

1" IPT TAP &  
1" MIPT X MIPT BALL CORP  
STOP W/BRASS CAP

2 - 3/4" φ x 2"  
BRASS CAP-SCREW 10 NC-2  
FULL LENGTH FOR BREAKING  
BOND BETWEEN FLANGES

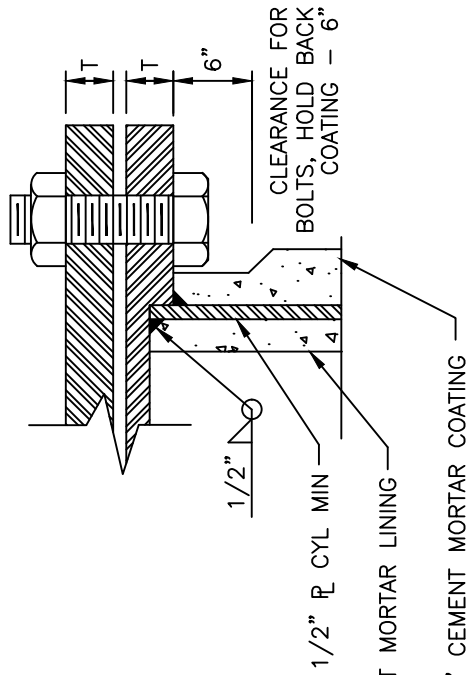
1/8" THICK x ID x OD  
CLOTH INSERTED RED RUBBER  
FULL FACE GASKET

2-3/4" DIA HAND-HOLDS  
WELDED TO TOP FLANGE

TOP VIEW OF MANWAY LID

CROSS-SECTION OF MANWAY A-A

HEX HEAD NUTS AND BOLTS IN ACCORDANCE WITH THE SPECIFICATIONS.



CROSS SECTION OF BOLT ASSEMBLY B-B

NOTES:

- 1.) PAINT ALL EXPOSED INTERIOR & EXTERIOR METAL SURFACES OF FLANGES, EXCEPT GASKET SURFACE, PER SPECIFICATIONS.
- 2.) 150 LB. HUB FLANGES SHALL BE USED IF WORKING PRESSURE 175 PSI OR LESS, 300 LB. FLANGES SHALL BE USED IF WORKING PRESSURE OVER 175 PSI.
- 3.) REINFORCE MANWAY IN ACCORDANCE WITH AWWA M11 OR EQUAL, MANUFACTURER'S REINFORCING GUIDE.
- 4.) MANWAY STATIONS MAY BE VARIED IN ORDER TO LOCATE THE 24" DIA OPENING @ MIDPOINT IN INDIVIDUAL PIPE LENGTHS THUS PERMITTING THE MANUFACTURE OF A UNIVERSAL PIPE LENGTH.
- 5.) PAINT UNDERSIDE OF BLIND FLANGE WITH EPOXY PER SPECIFICATIONS.
- 6.) REINFORCEMENT PLATE DIMENSIONS FOR OUTLET JOINTS, TO BE DESIGNED PER AWWA M11, 13.3 - 13.6, OR EQUAL TO MANUFACTURERS R/F GUIDE. 1/2" CEMENT MORTAR LINING.

ID	FLANGE OD	BC	T	BOLT DIA	NO. BOLTS	PIPE SIZE
24"	32"	29 1/2"	1 1/4"	1 1/4"	20	24" TO 30"
30"	38 3/4"	36"	1 3/8"	1 1/4"	28	36" & LARGER



WATER DISTRIBUTION & TRANSMISSION  
PIPELINE CONSTRUCTION METHODS

TYPICAL MANWAY FOR LARGE  
PIPELINES