



ROOF DETAILS

General Notes
Unless otherwise noted, all details are valid to a maximum slope of 12:12. Joists >16" have a maximum slope of 3:12.

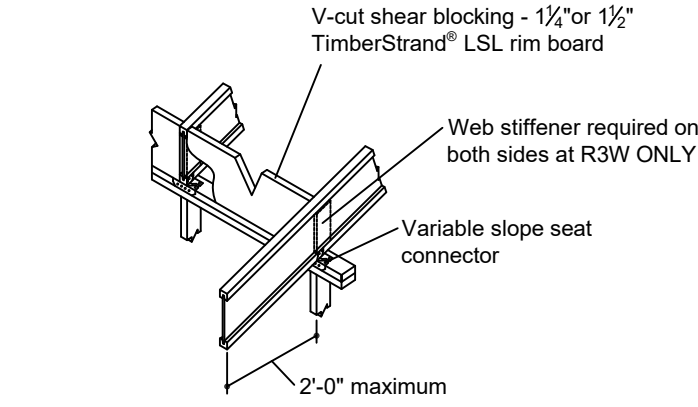
Web stiffeners are required with all 22" and 24" joists and when the sides of the hanger do not laterally support at least 1/2" of the TJI® joist top flange. Also see framing plan.

Shear blocking - 1/8" TJI® Rim Board (with depths ≤ 16"), 1/2" or 1/2" TimberStrand® LSL or TJI® joist.

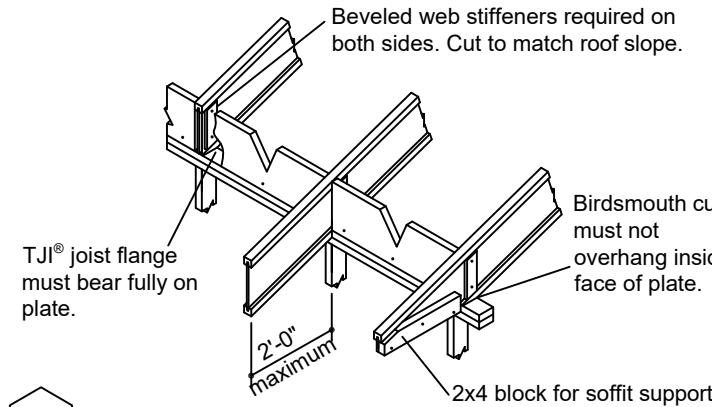
Web Stiffener required on both sides at R1W ONLY

See Beveled Plate Requirements in Trus Joist® TJI® Joist Specifier's Guide, TJ-4000

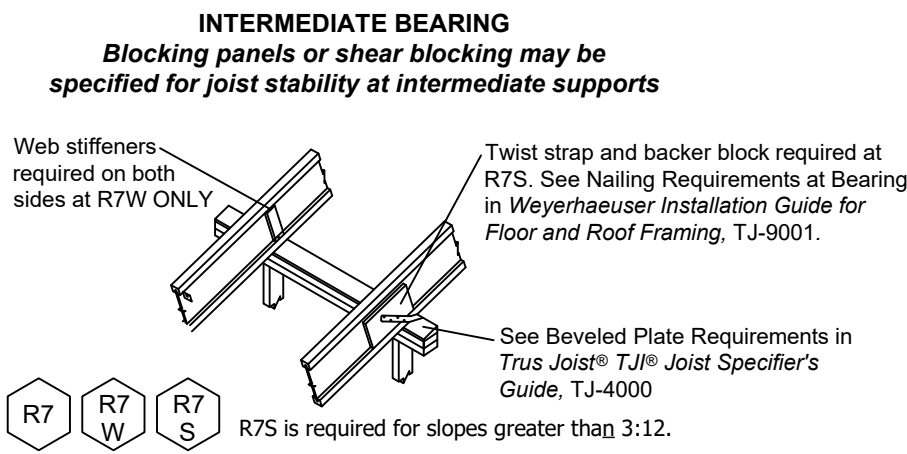
R1 R1W



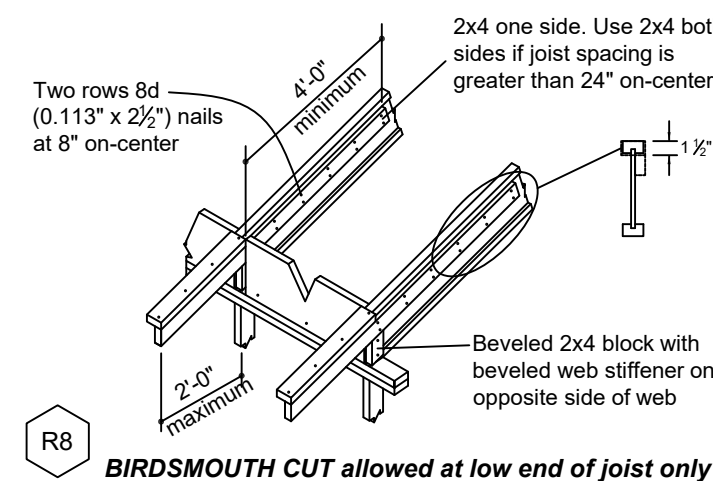
R3 R3W



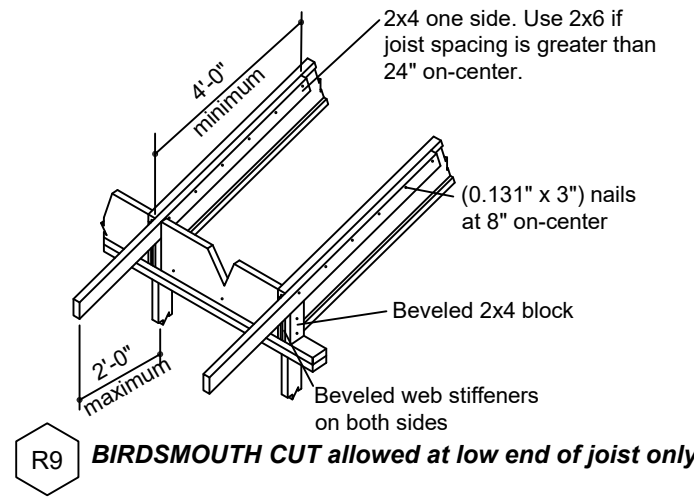
BIRDSMOUTH CUT allowed at low end of joist only



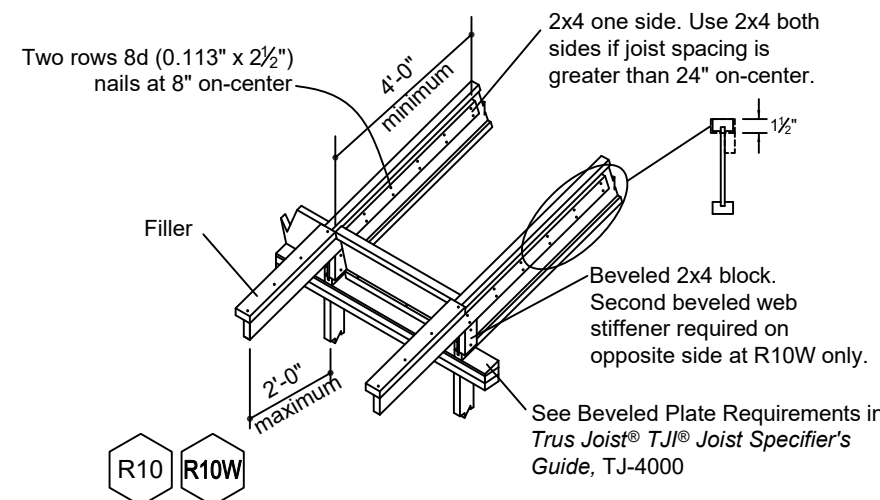
R7 R7W R7S



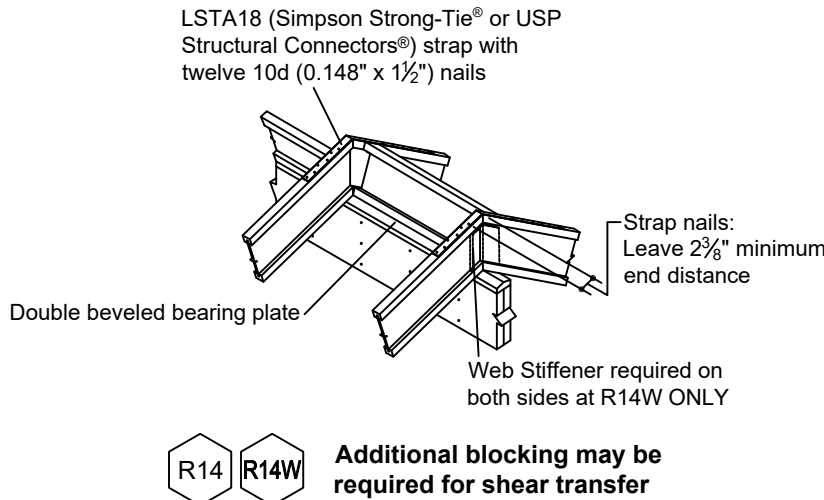
BIRDSMOUTH CUT allowed at low end of joist only



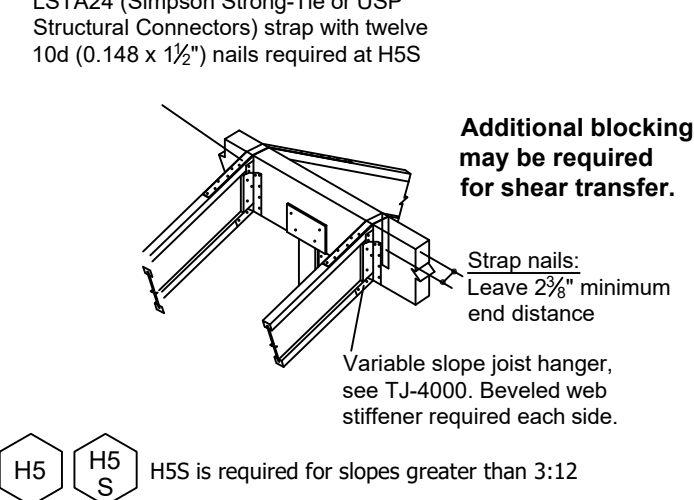
BIRDSMOUTH CUT allowed at low end of joist only



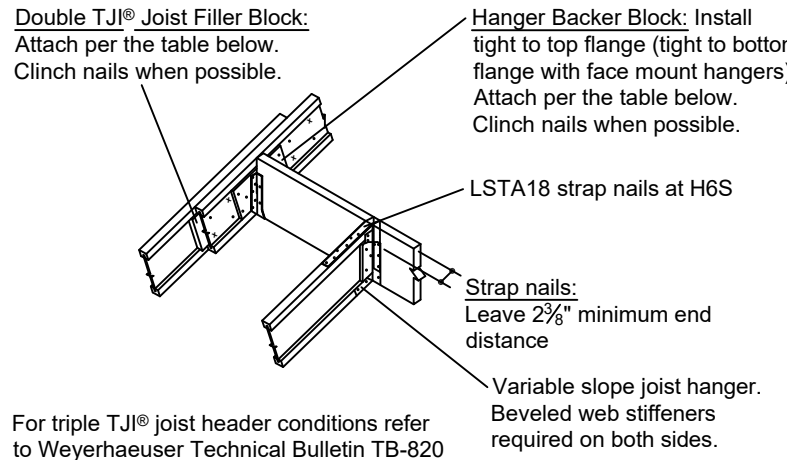
R10 R10W



R14 R14W



H5 H5S



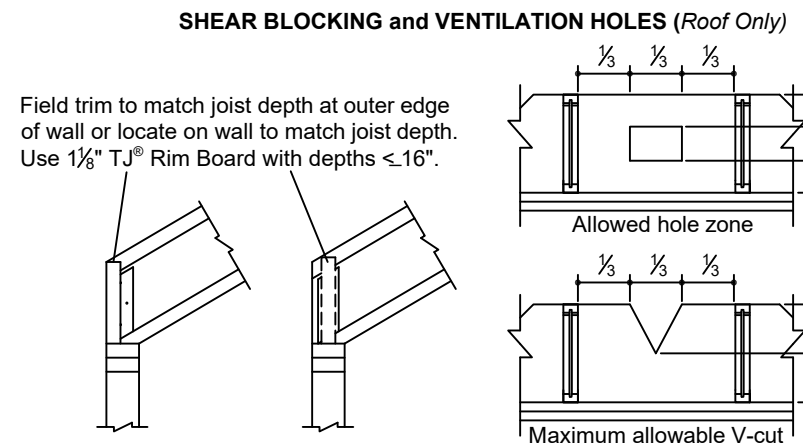
H6 H6S

For triple TJI® joist header conditions refer to Weyerhaeuser Technical Bulletin TB-820

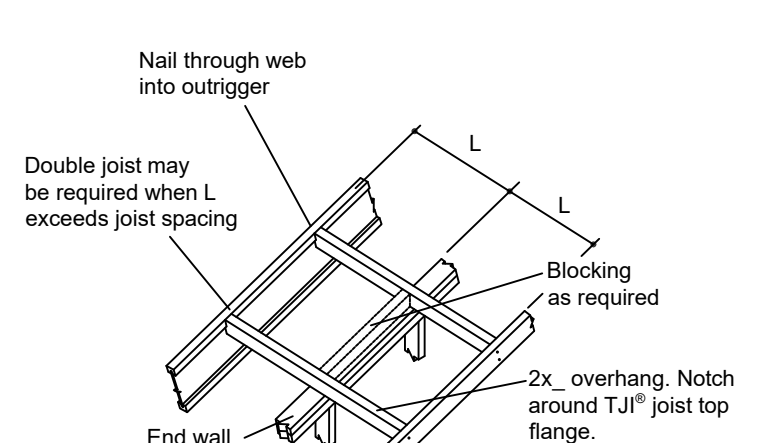
TJI® Depth, D	TJI® Flange Width	Block Type	Size	Quantity
9 1/2" <Ds 20"	less than 3 1/2"	Filler	(0.131" x 3")	15
		Backer	(0.131" x 3")	15
		Filler	(0.131" x 3 1/2")	16 - each side
		Backer	(0.131" x 3")	15
20" <Ds 24"	3 1/2"	Filler	(0.131" x 3 1/2")	25 - each side
		Backer	(0.131" x 3")	15

For nailing capacities refer to TB-834 (ASD) and TB-861 (LSD)

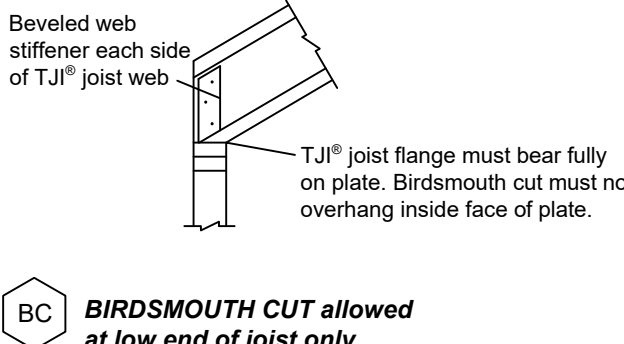
H6S is required for slopes greater than 3:12
For filler and backer block sizes see Trus Joist® TJI® Joist Specifier's Guide, TJ-4000



SB



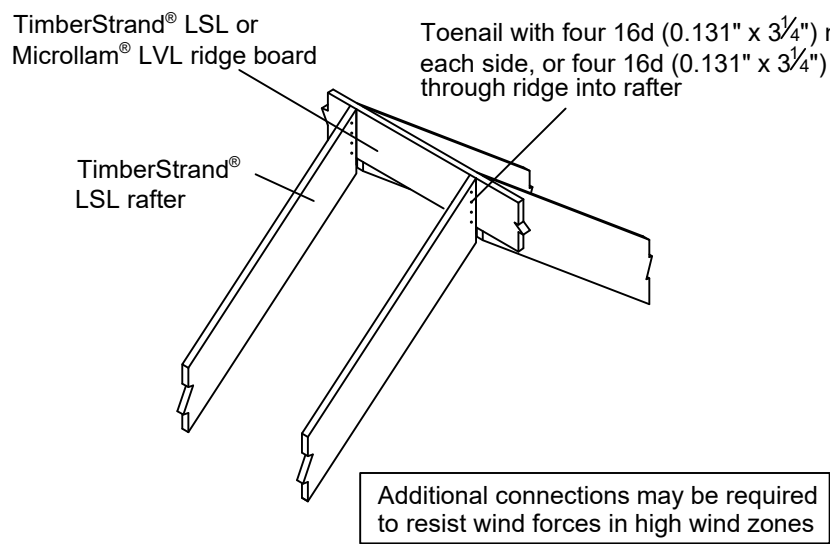
O



BC BIRDSMOUTH CUT allowed at low end of joist only

ROOF FRAMING DETAILS

Ridge Connection

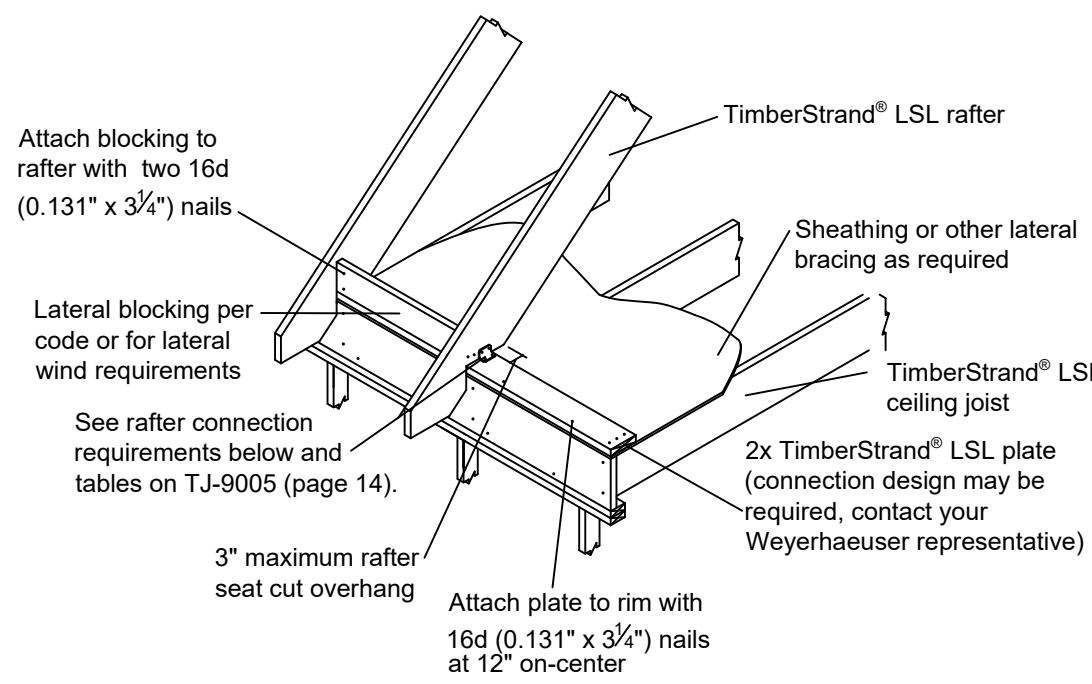


R20

Minimum Ridge Board Depth

Rafter Size	4:12 to 9:12	10:12 to 11:12	12:12
2x6	2x8	2x10	2x10
2x8	2x10	2x12	2x12
2x10	14"	14"	14"
2x12	14"	16"	16"

Heel Connection (Platform)



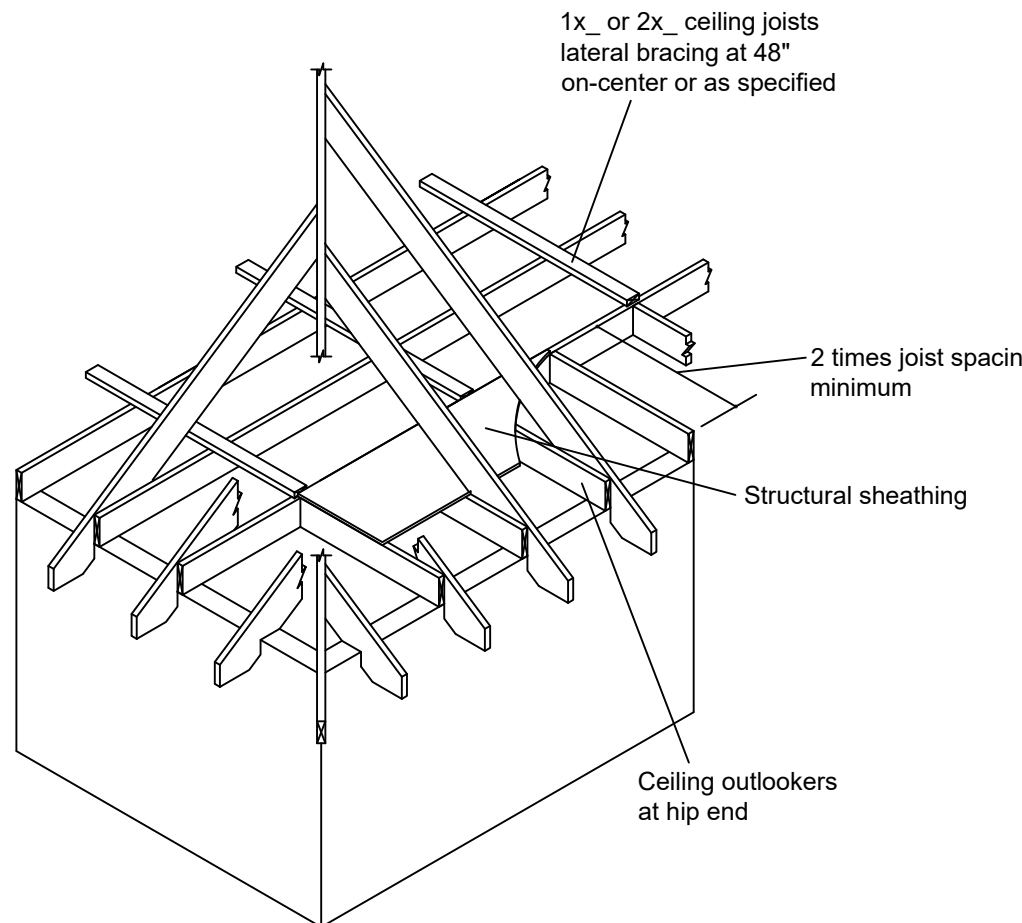
R22

Hanger Type	Clip	Capacity (lbs)	Nailing	
			Top Plate	Rafter/Ceiling Joist
Simpson Strong Tie®	A23	535	10d x 1 1/2"	10d x 1 1/2"
USP Structural Connectors®	A3	545	10d x 1 1/2"	10d x 1 1/2"

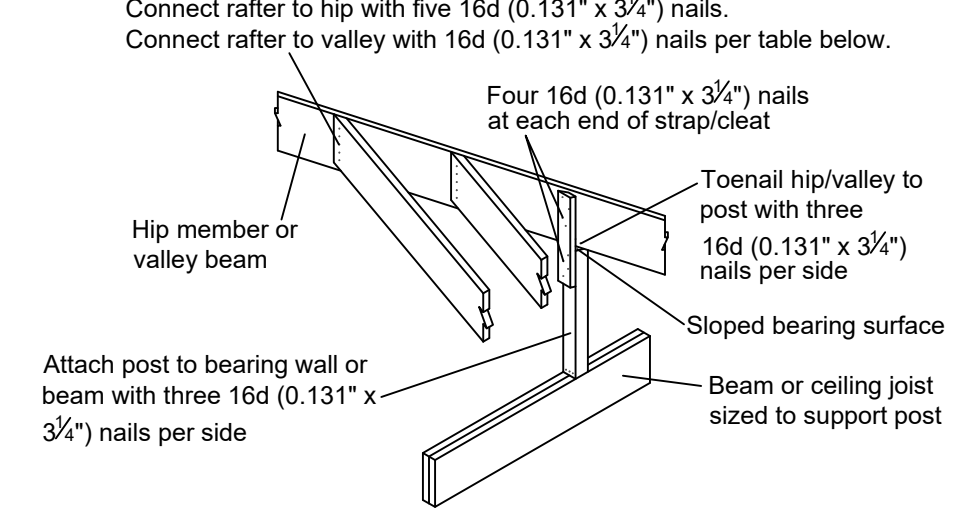
Rafter Connection for Thrust:
• Addresses lateral load only, not intended for wind uplift.
• For lap connection nail quantity requirements, see Rafter Span and Heel Connection Tables in Trus Joist® Roof System Design Guide, TJ-9005.
• If fewer than 8 nails are required, use only one A23 or A3 clip, each side.
• If 8-15 nails required, use two A23 or A3 clips, each side.

R24

Outlooker Detail



Hip/Valley Intermediate Support



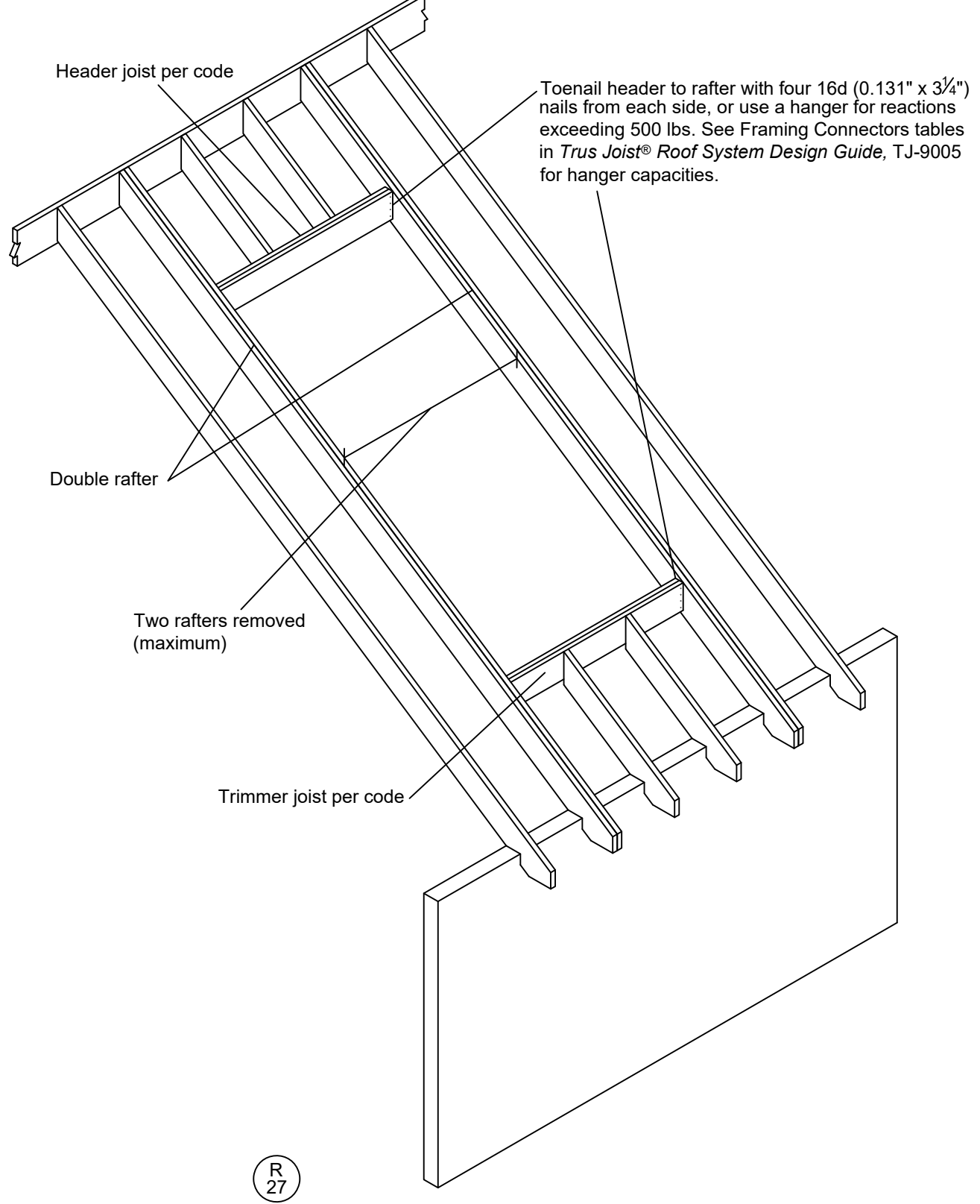
R26

Rafter - to - Valley Connection

Rafter On-Center Spacing	Rafter Span	Roof Snow Load			
		30 LL + 15 DL	50 LL + 15 DL	80 LL + 15 DL	Number of 16d (0.131" x 3 1/4") nails required
16"	6'	5	5	5	
	12'	5	6	8	
	18'	6	9	12	
	24'	8	12	*	
24"	6'	5	5	7	
	12'	6	8	11	
	18'	9	13	*	
	24'	12	*	*	

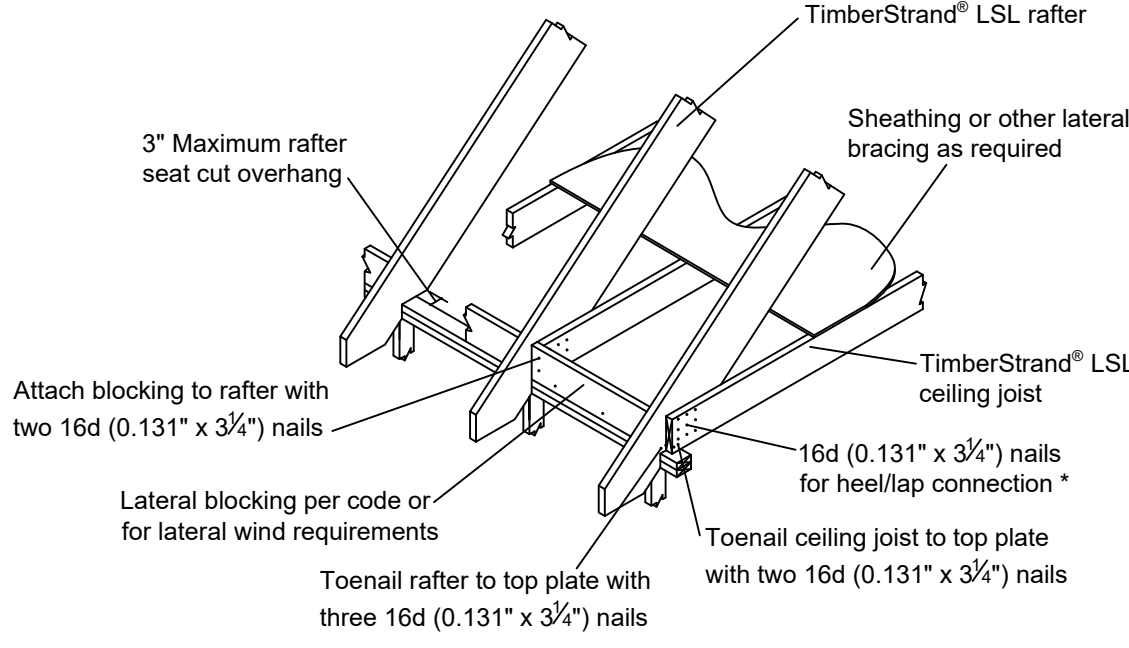
* Contact your Weyerhaeuser representative for additional connection information.

Dormer Framing



R27

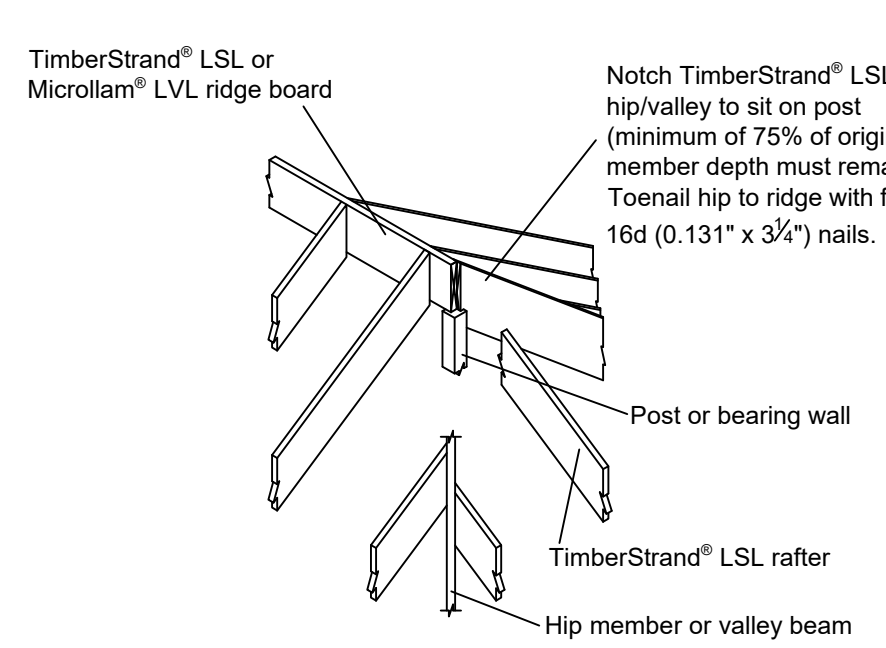
Heel Connection (Lap)



R21

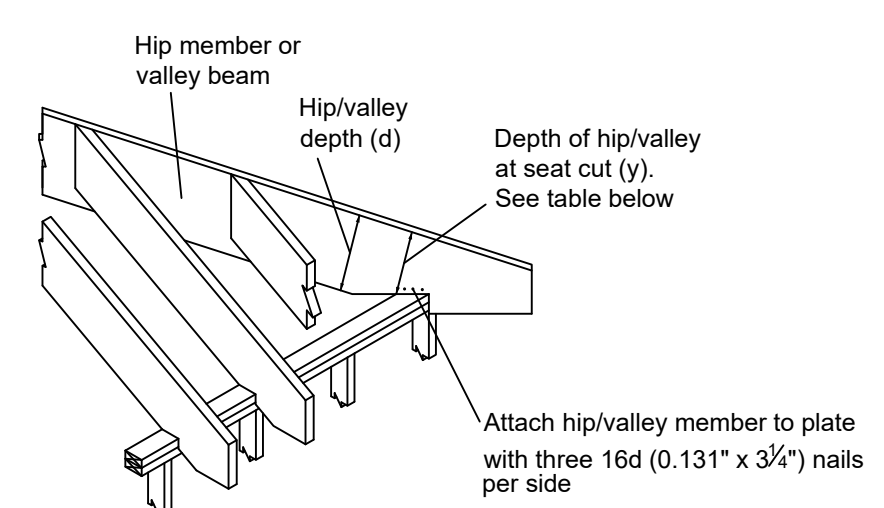
* For heel/lap connection nailing see Rafter Span and Heel Connection Tables in Trus Joist® Roof System Design Guide, TJ-9005.

Hip/Ridge/Valley/ Post Detail



R23

Hip/Valley Low End

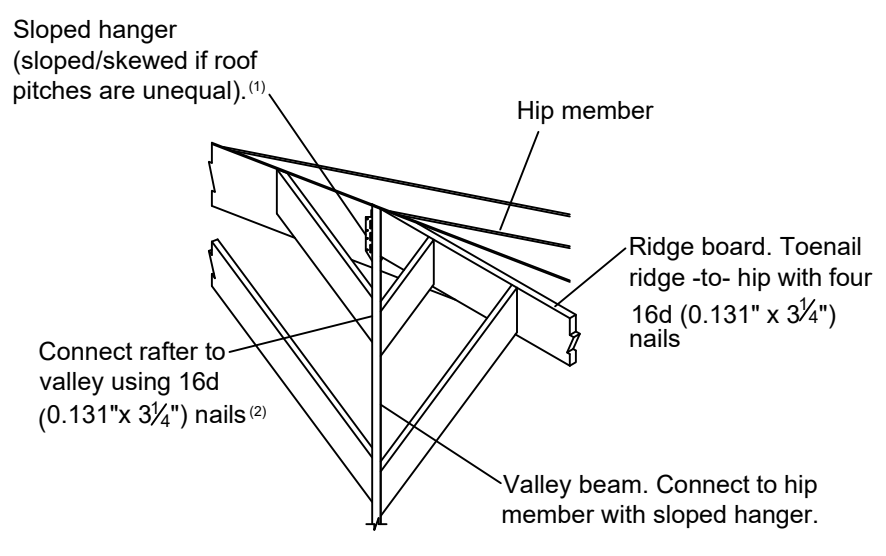


Hip/Valley Depth

Member Type	Minimum Percentage of Original Hip/Valley Depth Required
TimberStrand® LSL	50%
MicroIam® LVL	50%
Hip Member	35%
Valley Beam	60%

(1) For net width greater than 2", minimum percentage is 30%
• Calculate percentage as y/d x 100

Valley-to-Hip Connection



R28

Contact your Weyerhaeuser representative for sizing of a hip or valley with a point load.
(1) See Framing Connectors in Trus Joist® Roof System Design Guide, TJ-9005 for hanger capacities.
(2) See Rafter -to- Valley Connection table in Detail R26 above.



Warning: This product can expose you to chemicals including wood dust which are known to the State of California to cause cancer, and methanol, which are known to the State of California to cause birth defects or other reproductive harm. Drilling, sawing, sanding or machining wood products can expose you to wood dust. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov and www.P65Warnings.ca.gov/wood.

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August 2025 Reorder TJ-4014



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COMMENT

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