Basis of Design

This section applies to the design and installation of wiring devices.

Design Criteria

- Provide 120V receptacles in janitor closets, toilet rooms, corridors, tunnels and other special purpose spaces for maintenance use.
- In corridors, receptacles for cleaning shall be provided at spacing not to exceed 50 linear feet, near hallway intersections and rear entry vestibules. Circuits shall be separate from office and lab circuits.
- In general, each circuit’s overcurrent device should be on the same floor as the outlets.
- Provide at least one 120V emergency receptacle in mechanical, electrical and communications rooms, connected to the building standby emergency panel.
- Provide ground fault circuit interrupter (GFCI) receptacles as dictated by good engineering practice. Use master/slave arrangement. Reset must be accessible by users.

Design Evaluation

The following information is required to evaluate the design:

- **Schematic Design Phase**: Description of overall design concept for wiring device requirements. Special requirements such as hospitals, laboratories, etc. Outline specifications.
- **Design Development Phase**: Preliminary plans showing device locations. Draft specifications.
- **Construction Document Phase**: Completed drawings showing layout and circuiting information. Details for special applications when required. Complete specifications.

Submittals

- Provide standard industry submittal requirements.

Products, Materials and Equipment

- Generally use specification-grade self-grounding devices. Use hospital-grade receptacles and attachment plugs for health care facilities and laboratories.
- AC only “quite” type switches, 20 ampere rating, self-grounding. Ivory color for normal power, red for emergency. Interchangeable type devices may be used only for special applications when approved by the Campus Engineering.
- Use neon or low voltage transformer-base pilot lights for long life and ruggedness.
- Device plates shall be stainless steel in finished areas, galvanized or cast to suit boxes in areas where exposed wiring is permitted.
Installation, Fabrication and Construction

- Use hard ground pigtails. Do not rely on a device’s self-grounding feature.

END OF DESIGN INFORMATION SECTION