ELECTRICAL BOXES AND FITTINGS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

A. Extent of electrical box and electrical fitting work is indicated by drawings and schedules.

B. Types of electrical boxes and fittings in this section include, but are not limited to, the following and the requirements of the application.

Outlet boxes.
Junction boxes.
Pull boxes.
Floor boxes.
Conduit bodies.
Bushings.
Locknuts.
Knockout closures.

PART 2 - PRODUCTS

2.01 FABRICATED MATERIALS:

A. Interior Outlet Boxes: Provide galvanized flat rolled sheet steel interior outlet wiring boxes, of types, shapes and sizes, including box depths, to suit each respective location and installation; construct with stamped knockouts on back and sides, and with threaded screw holes with corrosion-resistant screws for securing box covers and wiring devices.

1. Interior Outlet Box Accessories: Provide outlet box accessories as required for each installation, including mounting brackets, wallboard hangers, extension rings, fixture studs, cable clamps, and metal straps for supporting outlet boxes, which are compatible with outlet boxes being used and fulfilling requirements of individual wiring situations. Choice of accessories is Installer's option.
B. Available Manufacturers: Subject to compliance with requirements, manufacturers offering interior outlet boxes which may be incorporated in the work include, but are not limited to, the following:

   Appleton Electric Co.
   Crouse-Hinds Co.
   RACO, Inc.
   Steel City/Midland-Ross Corp.

C. Weatherproof Outlet Boxes: Provide corrosion-resistant cast-metal weatherproof outlet wiring boxes, of types, shapes and sizes, including depth of boxes, with threaded conduit ends, cast-metal face plates with springhinged waterproof caps suitably configured for each application, including face plate gaskets and corrosion-resistant fasteners.

D. Available Manufacturers: Subject to compliance with requirements, manufacturers offering weatherproof outlet boxes which may be incorporated in the work include, but are not limited to, the following:

   Appleton Electric Co.
   Crouse-Hinds Co.
   O-Z/Gedney Co.

E. Junction and Pull Boxes: Provide galvanized code-gage sheet steel junction and pull boxes, with screw-on covers; of types, shapes and sizes, to suit each respective location and installation; with welded seams and equipped with stainless steel nuts, bolts, screws, and washers.

F. Available Manufacturers: Subject to compliance with requirements, manufacturers offering junction and pull boxes which may be incorporated in the work include, but are not limited to, the following:

   Appleton Electric Co.
   Crouse-Hinds Co.
   O-Z/Gedney Co.
   Spring City Elect Mfg Co.

G. Floor Services Boxes

   1. Large floor service boxes shall be a steel recessed floor box with four wiring compartments. Fully adjustable mounting hardware. Wiring
compartments shall be interconnected within the box with removable dividers. Each floor box shall use flush activation. The cover shall be suitable for the application, specifically a flush access hatch with carpet trim or flush furniture partition feed. The exact type of cover for each box will be determined by the owner in conjunction with the interior finishes. Boxes with no connections shall be equipped with the flush access hatch. The covers shall not be installed until the floor coverings or tile is installed. The boxes shall be protected from damage during construction. Covers shall be steel. Boxes shall be manufactured by Hubbell Incorporated, HBL series, or equal. 2.63" depth boxes shall be used in elevated applications, 4" depth boxes shall be used for slab-on-grade applications. Each box shall be equipped with two 20-amp duplex receptacles as specified in Section 16140. Install two brackets for mounting receptacles and two communications outlets with six (6) provision for snap-in connector modules unless indicated otherwise on plans.

2. Small floor service boxes shall be a steel recessed floor box with two wiring compartments. Fully adjustable mounting hardware. Each floor box shall use flush activation. The cover shall be suitable for the application, specifically a flush access hatch with carpet trim or flush furniture partition feed. The exact type of cover for each box will be determined by the owner in conjunction with the interior finishes. Boxes with no connections shall be equipped with the flush access hatch. The covers shall not be installed until the floor coverings or tile is installed. The boxes shall be protected from damage during construction. Covers shall be steel. Boxes shall be manufactured by Hubbell Incorporated, 3SFB series, or equal. Each box shall be equipped with one 20-amp duplex receptacle as specified in Section 16140. Install one bracket for mounting receptacle and one communications outlets with six (6) provision for snap-in connector modules unless indicated otherwise on plans.

3. Flush fire rated poke-through floor boxes, floor boxes shall be classified to maintain a two-hour fire rating in concrete floors. Floor box shall be equipped with four prewired 20-A, 120-V receptacles and shall contain category 6 communications inserts. Trim flange shall be die-cast aluminum with finish color to be chosen by owner. Unit shall mount in a 3-inch diameter core drilled hole.
H. Available Manufacturers: Subject to compliance with requirements, manufacturers offering floor boxes which may be incorporated in the work include, but are not limited to, the following:

Hubbell Incorporated
Steel City/Midland-Ross Corp.
Wiremold Company

I. Conduit Bodies: Provide galvanized cast-metal conduit bodies, of type, shapes and sizes, to suit respective locations and installation, construct with threaded-conduit-entrance ends, removable covers, and corrosion-resistant screws.

J. EMT Fittings: Use steel compression connectors.

K. Available Manufacturers: Subject to compliance with requirements, manufacturers offering conduit bodies which may be incorporated in the work include, but are not limited to, the following:

Appleton Electric Co.
Crouse-Hinds Co.
Thomas & Betts Co., Inc.

L. Bushings, Knockout Closures and Locknuts: Provide corrosion-resistant punched-steel box knockout closures, conduit locknuts and malleable iron conduit bushings, offset connectors, of types and sizes to suit respective uses and installation.

M. Available Manufacturers: Subject to compliance with requirements, manufacturers offering bushings, knockouts closures, locknuts, and connectors which may be incorporated in the work include, but are not limited to, the following:

O-Z/Gedney Co.
RACO, Inc.
Steel City/Midland-Ross Corp.
Thomas and Betts Co., Inc.
3.01 INSTALLATION OF ELECTRICAL BOXES AND FITTINGS:

A. General: Install electrical boxes and fittings where indicated, complying with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", and in compliance with recognized industry practices to ensure that products fulfill requirements.

B. Coordinate installation of electrical boxes and fittings with wire/cable and raceway installation work.

C. Provide knockout closures to cap unused knockout holes where blanks have been removed.

D. Install boxes and conduit bodies in those locations to ensure ready accessibility of electrical wiring.

E. Avoid using round boxes where conduit must enter box through side of box, which would result in difficult and insecure connections when fastened with locknut or bushing on rounded surface.

F. Fasten boxes rigidly to substrates or structural surfaces to which attached, or solidly embedded electrical boxes in concrete or masonry.

G. Provide electrical connections for installed boxes.

H. Use cast metal outlets and device boxes for all exposed work outside.

I. Ground all metallic junction boxes by bonding to the system raceway grounding conductor. Ground the yoke or frame of all box-mounted devices.

END OF SECTION 260530