

- (c) Underground Secondary Distribution Wire and Cable shall comply with the requirements of the Insulated Cable Engineers Association (ICEA)/National Electrical Manufacturers Association (NEMA) Standard Publication S-61-402/WC 5 or ICEA/NEMA Standard Pub. No. S-66-524/WC 7, unless otherwise shown on the Plans.
- (d) Outdoor Aerial Neutral-Supported Secondary Distribution Wire and Cable shall comply with the requirements of ICEA/NEMA Standard Publication S-66-524/WC 7, unless otherwise specified on the Plans.

## SECTION 739

### PULL BOXES

#### 739.01. PRECAST CONCRETE PULL BOXES.

Concrete pull boxes shall conform reasonably closely to the dimensions shown on the Plans and to the following materials requirements:

Portland Cement. Portland cement shall meet the requirements of Subsection 701.02.

Aggregate. Aggregate shall meet the quality requirements of Section 701 or of ASTM C 330 for Lightweight Aggregate.

Reinforcement. Welded wire fabric shall comply with Subsection 723.03.

Gray Iron Casting Cover. Gray iron casting covers shall comply with Subsection 725.04. The cover shall have a nonslip surface and two 3/8 inch (9.5 mm) pent head brass bolts and nuts to secure it to the box.

Concrete. The concrete mixture shall be designed to produce 3000 psi (20.67 MPa) strength in accordance with AASHTO T 23 and AASHTO T 22.

#### 739.02. PRECAST REINFORCED PLASTIC PULL BOXES.

- (a) **General.** Plastic pull boxes shall conform reasonably closely to the dimensions shown on the Plans and to the following materials requirements:

The reinforced plastic mortar shall be composed of a borosilicate type glass fiber in the form of woven fabric, chopped strand or mat, catalyzed polyester resin, and an aggregate.

Plastic pull boxes shall have the following design characteristics. The cover shall have an embossed nonskid surface and be equipped with two 3/8 inch (9.5 mm) pent head brass bolts and nuts to secure it to the box. The box and cover shall be concrete gray in color. The pull boxes shall be capable of withstanding the following loads.

1. *Cover:* 5000 pounds (2,268 Kg) distributed over a 10 x 10 inch (254 x 254 mm) area centered on the cover and shall withstand without puncture or splitting, a 75 ft •lb (101.6 NCm) impact load from a 12 pound (5.44 Kg) mass having a "C" tip in accordance with ASTM D 2444.
2. *Box walls:* 5000 pounds (2,268 Kg) vertical load distributed over a 10 x 10 inch (254 x 254 mm) area centered over an exposed edge of the box with the cover in place.
3. *Lateral Loads:* 5000 pounds (2,268 Kg) distributed over a 10 x 10 inch (254 x 254 mm) area of backfill immediately adjacent to the box with the box in the installed condition and without the cover in place.

Deflections resulting from loads imposed under the above mentioned tests shall in no case cause binding of the cover or displacement from the extension.

- (b) **Plastic Material.** Plastic materials shall be self-extinguishing when tested in accordance with ASTM D 635 and show no appreciable change in physical properties when exposed to the weather.
- (c) **Certification.** Submit a type A certification for each lot or shipment of precast reinforced plastic pull boxes.

## SECTION 740

### TRAFFIC SIGNAL BACKPLATES

#### 740.01. DESCRIPTION.

This section covers the material requirements for traffic signal backplates.

- (a) **Materials.** Backplates shall be constructed from sheet material of polycarbonate or acrylonitrile-butadiene-styrene (ABS). Backplates shall be vacuum formed.
  - 1. Polycarbonate sheet material shall conform to the requirements of ASTM D 638, D 695, D 790 and D 1822.
  - 2. ABS sheet material shall conform to ASTM D 1788.
  - 3. The thickness of the backplates shall be as shown on the Plans.
- (b) **Finish.** The backplate shall be black in color with a haircell finish on the front side and smooth finish on the back side.
- (c) **Certification.** Submit a type A certification for each lot or shipment of backplates.