
Single-Phase Angle Pole Top Assemblies

1. Scope

This standard covers the information necessary to construct the pole top assemblies for single-phase angle poles supporting #4 AWG copper primary conductors on the 26 kV primary distribution system. Requirements for vertical spacing and hardware, and installation instructions to connect the primary conductor to the pole are included.

Criteria for pole top assemblies covered under this standard include the following:

Grade of construction	C
Pole class	3 or stronger
Pole length	50 ft
Soil condition	Average
Allowable line angle	8°–30°

For line angles less than the allowable line angle described above, refer to SCL 0121.01.

For line angles greater than the allowable line angle described above, refer to SCL 0121.05.

Composite, steel, laminated and other non-wood poles are outside the scope of this standard.

2. Application

This standard provides direction to Seattle City Light (SCL) engineers, crews and contractors for the installation of single-phase angle pole top assemblies on 26 kV distribution poles with #4 AWG copper primary conductors.

3. General Requirements

An allowable line angle for a single-phase angle pole is between 8 and 30 degrees as shown in Figure 3a and shall be constructed as shown in Figure 3b.

A side tie shall be used for an angle pole and be installed on the side of the insulator away from the pole. The headpin on an angle pole (if required) shall be installed on the side of the pole where the conductor angles into the pole.

Angle poles shall be guyed as required in SCL 0199.01.



Figure 3a. Allowable Line Angle Range for 8°–30° Angle Pole

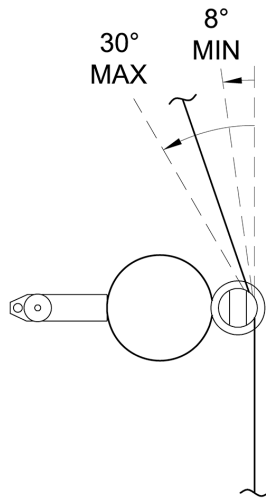
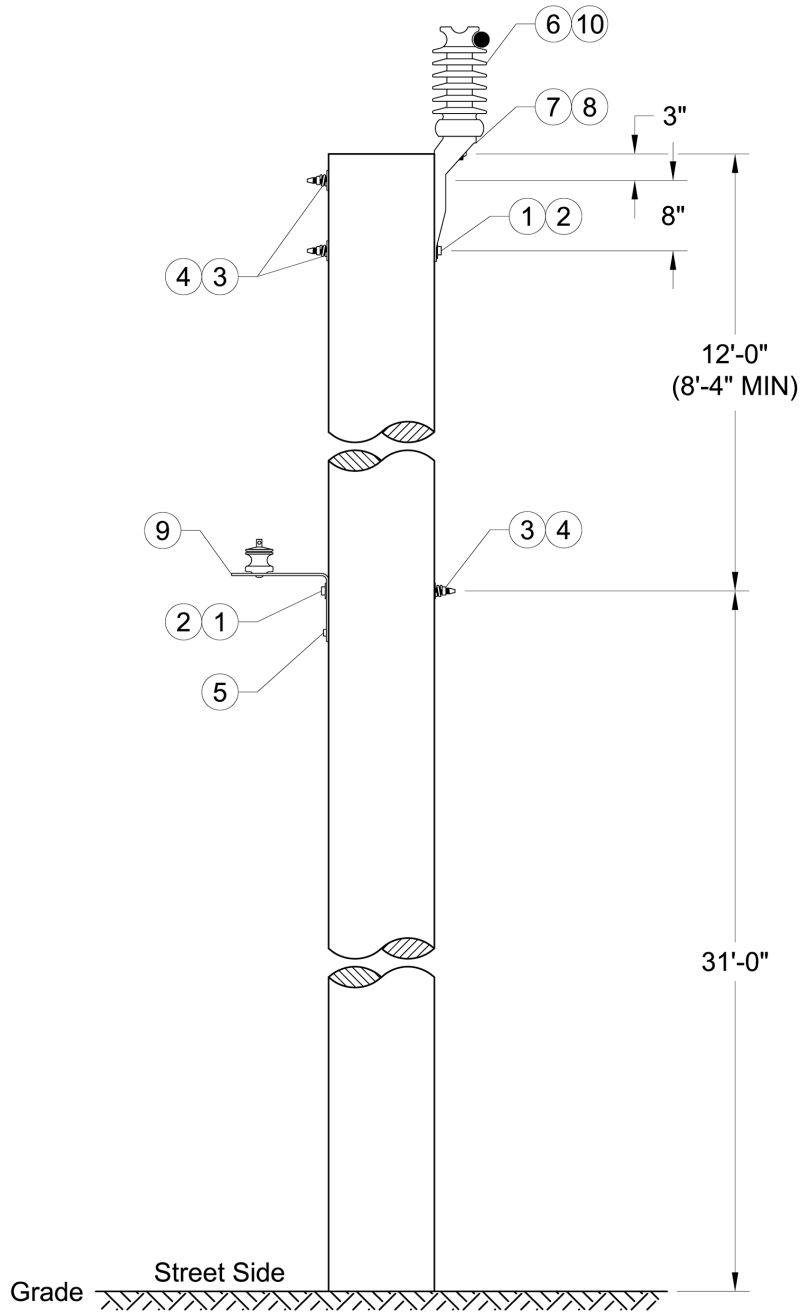


Figure 3b. Single-Phase Angle Pole Top Assembly (8°–30°)



4. Construction Notes

The LR bracket is installed on the street side of the pole.

If two neutrals are required, mount the second neutral on the street side 1 ft below the top bolt hole of the original neutral.

If poor soil is found in the field, contact the SCL Design Engineer.

If there are avian and wildlife concerns, contact the SCL Design Engineer.

If there are salt spray concerns, contact the SCL Design Engineer.

5. Material List

Table 5. Materials for Single-Phase Angle Pole Top Assemblies

Fig	Compatible Unit	ID	Qty
3b	Single-phase #4 AWG angle, 8°–30°	PLT#4-1ANGHP	
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#	Material Description	ID	
1	Bolt, machine, galvanized, 5/8" x 14"	780846	3
2	Washer, round, flat, 5/8"	585030	5
3	Washer, square, flat, 2-1/4" x 2-1/4"	585135	1
4	Washer, coil, spring, 5/8"	584261	3
5	Screw, lag, 1/2" x 4"	785261	1
6	Insulator, post top, 34.5 kV	014304	2
7	Bracket, pole top	563253	2
8	Stud, short	696826	2
9	LR bracket	690404	1
10	Wire, tie, insulator, #6 AWG Solid Cu SD (ft)	610210	6

6. References

SCL Construction Standard 0199.01; "Requirements for Guying and Anchoring"

SCL Construction Standard 0121.01; "Single-Phase Tangent Pole Top Assembly"

SCL Construction Standard 0121.05; "Single-Phase Dead End Pole Top Assemblies"

7. Sources

National Electrical Safety Code (NESC); C2-2012 Edition; Institute of Electrical and Electronics Engineers (IEEE) Inc., New York, NY, 2011

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