

How to ground the temporary power distribution box during construction



Article Overview

A temporary power distribution box must be grounded using an approved grounding electrode, properly bonded to the equipment grounding conductor, and comply with NEC Article 250 and OSHA safety standards.

Key Steps for Grounding

1. Identify the Power Source: Determine whether the temporary power comes from a utility service, portable generator, or building service. If a generator is used as the sole source, it is considered a separately derived system and requires grounding per NEC 250.30 .
2. Install a Grounding Electrode: Drive a ground rod (or use an approved grounding electrode system) into the earth near the distribution box. The rod should be made of copper or copper-clad steel and meet NEC 250.52(A) specifications .
3. Connect the Equipment Grounding Conductor (EGC): Run a grounding electrode conductor from the distribution box to the ground rod. All metal parts of the box, including enclosures and panel frames, must be bonded to this conductor to ensure a continuous path to earth .
4. Bond Neutral and Ground if Required: For a separately derived system, the neutral conductor must be bonded to the grounding electrode at the source (generator or transformer) to establish a reference to earth. If the distribution box is fed from a building service without a neutral switch, follow the existing bonding configuration .
5. Use GFCI Protection: All 120V, 15A, and 20A receptacles on the temporary distribution box must be GFCI-protected to prevent shock hazards, especially in damp or wet conditions .
6. Inspect and Test: Before energizing, perform a visual inspection of all connections and test the grounding sy...

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