

TABLE 2304.10.1—continued  
FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS		NUMBER AND TYPE OF FASTENER		SPACING AND LOCATION	
Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing <sup>a</sup>					
				Edges (inches)	Intermediate supports (inches)
Interior paneling					
40. $\frac{1}{4}$ "		4d casing ( $1\frac{1}{2}$ " $\times$ 0.080"); or 4d finish ( $1\frac{1}{2}$ " $\times$ 0.072")		6	12
41. $\frac{3}{8}$ "		6d casing (2" $\times$ 0.099"); or 6d finish (Panel supports at 24 inches)		6	12

For SI: 1 inch = 25.4 mm.

- Nails spaced at 6 inches at intermediate supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.
- Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).
- Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafter shall be permitted to be reduced by one nail.
- RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

**2304.11 Heavy timber construction.** Where a structure, portion thereof or individual structural elements are required by provisions of this code to be of heavy timber, the building elements therein shall comply with the applicable provisions of Sections 2304.11.1 through 2304.11.4. Minimum dimensions of heavy timber shall comply with the applicable requirements in Table 2304.11 based on roofs or floors supported and the configuration of each structural element, or in Sections 2304.11.2 through 2304.11.4. Lumber decking shall be in accordance with Section 2304.9.

**2304.11.1 Details of heavy timber structural members.**

Heavy timber structural members shall be detailed and constructed in accordance with Sections 2304.11.1 through 2304.11.1.3.

**2304.11.1.1 Columns.** Minimum dimensions of columns shall be in accordance with Table 2304.11. Columns shall be continuous or superimposed throughout all stories and connected in an approved manner. Girders and beams at column connections shall be closely fitted around columns and adjoining ends shall be cross tied to each other, or intertied by caps or ties, to transfer horizontal loads across joints. Wood bolsters shall not be placed on tops of columns unless the columns support roof loads only. Where traditional heavy timber detailing is used, connections shall be by means of reinforced concrete or metal caps with brackets, by properly designed steel or iron caps, with pintles and base plates, by timber splice plates affixed to the columns by metal connectors housed within the contact faces, or by other approved methods.

**2304.11.1.2 Floor framing.** Minimum dimensions of floor framing shall be in accordance with Table 2304.11. *Approved* wall plate boxes or hangers shall be provided where wood beams, girders or trusses rest on masonry or concrete walls. Where intermediate beams are used to support a floor, they shall rest on top of girders, or shall be supported by an *approved* metal hanger into which the ends of the beams shall be closely fitted. Where traditional heavy timber detailing

is used, these connections shall be permitted to be supported by ledgers or blocks securely fastened to the sides of the girders.

**2304.11.1.3 Roof framing.** Minimum dimensions of roof framing shall be in accordance with Table 2304.11. Every roof girder and not less than every alternate roof beam shall be anchored to its supporting member to resist forces as required in Chapter 16.

**2304.11.2 Partitions and walls.** Partitions and walls shall comply with Section 2304.11.2.1 or 2304.11.2.2.

**2304.11.2.1 Exterior walls.** Exterior walls shall be permitted to be *cross-laminated timber* meeting the requirements of Section 2303.1.4.

**2304.11.2.2 Interior walls and partitions.** Interior walls and partitions shall be of solid wood construction formed by not less than two layers of 1-inch (25 mm) matched boards or laminated construction 4 inches (102 mm) thick, or of 1-hour fire-resistance-rated construction.

**2304.11.3 Floors.** Floors shall be without concealed spaces. Wood floors shall be constructed in accordance with Section 2304.11.3.1 or 2304.11.3.2.

**2304.11.3.1 Cross-laminated timber floors.** Cross-laminated timber shall be not less than 4 inches (102 mm) in actual thickness. Cross-laminated timber shall be continuous from support to support and mechanically fastened to one another. Cross-laminated timber shall be permitted to be connected to walls without a shrinkage gap providing swelling or shrinking is considered in the design. Corbelling of masonry walls under the floor shall be permitted to be used.

**2304.11.3.2 Sawn or glued-laminated plank floors.** Sawn or glued-laminated plank floors shall be one of the following:

- Sawn or glued-laminated planks, splined or tongue-and-groove, of not less than 3 inches (76 mm) nominal in thickness covered with 1-inch (25 mm) nominal dimension tongue-and-groove