MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL ROVISION

FOR

**HANDHOLE, ROUND, DETROIT**

DET:MS 1 of 2 APPR:BMB:KSH:12-07-21

**a. Description.** This work consists of constructing around electrical handhole, and providing hardware, connectors, fittings, and other materials necessary to complete the work.

Assume all costs associated with maintenance, vandalism, and accident damage to the handhole and all other material installed, or to be installed until acceptance by the City Project Engineer. The following abbreviation will apply to this special provision and the plans:

Department of Public Works DPW

**b. Materials.** Furnish materials that meet subsection 918.06 of the Standard Specifications for Construction and as follows:

1. Furnish a precast handhole meeting the live loads requirements of *AASHTO HS 20* for wheel loading.

2 Use bricks of nominal size in accordance with subsection 913.03 of the Standard Specifications for Construction.

3 Furnish a handhole with a heavy-duty frame and cover manufactured by EJ No. 1210A or an approved equal, with “DPW DETROIT TRAFFIC” cast into the cover. Furnish a handhole cover of *ASTM class 35B* gray iron with approximate weight of 145 pounds and have frame of *ASTM class 35B* gray iron with approximate weight of 251 pounds.

4 Furnish a handhole with a smooth or deformed welded wire fabric in accordance with *ASTM A1064/A1064M*.

5. Furnish a handhole with reinforcing steel meeting the requirements of *ASTM A706/A706M, Grade 60* rebar, if required. Bend bars and place in accordance with the ACI standards.

6. Furnish a handhole having the following dimensions and requirements as specified on the City of Detroit’s handhole detail sheet #1103:

A. An inside diameter of 30 inches, capable of accommodating a round cover.

B. Integral wall and base. Ensure the inner surface of the handhole is smooth.

C. A height of 36 inches.

D. An outside diameter of 38 inches.

E. One, 5-inch knockout in the base for a sump drain hole.

F. Walls with four tapered knockouts for conduits entering the handhole, 2 inches deep from the inside and 15 inches in diameter.

7. Provide a handhole with a minimum of three brick layer chimney in soldier course for installation. Provide a handhole with a 5/8-inch by 8-foot copper clad steel ground rod protruding approximately 4 to 5 inches near the perimeter of the hole, not in the center in accordance with *NEC standard, Article 250 for Grounding and Bonding*.

**c. Construction.** Construct the handhole to accept a heavy-duty frame and cover centered on top of the handhole and determine the final location of the handhole based on actual field conditions at the time of construction to ensure no conflicts exist with other systems being installed or with existing utilities.

Install handholes at the location specified on the plans. No holes can be left open for an extended period of time, as determined by the Engineer.

Blank off unused conduit entrances and conduit openings to be extended by others to prevent entrance of earth, with suitable removable plugs of plastic or other material as approved by the Engineer. Bell ends are required on all conduits entering handholes.

Furnish the handhole with drainage for the conduit system so that freezing water does not damage the conduit or wires.

**d. Measurement and Payment.** The completed work, as described, will be measured and pay for at the contract unit price using the following pay item:

**Pay Item Pay Unit**

Hh, Round, Detroit Each

**Hh, Round, Detroit** includes constructing a round handhole and providing hardware, connectors, fittings, grounding and all material necessary to complete the work. Required excavation, granular material, backfill, disposal of excavated waste material, and bulk-heading of unused openings are also included and will not be paid for separately. Restore surrounding area to original condition after installation of handhole, which will not be paid for separately.