The National Electrical Safety Code® (NESC®)

RULES TO LIVE BY

The NESC can be found everywhere in everyday life. Designed for the practical safeguarding of people and utility facilities during the installation, operation and maintenance of electric supply and communications facilities – it is the consensus standard under procedures approved by the American National Standards Institute (ANSI).

Grounding Methods for Electric Supply and Communications Facilities

Rule 996C: Multi-Grounded Systems
The neutral shall be connected to an electrode at each transformer location and at additional points along the line. Multiple grounding increases the likeliness of a fuse turning off the circuit if an unplanned event causes a line to fail.

Rule 997C: Bonding of Electrodes
Connecting separate communications and supply system grounds serving a home helps limit voltage differences within communication equipment served by both systems if a voltage surge (such as lightning) enters such equipment through either system.

Installation and Maintenance of Electric Supply Stations and Equipment

Rule 116A1: Safety Signs
For fenced or walled electric supply stations without trees, a safety sign shall be displayed on each exterior side and at each entrance.

Installation and Maintenance of Overhead Electric Supply

Rule 210B: Vegetation Management
Line crossings, railroad crossings, and limited access highway crossings should be kept free from overhanging or decayed trees or limbs.

Rule 355B: Combined Ice and Wind District Loading
Four general degrees of district loading due to weather conditions are recognized as heavy, medium, light, and warm island loading.

Rule 356C: Climbing Spaces
Ladders or steps on racks or cables on messenger are not used. Protective devices are placed on the ladder space if workers can climb past them.

Installation and Maintenance of Underground Lines

Rule 326A1: Location
Conduit systems should be subject to the least disturbance practical. Parallel systems should not be located directly over or under subsurface structures.

Rule 332A1: Manholes, Handholes, and Vaults
These types of structures (manholes, handholes, and vaults) shall be designed to sustain all expected loads that may be imposed upon the structure.

Rule 351B: Direct-Buried Cable
If burying is required through areas with natural hazards, cables shall be constructed and installed as to protect them from damage.

Operation of Electric Supply and Communications Lines and Equipment

Rule 401A1: Work on Energized Lines and Equipment
Employees working on energized lines should be isolated from energized parts, and from ground and grounded structures.

Rule 410A3: Supply and Communications Systems
Employers shall provide training to all employees who work on or in the vicinity of exposed energized lines and parts.

Rule 411B: Protective Methods and Devices
Protective devices designed to enable employees to meet work requirements, and first aid equipment, shall be made readily accessible.

To learn more about the NESC, go to standards.ieee.org/about/nesc/