SECTION 260534

BOXES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Wall and ceiling outlet boxes.

B. Floor boxes.

C. Pull and junction boxes.

1.2 RELATED SECTIONS

A. Division 07 - Firestopping.

B. Division 08 - Access Doors.

C. Section 26 05 05 - Equipment Wiring Systems.

D. Section 26 27 16 - Cabinets and Enclosures.

E. Section 26 27 26 - Wiring Devices.

1.3 REFERENCES

A. NECA - Standard of Installation.

B. ANSI/NEMA FB 1 - Fittings and Supports for Conduit and Cable Assemblies.

C. ANSI/NEMA OS 1 - Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports.

D. ANSI/NFPA 70 - National Electrical Code.

E. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

1.4 SUBMITTALS FOR CLOSEOUT

A. Submit under the provisions of Division 01.

B. Accurately record actual locations and mounting heights of outlet, pull, and junction boxes.

PART 2 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 (13 mm) male fixture studs where required.
   2. Concrete Ceiling Boxes: Concrete type.

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

C. Wall Plates for Finished Areas: As specified in Section 26 27 26.

2.2 FLOOR BOXES

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

B. Material: Cast metal.

C. Shape: Round.

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

E. Covers:
1. Single gang, Brass with duplex flip cover for duplex receptacles.
2. Carpet flanges: Multi-gang, Aluminum.
3. Fittings: High-tension (15A-125 VAC), Aluminum.
4. Low-tension (telephone), Aluminum.

F. Service Fittings: As specified in Section 26 27 26.

2.3 PULL AND JUNCTION BOXES

A. Sheet Metal Boxes: NEMA OS 1, galvanized steel.

B. Surface-Mounted Cast Metal Box: NEMA 250, Type 4; flat-flanged, surface-mounted junction box.
1. Material: Galvanized cast iron.
2. Cover: Furnish with ground flange, neoprene gasket, and stainless-steel cover screws.

C. In-Ground Cast Metal Box: NEMA 250, Type 6, inside flanged, recessed cover box for flush mounting.
1. Material: Galvanized cast iron.
2. Cover: Smooth cover with neoprene gasket and stainless-steel cover screws.
3. Cover Legend: ELECTRIC.

D. Fiberglass Handholes: Die-molded glass fiber hand holes:
1. Cable Entrance: Pre-cut 6-inch x 6-inch cable entrance at center bottom of each side.
2. Cover: Glass fiber weatherproof cover with nonskid finish.

PART 3 EXECUTION

3.1 EXAMINATION

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

3.2 INSTALLATION

A. Install boxes in accordance with NECA "Standard of Installation" for flush mounting.

B. Set wall mounted boxes at elevations to accommodate mounting heights indicated and specified.

C. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. Adjust box location up to 10 feet if required to accommodate intended purpose.

D. Orient boxes to accommodate wiring devices oriented as specified in Section 26 27 26.

E. Maintain headroom and present neat mechanical appearance.

F. Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only.

G. Inaccessible Ceiling Areas: Install outlet and junction boxes no more than 6 inches (150 mm) from ceiling access panel or from removable recessed luminaire.

H. Install boxes to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Division 07.

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

J. Locate outlet boxes to allow luminaires to be positioned as shown on reflected ceiling plan.

K. Align adjacent wall mounted outlet boxes for switches, thermostats, and similar devices.

L. Use flush mounting outlet box in all areas, unless noted otherwise.

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

N. Do not install flush mounting box back-to-back in walls; provide minimum 6 inches (150 mm) separation. Provide minimum 24 inches (600 mm) separation in acoustic and fire rated walls.

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

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

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

R. Use adjustable steel channel fasteners for hanging ceiling outlet box.

S. Do not fasten boxes to ceiling support wires.

T. Support boxes independently of conduit.

U. Use separate boxes for emergency outlets.

V. For normal circuits use gang box where more than one device is mounted together. Do not use sectional box.

W. Use gang box with plaster ring for single device outlets.

X. Use cast outlet box in exterior locations (exposed to the weather) and wet locations.

Y. Use cast floor boxes for installations in slab on grade; formed steel boxes are acceptable for other installations.

Z. Set floor boxes level.

AA. Large Pull Boxes: Use hinged enclosure in interior dry locations, surface-mounted cast metal box in other locations.

3.3 INTERFACE WITH OTHER PRODUCTS

A. Coordinate installation of outlet box for equipment connected under Section 26 05 05.

3.4 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 unused box openings.

3.5 CLEANING

A. Clean interior of boxes to remove dust, debris, and other material.

B. Clean exposed surfaces and restore the finish.

END OF SECTION