



LISTING INFORMATION OF
Weyerhaeuser - TJI Joists
SPEC ID: 26948

Weyerhaeuser NR Company
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United States

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LISTING INFORMATION

TJI® Joists are engineered wood products, which have been designed to replace conventional wood joist members. The flanges of TJI Joists are formed from solid sawn lumber, laminated veneer lumber, or laminated strand lumber; and the webs are formed from oriented strand board (OSB).

***NOTE:** TJI is a registered trademark of Weyerhaeuser

FIRE RATINGS

Test Standard	Rating	Design Number
ASTM E119, CAN/ULC S101	45 Minutes	WNR/FCA 45-01, WNR/RCA 45-01 WNR/FCA 45-06
ASTM E119, CAN/ULC S101	1 Hour	WNR/FCA 60-01, WNR/FCA 60-03, WNR/FCA 60-05, WNR/FCA 60-08, WNR/FCA 60-11, WNR/RCA 60-01, WNR/RCA 60-03, WNR/WI 60-07, WNR/WI 60-12
ASTM E119, CAN/ULC S101	90 Minutes	WNR/FCA 90-01
ASTM E119, CAN/ULC S101	2 Hours	WNR/FCA 120-01, WNR/WI 120-03

Attribute	Value
Criteria	CAN / ULC S101 (2007)
Criteria	ASTM E119 (2012a)
Criteria	ASTM E119 (2018)
CSI Code	06 17 33 Wood I-Joists
Fire Resistance	2 Hour
Fire Resistance	1 Hour Fire Rating
Fire Resistance	90 Minute Fire Rated
Fire Resistance	45 Minute Fire Rated
Listing Section	PREFABRICATED JOISTS
Listing Section	ROOF/CEILING, FLOOR/CEILING, BEAM & COLUMN ASSEMBLIES
Spec ID	26948

DRAWING INDEX

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WNR/FCA 120-01



Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company

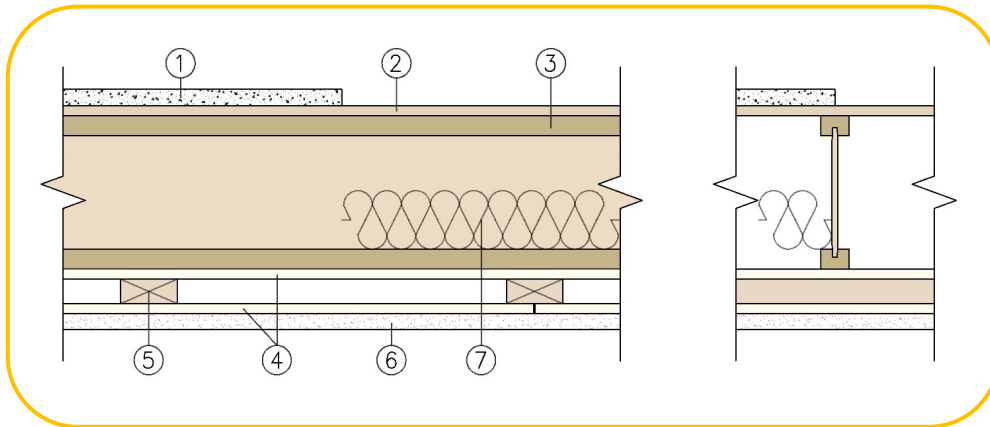
Design No. WNR/FCA 120-01

Wood I-Joist

TJI® Joists

ASTM E119, CAN/ULC S101

Rating: 2 hours, STC 54 with Minimum 1-1/2 in. Topping



1. Topping (Optional): Lightweight concrete or proprietary topping.

2. Sub-Flooring: Minimum 5/8 in. tongue and groove plywood or oriented strandboard (OSB) designed and installed per Code requirements. Square-edge panels are permitted when topping is used.

3. Structural Members: I-Joist structural member

A. CERTIFIED PRODUCT: Weyerhaeuser NR Company, TJI® Joists Series: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D

Minimum depth: 9-1/2 in., maximum spacing: 24 in. oc.

B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Minimum thickness: 1.5 in. Minimum depth: 9-1/2 in. Maximum spacing: 24 in. oc.

4. Gypsum Board: Two layers, 5/8 in. Type X. Maximum board width is 48 in.

Base layer installed with long dimension perpendicular to joists, end joints centered on joists. Attached to joists with minimum 1-5/8 in. Type W Screws.

Second layer installed with long dimension perpendicular to furring, end joints centered on furring. Attached to furring with minimum 1-5/8 in. Type W screws.

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SFT-BC-OP-191

WNR/FCA 120-01 (2 OF 2)

Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

All base and second layer joints to be staggered. All gypsum board screws spaced 8 in. oc, located 1-1/2 in. from side joints and 3/4 in. from end joints.

5. **Wood Furring:** 2 x 4 lumber, minimum Standard & Better grade, placed perpendicular to joists, spaced maximum 24 in. oc, and attached to each joist with one minimum 3 in. Type W screw.

6. **Ceiling Finish:** Gypsum sand plaster, minimum 1.0 in. thick on 3/8 in. thick self-furring Riblath

or equivalent, attached to 2 x 4 wood furring with 11-gauge barbed roofing nails engaging 2 strands or a rib at 6 in. oc along support. Nails to penetrate 3/4 in. minimum into wood furring. Minimum 1/2 in. side lap and 1.0 in. end lap.

7. **Insulation (Optional):** Maximum 6 in. fiberglass or mineral wool batt insulation, friction fit between webs, and supported using wires every 16 in.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

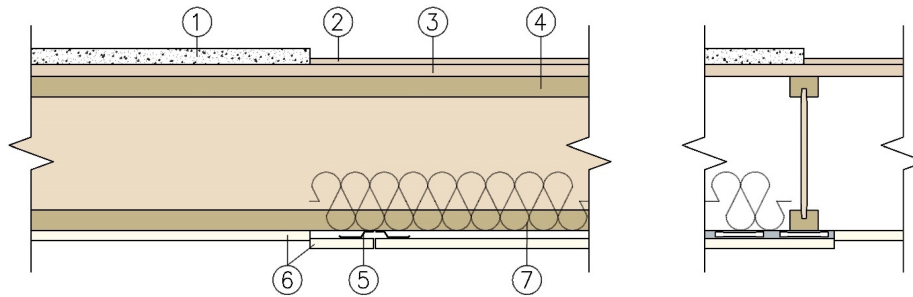
Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

WNR/FCA 45-01

Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company
Design No. WNR/FCA 45-01
Wood I-Joists
TJI® Joists
ASTM E119, CAN/ULC S101
Rating: 3/4 Hour

STC 50 with Insulation and Resilient Channels, STC 57 with Min. 1-1/2 in. of Topping and Resilient Channels



1. **TOPPING (Optional):** Lightweight concrete or proprietary topping.
2. **FLOORING (Optional):** 3/8 in. wood panel sheathing.
3. **SUB-FLOORING:** Minimum 23/32 in. tongue and groove plywood or oriented strand board (OSB) designed and installed per Code requirements. Alternate 5/8 in. tongue and groove plywood or OSB when optional Topping or Flooring is used.

4. **STRUCURAL MEMBERS:** Wood I-Joists

- A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company: TJI® Series Joists TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D.

Minimum depth: 9-1/2 in. Maximum spacing: 24 in. on center (oc).

- B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Minimum thickness: 1.5 in. Minimum depth: 9-1/2 in. Maximum spacing: 24 in. oc.

5. **STEEL FURRING CHANNELS (Optional):** 0.019 in. or thicker galvanized steel resilient channels, maximum spacing 24 in. oc, fastened to each joist with one 1-1/4 in. Type W screw. For the attachment of gypsum board end joints, additional channels are placed such that each board end is supported by its own channel. These additional channels extend to the next joist on each side of the board edges.
6. **GYPSUM BOARD:** One layer of 5/8 in. Type X. Maximum board width is 48 in. Joints to be taped and filled. Screw heads to be filled.

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WNR/FCA 45-01 (2 OF 2)

Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Application to Joists: Applied to joists with long edge perpendicular to joists and with end joints butted over joists. Adjacent end joints staggered minimum 24 in. Attached with minimum 1-5/8 in. Type W screws spaced 12 in. oc on intermediate supports and 6 in. oc at end supports.

Application to Channels: Applied to furring channels with long edge perpendicular to channels and located midway between joists. End joints staggered. Gypsum board fastened to channels with 1 in. Type S screws with two rows located 3/4 in. and

6 in. away from long edge and the remainder spaced 12 in. oc along channel. Screws located 1-1/2 in. from end joints.

- 7. FIBERGLASS BATT INSULATION (Optional, permitted only when resilient channels are used):** 3-1/2 in. thickness, friction fit between flanges.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

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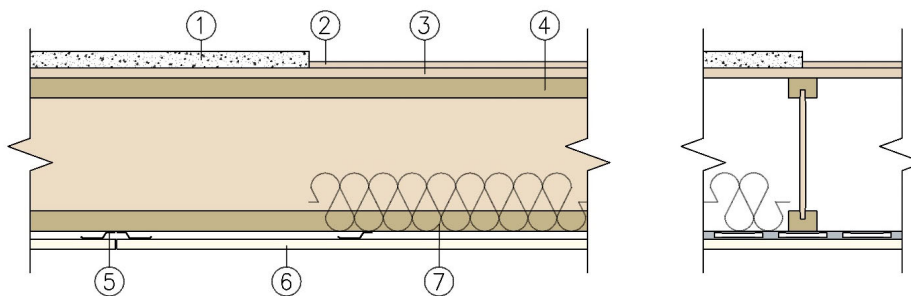
WNR/FCA 45-06



Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company
Design No. WNR/FCA 45-06
Wood I-Joists
TJI® Joists
ASTM E119, CAN/ULC S101
Rating: 3/4 Hour

STC 50 with Insulation and Resilient Channels STC 57 with Min. 1-1/2 in. of Topping & Resilient Channels



1. **TOPPING (Optional):** Lightweight concrete or proprietary topping.

2. **FLOORING (Optional):** 3/8 in. wood panel sheathing.

3. **SUB-FLOORING:** Minimum 19/32 in. tongue and groove plywood or oriented strand board (OSB) designed and installed per Code requirements. Square-edge panels are permitted when optional topping or optional flooring is used.

4. **STRUCTURAL MEMBERS:** Wood I-Joist

A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company, TJI® Joists Series: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D

Minimum depth: 9-1/2 in., maximum spacing: 24 in. on center (oc).

B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Minimum thickness: 1.5 in. Minimum depth: 9-1/2 in. Maximum spacing: 24 in. oc.

5. **STEEL FURRING CHANNELS:** 0.019 in. or thicker galvanized steel resilient channels, maximum spacing 16 in. oc, fastened to each joist with one 1-1/4 in. Type W screw. For the attachment of gypsum board end joints, additional channels are placed such that each board end is supported by its own channel. These additional channels extend to the next joist on each side of the board edges.

6. **GYPSUM:** 5/8 in. Georgia Pacific "Fire-Shield G, Type X", Westroc "Fireboard C" or USG/CGC "Sheetrock, Fire Code C" gypsum board. Maximum board width is 48 in. Joints to be taped and filled. Screw heads to be filled.

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WNR/FCA 45-06 (2 OF 2)



Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Applied to furring channels with long edge perpendicular to channels and located midway between joists. End joints staggered. Gypsum board fastened to channels with 1 in. Type S screws with two rows located 3/4 in. and 6 in. away from long edge and the remainder spaced 12 in. oc along channel. Screws located 1-1/2 in. from end joints

- 7. FIBERGLASS BATT INSULATION (Optional when resilient channel is used):** 3-1/2 in. thickness, friction fit between flanges.

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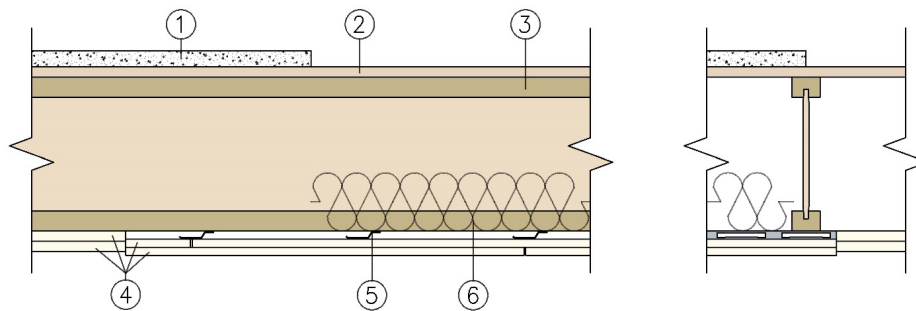
SFT-BC-OP-19I

WNR/FCA 60-01



Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 – Wood I-Joists

**Weyerhaeuser NR
WNR/FCA 60-01
TJI Joists
STC 50 with Resilient Channels Only
STC 58 with min 1-1/2 in. Topping & Resilient Channels
ASTM E119-12a and CAN/ULC S101-07
ASSEMBLY RATING – 1 Hour, Floor/Ceiling Assembly**



- 1. TOPPING (Optional):** Lightweight concrete or proprietary topping.

Min. thickness: 1.5 in., Min. depth: 9-1/2 in.,
Max spacing: 24 in. oc.

- 2. SUB-FLOORING:** Min. 5/8 in. tongue and groove plywood or oriented strand board (OSB) designed and installed per Code requirements. Square edge panels are permitted when optional topping is used.

- 4. GYPSUM BOARD:** Two layers of min. 1/2 in. thick Type X or Type C gypsum board. Max. board width is 48 in. Exposed joints to be taped and filled. Exposed screw heads to be filled.

- 3. STRUCTURAL MEMBER:** Wood I-Joist

Application to Joists (permitted only when 5/8 in. gypsum is used):

- A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company, TJI® Joists Series: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D:

Min. depth: 9-1/2 in., Max. spacing: 24 in. on center (oc).

Base layer applied to joists with long edge perpendicular to joists and with end joints butted over joists. Adjacent end joints staggered min. 24 in. Base layer attached with Type W screws, spaced 12 in. oc on intermediate supports and 6 in. oc at end supports. Screws must penetrate min. 1 in. into wood member.

- B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Face layer installed with long edge perpendicular to joists, and edges staggered 24 in. from base layer edges.

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WNR/FCA 60-01 (2 OF 2)

Division 06 – Wood, Plastics and Composites
 06 17 00 Shop-Fabricated Structural Wood
 06 17 33 – Wood I-Joists

End joints located over and attached to joists and staggered min. 24 in. from base layer end joints. Face layer attached with Type W screws, spaced 12 in. oc on intermediate supports and 8 in. oc on end supports. Screws must penetrate min. 1 in. into wood member. Face layer also fastened to base layer with a row of Type G screws, spaced 8 in. oc located 6 in. away from end joints in face layer. Type G screws must penetrate min. of 1 in. beyond surface of base layer.

Application to Channels:

Base layer applied to furring channels with long edge perpendicular to channels. End joints staggered min. of two channel spacings. Base layer fastened to channels with Type S screws spaced 12 in. oc along channels. 7/8 in. screws required for base layer when using 1/2 in. gypsum board base layer, 1 in. screws required for base layer when using 5/8 in. gypsum board.

Face layer installed with long edges perpendicular to the channels. Long edges staggered 24 in. from base layer edges. End joints staggered a min. of one channel spacing from the

base layer end joints. Face layer attached with Type S screws, spaced 12 in. oc on intermediate supports and 8 in. oc on end supports. 1-3/8 in. screws required for face layer when using 1/2 in. gypsum board. 1-5/8 in. screws required for face layer when using 5/8 in. gypsum board. Face layer also fastened to base layer with a row of Type G screws, spaced 8 in. oc located 6 in. away from end joints in face layer. Type G screws must penetrate min. of 1 in. beyond surface of base layer.

5. **STEEL FURRING CHANNEL:** 0.019 in. or thicker galvanized steel resilient channels, fastened to each joist with one 1-1/4 in. Type W screw, or 0.019 in. or thicker galvanized steel hat channels, fastened to each joist with two 1-1/4 in. Type W screws. Max. spacing 24 in. oc. Channels may be omitted when 5/8 in. thick Type X gypsum board is used.
6. **INSULATION (Optional):** Max. 3-1/2 in. thick fiberglass batt insulation friction fit between flanges or the webs of the joists.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

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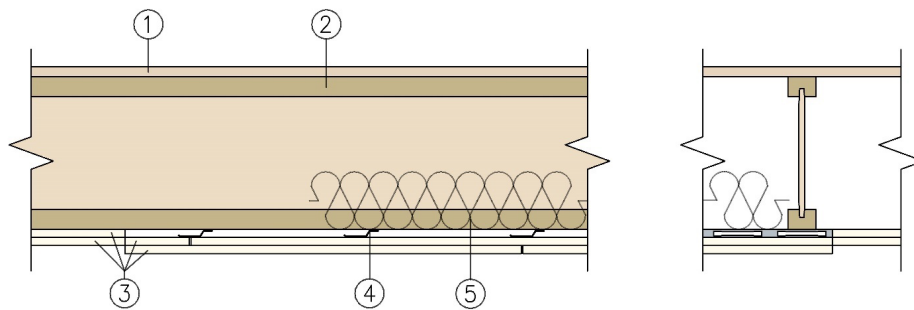
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WNR/FCA 60-03

Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company
Design No. WNR/FCA 60-03
Wood I-Joists
TJI® Joists
ASTM E119, CAN/ULC S101
Rating: 1 Hour
STC 50 with Insulation and Resilient Channels



1. SUB-FLOORING: Min. 5/8 in. tongue and groove plywood or oriented strand board (OSB) designed and installed per Code requirements.

2. STRUCTURAL MEMBERS: Wood I-Joists

A. CERTIFIED PRODUCT: Weyerhaeuser NR Company: TJI® Series Joists: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D:

Min. depth: 9-1/2 in., Max. spacing: 24 in. on center (oc). Spacing may be increased to max. 32 in. oc if furring channels are used and spaced max. 16 in. oc.

B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Min. thickness: 1.5 in., Min. depth: 9-1/2 in., Max. spacing: 24 in. oc. Spacing may be increased to max. 32 in. oc if furring channels are used and spaced max. 16 in. oc.

3. GYPSUM BOARD: Two layers of min. 1/2 in. thick USG/CGC "Sheetrock Fire Code C" or Westrock "Fireboard C" gypsum board. Max. board width is 48 in. Exposed joints to be taped and filled. Exposed screw heads to be filled.

Application to Joists:

Base layer applied to joists with long edge perpendicular to joists and with end joints butted over joists. Adjacent end joints staggered min. 24 in. Base layer attached with Type W screws, spaced 12 in. oc on intermediate supports and 6 in. oc at end supports. Screws must penetrate min. 1 in. into wood member.

Face layer installed with long edge perpendicular to joists, and edges staggered 24 in. from base layer edges.

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WNR/FCA 60-03 (2 OF 2)

Division 06 – Wood, Plastics and Composites
 06 17 00 Shop-Fabricated Structural Wood
 06 17 33 Wood I-Joists

End joints located over and attached to joists and staggered min. 24 in. from base layer end joints. Face layer attached with Type W screws, spaced 12 in. oc on intermediate supports and 8 in. oc on end supports. Screws must penetrate min. 1 in. into wood member. Face layer also fastened to base layer with a row of Type G screws, spaced 8 in. oc located 6 in. away from end joints in face layer. Type G screws must penetrate min. of 1 in. beyond surface of base layer.

Application to Channels:

Base layer applied to furring channels with long edge perpendicular to channels. End joints staggered min. of two channel spacings. Base layer fastened to channels with Type S screws spaced 12 in. oc along channels. 7/8 in. screws required for base layer when using 1/2 in. gypsum board base layer, 1 in. screws required for base layer when using 5/8 in. gypsum board.

Face layer installed with long edges perpendicular to the channels. Long edges staggered 24 in. from base layer edges.

End joints staggered a min. of one channel spacing from the base layer end joints. Face layer attached with Type S screws, spaced 12 in. oc on intermediate supports and 8 in. oc on end supports. 1-3/8 in. screws required for face layer when using 1/2 in. gypsum board. 1-5/8 in. screws required for face layer when using 5/8 in. gypsum board. Face layer also fastened to base layer with a row of Type G screws, spaced 8 in. oc located 6 in. away from end joints in face layer. Type G screws must penetrate min. of 1 in. beyond surface of base layer.

- 4. STEEL FURRING CHANNELS (Optional):** 0.019 in. or thicker galvanized steel resilient channels, fastened to each joint with one 1-1/4 in. Type W screw, or 0.019 in. or thicker galvanized steel hat channels, fastened to each joist with two 1-1/4 in. Type W screws. Max. spacing 24 in. oc.
- 5. INSULATION (Optional, permitted only when resilient channel is used):** Max. 3-1/2 in. thick fiberglass batt insulation friction fit between flanges or the webs of the joists.

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WNR/FCA 60-05



Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company

Design No. WNR/FCA 60-05

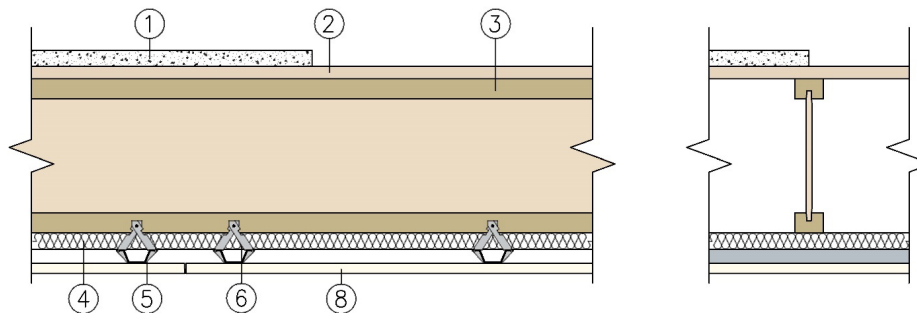
Wood I-Joists

TJI® Joists

ASTM E119, CAN/ULC S101

Rating: 1 Hour

STC 47 with 8 pcf Density Insulation, STC 58 with Min. 1-1/2 in. Topping and 8 pcf Density Insulation



1. **TOPPING (Optional):** Lightweight concrete or proprietary topping.

Min. thickness: 1.5 in., Min. depth: 9-1/2 in.,
Max. spacing: 24 in. oc.

2. **SUB-FLOORING:** Min. 23/32 in. tongue and groove plywood or oriented strandboard (OSB) designed and installed per Code requirements, and installed with nails and construction adhesive onto joist and also into grooved edge of panels. Alternate 5/8 in. thick tongue and groove or square edge plywood or OSB when optional Topping is used.

4. **MINERAL WOOL:** 1 in. thick, min. 6 pcf, Thermafiber mineral wool fire proofing, or Fibrex FBX 1280 industrial board, or Fibrex-IF 1280 Flex Batt, installed with width of batt equal to oc spacing of joists. Batts inserted between furring channels and bottom flanges of joists with long dimension perpendicular to furring channels, and with butted ends centered over furring channels.

3. **STRUCTURAL MEMBERS:** Wood I-Joists

- A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company, TJI® Joists Series: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D:

Min. depth: 9-1/2 in., Max. spacing: 24 in. on center (oc).

- B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

5. **STEEL FURRING CHANNEL:** 0.019 in. or thicker galvanized steel hat channels installed perpendicular to joists. Additional furring channels spaced 1-1/2 in. from and on each side of gypsum board end joints, extending 24 in. either side past end joint. Channels secured to joists with support clips at each joist location. At channel splices, adjacent pieces overlapped 6 in. and tied with double strand of No. 18 SWG galvanized steel wire at each end of overlaps.

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WNR/FCA 60-05 (2 OF 2)

Division 06 – Wood, Plastics and Composites
 06 17 00 Shop-Fabricated Structural Wood
 06 17 33 Wood I-Joists

- 6. SUPPORT CLIPS:** One Simpson Company Type CSC support clip to be used to support furring channels at each joist intersection. Support clips nailed to one side of joist bottom flange with one 1-1/2 in. long, 0.125 in. diameter nail.
- 7. STABILIZER STRAP (Not Shown):** 3/4 in. x 6 in., 24 GA galvanized steel strap used to prevent rotation of the support clips (Item 6) at wallboard end joints and along walls. At wallboard end joints (3 in. oc spacing of furring channels), stabilizer straps span between the channels and are screw-attached to the furring channels adjacent to each support clip location using No. 8 self-tapping steel screws. On furring channels nearest to and parallel with walls, one end of the stabilizer strap is screw-attached to the furring channel, adjacent to each support

clip location, using No. 8 self-tapping steel screws. The free end of the stabilizer strap is twisted 90 degrees bent upward and screw or nail attached to the side of the joist bottom flange on the side of the support clip nearest the wall.

- 8. GYPSUM:** One layer 5/8 in. Type X. Max. board width is 48 in. Joints to be taped and filled. Screw heads to be filled.

Applied to furring channels with long edge perpendicular to channels and located midway between joists. End joints staggered. Gypsum board fastened to channels with 1 in. Type S screws with two rows located 3/4 in. and 6 in. away from long edge and the remainder spaced 12 in. oc along channel.

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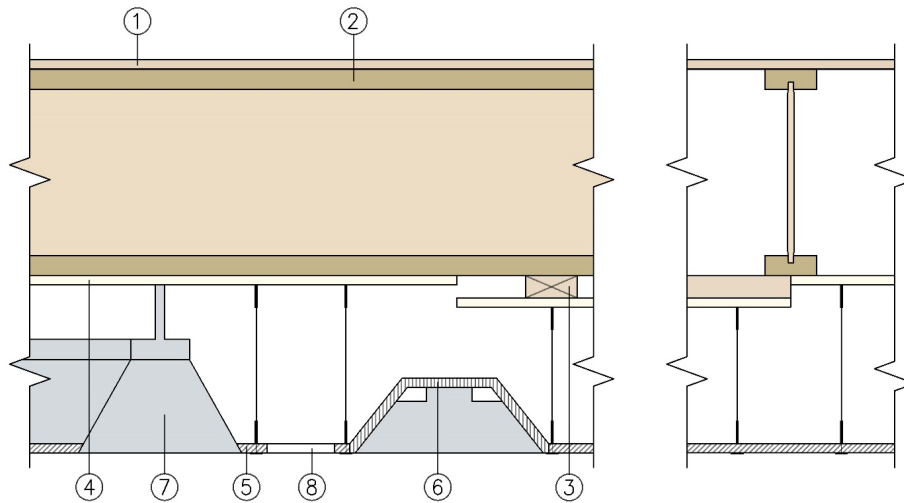
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SFT-BC-OP-19i

WNR/FCA 60-08

Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-joists

Weyerhaeuser NR Company
Design No. WNR/FCA 60-08
Wood I-Joists
TJI® Joists
ASTM E119, CAN/ULC S101
Rating: 1 Hour



1. **SUB-FLOORING:** Min. 3/4 in. thick tongue and groove plywood or oriented strand board OSB when TJI Joist spacing is max. 48 in. on center (oc), and min. 5/8 in. thick when TJI Joist spacing is a max. of 20 in. oc, designed and installed per Code requirements.
2. **STRUCTURAL MEMBERS:** Wood I-Joists
 - A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company, TJI® Series Joists: TJI 560, TJI 560D.

Min. depth: 14 in., Max. spacing: 48 in. oc.
 - B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Min. thickness: 1.5 in., Min. depth: 14 in.,
Max. spacing: 48 in. oc.
3. **WOOD FURRING (Optional):** 2 x 4 min. Standard & Better grade, placed perpendicular to joists, spaced max. 24 in. oc, and attached to each joist with one min. 3 in. Type W screw. Required when joist spacing exceeds 24 in. oc.
4. **GYPSON BOARD:** One layer min. 1/2 in. Type X. Max. board width is 48 in. Taping and finishing only of joints required.

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WNR/FCA 60-08 (2 OF 2)

Division 06 – Wood, Plastics and Composites
 06 17 00 Shop-Fabricated Structural Wood
 06 17 33 Wood I-joists

Applied to joists with long edge perpendicular to joists and with end joints butted over joists. Adjacent end joints staggered min. 24 in. Attached with Type W screws, spaced 12 in. oc on intermediate supports and 6 in. oc at end supports. Screws must penetrate a min. of 1 in. into wood member.

- 5. CEILING SYSTEM:** Suitable fire rated suspended ceiling system located a min. distance of 12 in. below the gypsum board. The grid system is suspended with No. 12 SWG galvanized steel wire, fastened to the joists or wood furring with 1-1/2 in. long flat-head hanger screws. Acoustical ceiling panels are 24 in. x 48 in. x 5/8 in., rated for use as a component in an equivalent fire-resistant assembly, with a min. finish rating of 15 minutes. Hold-down clips are required for acoustical ceiling panels weighing less than 1 psf.

- 6. FIXTURE PROTECTION:** Suitable flush mounted fire rated fluorescent fixtures up to 24 in. x 48 in. x up to 5 in. deep, protected by a five-sided box with up to 6 in. wide pieces of ceiling panels, 48 in. long for the sides and 24 in. long for the ends, and a full grid panel placed on top. Top panel spaced to allow min. 1 in. air space from top of fixture. Assemble panels with 3 in. nails spaced 6 in. oc. Strips of panel 6 in. wide over joints of light fixture boxes when two fixtures are butted end to end. Aggregate area of fixture not to exceed 10 sq.ft. per 215 sq.ft. ceiling.
- 7. DUCT:** 4 in. x 18 in. galvanized steel duct with a max. 12 in. diameter steel diffusion opening and spaced at least 84 in. apart.
- 8. RETURN OPENING:** A max. 6 in. x 12 in. return air opening permitted for each 215 sq.ft. of ceiling and spaced at least 84 in. apart.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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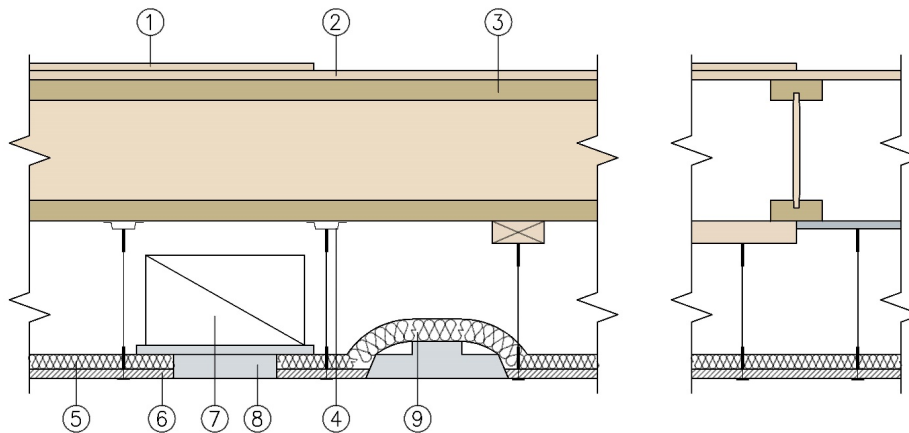
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WNR/FCA 60-11

Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-joists

Weyerhaeuser NR Company
Design No. WNR/FCA 60-11
Wood I-Joists
TJI® Joists
ASTM E119, CAN/ULC S101
Rating: 1 Hour



1. FLOORING (OPTIONAL): 1/2 in. wood panel sheathing.

Minimum thickness: 1.5 in. Minimum depth: 9-1/2 in. Maximum spacing: 48 in. oc.

2. SUBFLOORING: Minimum 5/8 in. tongue-and-groove plywood, or oriented strandboard (OSB) designed and installed per Code requirements.

4. STEEL FURRING CHANNEL: No. 16 gauge cold rolled channels, 1-1/2 in. wide, 1/2 in. deep having 1/2 in. flanges. Spaced maximum 24 in. oc, fastened directly to each joist with two 1-1/2 in. Type W screws.

3. STRUCTURAL MEMBERS: Wood I-Joists

A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company: TJI® Series Joists TJI 560, TJI 560D.

Alternate: Wood furring – 2 x 4 lumber, minimum Standard & Better grade, placed perpendicular to joists and spaced maximum 24 in. oc, attached to each joist with one minimum 3 in. Type W screw.

Minimum depth: 9-1/2 in. Maximum spacing: 48 in. oc.

B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

5. MINERAL WOOL: Minimum 1 in. thick, minimum 4 pcf Thermafiber® Sound Attenuation Fire Blankets or Fibrex®-FBX 1240 Industrial Board or Fibrex®-IF 1240 Flex Batts. Installed over the acoustical panels.

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Division 06 – Wood, Plastics and Composites
 06 17 00 Shop-Fabricated Structural Wood
 06 17 33 Wood I-joists

- 6. CEILING SYSTEM:** Suitable fire rated suspended ceiling system located a minimum distance of 10 in. below the joists. The grid system is suspended from the channels with 12 SWG galvanized steel wire. C.G.C. 3/4 in. Acoustone Firecode (No. 715) or 5/8 in. Auratone Firecode (No. 339) Acoustical Ceiling Panels. Hold down clips are required for acoustical ceiling panels weighing less than 1 psf. The weight of insulation bearing directly upon the panel may be included in the panel weight.

Alternatively, other components may be used that provide a 28 minute finish rating in an equivalent fire resistant assembly, to substitute for the Acoustical Panels covered by mineral wool.

- 7. DUCT:** No. 22 gauge steel, 18 in. x 6 in. with 12 in. diameter diffusers protected by rated fire

damper. Duct supported by 24 in. oc., 16 gauge, 3/4 in. cold rolled channel suspended from furring channels with No. 16 SWG wire at 40 in. intervals along the duct. Aggregate ceiling openings for air diffusers not to exceed 113 sq.ft per 100 sq.ft of ceiling and be spaced at least 6.6 ft. apart.

- 8. AIR DIFFUSER:** See #7 – Duct (above)

- 9. FIXTURE PROTECTION:** 24 in. x 48 in. x up to 5 in. deep, 26 gauge fixtures protected on all surfaces by a minimum thickness of 1-1/2 in. mineral wool blanket. Protection is to be securely tied at corners with No. 18 SWG steel wire. Aggregate area of fixtures not to exceed 11 sq ft per 215 sq ft of ceiling Equivalent protection may be used.

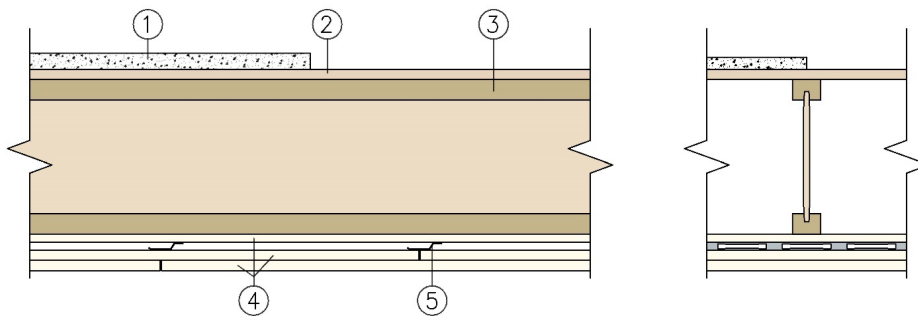
Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

WNR/FCA 90-01

Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company
Design No. WNR/FCA 90-01
Wood I-Joists
TJI® Joists
ASTM E119, CAN/ULC S101
Rating: 1-1/2 Hour
STC 54 with Minimum 1-1/2 in. Topping



1. **TOPPING (Optional):** Lightweight concrete or proprietary topping.
Min. thickness: 1.5 in., Min. depth: 9-1/2 in.,
Max. spacing: 24 in. oc.
2. **SUB-FLOORING:** Min. 5/8 in. tongue and groove plywood or oriented strandboard (OSB) designed and installed per Code requirements. Square edge panels are permitted when optional topping is used.
3. **STRUCTURAL MEMBERS:** Wood I-Joists
 - A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company, TJI® Series Joists: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D:
Min. depth: 9-1/2 in., Max. spacing: 24 in. on center (oc).
 - B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:
4. **GYPSUM:** Max. board width is 48 in. Exposed joints to be taped and filled. Exposed screw heads to be filled.
One base layer, min. 1/2 in. Type X, installed with long dimension perpendicular to joists, end centered on joists. Attached with Type W screws, spaced 8 in. on intermediate and end supports. Screws located 1-1/2 in. from side joints and 3/4 in. from end joints. Screws must penetrate min. 1 in. into wood member.
Face and middle layers, both min. 5/8 in. Type X, installed perpendicular to furring channels, with end joints centered on channel. All middle and face layer joints to be staggered. Screws spaced 8 in. oc, located 1-1/2 in. from side joints and 3/4 in. from end joints. 1 in. screws required for middle layer. 1-5/8 in. screws required for face layer.

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Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

5. **STEEL FURRING CHANNEL:** 0.019 in. or thicker galvanized steel resilient channels, or 0.0179 in. or thicker galvanized steel hat channels (not shown), installed at 16 in. oc and attached to each joist with min. 1-7/8 in. Type W Screws.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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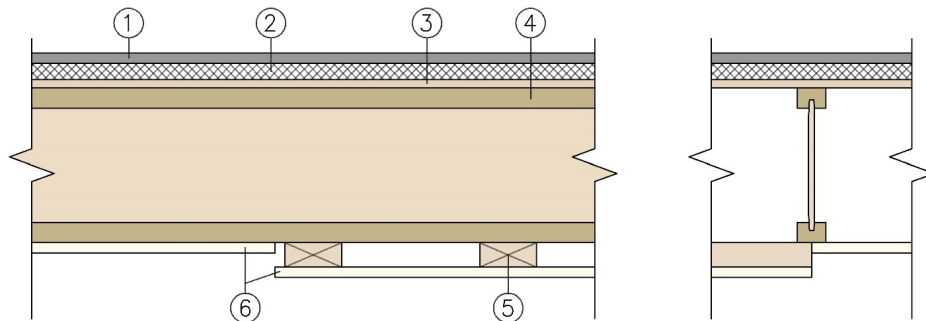
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WNR/RCA 45-01



Division 06 – Wood, Plastic, and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company
Design No. WNR/RCA 45-01
Wood I-Joists
TJI® Joists
ASMT E119, CAN/ULC S101
Rating: 45 minutes Roof /Ceiling Assembly



1. Roof Covering: Suitable materials intended for built-up roof covering which provides Class A, B, C covering on combustible wood decks for fire resistant assemblies equivalent to this roof-ceiling/assembly.

2. Roof Insulation: Sheathing material and adhesive products found suitable for use in 3/4 hour rated fire assemblies equivalent to this roof/ceiling assembly.

3. Sheathing: Minimum 15/32 in. square edge plywood or oriented strand board (OSB) sheathing designed and installed per Code requirements, H clips midway between joists or as per code requirements.

4. STRUCTURAL MEMBERS: Wood I-Joists

A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company: TJI® Series Joists: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D.

Minimum depth: 9-1/2 in. Maximum spacing: 48 in. oc.

B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Minimum thickness: 1.5 in. Minimum depth: 9-1/2 in. Maximum spacing: 48 in. oc.

5. Wood Furring (Optional): 2 x 4 lumber, minimum Standard & Better grade, placed perpendicular to joists and spaced maximum 24 in. oc, attached to each joist with one minimum 3 in. Type W screw. Required when joists spacing exceeds 24 in. oc.

6. Gypsum Board: One layer of 5/8 in. Type X gypsum. Maximum board width is 48 in. Joints to be taped and filled. Screw heads to be filled.

Applied to joists or furring with long edge perpendicular to supports and with end joints butted over supports. Adjacent end joints

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WNR/RCA 45-01 (2 OF 2)



Division 06 – Wood, Plastic, and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

staggered minimum 24 in. Attached with minimum 1-5/8 in. Type W screws spaced 12 in. oc on intermediate supports and 6 in. oc at end supports.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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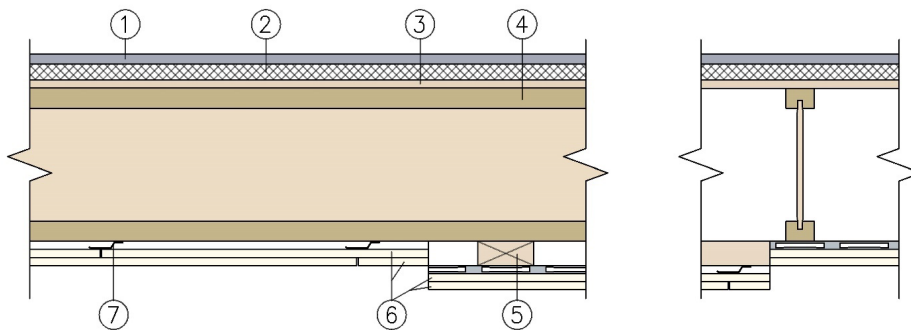
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WNR/RCA 60-01



Division 06 – Wood, Plastic, and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company
Design No. WNR/RCA 60-01
Wood I-Joists
TJI® Joists
ASMT E119, CAN/ULC S101
Rating: 1 Hour Roof/Ceiling Assembly



1. **ROOF COVERING:** Suitable materials intended for built-up roof covering which provides Class A, B, C covering on combustible wood decks for fire resistant assemblies equivalent to this roof-ceiling/assembly.
2. **ROOF INSULATION:** Sheathing material and adhesive products found suitable for use in 1 hour rated fire assemblies equivalent to this roof/ceiling assembly.
3. **SHEATHING:** Min. 15/32 in. square edge plywood or oriented strand board (OSB) sheathing designed and installed per Code requirements, H clips midway between joists or as per Code requirements.
4. **STRUCTURAL MEMBERS:** Wood I-Joists
 - A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company, TJI® Series Joists: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D:

Min. depth: 9-1/2 in., Max. spacing: 48 in. on center (oc).
 - B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Min. thickness: 1.5 in., Min. depth: 9-1/2 in., Max. spacing: 48 in. oc.
5. **WOOD FURRING (Optional):** 2 x 4 lumber, min. Standard & Better grade, placed perpendicular to joists and spaced max. 24 in. oc, attached to each joist with one min. 3 in. Type W screw. Required when joists spacing exceeds 24 in. oc.
6. **GYPSUM BOARD:** Two layers, min. 1/2 in. Type X gypsum board. Max. board width is 48 in. Exposed joints to be taped and filled. Exposed screw heads to be filled.

Application to Joists or Furring:

Base layer applied to joists or furring with long edge perpendicular to supports and with end joints butted over supports. Adjacent end joints staggered min. 24 in.

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06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Base layer attached with Type W screws, spaced 12 in. oc on intermediate supports and 6 in. oc at end supports. Screws must penetrate min. 1 in. into wood member.

Face layer installed with long edge perpendicular to supports and edges staggered 24 in. from base layer edges. End joints located over and attached to supports and staggered min. 24 in. from base layer end joints. Face layer attached with Type W screws, spaced 12 in. oc on intermediate supports and 8 in. oc on end supports. Screws must penetrate min. 1 in. into wood member. Face layer also fastened to base layer with a row of Type G screws, spaced 8 in. oc located 6 in. away from end joints in face layer. Type G screws must penetrate min. of 1 in. beyond surface of base layer.

Application to Channels:

Base layer applied to furring channels with long edge perpendicular to channels. End joints staggered at a min. of two channel spacings. Base layer fastened to channels with Type S screws spaced 12 in. oc along channels. 7/8 in. screws required for base layer when using 1/2 in. gypsum board base layer, 1 in. screws

required for base layer when using 5/8 in. gypsum board.

Face layer installed with long edges perpendicular to the channels. Long edges staggered 24 in. from base layer edges. End joints staggered a min. of one channel spacing from the base layer end joints. Face layer attached with Type S screws, spaced 12 in. oc on intermediate supports and 8 in. oc on end supports. 1-3/8 in. screws required for face layer when using 1/2 in. gypsum board. 1-5/8 in. screws required for face layer when using 5/8 in. gypsum board. Face layer also fastened to base layer with a row of Type G screws, spaced 8 in. oc located 6 in. away from end joints in face layer. Type G screws must penetrate min. of 1 in. beyond surface of base layer.

7. **STEEL FURRING CHANNELS:** 0.019 in. or thicker galvanized steel resilient channels, max. spacing 24 in. oc, fastened to each joist with one 1-1/4 in. Type W screw.

Alternate: Joists may be spaced at 32 in. oc without wood furring if resilient channels are spaced 16 in. oc max.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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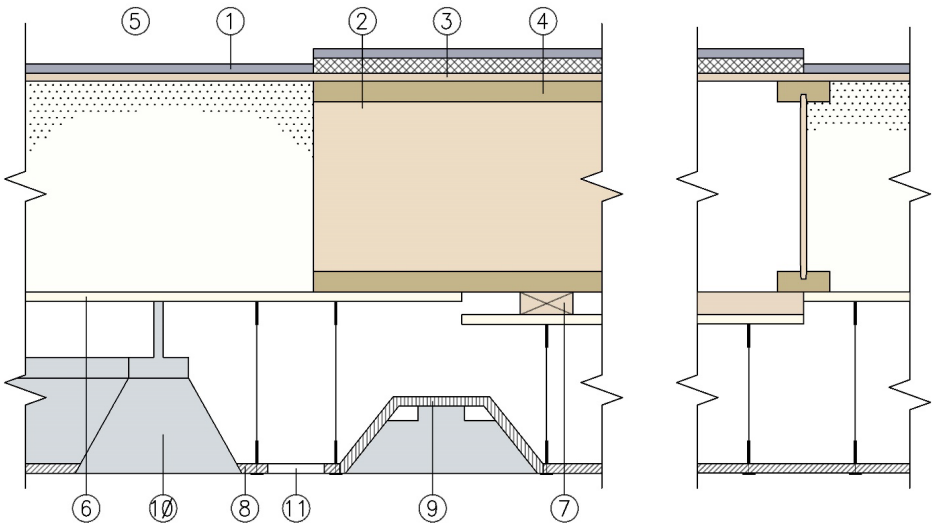
SFT-BC-OP-191

WNR/RCA 60-03



Division 06 – Wood, Plastic, and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company
Design No. WNR/RCA 60-03
Wood I-Joists
TJI® Joists
ASMT E119, CAN/ULC S101
Rating: 1 Hour Roof/Ceiling Assembly



1. **ROOF COVERING:** Suitable materials intended for built-up roof covering which provides Class A, B, C covering on combustible wood decks for fire resistant assemblies equivalent to this roof/ceiling assembly.

2. **ROOF INSULATION:** Sheathing material and adhesive products found suitable for use in 1 hour rated fire assemblies equivalent to this roof/ceiling assembly. (Not required if blown loose glass fiber insulation is used.)

3. **SHEATHING:** Min. 15/32 in. square edge plywood or oriented strand board (OSB) sheathing designed and installed per Code requirements, H clips midway between joists or as per Code requirements.
4. **STRUCTURAL MEMBERS:** Wood I-Joists

A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company, TJI® Series Joists: TJI 560, TJI 560D.

Min. depth: 14 in., Max. spacing: 48 in. on center (oc).

B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Min. thickness: 1.5 in., Min. depth: 14 in., Max. spacing: 48 in. oc.

WNR/RCA 60-03 (2 OF 2)

Division 06 – Wood, Plastic, and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

5. INSULATION (Optional): Blown loose glass fiber insulation placed at a depth of 14 in. and at a density of 0.77 pcf to achieve an insulation value of R30.

6. GYPSUM BOARD: One layer min. 1/2 in. Type X gypsum board. Max. board width is 48 in. Taping and finishing only of joints required. Taping and finishing not required if blown insulation is used.

Applied to joists or furring with long edge perpendicular to supports and with end joints butted over supports. Adjacent end joints staggered min. 24 in. Attached with Type W screws, spaced 12 in. oc on intermediate supports and 6 in. oc at end supports. Screws must penetrate min. 1 in. into wood member.

7. WOOD FURRING: 2 x 4 wood furring, min. Standard & Better grade, placed perpendicular to joists and spaced max. 24 in. oc, attached to each joist with one min. 3 in. Type W screw or two 3 in. long common nails. Required to install gypsum board when joist spacing exceeds 24 in. oc.

8. CEILING SYSTEM: Suitable fire rated suspended ceiling system located a min. distance of 12 in. below the gypsum board. The grid system is suspended with No. 12 SWG galvanized steel

wire, fastened to the joists or wood furring with 1.5 in. long flat-head hanger screws. Acoustical ceiling panels are 24 in. x 48 in. x 5/8 in., rated for use as a component of an equivalent fire resistant assembly with a min. finish rating of 15 minutes. Hold-down clips are required for acoustical ceiling panels weighing less than 1 psf.

9. FIRE PROTECTION: Suitable flush mounted fire rated fluorescent fixtures up to 24 in. x 48 in. x up to 5 in. deep, protected by a five-sided box with up to 6 in. wide pieces of ceiling panels, 48 in. long for the sides and 24 in. long for the ends, and a full grid panel placed on top. Top panel spaced to allow min. 1 in. air space from top of fixture. Assemble panels with 3 in. nails spaced 6 in. oc. Strips of panel 6 in. wide over joints of light fixture boxes when two fixtures are butted end to end. Aggregate area of fixture not to exceed 10 sq.ft. per 215 sq.ft. of ceiling.

10. DUCT: 4 in. x 18 in. galvanized steel duct with a max. 12 in. diameter steel diffusion opening and spaced at least 84 in. apart.

11. RETURN OPENING: A max. 6 in. x 12 in. return air opening permitted for each 215 sq.ft. of ceiling and spaced at least 84 in. apart.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

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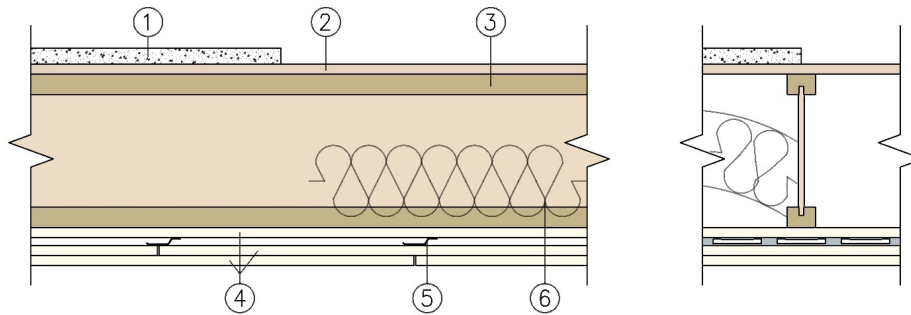
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WNR/WI 120-03



Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company
Design No. WNR/WI 120-03
Wood I-Joists
TJI® Joists
ASTM E119, CAN/ULC S101
Rating: 120-minute



1. TOPPING (Optional): Lightweight concrete or proprietary topping.

Minimum thickness: 1.5 in. Minimum depth: 9-1/2 in. Maximum spacing: 24 in. oc.

2. SUB-FLOORING: Minimum 5/8 in. tongue-and-groove plywood or oriented strand board (OSB) designed and installed per Code requirements. Square-edge panels are permitted when optional topping is used.

4. GYPSUM: Three layers of 5/8 in. thick USG/CGC "Sheetrock Fire Code C" or Westroc "Fireboard C" gypsum board. Maximum board width is 48 in. Exposed joints to be taped and filled. Exposed screw heads to be filled.

3. STRUCTURAL MEMBERS: Wood I-Joists

A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company: TJI® Series Joists: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D.

Minimum depth: 9-1/2 in. Maximum spacing: 24 in. oc.

B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456.

The base layer is installed with the long dimensions perpendicular to the joists, end joints centered on the joists. Attached with Type W screws spaced 8 in. oc on intermediate supports and 8 in. oc on end supports. Screws located 1-1/2 in. from side joints and 3/4 in. from end joints. Screws must penetrate minimum 1 in. into wood member.

Face and middle layers are installed perpendicular to the furring channel, with end joints centered on the channel. All middle and face layer joints are to be staggered. Face and middle layers fastened to channels with Type S

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WNR/WI 120-03 (2 OF 2)



Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

screws are spaced 8 in. oc, located 1-1/2 in. from side joints and 3/4 in. from end joints. 1 in. screws required for middle layer. 1-5/8 in. screws required for face layer.

- 5. STEEL FURRING CHANNEL:** 0.019 in. or thicker galvanized steel resilient or 0.017 in. or thicker galvanized steel hat channels. Installed 16 in. oc and attached to each joist with minimum 1-7/8 in. type W screws.

- 6. INSULATION (Optional):** Fiberglass batt insulation, 3.5 in. thick, supported by stay wires at 12 in. oc installed between the bottom flanges.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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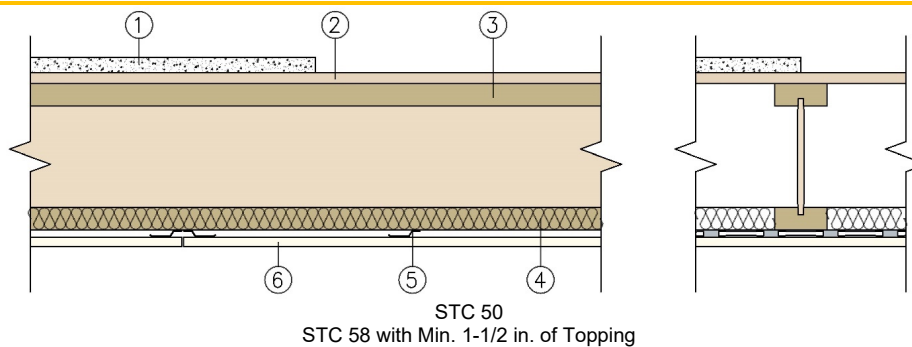
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WNR/WI 60-07



Division 06 – Wood, Plastics, and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Weyerhaeuser NR Company
Design No. WNR/WI 60-07
I-joists
TJI® Joists
ASTM E119, CAN/ULC S101
Rating: 1 Hour



1. **TOPPING (Optional):** Lightweight concrete or proprietary topping.
2. **SUB-FLOORING:** Minimum 23/32 in. tongue-and-groove plywood or oriented strand board (OSB) designed and installed per Code requirements and nailed and glued with construction adhesive. **Alternate:** 5/8 in. tongue-and-groove or square-edge plywood or OSB when optional topping is used.
3. **STRUCTURAL MEMBER:** Wood I-Joists
 - A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company: TJI® Series Joists: TJI 560D.

Minimum depth: 9-1/2 in. Maximum spacing: 24 in. oc.
 - B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Minimum thickness: 1.5 in. Minimum depth: 9-1/2 in. Maximum spacing: 24 in. oc.
4. **MINERAL WOOL:** Minimum 1-1/2 in. thick, minimum 2.5 pcf Thermafiber Sound-Attenuation Fire Blankets or Fibrex® Sound Attenuation Fire Batts, friction fitted between bottom flanges of joists and supported on furring channels. The bottom surface of the mineral wool flush with the bottom surface of the flanges, all butt joints located over the channels.
5. **STEEL FURRING CHANNELS:** 0.019 in. or thicker galvanized steel resilient channels. Max. spacing 16 in. oc, fastened to each joist with one 1-5/8 in. Type S screws. For attachment of gypsum board end joints, additional channels are placed such that each board end is supported by its own channel. These additional channels extend to the next joist on each side of the board edges.
6. **GYPSUM BOARD:** One layer, 5/8 in. USG/CGC Sheetrock, Fire Code C" or Westroc "Fireboard C." Maximum board width is 48 in. Joints to be taped and filled. Screw heads to be filled.

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WNR/WI 60-07 (2 OF 2)



Division 06 – Wood, Plastics, and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

Applied to resilient channels with long edge perpendicular to channels and located midway between joists. End joints staggered. Gypsum board fastened with 1 in. Type S screws spaced 12 in. oc in

the field and 8 in. oc at ends. Screws located 1-1/2 in. from end joints.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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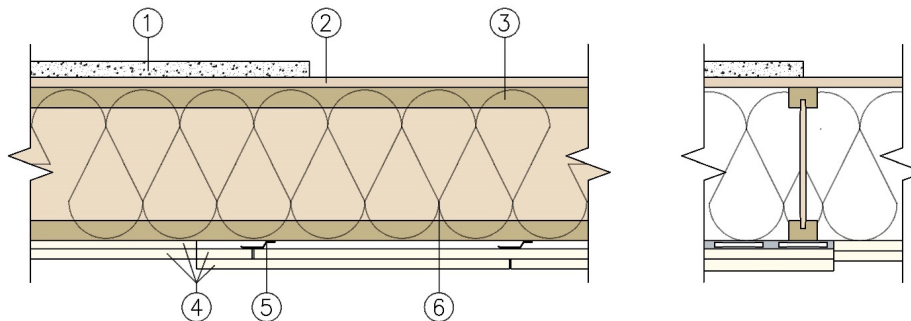
SFT-BC-OP-19I

WNR/WI 60-12



Division 06 – Wood, Plastics and Composites
06 17 00 Shop-Fabricated Structural Wood
06 17 33 Wood I-Joists

**Weyerhaeuser NR
WNR/WI 60-12
Wood I-Joists
TJI® Joists
ASTM E119, CAN/ULC S101
Rating: 1 Hour**



Floor/Ceiling Assembly

1. **TOPPING (Optional):** Lightweight concrete or proprietary topping.
2. **SUB-FLOORING:** Min. 5/8 in. tongue and groove plywood or oriented strand board (OSB) designed and installed per Code requirements. Square-edge panels are permitted when optional topping is used. When used as a roof/ceiling assembly, Item 2 is permitted to be any Code recognized wood decking.
3. **STRUCTURAL MEMBERS:** Wood I-Joists
 - A. **CERTIFIED PRODUCT:** Weyerhaeuser NR Company, TJI® Series Joists: TJI 110, TJI 210, TJI 230, TJI 360, TJI 560, TJI 560D:

Min. depth: 9-1/2 in., Max. spacing: 24 in. on center (oc).
 - B. Code Compliant Weyerhaeuser Timberstand LSL, Microllam LVL, or Parallam PSL Certified to ASTM D5456:

Min. thickness: 1.5 in., Min. depth: 9-1/2 in., Max. spacing: 24 in. oc.
4. **GYPSUM BOARD:** Two layers of min. 5/8 in. thick Type X gypsum board. Max. board width is 48 in. Exposed joints to be taped and filled. Exposed screw heads to be filled.

Application to Joists:

Base layer applied to joists with long edge perpendicular to joists and with end joints butted over joists. Adjacent end joints staggered min. 24 in. Base layer attached with Type W screws, spaced 12 in. oc on intermediate supports and 6 in. oc at end supports. Screws must penetrate min. 1 in. into wood member.

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Version: 02 August 2017

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WNR/WI 60-12 (2 OF 2)

Division 06 – Wood, Plastics and Composites
 06 17 00 Shop-Fabricated Structural Wood
 06 17 33 – Wood I-Joists

Face layer installed with long edge perpendicular to joists, and edges staggered 24 in. from base layer edges. End joints located over and attached to joists and staggered min. 24 in. from base layer end joints. Face layer attached with Type W screws, spaced 12 in. oc on intermediate supports and 8 in. oc on end supports. Screws must penetrate min. 1 in. into wood member. Face layer also fastened to base layer with a row of Type G screws, spaced 8 in. oc located 6 in. away from end joints in face layer. Type G screws must penetrate min. of 1 in. beyond surface of base layer.

Application to Channels:

Base layer applied to furring channels with long edge perpendicular to channels. End joints staggered min. of two channel spacings. Base layer fastened to channels with Type S screws spaced 12 in. oc along channels. 7/8 in. screws required for base layer when using 1/2 in. gypsum board base layer, 1 in. screws required for base layer when using 5/8 in. gypsum board.

Face layer installed with long edges perpendicular to the channels. Long edges staggered 24 in. from base layer edges.

End joints staggered a min. of one channel spacing from the base layer end joints. Face layer attached with Type S screws, spaced 12 in. oc on intermediate supports and 8 in. oc on end supports. 1-3/8 in. screws required for face layer when using 1/2 in. gypsum board. 1-5/8 in. screws required for face layer when using 5/8 in. gypsum board. Face layer also fastened to base layer with a row of Type G screws, spaced 8 in. oc located 6 in. away from end joints in face layer. Type G screws must penetrate min. of 1 in. beyond surface of base layer.

5. **STEEL FURRING CHANNELS (Optional):** 0.019 in. or thicker galvanized steel resilient channels fastened to each joist with one 1-1/4 in. Type W screw, or 0.019 in. or thicker galvanized steel hat channels fastened to each joist with two 1-1/4 in. Type W screws. Max. spacing 24 in. oc.
6. **INSULATION (Optional):** Fiberglass batt insulation or mineral wool insulation, friction fit between flanges or the webs of the joists. The joist cavity is permitted to be filled with insulation; however, the insulation must be placed above the resilient channels (where present) between the joist flanges.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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