

National Electrical Safety Code Committee, Accredited Standards Committee C2

National Electrical Safety Code®

Interpretation

Section 35. Direct-Buried Cable

Rule 350F, General (7 January 2002) IR525 of the 2002 Edition of the NESC

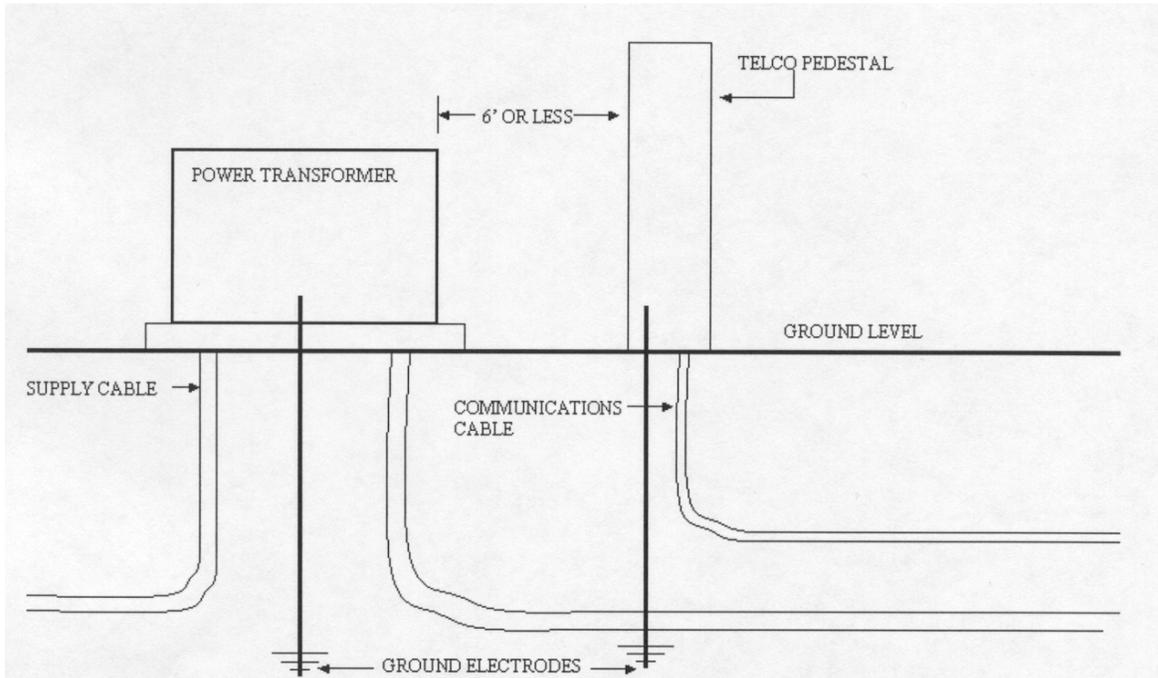
I am requesting an interpretation on the applicability of Rule 350F in relation to the bonding between above ground metallic apparatus of supply and communications entities.

We have been interpreting Rule 350F in a manner that requires bonding between our communications metallic apparatus (such as pedestals) to the power company transformers whenever there is a separation of 1.8 m (6 ft) or less between them.

We have received information from one of the local power companies in this area indicating that they have an interpretation of Rule 350F that is different from ours. The power company representative stated that the common bonding is not required since their transformers are fed by cables inside a duct and are not “direct-buried” cables, which is the subject of Section 35. A direct-buried cable is typically placed in the earth without ducts.

We believe that Rule 350H was added to the 2002 NESC to clarify the applicability of this section and to include cables in ducts that are not part of a conduit system (underground).

Specifically, is a communications metallic apparatus (such as a pedestal) required to be bonded to a power company transformer if there is a separation of 1.8 m (6 ft) or less between them? Please see attached sketch.



If the Telco pedestal and power transformer are within 6 ft of each other, should the two metallic units be bonded?

Does it make any difference if the underground facilities going to either unit is in direct buried or in conduit?

Interpretation

The NESC Interpretations Subcommittee has considered the subject Interpretation Request and has developed a consensus report as follows:

“Rule 350F states that above ground power transformers and metallic communication equipment (such as pedestals) should be bonded if they are separated by 6 ft or less. Three factors need to be considered in applying this rule, as follows:

1. Rule 350F is a “should” rule, indicating a provision that is normally and generally practical for the specified conditions. Bonding is to be provided unless local conditions not specified in the rule make bonding impractical. In such a case, other appropriate measures shall be taken. See Rule 015B.
2. Rule 350F applies to *direct*-buried cable. See Rule 350A.
3. Rule 350F also applies to direct-buried cable installed in a duct that is not part of a conduit system. See Rule 350H. You are correct; Rule 350H was added to the 2002 Edition to clarify that such installations are to be treated as direct-buried cable under Section 35. See definitions for “duct” and “conduit system” in Section 2. See also Section 32, NOTES 1 and 2.

Consequently, the power transformer and telephone pedestal shown in your diagram should be bonded if the cables are direct-buried or in duct that is not part of a conduit system.”