SECTION 26 27 26
WIRING DEVICES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Contracting Requirements and Division 01 General Requirements apply to this Section.

1.02 SUMMARY

A. This Section includes the following:
1. Receptacles, receptacles with integral GFCI, and associated device plates.
2. Wall-box occupancy sensors /switches.
3. Snap switches.

B. Related Sections include the following:
1. Division 26 Section "Lighting Control Devices”.

1.03 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals.

1.04 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in referenced Electrical Code, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers' Names:
1. Cooper Wiring Devices.
2. Hubbell.
3. Leviton.
4. Pass & Seymour.

2.02 STRAIGHT BLADE RECEPTACLES

A. Duplex Receptacles: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498. Specification grade commercial series, straight-blade, 2 pole 3 wire grounding type,

back and side wired, rated for 120 volts, 20 amperes. Hubbell No.BR20 or equal. Hubbell No.BR20WR or equal for weather-resistant listed receptacles.

B. Ground fault interrupter (GFI) receptacles: Duplex receptacles conforming to UL 943, commercial grade , feed-through type, rated for 120 volt, 20 amperes, NEMA 5-20R, GFI Class "A" with a sensitivity to leakage 5 milliamps. Hubbell No. GF20L or equal. Hubbell No.GFWR20 or equal for GFI weather-resistant listed receptacles.

2.03 SNAP SWITCHES

A. Comply with NEMA WD 1 and UL 20.

B. Switches, heavy duty, side wired, 120/277 V, 20 A:
   1. Products: Subject to compliance with requirements, provide one of the following:
      a. Cooper; 2221 (single pole), 2222 (two pole), 2223 (three way).
      b. Hubbell; CS1221 (single pole), CS1222 (two pole), CS1223 (three way).
      c. Leviton; 1221-2 (single pole), 1222-2 (two pole), 1223-2 (three way).
      d. Pass & Seymour; 20AC1 (single pole), 20AC2 (two pole), 20AC3 (three way).

2.04 WALL SWITCH OCCUPANCY SENSORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Hubbell.
   2. Watt Stopper.
   3. Leviton.
   4. Pass & Seymour.

B. Wall-Switch Sensors: Passive-infrared type, 120/277 V, adjustable time delay up to 30 minutes, 180-degree field of view, with a coverage area up to 300 sq. ft., choice of Auto-ON or Manual-ON operation.
   a. Watt Stopper WA-100 or equal, for single-level lighting control.
   b. Watt Stopper WA-300 or equal, for two-level lighting control.

C. Wall-Switch Sensors: Dual technology, with both passive-infrared- and ultrasonic-type sensing, 120/277 V, adjustable time delay up to 30 minutes, 180-degree field of view, and a coverage area up to 1000 sq.ft., choice of Auto-ON or Manual-ON operation, Hubbell LHMTD2 or equal.

2.05 WALL PLATES

A. Single and combination types to match corresponding wiring devices.
   1. Plate-Securing Screws: Metal with head color to match plate finish.
   2. Material for Finished Spaces: Smooth, high-impact thermoplastic.
   3. Material for Unfinished Spaces: Galvanized steel.

B. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 3R weather-resistant , die-cast aluminum.

2.06 FINISHES

A. Color: Wiring device catalog numbers in Section Text do not designate device color. Select as required by the Architect.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install work in accordance with the printed specifications and installation instructions of each of the manufacturers and with to the approved shop drawings. Installed work shall conform with NECA 1.

B. Install wiring devices in appropriately sized outlet boxes. Where more than one switch or a duplex receptacle are indicated on the drawings at the same location, use multi-gang outlet boxes.

C. Mount duplex convenience and power receptacles vertically, unless otherwise indicated, with grounding posts at the top of the device. Where duplex receptacles are indicated to be mounted horizontally, locate the grounding post on the left as the outlet is viewed from the front.

D. On finished walls, flush-mount switches. Where two or more switches are shown at one location, install them under a common wall plate. Mount switches on the knob side of doors, 4 feet above the floor.

E. Coordination with Other Trades:
1. Take steps to insure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
2. Install wiring devices after all wall preparation, including painting, is complete.

.F. Install toggle switches, except 3-way switches, so that posts are in the down position when lights are off.

G. Securely fasten wiring devices in place, plumb, level, and true to finished lines and surfaces.

H. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

3.02 IDENTIFICATION

A. Comply with Division 26 Section "Identification for Electrical Systems." Receptacles: Identify panelboard and circuit number from which served.

3.03 FIELD QUALITY CONTROL

A. Perform tests and inspections and prepare test reports.

1. Test Instruments: Use instruments that comply with UL 1436.
2. Test Instrument for Convenience Receptacles: Digital wiring analyzer with digital readout or illuminated LED indicators of measurement.

B. Tests for Convenience Receptacles:
1. Line Voltage: Acceptable range is 108 to 132 V.
2. Check for proper polarity and grounding.
3. Check for damaged or missing device plates.
4. Using the test plug, verify that the device and its outlet box are securely grounded.
5. The tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

END OF SECTION 26 27 26