

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G51.140
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AT&T Co Standard

AERIAL CABLE

SLACK SPAN CONSTRUCTION

Contents	Page
1. General	1
2. Strand Stringing Tension	2
3. Constructing Slack Span	2
4. Precautions	4

1. GENERAL

1.01 This section covers the methods to be used where slack span construction is required in an aerial cable line.

1.02 Where it is not possible to obtain the required guying at strand dead end points, it is necessary to string the strand in the unguyed last span at a lower tension than is specified in Section G51.125. The unguyed last span is called the slack span.

1.03 An anchor guy, a pole to pole guy, or a pole to stub guy shall be used, wherever possible, to support the strand dead end, in preference to the use of slack span construction.

1.04 Do not construct unguyed slack spans in jointly-used lines or in cases where the cable is supported by 16M strand, unless the details of construction for the particular job have been approved by the plant engineer.

2. STRAND STRINGING TENSION

2.01 Slack span construction may be used in accordance with the span lengths and stringing tensions shown in the following table:

Size of Suspension Strand (Pounds)	Maximum Length of Slack Span (Feet)	Approximate Strand Stringing Tension (Pounds)		
		100°F	60°F	20°F
6,000	100	500	800	1100
10,000	75	600	1000	1400

2.02 The approximate sag at 60° F. that can be expected in the cable in several typical cases is shown in the following table:

Strand Size	Cable Weight (Pounds)	Span Length (Feet)	Sag (Inches)
6M	2.25	100	38
10M	5.0	50	27
10M	5.0	75	38

3. CONSTRUCTING SLACK SPAN

3.01 The ungued pole used for supporting the slack span should be no smaller than shown in the following table:

Strand Size	Minimum Class of Pole*
6M	2
10M	1

*Select the sturdiest pole available in the required class, as indicated by size, straightness, relative freedom from knots, etc.

3.02 Place the end pole with about a one-foot rake away from the slack span.

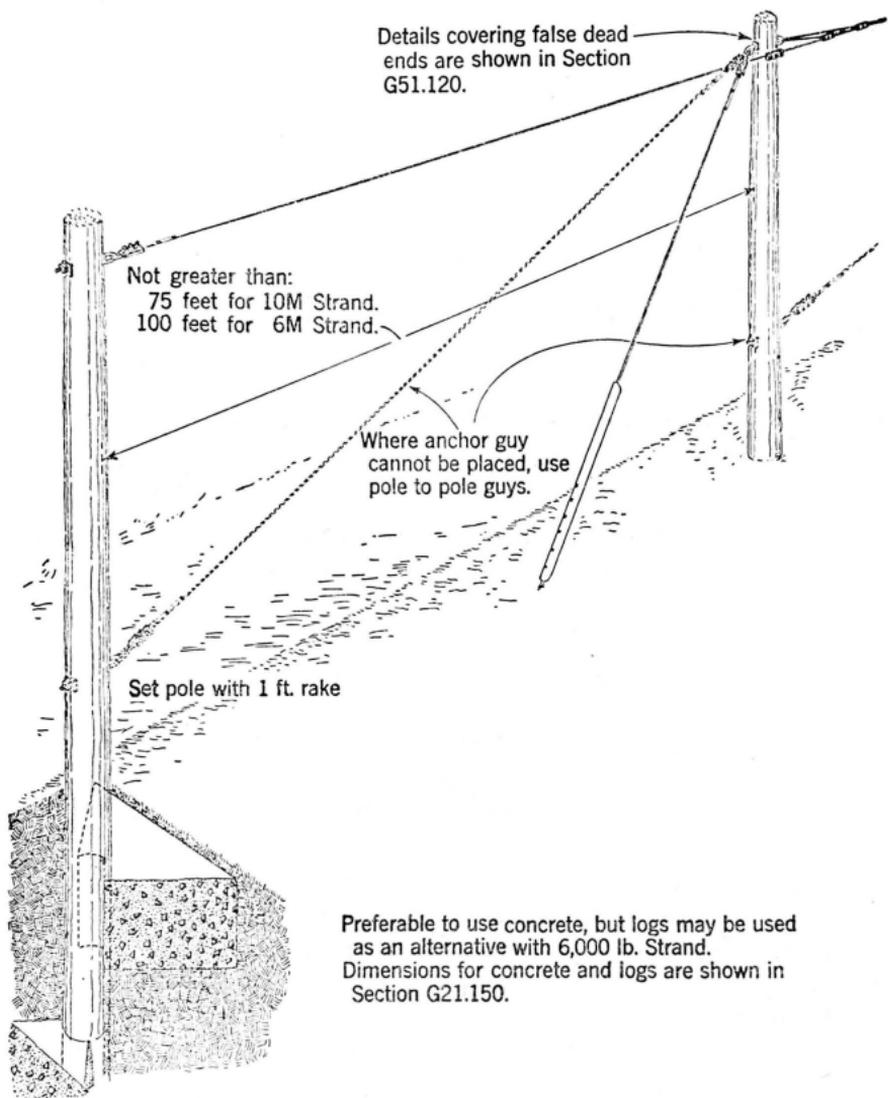
3.03 Ground brace the end pole, preferably with concrete. Logs may be used for the ground bracing where 6,000 pound strand is to be placed. If concrete is used, allow at least two days for the concrete to set before placing a load on the pole.

3.04 An anchor head guy should be attached to the second pole in the line if possible. Consider this pole as a cable dead end pole and determine the size of the head guy in the usual manner. Where an anchor guy cannot be placed, a pole to pole guy should be placed between the third and the second, and between the second and the dead end pole.

3.05 Run out the suspension strand for the entire length to be pulled.

3.06 Dead end the strand on the slack span end pole and pull up the strand until the required tension, as given in Paragraph 2.01, is obtained in the slack span.

3.07 Place the false dead end for holding the strand at the second pole in the line. Pull up the strand from this point toward the farther end until the standard stringing tension, as covered in Section G51.125, is obtained.



4. PRECAUTIONS

4.01 Do not ride slack spans unless a temporary guy can be placed at the dead end pole. Where a temporary guy cannot be placed, use a ladder when placing the aerial cable rings or doing other work in the slack span.