Design No. G564
BXUV.G564
Fire Resistance Ratings - ANSI/UL 263

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

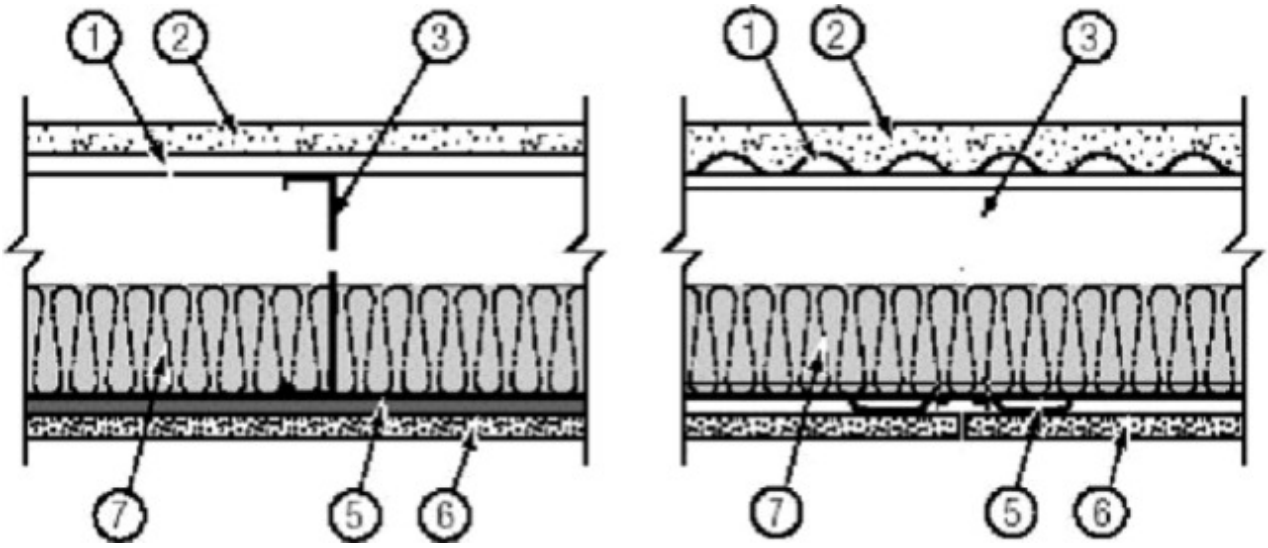
Design No. G564

March 11, 2016

Unrestrained Load -Bearing Assembly Rating — 1 or 2 Hrs. (See Item 5A)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Steel Deck —** Min 9/16 in. deep, 22 MSG galv corrugated fluted steel deck. Overlapped one corrugation at each side and attached to each joist with 5/8 in. long #10-16 TEK screws at each side joint and no more than 12 in. OC between sides.

2. **Floor Topping Mixture* —** Compressive strength to be 3500 psi min. Minimum thickness to be 1 in. as measured from the top plane of the deck or the top plane of the Floor Mat Material*. When 6 in. or 8 in. deep steel joists are used, floor topping mixture is to be a minimum of 1-1/8 in. thick. Refer to manufacturer's instructions accompanying

the material for specific mix design. An ethylene vinyl acetate adhesive may be applied to the steel deck prior to the installation of the floor topping mixture at a maximum application rate of 0.025 lbs./ft^2.

UNITED STATES GYPSUM CO — Type CSD, LRK, HSLRK

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) - Floor mat material loose laid over the crests of the steel deck. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25.

Alternate Floor Mat Materials* — (Optional) — Not Shown — Floor mat material loose laid over the crests of the steel deck. The flutes of the deck are not required to be filled prior to installation of sound mat. Min 1-3/8 in thick floor topping mixture applied over the floor mat. When 6 in. or 8 in. steel joists are used and the flutes are not filled, Min 1-1/2" thick floor topping mixture applied over the sound mat.

UNITED STATES GYPSUM CO — Type SAM CSD

Alternate Floor Mat Materials* — (Optional) - Floor mat material nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness a min 3/4 in. over the floor mat.

GRASSWORX L L C — Type SC50

3. **Steel Joists —** C shaped galvanized steel sections with min 8 in. deep, min 1-9/16 in. flanges and min 3/8 in. min. stiffening flanges, fabricated from min No. 16 MSG galv steel with a min yield strength of 33 ksi. When the clear span is a max of 8 ft and when fabricated from min No. 18 MSG, the min depth is 6 in. The web of each joist may be provided with circular or oval knockouts at the joist mid-depth. Knockouts spaced min 48 in. OC. Joists spaced max 24 in. OC. Joists attached to joist rim with three 3/4 in. long self-drilling #10-16 TEK screws through tab to the outside of the web. At joist rim splices bearing on supports, joists rims are connected using an overlapping section of a 12 in. long splice plate (a joist piece), with four 3/4 in. long self-drilling #10-16 TEK screws to each rim piece.

3A. **Structural Steel Members* —** As an alternate to Item 3 - Pre-fabricated light gauge steel truss system consisting of cold-formed, galv steel chord and web sections. Trusses fabricated in various sizes, depths and from various steel thickness. Trusses spaced a max of 24 in. OC.

TRUSSTEEL, DIV OF ITW BUILDING COMPONENTS INC — TrusSteel

3B. **Structural Steel Members* —** As an alternate Items 3 and 3A - Pre-fabricated steel truss system consisting of cold-formed, galvanized steel chord and web sections. Truss top and bottom chords min. 4 in. high by 1-11/16 in. wide by 18 ga. Truss webs min. 1-1/2 in. by 1-1/2 in. by 20 ga. square tube bent and triangulated as shown. Chords and web connected by fillet welds. Overall truss depth min. 12 in. Trusses spaced a max of 24 in. OC. Truss ends placed over and secured to Bearing Seats (Item 3C) with two min. #10 by 3/4 in. long screws on each side of Bearing Seats. Allowable loading must be calculated so as to stress the steel trusses to a maximum of 98% of the stress calculated in accordance with the allowable stress design approach outlined in the manufacturer's load tables.

EISEN PANEL SYSTEMS L L C — Type Gateway Panel pre-fabricated steel truss system.

3C. **Bearing Seats* —** (Not Shown) — Galvanized steel tube, min. 1 in. by 2-1/2 in. by 13 ga., oriented vertically and welded to min. 4 in. by 4 in. by 10 ga., galvanized steel plate. Bearing seats spaced 24 in. OC and attached to bearing supports by welding or screw attaching the steel plate to the bearing supports.

EISEN PANEL SYSTEMS L L C — Type Gateway Panel bearing seat.

4. **Joist Bridging —** Not shown — Installed immediately after joists are erected and before construction loads are applied. The bridging consists of min 1-1/4 in. deep, 2-3/4 in. wide and 21-3/4 in. long, formed galvanized steel installed in a staggered formation a maximum of every 8' along the joist span. Bridging secured to joist bottom flange with one 3/4 in. long self-drilling #10-16 TEK screw at each end tab. Minimum coated steel thickness for bridging is 0.048 in. Solid blocking must be provided in the two end joist bays and a maximum of 8 ft. OC (every 4 joist spaces). Solid blocking consisting of cut to length joist sections secured to the joists with clips. Clips are min 4 in. by 1-1/2 in. by 7 in. long, 0.054 in. thick, 50 ksi yield strength and secured with two 3/4 in. long self-drilling #10-16 TEK screws per leg.

4A. **Bridging —** (Not Shown)— For use with Item 3a - Location of lateral bracing for truss chord and web sections to be specified on truss engineering.

TRUSSTEEL, DIV OF ITW BUILDING COMPONENTS INC — TrusSteel

5. **Resilient Channels —** 1/2 in. deep, formed of 25 MSG galv steel, spaced 12 in. OC perpendicular to joists. Channels oriented opposite at wallboard butt-joints. Channel splices overlapped 4 in. beneath steel joists. Channels secured to each joist with 1/2 in. Type S-12 low profile screws. Channels oriented opposite at wallboard butt joints (spaced 6 in. OC) as shown in the above illustration.

5A. **Alternate Steel Framing Members —** (Not Shown) - For the 1 Hour Rating Only - As an alternate to Item 5, main runners, cross tees, cross channels and wall angle as listed below:

a. **Main Runners —** Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires inserted through holes drilled through web of joists and twist-tied.

b. **Cross Tees —** Nom 4 ft long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or cross channels used at 8 in. from each side of butted gypsum panel end joints. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

c. **Cross Channels —** Nom 4 or 12 ft long, installed perpendicular to main runners, spaced 16 in. OC.

d. **Wall Angle or Channel —** Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.

CGC INC — Type DGL or RX.

USG INTERIORS LLC — Type DGL or RX.

6. **Gypsum Board* —** Nom 5/8 in. thick, 48 in. wide gypsum panels. When resilient channels (Item 5) are used, gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle-head screws spaced 8 in. OC in both the field and the perimeter, and 1-1/2 in. from side edges of the board. When Steel Framing Members (Item 5A) are used, gypsum panels installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Panels fastened to cross tees with 1 in. long Type S bugle-head screws spaced 8 in. OC in the field and along end joints. Panels fastened to main runners with 1 in. long Type S bugle-head screws spaced midway between cross tees. Screws along sides and ends of panels spaced 3/8 to 1/2 in. from panel edge. End joints of panels shall be staggered with spacing between joints on adjacent panels not less than 2 ft OC.

CGC INC — Types C, IP-X2, IPC-AR

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL ZAWAWI DRYWALL L L C SFZ — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

7. **Batts and Blankets* —** Mineral wool or glass fiber insulation, min 3-1/2 in. thick, bearing the UL Classification Marking for Surface Burning Characteristics. Insulation fitted in the concealed space, draped over the resilient channel/gypsum panel or Steel Framing Members/gypsum panel ceiling membrane.

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

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Last Updated on 2016-03-11