**CITY OF DETROIT**

**SPECIFICATIONS**

**FOR**

**STRUCTURE COVER, ADJUSTMENT,**

**RECONSTRUCTING STRUCTURE, AND**

**WATER SHUTOFF ADJUSTMENT**

DET: GJM 11-30-15

**Description**: The work consists of adjusting utility structure covers in accordance with the applicable provisions of Section 403 and Section 823 of the 2012 Michigan Department of Transportation (MDOT) Standard Specifications for Construction, except as modified herein.

Utility structure cover adjustments will include all Public Lighting Department (PLD) manholes, and all Detroit Water and Sewerage Department (DWSD) gate wells, sewer manholes and catch basins whose covers are required to be raised or lowered to meet the required new pavement elevations. Water shutoff adjustments will include DWSD water shutoff boxes or stop boxes, and PLD hand holes which are required to be raised or lowered to meet the required new pavement elevations.

Before starting this work, the Contractor and the Engineer, or his representative, shall jointly inspect each structure to evaluate its interior conditions. Access to the structure will be provided by the Contractor. The Engineer, or his representative, shall determine whether the structure is to be adjusted or reconstructed. The Engineer shall also determine if any structure cleaning is necessary to remove existing debris. The Contractor shall remove all debris from the structure resulting from the Contractor’s operations.

**Materials:** Materials used in the adjustment and reconstruction of drainage structures shall be as specified in Section 403. Drainage Structures, of the 2012 MDOT Standard Specifications for Construction.

**Construction:** Where called for on the plans or authorized by the Engineer, existing structure covers shall be adjusted to the proper elevation in accordance with Section 403 of the 2012 MDOT Standard Specifications for Construction, except as modified herein.

Saw cut full depth and remove the adjacent concrete and/or HMA pavement, curb, curb and gutter, or sidewalk as necessary to adjust the structure and cover. Remove an area of pavement and curb at least five (5) feet by five (5) feet around the structure. The existing frame and cover shall be carefully removed and the upper portion of the existing utility structure repaired as necessary and raised or lowered as required. The frame and cover shall then be reset on the adjusted structure so constructed as to hold them firmly in place and reset on a full mortar bed so as to fit the required new pavement grade and cross section. Replace adjacent concrete and/or HMA pavement, curb, curb and gutter, or sidewalk to match existing grades or to the required new pavement grade and cross section.

When the existing frames and covers are unacceptable for reuse as determined by the Engineer, new frames and covers shall be furnished and installed. Drainage structure frames and covers shall be as specified in the City of Detroit “Specifications for Manholes and Catch Basins”, and as specified in the Plans for DWSD Watergate and PLD Manhole covers. Any reusable frame and cover damaged by the Contractor shall be replaced by the Contractor at no cost to the City. The frames and covers that are not to be used on the work shall become property of the Contractor and shall be promptly removed from the jobsite and properly disposed of.

Where the structure is in need of repair, as determined by the Engineer, in excess of the adjustment limits set forth herein, the existing structure shall be broken down and rebuilt with new materials as specified in the City of Detroit Specifications for Manholes and Catch Basins, to the required new pavement elevations.

A finished concrete collar shall be placed around any structure adjusted that is within five (5) feet of the Detroit Thermal (formerly Detroit Edison) steam lines, as directed by the Engineer. The cost of this shall be paid for separately as Concrete Repr, Nonreinf Conc, 10 inch, Modified, and measured by the surface area of the concrete collar.

Non-ferrous handholes and covers used by PLD and other City Utilities are made of fiberglass, copolymer propylene or similar material. These structure and covers shall be adjusted by a qualified electrical contractor. The removal of concrete around the perimeter of a non-ferrous handholes shall be performed with light chipping hammers to insure that no damage is done to the handhole, cover or any conduit or other utility that may feed the structure. Any damage to structures, conduits, cable and wiring shall be repaired by the Contractor at no cost to the City or utility.

For HMA pavement sections, immediately before placing the HMA top course or overlay, make final adjustments to drainage structure covers. Equipment will not be permitted to operate over adjusted structures for a period of twenty four (24) hours after their completion, unless otherwise approved by the Engineer.

**Measurement and Payment:** The completed work as described for adjusting or reconstructing structure will be measured as units and will be paid for at the Contract Unit Price, which price will be payment in full for furnishing all materials, equipment and labor; removal and replacement of concrete or HMA pavement, curb, curb and gutter, sidewalk; excavation, backfilling, disposal of surplus material, removal of all debris and foreign material from the structure (including the sump); adjusting the structure and cover to the required new pavement grade and cross section, with the existing or new cover; and providing access to all structures for inspection, as directed by the Engineer.

Structure damage, due to the Contractors operations shall be repaired at the Contractors expense.

“Dr Structure Cover, Adj. Case \_\_, Modified” shall include the above described work necessary to raise or lower the existing catch basin, manhole or gate well rim elevation involving adjustment, repair or replacement of less than or equal to five (5) layers of bricks or three (3) layers of concrete blocks, both including mortar, regardless of whether or not it is necessary to remove a cone section to accommodate the rim elevation adjustment.

“Dr Structure, Adj, Add Depth, Case \_\_, Modified” shall include the above described work necessary to raise or lower the existing catch basin, manhole or gate well structure and cover involving adjustment, repair or replacement of more than five (5) layers of bricks or three (3) layers of concrete blocks, both including mortar, and may include the removal of a cone section to accommodate the rim elevation adjustment. Measurement shall be per foot of adjustment, repair or replacement of brick or block exceeding the five (5) layers of bricks or three (3) layers of block.

“Drainage Structure Cover, Modified” shall include the furnishing and installation of catch basin, gate well and manhole structure covers of the appropriate type.

“Water Shutoff, Adj, Case \_\_, Modified” shall include the above described work necessary to raise or lower the existing structure and cover of water DWSD water shutoff boxes or stop boxes, and PLD hand holes.

Pay Item Pay Unit

Dr Structure Cover, Adj, Case 1, Modified Each

Dr Structure Cover, Adj, Case 2, Modified Each

Drainage Structure Cover, Modified Each

Dr Structure, Adj, Add Depth, Modified Foot

Water Shutoff, Adj, Case 1, Modified Each

Water Shutoff, Adj, Case 2, Modified Each

Concrete Repr, Nonreinf Conc, 10 inch, Modified Syd