INSTALLATION GUIDE

APA PERFORMANCE RATED™ I-JOISTS FOR RESIDENTIAL FLOORS

Form No. J715 September 1999

SAFETY

Do not allow workers to walk on I-joists until joists are fully installed and braced, or serious injuries can result.

Never stack building materials over unsheathed I-joists. Stack only over beams or walls.

WARNING

I-joists are not stable until completely installed, and will not carry any load until fully braced and sheathed.

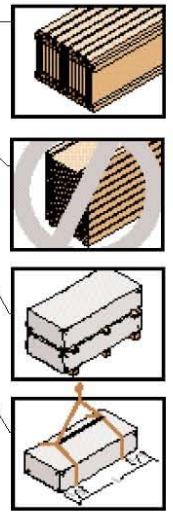
Avoid Accidents by Following These Important Guidelines:

1. Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bridging at joist ends.
2. When the building is completed, the floor sheathing will provide lateral support for the top flanges of the I-joists. Until this sheathing is applied, temporary bracing, often called struts, or temporary sheathing must be applied to prevent I-joist rollover or buckling.
   - Temporary bracing or struts must be 1 x 4 inch minimum, at least 8 feet long and spaced no more than 8 feet on center, and must be secured with a minimum of two 8d nails fastened to the top surface of each I-joist. Nail bracing to a lateral restraint at the end of each bay. Lap ends of adjoining bracing over at least two I-joists.
   - Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of I-joists at the end of the bay.
3. For cantilevered I-joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bridging.
4. Install and nail permanent sheathing to each I-joist before placing loads on the floor system. Then, stack building materials over beams or walls only.
5. *Never* install a damaged I-joist.

Improper storage or installation, failure to follow applicable building codes, failure to follow span ratings for APA Performance Rated™ I-Joists, failure to use allowable hole sizes and locations, or failure to use web stiffeners when required can result in serious accidents. Follow these installation guidelines carefully.

STORAGE AND HANDLING

1. Store, stack and handle I-joists vertically and level only.
2. Do not store I-joists in direct contact with the ground.
3. Protect I-joists from weather, and use stickers to separate bundles.
4. Do not open bundles until time of installation.
5. Take care not to damage I-joists with forklifts or cranes.
6. Do not twist or apply loads to the I-joist when horizontal.
7. Never use or try to repair a damaged I-joist.
8. When handling I-joists with a crane on the job site ("picking"), take a few simple precautions to prevent damage to the I-joists and injury to your work crew.
   - Pick I-joists in bundles as shipped by the supplier.
   - Orient the bundles so that the webs of the I-joists are vertical.
   - Pick the bundles at the 5th points, using a spreader bar if necessary.



ALLOWABLE SPANS

1. Allowable spans found in Tables 1 and 2 are based on uniform loads. For applications with non-uniform loads, an engineering analysis may be required using the design properties found in APA *Design/Construction Guide: I-Joists*, Form X710.
2. These span charts are for applications with a live load of 40 psf and a design dead load of 10 psf. Allowable spans for applications with a live load of 40 psf and a dead load of 20 psf can be found in APA *Design/Construction Guide: I-Joists*, Form X710.
3. Deflection under live load is limited to L/480.
4. Maximum spans shown are clear distances between supports. Minimum bearing length shall be 1-3/4 inches for end bearings and 3-1/2 inches for intermediate bearings when applicable.
5. For multiple-span applications using Table 2, the end spans must be at least 40% or more of the adjacent span.
6. Spans are based on a composite floor with glued-nailed sheathing meeting the requirements for APA Rated Sheathing or APA Rated STURD-I-FLOOR conforming to PRP-108, PS 1, or PS 2 with a minimum thickness of 19/32 inches (40/20 or 20 oc) for a joist spacing of 19.2 inches or less, or 23/32 (48/24 or 24 oc) for a joist spacing of 24 inches. Adhesives must meet APA Specification AFG-01 or ASTM D3498. Reduce spans by 1 foot when floor sheathing is nailed-only.
7. Web stiffeners are not required when PRIs are used according to the spans and spacings found in Tables 1 and 2, except as noted in this Installation Guide.
8. SI units conversion: 1 inch = 25.4 mm
   1 foot = 0.305 m

TABLE 1

Allowable Spans for *APA EWS* Performance Rated I-Joists – SIMPLE SPAN ONLY

		Simple Spans			
		On Center Spacing			
Depth	Joist Designation	12"	16"	19.2"	24"
9-1/2"	PRI-40	18'-0"	16'-5"	15'-6"	14'-6"
	PRI-60	18'-11"	17'-4"	16'-4"	15'-3"
11-7/8"	PRI-40	21'-5"	19'-7"	18'-6"	16'-9"
	PRI-60	22'-7"	20'-8"	19'-6"	18'-2"
	PRI-80	24'-11"	22'-8"	21'-4"	19'-10"
14"	PRI-60	25'-9"	23'-6"	22'-2"	20'-8"
	PRI-80	28'-3"	25'-9"	24'-3"	22'-7"
16"	PRI-60	28'-6"	26'-0"	24'-7"	22'-10"
	PRI-80	31'-4"	28'-6"	26'-10"	25'-0"

TABLE 2

Allowable Spans for *APA EWS* Performance Rated I-Joists – MULTIPLE SPAN ONLY

		Multiple Spans			
		On Center Spacing			
Depth	Joist Designation	12"	16"	19.2"	24"
9-1/2"	PRI-40	19'-7"	17'-11"	16'-5"	14'-8"
	PRI-60	20'-8"	18'-10"	17'-9"	16'-6"
11-7/8"	PRI-40	23'-5"	20'-6"	18'-9"	16'-9"
	PRI-60	24'-8"	22'-6"	21'-2"	19'-7"
	PRI-80	27'-1"	24'-8"	23'-3"	21'-7"
14"	PRI-60	28'-0"	25'-7"	24'-1"	19'-9"
	PRI-80	30'-10"	28'-0"	26'-5"	23'-11"
16"	PRI-60	31'-1"	28'-4"	24'-9"	19'-9"
	PRI-80	34'-2"	31'-1"	29'-3"	23'-11"

WEB STIFFENERS

1. Web stiffeners are only required:
   - When sides of the hangers do not laterally brace the top flange of each I-joist.
   - When I-joists are designed to support concentrated loads greater than 1000 lbs. applied to the I-joist's top flange between supports. In these applications only, the gap between the web stiffener and the flange shall be at the bottom flange.
   - As noted in the building plans for all engineered applications with design end-reactions greater than 1550 lbs.
2. When used at end bearings, install web stiffeners tight against the bottom flange of the I-joist. Leave a minimum 1/8-inch gap between the top of the stiffener and the bottom of the top flange (see Figure 1).
3. Web stiffeners may be supplied by the manufacturer for field installation, or may be cut in the field as required.

WEB STIFFENER SIZE REQUIRED

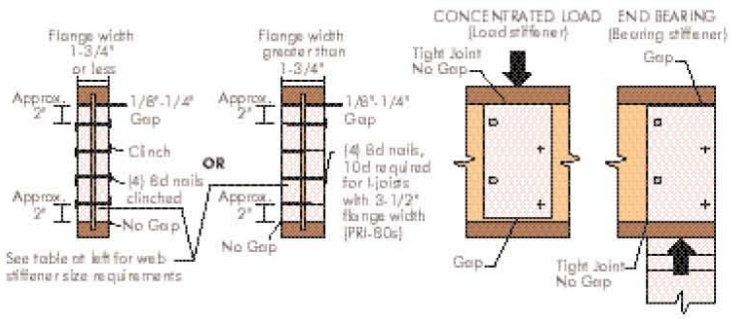
APA PRI* Flange Width	Web Stiffener Size Each Side of Web
1-1/2"	15/32" x 2-5/16" minimum width
1-3/4"	19/32" x 2-5/16" minimum width
2-5/16"	1" x 2-5/16" minimum width
2-1/2"	1" x 2-5/16" minimum width
3-1/2"	1-1/2" x 2-5/16" minimum width

SI units conversion: 1 inch = 25.4 mm

* See Table 4 for applicable joist designation.

FIGURE 1

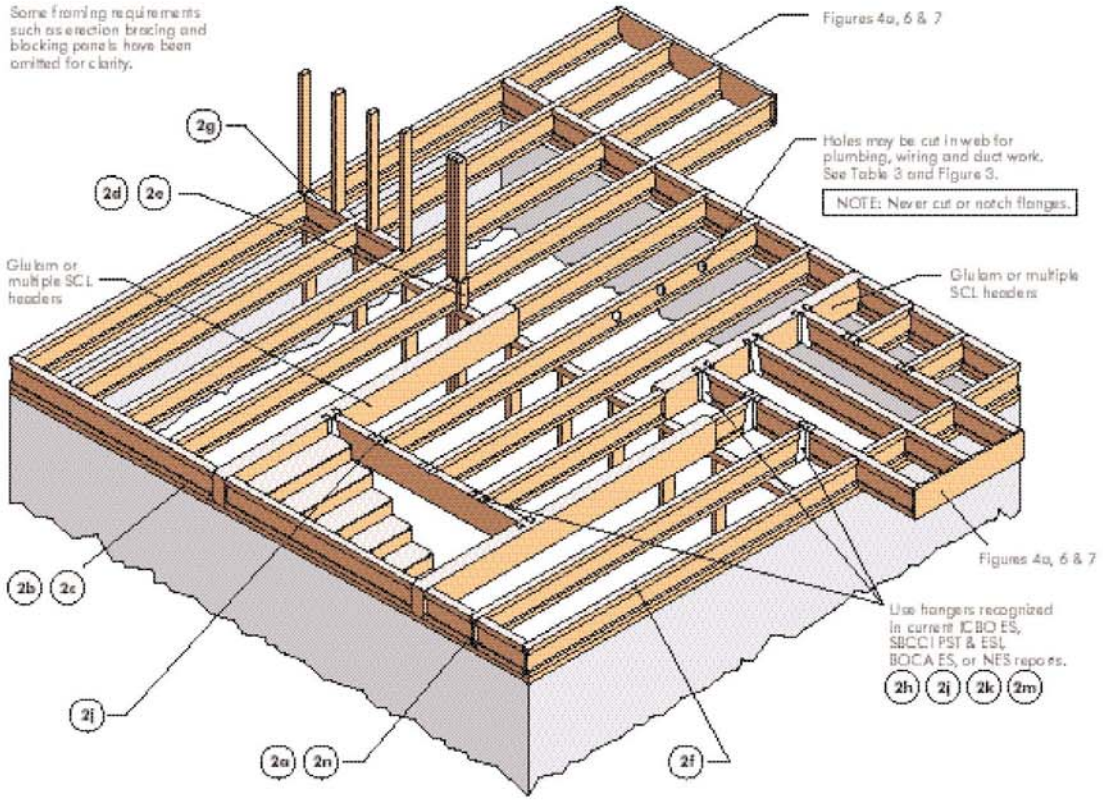
APA PERFORMANCE RATED I-JOIST WEB STIFFENER REQUIREMENTS



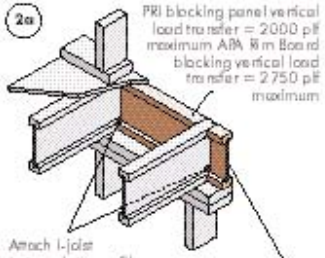
1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, contact your supplier.
2. Except for cutting to length, never cut, drill, or notch I-joist flanges.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. I-joists must be anchored securely to supports before floor sheathing is attached, and supports for multiple-span joists must be level.
5. Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for intermediate bearings.
6. When using hangers, seat I-joists firmly in hanger bottoms to minimize settlement.
7. Leave a 1/16-inch gap between the I-joist end and a header.
8. Concentrated loads greater than those that can normally be expected in residential construction should *only* be applied to the top surface of the top flange. Normal concentrated loads include track lighting fixtures, audio equipment and security cameras. Never suspend unusual or heavy loads from the I-joist's bottom flange. Whenever possible, suspend *all* concentrated loads from the top of the I-joist. Or, attach the load to blocking that has been securely fastened to the I-joist webs.
9. Never install I-joists where they will be permanently exposed to weather, or where they will remain in direct contact with concrete or masonry.
10. Restrain ends of floor joists to prevent rollover. Use APA Performance Rated™ Rim Board, rim joists or I-joist blocking panels.
11. For I-joists installed over and beneath bearing walls, use full depth blocking panels, APA Rim Board, or squash blocks (cripple members) to transfer gravity loads through the floor system to the wall or foundation below.
12. Due to shrinkage, common framing lumber set on edge cannot be used as blocking or rim boards. I-joist blocking panels or other engineered wood products – such as APA Rim Board – must be cut to fit between the I-joists, and an I-joist-compatible depth selected.
13. Provide permanent lateral support of the bottom flange of all I-joists at interior supports of multiple-span joists. Similarly, support the bottom flange of all cantilevered I-joists at the end support next to the cantilever extension. In the completed structure, the gypsum wallboard ceiling provides this lateral support. Until the final finished ceiling is applied, temporary bracing or struts must be used.
14. If square-edge panels are used, edges must be supported between I-joists with 2x4 blocking. Glue panels to blocking to minimize squeaks. Blocking is not required under structural finish flooring, such as wood strip flooring, or if a separate underlayment layer is installed.
15. Nail spacing:
    - Space nails installed to the flange's top face in accordance with the applicable building code requirements or approved building plans.
    - If nails must be installed into the sides of LVL flanges, spacing shall not be closer than 3 inches o.c. for 8d common nails, and 4 inches o.c. for 10d common nails.

FIGURE 2

TYPICAL APA PERFORMANCE RATED I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS

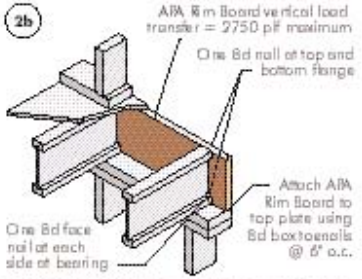


2a



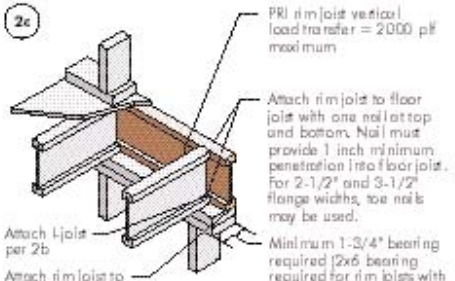
8d nails @ 6" o.c. (when used for lateral shear transfer, nail to bearing plate with same nailing as required for decking)

2b

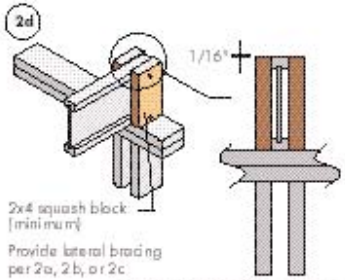


To avoid splitting flange, start nails at least 1-1/2" from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

2c

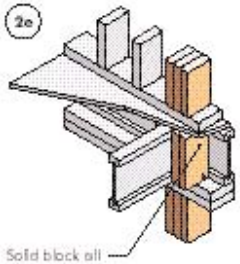


2d

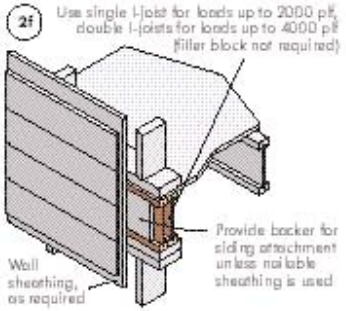


Vertical load transfer = 4000 lb maximum (per pair of squash blocks as shown)

2e

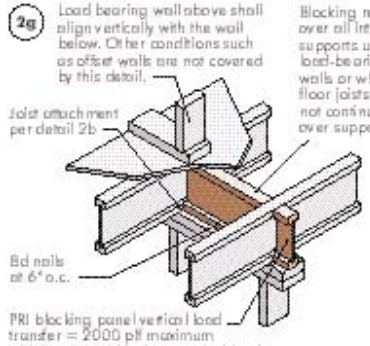


2f



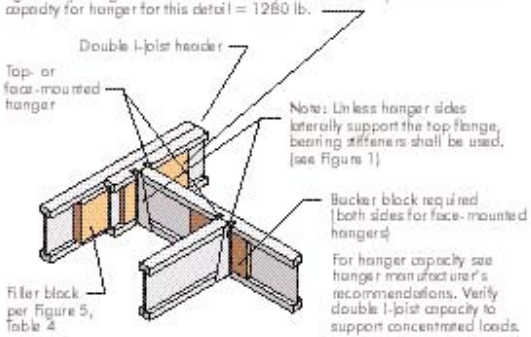
APA Rim Board may be used in lieu of I-joists. Backer is not required when APA Rim Board is used.

2g

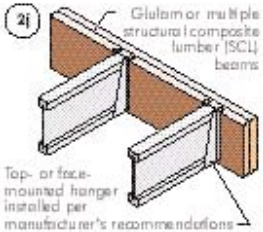


2h

Backer block (use if hanger load exceeds 250 lbs.) Before installing a backer block to a double I-joist, drive 3 additional 10d nails through the webs and filler block where the backer block will fit. Clinch. Install backer tight to top flange. Use twelve 10d nails, clinched when possible. Maximum capacity for hanger for this detail = 1260 lb.



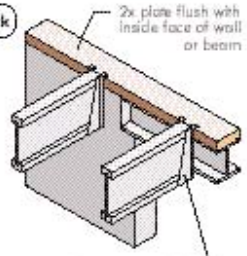
2i



For nailing schedules for multiple SCL beams, see the manufacturer's recommendations

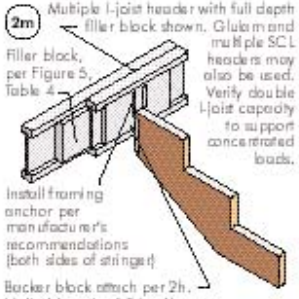
Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used. (see Figure 1)

2k



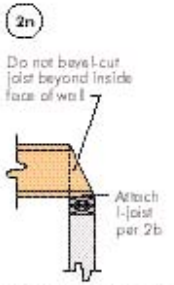
Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used. (see Figure 1)

2m



Maximum support capacity = 1260 lb.

2n



Note: Blocking required at bearing for lateral support, not shown for clarity.

BACKER BLOCKS (Blocks must be long enough to permit required nailing without splitting)

Flange Width	Material Thickness Required*	Minimum Depth**
1-1/2"	19/32"	5-1/2"
1-3/4"	23/32"	5-1/2"
2-5/16"	1"	7-1/4"
2-1/2"	1"	5-1/2"
3-1/2"	1-1/2"	7-1/4"

* Minimum grade for backer block material shall be Utility grade SPF (south) or better for solid sawn lumber and Rated Sheathing grade for wood structural panels.

** For face-mount hangers use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 1-5/16" thick flanges use net depth minus 2-7/8".

WEB HOLES

1. Except for cutting to length, never cut, drill, or notch I-joist flanges.
2. Holes may be located vertically anywhere in the web. Wherever possible, center holes in the web and always leave at least 1/8" of web at the top and bottom of the hole.
3. The sides of square holes shall not exceed three-fourths of the maximum round hole diameter permitted at that location. Do not over-cut the sides of square holes.
4. Where more than one hole is necessary, the distance between hole edges must be more than twice the diameter of the largest round hole or twice the size of the largest square hole. In addition, each hole must comply with the requirements of Table 3.
5. Do not cut any holes in the web within a distance of d/2 from the support centerline where d is the depth of the I-joist, otherwise, a 1-1/2 inch hole can be cut in the web anywhere.
6. Exceptions will require that additional data be provided to the local building official.

How to Use Table 3:

1. Read across the top of Table 3 to the desired hole size.
2. Follow this column down to the row that represents the I-joist depth and designation. This number indicates the minimum distance from the face of the support to the centerline of the hole.

Example: Need a 5-1/2-inch hole in a 11-7/8" PRI-30 joist:

From Table 3,

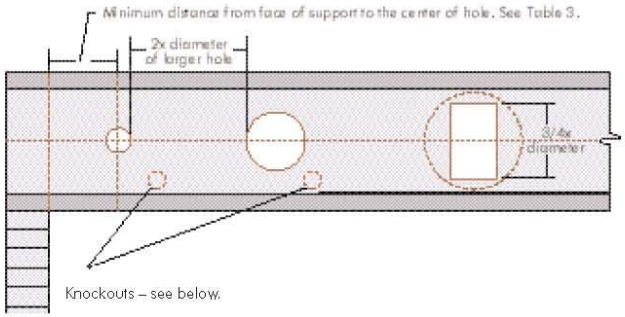
For a 5-inch round hole, the minimum distance is 2'-0".

For a 6-inch round hole, the minimum distance is 3'-0".

Therefore the minimum distance for the 5-1/2-inch round hole is 2'-6".

FIGURE 3

APA PRI JOIST FIELD-CUT HOLE LOCATOR



Knockouts – see below.

A knockout is **NOT** considered a hole, may be utilized whenever it occurs and may be ignored for purposes of calculating minimum distances between holes.

TABLE 3

MINIMUM DISTANCE FROM FACE OF ALL JOIST SUPPORTS TO CENTER OF HOLE – Single or Multi-Span

Joist Depth	Joist Designation	Span Adjustment Factor	Minimum Distance from Inside Face of Any Support to Center of Hole (ft - in.) Round Hole Diameter (in.) 2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	12	12-3/4
9-1/2"	PRI-40	13.0	1.0	2.0	3.0	4.0	5.0	5.5									
	PRI-60	14.4	2.0	3.0	4.0	5.0	6.5	7.0									
11-7/8"	PRI-40	15.0	0.5	0.5	1.5	2.5	3.5	4.0	4.5	6.0	7.0						
	PRI-60	16.7	0.5	1.5	3.0	4.0	5.0	5.5	6.5	8.0	9.0						
	PRI-80	18.4	2.0	3.5	4.5	6.0	7.0	7.5	8.5	10.0	11.0						
14"	PRI-60	16.7	0.5	1.0	1.0	1.5	3.0	3.5	4.5	6.0	7.0	7.5	9.0	10.5			
	PRI-80	20.2	0.5	2.0	3.0	4.5	5.5	6.0	7.0	8.5	9.5	10.0	11.5	13.0			
16"	PRI-60	16.7	0.5	0.5	1.0	1.0	1.0	2.0	2.0	3.5	4.5	5.0	6.5	8.0	8.5	10.5	12.0
	PRI-80	20.2	0.5	0.5	1.0	2.0	3.5	4.0	5.0	6.5	7.5	8.0	10.0	11.0	11.5	13.5	15.0

Notes:

1. Above tables may be used for I-joist spacing of 24 inches on center or less.
2. Hole location distance is measured from inside face of supports to center of hole.
3. Distances in this chart are based on uniformly loaded joists that meet the span requirements in Tables 1 and 2 in this installation guide.
4. For continuous joists with more than one span, use the **longest** span to determine hole location in either span.

OPTIONAL:

Table 3 is based on the I-joists being used at their maximum span. If the I-joists are placed at less than their full allowable span as shown in Tables 1 or 2, the maximum distance from the centerline of the hole to the face of any support (D) as given above may be reduced as follows:

$$D_{reduced} = \frac{L_{actual}}{SAF} \times D$$

Where:

$D_{reduced}$ = Distance from the inside face of any support to center of hole, reduced for less-than-maximum span applications (ft).

L_{actual} = The actual measured span distance between the inside faces of supports (ft).

SAF = Span Adjustment Factor given in Table 3.

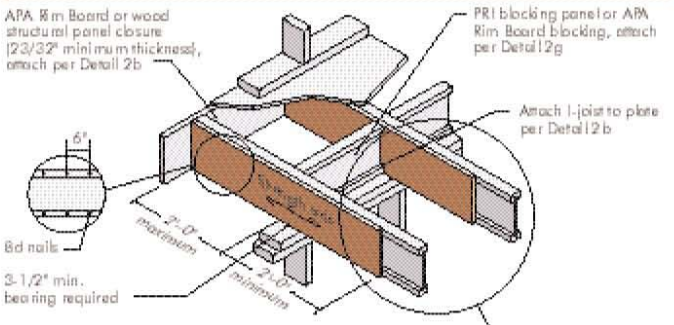
D = The maximum distance from the inside face of any support to center of hole from Table 3 above. If $\frac{L_{actual}}{SAF}$ is greater than 1.0, use 1.0 in the above calculation.

CANTILEVERS FOR VERTICAL BUILDING OFFSETS (CONCENTRATED WALL LOAD FROM ABOVE)

FIGURE 4a

PRI CANTILEVER REINFORCEMENT METHODS ALLOWED

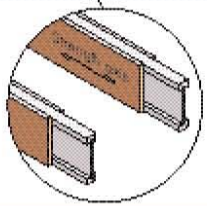
Method 1 – SHEATHING REINFORCEMENT ONE SIDE*



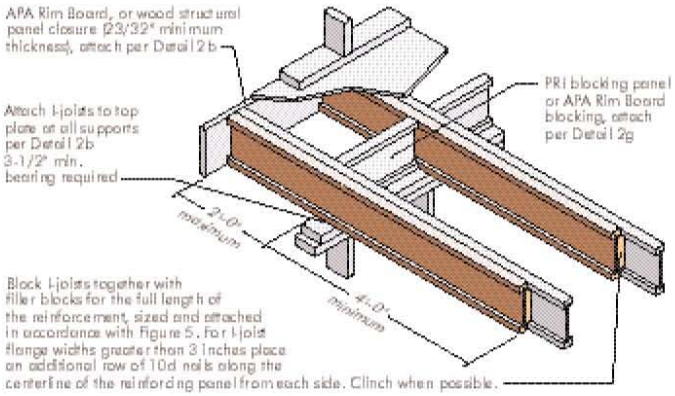
Method 2 – SHEATHING REINFORCEMENT TWO SIDES*

Use same installation as Method 1 but reinforce both sides of I-joist with sheathing

Use nailing pattern shown for Method 1 with opposite face nailing offset by 3"

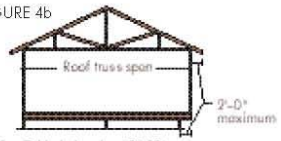


Alternate Method 2 – DOUBLE I-JOIST

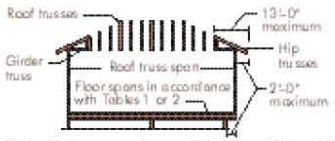


*Note: APA RATED SHEATHING 48/24 (minimum thickness 23/32") required on sides of joist. Depth shall match the full height of the joist. Nail with 8d nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach I-joist to plate at all supports per Detail 2b.

FIGURE 4b



See Table below for APA PRI reinforcement requirements at cantilever.



For hip roofs with the hip trusses running parallel to the cantilevered floor joists, the I-joist reinforcement requirements for a span of 26 ft. shall be permitted to be used.

FIGURE 4c

PRI CANTILEVER REINFORCEMENT METHODS ALLOWED

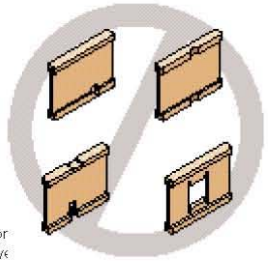
Joist Depth (in.)	Roof Truss Span (ft)	ROOF LOADINGS: TL = 35 psf, LL not to exceed 20 psf — Joist Spacing (in.) 12	16	19.2	24	TL = 45 psf, LL not to exceed 30 psf — Joist Spacing (in.) 12	16	19.2	24	TL = 55 psf, LL not to exceed 40 psf — Joist Spacing (in.) 12	16	19.2	24
9-1/2	26	N	N	N	1,2	N	N	1,2	2	N	1,2	2	X
	28	N	N	N	1,2	N	N	1,2	X	N	1,2	2	X
	30	N	N	N	2	N	1,2	1,2	X	N	1,2	X	X
	32	N	N	1,2	2	N	1,2	2	X	N	2	X	X
	34	N	N	1,2	2	N	1,2	2	X	N	2	X	X
	36	N	N	1,2	X	N	1,2	2	X	1,2	2	X	X
11-7/8	26	N	N	N	1,2	N	N	1,2	2	N	N	1,2	X
	28	N	N	N	1,2	N	N	1,2	X	N	1,2	2	X
	30	N	N	N	2	N	N	1,2	X	N	1,2	2	X
	32	N	N	N	2	N	N	1,2	X	N	1,2	X	X
	34	N	N	1,2	2	N	N	2	X	N	1,2	X	X
	36	N	N	1,2	X	N	1,2	2	X	N	2	X	X
	38	N	N	1,2	X	N	1,2	2	X	N	2	X	X
14	26	N	N	N	1,2	N	N	N	2	N	N	1,2	X
	28	N	N	N	1,2	N	N	1,2	X	N	N	2	X
	30	N	N	N	2	N	N	1,2	X	N	1,2	2	X
	32	N	N	N	2	N	N	1,2	X	N	1,2	2	X
	34	N	N	N	2	N	N	1,2	X	N	1,2	X	X
	36	N	N	1,2	2	N	N	2	X	N	1,2	X	X
	38	N	N	1,2	X	N	1,2	2	X	N	1,2	X	X
	40	N	N	1,2	X	N	1,2	2	X	N	2	X	X
16	26	N	N	N	1,2	N	N	1,2	2	N	N	1,2	X
	28	N	N	N	1,2	N	N	1,2	X	N	1,2	2	X
	30	N	N	N	2	N	N	1,2	X	N	1,2	2	X
	32	N	N	N	2	N	N	1,2	X	N	1,2	2	X
	34	N	N	1,2	2	N	N	2	X	N	1,2	X	X
	36	N	N	1,2	2	N	1,2	2	X	N	1,2	X	X
	38	N	N	1,2	X	N	1,2	2	X	N	2	X	X
	40	N	N	1,2	X	N	1,2	2	X	N	2	X	X
	42	N	N	1,2	X	N	1,2	X	X	N	2	X	X

1. N = No reinforcement required.
   1 = PRIs reinforced with 23/32" WSP on one side only.
   2 = PRIs reinforced with 23/32" WSP on both sides, or double PRI reinforcement.
   X = Try a deeper joist or closer spacing.
2. Maximum load shall be: 15 psf roof dead load, 50 psf floor total load, and 80 plf wall load. Wall load is based on 3'-0" maximum width window or door openings. For larger openings, or multiple 3'-0" width openings spaced less than 6'-0" o.c., additional joists beneath the opening's cripple studs may be required.
3. Table applies to joists 12" to 24" o.c. Use 12" o.c. requirements for lesser spacings.

KNOCKOUTS

Knockouts are prescored holes often provided by I-joist manufacturers for the contractor's convenience to install electrical or small plumbing lines. They are typically 1-3/8 to 1-3/4 inches in diameter, and are spaced 12 to 24 inches on center along the length of the I-joist. Where possible, use knockouts instead of field-cutting holes.

For floor applications, position the I-joists so the knockouts are all on the bottom of the joist, making it easier to install electrical wiring or residential sprinkler systems.



Never drill, cut or notch the flange, or over-cut the web. Holes in webs should be cut with a sharp saw. For rectangular holes, avoid ove cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Start the rectangular hole by drilling a 1"-diameter hole in each of the four corners and then make the cuts between the holes to minimize damage to the I-joist.

I-JOIST HANGERS

1. Hangers shown illustrate the three most commonly used metal hangers to support I-joists.
2. All nailing must meet the hanger manufacturer's recommendations.
3. Hangers should be selected based on the joist depth, flange width and load capacity based on the spans indicated in Tables 1 and 2.
4. Web stiffeners are required when the sides of the hangers do not laterally brace the top flange of the I-joist.

Top Flange | Face Mount | Skewed

DOUBLE I-JOISTS

1. Double I-joists may be required to frame openings, support concentrated loads, support partitions parallel to floor joists, or support any other loads which would exceed the capacity of a single I-joist. Install double I-joists when noted in the building drawings.
2. Support back of I-joist web during nailing to prevent damage to web/flange connection.
3. Leave a 1/8-inch gap between top of filler block and bottom of top I-joist flange.
4. Filler blocking is required between joists for full length of span.
5. Nail joists together with two rows of 10d nails at 12 inches o.c. (staggered and clenched) on each side of the double I-joist.

FIGURE 5

DOUBLE I-JOIST CONSTRUCTION

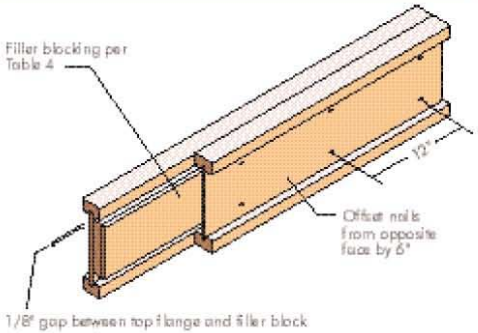
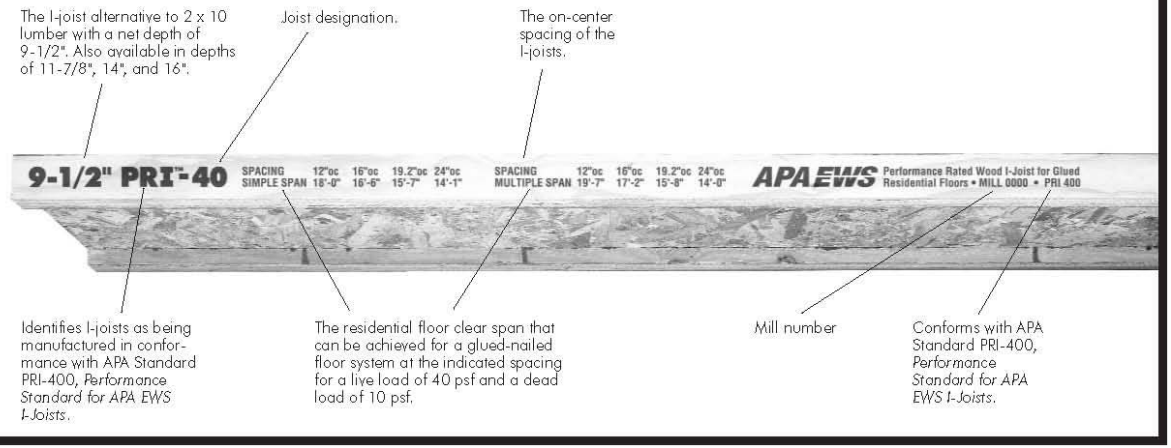


TABLE 4

FILLER BLOCK REQUIREMENTS FOR DOUBLE I-JOIST CONSTRUCTION

Flange Width	Net Depth	Joist Designation	Filler Block Size
1-1/2"	9-1/2	PRI-20, PRI-30	1-1/8" x 6" high
	11-7/8"	PRI-20, PRI-30	1-1/8" x 8" high
1-3/4"	9-1/2"	PRI-50	1-3/8" x 6"
	11-7/8"	PRI-50	1-3/8" x 8"
	14"	PRI-50	1-3/8" x 10"
	16"	PRI-50	1-3/8" x 12"
2-5/16"	14"	PRI-70	2" x 10"
	16"	PRI-70	2" x 12"
2-1/2"	9-1/2"	PRI-40, PRI-60	2-1/8" x 6"
	11-7/8"	PRI-40, PRI-60	2-1/8" x 8"
	14"	PRI-60	2-1/8" x 10"
	16"	PRI-60	2-1/8" x 12"
3-1/2"	11-7/8"	PRI-80	3" x 8"
	14"	PRI-80	3" x 10"
	16"	PRI-80	3" x 12"

SAMPLE TRADEMARK (Position of trademark on I-joist may vary by manufacturer)



CANTILEVERS FOR BALCONIES (NO WALL LOAD FROM ABOVE)

FIGURE 6

I-JOIST CANTILEVER DETAIL FOR BALCONIES

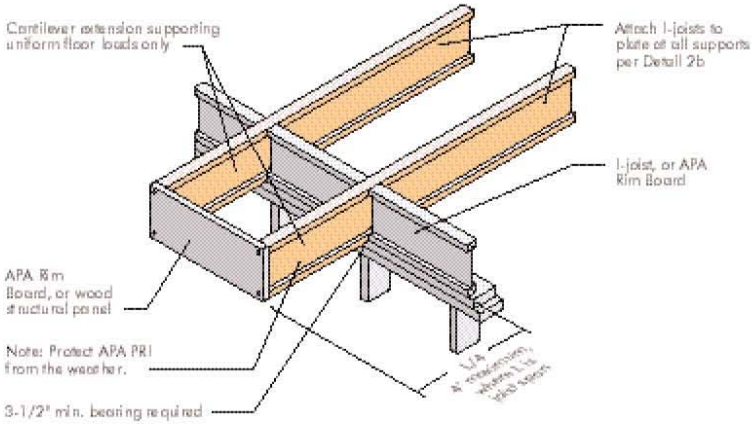
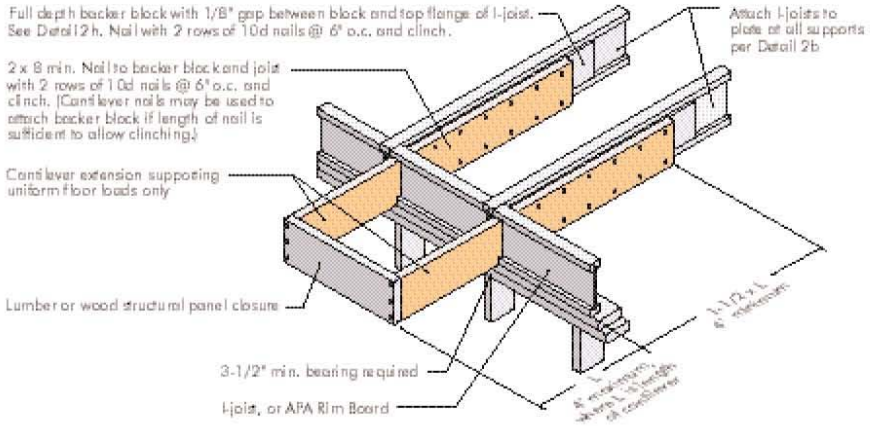


FIGURE 7

LUMBER CANTILEVER DETAIL FOR BALCONIES



INSTALLING THE APA GLUED FLOOR SYSTEM

1. Snap a chalk line across the I-joists four feet in from the wall for panel edge alignment and as a boundary for spreading glue.
2. Wipe any mud, dirt, water, or ice from I-joist flanges before gluing.
3. Spread only enough glue to lay one or two panels at a time, or follow specific recommendations from the glue manufacturer.
4. Lay the first panel with tongue side to the wall, and nail in place. This protects the tongue of the next panel from damage when tapped into place with a block and sledgehammer.
5. Apply a continuous line of glue (about 1/4-inch diameter) to the top flange of a single I-joist. Apply glue in a winding pattern on wide areas, such as with double I-joists.
6. Apply two lines of glue on I-joists where panel ends butt to assure proper gluing of each end.
7. After the first row of panels is in place, spread glue in the groove of one or two panels at a time before laying the next row. Glue line may be continuous or spaced, but avoid squeeze-out by applying a thinner line (1/8 inch) than used on I-joist flanges.
8. Tap the second row of panels into place, using a block to protect groove edges.
9. Stagger end joints in each succeeding row of panels. A 1/8-inch space between all end joints and 1/8-inch at all edges, including T&G edges, is recommended. (Use a spacer tool or an 8d common nail to assure accurate and consistent spacing.)
10. **Complete all nailing of each panel before glue sets.** Check the manufacturer's recommendations for allowable cure time. (Warm weather accelerates glue setting.) Use 6d ring- or screw-shank nails for panels 3/4-inch thick or less, and 8d ring- or screw-shank nails for thicker panels. Space nails per Table 5. Closer nail spacing may be required by some codes, or for diaphragm construction. The finished deck can be walked on right away and will carry construction loads without damage to the glue bond.

TABLE 5

APA RATED STURD-I-FLOOR FASTENER SCHEDULES FOR PRIs[1]

Span Rating (Maximum Joist Spacing) (in.)	Panel Thickness[2] (in.)	Fastening: Glue-Nailed[3]		
		Nail Size and Type	Maximum Spacing (in.)	
			Supported Panel Edges	Intermediate Supports
16	23/32[5]	6d ring- or screw-shank[4]	12	12
20	23/32[5]	6d ring- or screw-shank[4]	12	12
24	23/32, 3/4	6d ring- or screw-shank[4]	12	12
	7/8	8d ring- or screw-shank[4]	6	12

(1) Special conditions may impose heavy traffic and concentrated loads that require construction in excess of the minimums shown.

(2) Panels in a given thickness may be manufactured in more than one Span Rating. Panels with a Span Rating greater than the actual joist spacing may be substituted for panels of the same thickness with a Span Rating matching the actual joist spacing. For example, 19/32-inch-thick Sturd-I-Floor 20 oc may be substituted for 19/32-inch-thick Sturd-I-Floor 16 oc over joists 16 inches on center.

(3) Use only adhesives conforming to APA Specification AFG-01, or ASTM D3498 applied in accordance with the manufacturer's recommendations. If OSB panels with sealed surfaces and edges are to be used, use only solvent-based glues; check with panel manufacturer.

(4) 8d common nails may be substituted if ring- or screw-shank nails are not available.

(5) Recommended minimum thickness for use with I-joists.

Important Note:
Floor sheathing must be field glued to the I-joist flanges in order to achieve the allowable spans stamped on the product. If sheathing is nailed only, reduce I-joist spans in Tables 1 and 2 by 1 foot.