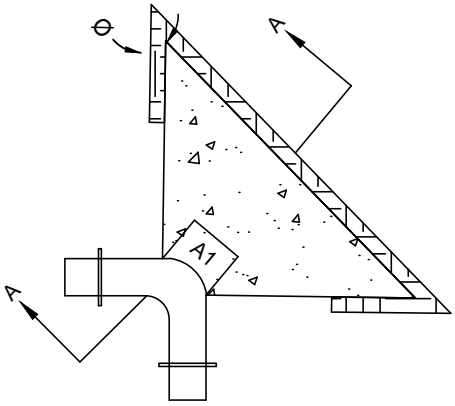
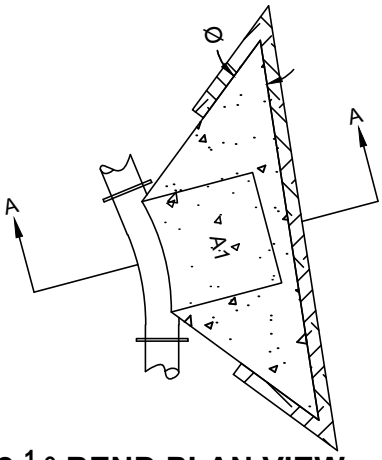
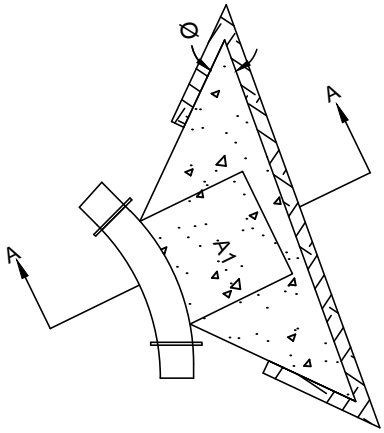
BUTTRESS DIMENSIONS						
PIPE SIZE	22½° BEND		45° BEND		90° BEND	
	B1	D1	B1	D1	B1	D1
6"	--	--	--	--	2'-1"	1'-6"
8"	--	--	--	--	2'-8"	2'-0"
12"	1'-10"	1'-10"	3'-4"	2'-0"	4'-9"	2'-6"
16"	3'-0"	2'-0"	3'-10"	3'-0"	6'-2"	3'-6"
20"	3'-6"	2'-8"	5'-6"	3'-4"	8'-4"	4'-0"
24"	4'-4"	3'-0"	6'-10"	3'-10"	9'-8"	5'-0"
30"	--	--	9'-3"	6'-0"	17'-0"	6'-0"



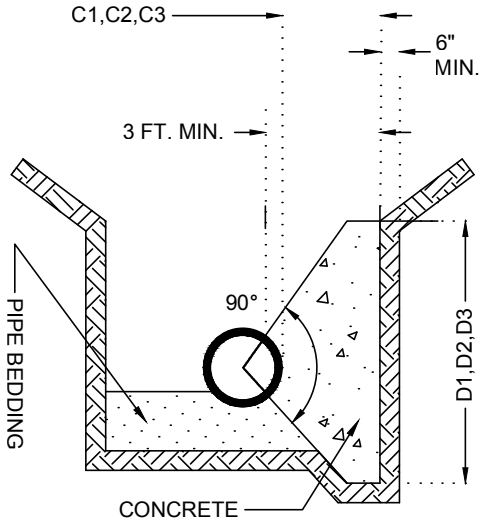
90 ° BEND PLAN VIEW



22 ½ ° BEND PLAN VIEW



45 ° BEND PLAN VIEW



X-SECTION A-A

NOTES

1. SHAPE OF BACK OF BUTTRESS MAY VARY AS LONG AS POURED AGAINST FIRM UNDISTURBED EARTH
2. DIMENSIONS: C1,C2,C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE Ø EQUAL OR LARGER THAN 45°
3. DIMENSIONS: A1,A2,A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH MJ BOLTS
4. Ø = 45° MINIMUM.
5. PLACE POLYETHYLENE BETWEEN CONCRETE AND PIPE.

DESIGN:	DATE:	ROSEVILLE ENGINEERING DEPARTMENT	PLATE NUMBER
DRAWN:		CONCRETE THRUST BLOCKING	W-8
REVISIONS 02-08-2018			

CONCRETE THRUST BLOCKING.dwg