

**BELL SYSTEM PRACTICES**  
**Outside Plant Construction**  
**and Maintenance**

**SECTION G51.105.2**  
**Issue 1, July, 1955**  
**AT&T Co Standard**

## **SUSPENSION STRAND**

### **ATTACHMENTS—TYPICAL CONSTRUCTION**

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#### **1. GENERAL**

1.01 This section covers the typical arrangement of attachments for supporting suspension strand at in-line and corner poles.

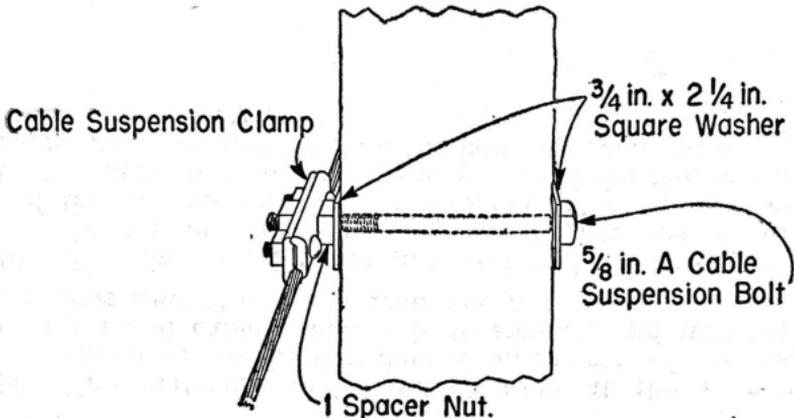
1.02 The materials and methods used at the suspension clamp end of the bolt depend on the size of the suspension strand and cable which it is to support and whether the strand pulls toward or away from the pole.

1.03 The size and type of guy bolt and the methods used for supporting the guy end of the bolt depend on the size of the guy strand and the lead/height of the guy except that when used to support suspension strand the size of the guy bolt shall never be smaller than the bolt size required to support the suspension strand.

## 2. IN-LINE POLES

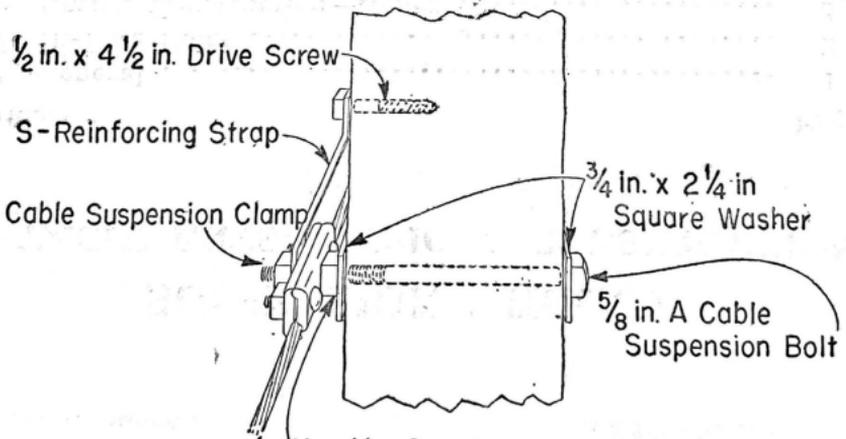
2.01 The following are typical examples of construction at in-line poles.

### 6000 POUND SUSPENSION STRAND



1 Spacer Nut.  
When two spacer nuts are used, place S Reinforcing Strap as illustrated for larger strands.

### 10,000, 16,000, AND 25,000 POUND SUSPENSION STRAND



Use 1 or 2 spacer nuts depending on cable diameter

### 3. CORNER CONSTRUCTION—GENERAL

3.01 In the following tables, the column "Size of Larger Strand" refers to either the guy strand or the larger of the two strands where the guy bolt also supports the suspension strand.

3.02 Where the **lead/height** of the guy is **1-1/4 or less**, use a **B** guy bolt and the associated hardware as shown in the following table.

<u>Size of Larger Strand (Pounds)</u>	<u>Size of B Guy Bolt (Ins.)</u>	<u>Type of Curved Washer at Threaded End of Bolt</u>	<u>Type of Washer or Guy Strap at Eye End of Bolt</u>
*6000	5/8	B	B Curved Washer
6000	3/4	E	E Curved Washer
10,000	3/4	E	B Guy Strap
16,000	1	C	B Guy Strap
25,000	1	C	L Guy Strap

\* Less than 10 ft. pull on corner.

3.03 Where the **lead/height** of the guy is **more than 1-1/4**, use an **S** guy bolt and the associated hardware as shown in the following table:

<u>Size of Larger Strand (Pounds)</u>	<u>Size of S Guy Bolt (Ins.)</u>	<u>Type of Curved Washer at Each End of Bolt</u>
*6000	5/8	B
6000	3/4	E
10,000	3/4	E
16,000	1	C
25,000	1	C

\* Less than 10 ft. pull on corner.

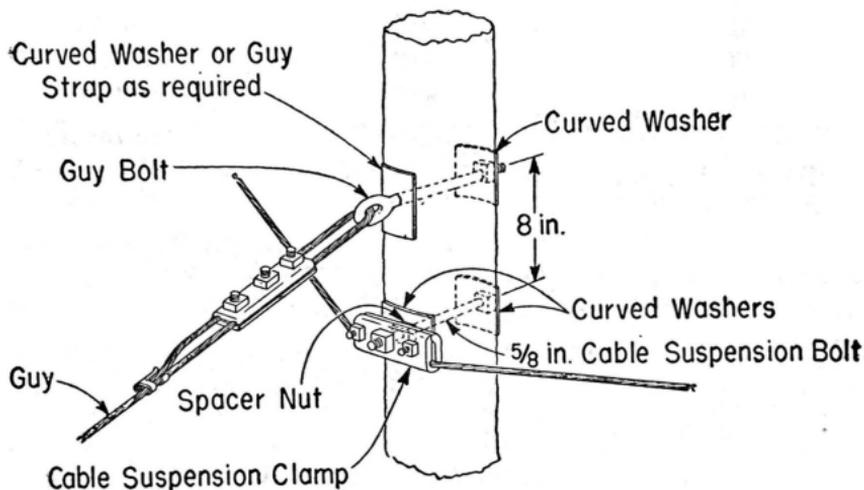
3.04 When the guy bolt is to be used as a cable suspension bolt, locate the guy bolt on the pole in accordance with the recommendations for locating cable suspension bolts. In those cases where the guy bolt is less than 22 inches below the pole top and a B guy strap is required, the guy strap may be secured with a crossarm bolt or it may be reversed and secured with two drive screws below the guy bolt. Reversing the strap is also advantageous where pole clearances are critical as in the case where the guy attachment is below the suspension strand attachment.

#### 4. CORNERS WHERE PULL IS TOWARD POLE

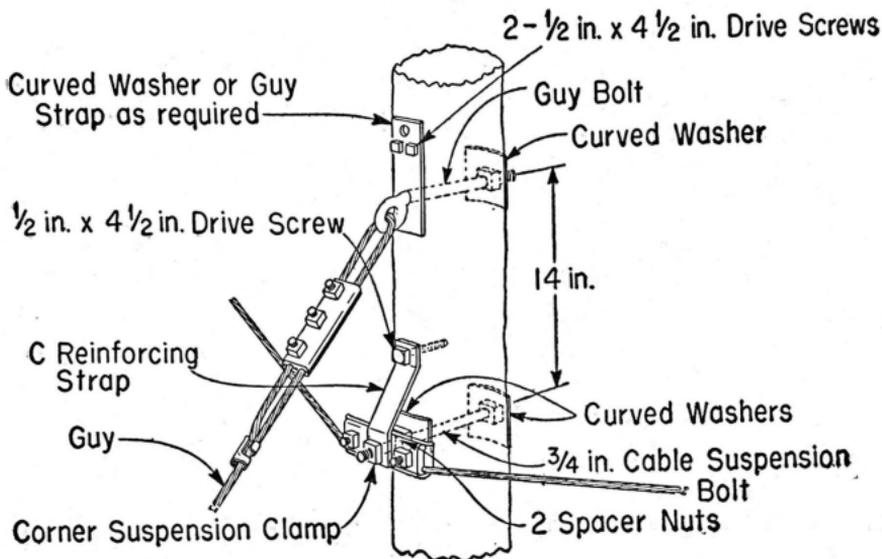
4.01 The following are typical examples of construction where the pull is toward the pole. The position of the guy either above or below the strand attachment level is determined largely by the cable placing method to be used. The guy below the strand is advantageous when cable is to be placed by the direct lashing method or the prelashing method. In the following sketches, the position shown is for illustration only. Either position may be used.

#### 4.02 For 6000 pound Suspension Strand:

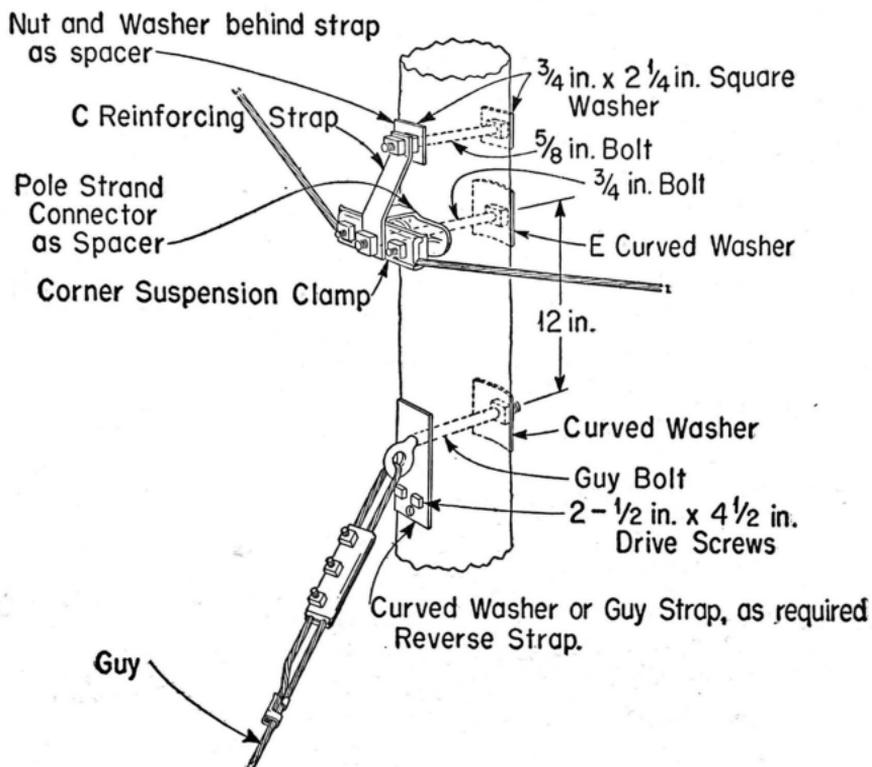
(a) Where the corner pull is less than 10 feet.



(b) Where the corner pull is 10 feet or more and the cable diameter is 1.6 inches or less.

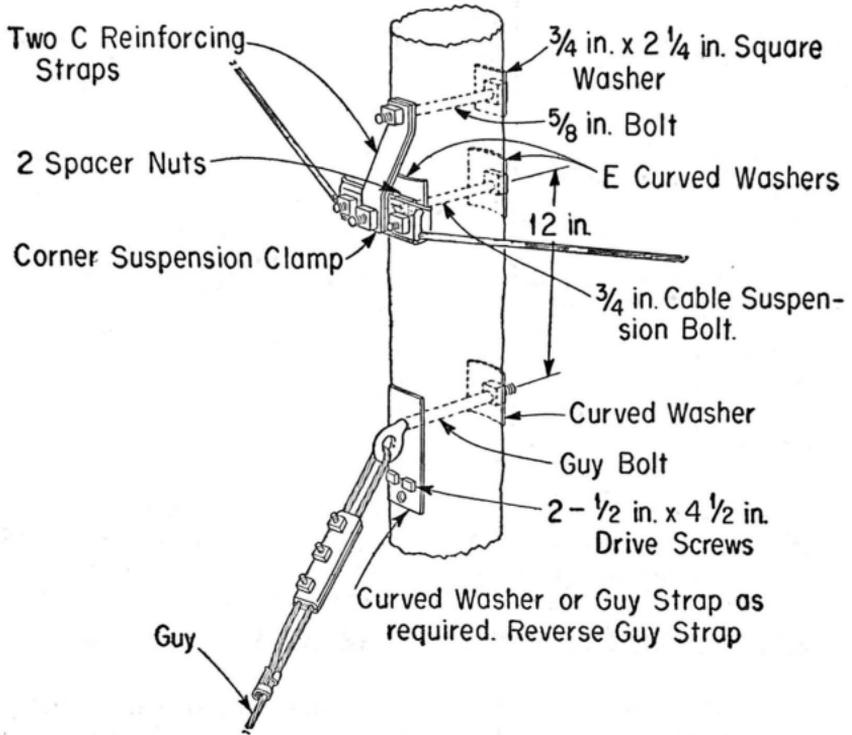


(c) Where the corner pull is 10 feet or more and the cable diameter is over 1.6 inches.

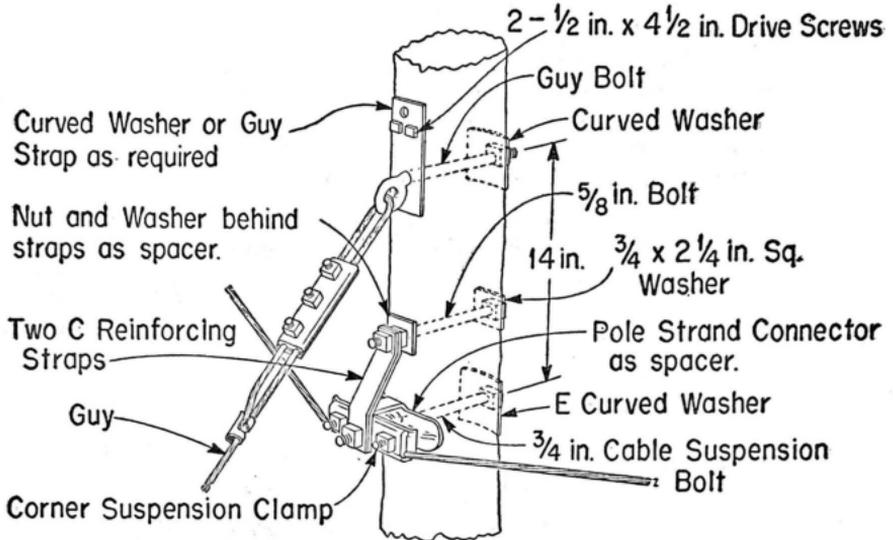


4.03 For 10,000, 16,000, and 25,000 pound Suspension Strand:

(a) Where the cable diameter is 1.6 inches or less.

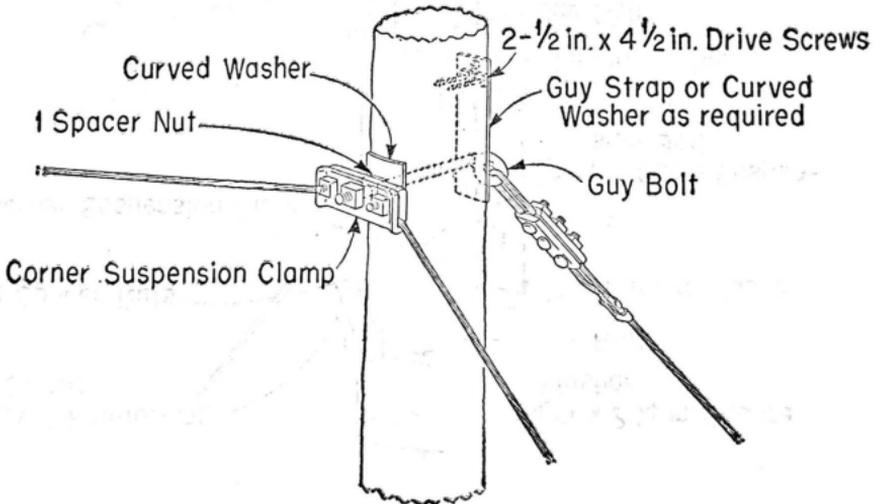


(b) Where the cable diameter is over 1.6 inches.



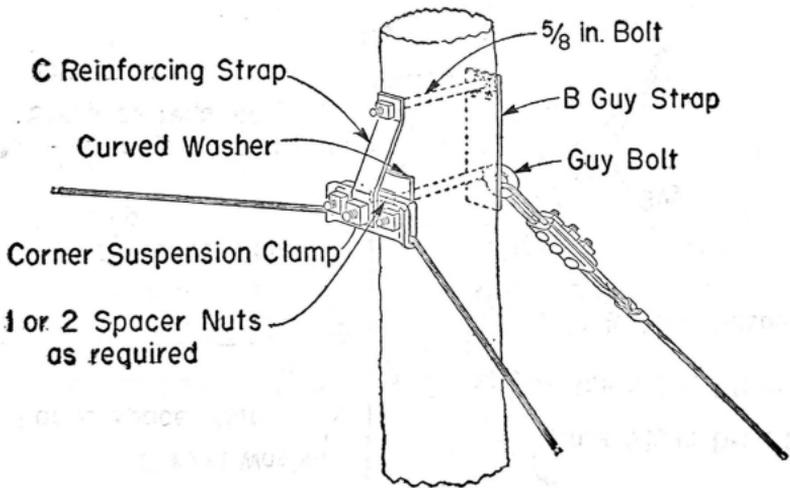
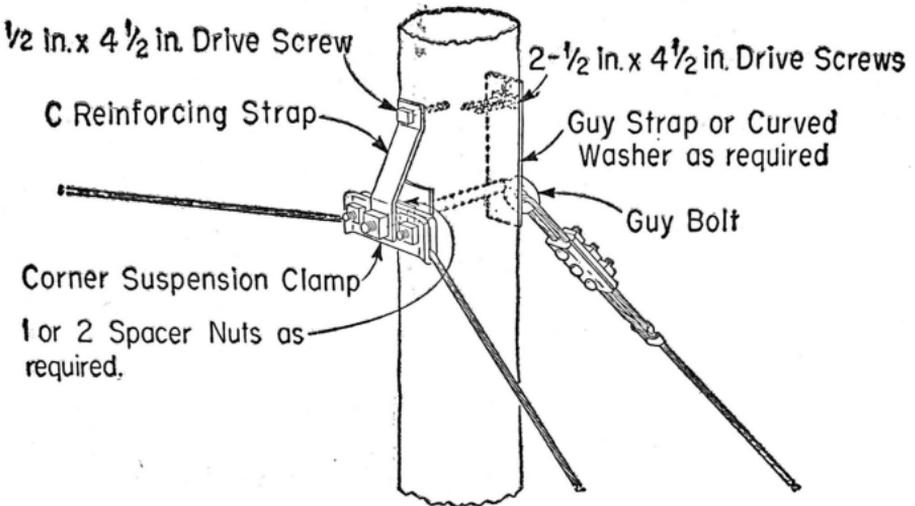
**5. CORNERS WHERE PULL IS AWAY FROM POLE**

- 5.01 The following are typical examples of construction where there is a pull away from the pole.
- 5.02 **For 6000 pound Suspension Strand (Pull of 10 ft. or more):**



**Note:** When 2 Spacer Nuts are required place a C Reinforcing Strap as illustrated for larger strands.

**5.03 For 10,000, 16,000, and 25,000 pound Suspension Strand (Pull of 5 ft. or more):**



5.04 An alternative, for **6000 and 10,000 pound guy strand** where the **lead/height of the guy is 1-1/4 or less.**

