SECTION 16141

WIRING DEVICES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Wall switches.

B. Receptacles.

C. Device plates.

1.2 RELATED SECTIONS

A. Section 16130 - Boxes.

1.3 REFERENCES

A. NEMA WD 1 - General Purpose Wiring Devices.

B. NEMA WD 6 - Wiring Device Configurations.

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.

1.5 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

PART 2 - PRODUCTS

2.1 WALL SWITCHES

A. Manufacturers:
   1. *Hubbell.*
   2. *Leviton.*
   3. *Bryant.*
   4. *Pass & Seymour*
   5. Substitutions: Or Approved Equal.

B. Switch Types: *Pass & Seymour* model numbers are listed below to establish configuration and type of switch. Equal devices by other manufacturers will be accepted.

C. SPST Switches:
1. Description: NEMA WD 1, commercial, specification grade, AC only general-use snap switch, back and side wired.
2. Device Body: Ivory plastic with toggle handle.
3. Voltage Rating: 120-277 volts, AC.
4. Current Rating: 20 amperes.
5. Model Number: CS20AC1-I

D. 3-Way Switches:
1. Description: Identical to SPST switches except 3-way operation.
2. Model Number: CS20AC3-I.

E. Boiler Cut-Off Switches:
1. Description: DPST switch with red handle.
2. Voltage Rating: 120-277 volts AC.
3. Current Rating: 20 Amperes.
4. Faceplate: Red color, engraved “EMERGENCY.”
5. Model Number: PS20AC2-RED

2.2 RECEPTACLES

A. Manufacturers:
1. *Hubbell.*
2. *Leviton.*
3. *Bryant.*
4. *Pass & Seymour*
5. Substitutions: Or Approved equal.

B. Receptacle Types: *Pass & Seymour* model numbers are listed below to establish configuration and type of receptacles. Equal devices by other listed manufacturers will be accepted.

C. General Use:
1. Description: NEMA WD 1; commercial, specification grade, 125-volt grounded duplex receptacle, back and side wired.
2. Device Body: Ivory, nylon face.
3. Configuration: NEMA 5-20.
4. Model number: BR20-I.

D. Tamper-Resistant:
1. Description: NEMA WD 1; specification-grade, tamper-resistant, 125-volt grounded duplex receptacle, back and side wired.
2. Device Body: Ivory, nylon face.
3. Configuration: NEMA 5-20.
4. Model number: TR63-I

E. Standard Ground Fault:
1. Description: UL 498, 544, 943; specification-grade, 125-volt, ground-fault interrupt type duplex receptacle with TEST and RESET, side wired.
2. Device Body: Ivory, Thermoplastic.
3. Configuration: NEMA 5-15R.
4. Model Number: 2095-I.

F. Tamper-Resistant Ground Fault:
1. Description: UL 498, 544, 943; specification-grade, tamper-resistant, 125-volt, ground-fault interrupt type duplex receptacle with TEST and RESET, side wired.
2. Device Body: Ivory, Thermoplastic.
3. Configuration: NEMA 5-15R.
4. Model Number: 2095-TRI.

G. Electric Range:
1. Description: 125/250 volt, 50-ampere surface receptacle.
2. Device Body: Black thermoplastic.
3. Configuration: NEMA 14-50R.
4. Model Number: 3854/3854-40.

2.3 WALL PLATES

A. Manufacturers:
1. *Hubbell.*
2. *Leviton.*
3. *Bryant.*
4. *Pass & Seymour.*
5. Substitutions: Or Approved Equal.

B. Description: Smooth plastic, ivory.

2.4 OWNER OPTION WIRING DEVICES

A. Provide a separate price quotation for the following, as may be selected on a per-unit basis by the owner. The price shall include installation.
1. Receptacle Outlets for Wireless Control of Appliances
a) Description: Tramper-Resistant 15 ampere, 125 volt grounded split duplex receptacle with one outlet certified by *Z-Wave* as being compatible with the *Z-Wave* wireless control system
(1) *Leviton* # VRR15
(2) *Cooper Wiring Devices* # RFTR9505-T
(3) Substitutions: or Approved equal.
2. Lighting Switch for Wireless Control of Lighting
a) Description: Single pole 15A light switch certified by *Z-Wave* as being compatible with the *Z-Wave* wireless control system.
(1) *Jasco* # 45609WB

(2) *Cooper Wiring Devices* # RF9501DW
(3) Substitutions: or Approved equal.

b) Description: 3-way 15A light switch certified by *Z-Wave* as being compatible with the *Z-Wave* wireless control system.
(1) *Jasco* # 45760/zw4003
(2) *Cooper Wiring Devices* # RF9517DW
(3) Substitutions: or Approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify outlet boxes are installed at proper height.

B. Verify wall openings are neatly cut and will be completely covered by wall plates.

C. Verify branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

3.2 PREPARATION

A. Provide extension rings to bring outlet boxes flush with finished surface.

B. Clean debris from outlet boxes.

3.3 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install devices plumb and level.

C. Install switches with OFF position down.

D. Install receptacles with grounding pole on top.

E. Connect wiring device grounding terminal to branch circuit equipment grounding conductor.

F. Install decorative plates on switch, receptacle, and blank outlets in finished areas.

G. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.

H. For non-dwelling unit locations, provide standard GFIC-type receptacles at all receptacle locations within six (6) feet of a sink, whether indicated as such on the Drawings or not.

I. For dwelling unit locations, provide tamper-resistant type receptacles at all locations. Provide tamper-resistant GFIC-type receptacles in kitchens (except dishwasher and refrigerator receptacles which shall be standard tamper-resistant type receptacles). Also provide tamper-resistant GFIC-type receptacles in dwelling unit bathrooms.

J. Install light switches 48 inches above finished floor. Install standard receptacle outlets 18 inches above finished floor. Install receptacle outlets above counters at heights as indicated on drawings.

K. For dwelling unit locations, provide receptacle outlets such that no point measured horizontally along the floor line in any wall space is more than six feet from a receptacle outlet. Wall space shall be defined as any space two feet or more in width (including space measured around corners) and unbroken along the floor line by doorways, or similar openings. The Contractor shall confirm that this condition has been met prior to rough-in of receptacle outlets.

L. For dwelling unit locations, provide wall countertop receptacle outlets such that no point along the countertop line is more than 24 inches measured horizontally from a receptacle outlet. At island countertops, provide receptacle outlets with at least one receptacle installed at each island with a long dimension of 24 inches or greater and a short dimension of 12 inches or greater. The Contractor shall confirm that this condition has been met prior to rough-in of receptacle outlets.

M. Tamper-resistant receptacle outlets shall be replaced where plugs are not able to be inserted after installation.

3.4 INTERFACE WITH OTHER PRODUCTS

A. Coordinate locations of outlet boxes provided under Section 16130 to obtain mounting heights specified and indicated on Drawings.

B. Install wall switch 48 inches above finished floor.

C. Install convenience receptacle 18 inches above floor, or as noted on the Drawings.

D. Where multiple heating boilers exist, connect all boilers to a single multi-pole emergency disconnect switch to be installed at the boiler room entrance door.

3.5 FIELD QUALITY CONTROL

A. Inspect each wiring device for defects.

B. Operate each wall switch with circuit energized and verify proper operation.

C. Verify that each receptacle device is energized.

D. Test each receptacle device for proper polarity.

E. Test each GFCI receptacle device for proper operation.

3.6 ADJUSTING

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

END OF SECTION