

MINIMUM RESTRAINED LENGTHS (IN FEET) BACK FROM BOTH SIDES OF FITTING

FITTING TYPE/NOMINAL SIZE	4"	6"	8"	10"	12"	16"
90 DEGREE BEND	17	25	32	38	45	59
45 DEGREE BEND	7	10	13	16	19	24
22.5 DEGREE BEND	3	5	6	8	9	12
11.25 DEGREE BEND	2	2	3	4	4	6
DEAD END	39	55	73	87	103	134
TOP SIDE VERTICAL OFFSET * (45 DEGREE)	16	23	30	36	43	55
BOTTOM SIDE VERTICAL OFFSET * (45 DEGREE)	4	6	8	10	11	15
TEE RUN X BRANCH **						
6" BY	1	17				
8" BY	1	5	34			
10" BY	1	1	24	49		
12" BY	1	1	15	41	65	
16" BY	1	1	1	26	52	95
REDUCER **						
6" BY	28					
8" BY	52	30				
10" BY	71	54	29			
12" BY	90	75	55	51		
16" BY	123	113	97	94	54	

* VERTICAL OFFSET WITH MINIMUM 10' OF SOLID PIPE BETWEEN UPPER AND LOWER BEND.

** TEE WITH MINIMUM 10' SOLID PIPE ON BOTH SIDES OF RUN.

NUMBER INDICATES LENGTH OF BRANCH TO BE RESTRAINED.

*** LENGTH BACK FROM LARGE END OF REDUCER.



**CITY OF BATAVIA
PUBLIC WORKS DEPARTMENT**

SHEET: 1 OF 1
DATE: 8/30/17

WATER MAIN RESTRAINT

STANDARD NO. 6.09