UL Product iQ®

UL U309

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

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

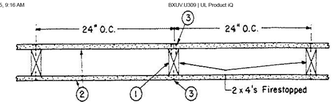
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

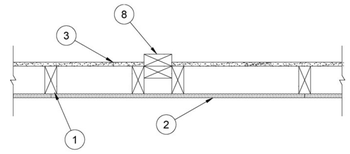
Design No. **U309**

March 3rd, 2025

Bearing Wall Rating — 1 Hr.
Finish Rating — See Items 2, 2A and 2B
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. **Wood Studs —** Nom 2 by 4 in., spaced 24 in. OC effectively firestopped.

2. **Gypsum Board* —** 5/8 in. thick, 4 ft wide, applied either horizontally or vertically, nailed to studs and bearing plates with 6d cement coated nails min. 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads spaced 7 in. OC. Finish Rating 27 Min. When used in widths other than 48 in., gypsum board to be installed horizontally.

When **Steel Framing Members*** (Items 5 or any alternate clips) are used, wallboard attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 6, resilient channels are used, 5/8 in. thick, 4 ft wide applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, Lightiloc

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CABOT MANUFACTURING ULC — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing, 5/8 in. Type C.

CERTAINTEED GYPSUM INC — Type X-1, Types EGRG, GlasRoc, GlasRoc-2, Type C, Type LWTX

CERTAINTEED GYPSUM INC — Types LGFCXA, LGFC2A, LGFC-C/A, LGCF-WD, LGLLX, CLLX

GEORGIA-PACIFIC GYPSUM L L C — Types S, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFSX, LS (finish rating 23 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, TG-C, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGXW, Water Rated-Type DGXW, Sheathing Type- DGXW, Soffit- Type DGXW, Type LWDX, Veneer Plaster Base – Type LWDX, Water Rated - Type LWDX, Sheathing – Type LWDX, Soffit – Type LWDX, Type DGLDW, Water Rated - Type DGLDW, Sheathing - Type DGLDW

NATIONAL GYPSUM CO — Types -eXP-C, FSK, FSK-C, FSW, FSW-3, FSW-5, FSW-C, FSW-G, FSMR-C, FSW-6 (finish rating 20 min), FSL, FSW-8, RSX, FSLX

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C, PG-9, PG-11, PG-C, PGS-WRS, PGI

PANEL REY S A — Types GREX, GROX, PRC, PRC2, PRX, RHX, MDX, ETX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type X, Type C

2A. **Gypsum Board* —** (As an alternate to Item 2, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically to studs and bearing plates on one side of the assembly with 1-5/8 in. long Type S screws spaced 12 in. OC at perimeter of panels and 8 in. OC in the field. Horizontal joints of vertically applied panels need not be backed by studs. Panel joints covered with paper tape and two layers of joint compound. Screwheads covered with two layers of joint compound. Batts and Blankets placed in stud cavity as described in Item 4E. Not evaluated for use with Steel Framing Members, Furring Channels or Fiber, Sprayed.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 530 (finish rating 23 min)

2B. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last two screws 1 and 4 in. from edge of board or nailed to studs and bearing plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads spaced 7 in. OC. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
GEORGIA-PACIFIC GYPSUM L L C — Type DGG, GreenGlass Type X (finish rating 23 min).

2C. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically only and secured as described in Item 2.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min)

NATIONAL GYPSUM CO — Type SBWB

2D. **Gypsum Board* —** (As an alternate to Items 2 through 2C) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES

2E. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically or horizontally and secured with 1-1/4 in. Type W coarse thread gypsum panel steel screws spaced a maximum of 12 in. OC.
CERTAINTEED GYPSUM INC — Type SilentFX

2F. **Gypsum Board* —** (As an alternate to 5/8 in. Type FSW in Item 2) — 2 layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal joints on the same side need not be staggered. Inner layer attached with fasteners, as described in item 2, spaced 24 in. OC. Outer layer attached per Item 2.
NATIONAL GYPSUM CO — Type FSW

2G. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick, 4 ft. wide, applied vertically or horizontally with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 2 or 2K.
CERTAINTEED GYPSUM INC — 5/8" Easi-Lite Type X

THAI GYPSUM PRODUCTS PCL — 5/8" Easi-Lite Type X

2H. **Wall and Partition Facings and Accessories* —** (As an alternate to Item 2) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

2I. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CERTAINTEED GYPSUM INC — Type LGFCXA (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

2J. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing as described in Item 2 or with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally. When square edge boards are used joint treatment, Item 3, may be omitted.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C

NATIONAL GYPSUM CO — Type FSK, Type FSK-G, Type FSW, Type FSW-3, Type FSW-5, Type FSW-G, Type FSK-C, Type FSW-C, Type FSMR-C, Type FSW-6, Type FSL

2K. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1/2 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
CERTAINTEED GYPSUM INC — Type X-1, Types EGRG, GlasRoc, GlasRoc-2, Type C

3. **Joints and Fastener Heads —** Wallboard joints covered with paper tape and joint compound. Fastener heads covered with joint compound. Gypsum plaster not more than 1/8 in. thick may be applied over the wallboard in addition to the specified joint treatment.

4. **Batts and Blankets* —** (Not Shown) — Optional glass fiber insulation.
CERTAINTEED CORP

JOHNS MANVILLE

OWENS CORNING

4A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal

dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product. When Item 5 is used, Fiber, Sprayed shall be SANCTUARY.

Applegate Greenfiber Acquisition LLC — SANCTUARY for use with wet or dry application. Insulmax is to be used for dry application only

4B. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation

4C. **Batts and Blankets* —** Required for use with resilient channels, Item 6, 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 4 in. face of the studs with staples placed 24 in. OC.
ROCKWOOL — Type SAFtInSOUND, min. 1.69 pcf.

THERMAFIBER/OWENS CORNING — Type SAFB, SAFB FF

4D. **Glass Fiber Insulation —** (As an alternate to Item 4C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall, attached to the 4 in. face of the studs with staples placed 24 in. OC. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4E. **Batts and Blankets* —** (Required for use with Wall and Partition Facings and Accessories, Item 2A) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

4F. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.
INTERNATIONAL CELLULOSE CORP — Cellwar-RL

4G. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft^3.

Applegate Greenfiber Acquisition LLC— Applegate Advanced Stabilized Cellulose Insulation

5. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Wallboard attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 3-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

5A. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 5) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in.

and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC, Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

5B. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 5) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item 5Ba) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

5C. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 5) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 5Cb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item 5Ca) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

5D. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 5) — Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Phillips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 5Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

5E. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 5) — Used as an alternate method to attach resilient channels to wall studs. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 24 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions.
PAC INTERNATIONAL L L C — Type RC-1 Boost

5F. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 5) — Furring channels and Steel Framing Members as described below:
a **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b **Steel Framing Members* —** Used to attach furring channels (Item 5Fa) to studs. Clips spaced maximum 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

6. **Furring Channel —** Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, items 4C or 4D is required.

7. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510

8. **Non-Bearing Wall Partition Intersection —** (Optional) — Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

9. **Mineral and Fiber Board* —** (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

9A. **Mineral and Fiber Board* —** (Optional, Not Shown) — For use with Items 9B-9E) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

9B. **Glass Fiber Insulation —** (For use with Item 9A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

9C. **Batts and Blankets* —** (As an alternate to Item 9B, For use with Item 9A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.
ROCKWOOL — Type SAFtInSOUND, min. 1.69 pcf.

THERMAFIBER/OWENS CORNING — Type SAFB, SAFB FF

9D. **Adhesive —** (For use with Item 9A) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 9A).

9E. **Gypsum Board* —** (For use with Item 9A) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 9A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 9A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.

AMERICAN GYPSUM CO — Type AG-C

CABOT MANUFACTURING ULC — 5/8 in. Type C

CERTAINTEED GYPSUM INC — Type FRPC, Type C

CGC INC — Types C, IP-X2, IPC-AR

CERTAINTEED GYPSUM INC — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types S, DAPC, TG-C

NATIONAL GYPSUM CO — Types FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

PANEL REY S A — Types PRC, PRC2

THAI GYPSUM PRODUCTS PCL — Type C

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

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

9F. **Mineral and Fiber Board —** (Optional, Not Shown) — For optional use as an additional layer on one side of wall - Nom 1/2 in. thick, 4 ft wide, square edge fiber boards applied vertically to studs on one side of the wall in between the wood studs and the UL Classified Gypsum Board (Item 2). Fiber boards installed with 1-1/4 in. long, Type W, bugle head, coarse thread gypsum board screws spaced 12 in. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gypsum board (Item 2) installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
BLUE RIDGE FIBERBOARD INC — SoundStop

10. **Wall and Partition Facings and Accessories* —** (CLBY) (Optional, Not Shown) — For use with Item 1, Item 2, Item 3, Items 4, and Item 6. For maximum fire rating of 1 hour. On one side of the wall, over the first layer of Gypsum Board (Item 2), install ReflexXor membrane with the gold side facing outwards. Membrane installed with T50 staples spaced 12 inches on center in both directions as per manufacturer's instructions, seams in membrane to be overlapped by 2 inches. When ReflexXor membrane is used an additional layer of Gypsum Board that is identical to the first layer and as specified in Item 2 shall be installed over the membrane. Additional layer of Gypsum Board to be installed through the membrane to the stud as specified in Item 2 except the fastener length shall be increased by a minimum of 5/8 inch. Install batts and blankets in the stud cavity as per Item 4.

On the other side of the wall prior to the installation of the Gypsum Board install Resilient Channels as per Item 6. Over the Resilient Channel install 3/4 inch thick SONOpan panel secured to the Resilient Channel with min. 1-1/4 in. long drywall screws and washers spaced at 16 in. OC on the perimeter of the panel and 8 in. OC in the field of the panel. Over the SONOpan panel install the same Gypsum Board as specified in Item 2 with the fastener length increased by minimum 1/4 inch. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

Alternately, on the other side of the wall prior to the installation of the Gypsum Board (Item 2), install 3/4 in. thick SONOpan panels, secured to one side of studs either horizontally or vertically. Panels secured to each stud with min. 1-1/4 in. long drywall screws spaced 12 in. OC. Over the SONOpan, install 25 MSG galv. steel, Resilient Channels, spaced vertically 24 in. OC. Resilient Channels fastened through panels to each stud with min. 2 in. long drywall screws or self-tapping screw. Over the Resilient Channels install Gypsum Board as specified in Item 2 with drywall screws as specified in Item 2. Panels not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

MSL — ReflexXor membrane, SONOpan panel

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

Last Updated on 2025-03-03

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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

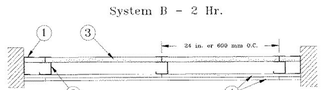
Design No. **U415**

July 31, 2025

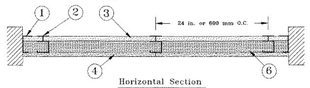
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

System A – 1 Hr.

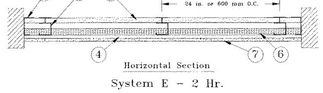
System B – 2 Hr.



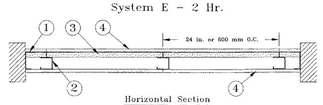
System C – 2 Hr.



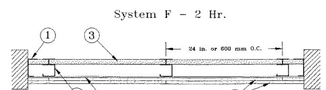
System D – 2 Hr.



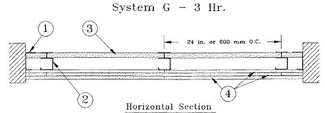
System E – 2 Hr.



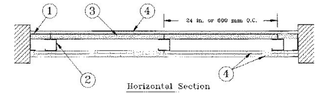
System F – 2 Hr.



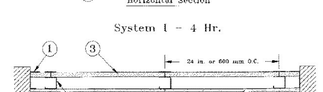
System G – 3 Hr.



System H – 3 Hr.



System I – 4 Hr.



1. **Floor, Side and Ceiling Runners —** "J" - shaped runner, min 2-1/2 in. deep (min 4 In. deep when System C is used), with unequal legs of 1 in. and 2 In., fabricated from min 24 MSG (min 20 MSG when item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners. Runners may be supplied with securement tabs for gypsum liner panels (refer to Item 3).

1A. **Steel Framing Members (Floor, Side, and Ceiling Runners)* —** As an alternate to Item 1, "J"-shaped runner, min 2-1/2 in. deep, with unequal legs of 1 in. and min 2-1/4 in. fabricated from min. 25 MSG galv. Steel (min 20 MSG when Item 4A, 4B, 4C, 4D, or 7 are used). Runner positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from wands and not greater than 24 In. OC. Runner may be supplied with securement tabs for gypsum liner panels (refer to Item 3).

SCAFCO STEEL STUD MANUFACTURING CO — I-Stud Shaftwall Steel Framing System

2. **Steel Studs —** "C-H" - shaped studs, min 2-1/2 In. deep (min 4 In. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when items 4A, 4B, 4C, or 4D are used).

2A. **Steel Studs —** (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 In. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 In. deep (min 4 In. deep when System C is used), with one leg 1 In. long and two legs 3/4 in. long. Shorter legs 1 In. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 In. less than floor to ceiling heights.

2B. **Furring Channels —** (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 In. liner panels with 1/2 In. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

2C. **Furring Channels —** For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 In. long Type S pan head steel scre