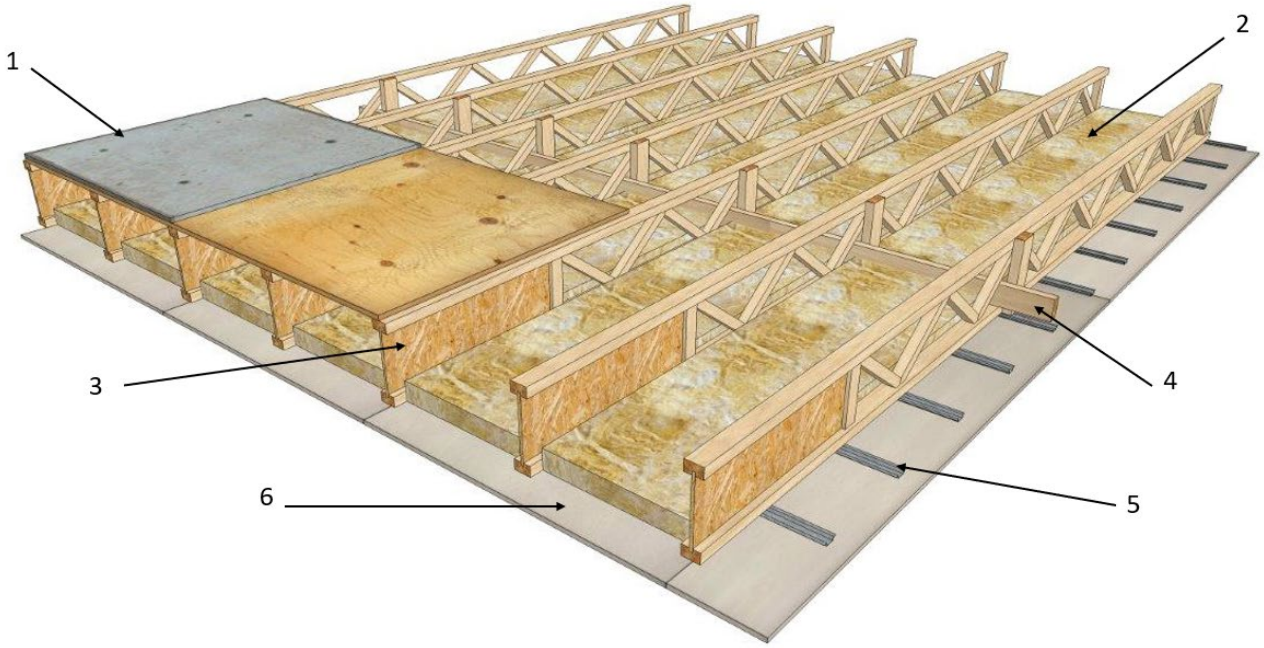
Barrette Structural Inc.
Design No. BS/SFWT 60-11
Load Bearing Fire Resistance Rated Roof/Ceiling, Floor/Ceiling Assembly
Open Joist TRIFORCE® Joist Series
ASTM E119 and CAN/ULC S101
Rating: 1 Hour



1. **FLOOR TOPPING AND SUB-FLOOR:** Install one layer of nominal 23/32 in. thick tongue-and-groove wood sub-floor sheathing. Apply a nominal 1/8 in. bead of adhesive meeting the following requirements: ASTM D 3498 Standard Specification for Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems, meets American Plywood Association specifications AFG-01 and tested and approved for HUD-FHA application per section UMB No. 60. along the top side of all wood trusses (Item 3) and in the flooring grooves. Apply the sheathing to the top side of the wood truss (Item 3) and secure using 2 in. long, 0.113 in. diameter smooth shank nails spaced 6 in. oc around the perimeter and 12 in. oc in the field. Install a lightweight concrete (nominal 110 pcf density, 3000 psi compressive strength), normal weight concrete (nominal 150 pcf density, 3000 psi compressive strength), or proprietary gypsum/cement/sand topping (min. 122 pcf density, 1000 psi compressive strength). Min. topping thickness for lightweight concrete or normal weight concrete is 1-1/2 in. Min. topping thickness for proprietary gypsum/cement/sand topping is 1 in.

2. **INSULATION:** Install min. 3 in. thick mineral wool insulation (min 2.5 pcf) press fit between the bottom flanges of the wood truss (Item 3).

3. **CERTIFIED MANUFACTURER:** Barrette Structural Inc.

   CERTIFIED MODEL: Open Joist TRIFORCE® Joist Series

   Min. 9-1/2 in. Open Joist TRIFORCE® Joist (with a min. end-web thickness of 3/8 in.) spaced a max. of 24 in. oc. Fasten wood truss to rim board with 2-3/8 in. long, 8d common nails. Fasten one nail through the rim board into the end of each flange, and one on each side of the truss bottom flange into the bearing plate (not shown).

4. **SUPPORT:** Install strongback consisting of 2x6 and 2x4 lumber. Install strongback through the closest bottom open truss to the center on the wood truss (Item 3). Secure 2x4 lumber to the wood truss (Item 3) using 3-1/4 in. long, 12d common nails and adhesive meeting the following requirements: ASTM D 3498 Standard Specification for Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems, meets American Plywood Association specification AFG-01 and tested and approved for HUD-FHA application per specification UMB No. 60. Secure 2x6 lumber (oriented vertically) to 2x4 lumber using 3-1/4 in. long, 12d common nails and adhesive meeting the specification above.

5. **GENIECLIP® RST AND STEEL CHANNELS:** Fasten the GenieClip® RST clip (not shown) to the bottom flange of the wooden open web joist every 48 in. oc using #8 x 2 in. coarse thread wood or drywall screws. The hat channels installed at 16 in. oc are snapped into the GenieClip® RST clips. The gypsum board is then fastened directly to the hat channels following the fastening schedule in Item 6.

6. **GYPSUM WALLBOARD:** One layer of min. 5/8 in. thick Type C gypsum board of the following brands:
   - National Gypsum Company Gold Bond® BRAND Fire-Shield® Type C
   - American Gypsum FIREBLOC® Type C
   - American Gypsum M-BLOC® Type C
   - CertainTeed St-Gobain ProFoc® Type C
   - Georgia-Pacific ToughRock® Fireguard C
   - Lafarge Firecheck® Type C
   - CGC/USG Sheetrock® Firecode® C

   Gypsum board installed with the long edge perpendicular to the steel channel (Item 5). Attach gypsum board to steel channels (Item 5) using No. 6, 1-1/4 in. long Type S screws spaced 6 in. oc with min. distance of 1-1/2 in. from the panel edges.

7. **JOINT TAPE AND COMPOUND (Not Shown):** After gypsum board is attached, apply vinyl or casein, dry or premixed, joint compound to the exposed face of gypsum board in two coats to all exposed fastener heads and gypsum board joints. Embed a min, 2 in. wide paper, plastic, or fiberglass tape in first layer of compound over joints in gypsum board.

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.