

CLEARANCES ON JOINTLY USED POLES

1. GENERAL

1.001 This Addendum supplements Section 620-216-013.

1.002 This Addendum is being reissued to include the bonding and grounding of power company gang operated switch rods.

1.003 The power company switch rod is constituted to be a vertical run on the jointly used pole.

1.004 This Addendum is also being reissued to include the A. T. & T. Co. Addendum 620-216-013 Issue 2, April 1968 material concerning Part 4.

Part 13 in the A. T. & T. Co. Addendum will not be included in this Addendum because it is non-standard in the New England Company.

1.005 The A. T. & T. Co. Addendum Issue 2 to 620-216-013 is hereby cancelled.

The following changes apply to Part 1 of the Section.

(a) 1.05 - 1.07 - added

1.05 Questions may arise as to when it is necessary to bring telephone plant which was placed according to the 5th Edition of the National Electrical Safety Code into conformance with the clearances specified in Section 620-216-013 which is based on the 6th Edition. Whenever existing plant which was placed in conformance with the 5th Edition clearances (see 1.06) is detached from the pole it shall be reattached in conformance with the clearances specified in Section 620-216-013. If the existing plant is not to be detached from the pole it shall remain in position unless directed otherwise.

1.06 The following are 5th Edition requirements. Separations for Street Light Brackets. (If street light is effectively grounded these separations do not apply.)

(a) From open communication conductors on crossarms.

Span wire or bracket
above crossarm - 20 inches*

Span wire or bracket
below crossarm - 24 inches

(b) From communication cables - 12 inches

(c) From terminal box of communication cables if practicable - 12 inches**

(d) From communication brackets, bridle wire rings, or drive hooks - 2 inches

*This may be reduced to 12 inches for either span wires or metal parts of lamp brackets at points 40 inches or more from the pole.

**Where it is not practicable to obtain a clearance of 12 inches from terminal boxes of communication cables, all metal parts of terminals shall have the greatest practicable separation from fixtures or span wires, including all supporting screws and bolts of both attachments.

1.07 There may be times when the power company cannot relocate street light fixtures right away to provide 6th edition clearances (20") due to their work load and the telephone company must place its cable due to service commitments. In this sort of situation the telephone cable may be placed according to the 5th edition requirement (12") on the basis that the power company will provide the proper clearance when their work load permits. The telephone work order shall state that negotiations are in progress with the power company to provide proper clearances.

2. STREETLIGHT FIXTURES AND THEIR ASSOCIATED WIRING

2.04 (Add after the last sentence) Telephone plant (cable, multiple line wire, terminals or through bolts) may be located not less than 4 inches above grounded streetlight fixtures having drip loops of grounded metal sheath cable. Telephone plant shall be at least 20 inches above such streetlight fixtures which are not grounded.

4. OPEN POWER WIRES, CROSSARMS, BACKS, ETC.

The following changes apply to Part 4 of the Section.

(a) 4.03 - Added note
(b) 4.03 - (c) through (h) - added
(c) 4.03 - Fig. 9.1 and 9.2 - added

4.03 Added Note

Caution: Power companies occasionally attach the neutral ABOVE the phase wire as shown in Fig. 9.1. Therefore, it is important to identify the neutral wire before determining separation requirements. The neutral can usually be identified by observing the presence of the following:

4.03 (Cont'd)

- (c) The neutral is usually bonded to a vertical ground wire at least every 1300 ft and more often when transformers are present.
- (d) The neutral is normally bonded to power guys which do not contain insulators.
- (e) Neutrals are sometimes carried on smaller insulators than those carrying phase wires.
- (f) The neutral is sometimes carried on a much lighter colored insulator than the phase wires.

(g) On transformer poles, the bushing for the neutral is usually smaller than the bushing for the phase connection. The neutral bushing is often located near the secondary bushings (Fig. 9.2).

(h) Where secondaries are dead ended, if the phase wire is carried through, the neutral will also be carried through.

If, after considering these factors, sufficient identification of the neutral wire has not been made, consult your supervisor or the electric utility company. However, if the neutral is attached above the phase wire, provide the clearance specified under paragraph 4.03 (a).

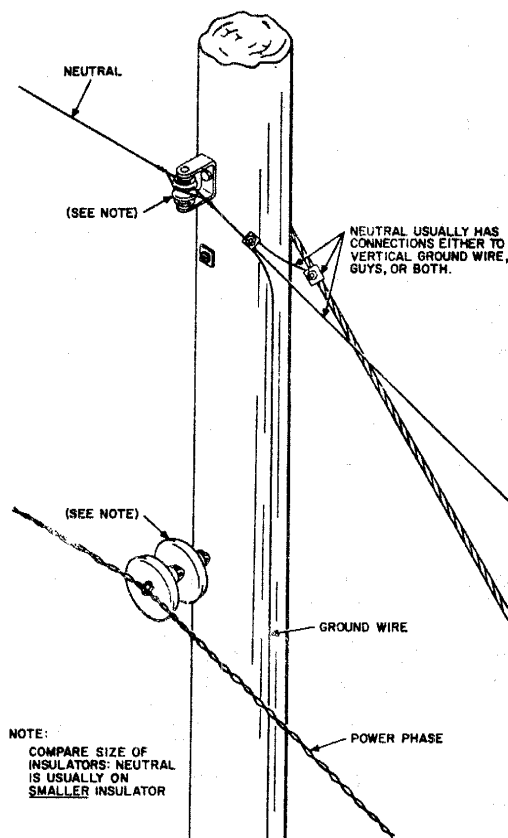
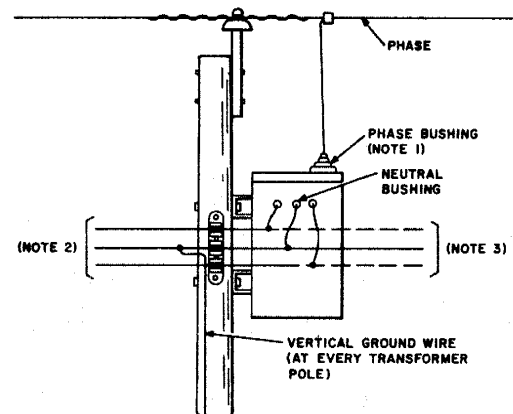


Fig. 9.1—Inverted Power Construction



- NOTES:
- 1. PHASE BUSHING USUALLY LARGER THAN NEUTRAL BUSHING.
 - 2. NEUTRAL CAN BE ANY ONE OF THESE. POSITION DEPENDS ON WIRING AT TRANSFORMER.
 - 3. NEUTRAL ALWAYS CARRIES THROUGH WHEN PHASE CARRIES THROUGH. SECONDARIES ARE DEADENDED IN SOME CASES.

Fig. 9.2—Identification of Neutral at Transformer Location

8. POWER VERTICAL RUNS (BONDING AND GROUNDING)

The following changes apply to Part 8 of the Section.

(a) 8.03 - 8.11 - Added

8.03 In order to operate pole top mounted switches some power companies install a long handle in the form of a rod, which may extend, in some cases, from the top of the pole to a point on the pole near the ground. The power system involved would be the multi-grounded common neutral type.

8.04 Some Power Companies install all metal rods and some employ those with insulating material through the communication space. The rod of current carrying material and passing through communication space is of concern to the Telephone Company.

8.05 The metal rod which passes through communication space must be grounded for telephone compatibility on the pole. Generally the Power Companies ground the rod if of current carrying material.

8.06 In some cases the top part of the switch rod is grounded to the common neutral wire and the bottom part of the switch rod to a ground rod. In other cases the switch rod is grounded to the power vertical ground wire which runs from the common neutral wire at the top of the pole to a ground rod at the groundline. It should be determined whether or not the switch rod is grounded.

8.07 At this location the grounding of each company's plant is made to separate grounds. In order to attain common potential it is telephone policy to arrange for a bond to be placed between the telephone strand and the Power Company vertical ground wire.

8.08 The connection to the power vertical ground wire or the power ground wire which is attached to a ground rod and comes up the pole as far as the lower end of the switch rod may be done by the telephone workman. He should first test the switch rod and the power ground wire with the B Voltage Tester and use the B Temporary Bond. Of course, permission to make the connection to the ground wire must first be obtained from the Power Company. The agreement for this permission should be established between the companies by the Outside Plant Engineers. See Plant Series Section 627-230-203 and Section 620-105-010.

8.09 The Power Company may want to make the connection to their ground wire. The telephone workman would then connect the #6 copper bond wire to the telephone strand and leave a coil of wire for the power company to make their connection.

8.10 The procedure for making these connections should be included in an inter-company operating practice established by the outside plant engineers.

8.11 A recommended program for the placement of bonds from telephone strand to the power company ground wire at the switch rod locations is:

(a) In conjunction with other types of work necessitating a visit to the location.

(b) Where no visit is anticipated a planned program should be established to complete the work over a reasonable period of time.