

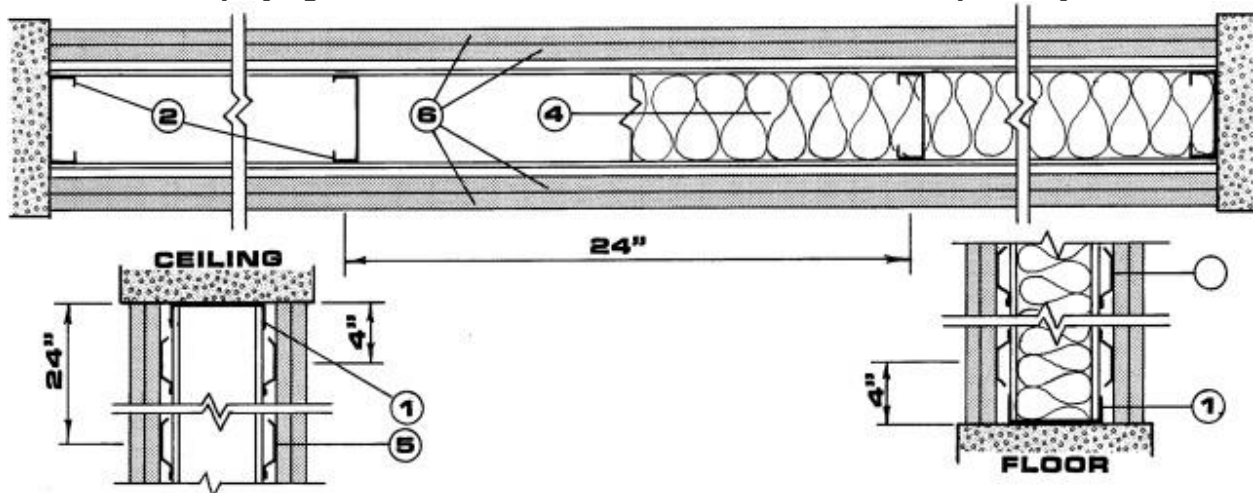
Design No. U440

April 14, 2022

Bearing Wall Rating — 1 HR.

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. **Floor Ceiling Runners** — Channel-shaped, min. 3-1/2 in. wide with min. 1-1/4 in. legs, fabricated from min No. 20 MSG (0.0329 in., min bare metal thickness) steel or min No. 20 MSG (0.038 in. thick) coated steel. Attached to floor and ceiling with steel fasteners spaced not greater than 24 in. O.C.

2. **Steel Studs** — Corrosion protected steel studs, min. 3 1/2 in. wide, min No. 20 MSG (0.0329 in., min bare metal thickness) steel or min. No. 20 MSG (0.033 in. thick) coated steel. Studs shall be designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute. All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer and shall meet the requirements of all applicable local code agencies. The max stud spacing shall not exceed 24 in. O.C. Studs attached to floor and ceiling runners with 1/2 in. long Type S-12 steel screws on both sides of studs.

3. **Lateral Support Members** — (Not Shown) — Where required for lateral support of studs, support may be provided by means of steel straps, channels or other similar means as specified in the design of a particular steel stud wall system.

4. **Batts and Blankets** — (Optional) — Placed in stud cavities to fill interior of wall. Any mineral wool batt material supplied in 24 in. widths and bearing the UL Classification Marking as to Fire Resistance. Max thickness 3-1/2 in.

4A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 4) — (100% Borate Formulation) — 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/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product.

U S GREENFIBER L L C — INS735, INS745, INS750LD for use with wet or dry application. INS765LD and INS773LD are 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. **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/ft³.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

4D. **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. To facilitate the 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/ft³.

APPLEGATE HOLDINGS L L C — Applegate Advanced Stabilized Cellulose Insulation

5. **Resilient Channels** — (Optional one side or both sides) — 25 MSG (0.021 in. thick) coated steel. Resilient channels spaced vertically 24 in. OC flange portion attached to studs with 1/2 in. long Type S-12 steel screws.

5A. **Steel Framing Members*** — (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. 2-9/16 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.

b. **Steel Framing Members*** — Used to attach furring channels (Item a) to studs (Item 2). Clips spaced 48 in. OC., and secured to studs with 1-5/8 in. wafer or hex head Type S steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 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).

5B. **Framing Members*** — (Not Shown) — (Optional on one or both sides) — 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 max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6.

b. **Steel Framing Members*** — Used to attach furring channels (Item 5Ba) to studs (Item 2). Clips spaced max. 48 in. OC. GENIE CLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PLITEQ INC — Type Genie Clip

5C. **Steel Framing Members*** — (Optional on one or both sides, Not Shown) — 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 6.

b. **Steel Framing Members*** — — Used to attach furring channels (Item 5Ca) 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

5D. **Steel Framing Members*** — (Optional on one or both sides, Not Shown) — 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 5Db. 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 6.

b. **Steel Framing Members*** — Used to attach furring 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. Furring channels are friction fitted into clips.

REGUPOL AMERICA — Type SonusClip

5E. **Steel Framing Members*** — (Optional on one or both sides, Not Shown) — 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. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 6.

b. **Steel Framing Members*** — Used to attach resilient channels (Item 5Ea) 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

6. **Gypsum Board*** — 1/2 in. thick. Wallboard applied vertically or horizontally in two layers.

When resilient channels (Item 5) are used, inner layer attached to studs with 1 in. long Type S-12 steel screws spaced 12 in. OC at joint edges and in the field. Outer layer attached with 1-5/8 in. long Type S-12 steel screws spaced 12 in. OC at the joint edges and in the field. Outer layer joints to be staggered 24 in. from inner layer joints and covered with joint tape and two coats of joint compound. Screw heads covered with two coats of joint compound. As an alternate, nominal 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

When **Steel Framing Members** (Item 5A, 5B, 5C, 5D or 5E) are used, base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced max 24 in. OC; face layer attached with 1-5/8 in. long Type S bugle-head steel screws spaced max 12 in. OC.

AMERICAN GYPSUM CO — Types AG-C

CABOT MANUFACTURING ULC — Type C

CERTAINTEED GYPSUM INC — Type C

CGC INC — Types C, IP-X2, IPC-AR

CERTAINTEED GYPSUM INC — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

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

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

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C

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

USG BORAL DRYWALL SFZ LLC — Type C

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

6A. **Gypsum Board*** — (As an alternate to Item 6) — 5/8 in. thick. Two layers installed as described in Item 6.

CGC INC — Type ULIX.

NATIONAL GYPSUM CO — Type FSMR-C.

UNITED STATES GYPSUM CO — Type ULIX

6B. **Gypsum Board*** — (As an alternate to Item 6) — 5/8 in. thick. Two layers installed as described in Item 6. Screw lengths increased min 1/8 in. and 1/4 in. for base and face layers, respectively.

PANEL REY S A — Type PRX2

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 steel 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

*** 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 2022-04-14