



Stairbuilders and Manufacturers Association

International Code Council and “The Ladder Effect/Climbability”

There has been much discussion over the years about the safety of horizontal or decorative infill patterns in balustrades that are referred to in the code as guards. In fact, the first edition of the International Code Council’s (ICC) “One and Two Family Dwelling Code”, known as the 2000 International Residential Building Code (IRC) did include a restriction. However, the following year, in the 2001 IRC Code Cycle the restriction was deleted.

This Sentence text was deleted from IRC section **R316.2 Guard opening limitations** when published in the 2001 supplement to the IRC:

“Required guards shall not be constructed with horizontal rails or other ornamental patterns that results in a ladder effect.”

The text was determined to be too subjective and impossible to interpret or enforce consistently. In subsequent code cycles the issue of climbable guards was debated without substantiation for change yet remained contentious. The ICC determined that this and other issues required a more intensive and thorough study that resulted in the formation of the Climbable Guard Study Group under the newly formed “Code Technology Committee” (CTC). Following an intensive three year study involving all interests on both sides of the issue the CTC resolved that no change in the regulation of guard design could be recommended that would make guards less climbable and safer.

It important to note, that the ICC’s International Building Code (IBC); *applicable to all buildings, residential, commercial, institutional, public, etc.* has never restricted the use of horizontal or decorative infill patterns. Most recently in September 2017 the ICC released the 2018 ICC Model Codes.

From 2001 to what will extend into the next decade, a period of some twenty years, the model codes have not and will not include any restrictions on the use of horizontal or decorative infill.

Please note, that local jurisdictions choose a model code and in the process of their review and adoption into law they make modifications. It is important for architects, stairbuilders, contractors, and homeowners to confirm local codes as related to the design and installation of railing products they choose.

For more Information: [Contact an SMA professional in your area.](#)