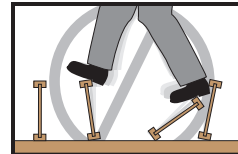




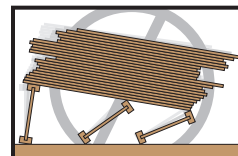
Power Joist™

Installation guide
for residential floors

Safety Precautions



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



Never stack building materials over unsheathed Power Joists. Stack only over beams or walls.

WARNING

Power Joists™ are not stable until completely installed, and will not carry any load until fully braced and sheathed.

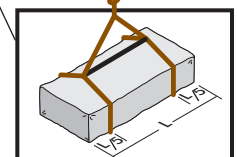
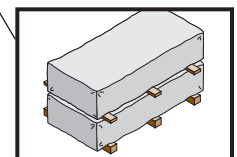
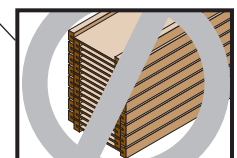
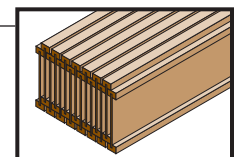
Avoid Accidents by Following These Important Guidelines:

1. Brace and nail each Power 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 Power Joists. Until this sheathing is applied, temporary bracing, often called struts, or temporary sheathing must be applied to prevent Power 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 Power Joist. Nail bracing to a lateral restraint at the end of each bay. Lap ends of adjoining bracing over at least two Power Joists.
 - Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of Power Joists at the end of the bay.
3. For cantilevered Power 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 Power Joist before placing loads on the floor system. Then, stack building materials over beams or walls only.
5. Never install a damaged Power Joist.

Improper storage or installation, failure to follow applicable building codes, failure to follow span ratings for Power 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 Guidelines

1. Store Power Joists vertically, level, and in bundles.
2. Always stack and handle Power Joists in the upright position only.
3. Do not store Power Joists in direct contact with the ground.
4. Protect Power Joists from weather, and use stickers to separate bundles.
5. Bundled units should be kept intact until time of installation.
6. When lifting Power Joists with a crane on the job site, take a few simple precautions to prevent damage to the Power Joists and injury to your work crew.
 - Pick Power Joists in bundles as shipped by the supplier.
 - Orient the bundles so that the webs of the Power Joists are vertical.
 - Pick the bundles at the 5th points, using a spreader bar if necessary.
7. Do not handle Power Joists in a horizontal orientation.
8. NEVER USE OR FIELD REPAIR A DAMAGED POWER JOIST.



Allowable spans

- 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 *Power Joist User Guide*.
- 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 *Anthony Power Sizer Software*.
- Deflection under live load is limited to L/480.
- 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.
- For multiple-span applications using Table 2, the end spans must be at least 40% or more of the adjacent span.
- 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.
- Web stiffeners are not required when ADIs are used according to the spans and spacings found in Tables 1 and 2, except as noted in this Installation Guide.
- SI units conversion: 1 inch = 25.4 mm
1 foot = 0.305 m

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

Table 2 Allowable Spans for Floor ADI Power Joist					
Multiple Span Only		On Center Spacing - Multiple Spans (inches)			
9-1/2"	ADI-40	19'-7"	17'-11"	16'-4"	14'-7"
	ADI-60	20'-8"	18'-10"	17'-9"	16'-6"
11-7/8"	ADI-40	23'-5"	20'-5"	18'-7"	16'-7"
	ADI-60	24'-8"	22'-6"	21'-2"	19'-7"
	ADI-80	27'-1"	24'-8"	23'-3"	21'-7"
14"	ADI-40	25'-11"	22'-5"	20'-5"	18'-3"
	ADI-60	28'-0"	25'-7"	24'-1"	19'-9"
	ADI-80	30'-10"	28'-0"	26'-5"	23'-11"
16"	ADI-40	27'-11"	24'-2"	22'-0"	19'-8"
	ADI-60	31'-1"	28'-4"	24'-9"	19'-9"
	ADI-80	34'-2"	31'-1"	29'-3"	23'-11"

Power Joist™ Web Stiffeners

- Web stiffeners are only required:
 - When sides of the hangers do not laterally brace the top flange of each Power Joist.
 - When Power 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 load stiffener and the flange shall be at the bottom flange.
 - For all engineered applications with design end-reactions greater than 1500 lb., a design analysis must be performed.
- 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).
- Web stiffeners may be supplied by the distributor for field installation, or may be cut in the field as required.

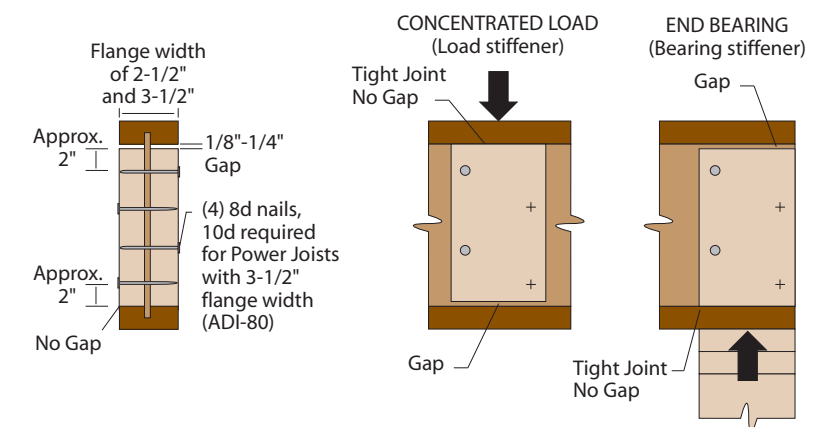
Web Stiffener Size Required

ADI Flange Width*	Web Stiffener Size Each Side of Web
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 5 for applicable joist designation.

Figure 1

Power Joist™ Web Stiffener Requirements



Installing Power Joist™

- Before laying out floor system components, verify that Power Joist flange widths match hanger widths. If not, contact your supplier.
- Except for cutting to length, **never** cut, drill, or notch Power Joist flanges.
- Install Power Joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
- Power Joists must be anchored securely to supports before floor sheathing is attached, and supports for multiple-span joists must be level.
- Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for intermediate bearings.
- When using hangers, seat Power Joists firmly in hanger bottoms to minimize settlement.
- Leave a 1/16-inch gap between the Power Joist end and a header.
- 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 Power Joist's bottom flange. Whenever possible, suspend *all* concentrated loads from the top of the Power Joist, or attach the load to blocking that has been securely fastened to the Power Joist webs.
- Never install Power Joists where they will be permanently exposed to weather, or where they will remain in direct contact with concrete or masonry.
- Restrain ends of floor joists to prevent rollover. Use Certified Rim Board, rim joists or Power Joist blocking panels.
- For Power Joists installed over and beneath bearing walls, use full depth blocking panels, Certified Rim Board, or squash blocks (cripple members) to transfer gravity loads through the floor system to the wall or foundation below.
- Due to shrinkage, common framing lumber set on edge **may never** be used as blocking or rim boards. Power Joist blocking panels or other engineered wood products – such as Certified Rim Board – must be cut to fit between the Power Joists, and a Power Joist-compatible depth selected.
- Provide permanent lateral support of the bottom flange of all Power Joists at interior supports of multiple-span joists. Similarly, support the bottom flange of all cantilevered Power 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.
- If square-edge panels are used, edges must be supported between Power Joists with 2 x 4 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.
- Nail spacing:
Space nails installed to the flange's top face in accordance with the applicable building code requirements or approved building plans.

Figure 2

Typical ADI Power Joist™ Floor Framing and Construction Details

Some framing requirements such as erection bracing and blocking panels have been omitted for clarity.

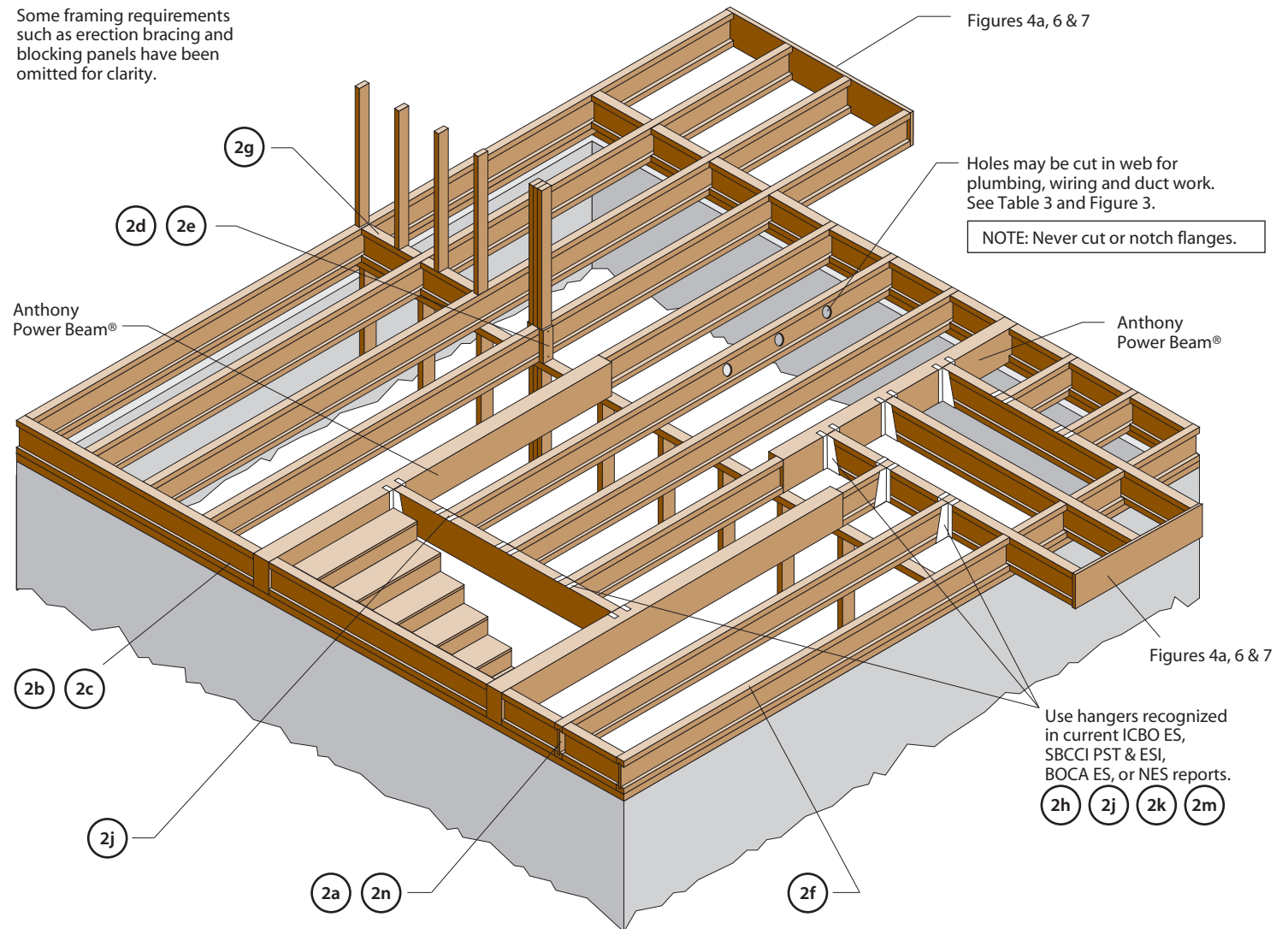
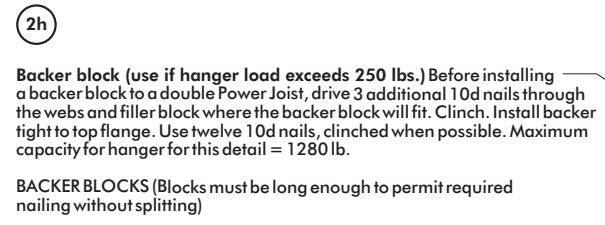
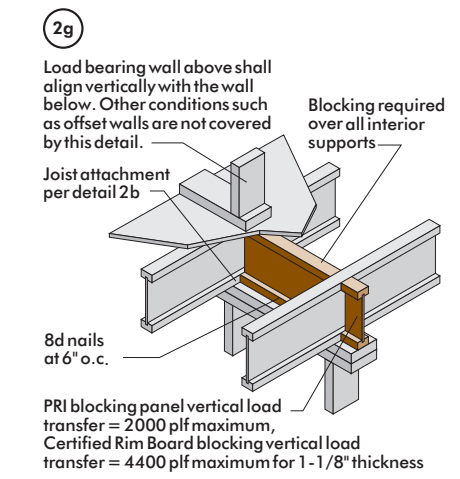
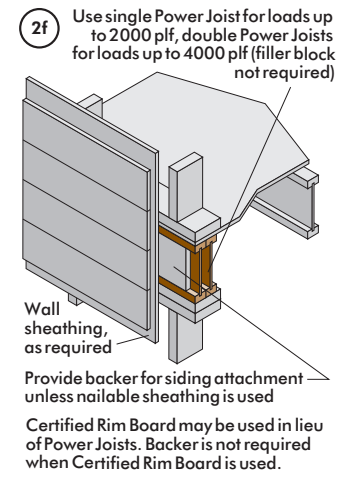
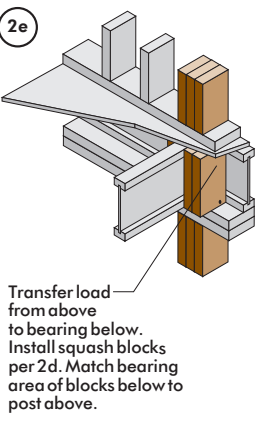
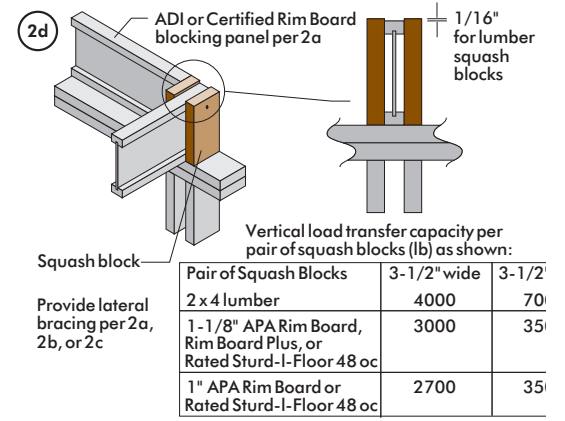
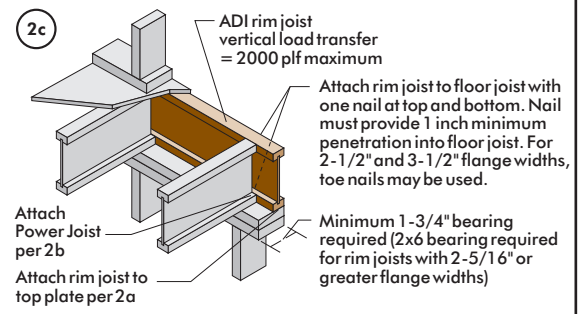
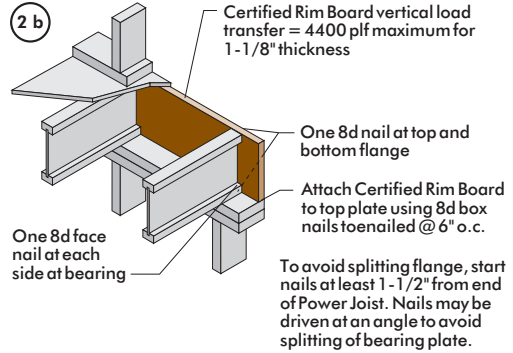
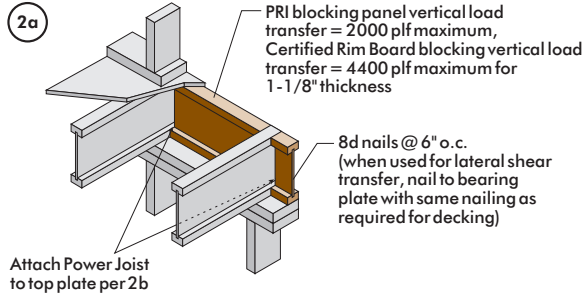


Figure 2 Continued

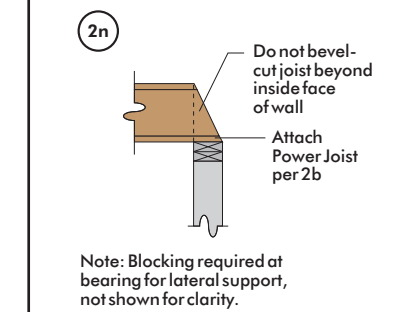
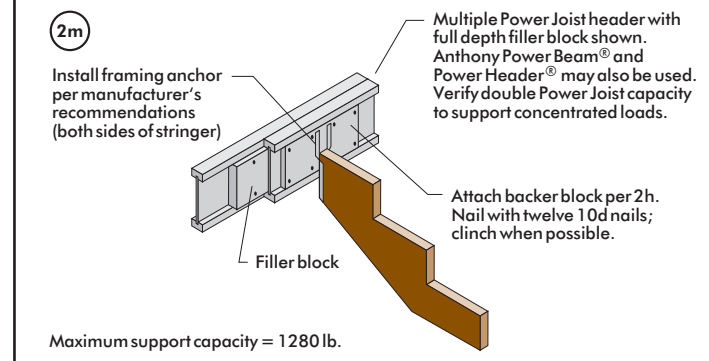
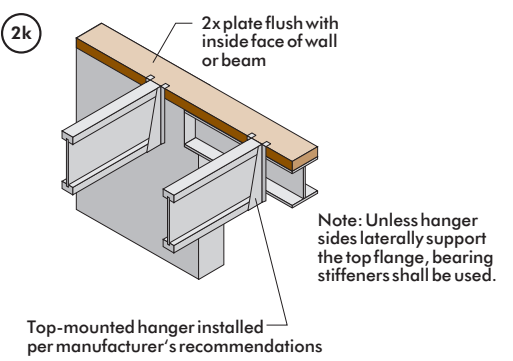
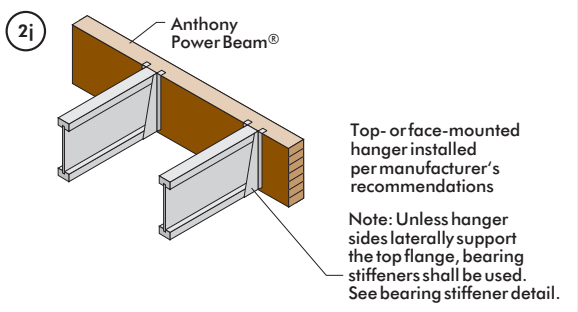
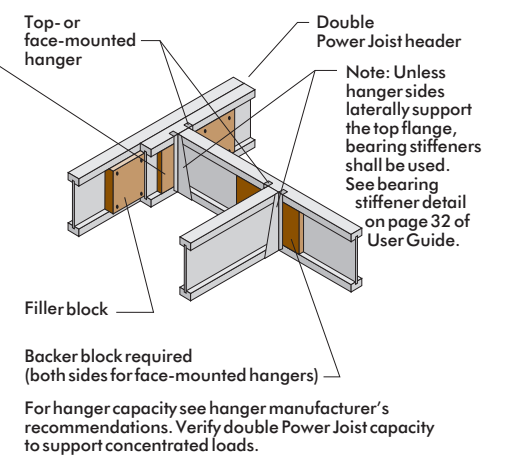
Typical ADI Power Joist Floor Framing and Construction

All nails shown in the details below are assumed to be common nails unless otherwise noted. 10d box nails may be substituted for 8d common shown in details. Individual components not shown to scale for clarity.



Flange Width	Material Thickness Required*	Minimum Depth**
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 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.



Web Hole Rules and Specifications

1. I-Joist top and bottom flanges must NEVER be cut, notched, or otherwise modified.
2. Whenever possible field-cut holes should be centered on the middle of the web.
3. The maximum size hole that can be cut into a I-Joist web shall equal the clear distance between the flanges of the I-joist minus 1/4-inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the hole and the adjacent I-Joist flange.
4. The sides of square holes or longest sides of rectangular holes should not exceed three fourths of the diameter of the maximum round hole permitted at that location.
5. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole (*or twice the length of the longest side of the longest rectangular hole*) and each hole must be sized and located in compliance with the requirements of Table 3.
6. A knockout is **not** considered a hole, may be utilized anywhere it occurs and may be ignored for purposes of calculating minimum distances between holes.
7. One and one-half inch holes shall be permitted anywhere in a cantilevered section of a PRI Joist. Holes of greater size may be permitted subject to verification.
8. A 1-1/2" hole can be placed anywhere in the web provided that it meets the requirements of 6 above.
9. For joists with more than one span, use the longest span to determine hole location in either span.
10. All holes shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 3.
11. Limit 3 maximum size holes per span.
12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

Table 3 Allowable Round Hole Web Opening Size and Locations 1, 2, 3, 4

(Simple or Multiple Spans for Dead Loads up to 10 psf and Live Loads up to 40 psf)

Joist Depth (inches)	Power Joist	Span Adjustment Factor (SAF)	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"	ADI-40	14.7	0'-6"	2'-0"	3'-0"	4'-6"	6'-0"	6'-6"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	ADI-60	16.6	2'-0"	3'-0"	4'-6"	6'-0"	7'-6"	8'-0"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11-7/8"	ADI-40	16.7	0'-6"	0'-6"	1'-6"	2'-6"	4'-0"	4'-6"	5'-6"	7'-0"	8'-0"	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	ADI-60	19.7	1'-0"	2'-0"	3'-6"	4'-6"	6'-0"	6'-6"	7'-6"	9'-0"	10'-0"	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	ADI-80	21.7	2'-0"	3'-6"	4'-6"	6'-0"	7'-6"	8'-0"	9'-0"	10'-6"	11'-6"	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14"	ADI-40	18.3	0'-6"	0'-6"	0'-6"	1'-0"	2'-0"	2'-6"	3'-6"	5'-0"	5'-6"	6'-0"	8'-0"	9'-6"	N/A	N/A	N/A	N/A
	ADI-60	19.9	0'-6"	0'-6"	0'-6"	2'-0"	3'-6"	3'-6"	5'-0"	6'-6"	8'-0"	8'-6"	10'-6"	12'-0"	N/A	N/A	N/A	N/A
	ADI-80	23.11	0'-6"	2'-0"	3'-0"	4'-6"	6'-0"	6'-6"	7'-6"	9'-0"	10'-0"	10'-6"	12'-6"	14'-0"	N/A	N/A	N/A	N/A
16"	ADI-40	19.8	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	1'-6"	3'-0"	4'-0"	4'-6"	5'-6"	7'-0"	7'-0"	9'-0"	11'-0"	N/A
	ADI-60	19.9	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	1'-0"	2'-0"	3'-6"	4'-6"	5'-6"	7'-6"	9'-0"	9'-6"	12'-0"	14'-0"	N/A
	ADI-80	23.11	0'-6"	0'-6"	0'-6"	2'-0"	3'-6"	4'-0"	5'-0"	6'-6"	8'-0"	8'-6"	10'-6"	12'-0"	12'-6"	14'-6"	16'-0"	N/A

SI: 1 inch = 25.4 mm; 1 foot = 304.8 mm

N/A = Not Allowed

(1) The above tables limited to Power Joist spacing of 24-inches on center or less.

(2) Distances are based on uniformly loaded I-joists.

(3) Hole location distance is measured from inside face of supports to center of hole.

(4) For continuous I-joists with more than one span, use the longest span to determine hole locations.

(5) If the I-joist are placed less than the full allowable span, the maximum distance from the centerline of the holes to the inside face of any support (D) as given below is permitted to be reduced as follows:

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

Where:

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

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

SAF = Span Adjustment Factor.

D = The minimum distance from the inside face of any support to center of hole from Table 7 above.

Note: If $\frac{L_{\text{actual}}}{\text{SAF}}$ is greater than 1, use 1 in the above calculation.

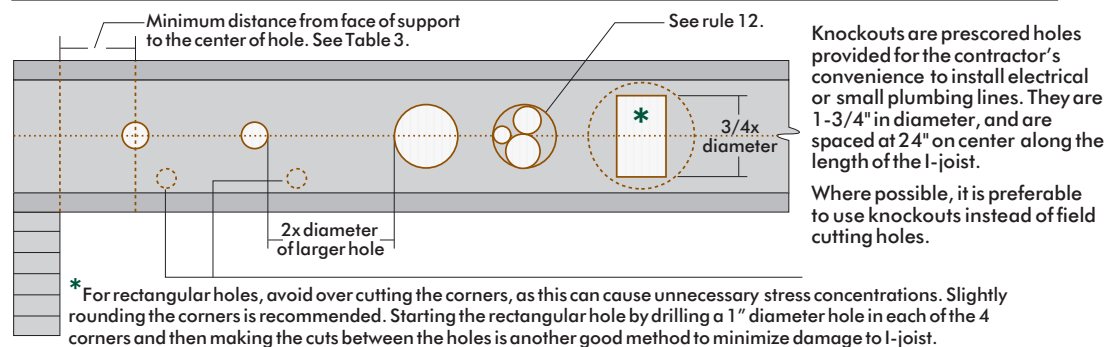
(6) Manufacturer's pre-scored 1-1/2-inch knockouts are not considered a hole and can be ignored for purposes of calculating minimum distances between holes.

When calculating hole locations by this optional method, the following minimum distances between the center of the hole and the inside face of the support apply:

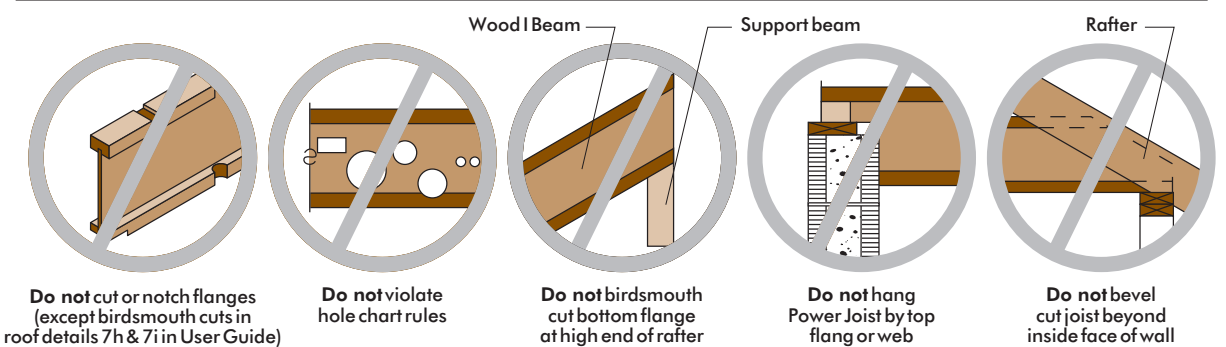
Hole Diameter	2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	12	12-3/4
inches	2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	12	12-3/4
(mm)	(51)	(76)	(101)	(127)	(152)	(159)	(178)	(202)	(219)	(228)	(254)	(273)	(279)	(305)	(324)
Minimum Distance	0.5	0.5	1	1	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2
in feet	0.5	0.5	1	1	1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2
(mm)	(150)	(150)	(300)	(300)	(300)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(450)	(600)

Figure 3

ADI Power Joist™ Typical Holes



Do Not Cut or Drill



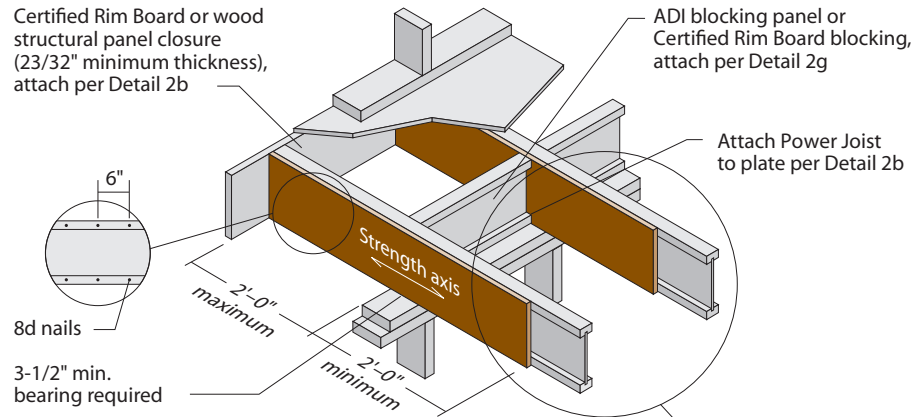
Cantilevers for Vertical Building Offsets (Concentrated Wall Load From Above)

Figure 4a

ADI Cantilever Reinforcement Methods allowed

Method 1 – Sheathing Reinforcement One Side*

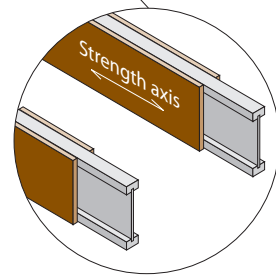
Certified Rim Board or wood structural panel closure (23/32" minimum thickness), attach per Detail 2b



Method 2 – Sheathing Reinforcement Two Sides*

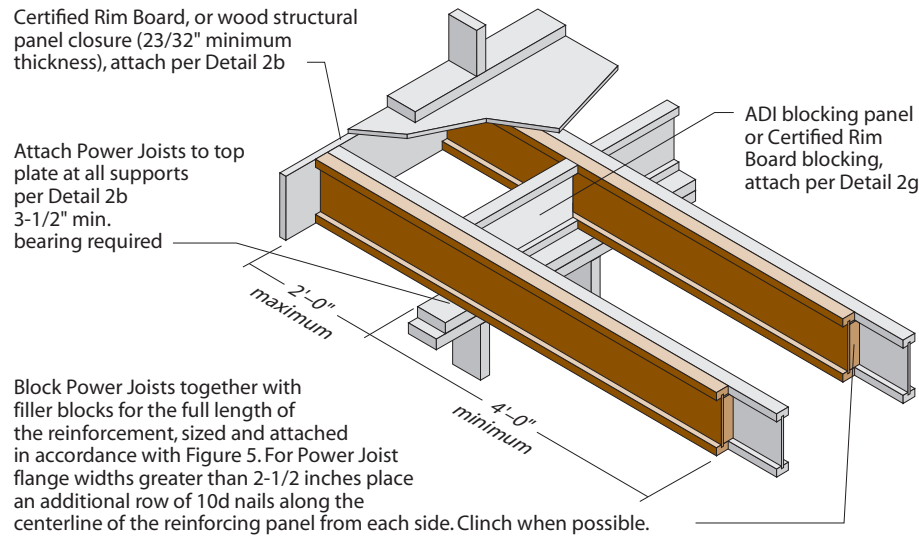
Use same installation as Method 1 but reinforce both sides of Power Joist with sheathing or Certified Rim Board

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



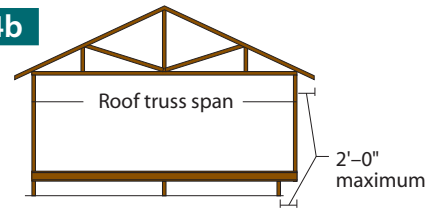
Alternate Method 2 – Double Power Joist

Certified Rim Board, or wood structural panel closure (23/32" minimum thickness), attach per Detail 2b

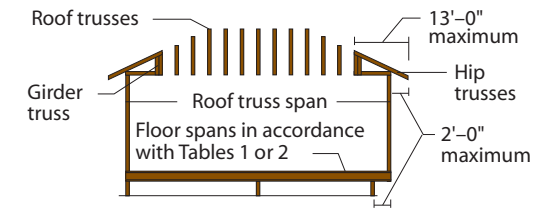


*Note: APA RATED SHEATHING 48/24 (minimum thickness 23/32") or Certified Rim Board required on sides of joist. Depth shall match the full height of the joist. Nail with 8d nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach Power Joist to plate at all supports per Detail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

Figure 4b



See Table below for ADI reinforcement requirements at cantilever.



For hip roofs with the hip trusses running parallel to the cantilevered floor joists, the Power Joist reinforcement requirements for a span of 26 ft. shall be permitted to be used. For additional roofing details see our Power Joist User Guide.

Table 5

ADI Power Joist Cantilever Reinforcement Methods Allowed

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

Notes:

- N = No reinforcement required.
1 = ADIs reinforced with 23/32" wood structural panel (WSP) on one side only.
2 = ADIs reinforced with 23/32" WSP on both sides or double I-joist.
X = Try a deeper joist or closer spacing.
- 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.
- Table applies to joists 12" to 24" o.c. Use 12" o.c. requirements for lesser spacings.
- For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if a truss is used.

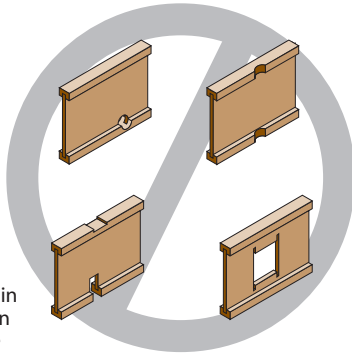
Knockouts

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

For floor applications, position the Power 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 over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1" diameter hole in each of the 4 corners and then making the cuts between the holes is another good method to minimize damage to Power Joists.



Double Power Joists

1. Double Power 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 Power Joist. Install double Power Joists when noted in the building drawings.
2. Support back of Power 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 Power Joist flange.
4. Filler blocks are required between joists for full length of span.
5. Nail joists together with two rows of 10d nails at 12 inches o.c. (clinched when possible) on each side of the double Power Joist. 4 nails per foot are required. If nails can be clinched, only 2 nails per foot are required.

Figure 5

Multiple Power Joist™ Construction

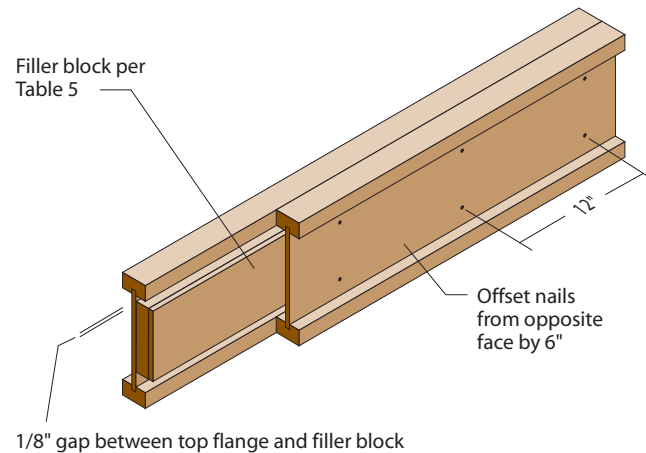


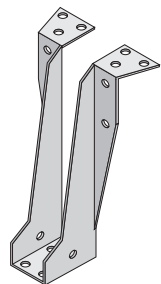
Table 5

Filler Block Requirements for Double Power Joist™ Construction

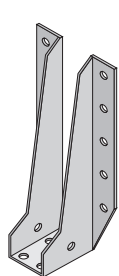
Flange Width	Net Depth	Joist Designation	Filler Block Size
2-1/2"	9-1/2"	ADI-40, ADI-60	2-1/8" x 6"
	11-7/8"	ADI-40, ADI-60	2-1/8" x 8"
	14"	ADI-60	2-1/8" x 10"
3-1/2"	16"	ADI-60	2-1/8" x 12"
	11-7/8"	ADI-80	3" x 8"
	14"	ADI-80	3" x 10"
	16"	ADI-80	3" x 12"

Power Joist™ Hangers

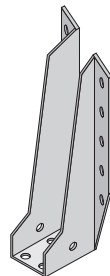
1. Hangers shown illustrate the three most commonly used metal hangers to support Power Joists.
2. All nailing must meet the hanger manufacturer's recommendations.
3. Hangers should be selected based on the joist depth, flange width and load capacity based on the spans indicated in Tables 1 and 2.
4.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



Top Flange



Face Mount

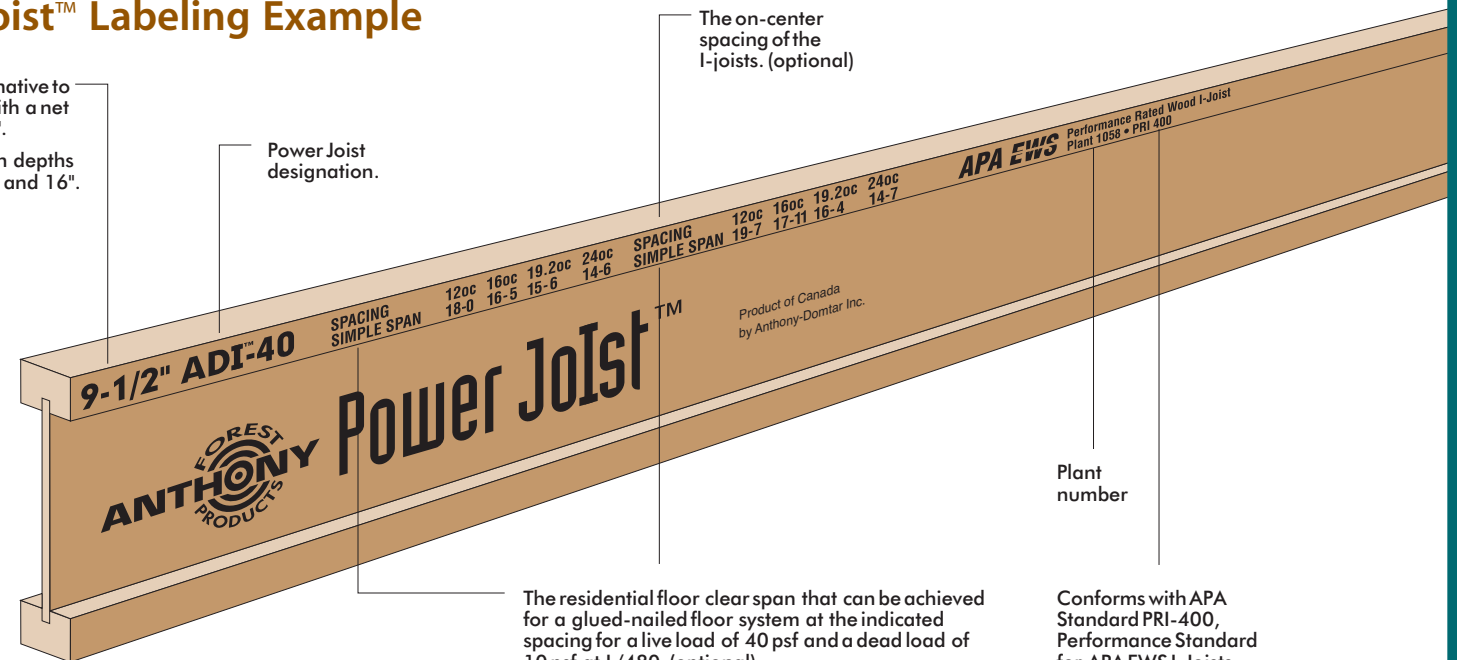


Skewed

Power Joist™ Labeling Example

The I-joist alternative to 2 x 10 lumber with a net depth of 9-1/2".

Also available in depths of 11-7/8", 14", and 16".



The residential floor clear span that can be achieved for a glued-nailed floor system at the indicated spacing for a live load of 40 psf and a dead load of 10 psf at L/480. (optional)

Plant number

Conforms with APA Standard PRI-400, Performance Standard for APA EWS I-Joists.

Cantilevers for Balconies (No Wall Load From Above)

Figure 6

Power Joist™ Cantilever Detail for Balconies

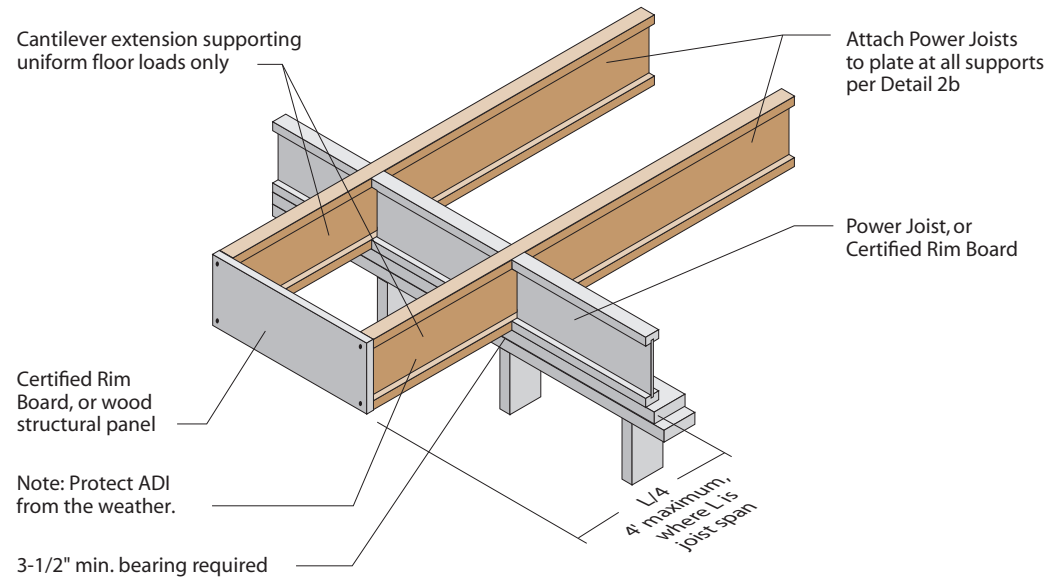
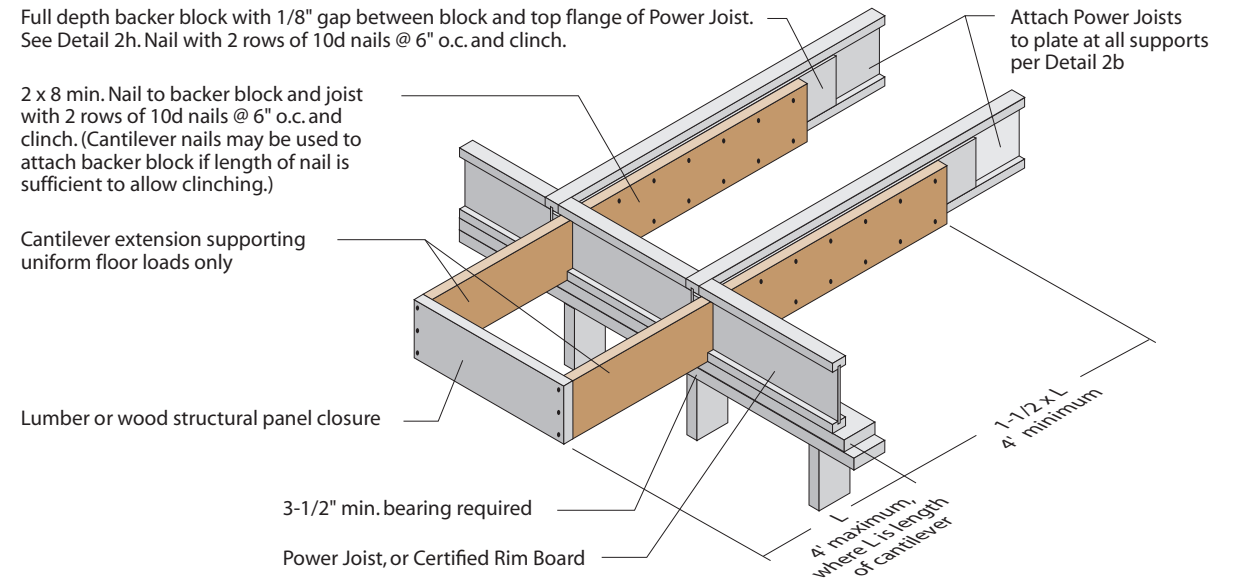


Figure 7

Lumber Cantilever Detail for Balconies



Installing the APA Glued Floor System

1. Wipe any mud, dirt, water, or ice from Power Joist flanges before gluing.
2. Snap a chalk line across the Power Joists four feet in from the wall for panel edge alignment and as a boundary for spreading glue.
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 Power Joist. Apply glue in a winding pattern on wide areas, such as with double Power Joists.
6. Apply two lines of glue on Power 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 Power 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 ensure 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 6. 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 6

APA Rated Sturd-I-Floor Fastener Schedules for ADIs⁽¹⁾

Maximum Joist Spacing (in.)	Panel Thickness ⁽²⁾ (in.)	Fastening: Glued-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 allowable span. Panels with an allowable span greater than the actual joist spacing may be substituted for panels of the same thickness with an allowable span matching the actual joist spacing. For example, 19/32-inch-thick Sturd-I-Floor 20 o.c. may be substituted for 19/32-inch-thick Sturd-I-Floor 16 o.c. 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 Power Joists.

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