PART 1 - GENERAL

1.01 SECTION INCLUDES

1. Wall and Ceiling Outlet Boxes
2. Floor Boxes
3. Pull and Junction Boxes
4. In-Ground Cast Concrete Boxes
5. FS/FD Cast Device Boxes

1.02 RELATED SECTIONS

* 1. Section 26 05 01 Basic Electrical Requirements
  2. Section 26 05 26 Grounding and Bonding
  3. Section 26 05 53 Electrical Identification
  4. Section 26 27 16 Cabinets and Enclosures
  5. Section 26 27 26 Wiring Devices

1.03 REFERENCES

1. ANSI/NEMA OS 1—Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports
2. ANSI/NFPA 70—National Electrical Code
3. NEMA 250—Enclosures for Electrical Equipment (1,000 Volts Maximum)

1.04 PROJECT CONDITIONS

A. Verify field measurements are as shown on drawings.

B. Verify locations of floor boxes and outlets to rough-in.

C. Electrical boxes are shown on drawings in approximate locations unless dimensioned. Install at location required for box to serve intended purpose.

PART 2 - PRODUCTS

2.01 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. Minimum depth—2-1/8 inches.

2) Concrete Ceiling Boxes: Concrete type.

B. Cast Boxes: NEMA FB 1, Type FD, cast ferroalloy deep type. Provide gasketed cover by box manufacturer. Provide threaded hubs.

2.02 FLOOR BOXES

A. Floor Boxes: ANSI/NEMA OS 1, fully adjustable.

B. Material: Cast metal with brass cover plate.

C. Shape: Round or Rectangular.

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

E. Hubbell: B-2436, B-4233, and B-4333 Series.

F. Walker: 880CS1, 880CS2, and 880CS3.

G. Replace trims, covers, and device with new in existing floor boxes.

2.03 PULL AND JUNCTION BOXES

A. Sheet Metal Boxes: NEMA OS 1, galvanized steel. Minimum depth—2-1/8-inches.

B. Surface-Mounted Cast Metal Box: NEMA 250, Type 4, flat-flanged, surface- mounted junction box.

1) Material: Stainless Steel.

2) Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.

PART 3 - EXECUTION

3.01 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. Boxes shall not be installed more than 4 feet above finished ceiling. Use 1/4" threaded rod for box support up to 4' in length and 3/8" threaded rod for box supports exceeding 4' in length.

D. Inaccessible Ceiling Areas: Install outlet and junction boxes no more than 6 inches from ceiling access panel or from removable recessed luminaire. Openings shall be a minimum 24” x 24” hinged door with cylinder cam.

E. Install boxes to preserve fire resistance rating of partitions and other elements, using materials and methods that are UL listed and tested.

F. Align adjacent wall-mounted outlet boxes for switches, 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 12 inch separation. Provide minimum 24 inches separation in fire-rated walls. Through-the-wall boxes are not allowed.

I. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.

J. Use stamped steel bridges to fasten flush mounting outlet box between studs.

K. Install flush mounting box without damaging wall insulation or reducing its effectiveness.

L. Use adjustable steel channel fasteners for hung ceiling outlet box.

M. Do not fasten boxes to ceiling support wires.

N. All boxes and enclosures, including Wiremold boxes, shall be grounded by use of a threaded ground lug/screw. No ground clips acceptable. This shall apply to new and existing installations.

O. Use gang box where more than one device is mounted together. If sectional boxes are used, barriers are required to separate different voltage systems.

P. Use gang box with plaster ring for multiple devices mounted together.

Q. Use FD malleable outlet boxes in exterior locations exposed to the weather, wet locations, kitchens, and toilet rooms where surface mounted with weatherproof “while-in-use” cover. Standard weather proof cast boxes are not acceptable.

R. Set floor boxes level.

S. Large Pull Boxes: Boxes larger than 100 cubic inches (1-600 cubic centimeters) in volume or 12 inches (300 mm) in any dimension.

1) Interior Dry Locations: Use hinged enclosure under provisions of Section 26 27 16.

2) Other Locations: Use surface-mounted cast metal box.

T. Interior PVC boxes, PVC junction boxes, PVC pull boxes, and PVC enclosures are not acceptable for any purpose.

U. Cabinets, enclosures, wire-ways, junction boxes, etc., shall be color identified per the following color schedule. Also, each raceway entry shall be similarly identified for approximately 12" in length at the box/conduit termination for all items listed below and at ten foot intervals for Fire Alarm and Emergency.

Fire Alarm: Red

Emergency: Orange

Data/Tech/Telephone: Black

C.C.T.V: Green

Intercom: Blue

V. All boxes are to be supported to building structure or building structural support with approved supports and hardware suitable for the task. No box, cabinet, or enclosure will be supported by the conduit or raceway only. Tie wraps, tie wire, or any other non-approved supports shall not be permitted.

W. All boxes, junction boxes, and enclosures shall have the exterior cover marked identifying the branch circuit and panelboard of origination with an indelible ink marker or grease pencil.

X. Myers hubs shall be used on all exterior boxes or enclosures where the conduits terminate on top of box or enclosure. Sealing lock nuts or Myers hubs shall be used where the conduits enter the side or bottom of the box or enclosure.

3.02 INTERFACE WITH OTHER PRODUCTS

A. Coordinate locations and sizes of required access doors with Construction Manager/General Contractor and other trades.

B. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.

C. Coordinate heights and locations of outlets mounted above counters, benches, and backsplashes.

D. Position outlet boxes to locate luminaries as shown on reflected ceiling plan.

E. Outlet boxes for exit lights shall be wall-mounted, where possible, and installed no higher than 24 inches above door frame. Where exit lights are suspended, the box and/or light fixture shall be rigidly secured.

3.03 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 closures in all unused box openings.

**END OF SECTION**