

BASIC MATERIALS AND METHODS

DESIGN GUIDELINES

1. Summary:
 - a. This section provides general guidelines and standards for the Washington University School of Medicine.
 - b. The design and contractor work performed shall in accordance with the St. Louis City adopted version of the National Electrical Code (NFPA-70).
2. Abbreviations
 - a. "WUSM" – Washington University School of Medicine
 - b. "WUSM OFMD" – Washington University School of Medicine Operations Facilities Management Department.
 - c. "WU EH&S – Washington University Department of Environmental Health and Safety
3. Design
 - a. The designer of record shall review all sections of the WUSM Design Standards and incorporate applicable items into the Contract Documents.
 - b. Policy: It is the goal of WUSM OFMD to install a system that is functionally efficient, maintenance friendly and modern enough to report system problems as needed.
 - c. All design trades shall coordinate locations of equipment to allow for access for maintenance, repair, replacement and day-to-day operations.
 - d. Deviations from these standards are not encouraged and must be approved by WUSM OFMD.
4. Contractor Work Performance
 - a. Before cutting or drilling holes in floors, verify the location of reinforcing steel bars and embedded electrical conduits to avoid cutting same. X-ray floors where necessary to verify such locations.
 - b. All electrical switchgear and panel boards shall be free of dust, dirt and trash along with their associated closets or rooms prior to final acceptance by WUSM.
 - c. Work shall be so arranged that electrical power and other services are available to the building at all times, except for short periods of interruption necessary for the performance of new work. Interruptions shall not be requested until the new services are complete and ready for final connection.
 - d. Interruptions shall be scheduled at a minimum 2 weeks prior, and services shall not be interrupted without written approval from the WUSM project manager. Notification to the WUSM project manager shall include the exact time and estimated duration of any interruption.
 - e. Some activities may be required to be performed after hours or on weekend. Coordinate with WUSM.
 - f. All contractors shall follow the adopted NFPA 70E Arc Flash Safety Procedures.

- g. All projects to have final drawings/As-builts and Operation and Maintenance manuals submitted to facilities for record documentation.
 - h. If electrical distribution is modified, the contractor shall be held responsible for updating established AutoCad generated electrical master one-line diagrams and floor plans that have changed due to their scope of work. The master one-line diagrams and floor plans shall be obtained from the WUSM OFMD. These plans shall be updated/modified and laminated on both sides and reposted in the main electrical room. (This only pertains to buildings that have an AutoCad master one-line and floor plans established. See WUSM OFMD for current list of established buildings.)
5. Equipment Pads
- a. Floor mounted equipment shall be located on concrete housekeeping pads. Typical height of 3-1/2 inches with chamfered edges and corners.
 - b. Equipment pad size shall include required edge spacing for anchor bolts and seismic forces. Reinforcing shall be designed in accordance with ASHRAE Practical Guide to Seismic Restraint or designed by a structural engineer.
 - c. Concrete pads shall be designed for a minimum of 2'-6" between pads for access. If this minimum spacing can not be met, then provide continuous pad in that area.

EQUIPMENT and PRODUCT REQUIREMENTS

1. Equipment, products, components and materials shall be listed and labeled by Underwriters Laboratories (UL)
2. Refer to the individual WUSM Design Standards for specific requirements.

END OF SECTION