Shear Transfer Equivalency of BCI®/AJS® Rim Joists and Blocking

BCI®/AJS® Joists may be used as rim joists and blocking as an alternate to EWP rim board and LVL products for shear transfer components within lateral load paths. The following table provides flange nailing schedules equivalent to common framing anchors used with solid EWP products for shear load transfer.

Equivalent Connector On-Center Spacing of Flange Nailing (inches) [3][4]

Connector Spacing	All BCI®/AJS® Joists			
	A35[1] / MPA1[1]		LTP4[1] / MP4F[1]	
	DF / SP Plate[2]	SPF / HF Plate[2]	DF / SP Plate[2]	SPF / HF Plate[2]
48”	10”	10”	8”	9”
36”	7”	8”	6”	7”
30”	6”	6”	5”	5”
24”	5”	5”	4”	4”
16”	2 rows @ 6”[5]	2 rows @ 6” [5]	2 rows @ 4” [5]	2 rows @ 6” [5]
12”	2 rows @ 4” [5]	2 rows @ 4” [5]	2 rows @ 4” [5]	2 rows @ 4” [5]

Notes:

1. Capacity of Framing Anchors:
   a. A35 = 650 lb (DF/SP plate) or 560 lb (SPF/HF plate), LTP4 = 715 lb (DF/SP plate) or 615 lb (SPF/HF plate), long axis parallel to rim/blocking length, per Simpson Strong-Tie® literature (*Wood Construction Connectors 2025*).
   b. MPA1 = 615 lb (DF/SP plate) or 515 lb (SPF/HF), MP4F = 750 lb (DF/SP plate) or 645 lb (SPF/HF plate), long axis parallel to rim/blocking length, per Mitek® literature (*Structural Products Catalog 62nd Edition 2024*).
2. Plate species: DF = Douglas-fir, SP = southern pine, SPF = spruce pine fir, HF = hem-fir
3. Allowable nail sizes: 10d box to 16d
4. Nail and framing anchor capacities assume load duration factor of 1.6.
5. When two rows of nailing required, one row per side of web, stagger nails.

- The project’s design professional(s) of record shall always be properly notified of any product substitution request.

- BCI®/AJS® Joists may require tighter nail spacing if original design with solid EWP rim/blocking considered toe-nailing capacity in addition to framing anchors.

Vertical load capacities for BCI®/AJS® rim joists and blocking are published in corresponding Boise Cascade EWP Specifier Guides and ICC-ES®/APA evaluation reports ESR-1336 (BCI® Joists) and ESR-1144 (AJS® Joists).

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