



PIPE RESTRAINT LENGTHS					
FITTING	4" DIA PIPE L	6" DIA PIPE L	8" DIA PIPE L	10" DIA PIPE L	12" DIA PIPE L
11-1/4° BEND	3'	3'	4'	5'	6'
22-1/2° BEND	5'	6'	8'	10'	12'
45° BEND	9'	13'	17'	20'	24'
90° BEND	22'	31'	40'	48'	57'

NOTE: THESE ARE THE MINIMUM PIPE RESTRAINT LENGTHS UNLESS STATED OTHERWISE ON THE PLANS.
 VALUES SHOWN HEREIN ASSUME 200PSI MAX TESTING PRESSURE WITH WELL GRADED GRAVEL
 BEDDING AND 3' STANDARD COVER.

REVISED JANUARY 2025

FILE NAME		HORIZONTAL BEND WATER MAIN INSTALLATION DETAIL	
23W			
SHEET	1 OF 1	STANDARD DETAILS	