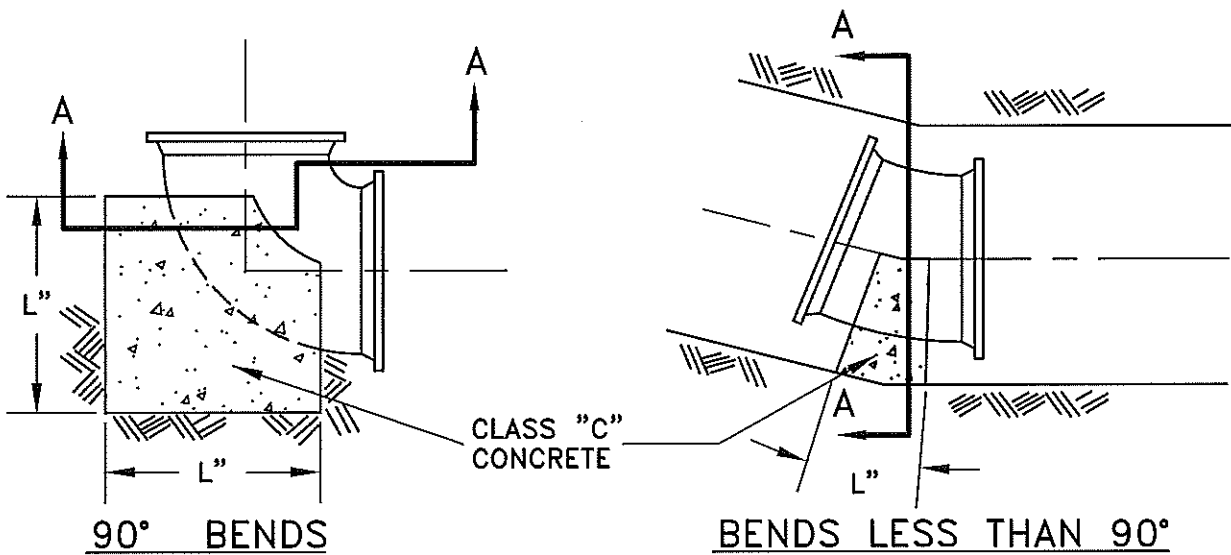


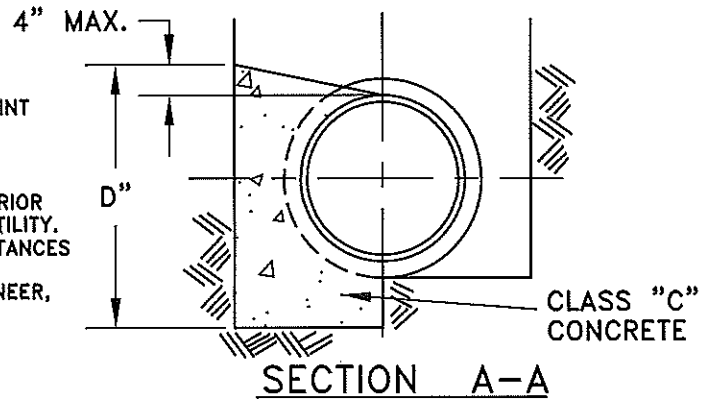
SIZE OF PIPE	DEGREE OF BEND											
	11.25°			22.50°			45°			90° (HORZ. ONLY)		
	L"	D"	Vc.f.	L"	D"	Vc.f.	L"	D"	Vc.f.	L"	D"	Vc.f.
3"	4	3	0.1	6	4	0.2	10	4	0.3	10	4	0.3
4"	5	4	0.2	9	5	0.4	14	5	0.6	14	5	0.6
6"	8	6	0.5	12	7	0.7	20	8	1.4	18	9	1.7
8"	9	8	0.7	16	9	1.4	24	12	2.7	25	11	4.0
12"	14	12	1.8	24	14	3.6	36	18	6.8	32	18	10.7
16"	18	16	3.4	32	18	6.7	36	32	13.4	41	26	25.6

STEEL WILL BE USED AS REQUIRED BY ENGINEER



NOTES:

1. BACKER DESIGNED FOR 3000 PSF SOIL BEARING.
2. CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH.
3. ALL NEW PIPE 20" & LARGER SHALL BE RESTRAINED JOINT PER CCMS ITEM 801 UNLESS OTHERWISE INDICATED PER PLAN OR AS DIRECTED BY THE ENGINEER.
4. EXISTING WATER LINES 20" AND GREATER MUST HAVE PRIOR APPROVAL FROM DOW TO LOWER UNDER A PROPOSED UTILITY. APPROVAL WILL ONLY BE GIVEN UNDER SPECIAL CIRCUMSTANCES AND CONTINGENT UPON THE CONTRACTOR SUBMITTING A DESIGNED DRAWING, STAMPED BY A PROFESSIONAL ENGINEER, DETAILING HOW THE LOWERED WATER MAIN WILL BE RESTRAINED TO THE EXISTING WATER MAIN.
5. PROVIDE CLEARANCE FOR REMOVAL OF BOLTS.



L-6311.Dwg Revision Date: 1/11/13

CITY OF COLUMBUS DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER	STANDARD DETAIL BACKING FOR BENDS HORIZONTAL AND VERTICAL SAG	
APPROVED: <i>RC Westerfield</i> 5-14-13 ADMINISTRATOR DATE		