PRECAST CONCRETE RISER RINGS
A minimum 2" of riser ring shall be installed in areas to be sodded or seeded. No more than 12" of rings may be used to adjust the frame and cover to grade.

PRECAST TOP SECTION
A precast flat top shall be used when pipe depth is less than 6'. An eccentric top shall be used when pipe depth is 6' or greater.

JOINT SEALING
Joints between all manhole sections shall be sealed with a Rubber Gasket or Butyl Rubber Rope..

PRECAST MANHOLE BARREL SECTION(S)
The minimum total height of barrel sections is 5'–0".

CAST or CORE DRILLED OPENINGS
All openings shall be at least 4" from the top of the base.

GASKETS and BOOTS
Pipe to manhole connections shall be flexible boot or cast in place gasket. See special detail below and 4.4.2.2.5 of CBU Specifications.

MANHOLE DRAIN
Drain shall be a 1' x 1' opening through the concrete base and filled with #11 stone.

MANHOLE BASE
The base shall be precast or cast–in –place. A cast–in–place base must form into the barrel section joint.

MANHOLE CONSTRUCTION
Manhole shall be 4500 p.s.i. concrete reinforced with 10 x 10 – W10 x W10 welded wire fabric.
Wall and base thickness shall be a minimum of 5".

MANHOLE FRAME AND COVER
Frame shall be East Jordan Iron Works casting no. 1020, 1022 or an approved equivalent.
Cover shall be East Jordan Iron Works casting no. 1020A or an approved equivalent. "WATER" or "SEWER" shall be cast in each cover (as applicable).
All castings shall be coated.
Frame shall be set on Butyl Rubber Rope.

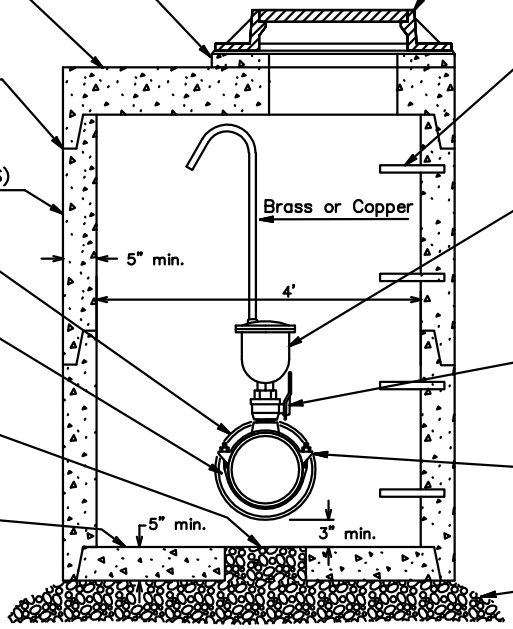
MANHOLE STEPS
Shall be constructed of Fiberglas reinforced polypropolene.
Install with nonshrink mortar or epoxy grout 12" or 16" apart and at a location allowing access to the table.

AIR VALVE
The air release, air vacumm, or combination air valve shall be sized according to system capacity and operating pressure.
The air valve shall be installed upright from a tap at the top of the water main.

CORPORATION STOP BALL VALVE
The corporation stop ball valve shall be sized to match the inlet size of the air valve. The valve shall have a lever for operation.

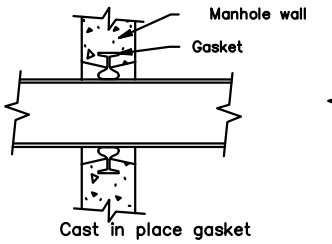
TAPPING SADDLE AND TAP
The tap and tapping saddle shall be sized to match the inlet size of the air valve. The tap shall be made at the top of the water main.

BEDDING
4" of #11 stone on soil or
6" of #11 stone on rock

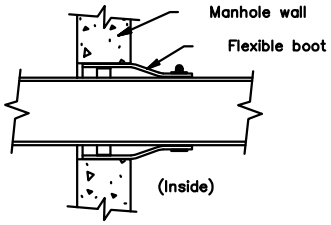


SECTIONAL VIEW

PIPE INTERSECTIONS WITH MANHOLE

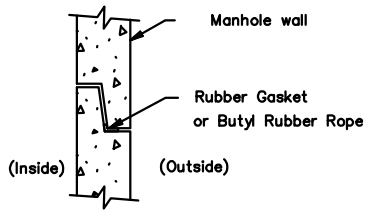


Cast in place gasket

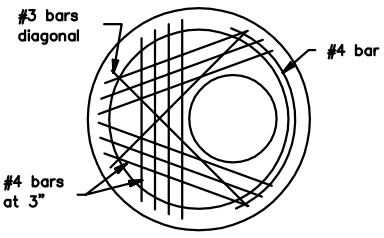


Flexible boot connector

PRECAST SECTION JOINT



FLAT TOP CONSTRUCTION



City of Bloomington Utilities Engineering Department		
NO SCALE 2/21/94 by: M. Hicks	Drawing File: I:\COMMON\STANDARD DRAWINGS\STD3.DGN REVISED 02/16/11 G.N.	STANDARD AIR VALVE VAULT 12" OR SMALLER PIPE

STANDARD DETAIL NUMBER 3