

SECTION 16131

JUNCTION AND PULL BOXES

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Furnish and install junction and pull boxes where indicated or where necessary for installation of the wiring systems.
- B. Secure prior approval of the Architects for locations of all boxes not specifically located on the drawings.

1.02 REFERENCE DOCUMENTS

- A. The Special Provisions for Electrical Work are hereby made a part of this Section of the work. Refer to Section 16010.
- B. See Section 16190 for Supporting Devices.

1.03 SUBMITTALS

- A. Shop Drawings shall be submitted on each specifically fabricated junction or pull box.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Junction and pull boxes shall be flush or surface type as indicated on the drawings or as required to fit into the building construction. Junction and pull boxes shall have screw covers. Small junction boxes, 100 cubic inches and smaller, for control or branch circuit wiring, shall be as specified for outlet boxes and with blank covers.
- B. Junction and pull boxes installed in walls and ceiling spaces shall be code-gauge galvanized steel with galvanized steel covers.
- C. Junction and pull boxes installed in floors shall be galvanized malleable cast iron with gasketed covers.
- D. Junction and pull boxes installed out doors shall be weatherproof with watertight gasketed covers fastened with corrosion resistant screws.
- E. Except as otherwise indicated, boxes shall be not less than code requirements and their size shall be determined as follows:

1. For straight pulls involving conductors of No. 6 or larger and for raceways of 1-1/4" and larger, the length shall be a minimum of 8 times the diameter of the largest raceway, and the width shall be three (3) times the diameter of the largest raceway plus the sum of the diameters of all other raceways in the same side of the box or cabinet.
2. For angle pulls or direction changes, the distance between any entering raceway and the opposite side of box shall be a minimum distance of six (6) times the diameter of the largest raceway and the minimum distance between raceway entries enclosing the same conductor shall not be less than 6 times the diameter of the larger raceway. Additional raceways in the same wall of the box shall require increase of these dimensions by the sum of the diameters of the added raceways. In no event shall any cabinet or box contain more than 20% of its' cross sectional area in conductors. Where conductors cross a box, a maximum of nine (9) conductors may be laid parallel without the use of a barrier or compartment. Where junction or pull boxes involve dimensions over 36 inches on any side, conductors crossing such distances must be supported on approved racks or clamps in such a manner as to avoid greater unsupported spans of more than 36 inches. Where such boxes exceed 60 inches in any dimension, all conductors shall be so supported regardless of direction of travel.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install junction and pull boxes in a neat workmanlike manner and support in accord with the provisions set forth elsewhere for panelboards and for hangers and supports.
- B. Arrange for raceways to enter boxes only in places specifically planned for raceways in the sizing and construction of the cabinets.
- C. Provide auxiliary conductor supports in large boxes per N.E.C. 370-23 where conductors must be supported.
- D. Conductors passing through the boxes shall be marked as to phase.

END OF SECTION