

ARC FLASH REQUIREMENTS

EXPANSEELECTRICAL.COM

ARC Flash Studies by Expanse Engineering Allow Our Clients to Comply with OSHA, Minimize Risk, and Keep Workers Safe

An ARC Flash is an electrical plasma that ignites the air between one exposed live conductor and another conductor or to ground. When an ARC Flash happens, the temperatures can reach up to 35,000 degrees Fahrenheit. This is four times the temperature on the surface of the sun. This can result in the destruction of equipment, fire, and injury.

OSHA requires that all “Non-Dwelling” facilities have an ARC Flash Hazard Analysis performed to determine:

- The ARC Flash Boundary
- The Level of PPE Required
- The Presence of a Flash Hazard

An ARC Flash study is essential to understand the actual level of danger and the appropriate personal protective equipment (PPE) required for employees.

Electrical systems are dynamic and change over time. Internal changes, such as adding new equipment can affect the level of ARC Flash energy. A study must be updated every time the system changes. External changes, such as a utility changing transformers or changes at your utility’s closest sub-station can severely impact your level of ARC Flash energy.



The Expanse Advantage

- Performed Over 9,000 Power System Studies
- Experts in the Field
- Turnkey Services
- Project Management
- Complete Installation, Testing, Commissioning, Maintenance, and Support Services

A Holistic Approach to Evaluating Your Electrical System

The engineers at Expanse Engineering have performed more than 9,000 power system studies to date. We take a holistic approach to evaluating your electrical system. This includes:

SHORT CIRCUIT STUDIES

NEC requires that equipment is rated higher than what's available at each location. Our engineers determine the magnitude of the currents that flow during an electrical fault and compare these calculated values to the equipment ratings to ensure equipment operates without risk.

PROTECTIVE DEVICE COORDINATION STUDIES

Proper coordination ensures that breakers and fuses trip when they are supposed to in the event of an incident. It confirms the downstream breakers trip first to prevent upstream breakers from being involved, thus minimizing any power outage.

ARC FLASH ANALYSIS

It all starts with the power entering your facility. Our team collects utility information and details about your existing equipment and performs an ARC Flash calculation. Our team are experts in the use of the SKM Systems Analysis Program "PowerTools for Windows" (PTW) and Operational Technologies "ETAP" program. We enter the collected data into our client's preferred calculation software (either PTW or ETAP).

Once complete, we:

- Document the findings and create one-line drawings
- Determine specifics of unsafe work locations
- Eliminate hazards through system changes or operational procedures
- Establish safe work practice procedures
- Apply hazard labels describing required PPE and boundaries for equipment use



Why Expanse?

- 24/7 Emergency Response
- 70+ Years of Experience
- Turnkey Services & Solutions
- In-House Engineering Department
- Experienced Craftsmen
- Local Expertise on National Scale
- Customer Support Across Geographical & Operational Spectrums

EXPANSE
~ ELECTRICAL CO. ~

NEW MEXICO

Carlsbad

NORTH DAKOTA

Williston

OKLAHOMA

Oklahoma City • Tulsa

TEXAS

Andrews • Big Spring • Houston
Midland • Odessa • San Angelo

FOR MORE INFORMATION

832.399.0054

(Press 1, then press 8 to reach Engineering)