

## Warning Ribbon Requirements for Service Conductors

Section 300.5(D)(3) of the National Electrical Code (NEC) requires a warning ribbon to identify the location of underground service conductors. Underground service conductors that are not encased in concrete and that are buried 18 inches or more below grade are required to have their location identified by a warning ribbon that is placed in the trench at least 12 inches above the underground installation.

The substantiation for this requirement is to provide a warning for persons making excavations in the vicinity of deep service installations where there often is no physical protection for the conductors and where there is no overcurrent protection on the supply end of the conductors. A warning ribbon is not required where underground service conductors are buried less than 18 inches deep and would usually be installed within a suitable raceway. It is recognized that for such installations the effectiveness of a warning ribbon would be minimized if the excavation would reach the electrical installation and the ribbon at the same time.

Section 300.5(D) is intended to apply only to 'underground service conductors' that are connected to the customer owned electrical equipment and wiring on the premises side of the 'service point'.

- It does not apply to utility-owned installations on the serving-utility side of the 'service point'.
- It does not apply to feeders and branch circuits as they are provided with overcurrent protection.

### In Summary

- Warning ribbons are required for underground service conductor installations on the premises side of the service point in accordance NEC Section 300.5(D) (3).
- Underground service conductors that are not encased in concrete and that are buried 18 inches or more below grade are required to have their location identified by a warning ribbon.
- This requirement applies to all approved wiring methods including raceways or direct buried cables.
- The warning ribbon is required to be located at least 12 inches above the electrical installation. The warning ribbon is required for all types of installation methods, including but not limited to, open trench, plowing, and directional boring methods.