CASE STUDY

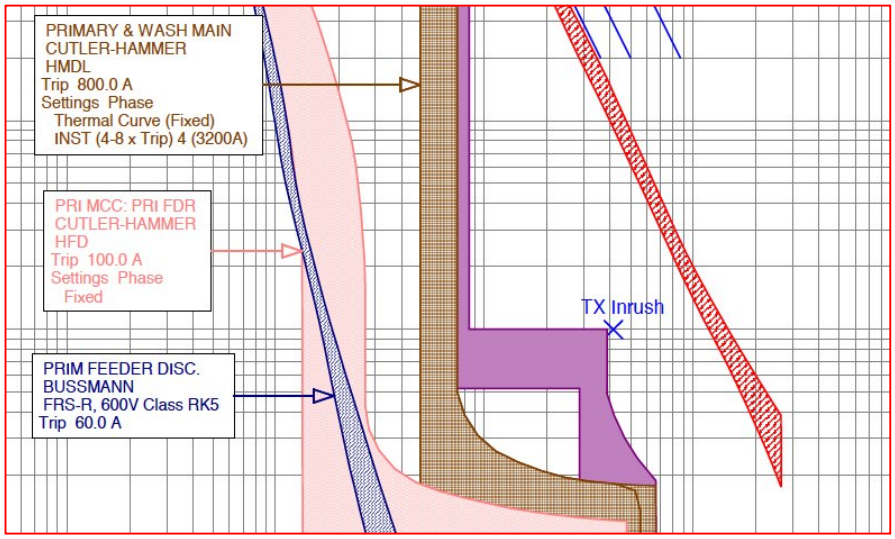
Mission Critical/Power Quality

Puckett Engineering, PLLC
THE CRITICAL DIFFERENCE BETWEEN OFF AND ON

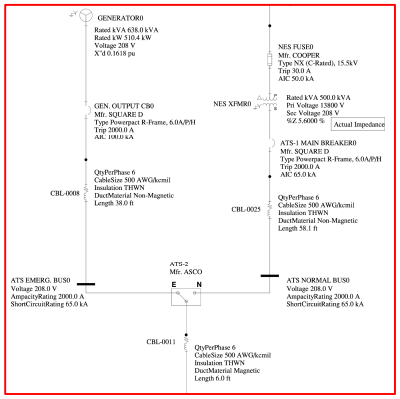
Power System Studies for Device Coordination and Arc Flash Hazard OSHA Compliance

Various Projects

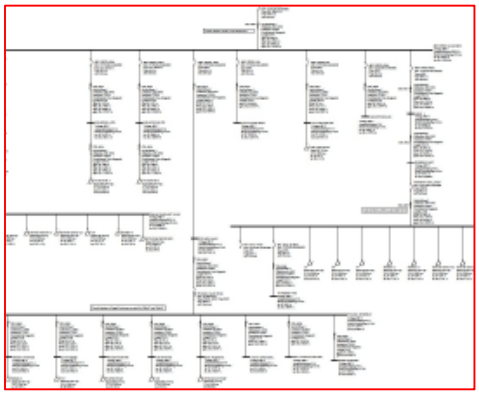
To prevent inadvertent shutdown of equipment and to help its clients comply with OSHA regulations for arc-flash hazards, Puckett Engineering performs Power System Studies. These studies begin with a Fault Analysis for calculating short-circuit currents. Next, a Coordination Study determines if downstream overcurrent devices, like circuit breakers and fuses, open before upstream devices. Once the Fault Analysis and Coordination Studies are completed, Puckett Engineering performs the Arc Flash calculations to determine the flash energy that could be released at electrical equipment if something in that equipment fails or someone accidentally drops a hand tool, or similar, across an energized bus. From these studies, circuit settings are adjusted, equipment short-circuit ratings are confirmed, and the level of Personal Protective Equipment is identified at equipment for electricians required to work on the system while it is energized.



Time-Current Curves for Determining Device Coordination



Model One-Line Diagram



Model One-Line Diagram

PROBLEM OR NEED

Coordinate devices to prevent inadvertent equipment shutdown

Help clients comply with OSHA regulations for arc-flash hazards

PUCKETT SOLUTIONS

Coordination Studies to determine proper device settings

Fault Analysis for calculating short-circuit currents

Arc Flash Studies to develop protective equipment guidelines for electricians