

PLACING CROSSARMS

EXTENSION FIXTURES

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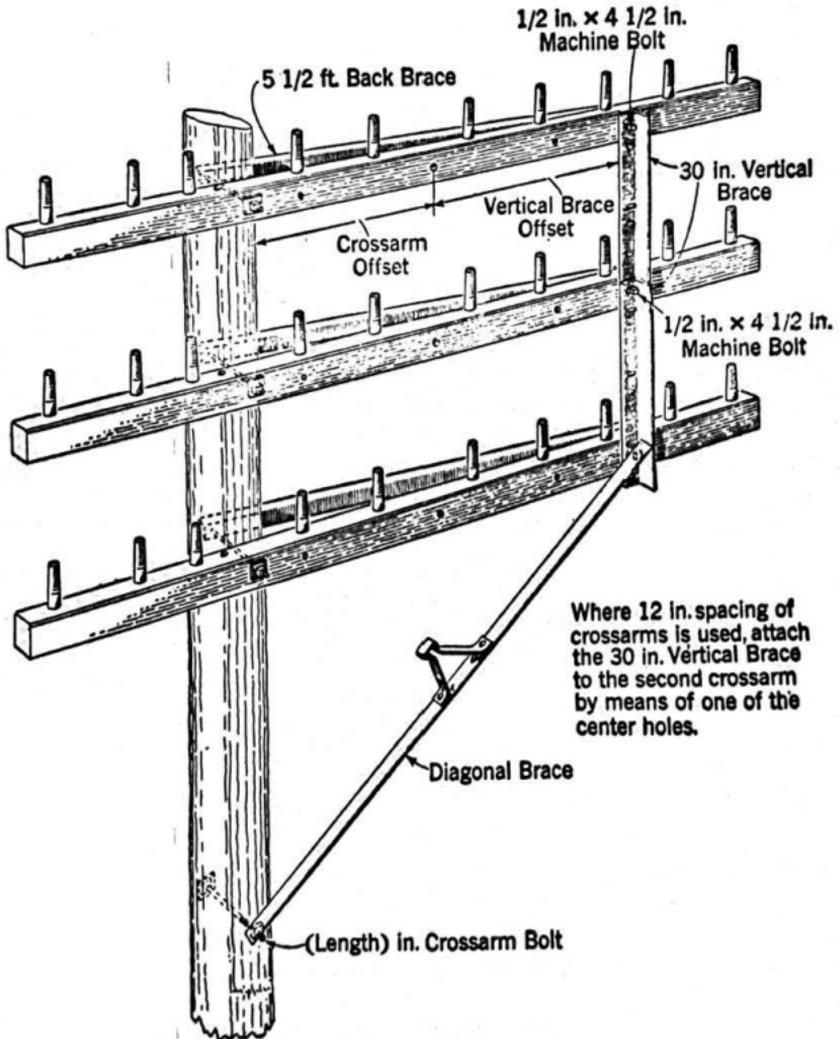
1. GENERAL

- 1.01 This section covers the placing of crossarms as extension fixtures.
- 1.02 Place extension fixtures only where necessary to clear trees, buildings or other obstructions or where necessary to keep wires in line at a pole which has been set out of line.

Note: Extension fixtures shall not be placed on toll lines except where specified in the detail plans or unless authorized by the Plant Engineers.

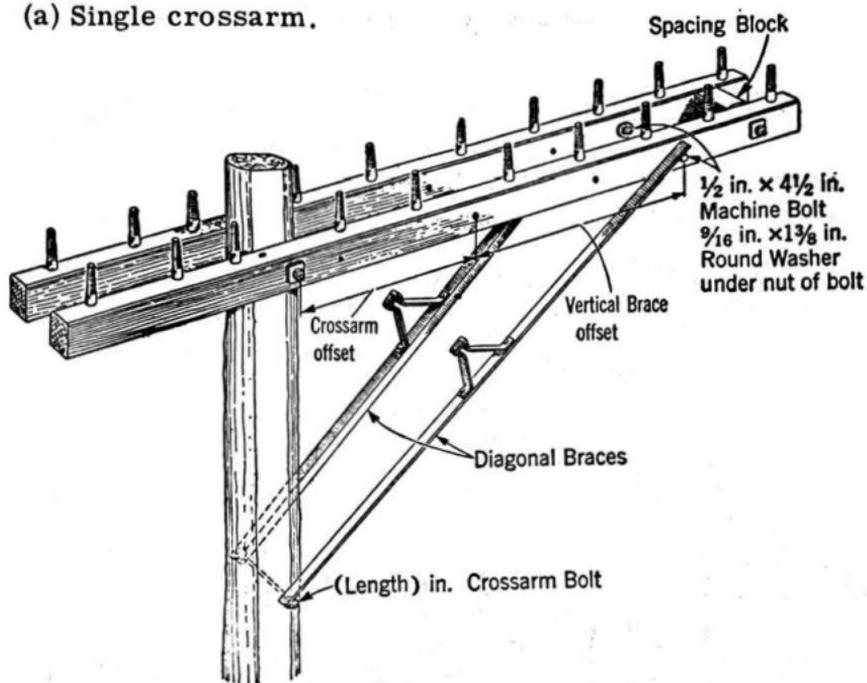
2. EXTENSION FIXTURES

2.01 The following illustration shows the method of placing extension fixtures where one diagonal brace is adequate, as indicated in Part 3, for the load involved.



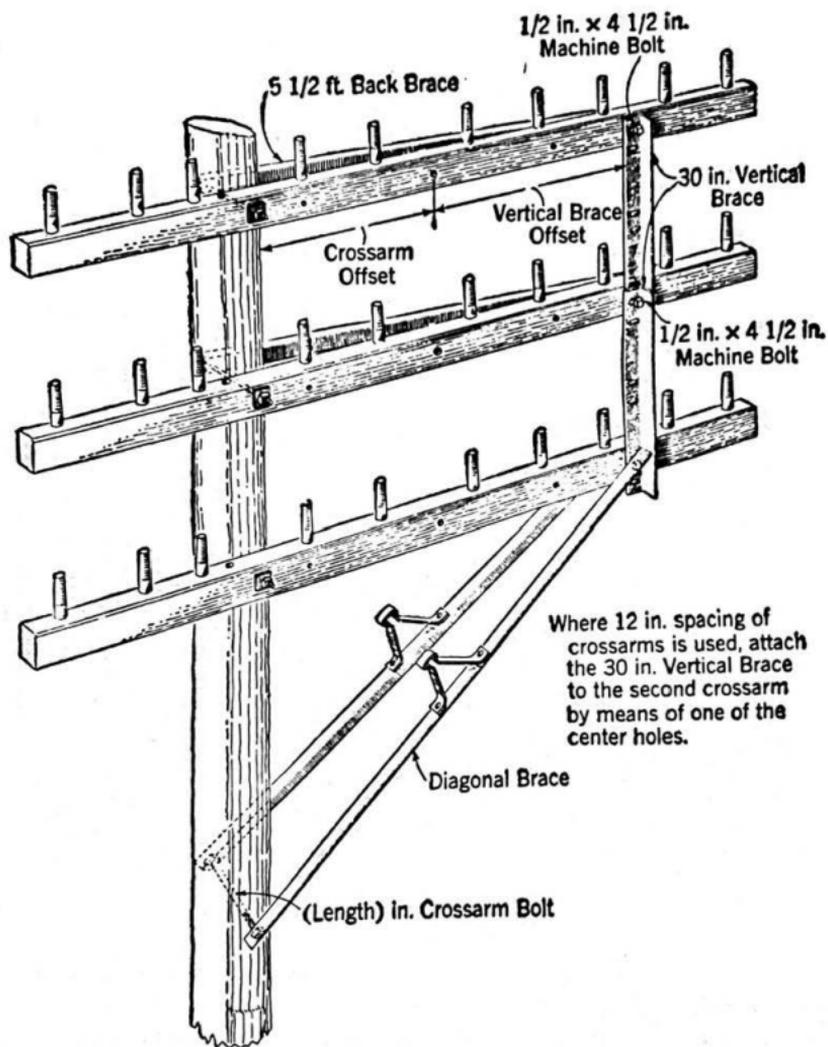
2.02 Where strength requirements, as indicated in Part 3, necessitate the use of two diagonal braces, place extension fixtures in the following manner.

(a) Single crossarm.

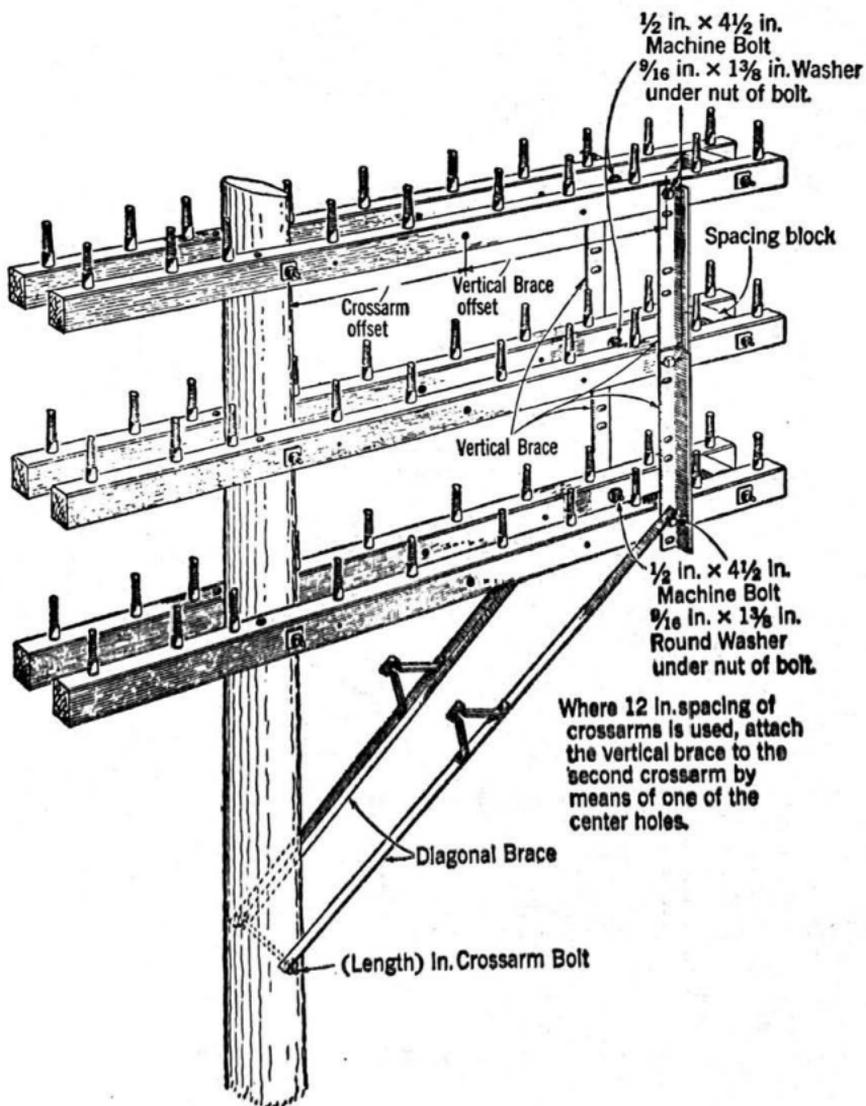


(b) Two or more crossarms.

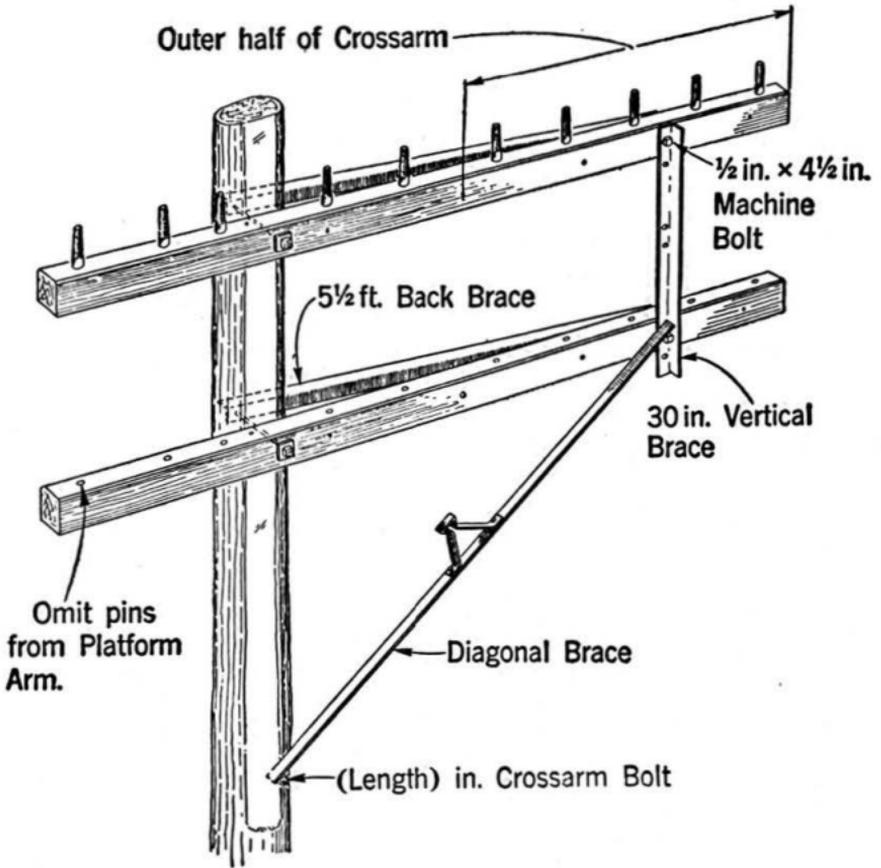
Note: Omit back brace from lowest crossarm.



2.03 Where double crossarms are required, construct extension fixtures as illustrated in Paragraph 2.02 (a) or as follows:

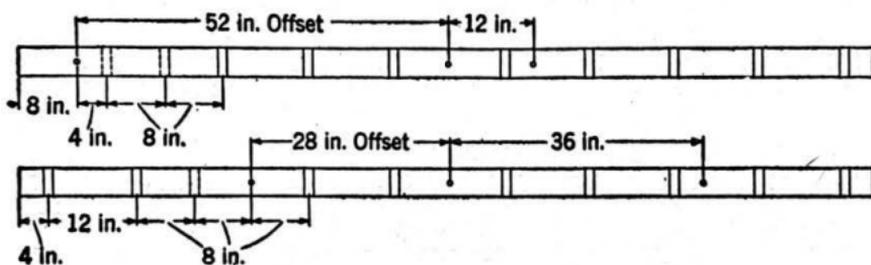


2.04 A platform extension fixture (additional arm) may be placed if drop wire or bridle wire will be attached to the outer half of a single extension crossarm and the point of attachment cannot be reached by an available extension ladder.

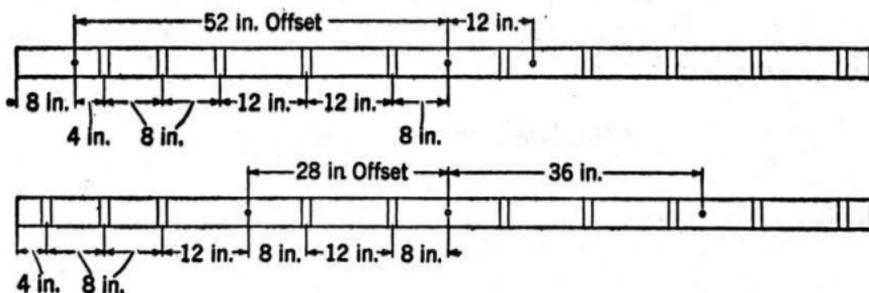


2.05 Wherever practicable, limit the distance to which a cross-arm is offset to the following examples. Other crossarm offsets may be used provided the space between adjacent pins is not less than the minimum pin spacing of the corresponding type of crossarm shown below:

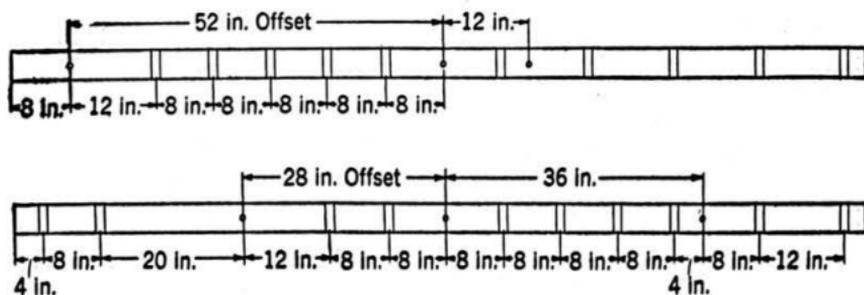
10A CROSSARM ON TELEPHONE POLE



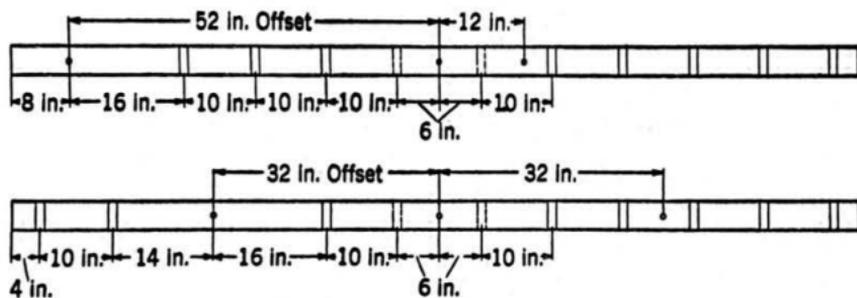
W8 CROSSARM ON TELEPHONE POLE



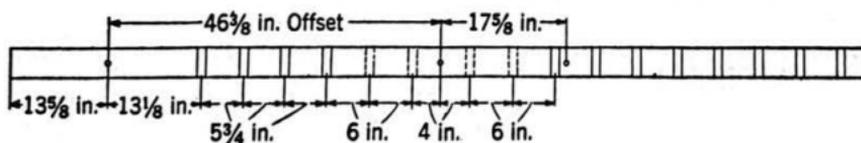
W8 CROSSARM ON JOINT POLE



10B CROSSARM ON JOINT POLE



16B CROSSARM ON JOINT POLE



3. STRUCTURAL REQUIREMENTS

- 3.01 The following table specifies the maximum number of cross-arms that may be supported by one or two diagonal braces.

Note: It is preferable to avoid the use of extension fixtures in lines with average span lengths greater than 350 feet.

CROSSARMS SUPPORTED BY SINGLE DIAGONAL BRACE (a)
(ALL CROSSARM OFFSETS)

(b) Span Length (Feet)	Heavy Loading Area		Medium Loading Area		Light Loading Area	
	10 Pin Crossarms	16 Pin Crossarms	10 Pin Crossarms	16 Pin Crossarms	10 Pin Crossarms	16 Pin Crossarms
0-100	4	3	4	3	4	3
101-120	4	2	4	3	4	3
121-150	3	2	4	3	4	3
151-225	2	1	4	2	4	3
226-300	1		4		4	
301-400	1		3		4	
401-450	1		2		4	
451-600	(c)		2		4	

- Notes:**
- a. Crossarms in excess of the number indicated, up to twice the number indicated, must be supported by two diagonal braces.
 - b. Use the longest adjacent span length.
 - c. Double crossarm supported by two diagonal braces.

3.02 A pole supporting an extension fixture in non-joint lines must be at least one class larger than the average class of poles in the line and never less than Class 7. If strength requirements necessitate the use of two diagonal braces for the support of an extension fixture, the pole must be at least two classes larger than the average class of poles in the line and never less than Class 5.

3.03(a) It is preferable to avoid the use of extension fixtures at downward changes in grade in lines with average span lengths less than 350 feet. If necessary, use double crossarms with two diagonal braces at changes in grade not in excess of 1/10 in the Heavy Loading Area, 2/10 in the Medium Loading Area and 3/10 in the Light Loading Area.

(b) Do not use extension fixtures at downward changes in grade in lines where the average span length is greater than 350 feet.