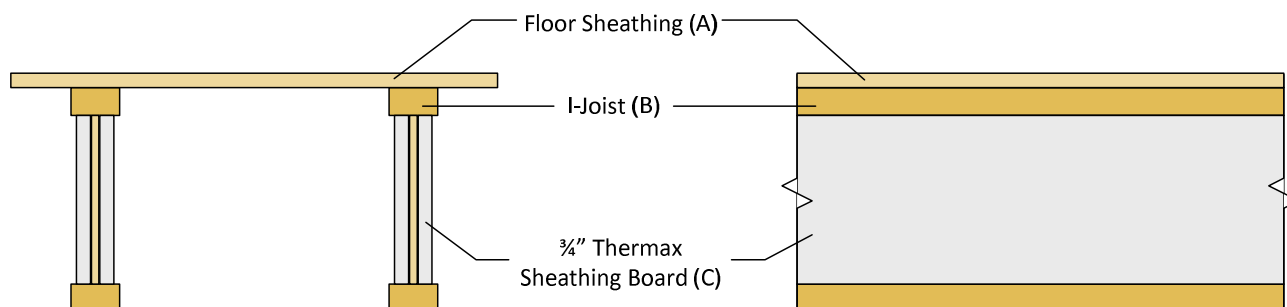




FMJ™ AJS® 24 & BCI® 60s Joist **for Fire Protection of Floors Installation Guide**

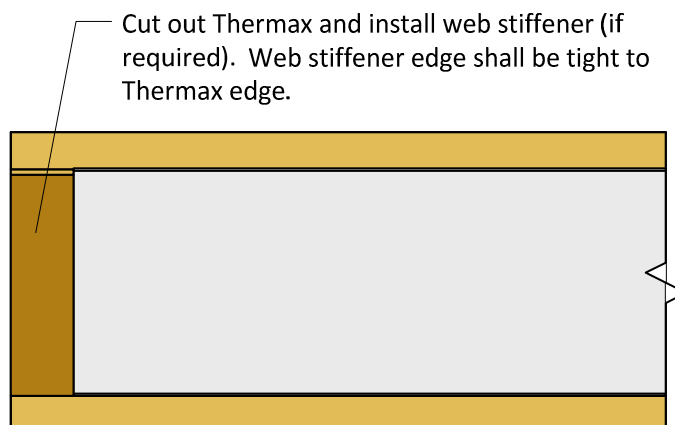
Materials



- (A) Floor Sheathing: Materials and installation per Section R503 of the IRC
- (B) I-Joists (marked with "FMJ" after series number within grade stamp on flange and/or web)
 - AJS® Joists: APA PR-S201 & ICC ES ESR-1144
 - BCI® Joists: APA PR-S201, APA PR-L323, or ICC ES ESR-1336
- (C) Factory-applied proprietary Thermax™ Sheathing Board: One layer of 3/4" thick Thermax™ Sheathing board conforming to ICC-ES ESR-1659 is adhered to each side of the AJS® / BCI® web.

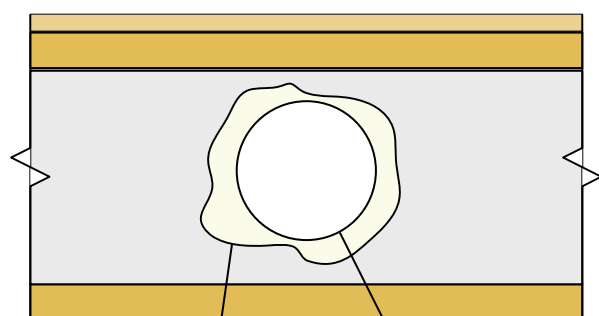
FMJ™ Joist Installation and Web Hole Instructions

- Maximum joist spacing = 24" o.c.
- Web Stiffeners: Remove portion of Thermax™ sheathing at web stiffener location (wear a dust mask and eye protection during removal). Install web stiffener tight to existing Thermax™. Nail and clinch web stiffeners per AJS® or BCI® Installation Guide.



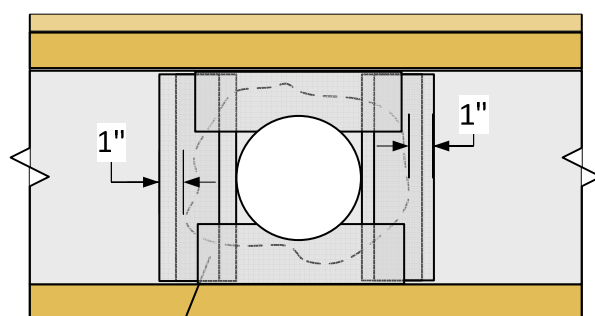


- Web Holes - Cut in a workmanlike manner. Wear a dust mask and eye protection while cutting product.
 - Hole size and location per AJS® / BCI® Installation Guides or BC CALC® sizing software.
 - Recommended Methods
 - Smaller Holes: Drill or spade bits. Minor tearing on backside of foil may occur.
 - Larger Holes: Self-feed bit or reciprocating saw (use drill for starter hole). Minor tearing on backside of foil may occur.
 - Hole Saws: Use a pilot hole and cut thru Thermax™ and portion of OSB web, then finish the cut from backside using the pilot hole as a guide. Minor tearing on backside of foil may occur. Larger tearing may occur when cutting from only one side.
- Repairs: For cuts that produce significant tearing of foam and/or foil on either side of the joist (greater than 1 1/2" from hole edge), provide fire resistance reinforcement with either aluminum foil tape, min. 1/2" gypsum board, min. 5/8" OSB or plywood, or min. 3/4" Thermax™ sheathing as shown in the following details:



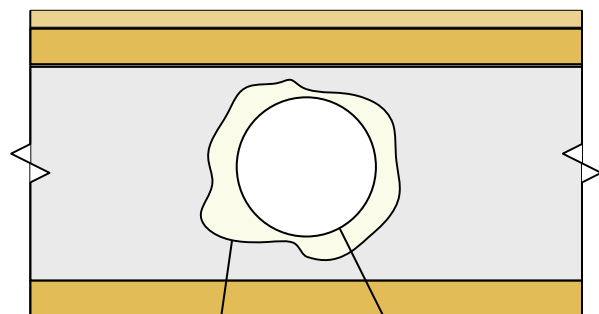
Intended
web hole

Tear out from hole cutting
No repair required if tearing
does not extend further than
1.5" from original hole.



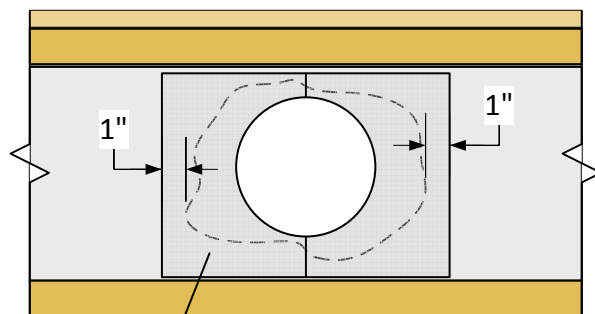
Aluminum foil tape, placed to
wrap around hole and cover
damaged area. Extend past
damaged area min. 1" or tight
to flange. Fasten with staples
(office size or larger) or 3/4" or
shorter nails/screws at 3" oc





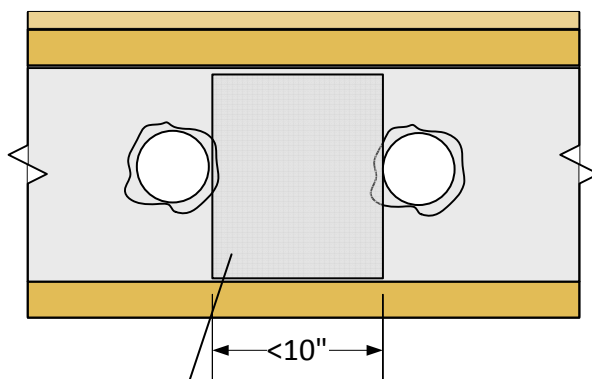
Intended
web hole

Tear out from hole cutting
No repair required if tearing
does not extend further than
1.5" from original hole.



Min. ½" regular gypsum
board, 5/8" wood structural
panel, or ¾" Thermax.
Cut to wrap around hole and
cover damaged area. Extend
past damaged area min. 1" or
tight to flange.
Fasten with drywall or wood
screws, 2" min length, 3" oc
around perimeter

- **Multiple Hole Reinforcement:** For holes closer than 10" (edge to edge) with foil tearing exceeding 1", install ½" gypsum board, min. 5/8" structural wood panel or ¾" Thermax™ between holes for reinforcement. Note that holes should not be closer edge to edge than the twice the greater dimension of the holes for structural limits.

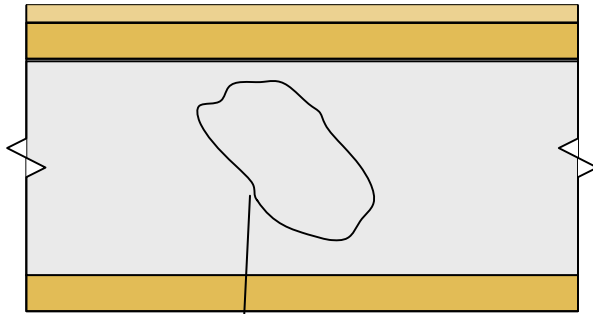


For conditions where multiple holes closer than 10"
apart and greater than 1" foil tearing: Min. ½" regular
gypsum board, 5/8" wood structural panel, or ¾"
Thermax reinforcement. Fasten with drywall or wood
screws, 2" min length, 3" o.c. around perimeter



FMJ™ Damage Guidelines

- No repair required for conditions where foil has been fractured and foam compressed.



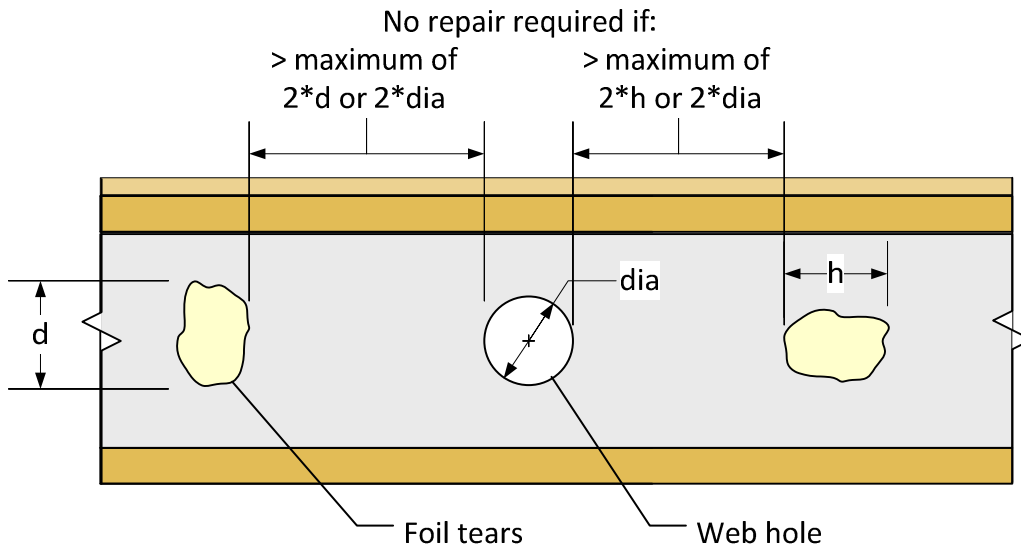
Indentations into foam with minor foil tears allowable, no repair required



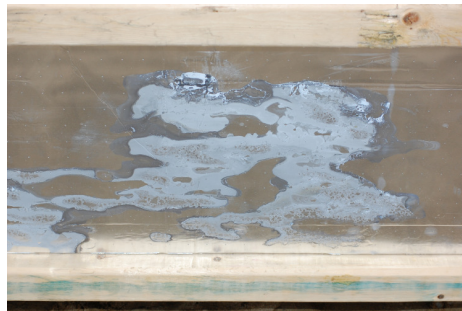
- For conditions where foil and foam has been removed, use min. 3/8" depth of fire resistance caulk (meeting ASTM E136) in damaged area, full coverage.



- For conditions where foil has been removed for an area of 1.5 in² or less, no repair or consideration is required. Larger areas may be considered holes and are allowable if not located within twice the greater dimension of itself and an adjacent hole or foil removed area. If located closer, foil tears may be repaired using the guidelines on page 2 and 3 for hole repairs.



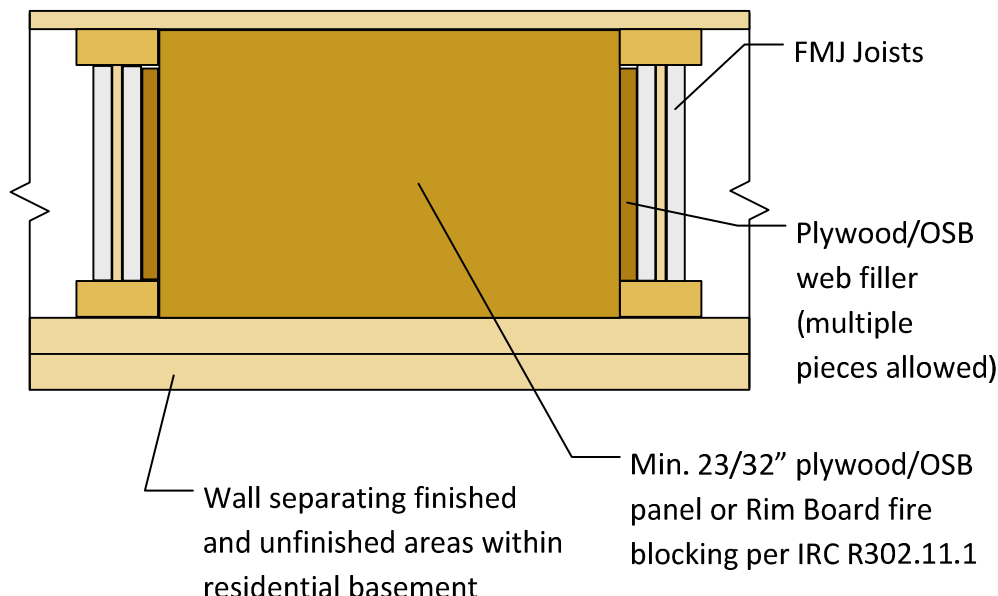
- Discoloration may be present on Thermax™ panels; areas up to 24" wide and full depth of panel are allowable with no repair or consideration. For larger areas, previously listed repairs (aluminum foil tape, min. 1/2" gypsum board, min. 5/8" OSB or plywood) may be used to cover such areas, or contact Boise Cascade EWP Engineering for specific condition review.



- The application of paints or stains is not allowed on the Thermax™ panels of FMJ™ Joists.

Fireblocking at Finished/Unfinished Boundaries

- Only required at finished/unfinished boundary areas.
- Web filler to fill gap between joist web and blocking, 3" min width.



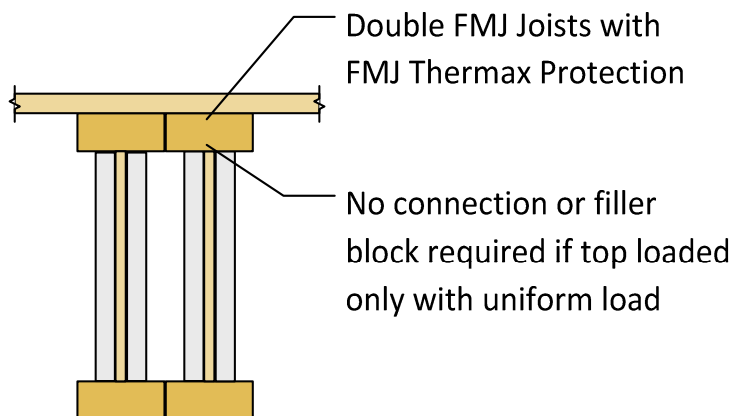
- FMJ™ joists may be installed as fire blocking in place of min. 23/23" plywood/OSB or rim board, if gaps filled with plywood/OSB, gypsum board or Thermax™.
- Fasten gap filler with (2) nails or screws through Thermax™ into AJS® / BCI® web.

Blocking / Bridging

- Span Blocking / Bridging for Floor Performance Improvement: Since span blocking / bridging is not a floor load transfer element, non-FMJ AJS® or BCI® joists may be used.
- Intermediate or End Bearing Blocking: Install minimum 1" BC RIM BOARD® OSB or VERSA-LAM® as blocking.

Double Joist Detailing

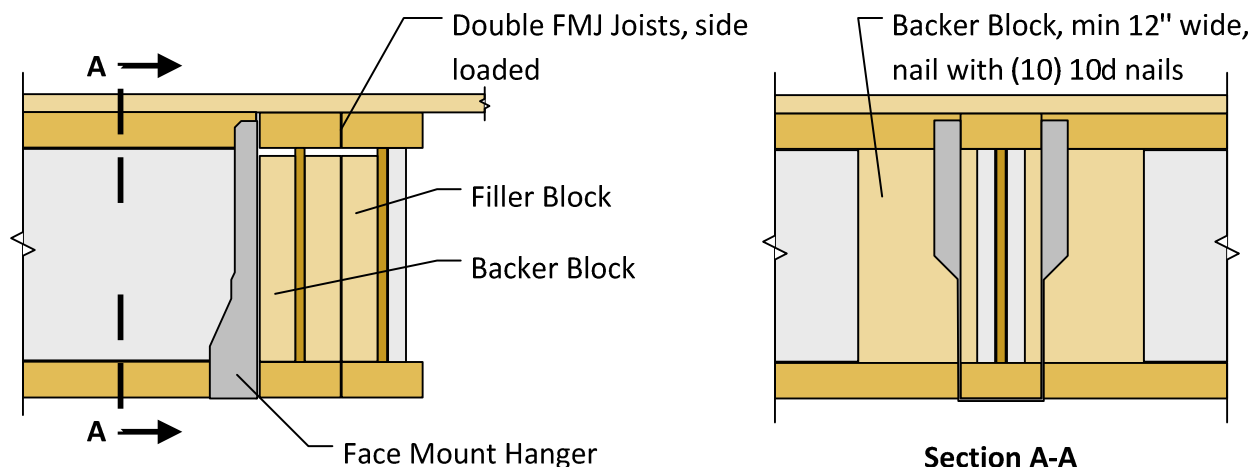
- Top Uniform Loaded Only Applications





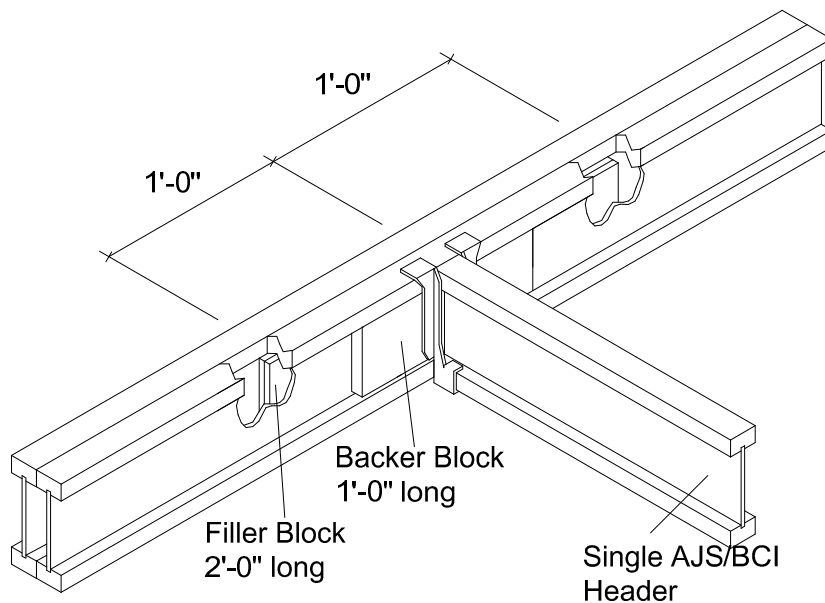
- Detail allowed only when both plies are loaded evenly from the top.
- Apply construction adhesive to contact surfaces to limit floor squeaks.
- Nail floor sheathing to each joist.

- Side Loaded Applications



Block Type	FMJ™ AJS® 24	FMJ™ BCI® 60s
Filler Block	Double 2x	2x + 7/16" or 1/2" wood panel
Back Block	Single 2x	1 1/8" or double 1/2" wood panel

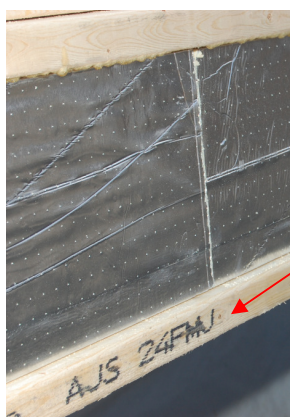
- Remove Thermax™ in areas where filler and backer blocks are required (wear a dust mask and eye protection during removal); use utility and putty knives for removal.
- Nail filler blocks with 2 rows min. 0.128" x 3" (10d box) nails at 12" on-center, stagger rows (offset of 6"), from both sides of double joist. Use pneumatic nail gun when nailing through Thermax™.
- Continuous filler blocks required along length of double joist where multiple side loads exist. Single side point load requires minimum 2'-0" long filler block with min. 0.128" x 3" (10d box) nails.



Note: Thermax web protectant not shown for clarity

- Side Loaded Applications (cont.)
 - Top flange hangers are allowed if backer blocks are installed tight to underside of top flange.
 - Refer to Technical Note IJ-13 *Multiply Ply BCI® / AJS® Members* for hanger capacity limits, connection values and other multiple I-joist information.
 - Apply construction adhesive to contact surfaces to limit floor squeaks.

Field Identification



Each joist marked
“FMJ”, along with
qualified agency
name