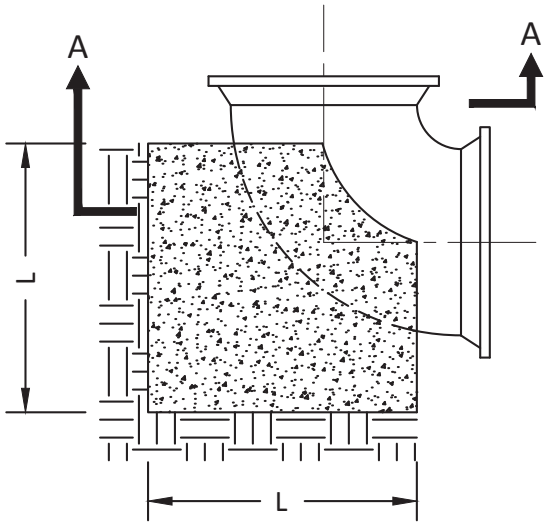
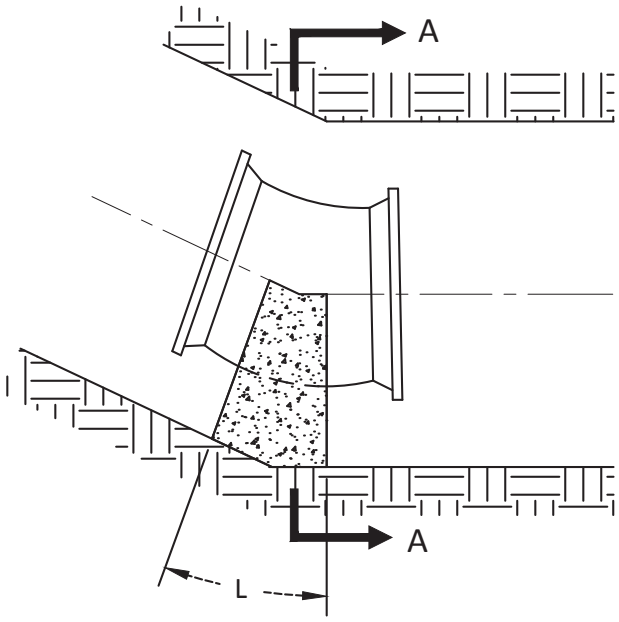
SIZE OF PIPE	DEGREE OF BEND											
	11 ¼°			22 ½°			45°			90°		
	L"	D"	V (c.f.)	L"	D"	V (c.f.)	L"	D"	V (c.f.)	L"	D"	V (c.f.)
3"	4	3	0.1	6	4	0.2	10	4	0.3	10	4	0.3
4"	5	4	0.2	9	5	0.4	14	5	0.6	14	5	0.6
6"	8	6	0.5	12	7	0.7	20	8	1.4	18	9	1.7
8"	9	8	0.7	16	9	1.4	24	12	2.7	25	11	4.0
12"	14	12	1.8	24	14	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	25.4
20"	25	20	6.4	30	30	11.5	49	36	20.5	50	32	46.5
24"	27	24	9.0	39	34	18.4	60	42	35.0	58	40	77.7
REINFORCING STEEL WILL BE USED AS REQUIRED BY ENGINEER												

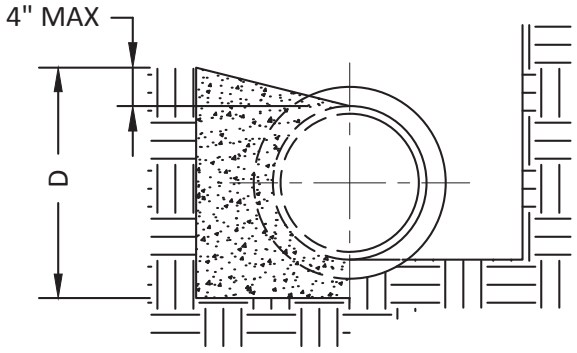


90° BENDS



BENDS LESS THAN 90°

NOTES:
1. BACKER DESIGNED FOR 3000 PSF SOIL BEARING.
2. CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH.
3. A LAYER OF POLYETHYLENE SHEETING REQUIRED BETWEEN CONCRETE AND WATERLINE, VALVES, ETC.



SECTION A-A

EST 1808
CITY OF DELAWARE OHIO
Public Works Department

STANDARD DETAIL

BACKING FOR BENDS

HORIZONTAL AND VERTICAL SAG

WATER

WTRD-13.0

Rev. 12/31/2018