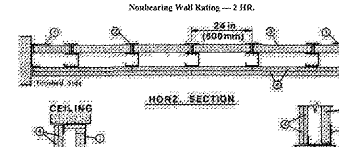
DESIGN No. U438

MECHANICAL SHAFT

Design No. U438
August 01, 2012

Nonbearing Wall Rating — 2 HR.



1. **Floor and Ceiling Runners** — "J" -shaped runner, 2-1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 24 MSG galv steel (min 20 MSG when Item 4B is used). 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.
2. **Steel Studs** — "C-H" -shaped studs, 2-1/2 in. wide by 1-1/2 in. deep, fabricated from 25 MSG galv steel (min 20 MSG when Item 4B is used). Cut to lengths 3/8 to 1/2 in. less than floor to ceiling height and spaced 24 in. or 600 mm OC.

2A. **Steel Studs** — (Not shown)-"E" -shaped studs installed in place of "C-H" -shaped studs (Item 2) to secure the closure liner panels at the ends of walls. Fabricated from 25 MSG galv steel (min 20 MSG when Item 4B is used), 2-1/2 in. wide, 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 in. less than floor to ceiling height. Sill and lintel of opening formed with "J" -shaped runners (Item 1) secured to "E" -shaped studs with angle clips and steel screws.

3. **Gypsum Board*** — 1 in. thick gypsum wallboard liner panels, supplied in nom 24 in. or 600 mm (for metric spacing) widths. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" -shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" -runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC.

CGC INC — Type SLX.

UNITED STATES GYPSUM CO — Type SLX.

USG MEXICO S A DE C V — Type SLX.

4. **Gypsum Board*** — 1/2 in. thick, 4 ft. or 1200 mm (for metric spacing) wide wallboard applied vertically in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC along the edges and in the field of the boards. Outer or face layer attached to studs and "J" -runners with 1-5/8 in. long Type S steel screws spaced 12 in. along the edges and in the field of the boards, staggered from screws in inner layer. Joints between inner and outer layers staggered.

Outer layer joints covered with paper tape and joint compound. Exposed screw heads covered with joint compound.

RAY-BAR ENGINEERING CORP — Type RB-LBG

4C. **Gypsum Board*** — (As an alternate to Item 4, 4A, 4B) — 5/8 in. thick. Two layers installed as described in Item 4

NATIONAL GYPSUM CO — Type FSMR-C.

4D. **Gypsum Board*** — (Not Shown) - May be used in lieu of Items 4 for the base layer - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints. To be used with Lead Batten Strips (see Item 6B) or Lead Discs (see Item 6C).

MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4E. **Gypsum Board*** — (Not Shown) - May be used in lieu of Items 4 for the base layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and one 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5. **Batts and Blankets*** — (Optional) — (Not shown) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt material bearing the UL Classification Marking as to Fire Resistance.

5A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) — 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. Nominal dry density of 3.0 lb/ft³. Alternate application method: The fiber is applied with U.S. GreenFiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft³.

U S GREENFIBER L L C — Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)

5B. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) and Item 5A - 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

5C. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) - 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 lb/ft³.

As an alternate method, inner wallboard layer applied vertically, outer wallboard layer applied horizontally. Inner layer attached to studs with 1 in. Type S steel screws spaced 24 in. OC along vertical edges and in the field. Outer layer attached to the studs and "J" runners over the inner layer with 1-5/8 in. long Type S steel screws spaced 12 in. OC in the field, along the vertical edges and to the floor and ceiling runners. Outer layer secured to inner layer wallboard with 1-1/2 in. long Type G steel screws located midway between studs and 1 in. from the horizontal joint.

AMERICAN GYPSUM CO — Types AG-C .

CERTAINTEED GYPSUM INC — Type FRPC, Type C.

CERTAINTEED GYPSUM CANADA INC — Type C.

CGC INC — Type C, IP-X2, or WRC.

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

LAFARGE NORTH AMERICA INC — Types LGFC-C, LGFC-C/A.

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

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

TEMPLE-INLAND — Type TG-C.

UNITED STATES GYPSUM CO — Type C, IP-X2 or WRC.

USG MEXICO S A DE C V — Type C, IP-X2 or WRC.

4A. **Gypsum Board*** — (As an alternate to Item 4) — 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Inner or base layer attached to studs with 1 in. long Type S or S-12 steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S or S-12 steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. Outer layer joints covered with paper tape and joint compound. Exposed screw heads covered with joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. When used in widths other than 48 in., gypsum panels to be installed horizontally.

CGC INC — Type AR, IP-AR, IP-X1, SCX, ULX, or WRX.

UNITED STATES GYPSUM CO — Type AR, FRX-G, IP-AR, IP-X1, SCX, ULX or WRX.

USG MEXICO S A DE C V — Type AR, IP-AR, IP-X1, SCX, ULX, or WRX.

4B. **Gypsum Board*** — (Not Shown) - May be used in lieu of Items 4 or 4A for the base layer - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips (Item 6) required behind vertical joints.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

6. **Lead Batten Strips** — For Use with Item 4B - (Not Shown) - Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

6A. **Lead Discs or Tabs** — (Not Shown) - Used in lieu of or in addition to the lead batten strips (Item 6) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

6B. **Lead Batten Strips** — (Not Shown, for use with Item 4D) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grades "A, B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations.

6C. **Lead Discs** — (Not Shown, for use with Item 4D) Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.9% meeting the Federal Specification QQ-L-201f, Grades "A, B, C or D".

*Bearing the UL Classification Mark

DESIGN No. U356

1 HOUR BEARING WALL

Design No. U356
May 05, 2014

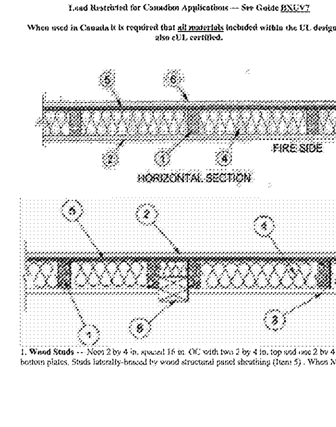
(Exposed to Fire on Interior Face Only)

Bearing Wall Rating — 1 Hr

Finish Rating — 23 Min or 25 Min (See Item 2C)

Load Restricted for Canadian Applications — See Guide BXUV7

When used in Canada it is required that all materials included within the UL design are also cUL certified.



1. **Wood Studs** — Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5) . When Mineral and Fiber Boards* (Item 5A) are considered as bracing for the studs, the load is restricted to 76% of allowable axial load. Walls effectively fire stopped at top and bottom of wall.

2. **Gypsum Board*** — **Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305.** Nom 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.

When Item 7, **Steel Framing Members***, is used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 7A, 7B, or 7C **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers.

ACADIA DRYWALL SUPPLIES LTD (View Classification) — CKNX.R25370

AMERICAN GYPSUM CO (View Classification) — CKNX.R14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CKNX.R19374

CERTAINTEED GYPSUM CANADA INC (View Classification) — CKNX.R15167

CERTAINTEED GYPSUM INC (View Classification) — CKNX.R3660

CGC INC (View Classification) — CKNX.R19751

CONTINENTAL BUILDING PRODUCTS OPERATING CO. L L C (View Classification) — CKNX.R18482

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX.R2717

LOADMASTER SYSTEMS INC (View Classification) — CKNX.R11809

NATIONAL GYPSUM CO (View Classification) — CKNX.R3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CKNX.R7094

PANEL REY S A (View Classification) — CKNX.R21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CKNX.R19262

THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX.R27517

UNITED STATES GYPSUM CO (View Classification) — CKNX.R1319

USG MEXICO S A DE C V (View Classification) — CKNX.R16089

2A. **Gypsum Board*** — (As an alternate to Item 2, not shown) - Any 5/8 in. thick 4 ft wide gypsum panels that are eligible for use in Design Nos. L501, G512 or U305, supplied by the Classified Companies listed below shown in the **Gypsum Board*** (CKNX) category. Applied vertically and attached to studs and bearing plates 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.

CGC INC

UNITED STATES GYPSUM CO

USG MEXICO S A DE C V

2B. **Gypsum Board*** — (As an alternate to Item 2, not shown) - 5/8 in. thick 4 ft wide gypsum panels applied vertically and attached to studs and bearing plates 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.

ACADIA DRYWALL SUPPLIES LTD — Type X, 5/8 Type [illegible]

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

CERTAINTEED GYPSUM CANADA INC — Type C, Type X, Type FG[illegible] GlasRoc

CERTAINTEED GYPSUM INC — Type C or Type X

GEORGIA-PACIFIC GYPSUM L L C — Types X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, Type X ComfortGuard Sound Deadening Gypsum Board

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS.

THAI GYPSUM PRODUCTS PCL — Type C or Type X

2C. **Gypsum Board*** — As an alternate to Item 2, not shown - For Use with Item 5A only - 5/8 in. thick 4 ft wide gypsum panels applied horizontally and attached to studs and bearing plates with 1-1/4 in. long Type W coarse gypsum panel steel screws spaced a max 8 in. OC, with last screws 1 in. and 4 in. from edge of board. Finish Rating is 25 min.

ACADIA DRYWALL SUPPLIES LTD — 5/8 Type X

GEORGIA-PACIFIC GYPSUM L L C — Types X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types [illegible] WRS.

2D. **Gypsum Board*** — (As an alternate to Item 2) - Not to be used with Item 7. 5/8 in. thick 4 ft. wide [illegible] surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

2E **Gypsum Board*** — (As an alternate to Items 2 through 2D) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.

2F. **Gypsum Board*** — (As an alternate to Item 2) - Not to be used with Item 7. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC.

CERTAINTEED GYPSUM INC — Type SilentFX

2G. **Wall and Partition Facings and Accessories*** — (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

3. **Joints and Nailheads** — (Not Shown) — Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound.
4. **Batts and Blankets*** — Mineral fiber or glass fiber insulation, 3-1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min density of 0.9 pcf (min R-13 thermal insulation rating).

See **Batts and Blankets*** (BKNV) Category in the Building Materials Directory and **Batts and Blankets*** (BZJZ) Category in the Fire Resistance Directory for names of Classified Companies.

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/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 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only.

4B. **Fiber, Sprayed*** — As an alternate to Item 4 and 4A — 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. Nominal dry density of 4.58 lb/ft³.

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 lb/ft³.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

5. **Wood Structural Panel Sheathing** — Min 7/16 in. thick, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing". Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d common coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.

5A. **Mineral and Fiber Boards*** — As an alternate to Item 5 - Min 1/2 in. sheathing, installed vertically to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 1-[illegible] in. long galvanized roofing nails spaced 6 in. OC at perimeter [illegible] and 12 in. OC along interior studs. As an option a weather resistive barrier may be applied over the [illegible] and Fiber Boards.

GEORGIA-PACIFIC PANEL PRODUCTS L L C — [illegible] FiberBrace, QuietBrace

6. **Exterior Facings** — Installed in accordance with the manufacturer's instructions. One of the following exterior facings is to be applied over the sheathing:
A. **Vinyl Siding** — **Molded Plastic** — Corrugated rigid vinyl siding having a flame spread value of 20 or less.

See [illegible] Plastic [illegible] Category in the Building Materials Directory for names of manufacturers.

B. **Particle Board Siding** — [illegible] board exterior sidings including patterned panel or lap siding.
C. **Wood Structural Panel or Lap Siding** — APA Rated Siding, Exterior, plywood, OSB or composite panels [illegible] veneer faces [illegible] wood core, per PS 1 or APA Standard PRP-108, including [illegible] rough sawn [illegible] density overlay, brushed, grooved and lap siding.
D. **Cementitious Stucco** — Portland cement or synthetic stucco systems with self-furring metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.
E. **Brick Veneer** — Any type on nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. [illegible] fastened with [illegible] rated metal wall ties attached over sheathing to wood studs with 8d nails. [illegible] ties spaced [illegible] each sixth course of brick [illegible] max 32 in. OC horizontally. [illegible] air space [illegible] between brick veneer and sheathing.
F. **Exterior Insulation and Finish System (EIFS)** — Nom 1 in. [illegible] **Foamed Plastic*** [illegible] insulation bearing [illegible] Classification Marking, attached over sheathing and [illegible] base coating system, or [illegible] stucco system [illegible] in accordance with manufacturer's instructions. See **Foamed Plastic** [illegible] and CCVW [illegible] categories [illegible] of Classified Companies.
G. **Siding** — Aluminum or steel siding [illegible] over sheathing to studs.
H. **Fiber-Cement Siding** — Fiber-cement [illegible] sidings including smooth and patterned panel [illegible]

7. **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. Gypsum board attached to furring channels as described in Item 2.
b. **Steel Framing Members*** — Used to attach furring channels (Item 7A) 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 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 INC — Types RSIC-1, RSIC-1 (2.75).

7A. **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, 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. Two layers of gypsum board attached to furring channels as described in Item 2.
b. **Steel Framing Members*** — Used to attach furring channels (Item 7Aa) to interior side of studs. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC — Type Isomax.

7B. **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, 2-3/8 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

7C. **Steel Framing Members** — (Optional, Not Shown)* - Furring channels and resilient sound isolation clip 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 secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 2. Side joint furring channels shall be attached to studs with RESILMOUNT Sound Isolation Clips - Type A237R located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC. approximately 1/2 in. from joint edge.
b. **Steel Framing Members*** — Resilient sound isolation clip used to attach furring channels (Item 7Ca) to studs. Clips spaced 16 in. OC., and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

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 a minimum equal to the depth of the bearing wall.

*Bearing the UL Classification Mark

Last Updated on 2014-05-05

EXTENDED STAY AMERICA - POOLER, GA - R-1 - Construction Type 5A - Sprinklered (SEE LIFE SAFETY DRAWINGS)

Type	2012 IBC	Fire Rating	Tested Assembly	STC / IIC Rating	Sound Tests	Partition Type	Page
Exterior Wall							
Load-Bearing	Table 601	1	U356			1-87S	AT.05A
Non-Load-Bearing	Table 601	0	NR	NR	NR	N/A	
Fire Separation X < 5	Table 602	1	U356	NR		N/A	AT.05A
Openings	Table 705.8	Fire Separation 3 ≤ X < 5: (UP,NS) 0% Openings Allowed w/ NFPA 13R Fire Sprinkler System					
Interior Wall							
Unit Load-Bearing	Table 601	1	U305	1-62S (STC 46)	USG: BBN-700725	1-62/62S	AT.[illegible]C
Unit Non-Load-Bearing	Table 601	0	NR	62S (STC 46)	USG: BBN-700725	62/62S	[illegible]A
Shaft Enclosures							
Mechanical Shaft Wall	713.4	2	U438	50 MIN	Certainteed	2-7S	AT.[illegible]
Mechanical Horizontal Shaft Enclosure	713.11	2	AER-09038 FIG. 8			N/A	AT.05H
Hoistway Enclosure	713.14/3002	2	U905			[illegible]	[illegible]T.05B
Stair Wall Enclosure	713.4	2	U301/U371	STC 56	Certainteed	2-63S/2-85S	AT.05B & AT.05D
Stair Roof/Ceiling Enclosure	713.12	2	AER-09038 FIG. 7			N/A	AT.05H
Fire Partition							
Unit Demising Wall	708.3	1	[illegible]	[illegible]IN. 50	Certainteed	1-74S	AT.05B
Corridor	708.3/1018.1	1	U3[illegible]	[illegible]50	USG: BBN 760903	1-72S/73S	AT.05A
Fire Wall (N/A)							
Floor/Ceiling Assembly							
Unit Floor/Ceiling	711.3/6[illegible]	[illegible]	[illegible]21	STC: 50 MIN IIC: 50 MIN RAL OT04-08, 1-26-04	GA #FC5012 RAL OT04-01, 1-19-04 RAL OT04-03, 1-20-04 RAL OT04-05, 1-21-04 RAL OT04-07, 1-26-04 RAL OT04-11, 4-16-04		AT.05F
Corridor Floor/Ceiling	711.3/601	1	L521	STC: 50 MIN IIC: 50 MIN RAL OT04-06, 1-21-04	GA #FC5012 RAL OT04-01, 1-19-04 RAL OT04-03, 1-20-04 RAL OT04-05, 1-21-04 RAL OT04-07, 1-26-04 RAL OT04-11, 4-16-04	N/A	AT.05F
[illegible] Assembly	711.3/601	1	P522	N/A	N/A		AT.05E

SOURCES
GA: GA-600-2009 Fire Resistance Design Manual Sound Control Gypsum Systems - Gypsum Association
USG: USG Acoustical Assemblies
Certainteed Noise Control for Buildings (National Research Council Canada; Riverbank Acoustical Laboratories)
NR Not Required
N/A Not Applicable

DESIGN No. U327

CORRIDOR WALL

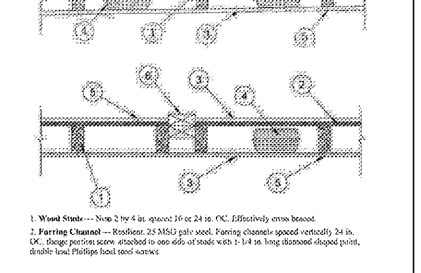
Design No. U327
March 06, 2014

Bearing Wall Rating — 1 Hr

Finished Rating — 23 Min

Load Restricted for Canadian Applications — See Guide BXUV7

When used in Canada it is required that all materials included within the UL design are also cUL certified.



1. **Wood Studs** — Nom 2 by 4 in. spaced 16 or 24 in. OC. Effectively cross braced.
2. **Furring Channel** — Resilient. 25 MSG galv steel. Furring channels 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.
3. **Gypsum Board*** — 5/8 in. thick, 4 ft wide applied vertically. Screw attached one side to 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. Wallboard attached on other side directly to studs with 1-1/4 in. long diamond shaped point. double lead Philips head steel screws spaced 12 in. OC. vertical joints located over studs.

CGC INC — Types C, SCX, SHX, FRX-G, IP-X1, IP-X2, IPC-AR, ULX.

UNITED STATES GYPSUM CO — Types C, SCX, SHX, ULX, FRX-G, IP-X1, IP-X2, IPC-AR.

USG MEXICO S A DE C V — Types C, SCX, SHX, FRX-G, IP-X1, IP-X2, IPC-AR, ULX.

4. **Batts and Blankets*** — 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.

THERMAFIBER INC — Type SAFB

4A. **Glass Fiber Insulation** — (As an alternate to Item 4) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See **Batts and Blankets (BKNV or BZJZ) Categories** for names of Classified companies.

5. **Joints and Screw Heads** — Gypsum board joints covered with paper tape and joint compound. Screw heads covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape.
6. **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 a minimum equal to the depth of the bearing wall.

*Bearing the UL Classification Mark

Last Updated on 2014-03-06

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