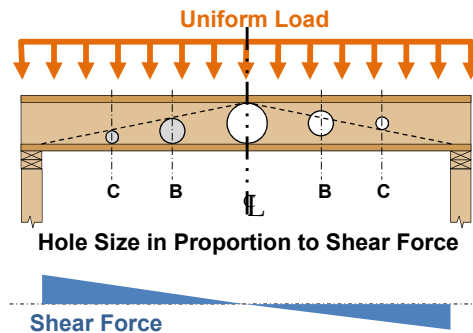


## Cutting Holes in I-Joists



Near the bearing points, the shear forces are greatest. Generally holes in the web material can be larger the further they are from the I joists bearings.

There is additional guidance in the APA publication Performance Rated I Joists Design and Construction Guide or refer to the I-joist manufacturers literature

Never cut or notch the flanges and it is recommended that an 1/8" section of web be left at the top and bottom of any opening.

To determine the hole size allowed and keeping in mind that the shear is greatest near the i-joists bearings, if we draw a line from the top-center of the web to the bottom of the web just above the support, we will have drawn a line that represents the inverse of the shear force. The height of the dotted line at any point approximates the permitted hole size at that location, as indicated by the dark brown holes on the left side. Once hole size is determined by fitting under this line, the holes should be cut in the middle of the depth of the web, like indicated by the white holes on the right side.