

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G21.151.1
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AT&TCo Standard

PLACING POLES
"H" FIXTURES

Contents	Page
1. General	1
2. Use	1

1. GENERAL

1.01 This section provides general information on the construction of "H" fixtures. This information was previously included in Section G21.145, Issue 1 entitled, Placing Poles—Soft Soil and "H" Fixtures.

2. USE

2.01 "H" fixtures may be used at locations specified on the detail plans as a substitute for storm guyed single poles and, under certain conditions, at corners as a substitute for guyed single poles.

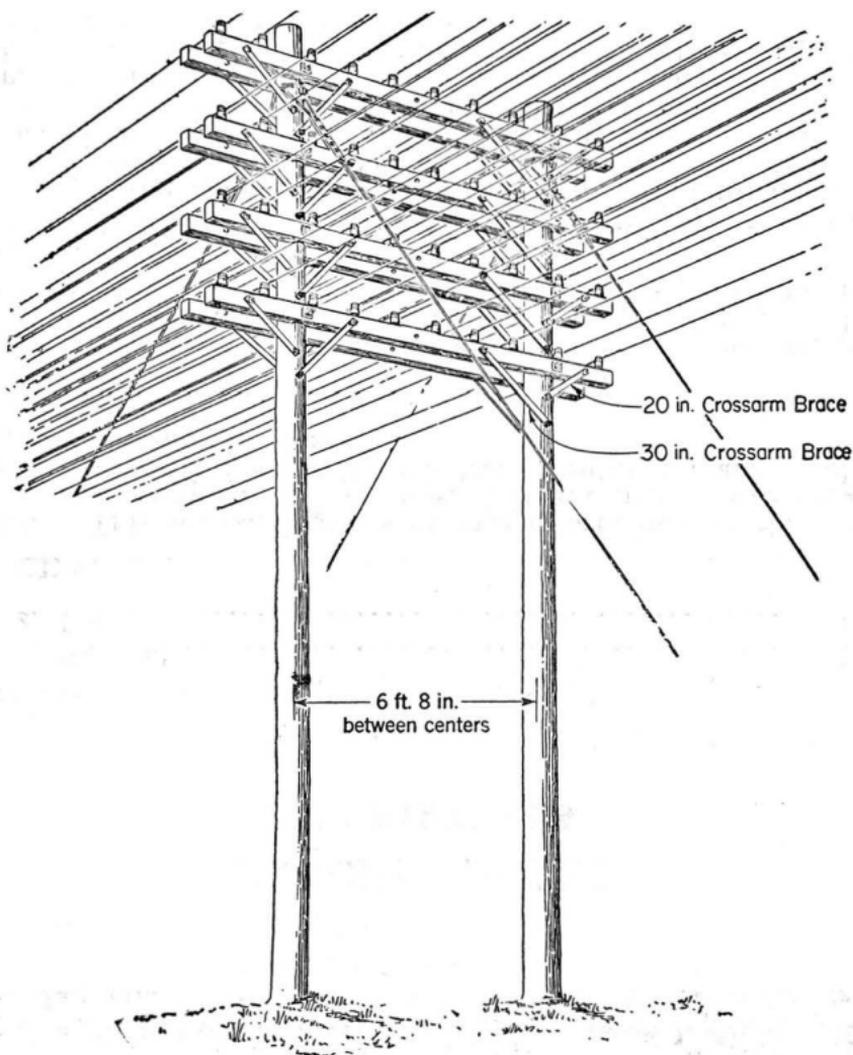
2.02 "H" fixtures, when used as a substitute for storm side guyed single poles, provide a more substantial structure in the direction of the line and in some cases are more economical. The use of double crossarms at these "H" fixtures is not necessary unless required because of excessive span lengths, railroad crossings, or sharp corners. The locations at which, and the conditions under which "H" fixtures may be used should be determined by the Plant Engineer.

2.03 Head-guyed "H" fixtures may be used as a substitute for four-way storm guyed single poles. The use of double crossarms is recommended at these points in the heavy and medium loading districts, in order to provide additional structural strength.

2.04 A separation of 6 feet, 8 inches, measured center to center, between the two poles of an "H" fixture is recommended. Both poles should be set vertically. With this separation it will not be necessary to shift pins on carrier

crossarms. Where 10-Pin A crossarms are supported, pins 2 and 9 may be shifted toward the ends of the arm where necessary to provide climbing space.

2.05 A typical installation of a head-guyed "H" fixture is shown below. The details of placing the crossarms and the details of the guying are covered in other Sections of the Practices.

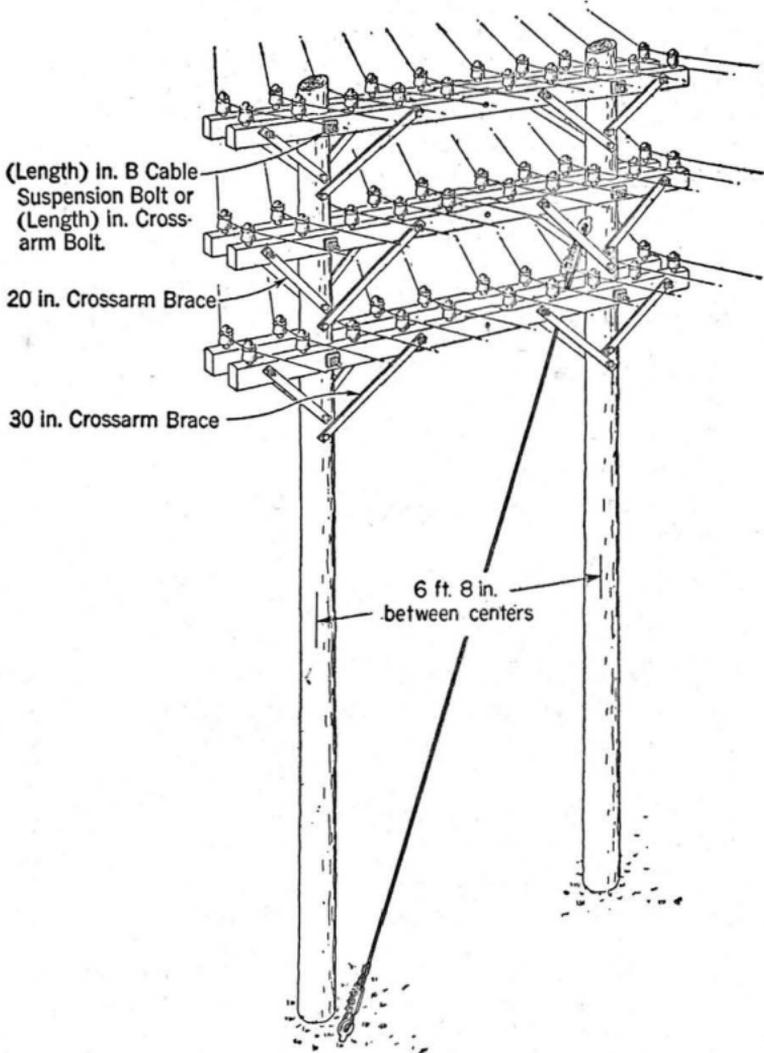


2.06 The use of "H" fixtures at corners may be desirable in certain cases. In general, however, and particularly on important toll leads, the use of anchor guyed single poles is preferred, and "H" fixtures should be employed only where their use is authorized by the Plant Engineer. "H" fixtures, without supplementary side guying, may be used at corners having the amount of pull shown in the following table. If poles longer than 25 feet are required, the limit of corner pull should be reduced in proportion to the additional length of pole, as indicated below.

<u>Length of Pole</u>	<u>Equivalent Number of Wires</u>	<u>Maximum Allowable Pull on "H" Fixture at Corner Where Side Guying May Be Omitted</u>
25 feet or less	60	4 feet
" " " "	40	6 "
" " " "	20	12 "
" " " "	10	24 "
30 feet	60	3 feet
" "	40	5 "
" "	20	10 "
" "	10	20 "
35 feet	60	2 feet
" "	40	4 "
" "	20	8 "
" "	10	16 "

2.07 "H" fixtures may be used at corners where the pull is in excess of the above limits provided that the fixture is guyed and the use of the fixture is specifically authorized by the Plant Engineer. Ordinarily, the locations at which these fixtures are used do not permit the installation of a side guy other than a short lead guy extending from the pole on the inside of the corner to an anchor placed near the butt of the other pole, as shown below. In determining the size of guy required, reduce the actual corner pull on the fixture by the amount shown in the last column of the above table for the length of pole in question and number of equivalent wires involved. Use the reduced value of the corner pull in setting the guy rule. For example, if it is desired to determine the size of guy required on a 30-foot pole having a pull of 20 feet and supporting the equivalent of 20 wires, it will be found from the above table that an "H" fixture without guying may be used where the pull at the corner does not exceed 10 feet. Inasmuch as the amount of corner on the pole exceeds 10 feet, guying is required on the amount of corner exceeding 10 feet, that is, the

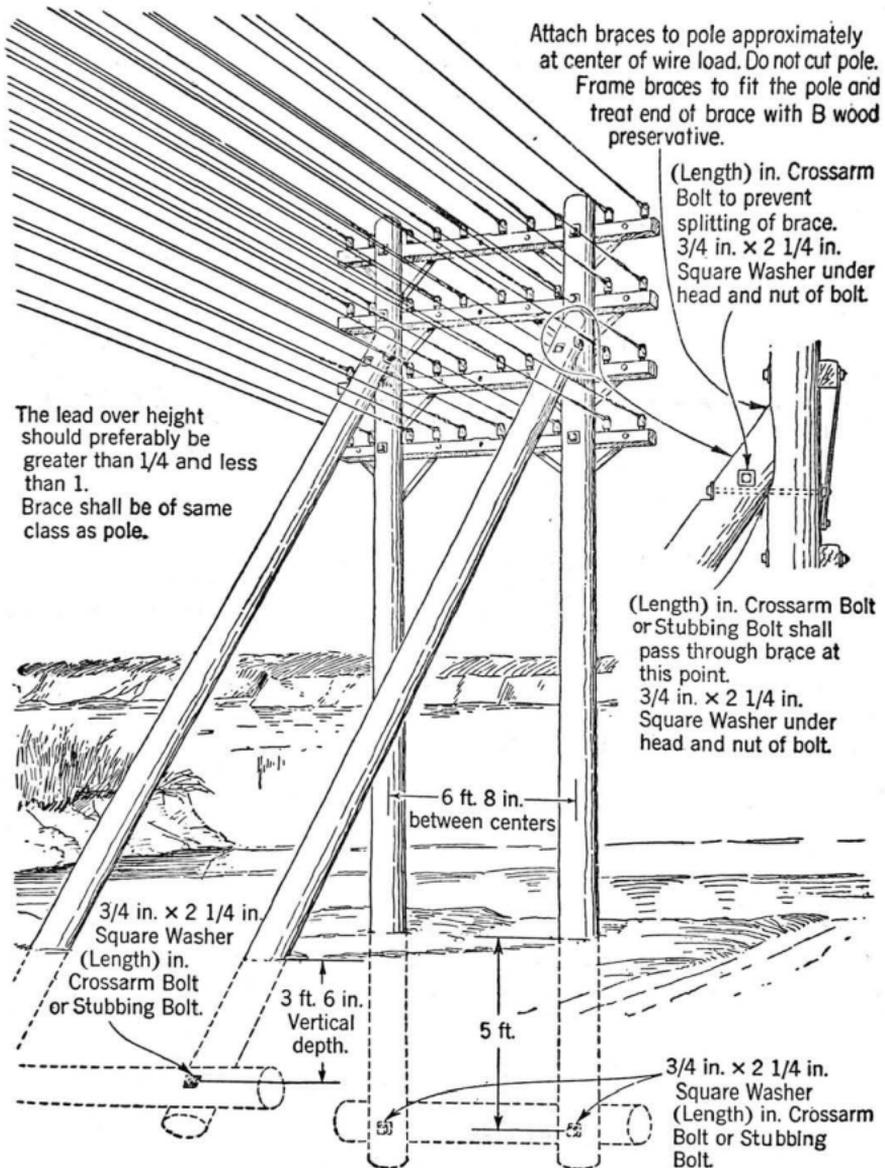
additional guying required is that required for a 10-foot corner. Attach the guy to the pole at the point where a side guy would normally be attached. A typical installation is shown in the following illustration.



2.08 "H" fixtures set in unstable ground may require ground bracing in order to prevent the fixture from sinking in the ground. The type of support to be provided will usually be

of the platform type described in the Section covering placing poles in soft soil.

2.09 A push braced "H" fixture may be used where it is impracticable to place head guys, as at submarine cable crossings as shown in the following illustration.



G21.151.1