

PIPE MATERIAL TYPE AND SIZE	MAXIMUM DEFLECTION AT EACH JOINT	DEFLECTIONS (INCHES EACH JOINT) 19' LAYING LENGTH	RADIUS (MINIMUM)
DUCTILE IRON (PUSH-ON JOINT) 6" TO 12" 14" TO 16" 18" +	2° 30' 2° 00' 1° 30'	9.5" 7.5" 5.5"	413' 516' 688'
DUCTILE IRON (MECHANICAL JOINT) 6" 8" TO 12" 16" 24"	3° 30' 3° 00' 2° 00' 1° 30'	13.5" 11.5" 7.5" 5.5"	291' 344' 516' 688'

Note: Any deflection not listed for iron pipe may be derived by:

$$R = \frac{90^\circ}{1/2 \text{ Manufacturer's Max. Jt. Deflection} \times 18' \times 2} \times \frac{18' \times 12'}{\pi}$$

Deflection = tan joint deflection X 18' X 12

PVC PIPE (C-900, C-905)			
PIPE NOM. DIA.	PIPE O.D.	RADIUS (MIN.)	PRESSURE RATING - DIMENSION RATIO
6"	6.9"	272.5'	150 psi DR 18
8"	9.05"	326.3'	150 psi DR 18
10"	11.10"	377.5'	150 psi DR 18
12"	13.20"	430.0'	150 psi DR 18
14"	15.30"	482.5'	165 psi DR 26
16"	17.40"	535.0'	165 psi DR 26
18"	19.50"	587.5'	165 psi DR 26
20"	21.60"	640.0'	165 psi DR 26
24"	25.80"	745.0'	165 psi DR 26

- Notes:
- Any radius not listed for PVC pipe may be derived by: $Do \ 300 + 100$ (Do = outside diameter in feet)
 - Due to the difficulty of measuring deflections on curved pipe, no deflections are given. It is expected that curved water lines will be properly shown on the plans and staked in the field.