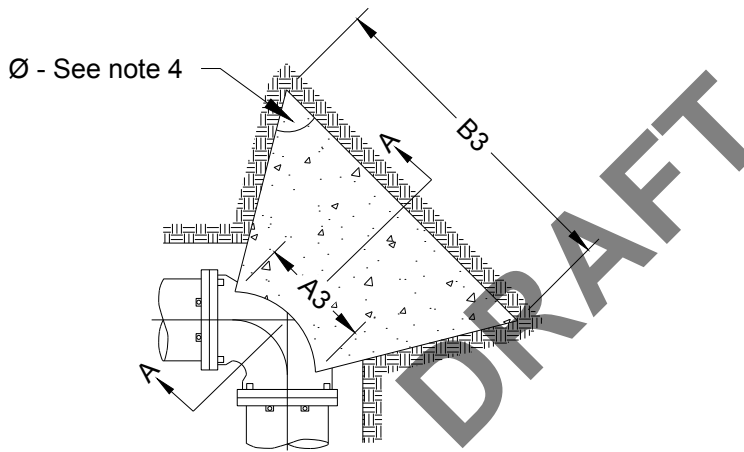


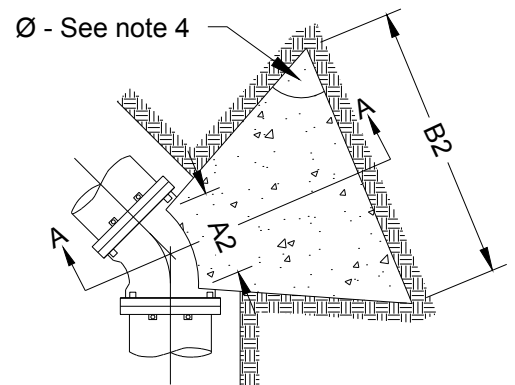
Notes:

1. Shape of back of buttress may vary as long as poured against firm undisturbed earth.
2. Dimension C1, C2, & C3 should be large enough to make angle \emptyset equal to or larger than 45° .
3. Dimension A1, A2, & A3 should be as large as possible without interfering with MJ bolts.
4. $\emptyset = 45^\circ$ Minimum.
5. Place polyethylene between concrete & pipe.
6. Mechanical joint restraints may be used in lieu of thrust blocking.

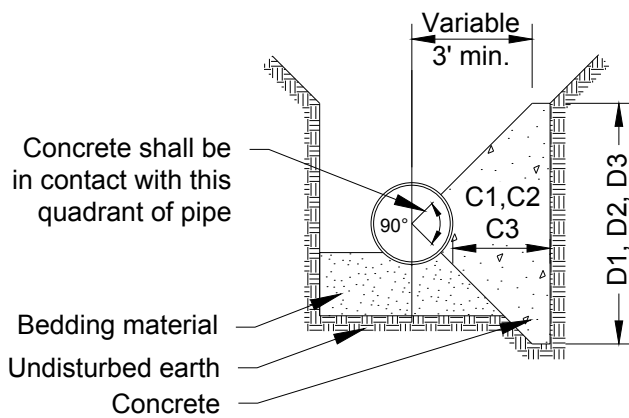
| PIPE SIZE | 22 1/2 ° BEND | | 45° BEND | | 90° BEND | |
|-----------|---------------|--------|----------|--------|----------|-------|
| | B1 | D1 | B2 | D2 | B3 | D3 |
| 6" | 1'-5" | 1'-5" | 1'-5" | 1'-5" | 1'-5" | 1'-5" |
| 8" | 1'-5" | 1'-5" | 2'-1" | 1'-6" | 2'-8" | 2'-0" |
| 12" | 1'-10" | 1'-10" | 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" | 6'-2" | 3'-6" |
| 30" | - | - | 9'-3" | 6'-0" | 17'-0" | 6'-0" |



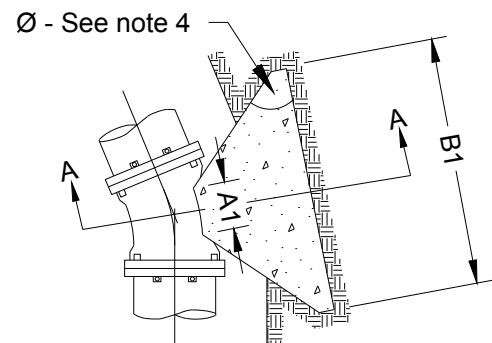
PLAN 90° BENDS



PLAN 45° BENDS



SECTION A-A



PLAN 22 1/2° BENDS

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City Plate No.:
WAT-7
Last Revision:
4/10/2019
File:
WAT_7.dwg

**STANDARD DETAILS
CONCRETE THRUST
BLOCKING**

