NOTCHING & DRILLING

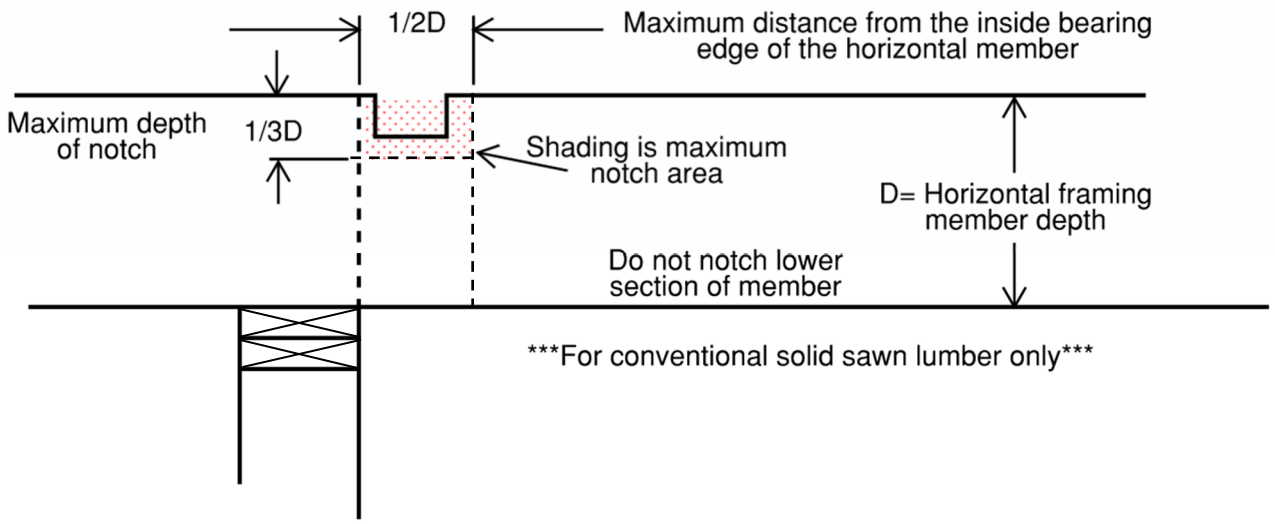
ONTARIO BUILDING CODE

The drilling and notching of framing members to allow the passage of piping, ducts and other services is effected by provisions of the Code. Care must be taken not to cut or notch wood joists and studs in a manner that reduces the load carrying capacity of the member. Supporting members such as beams and lintels cannot be notched or drilled.

JOIST NOTCHING

Notches in repeating horizontal framing members such as roof, ceiling, and floor joists are allowed in the top of the member only, and must be within ½ the depth of the joist from the bearing edge.

Notches are not permitted to be deeper than ⅓ the depth of the framing member unless the framing member has been increased in size by the size of the notch.



Member Size	Max. Distance from supported edge	Maximum Depth of notch
38 x 89 mm (2x4”)	44 mm (1-3/4”)	30 mm (1-1/8”)
38x140 mm (2 x 6”)	70 mm (2-3/4”)	46 mm (1-3/4”)
38x184 (2x8”)	92 mm (3-5/8”)	61 mm (2-3/8”)
38x235 mm (2x10”)	117 mm (4-5/8”)	78 mm (3”)
38x286 (2x12”)	143 mm (5-5/8”)	95 mm (3-3/4”)

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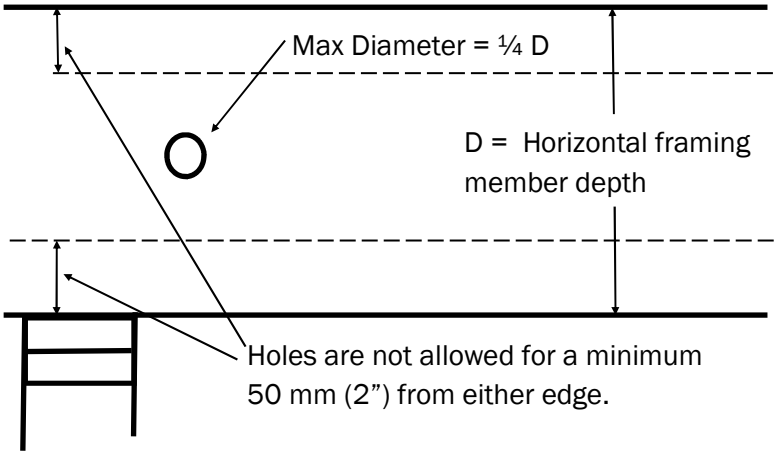
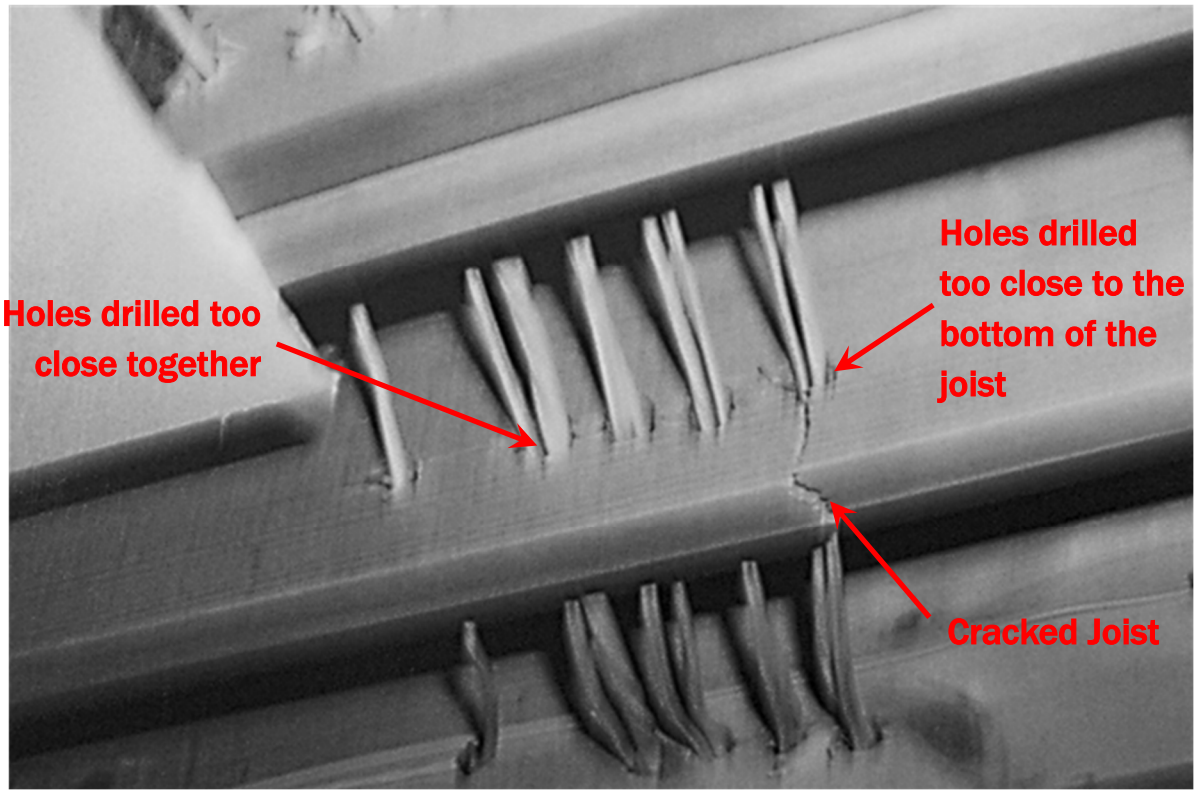
JOIST DRILLING

Holes drilled through floor, ceiling or roof framing (excluding trusses) are not to exceed ¼ the member depth. The holes are not permitted within 50 mm (2 in.) from the edges unless the framing member size has been increased by the size of the hole.

The space between holes is required to be at least the size of the largest hole diameter in a series.



Floor Joists	
Member Size	**Maximum hole size**
38 x 89 (2 x 4")	Not permitted
38x140 mm (2x6")	35 mm (1-3/8")
38x184 mm (2x8")	46 mm (1-3/4")
38x235 mm (2x10")	58 mm (2-1/4")
38x286 mm (2x12")	71 mm (2-3/4")



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WALL STUDS

Wall studs are permitted to be notched or drilled in a loadbearing wall provided the undamaged portion has a minimum of $^{2}/_{3}$'s its depth remaining.

Studs in non-loadbearing walls only require a minimum of 40 mm (1 - $^{9}/_{16}$") in remaining depth for a stud of any size.

Wall Studs		
Wall Type	**Member Size**	**Max Hole Size**
Loadbearing	38mm x 89mm(2x4)	29mm (1-1/8”)
	38mm x 140mm(2x6)	46mm (1-13/16”)
Non-Loadbearing	38mm x 89mm(2x4)	49mm (1-15/16”)
	38mm x 140mm(2x6)	100mm (3-15/16”)

TOP PLATES

Top plates in wall assemblies may be notched and drilled provided a minimum width of 2” of the top plate is intact or the plate is reinforced.

PRE-ENGINEERED ROOF TRUSSES & ENGINEERED WOOD PRODUCTS

Engineered roof trusses are not permitted to be notched or drilled unless the notching or drilling is included in the design of the truss. Contact the truss designer prior to any notching or drilling of the trusses to confirm and provide the details.

Other engineered products such as I-joists in floor assemblies are permitted to be drilled within the interior webbing. These allowances can vary based on the location of the hole or the specific product. If you are using engineered products such as LVL, CLT, or an engineered floor system refer to the manufacturers specifications for permitted drilling allowances. Note that when an engineered product is used as a supporting element, such as a beam, notching and drilling is not permitted unless a stamped engineered detail is provided.