



Office of University Building Official

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Electrical Review Tips

1. **Arc Flash:** Provide arc-flash assessment and labels indicating flash hazard category (or incident energy values) and PPE required in accordance with NEC 110.16 and NFPA 70E.
2. **Selective Coordination:** Emergency systems overcurrent devices shall be selectively coordinated with all supply side overcurrent protective devices. *(NEC 700.32)*
3. **Transformers:** Provide disconnect ahead of and within sight of transformer. If using a disconnecting means in a remote location, it must be lockable, and its location must be identified on the transformer. *(NEC 450.14)*
4. **Fire Rated Assemblies:** Indicate fire-resistance rating of walls/partitions on all plans. Provide approved penetration firestop details with associated UL number for all penetrations in rated assemblies. *(USBC 109.3)*
5. **Calculations:** Provide point-by-point site lighting and interior lighting (normal and emergency) foot candle calculations, short circuit, building load, feeder voltage drop and generator load calculations with CD submittal.
6. **Identification of systems:** Components of all normal, standby and emergency electrical systems shall be identified with permanent marking. Emergency systems shall have permanent and readily identifiable labels - with red paint dot on lighting fixtures, red device body for receptacles etc. *(NEC - 700.10A)*
7. **Energy efficiency:** Occupancy sensors shall be used in rooms such as restrooms, single person offices, storage rooms, custodial closets, conference rooms, classrooms and corridors. In areas with glazing, occupancy sensors are to have an integral light level sensor. *(VECC C405.2)*
8. **Wiring:** All power and fire alarm wiring shall be in conduit. Minimum conduit size shall be $\frac{3}{4}$ " EMT. Permitted maximum length of flexible metal conduit or MC Cable is 6 ft. Minimum power and lighting circuit conductors shall be #12 AWG. Minimum control wires shall be #14 AWG.