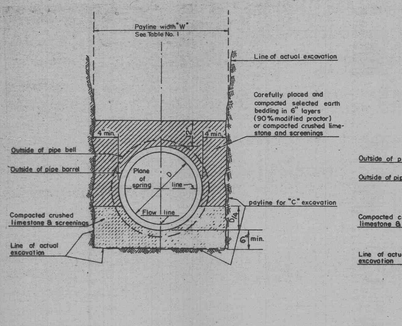
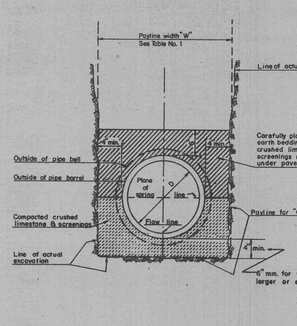


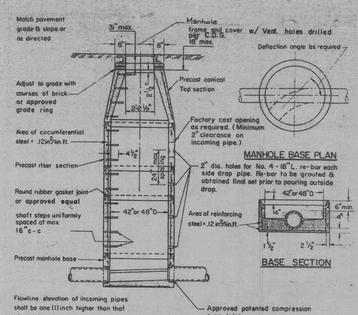
PIPE BEDDING CLASS "C"
(FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)
(FOR SANITARY LATERAL)



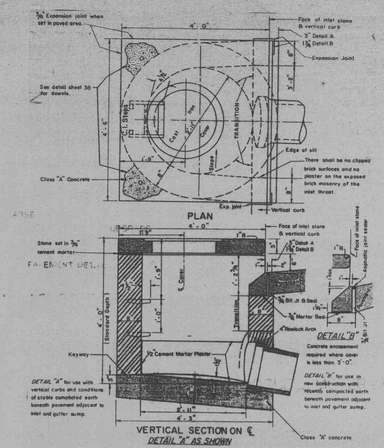
PIPE BEDDING CLASS "C"
(MODIFIED FOR REINFORCED CONCRETE PIPE)

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 36" Dia. Pipe	3'-6" Square

TABLE NO.2
STANDARD MANHOLE DIMENSIONS

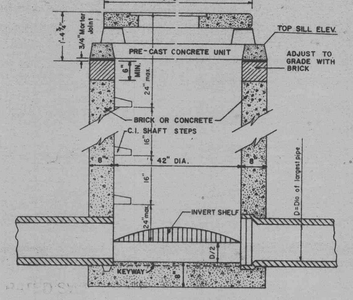


PRE-CAST CONCRETE MANHOLE
FOR SEWERS
8" THROUGH 12"
SAMPLING MANHOLE FOR PROCESS & SANITARY SEWER



VERTICAL SECTION ON ℄
DETAIL "A" AS SHOWN

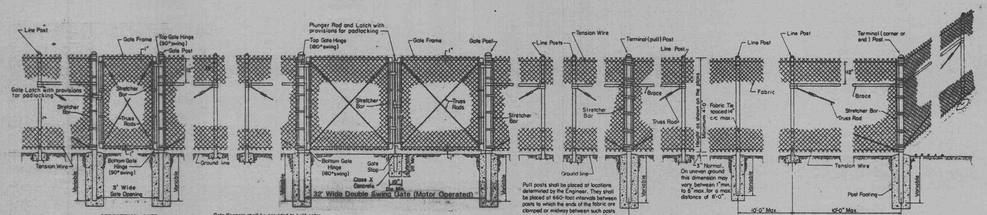
UNTRAPPED STREET INLET
BRICK CONSTRUCTION

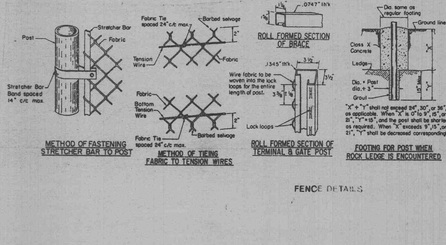


AREA INLET
(12" thru 24")

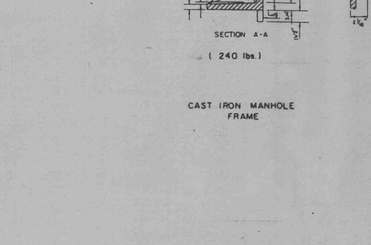
ROUND PIPE					HORIZONTAL ELLIPTICAL PIPE				
Inside Diameter of Pipe (Inches)	"W" Polyline Width of Trench (Inches)	"W" Polyline Width of Trench (Feet)	Pay-volumes cu. ft. per ft. Concrete Encasement		Inside Dimensions of Pipe (Inches)	"W" Polyline Width of Trench (Inches)	"W" Polyline Width of Trench (Feet)	Pay-volumes cu. ft. per ft. 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	7.68	
27	45	3.75	8.18		22 x 34	53	4.42	8.61	
30	49	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	15.16	72.40		116 x 180	218	18.17	73.59	

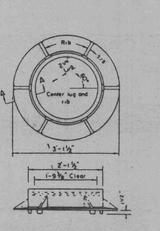
TABLE NO.1
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE



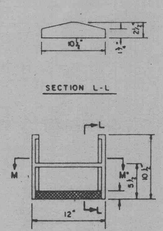


FENCE DETAILS

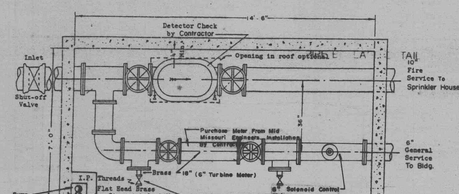




CAST IRON MANHOLE FRAME
(240 lbs.)

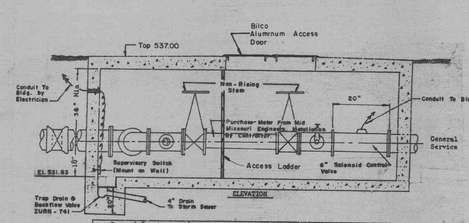


CAST IRON
MANHOLE STEPS



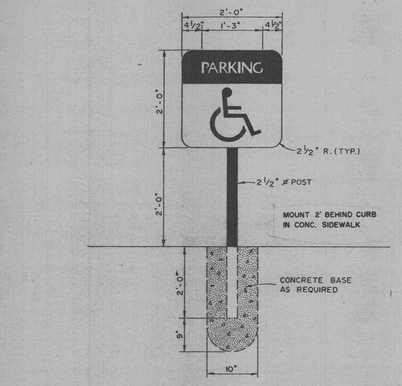
NOTE: CONTACT GARY JOHNSON AT M.M.E.H.
(281 - 2858)

METER BOX FOR SPLIT SERVICE

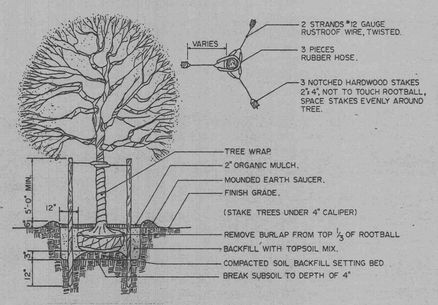


Meter Bypass				Fire Service								
				8"			10"			12"		
Size	Min. Size	A	B	C	D	E	C	D	E	C	D	E
1	1	10	22¢	15	72	102	15	72	90	10	66	84
1¼	1	10	22¢	15	72	102	15	72	90	10	66	84
2	1	10	22¢	15	72	102	15	72	90	10	66	84
3	1½	10	15¢	15	78	156	15	78	156	10	72	150
4	1½	10	15¢	15	84	156	15	84	162	10	78	156
6	2	10	15¢	16	84	174	16	84	174	11	78	174
8	2	10	15¢	16	84	174	16	84	174	11	78	174
10	2	66	15¢	37	84	186	37	84	186			
12	2	66	15¢	37	84	186	37	84	186			

NOTES
1. Vault walls to be of concrete or concrete block
2. Vault roof to be of reinforced concrete with opening centered over general service meter
3. Lids and frames of opening to be set in place, not in concrete
4. Valves on each side of general meter for 1½" or 2" service to have screw ends, I.P. threads; for 3" and above, valves must have flanged ends, be in alignment and be adequately secured to withstand water thrust with meter removed
5. Minimum clearance of 2" to be provided between general meter and detector check bypass meter
6. Drainage facilities must be provided, or box otherwise kept free of water
7. Service to be run at right angles from meter box to street
8. Metal ladder to be provided if box depth exceeds 6 feet
9. R.J. or copper piping through box.
10. All gate valves shall be non-rising stem.

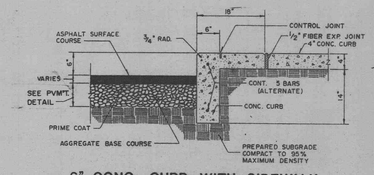


HANDICAPPED SIGN DETAIL

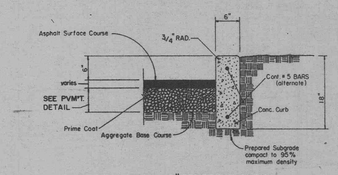


TREE SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

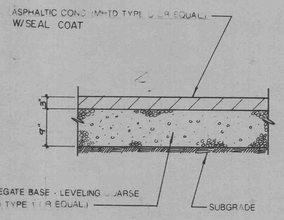
DECIDUOUS TREE PLANTING DETAIL - STAKED
NO SCALE



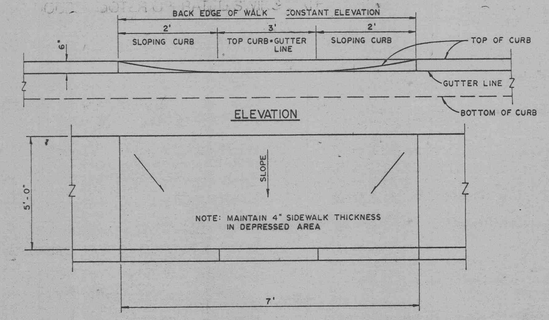
6" CONC. CURB WITH SIDEWALK



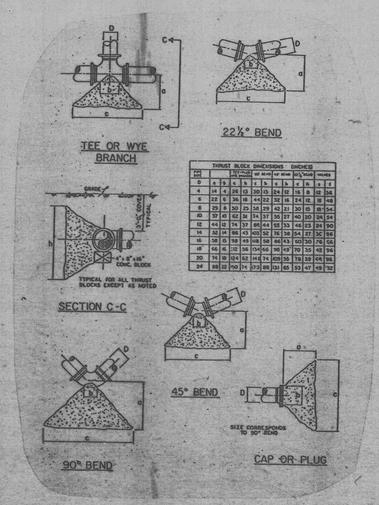
6" CONCRETE CURB

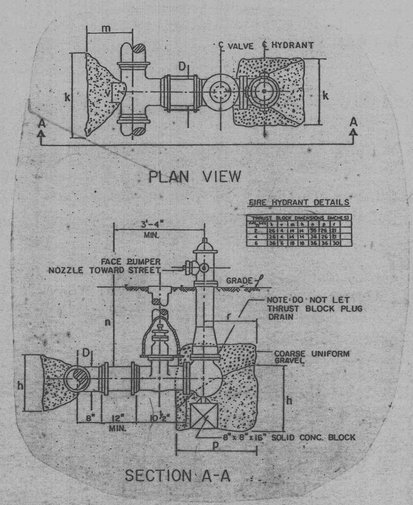


PAVEMENT DETAIL



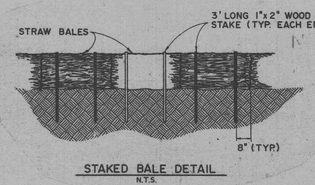
HANDICAPPED RAMP



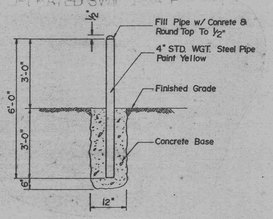


NOTES

1. Sanitary sewer pipes shall be 316-L stainless steel.
2. Valves shall be resilient wedge, non-rising stem valves with operating nut and mechanical joint flanges manufactured in accordance with AWWA Standard C 509-80. The permanently bonded wedge sealing surface shall be resilient material meeting A.S.T.M. D 429 requirements for rubber bonded to cast iron and shall be as manufactured by Mueller Company or equal.
3. All fire hydrants shall be 5-1/4" Mueller Figure A423. The hydrant assembly will be furnished with a 6" flanged shoe. A 6" auxiliary valve and valve box to be flanged by Mechanical Joint installed. All hydrants to be 5-way.
4. All pipe and fittings shall be installed and pressure tested in accordance with A.W.W.A. Specification C-600-64 (300 psi at the low point).
5. All pipe shall be disinfected in accordance with A.W.W.A. Specifications C-601 prior to being placed into service in the following manner: Disinfection shall be by the tablet method. Hypochlorite tablets (HTH) shall be attached to the pipe during installation. Two tablets per 20 foot length. Following installation, the main shall be filled with water at a velocity not to exceed one (1) foot per second. The water shall remain in the pipe for 24 hours prior to flusing.
6. Horizontal and vertical separation of water and sewer lines shall be in accordance with regulations as prescribed by the Missouri Department of Natural Resources, Division of Environmental Quality, Public Drinking Water Program.
7. Trenches shall be backfilled full width with granular backfill material a minimum of 12" above the pipe and a minimum of 3" below the pipe.
8. Trenches at road crossings and parking areas shall be backfilled with compacted granular backfill material full height.
9. All fittings within 6'-0" of each other shall be rodded by utilizing two (2) 5/8" threaded rods, four (4) duc lugs, and four (4) 5/8" nuts and washers per pair of fittings and/or valves.
10. A single No. 12 THN copper wire shall be placed in pipe trench with plastic watermain. Terminals of wire shall be brought above ground elevation at each end of watermain segment.
11. All fasteners on all fittings, tapping sleeves, and valves must be stainless steel or corten steel.
12. Water mains to have min. 42" of cover.



STAKED BALE DETAIL
N.T.S.



PIPE BOLLARD DETAIL

NO.	DATE	DESCRIPTION OF REVISION OR ISSUE	BY	CK.	PROJ. ENGR.	A.B. APPROVAL
5	8/26/89	AS-BUILT	JPT	JPT	JPT	
4	6-5-89	NOTE REV.	JPT	JPT	JPT	
3	2-28-89	MOTORIZED GATE & PIPE BOLLARD DETAIL	DPB	JPT	JPT	
2	1-18-89	PIT & MISC. REVISIONS	DLM	JPT	JPT	
1	1-4-89	PIT DRAIN	DPB	JPT	JPT	

ESR
DESIGNED JPT
DRAWN DPB
CHECKED
SCALE NO SCALE
DATE DEC. 23, 1988

ANHEUSER-BUSCH COMPANIES
ANHEUSER BUSCH, INC.
O'FALLON, MO.

PROJ. 1038

CIVIL
DETAIL SHEET

BLDG. NAME PILOT PLANT

ENGINEER APPROVED | OWNER APPROVED

C-5

PROPERTY OF
CITY OF O'FALLON
BUILDING DEPARTMENT

CONSULTANT
CLC
Colton/Lester Corporation
Consulting Engineers & Surveyors
14222 South Outer Forty Road
Chesterfield, Missouri 63017
(314) 878-7007

PLANT	BLDG. NO.	DIV.	DRG. NO.	REV.
OPB -	1 -	C -	1001	-