

IMPORTANT NOTICE

Use of Foundation Rebar for Grounding Electrode Connections

The 2015 edition of the Uniform Statewide Building Code (USBC) and referenced codes became effective September 4, 2018 and became mandatory on September 4, 2019.

As part of the code change, the 2014 National Electrical Code was adopted and included an update to Article 250.68 (C)(3). This article allows an extension of the foundation rebar to be bent up to an accessible location and be used as a connection point for grounding purposes. This is an option that can be used in lieu of using two exterior grounding rods as required by Article 250.52(A).

To apply this option, the following requirements must be met:

- 1) The building construction foundation plans must specify the location of the connection point for grounding purposes.
 - ❖ For pre-approved model plans, an updated foundation sheet must be submitted noting the location of the connection point.
- 2) An electrical permit must be obtained prior to the placement of the concrete for the foundation
 - ❖ This requires the electrical permit to be obtained much sooner than normally required and it should include all electrical work on the structure.
- 3) The electrical bonding inspection of the rebar will be inspected under the "bonding" inspection of the electrical permit by a City electrical inspector, prior to the placement of the concrete for the foundation.

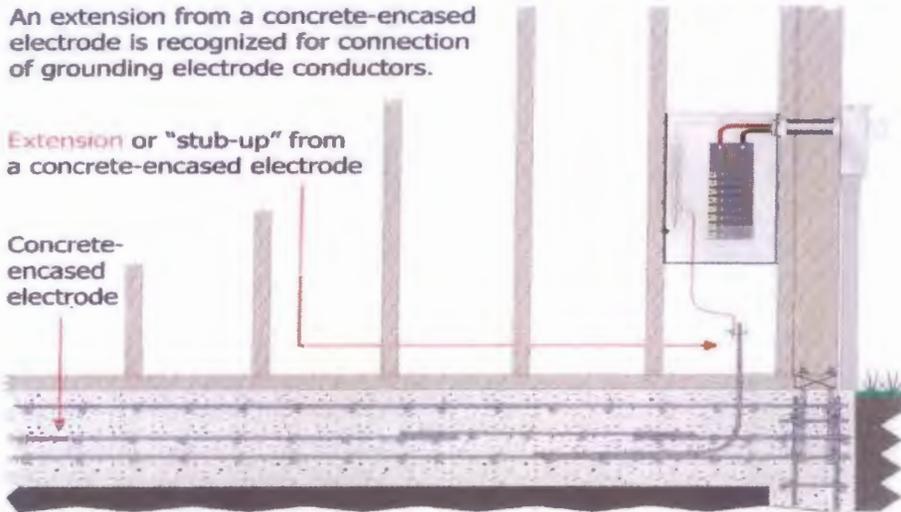
- 4) The grounding electrode (rebar) must meet the following criteria:
 - a. The grounding electrode shall be $\frac{1}{2}$ inch diameter or greater.
 - b. The grounding electrode shall be at least 20 feet in length.
 - c. The grounding electrode shall be encased in a minimum of 2 inches of concrete.
 - d. The grounding electrode connection shall be in an accessible location, interior of the structure and extended up above grade.
 - e. The footing with the grounding electrode shall be in direct contact with the earth.
 - f. At no point can the turned up rebar be in contact with the earth.
 - g. If the rebar is located in a wall that will be covered, an access panel to the connection must be provided if the connection is not exothermic or irreversible (Accessibility to grounding electrode connections provides the ability to verify the integrity of the connections).
 - h. The minimum bare copper conductor connected to a rebar that is bent up out of the footing shall be no smaller than four (4) AWG.
 - i. This grounding method is in addition to all other electrodes within the building being bonded together to form the grounding electrode system.

- 5) If any of the above noted requirements or criteria are not met, the turned up rebar will not be allowed to act as a grounding electrode connection and shall require the installation of the two exterior grounding rods as required by current code.

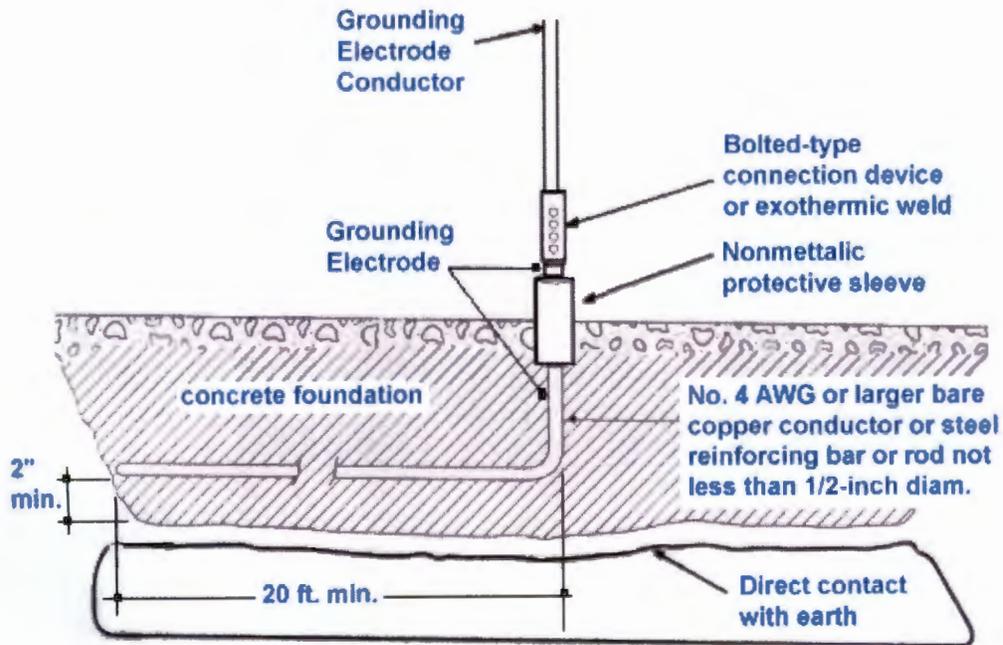
See the following diagrams as examples of the above noted information:

250.68(C)(3) Concrete-Encased Electrode Extension

An extension from a concrete-encased electrode is recognized for connection of grounding electrode conductors.



The "stubbed-up" rebar adds to or takes away nothing from the structural component that qualifies as a concrete-encased electrode.



A concrete-encased electrode.