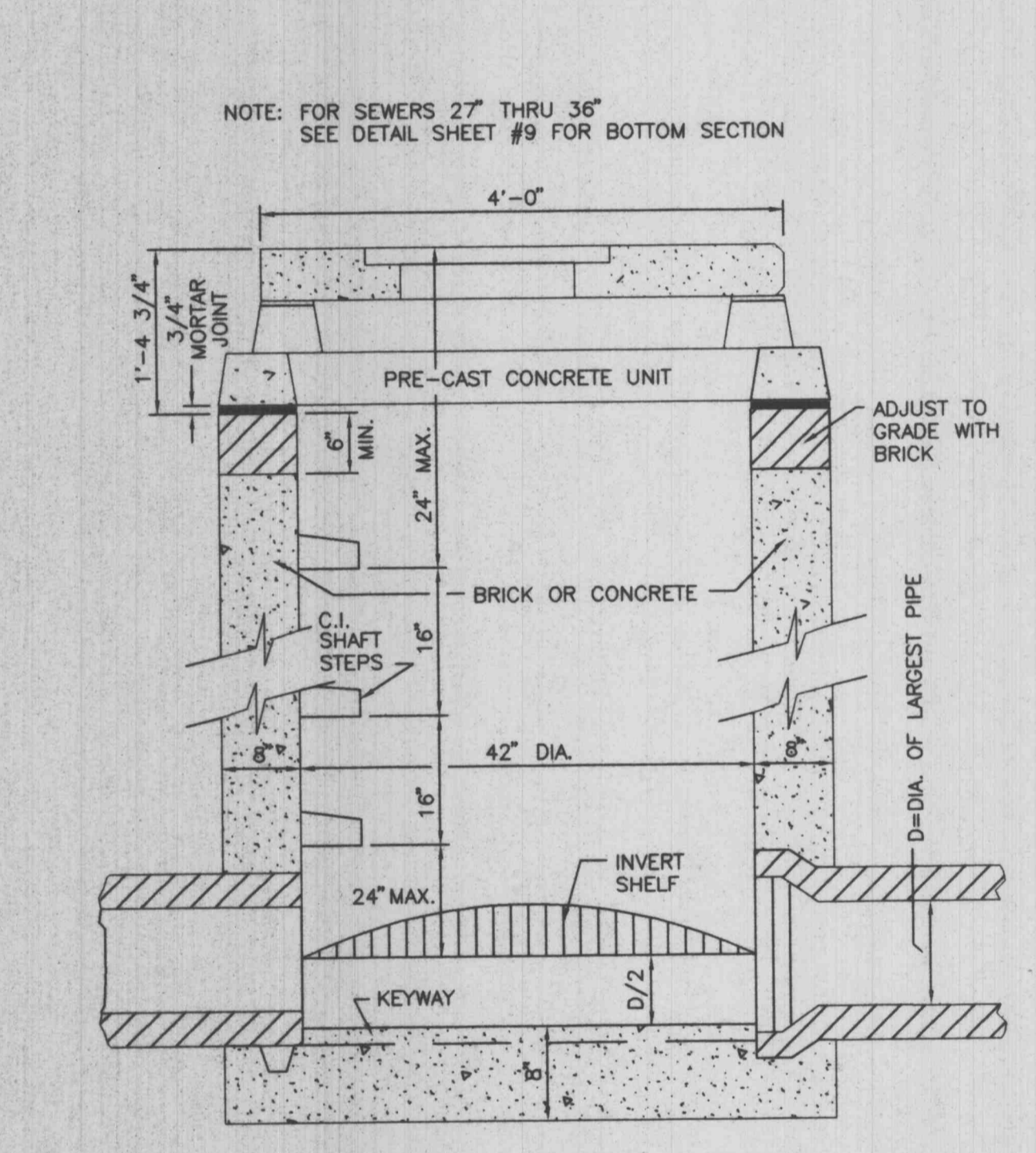
2 CRATE INLET



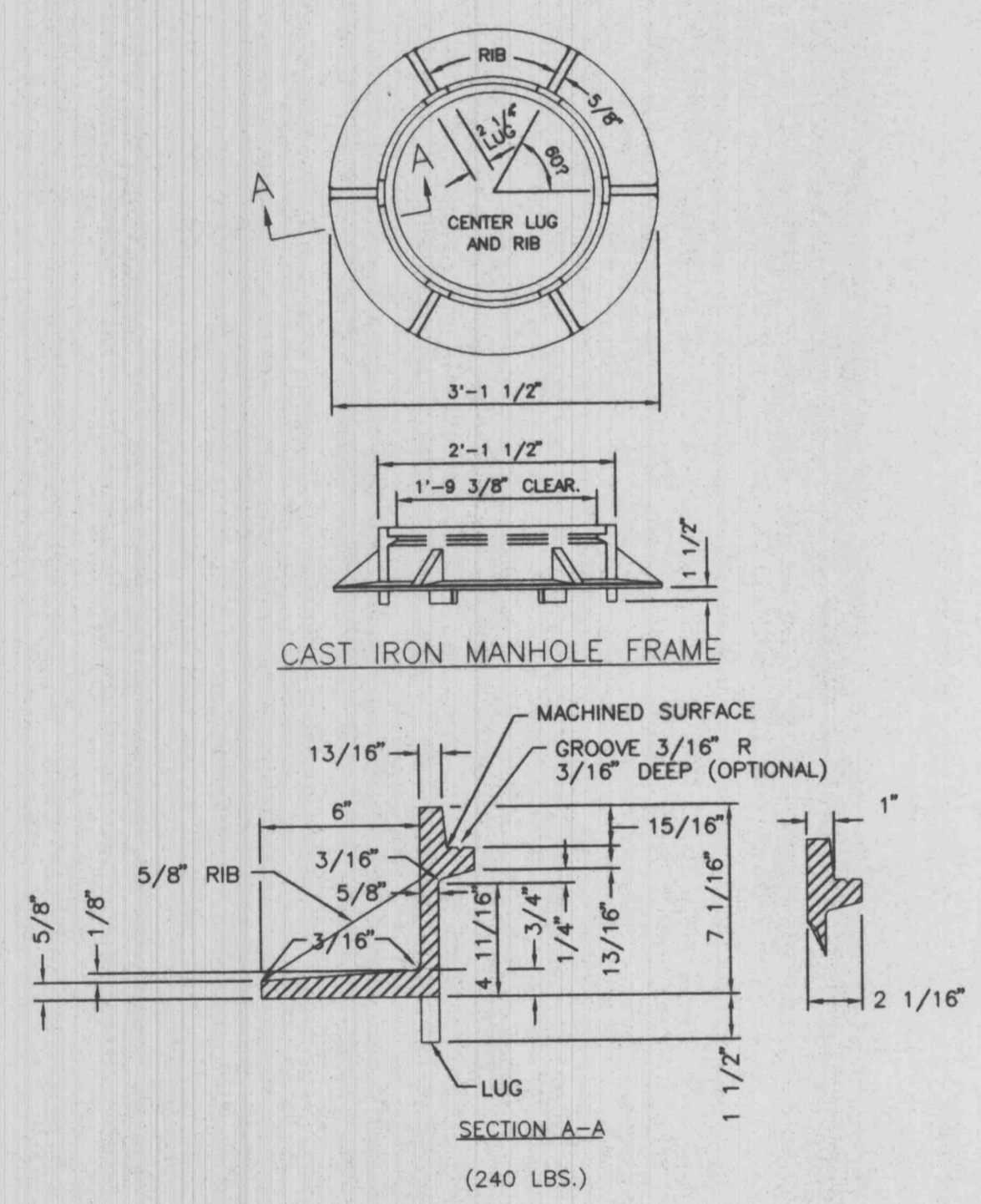
LINE MANHOLE  
PIPE SEWERS 8"-24" DIA.



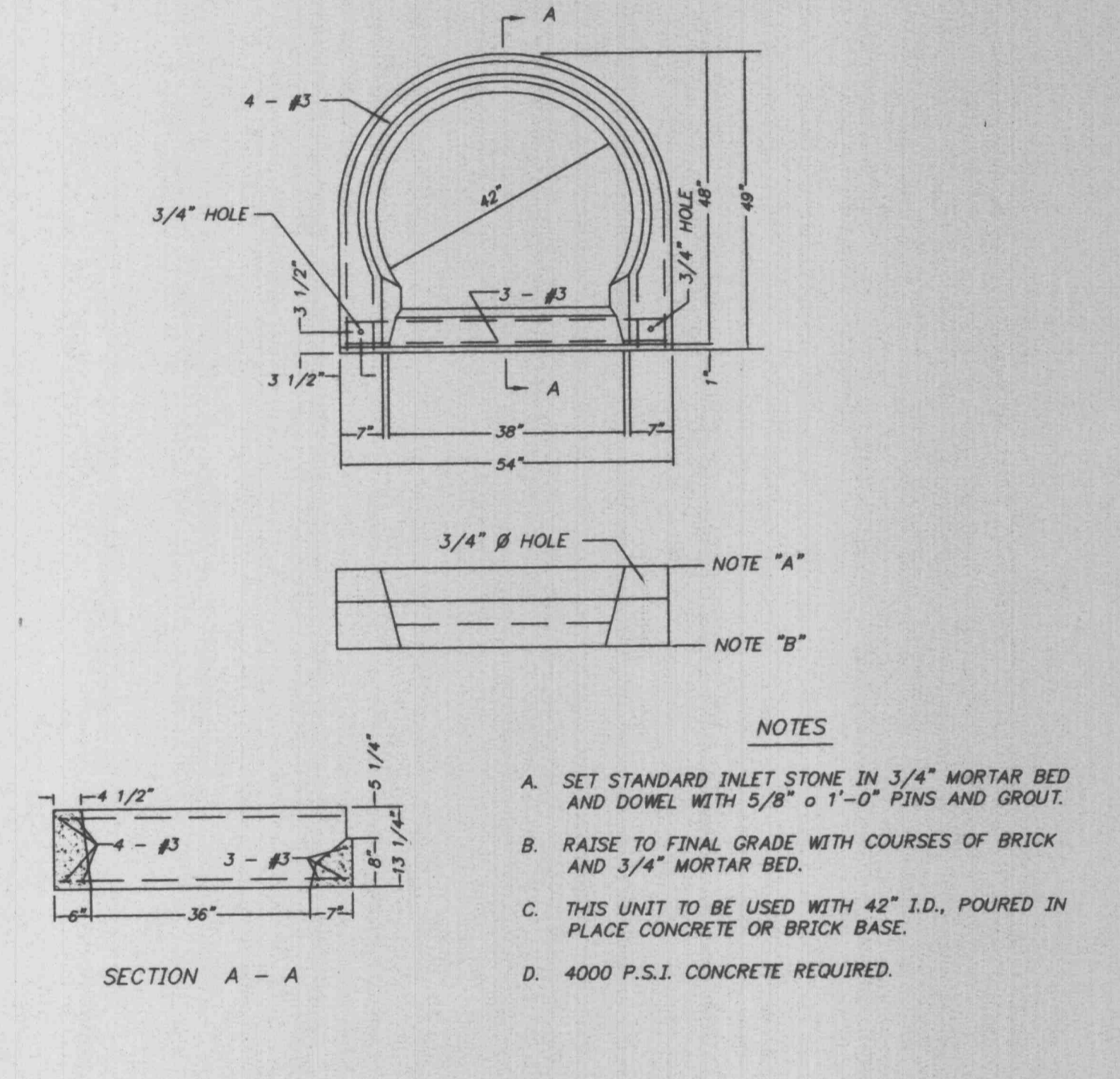
CAST IRON COVERS  
MANHOLES AND INLETS



AREA INLET  
(12" THRU 24")



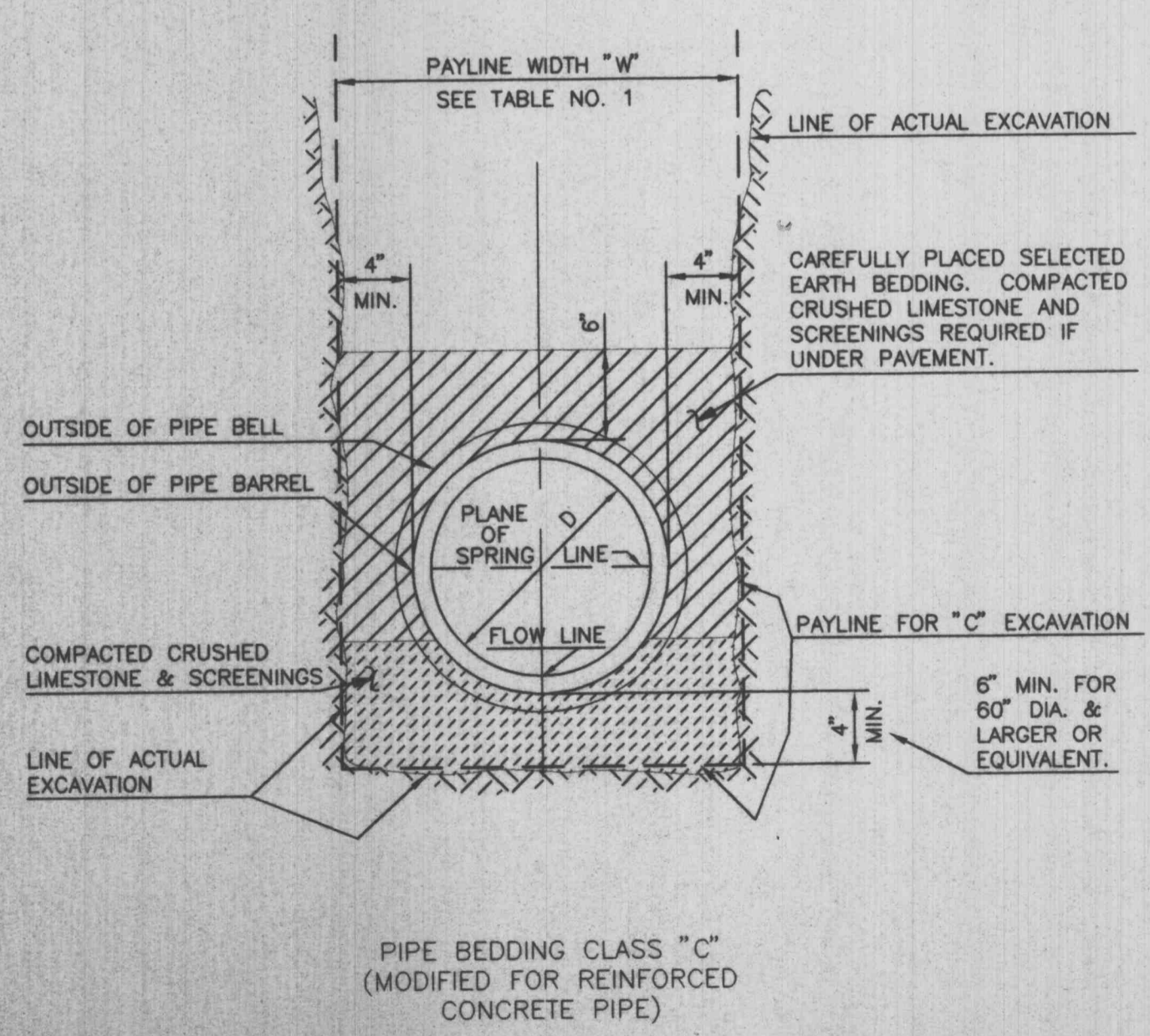
CAST IRON  
MANHOLE FRAME



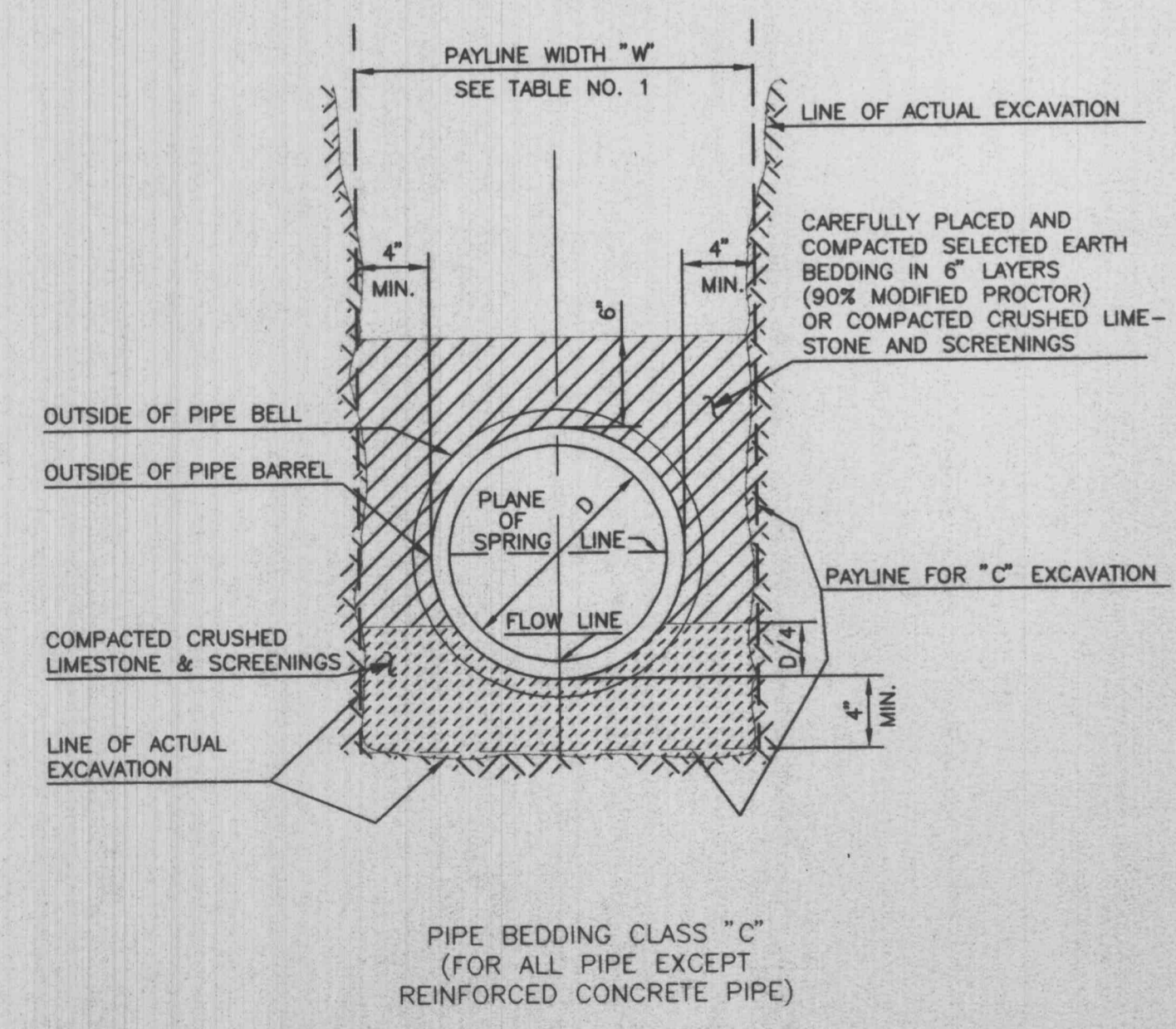
PRE-CAST CONCRETE UNIT FOR  
SINGLE CURB INLET

ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
Inside Diameter of Pipe (Inches)	*W Payline Width of Trench (Inches)	*W Payline Width of Trench (Feet)	Pay-volumes cu. ft. per ft. of Concrete Encasement	Inside Diameter of Pipe (Inches)	*W Payline Width of Trench (Inches)	*W Payline Width of Trench (Feet)	Pay-volumes cu. ft. per ft. of Concrete Encasement
4	28	2.33	3.20				
6	28	2.33	3.46				
8	28	2.33	3.70				
10	28	2.33	3.86				
12	28	2.33	3.98				
15	32	2.67	4.89				
18	35	2.92	5.63	14 X 23	41	3.42	5.94
21	39	3.25	6.61				
24	42	3.50	7.39	19 X 30	49	4.08	7.88
27	45	3.75	8.18	22 X 34	53	4.42	8.61
30	48	4.08	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	DISCONTINUED			32 X 49	71	5.92	13.14
42	63	5.25	13.38	34 X 53	75	6.25	14.05
48	70	5.83	15.67	38 X 60	83	6.92	16.18
54	77	6.42	18.15	43 X 68	92	7.67	18.81
60	84	7.00	20.73	48 X 76	101	8.42	21.59
66	91	7.58	23.45	53 X 83	109	9.08	24.35
72	98	8.17	26.37	58 X 91	118	9.83	27.45
78	105	8.75	29.39	63 X 98	126	10.50	30.50
84	112	9.33	32.57	68 X 106	135	11.25	33.91
90	119	9.92	35.90	72 X 113	143	11.92	36.99
96	126	10.50	39.37	77 X 121	152	12.67	40.69
102	133	11.08	42.99	82 X 128	160	13.33	44.45
108	140	11.67	46.75	87 X 136	168	14.00	47.79
114	147	12.25	50.66	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	116 X 180	218	18.17	73.59

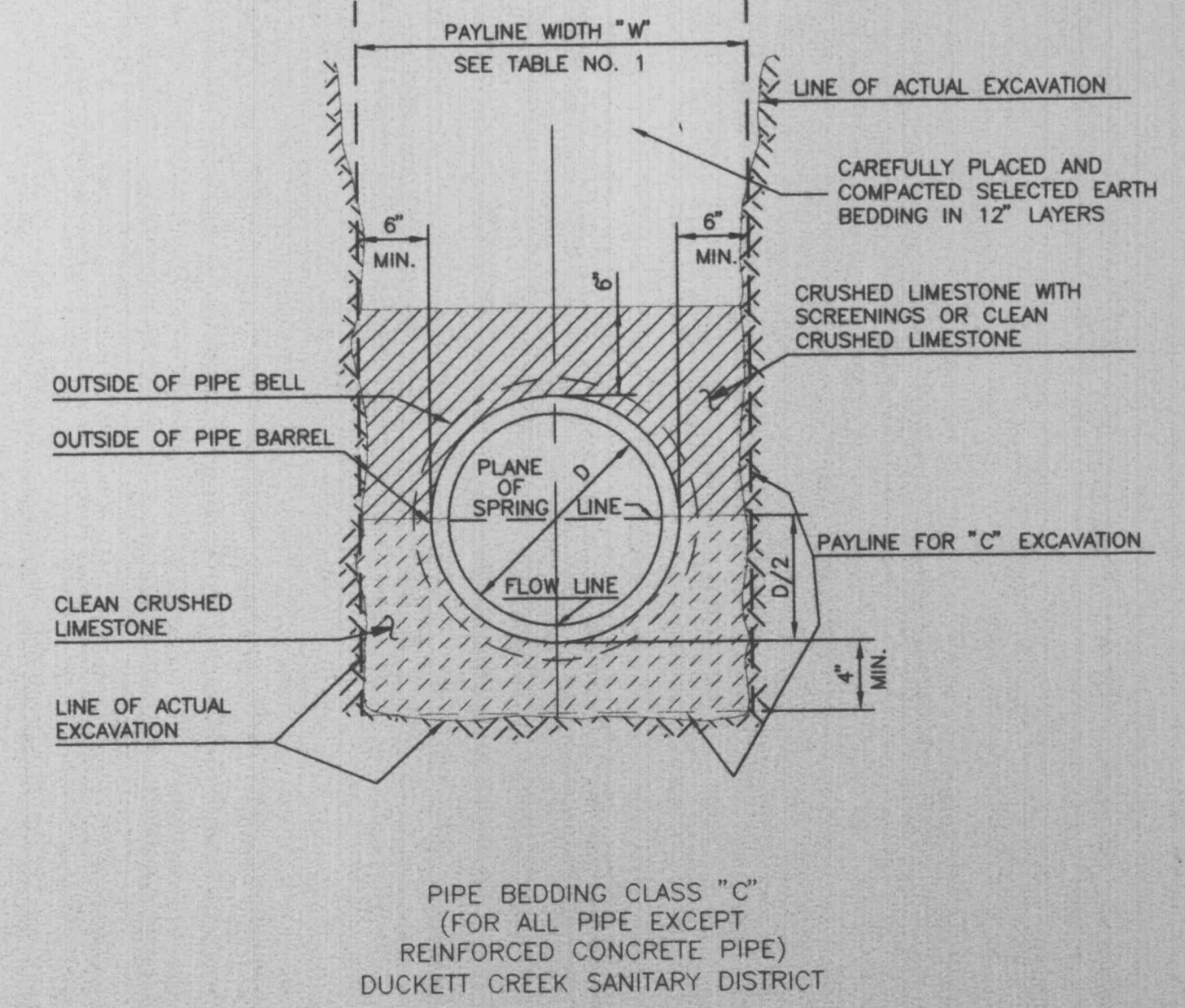
TABLE NO. 1  
PAYLINE WIDTHS OF TRENCH AND  
PAY-QUANTITIES OF CONCRETE



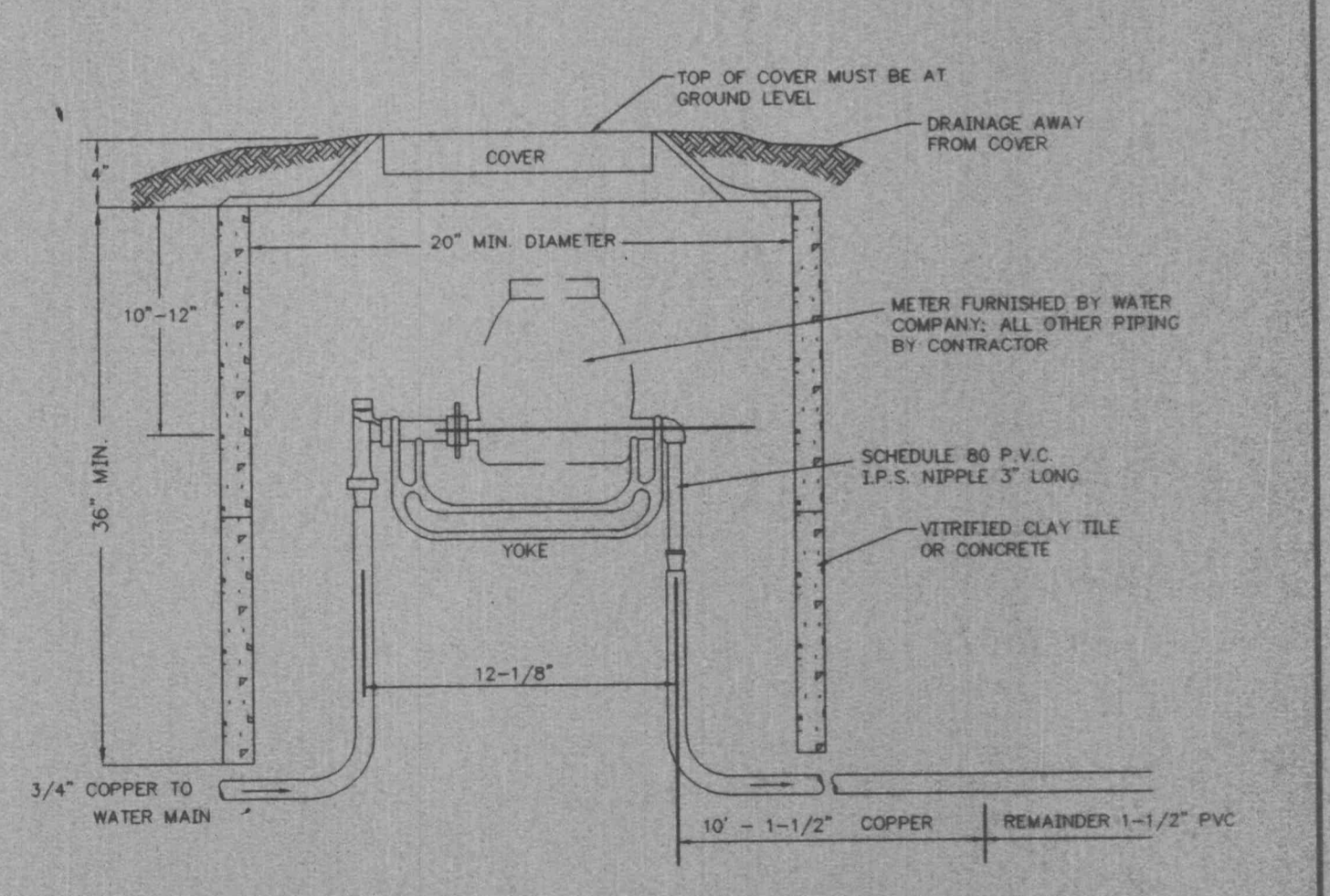
PIPE BEDDING CLASS "C"  
(MODIFIED FOR REINFORCED  
CONCRETE PIPE)



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



PIPE BEDDING CLASS "C"  
(FOR ALL PIPE EXCEPT  
REINFORCED CONCRETE PIPE)  
DUCKETT CREEK SANITARY DISTRICT



WATER METER BOX FOR 3/4" SERVICE  
NOT TO SCALE

