

in the handhole are service conductors, or in accordance with 250.96(A) if the conductors in the handhole are feeder or branch-circuit conductors.

Part III. Pull and Junction Boxes, Conduit Bodies, and Handhole Enclosures for Use on Systems over 1000 Volts, Nominal

314.70 General.

Δ (A) **Pull and Junction Boxes.** Where pull and junction boxes are used on systems over 1000 volts, the installation shall comply with Part III and with the following general provisions of this article:

- (1) Part I, 314.2, 314.3, 314.4, and 314.5
- (2) Part II, 314.15; 314.17; 314.20; 314.23(A), (B), or (G); 314.28(B); and 314.29
- (3) Part III, 314.100(A) and (C); and 314.101

Δ (B) **Conduit Bodies.** Where conduit bodies are used on systems over 1000 volts, the installation shall comply with Part III and with the following general provisions of this article:

- (1) Part I, 314.4, and 314.5
- (2) Part II, 314.15; 314.17; 314.23(A), (E), or (G); 314.28(A) (3); and 314.29
- (3) Part III, 314.100(A) and 314.101

Δ (C) **Handhole Enclosures.** Where handhole enclosures are used on systems over 1000 volts, the installation shall comply with Part III and with the following general provisions of this article:

- (1) Part I, 314.3, 314.4, and 314.5
- (2) Part II, 314.15, 314.17, 314.23(G), 314.28(B), 314.29, and 314.30

314.71 Size of Pull and Junction Boxes, Conduit Bodies, and Handhole Enclosures. Pull and junction boxes and handhole enclosures shall provide approved space and dimensions for the installation of conductors, and they shall comply with the specific requirements of this section. Conduit bodies shall be permitted if they meet the dimensional requirements for boxes.

(A) **For Straight Pulls.** The length of the box shall not be less than 48 times the outside diameter, over sheath, of the largest shielded or lead-covered conductor or cable entering the box. The length shall not be less than 32 times the outside diameter of the largest nonshielded conductor or cable.

(B) **For Angle or U Pulls.**

(1) **Distance to Opposite Wall.** The distance between each cable or conductor entry inside the box and the opposite wall of the box shall not be less than 36 times the outside diameter, over sheath, of the largest cable or conductor. This distance shall be increased for additional entries by the amount of the sum of the outside diameters, over sheath, of all other cables or conductor entries through the same wall of the box.

Exception No. 1: Where a conductor or cable entry is in the wall of a box opposite a removable cover, the distance from that wall to the cover shall be permitted to be not less than the bending radius for the conductors as provided in 305.5.

Exception No. 2: Where cables are nonshielded and not lead covered, the distance of 36 times the outside diameter shall be permitted to be reduced to 24 times the outside diameter.

(2) **Distance Between Entry and Exit.** The distance between a cable or conductor entry and its exit from the box shall not be less than 36 times the outside diameter, over sheath, of that cable or conductor.

Exception: Where cables are nonshielded and not lead covered, the distance of 36 times the outside diameter shall be permitted to be reduced to 24 times the outside diameter.

(C) **Removable Sides.** One or more sides of any pull box shall be removable.

314.72 Construction and Installation Requirements.

(A) **Corrosion Protection.** Boxes shall be made of material inherently resistant to corrosion or shall be suitably protected, both internally and externally, by enameling, galvanizing, plating, or other means.

(B) **Passing Through Partitions.** Suitable bushings, shields, or fittings having smooth, rounded edges shall be provided where conductors or cables pass through partitions and at other locations where necessary.

(C) **Complete Enclosure.** Boxes shall provide a complete enclosure for the contained conductors or cables.

(D) **Wiring Is Accessible.** Boxes and conduit bodies shall be installed so that the conductors are accessible without removing any fixed part of the building or structure. Working space shall be provided in accordance with 110.34.

(E) **Suitable Covers.** Boxes shall be closed by suitable covers securely fastened in place. Underground box covers that weigh over 45 kg (100 lb) shall be considered meeting this requirement. Covers for boxes shall be permanently marked "DANGER — HIGH VOLTAGE — KEEP OUT." The marking shall be on the outside of the box cover and shall be readily visible. Letters shall be block type and at least 13 mm (½ in.) in height.

(F) **Suitable for Expected Handling.** Boxes and their covers shall be capable of withstanding the handling to which they are likely to be subjected.

Part IV. Construction Specifications

314.100 Metal Boxes, Conduit Bodies, and Fittings.

(A) **Corrosion Resistant.** Metal boxes, conduit bodies, and fittings shall be corrosion resistant or shall be well-galvanized,