

STATE ELECTRICITY COMMISSION OF VICTORIA

LINESMEN'S SCHOOL NOTES

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Subject:	Division	Date
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POLE CONSTRUCTION	DISTRIBUTION	9/12/55

② There are five main types of poles with crossarms:

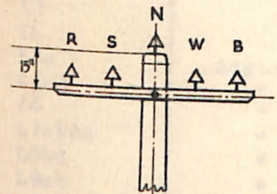
- (i) intermediate poles - conductors pass straight through.
- (ii) angle poles - for change in direction of line without straining.
- (iii) semi-anchor poles - a special structure with an in-line guy, used at Railway and P.M.G. crossings.
- (iv) strain poles - conductors terminate at the pole on one crossarm, and the pole is guyed if necessary. Can be in line, or at an angle, or at a termination.
- (v) anchor poles - for angles greater than 45° ; the lines terminate on separate crossarms and there are separate guys.

The sketches below refer to L.V. poles.

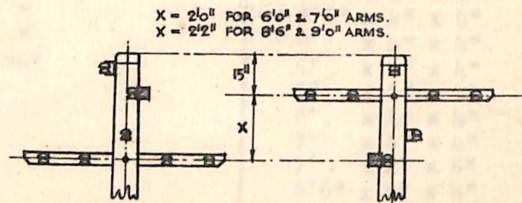
"a" type angle construction is used where there is only a slight change in direction and pin insulators are satisfactory. The construction is similar to an intermediate pole.

"b" type angle construction is for sharper angles where pin insulators could not withstand the sideways pull, and shackle insulators are used instead.

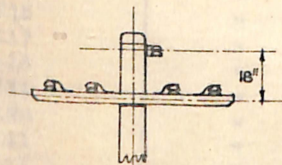
For intermediate and strain pole construction the kingbolt is 15" from the top of the pole cap. For "b" type angle poles it is 18" from the centre of the "A" bracket, which is fitted against the bottom edge of the pole cap.



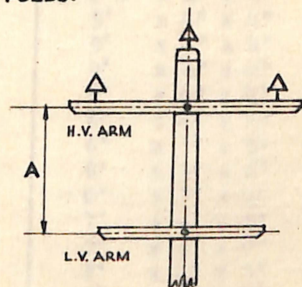
INTERMEDIATE AND "A" TYPE ANGLE POLES.



TWO VIEWS OF STRAIN, RIGHT ANGLE AND TEE-OFF POLES.



"B" TYPE ANGLE POLE



INTERMEDIATE H.V. AND L.V. POLE

When L.V. is run on 22kV. or 6.6kV. poles, $A=4'0''$ (see Drg. 7023/5). Note that $A=4'7''$ on a pole where the H.V. terminates and L.V. continues on, due to loss of clearance through using disc insulators in place of pin insulators on the H.V.

For angles in a 22kV. line, pin insulators are used without a bearing washer in Type 1 angles but with a bearing washer on crossarms and pole top assembly in Type 2 angles. When the sideways pull is too great for Type 2 angle construction, disc insulators are used and the pole becomes a strain pole.

In 66kV. construction, there is no standard angle pole using pin insulators. A Type 1 angle pole uses disc insulators suspended from crossarms, a Type 2 uses disc insulators attached to the pole by extension eyebolts, and

a Type 3 by short eyebolts (see Drg. 7042/1).

① Bracket Construction (WITHOUT CROSSARMS)

Bracket (or rural) construction consists of L.V. poles without crossarms, and with the conductors supported on pin insulators on "B" brackets and a pole cap pin. It is used mainly where 2 or 3 wire supply is required, for private service lines, or for L.V. mains on heavily timbered roads and narrow streets. The first bracket is placed 15" from the pole top, the others at 9" intervals, but on alternate sides of the pole. This arrangement ensures a distance of 15" between conductors.