

Material Specification – 35

CONCRETE MANHOLES

1. GENERAL

Concrete manhole riser sections, cone sections, flat covers, grade rings, grade beams and flat base slabs shall be in accordance with ASTM C 478 and [MS-20](#) with the following additional requirements or exceptions.

2. BASE BEAMS

Manhole base beams shall be constructed of precast, reinforced concrete 12-inches wide by 9-inches deep by 8-feet long. Reinforcement shall consist of three evenly spaced No. 5 reinforcing bars and No. 4 reinforcing bars at 12-inch centers transversely.

3. BASE SLABS

Manhole base slabs shall be cast-in-place or precast and designed to uniformly support the earth load and any other reasonable loads that may occur. The minimum slab thickness shall be 6-inches. The minimum reinforcement shall consist of No. 4 reinforcing bars placed 12-inches on center, each way. Concrete shall be in accordance with [MS-20](#); concrete reinforcement shall be in accordance with [MS-22](#).

4. COREHOLES AND BLOCKOUTS

Openings through the manhole riser shall be cored or cast-in with blockouts. Breakouts and doghouse openings are not allowed.

5. JOINT SEALANT

Joint sealant shall be preformed, flexible plastic gasket in accordance with ASTM C 990. It shall be packaged in extruded pre-formed rope shapes of proper size to completely fill the joint when completely compressed. The material shall be protected by a suitable, renewable 2-piece wrapper that may be removed as the material is applied to the joint without disturbing the other wrapper.

6. MANHOLE STEPS

Manhole steps shall be comprised of No. 4, grade 60 deformed reinforcing bar encased in a polypropylene copolymer plastic with a tread width of 14-inches. The steps shall be M. A. Industries No. PS2-PF Double Face.

7. APPROVED MANUFACTURERS

Copeland Precast, Inc.
Eagle Precast
Forterra Precast
Lindsay Precast
Oldcastle Precast
Rinker Materials
Vaughn Concrete Products

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