# OPEN WIRE

# GROUNDING NONWORKING WIRE

## 1. GENERAL

**1.01** This section describes methods of grounding nonworking open wire and replaces Section 638-320-200 which is cancelled.

**1.02** Grounding nonworking wire will reduce the effects of electrical induction which may be imposed on the wire and will also reduce the effects of foreign voltages which may result from accidental contact with power conductors.

**1.03** Nonworking open wire is open wire that is not connected to other telephone plant and includes:

(a) Open wire that has become idle because of service disconnects or for other reasons.

(b) Newly constructed open wire that is not immediately connected for service. Section 623-102-010 provides information for grounding open wire during construction.

**1.04** The treatment of drop and block wire that is not in service is covered in Section 462-470-241.

## 2. PRECAUTIONS

**2.01** ***Insulating gloves shall be worn when making or breaking a ground connection to the vertical grounding conductor of a multigrounded neutral system.***

**2.02** If line wire is known or suspected to be in contact with electric power wires, do not perform any work on the line until the hazardous condition has been cleared by the power company.

**2.03** If the presence of nonworking ungrounded wire is discovered, ***test the wire and the proposed ground at the point of connection with the B Voltage Tester, as instructed in Section 620-105-010.*** If the indicator of the B Voltage Tester does not glow, make this ground connection, as outlined in Part 3. If the indicator glows, ***make a visual inspection from the ground*** of the entire length of the nonworking wire and report the hazardous condition to the supervisor at once.

**2.04** ***Insulating gloves shall be worn when removing the grounding connection of previously idle or newly constructed open wire that is to be connected for service.*** Test circuit as described in 2.03 after ground connection has been removed.

## 3. GROUNDING NONWORKING WIRE

**3.01** Nonworking open wire should be grounded in one of the following ways:

(a) ***At Terminal Poles:*** By connecting a length of C Bridle Wire between the nonworking wire and an effectively grounded cable suspension strand. (Fig. 1).

(b) ***At Protectors:*** By connecting a length of C Bridle Wire between the nonworking wire and the ground connection of a 118-type protector. Connect the C Bridle Wire to the vertical grounding conductor with an AT-7796X Connector (Fig. 2). Where the power company has installed an aluminum vertical grounding conductor, do not use an AT-7796X Connector because of the corrosive chemical reaction between copper and aluminum. Make the grounding connection to the aluminum vertical grounding conductor with a Blackburn PAC 3 or a Fargo GA610AC Connector.

(c) ***At Anchor Guys:*** By connecting a length of C Bridle Wire between the nonworking wire and a ***well-grounded*** anchor guy such as:

(1) Telephone anchor guys that are electrically connected to power company guys which are in turn electrically connected to a multigrounded neutral wire (Fig. 3).

(2) Telephone anchor guys that are electrically connected to a power company vertical ground wire which is in turn connected to a multigrounded neutral wire.

(3) Telephone anchor guys on the same anchor rod as power company guys which are connected to a multigrounded neutral wire.

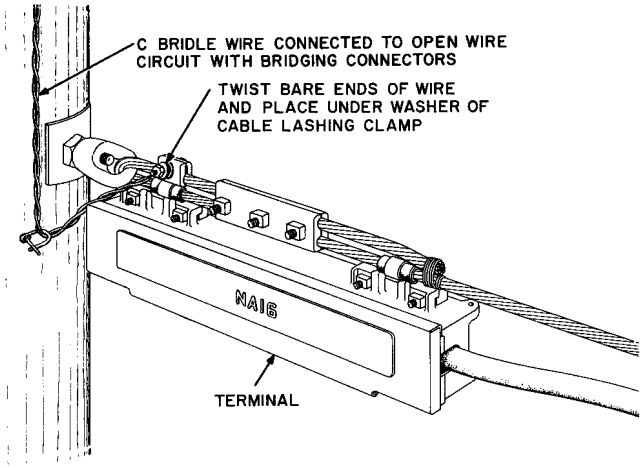


**Fig. 1—Method of Grounding Open Wire at Terminal Pole**

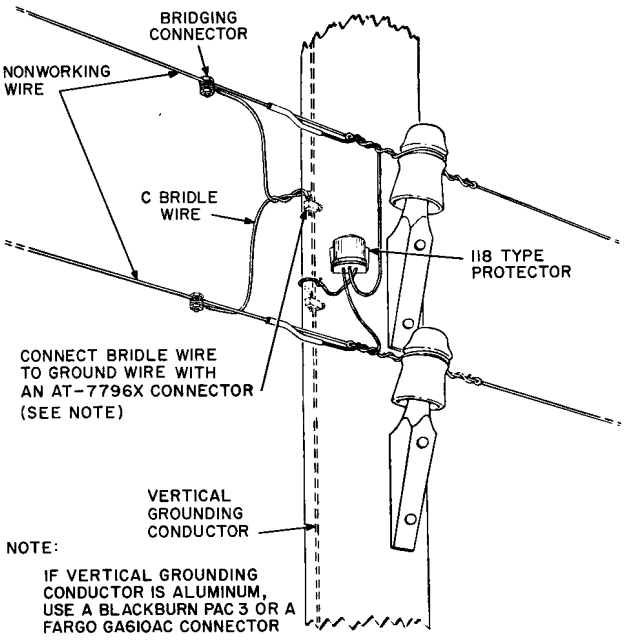


**Fig. 2—Method of Grounding Open Wire at Protector**

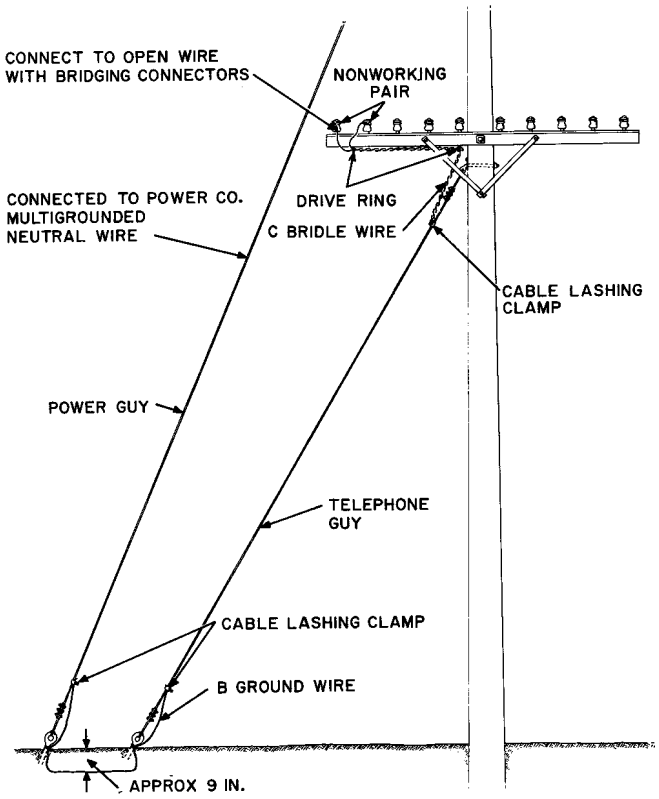


**Fig. 3—Method of Grounding Open Wire at Guy**

**3.02** If side lead foreign communication wires, such as connecting company, service company, privately owned, or other non-Bell System facilities, become nonworking because of service disconnects or for other reasons, such wire shall be disconnected from Bell System plant. This shall be done either by removing the span of wire between the Bell System lead and the first pole of the foreign line or by cutting a No. 00 strain insulator into each line wire at the first pole of the foreign line. This work should preferably be done by the party that operates the foreign line (Fig. 4).

**3.03** In the case of nonworking foreign communication wires carried on a Bell System pole line, arrangements should be made with the party owning the foreign wires to have their wires acceptably grounded or removed, unless they are effectively shielded from power contacts by upper wires.

**3.04** Bridging connectors should be used instead of bridging sleeves to facilitate removal when grounding is no longer necessary.

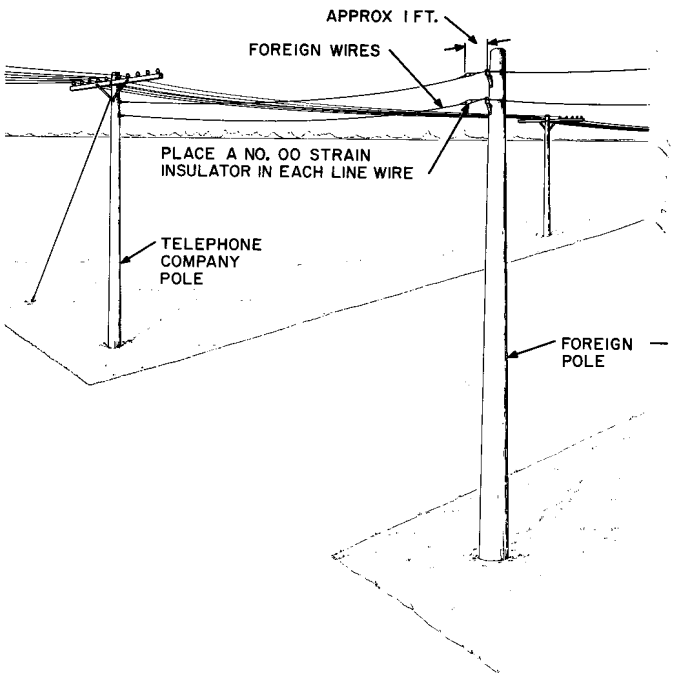


**Fig. 4—Method of Disconnecting Foreign Line**