

4.6.1. Periscope Clearances and Bracing Requirements

Applicants must ensure that periscopes and raceway-type service masts extend at least 12 inches above any roof or eave they may penetrate. Applicants may be required to raise periscopes and raceway-type service masts when using them as attachment structures and/or to obtain the appropriate clearances for service drop conductors. For more information, see Figure 4-13 through Figure 4-16, all found on Page 4-13. Also, see Figure 4-34, “Open Wire Service, #4 to 397.5 kcmil Aluminum,” and Figure 4-35, “Service Drop Cable,” found on Page 4-18. Finally, see Figure 4-36 through Figure 4-38, found on Page 4-20.

Applicants may have to brace periscopes that project above the roof lines, as shown in Figure 4-39 and Table 4-5. An acceptable method of bracing is illustrated in Figure 4-34 and Figure 4-35. Table 4-5 lists the maximum periscope heights that applicants can install without bracing for different types of conduit.

The periscope (i.e., mast) height without bracing is limited to 30 inches above the roof in either of the following two locations.

- Where the service drop is installed through trees.
- Where trees or tree branches may strike or cause unplanned loading on the service drop.

Applicants must ensure that unbraced periscopes projecting above roofs or eaves are continuous without couplings from the point where the utility service drop is attached to the periscope to 30 inches below the roof or eave. When the periscope structure requires support above the roof, applicants must ensure that it is braced, not guyed, as shown in Figure 4-38. The brace must be located as described in Table 4-4. When applicants need to brace periscope structures, the bracing must consist of two galvanized steel members installed at an approximate 90° spread. Braces must consist of a minimum 3/4-inch galvanized steel pipe or 1-1/4-inch x 1-1/4-inch x 1/8-inch galvanized steel angles.

Table 4-5 Maximum Mast Height Above the Roof Without Bracing¹

(IPS) Conduit Size		Maximum Height Without Bracing
GRS ² or IMC ³	Aluminum	
All Measurements in Inches		
1-1/4	2	42
1-1/2	2-1/2	42
2	3	54
Larger	Larger	78

¹ See Subsection 4.5.3. on Page 4-19 for snow-loading area requirements.

² GRS: galvanized rigid steel

³ IMC: intermediate metal conduit