

SECTION 16130 - BOXES

GENERAL

1.1 SECTION INCLUDES

- A. Wall and ceiling outlet boxes.
- B. Interior pull and junction boxes.
- C. Floor boxes.
- D. In-Ground electrical pull-boxes.

1.2 RELATED SECTIONS

- A. Section 16111 – Conduit
- B. Section 16141 - Wiring Devices
- C. Section 16180 - Equipment Wiring Systems.
- D. Section 16721 - Fire Alarm System.
- E. Section 16746 – Integrated Technology Network System.
- F. Section 16530 – Lighting Control System.

1.3 REFERENCES

- A. ANSI/NEMA FB 1 - Fittings and Supports for Conduit and Cable Assemblies.
- B. ANSI/NEMA OS 1 - Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
- C. ANSI/NFPA 70 - National Electrical Code.
- D. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

1.4 SUBMITTALS

- A. Submit under provisions of Section 16010.
- B. Product Data: Provide dimensions, knockout sizes and locations, materials, fabrication details, finishes, and accessories.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of Product.

1.5 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

1.6 PROJECT CONDITIONS

- A. Verify field measurements are as shown on Drawings.
- B. Verify locations of floor boxes and outlets prior to rough-in.
- C. Electrical boxes are shown in approximate locations unless dimensioned. Install at location required for box to serve intended purpose. Include installation within 10 feet of location shown.

PRODUCTS

2.1 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: ANSI/NEMA OS 1, galvanized steel.
 - 1. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; include ½ inch male fixture studs where required.
- B. Cast Boxes: NEMA FB 1, Type FD. Provide gasketed cover by box manufacturer. Provide threaded hubs.

2.2 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes (interior locations): NEMA OS1, galvanized steel.
- B. Sheet Metal Boxes (exterior locations): Stainless steel.

2.3 FLOOR BOXES

- A. Manufacturers:
 - 1. Wiremold, Model RFB4-SS/RAKM11/RFB-RB-SS/RFB-2T-SS
 - 2. Substitutions: Or Approved Equal.
- B. Description: 4-section recessed floor box with hinged cover, rated for installation in poured-in-place concrete floors.
- C. Floor boxes: ANSI/NEMA OS 1, semi-adjustable.
- D. Material: Cast metal.
- E. Activation Accessories:

1. Two (2) internal duplex receptacle brackets.
2. Flush cover with carpet trim.

F. Conform to regulatory requirements for concrete-tight floor boxes.

2.4 FIRE STOP

A. Fire stop material shall be as specified in Section 16111.

2.5 IN-GROUND ELECTRICAL PULL BOXES

A. Manufacturers:

1. Carson Industries model H2436-24.
2. Substitutions: Or Approved Equal.

B. Description: Reinforced polyester fiber box with gasketed cover and stainless steel hardware. Imprint cover with logo: "ELEC." Sizes shall be as indicated on the Drawings.

EXECUTION

3.1 INSTALLATION

- A. Install electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
- B. Install electrical boxes to maintain headroom and to present neat mechanical appearance.
- C. Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only.
- D. Inaccessible Ceiling Areas: Install outlet and junction boxes no more than six (6) inches from ceiling access panel or from removable recessed luminaire.
- E. Install boxes to preserve fire resistance rating of partitions and other elements.
- F. Align adjacent wall-mounted outlet boxes for fire alarm devices, switches, receptacle outlets, intercom call stations, telecommunications outlets, thermostats, and similar devices with each other.
- G. Use flush mounting outlet boxes in finished areas.
- H. Do not install flush mounting boxes back-to-back in walls; provide minimum 6-inch separation. Provide minimum 24 inches separation in acoustic rated walls.
- I. Where two (2) or more single-gang boxes are to be installed side-by-side, mount boxes a stud-width apart.
- J. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.

- K. Use stamped steel bridges to fasten flush mounting outlet box between studs.
- L. Install flush mounting box without damaging wall insulation or reducing its effectiveness.
- M. Use adjustable steel channel fasteners for hung ceiling outlet box.
- N. Do not fasten boxes to ceiling support wires.
- O. Support boxes independently of conduit.
- P. Use gang boxes where more than one device is mounted together. Do not use sectional box. Provide 2-gang plaster rings for 2-gang boxes
- Q. Use single gang box with plaster ring for single device outlets.
- R. Use cast outlet box in exterior locations and wet locations.
- S. Confirm exact locations of floor boxes with Resident prior to installation.
- T. Box penetrations in fire rated walls shall be provided with UL-listed fire stopping pad installed on the back of the box.
- U. Install recessed telephone box centerline at 48" AFF.
- V. Provide an 8-inch gravel base (minimum) under all in-ground electrical pull boxes

3.2 INTERFACE WITH OTHER PRODUCTS

- A. Coordinate locations and sizes of required access doors as required.
- B. Locate flush mounting box in masonry walls to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.
- C. Coordinate mounting heights and locations of outlets mounted above counters, benches, and backsplashes.
- D. Position outlet boxes to locate luminaires as shown on reflected ceiling plan.

3.3 ADJUSTING

- A. Adjust floor box flush with finish flooring material.
- B. Adjust flush-mounting outlets to make front flush with finished wall material.
- C. Install knockout closure in unused box opening.

END OF SECTION