

## Materials Specification – 25 for METER PITS, DOMES AND LIDS

**1. GENERAL:**

Meter pits shall be constructed as a cylindrical concrete or plastic pit that is 24-inches in diameter and 52 to 78-inches deep with a metal dome or bell housing double lid of frost proof construction that will fit a 20-inch ID concrete or plastic meter pit top ring.

**2. METER PIT:**

The meter pit shall consist of a 24-inch nominal diameter by a 48-inch high cylinder of concrete or plastic with at least two units. The base unit shall have two doghouse cutouts that are 3-inches wide by 4-inches high, located 180 degrees apart, to accommodate the service line tubing. The top unit shall have a shelf, or tapered design, to support a standard dome or bell housing with a 20-inch nominal diameter.

**A. Concrete Meter Pits:**

Concrete meter pits shall consist of a combination of two to four precast concrete rings that total 48-inches in height; the top ring shall not exceed 12-inches in height. The rings shall have a 2-inch minimum wall thickness that is suitably reinforced to minimize breakage during installation and use. The rings shall be constructed of concrete in accordance with these Specifications and shall comply with ASTM C478.

**B. Plastic Meter Pits:**

Plastic meter pits shall be of a two-piece design with a nominal 24-inch diameter by 36-inch high base unit and a 12-inch top unit that tapers from a 24-inch diameter in order to accept a standard 20-inch diameter dome unit. The units shall be constructed of Linear Medium Density Polyethylene (LMDP) with a wall thickness that is no less than 0.6 inches at the top of the base unit and 0.650 inches at the bottom of the base unit. The top unit shall have a minimum thickness of 0.7 inches.

The assembled meter pit shall be able to bear a 20,000 lb vertical load when distributed evenly over the top rim of the top unit. The meter pit shall be able to withstand a 200 pound lateral load, applied with a 4-inch square plate that is positioned one-inch below the top of the pit, with a maximum deflection of one-inch. The base unit shall have two 2-inch wide by 2-inch high pipe entry cutouts, located 180-degrees apart, a 3-inch flange at the bottom of the base unit and a molded flange near the top of the base section to resist settling and to provide additional resistance to deformation from lateral loads during backfilling. The meter pit shall be black on its exterior, to prevent ultraviolet degradation, and bright white on the interior. The manufacturer's name and model number shall be cast or printed on each piece. Grade adjustment rings from the same manufacturer shall be used to raise the top of the pit to grade or to accommodate the plumb pit to angled grades.

**3. METER PIT DOME:**

The meter pit dome, or bell housing, that is used for standard installations shall be made of aluminum in accordance with ASTM A132. The meter pit dome that is used for moderate traffic installations, such as residential driveways, shall be made of cast iron in accordance with ASTM A48. It shall have a nominal 20-inch bottom diameter that tapers to a nominal 12-inch diameter opening at the top with a height of 10 to 12-inches. The dome, or bell housing, shall have an inside lip to support an inner frost lid and an upper lip to accommodate the locking mechanism of the meter pit lid. When installed on a meter pit top ring, the dome shall be rated for H20 traffic loading.

**C. METER PIT LID:**

The cap type top lid shall be cast iron or high-impact, no-break Hydrozone HD composite or other approved fiber reinforced polymer material. The cast iron lid shall have a recess approximately 7-inches in diameter by 3/4-inches deep to hold an Itron Pit ERT or similar AMR device. There shall be a center hole, 2-inches in diameter, to accept the AMR device, and three drainage holes within the recessed area. Composite lids shall be capable of withstanding a temperature range from -40°F to +190°F and shall be resistant to ultraviolet light degradation. Top lids shall be furnished with a worm-gear locking bolt with a large five sided brass nut and shall be capable of withstanding H-20 traffic loading without any damage or permanent deformation. Meter pit covers shall have the words Denver Water Meter cast or imprinted on them.

**D. INNER FROST LID:**

The inner frost lid shall be molded of high-density polyethylene at least 1/8-inch thick. The frost lid shall be dish-shaped with a recess that is 2 to 3-inches deep with three to five 1/4-inch diameter drainage holes located around the edge of the recessed area. There shall be a one-quarter inch wide notch the full width of the top lip and a lifting tab that projects 2-inches inward with a 9/16-inch or larger hole.

**E. ACCEPTABLE MANUFACTURERS:**

**Meter Pit**

Concrete Pit		
Rinker Materials		
AMCOR Precast		
Precast Concepts		
Plastic Pit		
Carson Industries	0024-48B Body B-W 2 MsHI	(Denver Water)

**Meter Pit Dome**

Castings, Inc.	Aluminum Dome	#M-70-AL
	Cast Iron Dome	#M-70-CI

**Meter Pit Lid**

Bingham & Taylor, Inc.	12" Cast Iron Lid	Denver Model
Nicor, Inc.	Composite Lid	125SDENI
GMI Composite Covers	Composite Lid	Denver Model

**Plastic Frost Lid**

Castings, Inc.		Denver Model
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