

TECHNICAL BULLETIN

2-Side Support Minimum Glass Thickness Recommendations

Glass panels that are supported on only two edges (top and bottom) are more flexible than those glazed on all four sides. Therefore, care must be exercised when considering the appropriate glass thickness to be used. If too thin, these panels become susceptible to small pressure fluctuations on one side of the panel, causing the glass to temporarily flex or shudder. Point loads against the glass face, such as people bumping, leaning, or pushing on the glass, will noticeably deflect the glass. As the height of these panels increases, so too does the flex and/or deflection that results from such forces. In order to guard against excessive and objectionable deflection the glass thickness must be increased as the height of the panel increases. The table below shows the Glass Association of North America’s recommended minimum thickness of fully tempered glass for various heights used in interior butt-glazed conditions.

Table 1

Maximum unsupported span from top to bottom of glass	Recommended minimum thickness of Fully Tempered glass
5 ft. (60")	1/4"
8 ft. (96")	3/8"
10 ft. (120")	1/2"
12 ft. (144")	5/8"
14 ft. (168")	3/4"

Unsupported spans greater than 14 ft. require glass thicknesses that are not domestically manufactured and therefore not shown. The use of partial or full-height glass fins can be used to reduce the glass thickness required or increase the height of the unsupported span. Engineering calculations must be made on a case-by-case basis.

It is important to note, however, that the thicknesses indicated in the above table will NOT meet BOCA’s model National Building Code for adjacent panels not linked together by mechanical means. The BOCA code states:

“Where interior glazing is installed adjacent to a walking surface, the differential deflection of two adjacent unsupported sides shall not be greater than the thickness of the panels when a force of 50 pounds per linear foot is applied horizontally to one panel at a point up to 42 inches above a walking surface.”

In order for the designated glass thicknesses and corresponding unsupported spans in Table 1, above, to also comply with the BOCA code, there must be adequate silicone or permanent clips used to mechanically link the adjacent butt edges of the panels. Without such linkage either the unsupported span must be reduced or the fully tempered glass thickness increased. Table 2 shows the recommended minimum thickness of fully tempered glass that will meet the BOCA code for panels that are not linked together.

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2-Side Support Minimum Glass Thickness Recommendations (Cont'd)

Table 2

Panel Height	Distance from walking surface to bottom edge of glass				
	0"	6"	12"	18"	24"
7 ft. (84")	5/8"	5/8"	5/8"	1/2"	1/2"
8 ft. (96")	5/8"	5/8"	5/8"	5/8"	1/2"
9 ft. (108")	5/8"	5/8"	5/8"	5/8"	5/8"
10 ft. (120")	3/4"	3/4"	5/8"	5/8"	5/8"
11 ft. (132")	3/4"	3/4"	3/4"	5/8"	5/8"
12 ft. (144")	3/4"	3/4"	3/4"	3/4"	5/8"
13 ft. (156")	n/a	3/4"	3/4"	3/4"	5/8"
14 ft. (168")	n/a	n/a	3/4"	3/4"	5/8"
15 ft. (180")	n/a	n/a	3/4"	3/4"	3/4"

The most common application for interior butt glazed (2-sided support) fixed glass panels would be where the bottom of the glass is resting in a channel or rail at floor level. For this calculation the distance from walking surface to bottom edge of glass is 0".

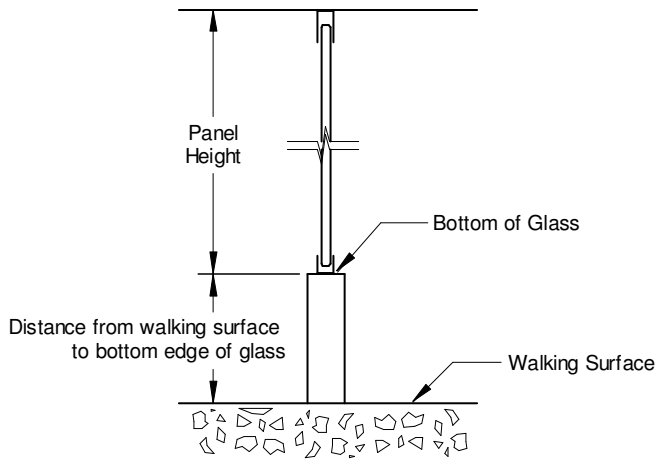


Fig. 1