

FRAMING DETAILS

F07

Nail rimboard to Joists with 2 1/2" (8d) nail into each flange. Dimension lumber is not suitable for use as rim board with I-joists.

F07A

Dimension lumber is not suitable for use as rim board with I-joists.

F01

Joist blocking

F02

Rim Joist
NJ40U/AJS 24 and NJ60U/AJS 25 requires 2X6 wall for minimum bearing

F27A

Top flange or face mount Joist hanger
LVL

F52

One 2 1/2" (8d) nail each side at bearing
1 1/2" minimum bearing length (1 1/4" for 18-24" deep)

To limit splitting flange, start nails at least 1 1/4" from end. Nails may need to be driven at an angle to limit splitting of bearing plate.

F08

Solid block all posts from above to bearing below

F03

Rim Joist
NJ40U/AJS 24 and NJ60U/AJS 25 requires 2X6 wall for minimum bearing
Joist must be designed to carry wall above when not stacked over wall below

INTERMEDIATE BEARING DETAILS

F06

For load bearing wall above (stacked over wall below)

F09

Blocking may be required, consult design professional of record and/or local building official.
Load bearing wall above (stacked over wall below)

Size	12	16	19.2	24
2X4	6460	4840	4030	3230
2X6	10140	7600	6330	5070

1. Squash blocks are to be in full contact with upper floor and lower wall plate.
2. Capacities shown are for double squash blocks at each Joist, for single squash block, divide the vertical load by 2.

F05A

3/8" min. plywood/OSB or rimboard closure. Nail with 2 1/2" (8d) nail into each flange. Joist blocking required for cantilever.
Structural panel reinforcement. Web stiffeners should be installed if required.
Uplift on back span shall be considered in all cantilever designs.

LATERAL SUPPORT

- Joists must be laterally supported at the ends with hangers, Rim Joists, rimboard, blocking panels or cross-bracing. Blocking panels or cross-bracing are required at cantilever supports.
- Blocking may be required at intermediate bearings for floor diaphragm as per Code, consult local building official.

MINIMUM BEARING LENGTH FOR JOISTS

- 1 1/2" is required at end supports. 3 1/2" is required at cantilever and intermediate supports.
- Longer bearing lengths allow higher reaction values. Refer to the Bldg Code evaluation report.

NAILING REQUIREMENTS

Rim Joist, rimboard or closure panel to Joist:

- Rims or closure panel 1 1/4" thick and less: 2 - 2 1/2" (8d) nails, one each in the top and bottom flange.
- Rim Joist: Toe-nail top flange to Rim Joist with 2-10d box nails, one on each side of flange.

Rim Joist, rimboard or blocking panel to support:

- 2 1/2" (8d) nails at 6" o/c
- When used for shear transfer, follow the building designer's specification.

Joist to Support:

- 2 - 2 1/2" (8d) nails, one on each side of the web, placed 1 1/2" minimum from the end of the Joist to limit splitting.

Sheathing to Joist:

- Prescriptive residential floor sheathing nailing requires 2 1/2" (8d) common nails at 6" o/c on edges and at 12" o/c in the field as per Code.
- Maximum nail spacing for minimum lateral stability is 24".
- 14 gauge staples may be substituted for 2 1/2" (8d) nails if the staples penetrate at least 1" into the Joist.
- Wood screws may be acceptable, contact local building official or KOTT for more information.

BACKER BLOCK DIMENSIONS

Series	Backer Block Thickness
LPI 20Plus AJS 140 NJ40H/AJS 150 NJ60H/AJS 20 NJ40U/AJS 24 NJ60U/AJS 25	1 1/8" or two 1/2" wood panels 2X_lumber

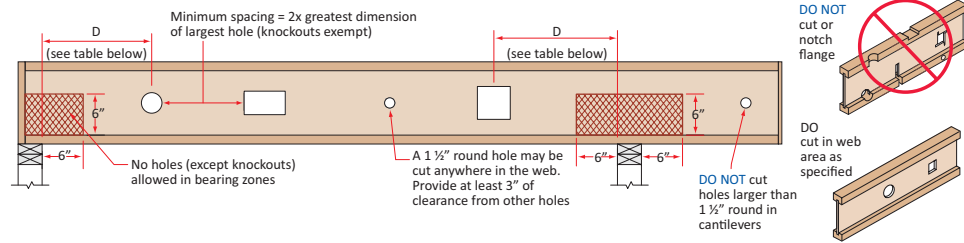
- Cut backer blocks to a maximum depth equal to the web depth minus 1/4" to avoid a forced fit.

PROTECT JOISTS FROM WEATHER

- Joists are intended only for applications that provide permanent protection from the weather. Bundles of product should be covered and stored off of the ground.

HOLE CUTTING CHARTS

for Residential Applications (40/15 PSF)



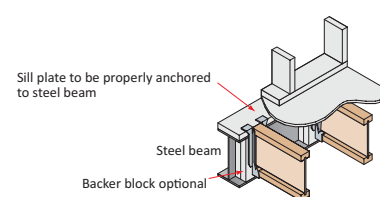
ROUND HOLES

Span [ft]	JOIST DEPTH & HOLE SIZE [IN]											
	9-1/2"		11-3/8"		14"			16"				
	3"	6"	3"	6"	3"	6"	9"	3"	6"	9"	12"	
8'	1'-0"	1'-6"	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	1'-0"	1'-4"	3'-7"	4'-11"	
10'	1'-0"	2'-6"	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	1'-0"	1'-4"	3'-7"	4'-11"	
12'	1'-0"	4'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	1'-0"	1'-4"	3'-7"	4'-11"	
14'	1'-0"	5'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-2"	1'-0"	1'-4"	3'-7"	4'-11"	
16'	2'-0"	6'-6"	1'-0"	2'-6"	1'-0"	1'-9"	4'-6"	1'-0"	1'-4"	3'-7"	4'-11"	
18'	3'-0"	7'-6"	1'-0"	3'-6"	1'-0"	1'-9"	4'-6"	1'-0"	1'-4"	3'-7"	4'-11"	
20'	4'-0"	9'-0"	3'-2"	4'-10"	2'-9"	4'-1"	7'-0"	2'-5"	3'-6"	6'-1"	7'-5"	
22'	5'-0"	10'-0"	3'-2"	5'-6"	2'-9"	4'-1"	7'-0"	2'-5"	3'-6"	6'-1"	7'-5"	
24'	6'-6"	11'-6"	3'-2"	7'-0"	5'-0"	6'-5"	9'-8"	4'-8"	5'-11"	8'-7"	10'-1"	
26'			4'-0"	8'-0"	5'-0"	6'-5"	9'-8"	4'-8"	5'-11"	8'-7"	10'-1"	
28'			5'-0"	9'-0"	5'-0"	6'-5"	10'-0"	7'-0"	8'-4"	11'-3"	12'-10"	
30'			5'-0"	9'-0"	5'-0"	7'-0"	11'-0"	7'-0"	8'-4"	11'-3"	12'-10"	
32'			5'-0"	9'-0"	5'-0"	8'-0"	12'-6"	7'-0"	8'-4"	11'-3"	13'-0"	
34'								7'-0"	8'-4"	11'-3"	14'-6"	

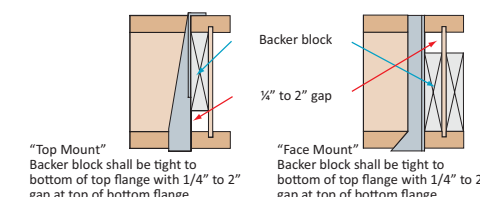
NOTES:

- Hole may be positioned vertically anywhere in the web.
- Use Table 1 for uniformly loaded maximum loads of 40 psf live loads and 15 psf dead loads on simple span application.
- For other load conditions or hole sizes, contact KOTT.

F15E CONNECTION WITH HANGER ON STEEL BEAM

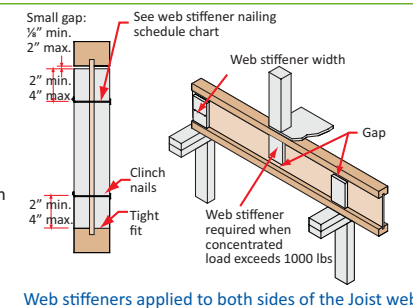


F16D HANGER CONNECTIONS TO JOIST HEADERS

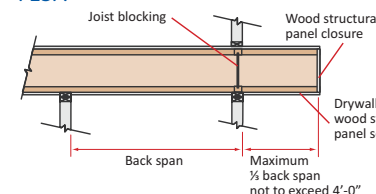


F16E

- Web stiffeners are optional except as noted below: Stiffeners are always required in hangers that do not extend up to support the top flange of the Joist. Web stiffeners may be required with certain sloped or skewed hangers or to achieve uplift values. Refer to hanger manufacturer's installation guide.
- Stiffeners may be cut from structural rated wood panels, engineered rimboard or 2X lumber (NJ40U/AJS 24 and NJ60U/AJS 25 only).
 - For structural capacity: Web stiffeners needed to increase the Joist's reaction at a specific bearing location.
 - Stiffeners are always required in certain roof applications.
 - Stiffeners are always required under concentrated loads that exceed 1000 pounds. Install the web stiffeners snug to the top flange in this situation. Follow the nailing schedule for intermediate bearings.



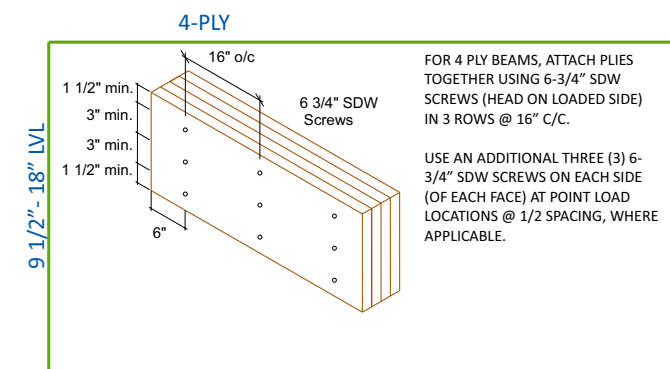
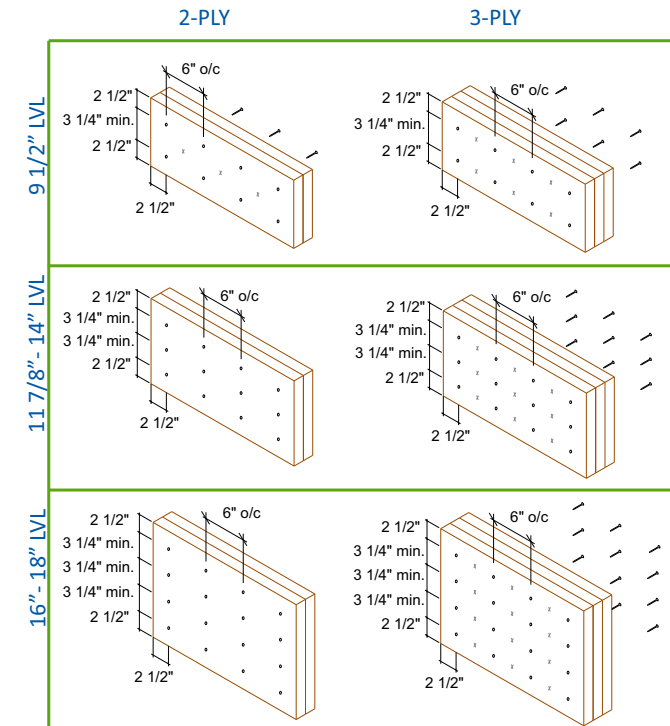
F15A



These details apply to cantilevers with uniform loads only. It may be possible to exceed the limitations of these details by analyzing a specific application with design software.

LVL MULTIPLE MEMBER CONNECTIONS

THESE CONNECTIONS APPLY UNLESS NOTED OTHERWISE ON THE LAYOUT OR BEAM CALCULATION SHEET IN THE FLOOR PACKAGE



LVL CONNECTION NOTES:

- LVL ply width is 1-3/4".
- Nails to be 3 1/2" common wire nails.
- Nails to be located 2 1/2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
- Minimum 3 1/4" spacing between rows.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.
- Head of all specified screws must be on the loaded side.
- All connections are for uniformly-distributed loads.
- For multi-ply connections of I-Joists, refer to Manufacturer's Installation Guide.