

## **DIVISION 16 - ELECTRICAL**

### **Section 16140 - Devices**

#### **Introduction**

The design should take into account not only what type of equipment is to be connected to the device but also what type of loading will occur on the circuit when determining the number of receptacles on each circuit.

- Designers shall provide at least one outlet on each wall unless construction with doors and walls prevent sensible construction.
- Minimum of 1 convenience circuit shall be installed in each individual office.
- Maximum of 6 receptacles on each circuit for office areas.
- Dedicated circuit for copiers.
- Dedicated circuit for laser printers.
- Dedicated circuit for microwave.
- Hallway receptacles shall be connected to circuits which are independent of the office or other room receptacles.
- Wall switches shall be on the latch side of doors according to the architectural plans. Where two level switching is used switches shall be in the same J-box. Motion sensors with override button shall only be installed in specific situations approved by UA Electrical Engineer.

#### **Part 1 - General**

- Due to the rough treatment of devices at this facility industrial quality heavy duty specification grade devices and receptacles are used.

#### **Part 2 - Products**

- Pass & Seymour, Arrowhart, Leviton, and Hubbell are approved manufacturers. Hubbell shall be the basis of design.
  - All devices shall be heavy duty specification grade, plug tail or snap back wired minimum 20 A rated devices. Included here are standard wall outlets, light switches, GFCI, and IG receptacles.
  - Receptacles shall have a one piece brass strap and grounding system.
  - Color of devices shall match the existing for main campus modifications.
  - Devices used for emergency power shall be red.
  - Isolated ground devices shall be orange.
  - All wall plates shall be stainless steel, satin finish, minimum of .035" thick. Sierra Brand, to match plates specified in 16700.
  - Exterior device plates shall have separate covers for each section of the device. Plate shall be constructed of cast aluminum. The unit shall be rain tight with plug in use.
  - Lighted toggle switches shall be used in all electrical, mechanical, equipment rooms and in tunnels. Color shall be white or clear. Wire so that they glow when the power is off.

#### **Part 3 - Execution**

- Install receptacles with the ground stab up in vertical mounting or neutral stab up in horizontal mounting.

- Install such that devices are either perpendicular or parallel to the floor or adjacent walls.
- All devices shall be pigtail connected and not used as a terminal strip or feed through connector for devices down line.
- Receptacles shall be mounted at 18" above finished floor to center.
- Lab receptacles shall mount minimum of 6" above counter top. (Except where using countertop mounted devices, manufactured for that purpose.) Max height shall not exceed 42".
- Light switches shall mount at +42 above finished floor to center.
- All receptacles shall be identified per Section 16195.
- Install wiring under back wiring clamp without use of Stak-ons or crimp terminals except at ground terminals.
- Receptacles not installed in back splashes can be installed vertical above counters.
- Provide samples for approval.

**End of Section 16140**