

## **SECTION 33 05 14 UTILITY GRADE ADJUSTMENT**

### **PART 1 GENERAL**

#### **1.1 SECTION INCLUDES**

- A. Raise, lower, or change slope of Street Fixtures.
- B. Install Cover Collars.
- C. This section is NOT APPLICABLE to raising and lowering Street Fixtures that withstand internal pressure.

#### **1.2 DEFINITIONS**

- A. Box: A structure such as a valve box, meter box, monument box, fire hydrant box, electrical pull box, cleanout box or other like structure not intended for human entry.
- B. Cover Collar: A concrete filled annular space between metal frames and the adjacent Pavement structural section.
- C. Extension Ring: A concrete or metal ring used to adjust surface elevations and surface cross slopes of Street Fixture covers. Metal rings are used between metal frames and metal covers or grates. Concrete rings are used below metal frames or in the concrete structure below.
- D. Manhole: A structure designed to permit human entry and working space inside and to confine and control the flow of pipe-conveyed fluids.  
These structures are collectively referred to as manholes regardless of composition, design, type or depth.
- E. Street Fixture: The top of existing structures such as but not limited to Manholes, catch basin, sumps, inlets, valve boxes, meter boxes, monument boxes, and similar structure in a thoroughfare surface.
- F. Vault: A structure intended for human entry containing electrical/telephone facilities or other like utilities.

### **PART 2 PRODUCTS**

#### **2.1 PAVEMENT**

- A. Asphalt Concrete: AC-20-DM-1/2, Section 32 12 05.
- B. Cast-in-place Concrete: Class 4000, Section 03 30 04.

#### **2.2 GROUT**

- A. Hydraulic cement, Section 03 61 00.

#### **2.3 EXTENSION RINGS**

- A. Metal: Cast iron or steel.
- B. Cast-in-place Concrete: Class 4000, Section 03 30 04.

### **PART 3 EXECUTION**

### **3.1 PREPARATION**

- A. Determine condition of existing incidental structure. Any item not reported damaged prior to construction shall be considered unbroken and must be replaced by CONTRACTOR at no additional cost to OWNER.
- B. Provide invert cover over pipe in cleanout box to prevent gravel, concrete, or debris from entering pipeline.
- C. Unless indicated otherwise, arrange for utility companies to adjust their own structures.
- D. Coordinate all adjustments with requirements of affected utility company.

### **3.2 ADJUST STRUCTURE TO GRADE**

- A. Restrict excavation around the structure to a minimum area.
- B. At the completion of the structure adjustment, backfill the void around the structure and compact before paving or landscaping.
- C. Apply mortar to inside and outside of concrete grade rings used to make adjustments.
- D. If the cone is cracked during construction, restack the Manhole with shorter Manhole sections and install a new cone at no additional cost to the OWNER.

### **3.3 ADJUST COVER IN PAVEMENT SURFACE**

- A. Method A -Metal Extension Rings:
  - 1. Use rings that lock together.
  - 2. Set frame at desired elevation and cross-slope.
  - 3. Seal joints between Pavement and ring.
- B. Method B – Concrete Extension Rings:
  - 1. Place concrete grade rings under frame or in structure riser shaft.
  - 2. Set frame at desired elevation and cross-slope.
  - 3. Provide 100 percent concrete support under frame. Do not use wood, bricks, concrete fragments, blocks or particles as support.
  - 4. Grout seams between concrete rings and between frame and concrete rings.
- C. Method C – Place Concrete:
  - 1. Set frame at desired elevation and cross-slope.
  - 2. Place concrete and provide 100 percent concrete support under frame.
- D. Method D – Concrete Deck:
  - 1. Remove existing concrete deck.
  - 2. Reset steel rebar.
  - 3. Set frame to grade, set forms.
  - 4. Pour concrete. Provide complete concrete support under Street Fixture.

### **3.4 INSTALLING COVER COLLAR**

- A. Open an annular space between pavement and Street Fixture cover. Unless indicated otherwise, provide 12 inches of annular space.
- B. Set concrete collar to 1/4 inch minimum to 1/2 inch maximum below asphalt concrete pavement surface and 1/4 inch below portland cement concrete pavement surface.
- C. Trowel finish, Section 03 35 00.

### **3.5 PAVEMENT SURFACE RESTORATION**

- A. In new streets or overlays, adjust Street Fixture cover after bituminous paving is complete.

END OF SECTION