

Notching & Boring of Sawn Joists & Rafters

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(5) NOTCHING AND BORING. Notching and boring of beams or girders is prohibited unless determined through structural analysis.

(a) Notching of floor joists.

1. Notches located in the top or bottom of floor joists shall not have a depth exceeding $1/6$ the depth of the joist, shall not have a length exceeding $1/3$ the joist depth nor be located in the middle $1/3$ of the span of the joist.

2. Where floor joists are notched on the ends, the notch shall not exceed $1/4$ the depth of the joist. Notches over supports may extend the full bearing width of the support.

(b) Boring of floor joists.

1. 'General.' A hole may not be bored in a floor joist within 2 inches of a notch or another hole. In no case shall the distance between adjacent holes be less than the diameter of the larger hole.

2. 'Holes near the edge.' Holes bored in the top or bottom 2 inches of a joist shall follow the limitations for notching under par. (a).

3. 'Other holes.' Holes bored in floor joists that are not within 2 inches of the top or bottom of the joist shall have their diameter limited to $1/3$ the depth of the joist.

Holes & Notches in Sawn Joists and Rafters (D = Actual Member Depth)

Member Size	Maximum Hole Diameter or Notch Length = $D/3$	Maximum Edge-Hole Diameter or Notch Depth (except at ends) = $D/6$	Maximum End Notch = $D/4$
2x6	1-3/4"	7/8"	1-3/8"
2x8	2-3/8"	1-1/4"	1-7/8"
2x10	3"	1-1/2"	2-3/8"
2x12	3-3/4"	1-7/8"	2-7/8"

