

MINIMUM BLOCK VOLUME FOR ANCHORAGE

VERTICAL BENDS			
FOR TEST PRESSURE OF 1000 kPa (SEE NOTE 2)			
PIPE DN	CONCRETE VOLUME M ³		
	11.25° BEND	22.5° BEND	45° BEND
100	N	N	0.3
150	N	0.3	0.6
200	0.2	0.5	1.1
225	0.3	0.6	1.4
250	0.3	0.7	2.5
300	0.4	1.1	3.8
375	0.7	1.8	5.8
450	DETAILED DESIGN REQUIRED (ALTERNATIVE METHODS TO BE CONSIDERED)		
500			
600			
750			

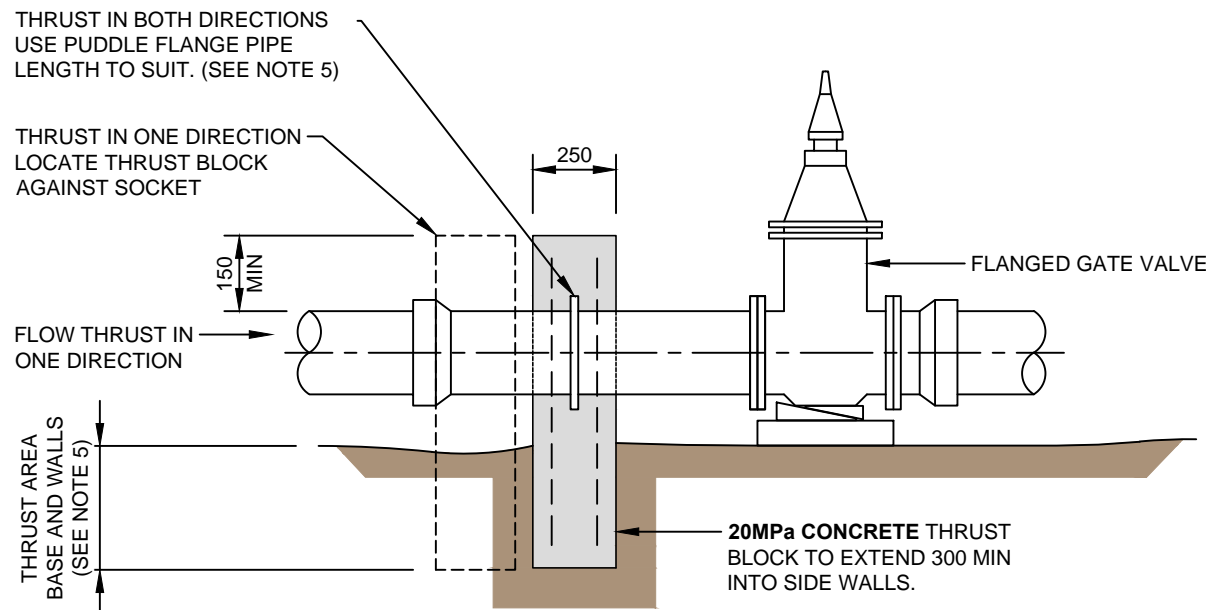
'N' - NO ADDITIONAL RESTRAINT REQUIRED
(COMPACTED TRENCHFILL SUFFICIENT)

ANCHOR BLOCK CONSTRUCTION NOTES:

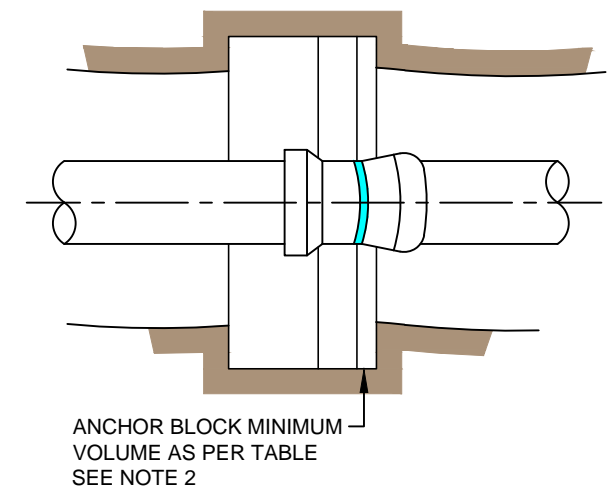
- LOCATE ANCHOR BLOCK CENTRALLY AROUND BEND.
- KEY ANCHOR BLOCK INTO BASE OF TRENCH A MINIMUM DEPTH OF 250.
- POUR CONCRETE AGAINST A SOLID EXCAVATION FACE.
- USE GRADE 20 MPa CONCRETE.
- KEEP CONCRETE CLEAR OF ALL BOLTS, NUTS, AND PIPE JOINTS.

NOTE:

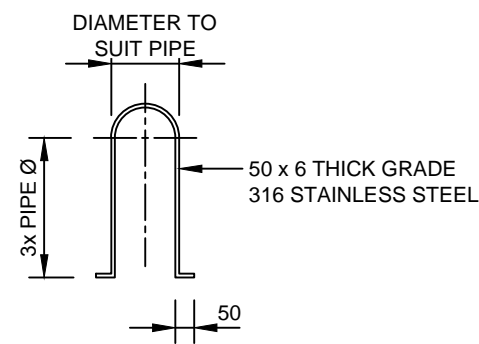
- ALL DIMENSIONS IN MILLIMETRES, UNLESS SHOWN OTHERWISE.
- ANCHOR BLOCKS IN THE TABLE ARE DESIGNED FOR A TEST PRESSURE OF 1000 kPa (100 m HEAD) ADJUST CONCRETE VOLUME TO SUIT ACTUAL TEST PRESSURE.
- THRUST BLOCK REINFORCEMENT AS SPECIFIED IN DESIGN DRAWINGS.
- WHERE SPECIFIED PROVIDE CONCRETE THRUST BLOCKS FOR **FL-FL** VALVES. THRUST AREA TO BE AS FOR DEAD ENDS AS SHOWN IN WS-004.
- INSTALL PUDDLE FLANGES ON CLASS **PN25** DICL PIPE.



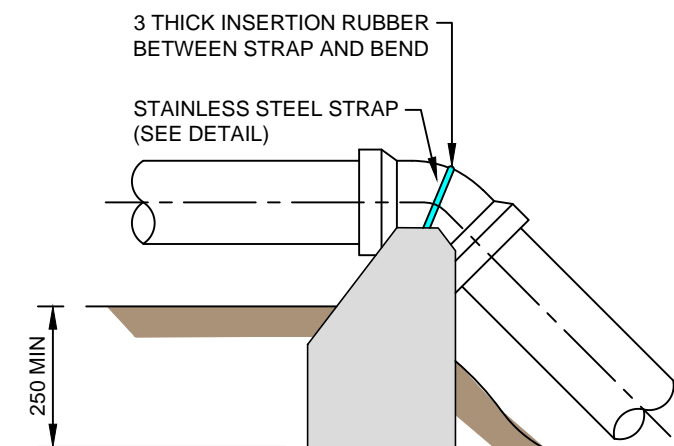
FLANGED VALVES



PLAN



TYPICAL SS STRAP



ELEVATION
VERTICAL BENDS

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KCDC AMENDMENTS TO NZS 4404:2010 SHOWN IN **BOLD**.



STANDARD DETAILS

THRUST AND ANCHOR BLOCKS GATE VALVES AND VERTICAL BENDS

Drawn	Designed	
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Approved	Revision Date	
M. COLE	OCTOBER 2015	
Scale	Drawing No.	Revision
NOT TO SCALE	KCDC-WS-005	R2