

GENERAL:

The scope of this document is to provide requirements for providing a low voltage (600 volts and below) Arc Flash Hazard Analysis and documentation.

DESIGN GUIDELINES:

1. A low voltage Arc Flash Hazard Analysis shall be provided for projects installing electrical overcurrent protective devices. The analysis shall be based on the specific equipment installed, and shall be updated to include project “as built” documentation. Where the arc flash hazard/risk category is equal to or greater than level 3, the overcurrent protective device coordination study should be reviewed to reduce the hazard/risk level. The analysis shall be based on the specific devices installed and include (but not be limited to) the following:
 - 1.1. Service Entrance Equipment.
 - 1.1.1. All overcurrent protective devices installed in service entrance panels.
 - 1.2. Feeder Circuits.
 - 1.2.1. All three (3) phase Feeder circuit overcurrent protective devices installed with a rating equal to or greater than 30 amps.
 - 1.3. Branch Circuits.
 - 1.3.1. All three (3) phase Branch circuit overcurrent protective devices installed with a rating equal to or greater than 30 amps.
 - 1.3.2. All motor circuit overcurrent protective devices for motors with a rating equal to or greater than 10 horse power.
 - 1.4. Motor Control Centers.
 - 1.4.1. All motor circuit overcurrent protective devices for motors with a rating equal to or greater than 10 horse power.
2. The project shall include printed waterproof labels for equipment that lists the specific arc flash hazard/risk category at each location.
3. Format
 - 3.1. A preliminary Arc Flash Hazard Analysis should be submitted to the Owner’s Representative no later than six (6) weeks after the overcurrent protective device shop drawings have been approved.
 - 3.2. The Arc Flash Hazard Analysis shall be reviewed and updated to reflect any changes and corrections to conductor length within one week of the final electrical walk through for punchlist. The low voltage arc flash hazard analysis shall include the stamp or seal and signature of the preparing engineer, and shall be reviewed and approved by the Engineer of Record.

- 3.3. Owner approved Arc Flash Hazard warning labels shall be furnished and installed prior to project completion.
- 3.4. The low voltage arc flash hazard analysis shall be provided using the SKM Systems Analysis, Inc SKM Power Tools Electrical Engineering Software (PTW 32).
- 3.5. Prior to project completion, the low voltage arc flash hazard analysis shall be provided in both hard copy and on computer disk. The hard copy shall clearly show each device set point. The computer disk shall include the complete coordination file including all device curves (use the SKM "Project - Backup" command).