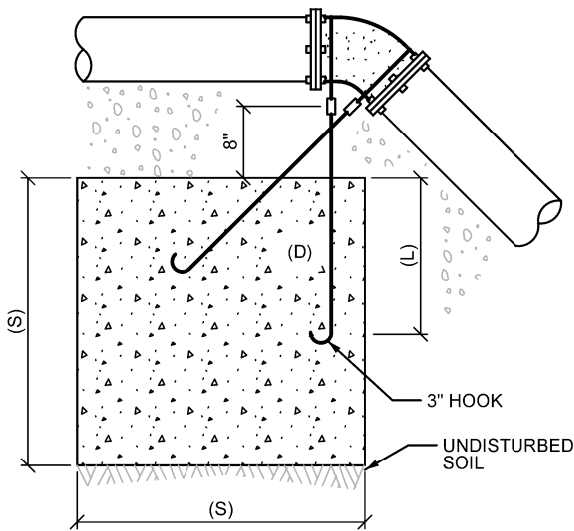


MINIMUM BEARING AREA (SQ. FT)					
SIZE OF PIPE	TEE, VALVE, END	90 BEND	45 BEND	22 BEND	11 BEND
4"	2	3	2	2	2
6"	4	6	3	2	2
8"	7	10	5	3	2
12"	14	20	11	6	3
14"	19	26	14	8	4
16"	24	34	19	10	6

**DIRECT BEARING THRUST BLOCK**



DIMENSIONS FOR 45-DEG. BENDS				
SIZE OF PIPE	CONCRETE (CY)	SIDE (FEET)	REBAR SHAFT DIA. (INCH)	DEPTH IN CONCRETE (FEET)
		(S)	(D)	(L)
4"	1	3	5/8	2
6"	2.5	4	5/8	2.5
8"	4	4.75	5/8	3
12"	9	6.25	5/8	4

**TIE DOWN RESTRAINT**

**NOTES**

1. CONCRETE: CLASS 2000 MINIMUM. POUR CONCRETE AGAINST UNDISTURBED SOIL.
2. PIPE JOINTS: DO NOT COVER WITH CONCRETE. LEAVE COMPLETELY ACCESSIBLE. USE "GRIP RING" CONNECTIONS ON ALL FITTINGS.
3. GREASE: APPLY POLY-FM GREASE TO ALL BURIED METAL SURFACES. WRAP WITH 8-MIL THICK POLYETHYLENE SHEET AND TAPE WRAP.
4. SPECIAL CONSTRUCTION REQUIREMENTS:
  - A. THRUST DESIGN FOR PIPE SIZES OR CONFIGURATIONS NOT SHOWN REQUIRE SPECIAL DESIGN.
  - B. BEARING AREAS, VOLUMES, AND SPECIAL THRUST BLOCKING DETAILS SHOWN ON DISTRICT APPROVED DRAWINGS TAKE PRECEDENCE OVER THIS PLAN.
  - C. REINFORCING STEEL BARS TO BE EPOXY COATED AT LEAST 15-MILS THICK. MINIMUM STRESS YIELD STRENGTH OF TIE DOWN BARS IS 70,000 PSI.
  - D. LOCKING RESTRAINT DEVICES MAY BE USED IN CONJUNCTION WITH CONCRETE THRUST BLOCKING AS PER ENGINEER.
5. INSPECTION: PRIOR TO BACKFILLING, SECURE INSPECTION OF INSTALLATION BY ENGINEER OR DISTRICT REPRESENTATIVE.
6. BACKFILL: PROVIDE AND PLACE PER DISTRICT STANDARD SECTION 31 05 13. COMPACT PER SECTION 31 23 26 TO A MODIFIED PROCTOR DENSITY OF 95 PERCENT OR GREATER. MAXIMUM LIFT THICKNESS IS 8 INCHES BEFORE COMPACTION.



**CONCRETE THRUST BLOCK**

SDWD  
STANDARD  
DETAIL

FEBRUARY 2016

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