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**SECTION 26 27 26**  
**WIRING DEVICES****PART 1 GENERAL****1.1 SECTION INCLUDES**

- A. Wall switches.
- B. Wall dimmers.
- C. Receptacles.
- D. Wall plates.
- E. Floor box service fittings.
- F. Section 26 05 33.16 - Boxes for Electrical Systems.
- G. Section 27 10 00 - Structured Cabling: Voice and data jacks.

**1.2 REFERENCE STANDARDS**

- A. FS W-C-596 - Connector, Electrical, Power, General Specification for 2014h, with Amendments (2017).
- B. FS W-S-896 - Switches, Toggle (Toggle and Lock), Flush Mounted (General Specification) 2014g, with Amendment (2017).
- C. NECA 1 - Standard for Good Workmanship in Electrical Construction 2015.
- D. NEMA WD 1 - General Color Requirements for Wiring Devices 1999 (Reaffirmed 2020).
- E. NEMA WD 6 - Wiring Devices - Dimensional Specifications 2021.
- F. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. UL 20 - General-Use Snap Switches Current Edition, Including All Revisions.
- H. UL 498 - Attachment Plugs and Receptacles Current Edition, Including All Revisions.
- I. UL 514D - Cover Plates for Flush-Mounted Wiring Devices Current Edition, Including All Revisions.
- J. UL 943 - Ground-Fault Circuit-Interrupters Current Edition, Including All Revisions.
- K. UL 1472 - Solid-State Dimming Controls Current Edition, Including All Revisions.

**1.3 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination:
  - 1. Coordinate the placement of outlet boxes with millwork, furniture, equipment, etc. installed under other sections or by others.
  - 2. Coordinate wiring device ratings and configurations with the electrical requirements of actual equipment to be installed.
  - 3. Coordinate the installation and preparation of uneven surfaces, such as split face block, to provide suitable surface for installation of wiring devices.
  - 4. Notify Architect of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.
- B. Sequencing:

**1.4 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.

- C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.
- D. Operation and Maintenance Data:
  - 1. GFCI Receptacles: Include information on status indicators.
- E. Project Record Documents: Record actual installed locations of wiring devices.

### **1.5 QUALITY ASSURANCE**

- A. Comply with requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- D. Products: Listed, classified, and labeled as suitable for the purpose intended.
- E. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

### **1.6 DELIVERY, STORAGE, AND PROTECTION**

- A. Store in a clean, dry space in original manufacturer's packaging until ready for installation.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Hubbell Incorporated: [www.hubbell-wiring.com](http://www.hubbell-wiring.com).
- B. Leviton Manufacturing Company, Inc: [www.leviton.com](http://www.leviton.com).
- C. Lutron Electronics Company, Inc: [www.lutron.com](http://www.lutron.com).
- D. Pass & Seymour, a brand of Legrand North America, Inc: [www.legrand.us](http://www.legrand.us)

### **2.2 WIRING DEVICE APPLICATIONS**

- A. Provide wiring devices suitable for intended use and with ratings adequate for load served.
- B. For single receptacles installed on an individual branch circuit, provide receptacle with ampere rating not less than that of the branch circuit.
- C. Provide weather resistant GFCI receptacles with specified weatherproof covers for receptacles installed outdoors or in damp or wet locations.
- D. Provide GFCI protection for receptacles installed within 6 feet of sinks.
- E. Provide GFCI protection for receptacles installed in kitchens.
- F. Provide GFCI protection for receptacles serving electric drinking fountains.
- G. Unless noted otherwise, do not use combination switch/receptacle devices.

### **2.3 WIRING DEVICE FINISHES**

- A. Provide wiring device finishes as described below unless otherwise indicated.
- B. Wiring Devices, Unless Otherwise Indicated: White with white nylon wall plate.

### **2.4 WALL SWITCHES**

- A. Manufacturers:
  - 1. Hubbell Incorporated: [www.hubbell.com/#sle](http://www.hubbell.com/#sle).

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2. Leviton Manufacturing Company, Inc: [www.leviton.com/#sle](http://www.leviton.com/#sle).
  3. Pass & Seymour, a brand of Legrand North America, Inc: [www.legrand.us/#sle](http://www.legrand.us/#sle).
  4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Wall Switches - General Requirements: AC only, quiet operating, general-use snap switches with silver alloy contacts, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 20 and where applicable, FS W-S-896; types as indicated on the drawings.
1. Wiring Provisions: Terminal screws for side wiring and screw actuated binding clamp for back wiring with separate ground terminal screw.
- C. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw as indicated on the drawings.
1. Standard wall switches for use with display case lighting only. All general illumination lighting areas shall make sure of Networked Digital Lighting Control System as specified in Section 26 09 23 - Lighting Control Devices.

## 2.5 WALL DIMMERS

- A. Manufacturers:
1. Leviton Manufacturing Company, Inc: [www.leviton.com](http://www.leviton.com).
  2. Pass & Seymour, a brand of Legrand North America, Inc: [www.legrand.us](http://www.legrand.us).
- B. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control following square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled as indicated on the drawings.
- C. Control: Slide control type with separate on/off switch.
- D. Provide locator light, illuminated with load off.
- E. Provide accessory wall switches to match dimmer appearance when installed adjacent to each other.

## 2.6 RECEPTACLES

- A. Manufacturers:
1. Hubbell Incorporated: [www.hubbell-wiring.com](http://www.hubbell-wiring.com).
  2. Leviton Manufacturing Company, Inc: [www.leviton.com](http://www.leviton.com).
  3. Lutron Electronics Company, Inc: [www.lutron.com](http://www.lutron.com).
  4. Pass & Seymour, a brand of Legrand North America, Inc: [www.legrand.us](http://www.legrand.us)
  5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Receptacles - General Requirements: Self-grounding, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 498, and where applicable, FS W-C-596; types as indicated on the drawings.
1. Wiring Provisions: Terminal screws for side wiring or screw actuated binding clamp for back wiring with separate ground terminal screw.
  2. NEMA configurations specified are according to NEMA WD 6.
- C. Convenience Receptacles:
1. Standard Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R; single or duplex as indicated on the drawings.
- D. GFCI Receptacles:
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1. GFCI Receptacles - General Requirements: Self-testing, with feed-through protection and light to indicate ground fault tripped condition and loss of protection; listed as complying with UL 943, class A.
  - a. Provide test and reset buttons of same color as device.
2. Standard GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style.
3. Weather Resistant GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style, listed and labeled as weather resistant type complying with UL 498 Supplement SE suitable for installation in damp or wet locations.

## **2.7 WALL PLATES**

- A. Manufacturers:
  1. Hubbell Incorporated: [www.hubbell-wiring.com/#sle](http://www.hubbell-wiring.com/#sle).
  2. Leviton Manufacturing Company, Inc: [www.leviton.com/#sle](http://www.leviton.com/#sle).
  3. Lutron Electronics Company, Inc: [www.lutron.com/#sle](http://www.lutron.com/#sle).
  4. Pass & Seymour, a brand of Legrand North America, Inc: [www.legrand.us/#sle](http://www.legrand.us/#sle).
  5. Substitutions: See Section 01 60 00 - Product Requirements.
  6. Configuration: One piece cover as required for quantity and types of corresponding wiring devices.
  7. Size: Standard.
  8. Screws: Metal with slotted heads finished to match wall plate finish.
- B. Nylon Wall Plates: Smooth finish, high-impact thermoplastic.
- C. Weatherproof Covers for Wet Locations: Gasketed, cast aluminum, with hinged lockable cover and corrosion-resistant screws; listed as suitable for use in wet locations while in use with attachment plugs connected and identified as extra-duty type.

## **2.8 FLOOR BOX SERVICE FITTINGS**

- A. Manufacturers:
  1. Hubbell Incorporated: [www.hubbell.com/#sle](http://www.hubbell.com/#sle).
  2. Thomas & Betts Corporation: [www.tnb.com/#sle](http://www.tnb.com/#sle).
  3. Wiremold, a brand of Legrand North America, Inc: [www.legrand.us/#sle](http://www.legrand.us/#sle).
  4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Description: Service fittings compatible with floor boxes provided under Section 26 05 33.16 with components, adapters, and trims required for complete installation.
- C. Flush Floor Service Fittings:
  1. Dual Service Flush Combination Outlets:
    - a. Cover: Round.
    - b. Configuration:
      - 1) Power: Two standard convenience duplex receptacle(s) with duplex flap opening(s).
      - 2) Voice and Data Jacks: As specified in Section 27 10 00.
  2. Accessories:
    - a. Carpet Flanges: Finish to match covers; configuration as required to accommodate specified covers.

## **PART 3 EXECUTION**

**3.1 EXAMINATION**

- A. Verify that field measurements are as indicated.
- B. Verify that outlet boxes are installed in proper locations and at proper mounting heights and are properly sized to accommodate devices and conductors in accordance with NFPA 70.
- C. Verify that wall openings are neatly cut and will be completely covered by wall plates.
- D. Verify that final surface finishes are complete, including painting.
- E. Verify that branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.
- F. Verify that conditions are satisfactory for installation prior to starting work.

**3.2 PREPARATION**

- A. Provide extension rings to bring outlet boxes flush with finished surface.
- B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

**3.3 INSTALLATION**

- A. Perform work in a neat and workmanlike manner in accordance with NECA 1 and, where applicable, NECA 130.
  - B. Coordinate locations of outlet boxes provided under Section 26 05 33.16 as required for installation of wiring devices provided under this section.
    - 1. Mounting Heights: Unless otherwise indicated, as follows:
      - a. Wall Switches: 48 inches above finished floor.
      - b. Receptacles: 18 inches above finished floor or 6 inches above counter.
    - 2. Orient outlet boxes for vertical installation of wiring devices unless otherwise indicated. Exterior receptacles shall be installed horizontally.
    - 3. Where multiple receptacles, wall switches, or wall dimmers are installed at the same location and at the same mounting height, gang devices together under a common wall plate.
    - 4. Locate wall switches on strike side of door with edge of wall plate 3 inches from edge of door frame. Where locations are indicated otherwise, notify Architect to obtain direction prior to proceeding with work.
    - 5. Locate receptacles for electric drinking fountains concealed behind drinking fountain according to manufacturer's instructions.
  - C. Install wiring devices in accordance with manufacturer's instructions.
  - D. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.
  - E. Where required, connect wiring devices using pigtails not less than 6 inches long. Do not connect more than one conductor to wiring device terminals.
  - F. Connect wiring devices by wrapping conductor clockwise 3/4 turn around screw terminal and tightening to proper torque specified by the manufacturer. Where present, do not use push-in pressure terminals that do not rely on screw-actuated binding.
  - G. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
  - H. Provide GFCI receptacles with integral GFCI protection at each location indicated. Do not use feed-through wiring to protect downstream devices.
  - I. Install wiring devices plumb and level with mounting yoke held rigidly in place.
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- J. Install wall switches with OFF position down.
- K. Install wall dimmers to achieve full rating specified and indicated after derating for ganging as instructed by manufacturer.
- L. Do not share neutral conductor on branch circuits utilizing wall dimmers.
- M. Install vertically mounted receptacles with grounding pole on top and horizontally mounted receptacles with grounding pole on left.
- N. Install wall plates to fit completely flush to wall with no gaps and rough opening completely covered without strain on wall plate. Repair or reinstall improperly installed outlet boxes or improperly sized rough openings. Do not use oversized wall plates in lieu of meeting this requirement.
- O. Install blank wall plates on junction boxes and on outlet boxes with no wiring devices installed or designated for future use.

### **3.4 FIELD QUALITY CONTROL**

- A. Inspect each wiring device for damage and defects.
- B. Operate each wall switch with circuit energized to verify proper operation.
- C. Test each receptacle to verify operation and proper polarity.
- D. Test each GFCI receptacle for proper tripping operation according to manufacturer's instructions.
- E. Correct wiring deficiencies and replace damaged or defective wiring devices.

### **3.5 ADJUSTING**

- A. Adjust devices and wall plates to be flush and level.

### **3.6 CLEANING**

- A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

**END OF SECTION 26 27 26**