

SELF-SUPPORTING CABLE

PLACING METHODS

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1. GENERAL

- 1.01 This section covers various methods of placing self-supporting cable on pole lines.
- 1.02 This section has been revised to omit references to Strandlink and Reducer Strandlinks. Table A has been revised to include cable weights as an aid in determining the maximum sag to which self-supporting cable can be tensioned when using the aerial lift placing method.
- 1.03 Self-supporting cable can be placed from a stationary reel or from a moving reel.
- 1.04 The clearances required for self-supporting cable are shown in Subdivision 627-070 of the Plant Series Practices.
- 1.05 Maximum span lengths and the proper sag for self-supporting cable may be found in Section 627-700-011.

1.06 The cable weights to be used for determining the sag of self-supporting cables are shown in Section 626-200-130.

1.07 The tools and hardware required for placing self-supporting cable are described in Section 627-700-014.

1.08 The use of E Cable Blocks and the associated frames is described in Section 081-410-108.

1.09 Bonding and grounding requirements and methods for self-supporting cables are shown in Section 627-700-014.

2. PRECAUTIONS

2.01 Workmen placing self-supporting cable should follow precautions listed in Division 620 of the Plant Series Practices which pertain to the guarding of work areas and working aloft.

2.02 When required, use warning signs and traffic warning cones to clearly define the work area and to safely channel the traffic.

2.03 When placing self-supporting cable on joint-use pole lines or pole lines involving power crossings, observe the precautions outlined in Section 624-200-011.

2.04 On joint-use pole lines, the strand should be connected to a low impedance ground before starting cable placing operations.

2.05 On streets or highways, place the cable with the motor vehicle *moving in the direction of traffic*.

2.06 Before starting cable placing operations, survey the proposed cable run to ensure that there are no obstructions which would interfere with placing the cable. Where trees or tree limbs cannot be avoided, they should be trimmed. Where it is impractical to trim, or where permission to trim cannot be obtained, and the obstruction can be cleared by use of a cable extension arm, install

the arm *before* placing the cable.

2.07 Before starting cable placing operations, inspect the cable reel carefully, particularly the inside edge of the reel flanges. Check for protruding edges or other obstructions that would damage the sheath, or interfere with turning the reel or unwinding the cable properly.

2.08 When the cable is pulled-in from a stationary reel or payed-out on the ground, do not drag it over obstructions in the span or on the ground which may cause damage to the sheath.

2.09 Do not allow vehicular traffic to pass over the cable during placing operations. The cable should be suspended temporarily above roads, driveways, etc. Cable blocks placed on a slack span of suspension strand or rope may be used to temporarily suspend the cable.

2.10 *Do not use a metallic pulling line* when placing self-supporting cable on joint-use pole lines or on lines where power crossings are involved.

2.11 When pulling up and tensioning self-supporting cable, observe the same precautions as outlined in Section 627-240-211, for pulling up and tensioning suspension strand.

2.12 Before cutting the strand at a dead-end location, apply three turns of vinyl tape around the strand and cable to prevent the weight of the unsupported cable from tearing the web.

2.13 Permanent or temporary guys must be used at any location where self-supporting cable is tensioned *to avoid placing any unbalanced load on the pole.*

2.14 *Use only a B Strand Puller when tensioning or temporarily holding fully tensioned self-supporting cable.*

2.15 *Self-supporting cable must be tested in the same manner as suspension strand before work is performed aloft on a ladder or splicing platform.* Testing methods are outlined in Section 627-295-500.

2.16 Do not use a ladder or splicing platform on self-supporting cable that is held by strand pullers. The strand must be permanently dead ended before a workman can be safely supported

by this cable.

2.17 When aerial lift equipment is used for placing self-supporting cable, all the precautions outlined in Section 627-320-011 must be observed as well as local instructions covering the equipment being used. The 649 Division of the Plant Series Practices covers the operation of approved aerial lifts.

3. GUYING

3.01 The strand of self-supporting cable should be considered as a 6M suspension strand when determining the size of guys. See the 621 Division of Plant Series Practices.

3.02 All guys must be placed *before* self-supporting cable is fully tensioned.

3.03 Where it is necessary to tension self-supporting cable at an intermediate pole in the lead, and suitable guying is not provided, place a temporary 6M strand or 3/4-inch manila rope guy. An example of temporary guying is shown in Fig. 1.

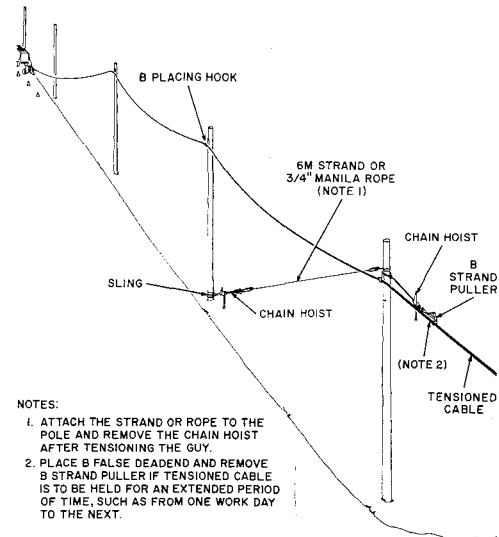


Fig. 1—Temporary Guying

3.04 Where grounding of guys is required, it will be necessary to ground the guys to the

strand using either a C or D Connector and B Ground Wire.

3.05 An occasional long span, which does not exceed the maximum span length, but exceeds by 50 percent the average length of the adjacent five spans in each direction, shall be guyed away from the long span and have false deadends placed at each end of the long span.

4. PLACING CABLE—MOVING REEL METHOD

4.01 The moving reel method of placing self-supporting cable is used where a cable reel can be moved along the side of the pole line on which the cable is to be placed and there are no obstructions which would prevent raising the cable into position. Jobs should be planned so this method can be used wherever possible.

4.02 If trees or other obstructions restrict the use of the moving reel method for a few sections relatively close to either end of the run, proceed as follows:

- (1) Position the reel and pull the cable beyond the obstruction using the stationary reel method.
- (2) Resume cable placing operations using the moving reel method.

MOUNTING THE REEL

4.03 Before mounting a cable reel on a cable reel trailer or lift truck, check the size, gauge, type, and length of cable with the information given in the detail plans.

4.04 Mount the cable reel on the cable reel trailer so the cable is payed-out from the top of the reel, as shown in Fig. 2.

TEMPORARY POLE ATTACHMENTS

4.05 Either the B Placing Hook or the B Wire Block may be used for temporarily supporting the cable at in-line poles and at corners not exceeding 3 feet of pull. See the 621 Division of Plant Series Practices for method of determining pull.

4.06 C Sheave Supports may be used for supporting the cable at corners with a pull of 25 feet or less. The sheave support may be used as a temporary roller with the cable subsequently transferred to a C Cable Clamp, or it may be left in place as a permanent attachment with no transfer work required.

4.07 If self-supporting cable is tensioned around corners exceeding 25 feet of pull, E Cable Blocks must be used with E or F Cable Block Frames, as required.

4.08 The B Wire Block may be attached to a crossarm, B Wire Bracket, or behind a C Cable Clamp attached vertically to a cable suspension bolt.

4.09 The B Placing Hook is installed as follows:

- (1) Drill a hole and install the cable suspension bolt with 3-1/2 inches of bolt extending beyond the pole.
- (2) Place a 3/4- by 2-1/4 inch square washer and nut to secure the bolt to the pole.

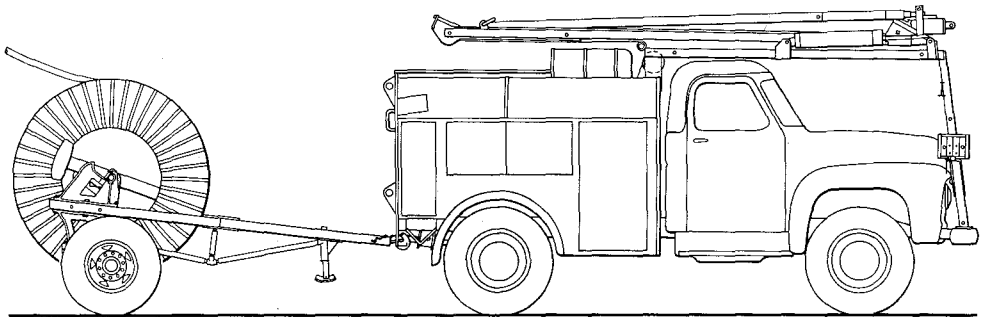


Fig. 2—Cable Reel on Cable Reel Trailer Coupled to Construction Truck

(3) Install the B Placing Hook on the cable suspension bolt so the hook is seated over the nut and washer at the pole and the slotted hole in the hook is seated on the bolt.

(4) Install and tighten the second nut with the **chamfered side toward the B Placing Hook**. A completed installation of the B Placing Hook is illustrated in Fig. 3.

4.10 The B Sheave Support or E Cable Block must be used at poles where there is an up-pull, as there is no keeper to retain the cable in the B Placing Hook, and the B Wire Block is not rigidly secured to the pole.

PLACING CABLE

4.11 Place all guys and extension fixtures before starting cable placing operations so delays in the **moving reel** placing operation will be kept to a minimum.

4.12 Pole attachments for the cable may be installed before or during placing operations as desired.

4.13 Leaving sufficient cable for splicing, permanently dead end the strand at the dead-end pole and ground, when on joint-use pole lines. Drive the truck slowly along the line beyond the next pole to which the cable is to be attached. Stop the truck when the cable reel has reached a distance of approximately 60 feet beyond the pole.

4.14 Turn the reel by hand to pay-out any additional slack required to facilitate raising the cable.

4.15 Raise the cable into place using a handline.

4.16 Repeat the procedure described in 4.13 through 4.15 on successive poles until reaching the dead-end pole or an intermediate pole at which the cable is to be tensioned.

4.17 Where it is necessary to clear streets, driveways, etc, pull sufficient slack from the cable and hold it with a B Strand Puller attached to the pole with a sling. Place temporary guys, if required. Do not remove the strand puller until the cable has been pulled to final sag at the dead-

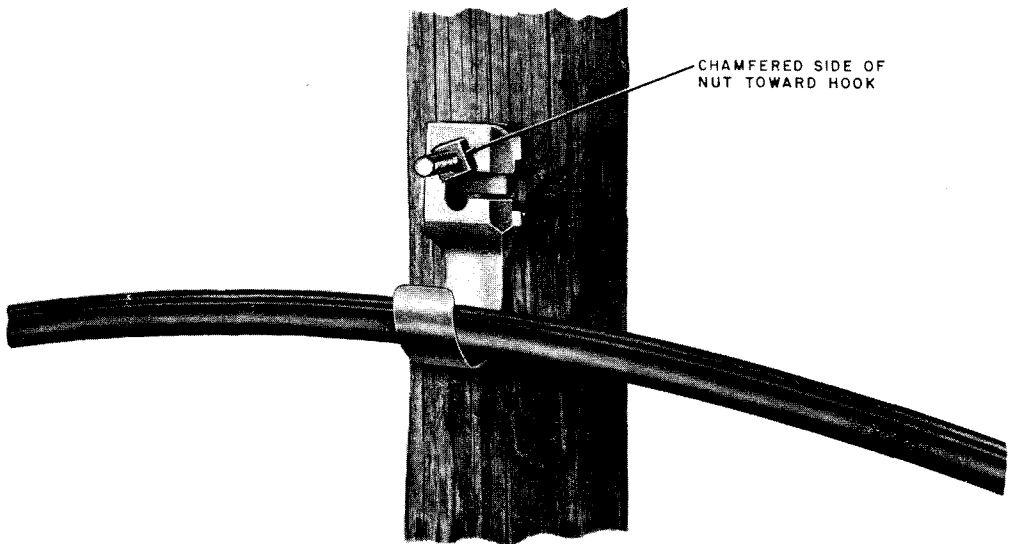


Fig. 3—B Placing Hook Installed

end or tensioning location.

4.18 When placing long sections of self-supporting cable, the excess slack should be removed as described in 4.17 at intervals of approximately 1000 feet. This will facilitate the final tensioning operation and reduce the amount of slack to be removed at the tensioning location.

AERIAL LIFT

4.19 Before operating the aerial lift, review the 649 Division of Plant Series Practices which covers the description and operation of approved aerial lifts. All safety precautions given in the applicable practice are to be observed. When using an aerial lift vehicle for placing self-supporting cable by the moving reel method, observe the safety precautions given in Part 2.

4.20 *The boom must not be stressed in excess of safe working loads. Only one person with his tools and the necessary equipment for performing the job is allowed in the basket at any time. Since the boom load imposed when placing cable is directly related to the tension of the cable, the cable tension needs to be known in order to operate the aerial lift within its boom load limitations. The maximum cable tension allowable, consistent with safe boom loads, is 600 pounds. Table A lists the amount of sag which will give a tension of 600 pounds for each span length*

and cable weight.

4.21 For any given span length and cable weight, tension *increases* as sag *decreases*. For example, with a cable weight of .420 lbs/ft, a span length of 150 ft, and 3 ft of sag, the tension is *less* than 600 lbs; with 2 ft of sag (Table A), the tension is 600 lbs; and at any sag less than 2 feet, the tension is *greater* than 600 lbs.

4.22 There are very few conditions in which the final stringing tensions of self-supporting cable will be 600 lbs or less (Section 627-700-011). The minimum sag at which self-supporting cable can be placed using an aerial lift boom can be determined by referring to Table A. The final stringing tension can then be obtained with a chain hoist or winch line fastened to the pole.

4.23 With the cable reel in place on the spindle bar, feed the end of the cable through the guide rollers on the truck and through the Roller Guide Assembly of the Fairlead. Dead end the strand at the dead-end pole and where required ground the strand. Adjust the brake tension on the spindle to maintain the necessary aboveground clearance taking care not to exceed cable tension given in Table A.

4.24 Move to the second pole. To reduce side loads keep the boom as near as possible in line with the direction of pull (Fig. 4). When the

TABLE A — SAGS WHICH GIVE TENSION OF 600 POUNDS

CABLE WEIGHT (LBS/FT)	SPAN LENGTH — FEET													
	100	125	150	175	200	225	250	275	300	325	350	375	400	425
	SAG — FEET													
Up to .270	1	1	2	2	3	3	4	5	5	6	7	8	9	11
.271 to .320	1	1	2	2	3	4	5	5	6	7	9	10	11	—
.321 to .370	1	2	2	3	3	4	5	6	7	9	10	11	—	—
.371 to .420	1	2	2	3	4	5	6	7	8	10	11	—	—	—
.421 to .520	1	2	3	4	5	6	7	9	10	—	—	—	—	—
.521 to .620	2	2	3	4	6	7	8	10	—	—	—	—	—	—
.621 to .720	2	3	4	5	6	8	10	—	—	—	—	—	—	—
.721 to .820	2	3	4	6	7	9	—	—	—	—	—	—	—	—
.821 to .920	2	3	5	6	8	10	—	—	—	—	—	—	—	—

pole is reached, stop the truck and swing the boom to the pole to make the attachment. Temporary pole attachments may be placed at this time or may have been placed prior to the cable placing operation as desired. In either case, use attachments as covered in 4.05 through 4.10.

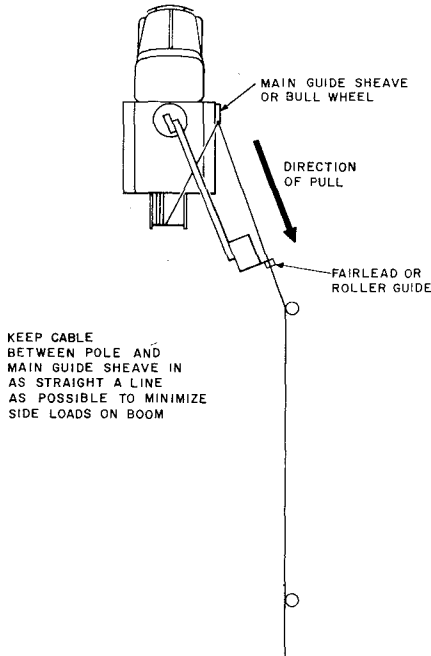


Fig. 4—Aligning Boom With Direction of Pull

Caution: In order to prevent an unbalanced load on a pole, do not attempt to place self-supporting cable at final tension or to tension the cable on a span-by-span basis.

4.25 Proceed to each successive pole following the same procedure. If it becomes necessary to pull slack out of the cable to clear driveways, streets, etc, use a winch, if available, or chain hoist and a B Strand Puller. Pull the cable only tight enough to provide safe aboveground clearances and hold with the B Strand Puller and a rope sling.

4.26 When the last pole is reached, tension the cable and dead end it as outlined in Parts 7 and 8 and transfer to permanent attachments where required, as outlined in Part 10.

5. PLACING CABLE—STATIONARY REEL METHOD

SELECTION OF POLE LINE HARDWARE AND CONSTRUCTION APPARATUS

5.01 When self-supporting cable is to be placed from a stationary reel (Fig. 5) install the hardware and placing apparatus as follows:

- (a) Place a B Cable Block Frame with an E Cable Block on the first and last poles of the section in which the cable is being placed.
- (b) Place B Sheave Supports or E Cable Blocks on all in-line poles and corner poles with a pull of 3 feet or less.
- (c) C Sheave Supports can be used for supporting the cable at corners with a pull of 25 feet or less. The sheave support can be used as a temporary roller with the cable subsequently transferred to a C Cable Clamp, or it can be left in place as a permanent attachment with no transfer work required.
- (d) If self-supporting cable is tensioned around a corner exceeding 25 feet of pull, E Cable Blocks must be used with E or F Cable Block Frames, as required.
- (e) The E Cable Block Frame with two E Cable Blocks may be used at corners where the *pull away* from the pole does not exceed 50 feet (Fig. 6).
- (f) The F Cable Block Frame with two E Cable Blocks may be used at corners where the *pull against* the pole does not exceed 50 feet (Fig. 7).
- (g) Place a 1/2-inch polypropylene or 5/8-inch manila rope pulling-in line in the roller attachments.

5.02 Permanent attachment holes may be bored at the same time that the B, E, and F Cable Block Frames are placed, or during transferring operations.

- (a) Holes for mounting E Cable Block Frames are located **6 inches above** the holes bored for the cable clamp attachment.
- (b) Holes for mounting F Cable Block Frame

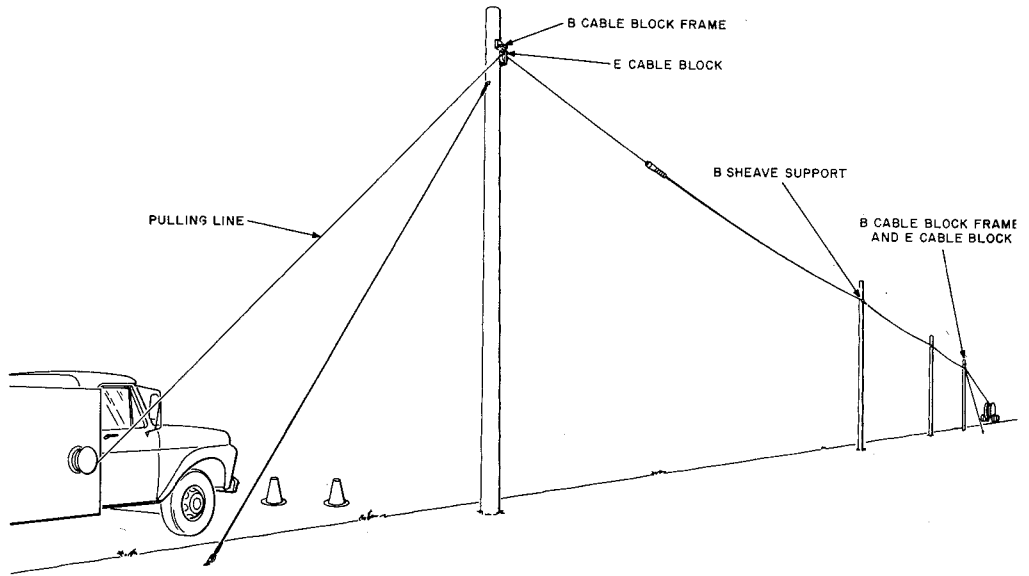


Fig. 5—Hardware and Construction Apparatus—In-Line Sections

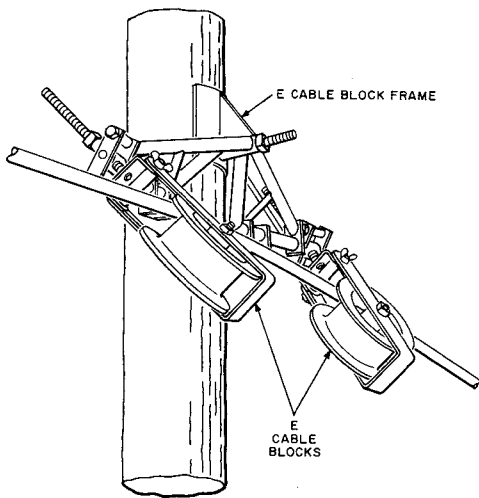


Fig. 6—Pull Away From Pole—Up to 50 Feet—Placing Temporary Blocks

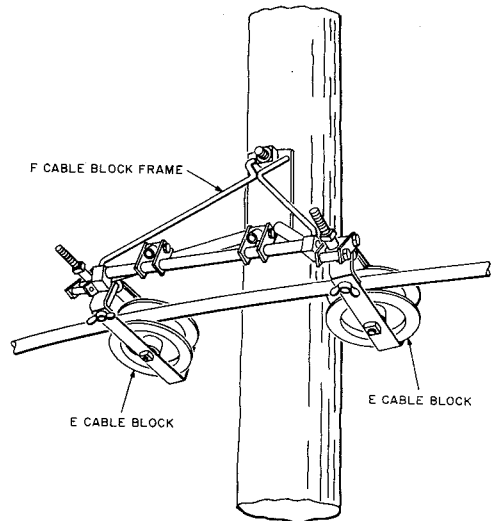


Fig. 7—Pull Toward Pole—Up to 50 Feet—Placing Temporary Blocks

are located **14 inches above** the holes bored for the cable clamp attachment.

5.03 When E or F Cable Block Frames are used, adjust the rollers so that the cable is positioned as close to the pole as possible without rubbing against the pole. This will facilitate transferring the tensioned cable to the permanent attachment.

5.04 B Placing Hooks may be used for supporting short lengths of cable to be pulled in.

POSITIONING CABLE REEL AND TRUCK

5.05 The cable reel can, in most cases, be set up at either end of the pull. In locating and positioning the cable reel, the following factors should be considered:

- The distance of the cable reel from the first pole should be approximately two times the height of the pole attachment from the ground.
- The cable should pay off of the top of the reel.
- The cable reel should be as near in line with the pole line as possible.
- The cable reel should be located at the end farthest from a heavy corner so that a minimum amount of cable is pulled around the corner.

5.06 The pulling truck is set up at the opposite end of the pull from the cable reel trailer. In positioning the truck, the following factors should be considered:

- The distance of the pulling truck from the last pole should be at least three times the height of the pole attachment from the ground, where possible.
- The spool of the power reel (or drum of the winch) should be as nearly in line with the pole line as possible.
- Whenever practical, the truck should be faced in the direction of the cable reel to provide the driver with an unobstructed view of the section of pull.

5.07 Guard the work area with traffic warning devices and position the truck and cable reel to provide the least possible obstruction to traffic.

PULLING-IN CABLE

5.08 Prepare self-supporting cable for pulling-in by the stationary reel method as follows:

- Remove approximately 4 inches of jacket from strand and 5 inches of jacket from cable.
- Connect the strand to the B Chuck.
- Connect the pulling line to the clevis pin and clevis (Fig. 8).

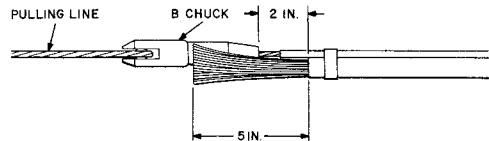


Fig. 8—Preparation of Cable at Pulling End

- Taper the cable core sufficiently to permit the cable to ride over the roller attachments.
- Tape the cable conductors and the leading portion of the cable tightly to the strand and B Chuck using vinyl tape, build up with friction tape if required, and apply a 1/2-lapped layer of vinyl tape as shown in Fig. 9.

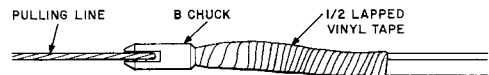


Fig. 9—Completed Attachment

5.09 Establish reliable communication between the truck and the workman following the end of the cable.

5.10 Pull-in the cable using an RS Spool to wind up the rope pulling line. If polypropylene rope is being used and pulling tension exceeds 300 pounds, the rope should be wrapped around the

RS Spool about five turns and the spool used as a capstan.

5.11 If the cable reel is mounted on a cable reel trailer, use a B Cable Reel Brake or equivalent to maintain sufficient tension in the cable to clear any obstacles.

5.12 Upon completion of the pull, dead end the support strand at the pulling end leaving sufficient cable for splicing or for future extension and remove the B Block Frame and E Cable Block.

5.13 Tension the cable and dead end it at the reel end as outlined in Parts 7 and 8, and transfer to permanent attachments where required, as outlined in Part 10.

AERIAL LIFT

5.14 When using an aerial lift vehicle for placing self-supporting cable by the stationary reel method, observe the safety precautions given in Part 2 and see instructions in 3.01.

5.15 ♦Before starting placing operations obtain the cable weight from Section 626-200-130, and the span lengths from the workprint. *Do not exceed the 600 lb limit given in Table A for the appropriate cable weight and span length.*♦

5.16 Position the cable reel in accordance with 5.05. Pass the winch line (tow line) through the Roller Guide of the Fairlead. ♦Pass the cable end through an E Cable Block or B Block Frame mounted on the first pole. Connect the winch line and cable end in accordance with 5.08 (1) through (3).♦

5.17 Set the cable reel brake to maintain sufficient cable tension to clear any obstacles. Move the lift to the next pole keeping the boom as near as possible in line with the direction of pull to minimize side loads. When the pole is reached, stop the truck and swing the boom to the working position for placing attachments.

5.18 Install the hardware and placing apparatus in accordance with 5.01(b) through (e), 5.02, and 5.03.

5.19 Position the basket to align the roller guide of the fairlead with the cable block(s) on the pole and place the cable in the cable block(s).

5.20 Move to the next pole, realigning the boom with the direction of pull to minimize side loads, and repeat the placing procedure at each successive pole until the placing operation is completed. Dead end the support strand at the last pole leaving sufficient cable for splicing.

5.21 Return to the first pole, tension the cable, and dead end it as outlined in Parts 7 and 8. Transfer the cable to permanent attachments at intermediate poles where required as outlined in Part 10.

6. MEASURING SAGS

6.01 The sag and the resulting tension in the strand of self-supporting cable is based on the average span length of the pole line on which the cable is to be placed. The average span length is used to select the proper sag table shown in Section 627-700-011.

6.02 If the basic layout of the pole line changes from short spans to long spans, the short spans and the long spans should be sagged separately. Adequate guying and a false deadend should be provided to compensate for the difference in tension.

6.03 An occasional long span which is 50 percent in excess of the average of the adjacent 5 spans in each direction must be sagged individually. Adequate guying and false deadends should be provided to compensate for the difference in tension.

6.04 To properly sag self-supporting cable it will be necessary to select a span which will permit sighting between adjacent poles at attachment height.

6.05 When the span to be sagged has been selected, measure the length of the span from center of pole to center of pole. This length and the weight of the cable per foot will enable the workman to determine the sag from the proper sag table in Section 627-700-011.

6.06 A method of measuring sag is illustrated in Fig. 10 and is done as follows:

- (1) Mark off the required sag from one end of a tree pruner handle and apply a layer of paper tape or equivalent to clearly indicate the mark.

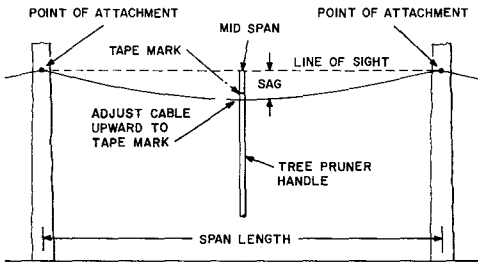


Fig. 10—Measuring Sag

- (2) Hold the tree pruner handle vertically at midspan and adjust the height so that the top of the handle is in line with the points of attachment as sighted by a workman on the pole.
- (3) Maintaining the tree pruner handle in position determined in (2), the workman controlling the tensioning will adjust the sag in the cable until it lines up with the tape marking on the tree pruner handle.

7. TENSIONING

- 7.01 The length of self-supporting cable that can be tensioned at one time will depend upon several factors such as corners, span length, changes in grade, etc. However, lengths up to 4000 feet can generally be tensioned satisfactorily in straight sections of pole line.
- 7.02 After excess slack has been removed, use a 1-1/2 ton chain hoist, B Strand Puller, and sling to tension self-supporting cable. The B Strand Puller is installed over the jacketed strand.
- 7.03 A Tensiometer is available that can be used to obtain the proper tension (in pounds) as recommended in Section 627-700-011. The Tensiometer is placed in series with the chain hoist and B Strand Puller, as shown in Fig. 11, so the cable tension can be read directly from the scale on the Tensiometer as the cable is being sagged. The sag should be observed in selected spans to be sure cable tension is relatively equal over the length of the cable being tensioned.

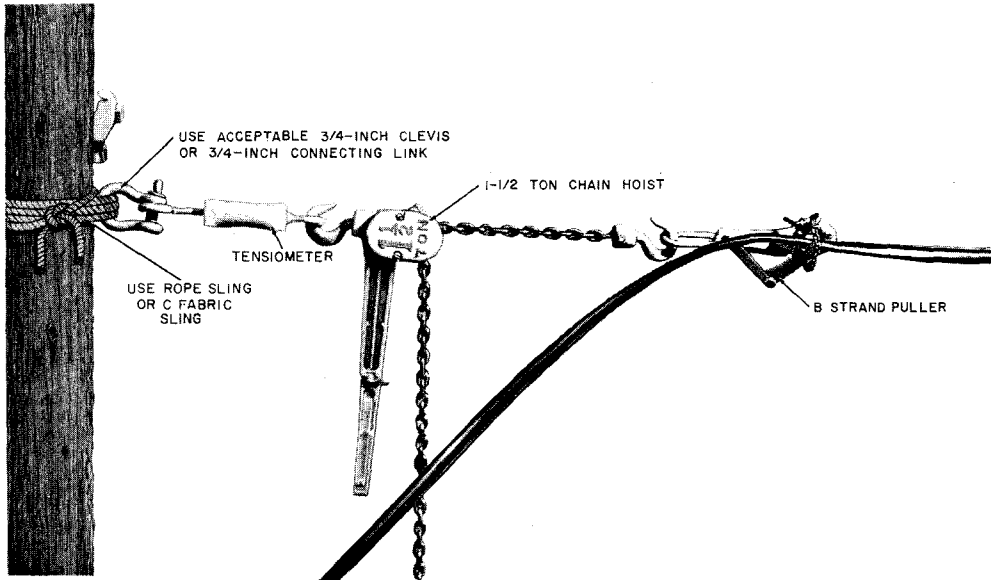


Fig. 11—Tensiometer Used in Tensioning Cable

7.04 A winch line may be used in place of a chain hoist for pulling up and tensioning self-supporting cable. The winch line is used in the same manner as for pulling up suspension strand.

7.05 Temporary or permanent guys are required to compensate for the unbalanced load at the pole where the tensioning is done.

7.06 Where it is necessary to tension self-supporting cable at an intermediate pole in the lead, **hold the tension with 1-1/2 ton chain hoist and B Strand Puller** until the cable is tensioned ahead. If fully tensioned cable is to be held for an extended period of time, such as from one workday to the next, place a B False Deadend and remove the chain hoist and strand puller.

7.07 C Sheave Supports may be used as temporary roller attachments in tensioning self-supporting cable around corners not exceeding 25 feet of pull. These supports can be left in place as a permanent attachment.

7.08 Self-supporting cable may be tensioned around corners with a pull of 50 feet or less by using E Cable Blocks with E or F Cable Block Frames.

8. DEAD ENDING

8.01 Self-supporting cable is dead ended at the first and last pole and at corners exceeding 50 feet of pull by attaching the strand to a B Guy Hook with a Strandwise, B Strand Grip, or B False Deadend. Sufficient strand is removed prior to dead ending to provide the cable necessary for splicing, where required.

8.02 The strand must be dead ended in both directions at corners that exceed 50 feet of pull. When using the moving reel method of placing self-supporting cable, the strand may be dead ended in both directions at corners, where required, as follows:

- (1) Place the cable up to the corner pole.
- (2) Tension and dead end the support strand of the cable that has been placed.
- (3) Form the cable in a smooth bend around the corner and place the dead-end attachment for the cable that is to be placed in the subsequent

spans.

- (4) If the strand continuity is broken, bond with B Ground Wire and proceed with the cable placing.

Note: It is not necessary to cut the strand if B False Deadends are used.

8.03 The deadend at a cable end location, where there is a possibility of future extension, may be made with a B False Deadend as illustrated in Fig. 12. This permits the strand to remain intact beyond the dead-end pole. This same method of dead ending may be used where the cable is extended down the pole and through a subsidiary conduit to a manhole.

8.04 *The 6.6M Strandwise* is used for dead ending the strand of self-supporting cable in the same manner as outlined in Division 627 of the Plant Series Practices for suspension strand with the following exceptions:

- (a) Where cable is required to extend beyond the dead-end attachment, the web must be slit from the end of the cable to a point 2 inches beyond the Strandwise location.
- (b) After the jacketed strand has been cut to the proper length, remove 4 inches of the polyethylene (poly-) jacket.
- (c) **Do not attempt to clean or remove the flooding compound from the strand.**

8.05 *The 6.6M B Strand Grip* is used for dead ending the strand of self-supporting cable in the same manner as outlined in Division 627 of the Plant Series Practices for suspension strand with the following exceptions:

- (a) Where cable is required to extend beyond the dead-end attachment, the web must be slit from the end of the cable to a point 2 inches beyond the far end of the strand grip.
- (b) Cut the jacketed strand approximately 4 inches from the dead-end attachment and remove the poly-jacket from the portion of the strand to which the B Strand Grip will be attached.
- (c) **Do not attempt to clean or remove the**

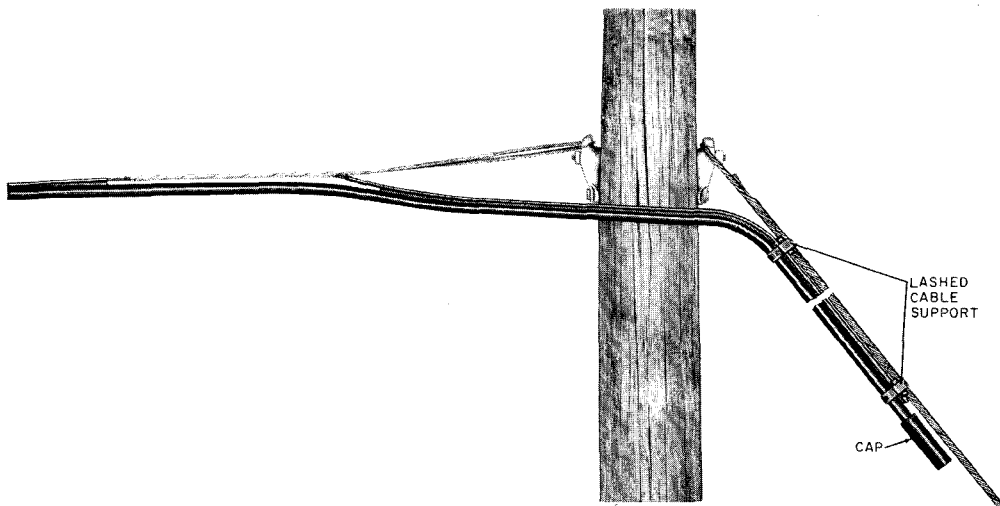


Fig. 12—Deadend With B False Deadend

flooding compound from the strand.

8.06 Install the **6.6M B False Deadend** on the strand as follows:

- (a) Place the loop of the B False Deadend over the B Guy Hook or through the thimble eye nut and lay the legs along the cable away from the dead-end attachment.
- (b) Measure points approximately 3 inches beyond each end of the location where the B False Deadend will be attached to the strand and slit the web between these points.
- (c) Remove the poly-jacket from the portion of the strand around which the B False Deadend will be wrapped.
- (d) Insert a B Wire Wedge between the cable and strand at each end of the slit in the web.
- (e) Install the B False Deadend as outlined in Section 627-240-213.

8.07 Typical arrangements for dead ending self-supporting cable are shown in Section 627-700-014.

8.08 ♦ Where a self-supporting cable is placed to extend an existing cable supported on 6M Strand, the strands are joined as shown in Fig. 13. Using a strand connector and B Strand Grips proceed as follows:♦

- (a) Use a 1-1/2 ton chain hoist and two strand pullers to equalize the tension between the self-supporting cable and the 6M strand supporting the existing cable. **The B Strand Puller must be used on the jacketed 6.6M strand.**
- (b) Separate the cable and strand of the self-supporting cable.
- (c) ♦ Overlap the two strands and use tape markers to indicate where the strands are to be cut to position the strand connector 8 inches from the center of the pole.♦
- (d) ♦ Cut the strands at the tape markers placed in (c). Use the B Strand Cutter to cut the 6.6M Strand.♦
- (e) ♦ Install the B Strand Grips and the strand connector. The completed installation is shown in Fig. 13.♦

8.09 ♦ Where self-supporting cable is used to

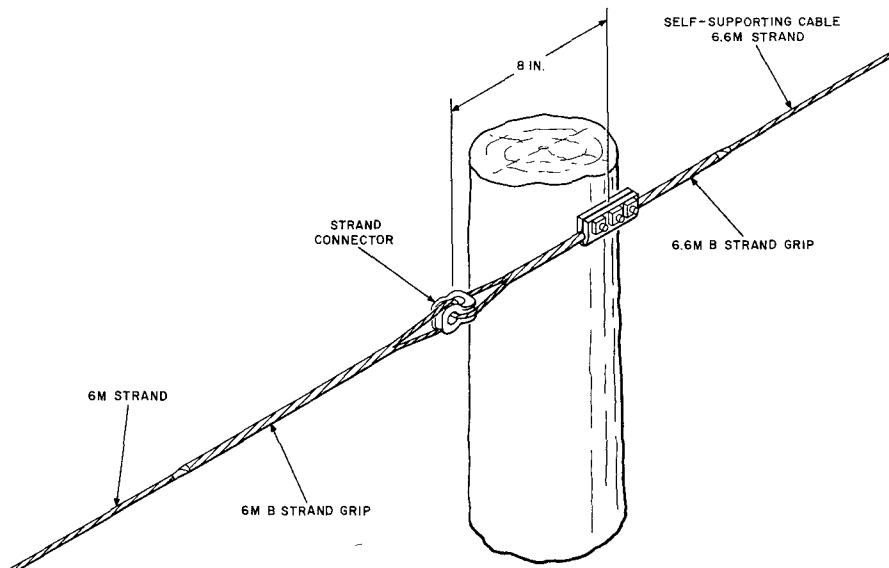


Fig. 13—Joining 6.6M and 6M Strand

extend an existing self-supporting cable, the strands are joined with a B Strand Connector as described in 627-230-208.⚡

9. SEALING CABLE ENDS

- 9.01** Cable ends should be sealed to prevent the entrance of moisture.
- 9.02** The cable ends are prepared for sealing as follows:
- (1) Starting at the end of the cable, slit approximately 8 inches of the polyethylene web which joins the strand and cable.
 - (2) Cut off approximately 6 inches of the strand so that it is shorter than the cable.
 - (3) Remove any remaining web from the cable until the sheath is smooth.
- 9.03** Self-supporting cable ends that have been prepared as outlined in 9.02 may then be sealed in the same manner as any other plastic-sheathed cable.

10. TRANSFERRING AND ATTACHING CABLE TO POLES

- 10.01** Self-supporting cable that is not left in sheave supports is permanently attached to the poles after it has been placed and properly tensioned.
- 10.02** C Cable Clamps are used for attaching the jacketed strand at in-line poles and at corners with a pull of 25 feet or less.
- 10.03** The C Sheave Support may be left in place as a permanent attachment at corners with a pull of 25 feet or less. In this case no transfer work is required.
- 10.04** The corner suspension clamp must be used for attaching the jacketed strand to poles where the corner exceeds 25 feet of pull. The web must be slit to permit the corner suspension clamp to be installed on the strand.
- 10.05** At corner pole locations the self-supporting cable is transferred from C Sheave Supports

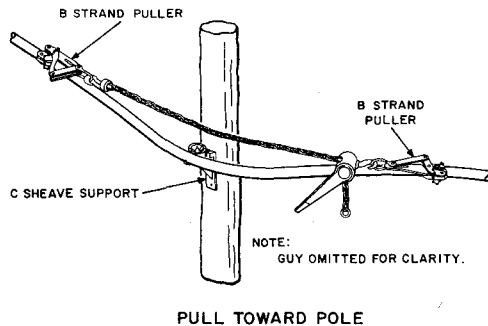
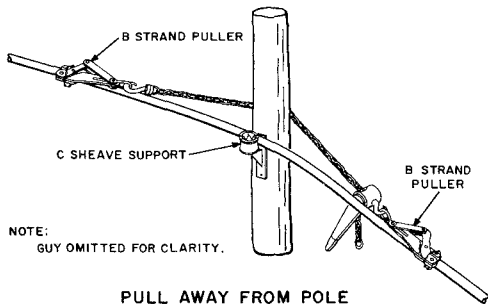


Fig. 14—Transferring Self-Supporting Cable to Permanent Attachments

or E Cable Blocks to C Cable Clamps or corner suspension clamps by using a 1-1/2 ton chain hoist and two B Strand Pullers as shown in Fig. 14.

10.06 The methods and tools used in transferring cable from cable blocks to permanent attachments are outlined in Section 627-350-204, and can also be applied to self-supporting cable by slitting enough of the web to permit the use of the D or E Strand Shifter.

10.07 Transfer self-supporting cable from the B Placing Hook to a C Cable Clamp as follows:

- (1) Place the C Cable Clamp on the jacketed strand at the attachment location and tighten the nuts on the clamp sufficiently to hold it in place (Fig. 15).
- (2) Remove the outer nut which secures the B Placing Hook to the pole. The placing hook remains suspended on the bolt.
- (3) Spiral the cable if required to prevent dancing.
- (4) Place the center hole of the C Cable Clamp on the cable suspension bolt and start the nut on the bolt to hold the clamp (Fig. 16).
- (5) Remove the B Placing Hook from the bolt.
- (6) Securely tighten all nuts.

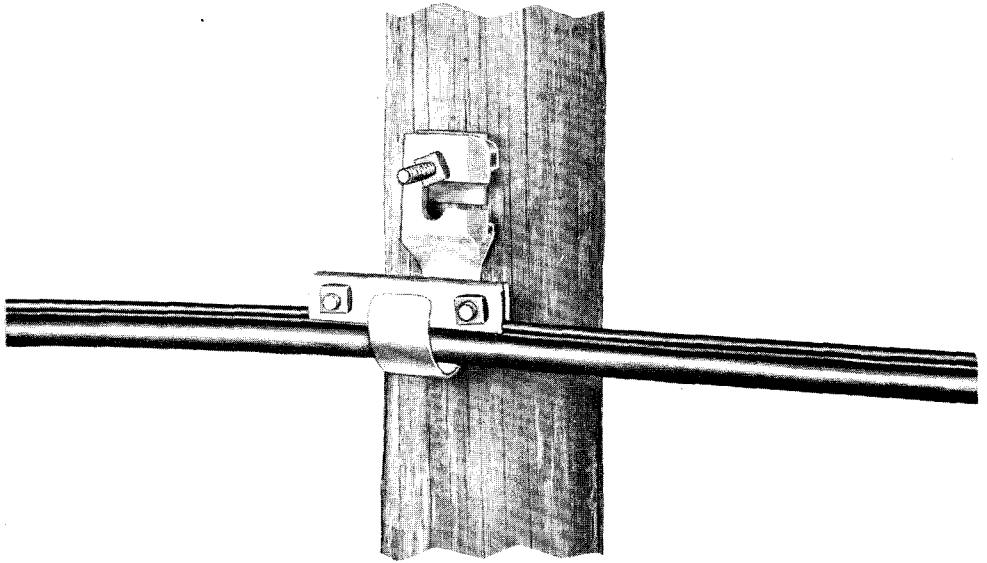


Fig. 15—Self-Supporting Cable in B Placing Hook

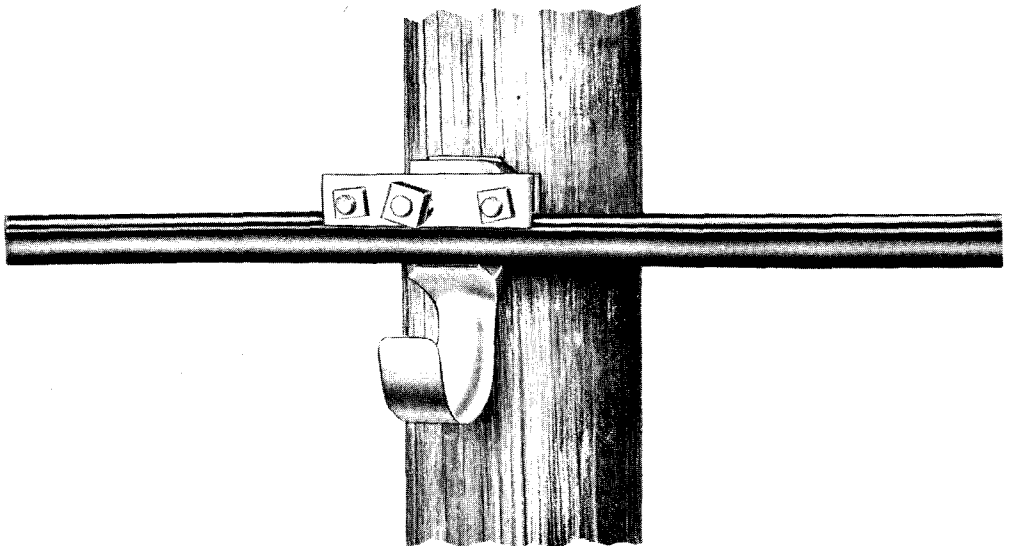


Fig. 16—Self-Supporting Cable Transferred From B Placing Hook