

## Electrical Safety: Quick Reference Guidelines

**Note:**

This document is intended to serve as a quick reference guide, and NOT intended to serve as a work plan, JHA, Site-Specific Safety & Health Plan or any other document. The following guideline is a vital tool to help Alston Supervisors, Subcontractors and workers assess, monitor and inspect the jobsite conditions for potential electrical safety hazards. Refer to Alston’s SSSHP and Exhibit E- Subcontractor Safety Requirements for detailed information.

The items below are general guidelines. Guidelines may change depending on the scope of work and/or current jobsite conditions.

### **Underground Utilities**

- Utility Locate (Ex: USA Dig Alert, 811) has been contacted and marked all underground utilities prior to starting underground work.
- Outside of the public right-of-way, a 3<sup>rd</sup> party locate service is strongly recommended to locate utilities on private property.
- Markings from 811 and/or 3<sup>rd</sup> party locate service have been maintained and current for duration of work.
- Time/Date stamped photos used to memorialize locations of existing and new utilities prior to excavation operations.
- Subcontractor used pot-holing/water-jet/vacuum-truck to physically locate utility and “soft-digging” within 2’ of known utility location.

### **Overhead Utilities**

- Voltage known and verified through local power company.
- Minimum clearance maintained while operating equipment and cranes in vicinity of lines.

Voltage (nominal, kV, alternating current)	Minimum Clearance Distance (feet)
Up to 50	10
Over 50 to 200	15
Over 200 to 350	20
Over 350 to 500	25
Over 500 to 750	35
Over 750 to 1000	45
Over 1000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

- Signage in place to warn equipment operators of overhead lines.
- Spotters used when operating close to allowable minimum clearances from overhead lines.

### **Power Tools and Cords**

- Inspected by user before each use.

- Cords not “daisy chained”
- Cords must be rated for hard/extra hard usage. No household cords allowed.
- Damaged or defective tools and cords removed from service immediately.
- Repairs to cords and power tools shall only be performed by a qualified person.
- Proper protection of cords: Avoid pinch-points, sharps (tracks), walkways that can create a trip hazard, wet conditions, and equipment paths.
- Cords protected from vehicles and mobile equipment.

### **Ground Fault Circuit Interrupters (GFCIs)**

- GFCI inspection conducted regularly by qualified person and inspection documented.
- GFCI Protection (Temp Power): GFCIs must be built in to temp power source or external GFCI is required. (including portable generators and light plants)
- GFCI Protection (Permanent Power): if receptacle is not a GFCI receptacle, external GFCI is used.
- If portable/external GFCIs (ex: pigtailed) are used, the GFCI device must be installed at the power source, not at the tool.
- Subcontractors may use Assured Grounding Program in addition to GFCIs.

### **Energized Panels**

- Panels have dead-fronts installed, panels de-energized and LOTO before dead-fronts removed.
- Panels have door with locking mechanism installed to prevent unauthorized access.
- All breakers in panels are properly labeled, blanks installed.
- Electrical room doors are capable of being locked. Doors are closed and locked when not occupied by qualified electrician.
- Signage installed on electrical room doors.

### **Lock-Out/Tag-Out (LOTO) Program**

- Energized work is not permitted.
- Ensure all stored energy has been released prior to starting LO/TO work.
- All employees involved in Lock-Out/Tag-Out have been trained on proper procedures.
- Lock and Tag w/ contact information are present for each individual working on de-energized circuit.

### **Illumination**

- Temporary light strands must be UL approved with shatterproof bulbs or bulb covers.
  - o Light strands secured/hung with non-conductive materials
- Light plants installed prior to start of night-time concrete pours. Work area and clean-out area well lit.
- Task lighting installed by responsible subcontractor.
- Illumination Requirements
  - o 5 Foot-candles: general construction area
  - o 3 Foot-candles: general construction area, concrete placement, access/egress paths.
  - o 10 Foot-candles: mechanical and electrical rooms.