Electrical Safety Overview and Governing Agencies

Overview

Safety is the most important aspect of any job performed on or around electrical equipment. Everyone must know the electrical hazards associated with the job and how to protect themselves from these hazards. Every year, there are thousands of electrical shock related accidents within the United States. Most of the accidents are the result of inadequate training/knowledge, complacency and/or a neglect of safety procedures. Connect/One has prepared specific guidelines to ensure your safety within close proximity to energized sources.

Connect/One Safety Responsibility for Field Service Operations:

- Must attend all safety training classes.
- Must follow safety procedure at all times.
- Must use all proper safety equipment and Personal Protective Equipment (PPE).
- Must immediately report any and all safety violations, unsafe conditions and/or accidents to their respective supervisors.
- Must conduct required inspections (e.g. Vehicle and Equipment Safety Inspection).
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Governing Agencies

This section discusses the Occupational Safety and Health Administration (OSHA), the National Electrical Code (NEC), and the National Electrical Safety Code (NESC) roles in establishing safety regulation. Connect/One's safety policies are based on OSHA regulation and may be stricter than OSHA regulation. Following all Connect/One's safety policies ensures compliance with the governing authorities' regulations.

Occupational Safety and Health Administration (OSHA)

The Occupational Safety and Health Administration (OSHA) is the authority governing all occupational safety regulations. OSHA uses the Occupation Safety and Health Act to establish regulations pertinent to occupational safety. OSHA regulations are enforceable as federal laws. Any employer found in violation of any OSHA regulation could be subject to severe penalties including fines, imprisonment, or both. OSHA regulations related to telecommunication work, including CATV installers, are found in OSHA standard 1910.268. Other OSHA regulations pertaining to your work are located in the General Industrial Safety Orders.

While Connect/One can establish policies, provide equipment, conduct safety training, and check to see that safe practices are being followed at the job sites; it is your responsibility to ensure that safety is your first priority in the field. Failure to follow company safety policies could result in injury or equipment damage. Your failure to comply with these requirements could lead to termination of your employment.

National Electrical Code (NEC)

Given the potentially dangerous environment created by electricity and electrical work, several national agencies have developed regulations, codes and standards. The National Electrical Code (NEC) is a list of safety regulations and procedures for the installation of electrical wiring and equipment in the United States. It was created for the "practical safeguarding of persons and property from hazards arising from the use of electricity."

The NEC is not actually a law, but a code of practice. In order for the code to be legally enforced, the state, county and/or community must first adopt the NEC.

National Electric Safety Code (NESC)

The National Electrical Safety Code (NESC) is issued by the Institute of Electronic and Electrical Engineers (IEEE). The NESC lists safety regulations and procedures for the "practical safeguarding of persons from hazards arising from the installation, operation and maintenance of electric supply and communications cables and their associated equipment located throughout the cable plant." In other words, the NESC covers the entire cable system up to the tap port. The NESC does not cover the coaxial cable or materials in the customer's house drop and as with the NEC, the NESC must be adopted by the state, county and/or local community in order for the codes to be enforced.

Definitions

Electricity	The flow of electrons through a conductor.
Voltage	Also known as electrical pressure (potential). It is the difference of electrical potential measured in Volts.
Current	The measurement of how much electricity passes a point on a wire in a time frame. Current is measured in Amperes.
Resistance	The opposition to current flow in a direct current (DC) circuit. DC circuit is measured in Ohms.
Impedance	The total opposition a circuit offers to the flow of alternating current. (AC)
Bond	The permanent joining of metallic parts to form an electrically conductive.
Ground	A connection to earth or conductor serving as earth potential. Ground is the point of reference in an electrical circuit considered to be at nominal zero potential when other potentials within the circuit are compared to it.
Neutral Wire	The Electrical return path for current to travel back to the source in a power transmission system.