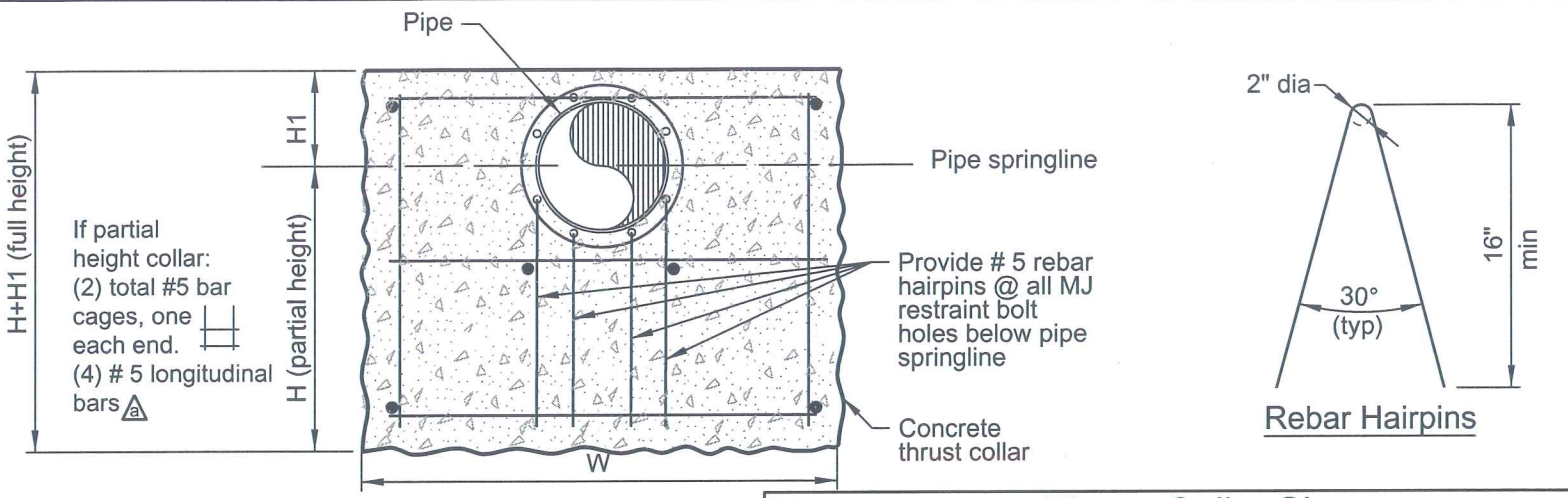


Concrete Thrust Collar Plan View
NTS



End Elevation A-A
NTS

▲ longitudinal bars run parallel to pipe

If full height collar:
(2) total #5 bar cages, one each end.
(6) # 5 longitudinal bars ▲

If partial height collar:
(2) total #5 bar cages, one each end.
(4) # 5 longitudinal bars ▲

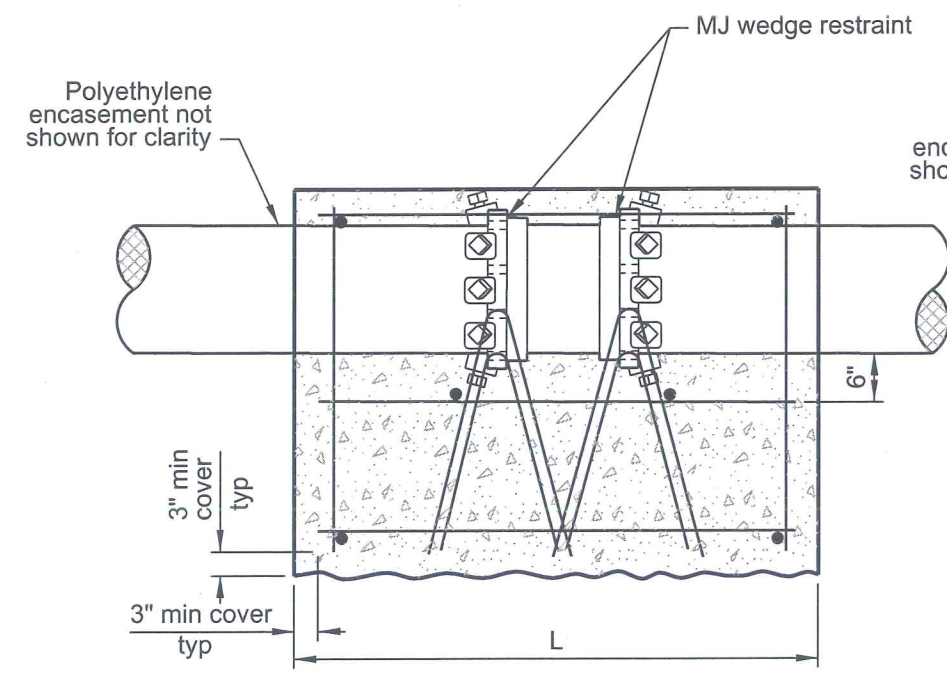
Thrust Collar Size

Use of table requires:
1. Top of pipe 3 feet min below surface;
2. Water pressure 150 psi max; and
3. Tie-in connection 3W min length from collar.
If these required conditions are not met contact Project Engineer.

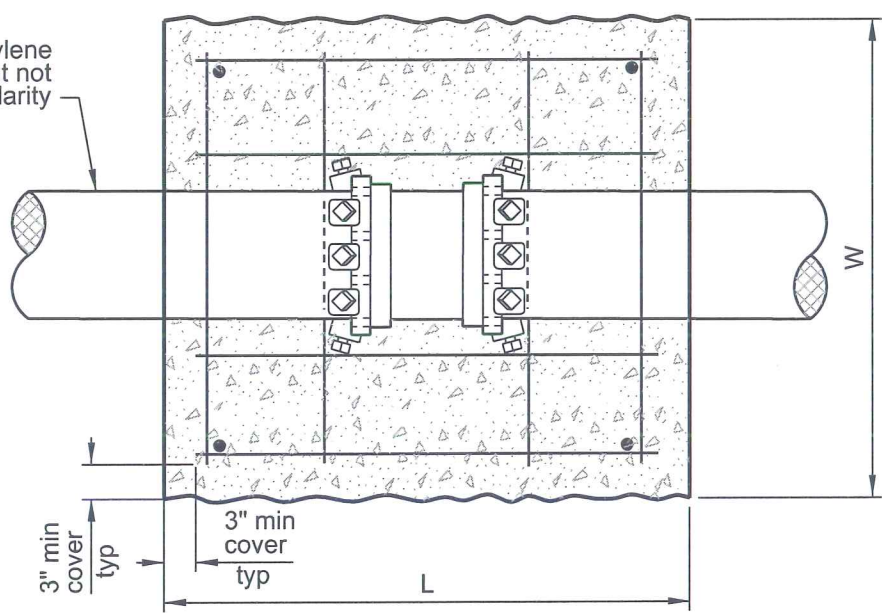
Pipe Diameter (inches)	Width W (ft)	Length L (ft)	Height H (ft)	H1 (ft) * see note 6 ** see note 7
6	2.5	2.5	2	0 *
8	3	3.5	2	0 *
12	4.5	5	2	1
16	5.5	6	3	1
20	6	6.5	4	2 **
24	6.5	9	4.5	2 **

Notes:

- All reinforcing steel to be ASTM A615, Grade 60 (60ksi).
- Concrete compressive strength to be 3,000 psi prior to the thrust force.
- When possible, excavation should match thrust collar dimensions so concrete is placed directly against native soil on sides and bottom. When side forms are necessary, pull forms and compact according to note 5.
- Polyethylene wrap (AWWA C105) to prevent concrete intrusion into wedge pocket of the retainer gland. Keep wrap loose to allow concrete bearing against retainer.
- Compact excavation backfill to 95% of the maximum density according to Standard Proctor (ASTM D698) or to 90% of the maximum density according to the Modified Proctor (ASTM D1557).
- For split ring couplings H1 shall be 1 ft min.
- The excavation competent person shall approve site conditions. For pipe diameter greater than 16" the Project Engineer must also approve site conditions.
- For alternate dimensions of thrust collar, contact Project Engineer of Record for project specific design.




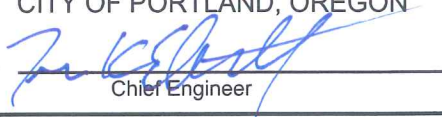
Side Elevation B-B
NTS



Reinforcing Plan
NTS

Note:
Rebar hairpins not shown for clarity

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.


PORTLAND WATER BUREAU
 CITY OF PORTLAND, OREGON

 Chief Engineer

Standard Drawing Title
Concrete Thrust Collar DI Pipe

Note:
All material and workmanship shall be in accordance with City of Portland Standard Construction Specifications.

Effective Date	11/02/2017	Standard Drawing No. P-795
Calc. Book No.	PWB 1	
Baseline Report Date	11/02/2017	