

CLIMBING SPACE ON JOINTLY USED POLES

1. GENERAL

1.01 This section deals with climbing space on poles jointly occupied with electric utilities. The requirements stated in this section are based upon the Sixth Edition of the National Electrical Safety Code. These requirements apply in all loading areas unless state rules, municipal requirements or local arrangements with other utilities call for greater values.

1.02 Provision of climbing space is required by the National Electrical Safety Code and is generally specified as one of the conditions for joint use with the electric utility. Lack of adequate climbing space may endanger or hinder workmen in the performance of their duties, and increases the likelihood of plant damage.

1.03 The dimensions of climbing space vary somewhat with the voltage of the power conductors. For *effectively grounded* power circuits, *voltage always means voltage to ground*. In the case of three phase power systems, voltage to ground is 58% of the voltage between conductors. For power circuits which are *not effectively grounded*, voltage must be taken as the full voltage between conductors.

1.04 If climbing space is obstructed by attachments of community TV, municipal fire alarm, police call, traffic control facilities, etc., report the matter to your supervisor. Do not try to rearrange foreign attachments.

2. DEFINITION AND EXPLANATION

2.01 Climbing space is an unobstructed vertical space along the side of a pole. In general, it consists of an imaginary box at least 30 inches on each side and extending at least 40 inches above the highest telephone cable, wire, crossarm, etc., and 40 inches below the lowest telephone cable, wire, crossarm, etc. See Fig. 1.

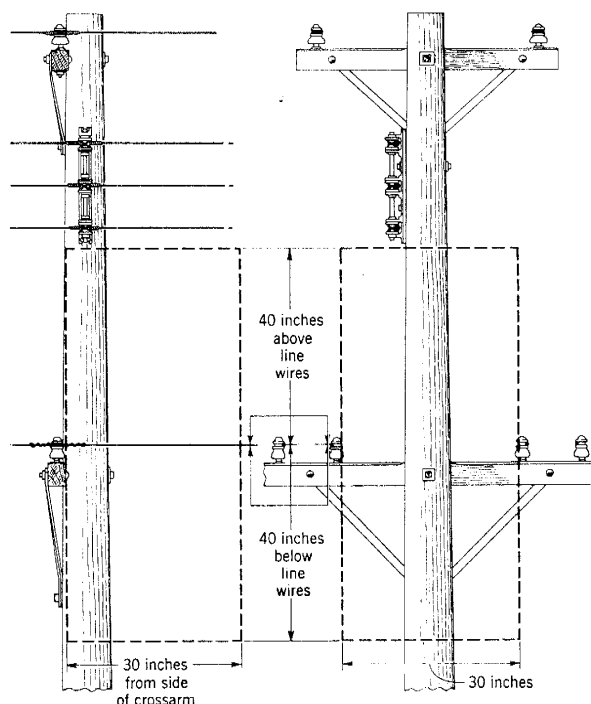


Fig. 1

2.02 Climbing space serves not only to permit workmen to climb poles, but also serves to permit raising and lowering of the electric utility's equipment and material through telephone attachments. Because of this, it is generally preferable to maintain climbing space on the same side or quadrant of the pole all the way from the groundline up to a point 40 inches above the highest telephone attachment. This will minimize the chances that material raising operations of the electric utility may damage telephone plant or interrupt telephone service.

2.03 As the definition points out, climbing space is to be provided along one side of the pole. NESC rules provide further that part of the pole itself may be included in the climbing space without being considered an obstruction. However,

this should be kept to a minimum in order to leave as much room as possible for raising and lowering of the electric utility's equipment and material.

2.04 Vertical runs securely fastened to the surface of the pole and covered with molding or in conduit are not considered to obstruct climbing space under NESC rules. Unprotected vertical runs fastened to the surface of the pole or made on pins and insulators **are** considered as obstructions and should **not** be included in the climbing space. Where practical, climbing space should be located so as to avoid **all** vertical runs. Pole steps should be located so as to be outside of climbing space.

3. REQUIREMENTS AND METHODS OF PROVIDING CLIMBING SPACE

3.01 Full climbing space, as defined in 2.01, shall be provided and maintained on all joint poles carrying power conductors of over 750 volts. **Do not obstruct climbing space with drop wires.** Examples of how climbing space is obtained when drop wires are distributed directly from the pole are shown in Fig. 2. Drive-hooks should not be placed on the climbing side of the pole.

3.02 Where climbing space cannot be obtained because of drop wire attachments, if longitudinal cable is present, place span clamps on the strand and distribute from it. If longitudinal cable is not present and climbing space cannot be otherwise obtained, place a guard arm and distribute from it. See Fig. 3.

3.03 Full climbing space must be provided **past** longitudinal runs of cable, multiple line wire, drop wire, etc. Cable or multiple line wire, for example, may abut one or two **sides** of the 30-inch square, but may not run through the climbing space. Hence when telephone cable is **less** than 40 inches above or below telephone open wire on a joint pole, it will usually be necessary to shift pins, etc., to provide climbing space. See Fig. 4.

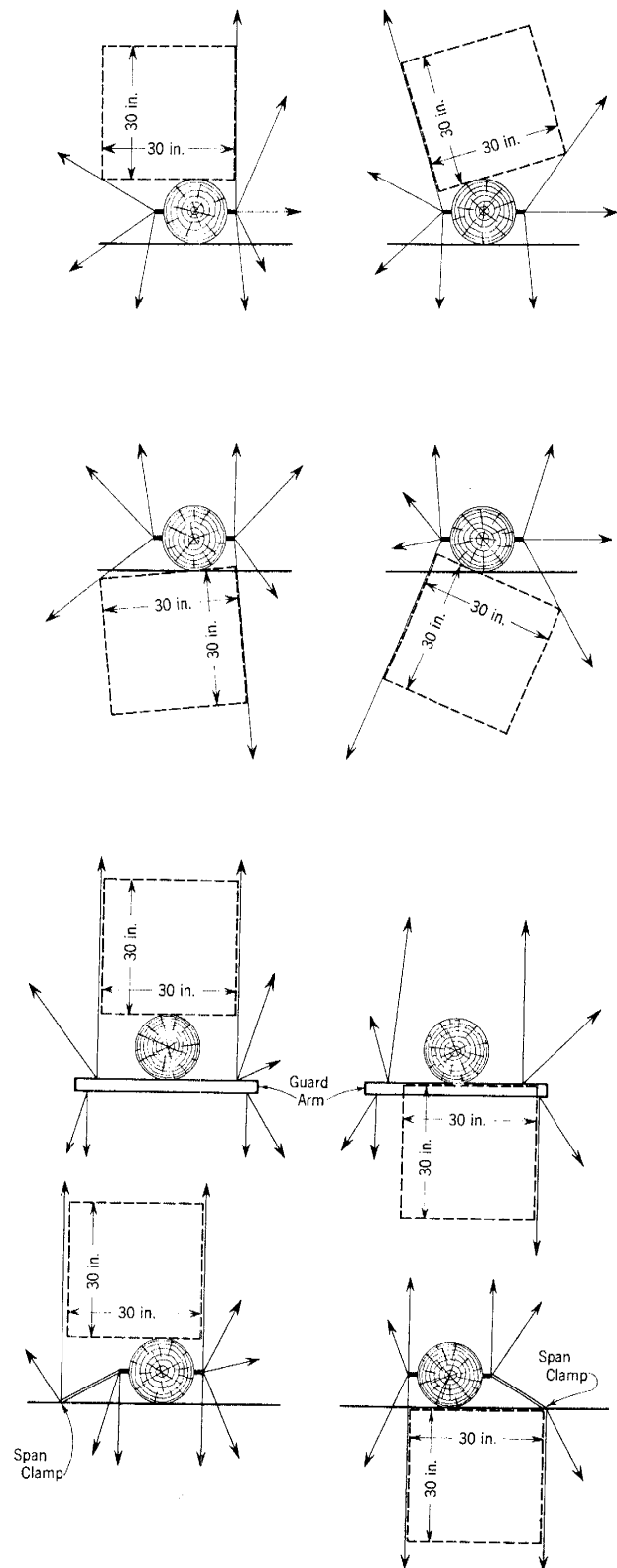


Fig. 3

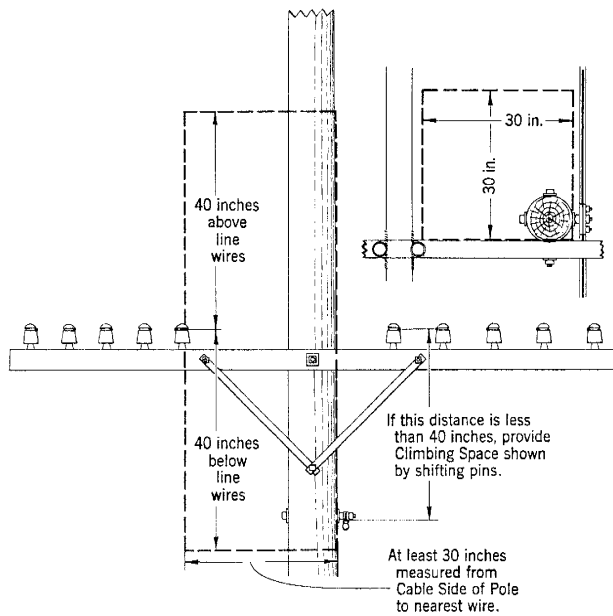


Fig. 4

3.04 Open wire may be placed on wooden pole brackets attached to one side of the pole if the electric utility has no objection. Where wooden pole brackets are installed so there will be less than 40 inches between the wire on the crossarm and the wire on the brackets, respace the pins to provide 30 inches climbing space. See 3.03.

3.05 On joint poles carrying only longitudinal power secondary conductors of 300 volts or less, the horizontal dimensions of climbing space may be reduced to 24 x 24 inches instead of the usual 30 x 30 inches. There is no reduction in the vertical requirement of 40 inches above and below telephone attachments, however.

3.06 On joint poles carrying only longitudinal power conductors of 750 volts or less and used to supply airport or airway marker lights, the width of climbing space *across* the line may be reduced to 16 inches. The width of climbing space *along* the line must be maintained at 30 inches, however. See Fig. 5.

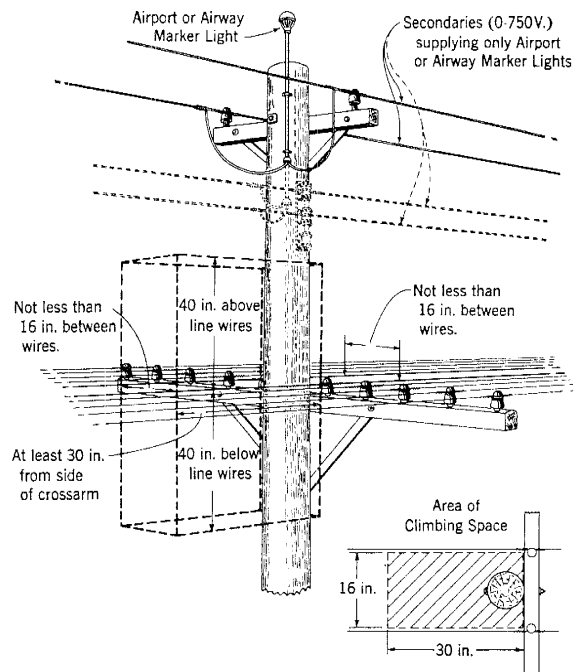


Fig. 5

3.07 On *common crossing poles* carrying only secondary conductors of 750 volts or less, the width of climbing space may also be reduced to 16 inches across the line. The width of climbing space along the line must be maintained at 30 inches. This applies without regard to whether the electric attachment is made by means of a pole top extension or is made directly to the pole. See Fig. 6.

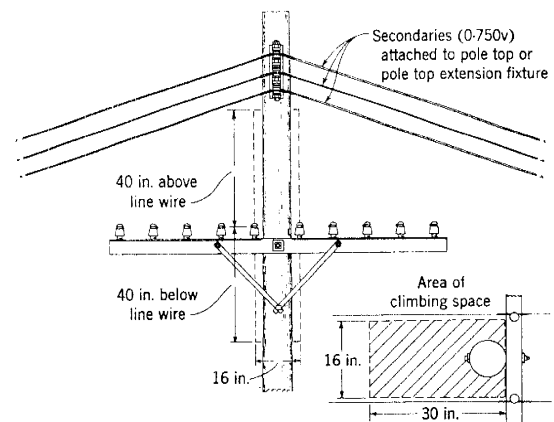


Fig. 6