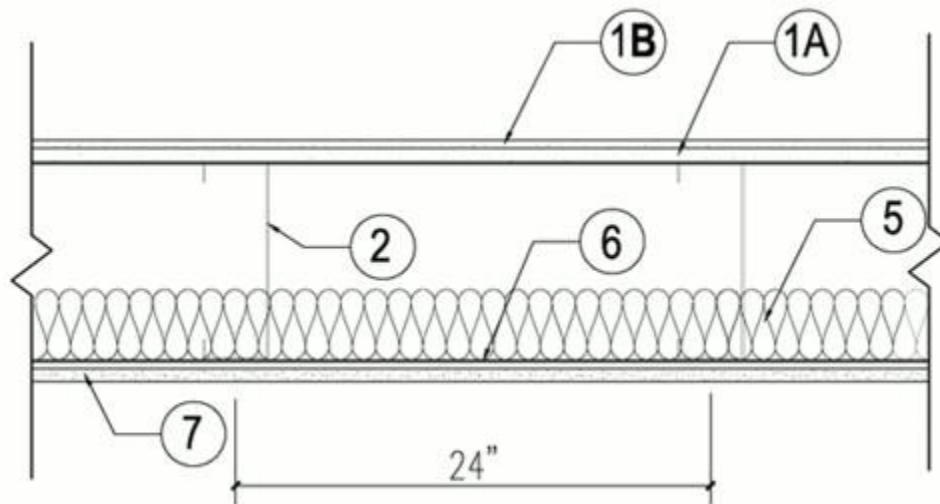


## Design No. M527

October 07, 2020

*Unrestrained Assembly Rating - 2 h.*

*Loading Determined in accordance with the relevant Limit State Design Provisions of Part 4 of the National Building Code of Canada*



- **1A. Flooring System - Mineral and Fibre Boards** — (Required Sub-floor). Nom 19 mm thick, tongue and grooved boards. Long dimension of boards to be perpendicular to joists with end joints staggered a min of 1220 mm and centered over the joists. Boards secured to steel joists with 32 mm. long self-drilling, self-countersinking, bugle head steel screws spaced a max of 305 mm OC in the field with screws located 25 mm from long edge, and max 204 OC along the end joints with screws located 13 mm from end joint.

**ECTEK INTERNATIONAL INC** — Type MegaBoard, 19 mm thick

- **1B. Flooring System - Mineral and Fibre Boards** — (Required Finished-floor) Nom 6 mm thick, tongue and grooved boards. Long dimension of boards to be perpendicular to joists with end joints staggered a min of 1220 mm and centered over the joists. All joints shall be staggered by minimum 305 mm to the joints in the sub-floor (Item 1A). Boards secured to steel joists through the sub-floor (Item 1A) with minimum 38 mm. long self-drilling, self-countersinking, bugle head steel screws spaced a max of 305 mm OC in the field with screws located 25 mm from long edge, and max 204 OC along the end joints with screws located 13 mm from end joint. Screws in the finished floor shall be off set to those in the sub-floor by 100 to 150 mm.

**ECTEK INTERNATIONAL INC** — Type MegaBoard, 6 mm thick

2. **Structural Steel Members** — C-shaped, galvanized steel section, min 254 mm deep with min 42 mm flanges and min 13 mm returns. Joists fabricated from min No. 16 MSG galv steel with Yield Strength of 345 MPa. Joists spaced max 610 mm OC. At joist rim splices bearing on supports, joists rims are connected using an overlapping section of a 305 mm long splice plate (a joist piece), with four 19 mm long No. 10 self-drilling steel TEK screws to each rim piece.

3. **Joist Bridging** — Not Shown — Installed at the center of the joist span immediately after joists are erected and before construction loads are applied. Bridging consisting of cut-to-length joist sections (Item 2) placed between the joists with a max spacing of 2440 mm OC.

4. **Angle Clips** — Not Shown — 38 x 102 x 235 mm long, No 16 gauge clips used to fasten joists to joist rim track. 102 mm side of clip placed against outside web of joists and 32 mm side placed against joist rim track. Each side secured with three No. 10 by 19 mm long TEK screws. 38 x 102 x 200 mm No. 16 gauge clips used to fasten joist bridging with clip located on the web/flange side of the joist. Clip fastened with two No.10 by 19 mm long TEK screws per leg per clip. 38 x 38 x 200 mm No. 16 gauge clips used to fasten joist bridging with clip located on the web/non-flange side of the joist. Clip fastened with two No. 10 by 19 mm long TEK screws per leg per clip.

• 4A. **Web Stiffeners** — Not shown — Web stiffeners, min 92 mm wide with min 15 mm flange and min 32 mm flange, having the same depth as the joists. Fabricated from min 16 MSG galv steel. Secured to each joist at support ends with four No. 10 by 19 mm long self-drilling screws

• 5. **Batts and Blankets** — 89 mm thick glass fiber batt insulation of nominal 8 kg/m<sup>3</sup> density, draped over the resilient channels (Item 6). Any glass fiber batt insulation bearing the ULC label or Classification Marking for Surface Burning Characteristics having a flame spread index of 25 or less and a smoke developed index of 50 or less may be used. See ULC Building Materials Directory for names of manufacturers.

6. **Resilient Channels** — Formed of No. 25 MSG galv steel, 13 mm deep, spaced max 305 mm OC, perpendicular to joists. Channel splices located beneath joists and overlapped 102 mm. Channels secured to each joist with one 13 mm long Type S-12 low profile steel screw. Two additional channels spaced 152 mm OC, oriented opposite each gypsum board end joint. The additional channels shall extend min 305 mm beyond each side edge of board.

• 7. **Gypsum Wallboard** — One layer of nominal 15.9 mm thick, 1220 mm wide gypsum panels installed with long dimension perpendicular to resilient channels. End joints centered on resilient channels. Gypsum panels secured with 25 mm long Type S bugle-head screws

spaced 305 mm OC in the field and 203 mm OC at the end joints. Screws located 32 mm and 102 mm from the end joints and 38mm from side edges of the panels.

**NATIONAL GYPSUM CO** — Type FSW-C

**CGC INC** — Type C

**UNITED STATES GYPSUM CO** — Type C

8. **Finishing System - (Not Shown)** — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints.

[Last Updated](#) on 2020-10-07