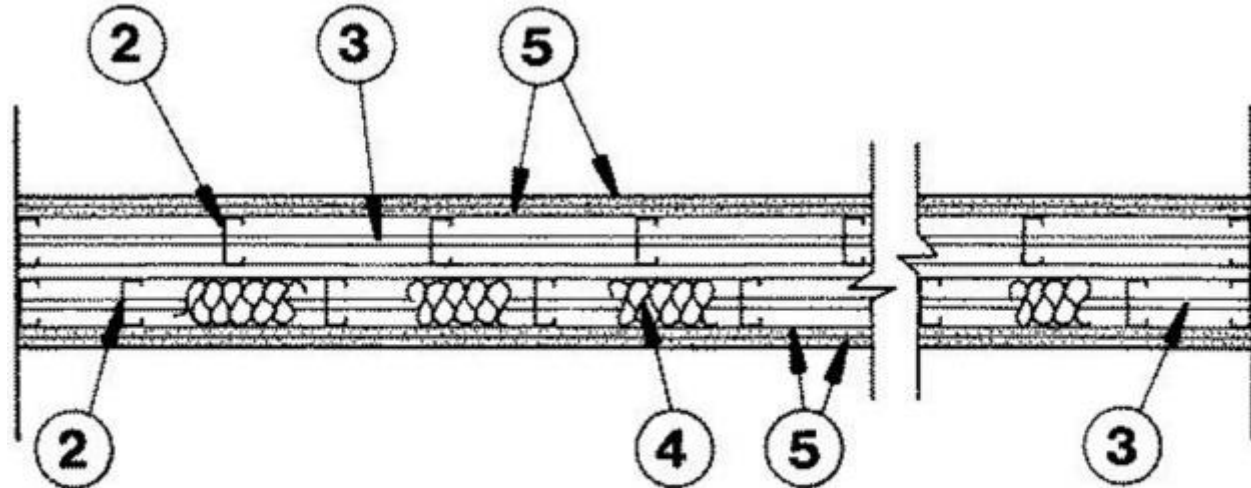


## Design No. V469

June 03, 2020

### Nonbearing Wall Rating — 1 or 2 Hr. (See Item 5)

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



### HORIZONTAL SECTION

1. **Floor and Ceiling Runners** — Channel shaped, attached to floor and ceiling in two rows, a min 1 in. apart, with steel fasteners spaced 24 in. OC. Runners fabricated from min No. 25 MSG galv steel, 1-1/4 in. wide and 2-1/2 in. deep.

1A. **Floor and Ceiling Runners** — (As an alternate to Item 1) — Channel shaped, attached to floor and ceiling in two rows, a min 1 in. apart. Runners fabricated from min No. 20 MSG galv steel, 1-3/16 in. wide and 2-9/16 in. deep.

1B. **Framing Members\***— **Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 for a 2 hour rating only - For use with Item 2C, channel shaped, min 2-1/2 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners 24 in. OC. max.

**CLARKDIETRICH BUILDING SYSTEMS** — CD ProTRAK

**DMFCWBS L L C** — ProTRAK

**MBA METAL FRAMING** — ProTRAK

**RAM SALES L L C** — Ram ProTRAK

**STEEL STRUCTURAL PRODUCTS L L C** — Tri-S ProTRAK

1C. **Framing Members\***— **Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 — For use with Item 2D, channel shaped, min 2-1/2 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper20™ Track

**FUSION BUILDING PRODUCTS** — Viper20™ Track

**IMPERIAL MANUFACTURING GROUP INC** — Viper20™ Track

**1D. Framing Members\* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 for a 2 hour rating only - For use with Item 2E, channel shaped, min 2-1/2 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper25™Track

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper25™ Track

**FUSION BUILDING PRODUCTS** — Viper25™ Track

**IMPERIAL MANUFACTURING GROUP INC** — Viper25™ Track

**1E. Framing Members\*— Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 — For use with Item 2E, channel shaped, min 3-5/8 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.

**BAILEY METAL PRODUCTS LTD** — Type PLATINUM PLUS

**1F. Framing Members\* — Floor and Ceiling Runners** — Not Shown — As an alternate to Item 1. For use with Item 2H, proprietary channel shaped, min. 3-5/8 in. wide, fabricated from min. 0.018 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max.

**RESCUE METAL FRAMING, L L C** — AlphaTRAK

**1G. Framing Members\* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 for a 1 or 2 hour rating, For use with Item 2I, channel shaped, min 2-1/2 in. deep, fabricated from min. 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with fasteners 24 in. OC. max.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper X Track, Viper25™ Track

**2. Steel Studs** — Channel shaped, supplied with cutouts, friction -fitted into floor and ceiling runners and spaced a max 24 in. OC. Studs cut 1/2 in. less than assembly height and evenly staggered between the two rows of floor and ceiling runners. Studs fabricated from min No. 25 MSG galv steel, min 2-1/2 in. deep by 1-5/8 in. wide with 3/8 in. folded back return flange legs. Studs in adjacent rows may be staggered or in-line.

2A. **Steel Studs** — (As an alternate to Item 2) — Channel shaped, supplied with cutouts, friction -fitted into floor and ceiling runners and spaced a max 16 in. OC. Studs cut 1/2 in. less than assembly height and staggered flush against the floor runners. Studs fabricated from min No. 20 MSG galv steel, min 2-1/2 in. deep by 1-3/16 in. wide with 1/4 in. folded back return flange legs. Studs in adjacent rows may be staggered or in-line.

2B. **Steel Studs** — (As an alternate to Item 2) — Channel shaped, fabricated from min 20 MSG (0.0327 in. thick) corrosion-protected or galv steel, 3-1/2 in. min deep, min 1-1/2 in. flanges and 1/4 in. return, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height. Studs in adjacent rows may be staggered or in-line.

2C. **Framing Members\* — Steel Studs** — As an alternate to Item 2 for a 2 hour rating only — For use with Item 1B, channel shaped studs, min 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Studs in adjacent rows may be staggered or in-line.

**CLARKDIETRICH BUILDING SYSTEMS** — CD ProSTUD

**DMFCWBS L L C** — ProSTUD

**MBA METAL FRAMING** — ProSTUD

**RAM SALES L L C** — Ram ProSTUD

**STEEL STRUCTURAL PRODUCTS L L C** — Tri-S ProSTUD

2D. **Framing Members\* — Steel Studs** — As an alternate to Item 2 — For use with Item 1C, channel shaped studs, min 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Studs in adjacent rows may be staggered or in-line.

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper20™

**FUSION BUILDING PRODUCTS** — Viper20™

**IMPERIAL MANUFACTURING GROUP INC** — Viper20™

2E. **Framing Members\* — Steel Studs** — As an alternate to Item 2 for a 2 hour rating only — For use with Item 1D, channel shaped studs, min 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Studs in adjacent rows may be staggered or in-line.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper25™

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper25™

**FUSION BUILDING PRODUCTS** — Viper25™

**IMPERIAL MANUFACTURING GROUP INC** — Viper25™

**2F. Framing Members\* — Steel Studs** — As an alternate to Item 2 — For use with Item 1C (3-5/8 in. wide track), channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 1-1/4 in. wide by 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. Studs in adjacent rows may be staggered or in-line.

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — StudRite™

**2G. Framing Members\* — Steel Studs** — As an alternate to Item 2 — For use with Item 1E, channel shaped studs, min 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Studs in adjacent rows may be staggered or in-line.

**BAILEY METAL PRODUCTS LTD** — Type PLATINUM PLUS

**2H. Framing Members\* — Steel Studs** — As an alternate to Item 2, for use with Item 1F, proprietary channel shaped studs, min. 3-5/8 in. wide, fabricated from min. 0.018 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Studs in adjacent rows may be staggered or in-line.

**RESCUE METAL FRAMING, L L C** — AlphaSTUD

**2I. Framing Members\* — Steel Studs** — As an alternate to Item 2 for a 1 or 2 hour rating, for use with Item 1G, channel shaped studs, min 2-1/2 in. deep, fabricated from min. 25 MSG (0.018 in. min. bare metal thickness), spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Studs in adjacent rows may be staggered or in-line.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper X, Viper25™

**3. Lateral Bracing** — The bracing shall be in accordance with the SSMA Technical Note Dated March 2000 Referencing Unsheathed Flange Bracing.

**3A. Lateral Bracing** — (Not Shown) — Right angle- shaped, supplied with notches spaced 12, 16, or 24 in. OC., friction-fitted to the cutouts in steel studs, supplied in 7/8 in. by 7/8 in. by 50 in. lengths. Lateral bracing bars fabricated from min. 20 MSG galvanized steel. The bracing shall be located a maximum of 5 ft on center in accordance with the manufacturers published literature.

**CLARKDIETRICH BUILDING SYSTEMS** — TradeReady Spazzer 9200 bar

**4. Batts and Blankets** — Optional — Glass fiber batts may be friction-fitted to completely fill the stud cavities on one or both rows of studs.

See **Batts and Blankets** Category (BZJZ) for names of manufacturers.

5. **Gypsum Board\*** — Single layer installed on each side of the steel studs for the 1-hr system, two layers installed on each side of the studs for the 2-hr system. Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers staggered a min one stud cavity. For the 1-hr system, panels attached to steel studs and floor runner with 1 in. long Type S (With Item 2) or Type S-12 (With Items 2A or 2B) self-drilling, self-tapping steel screws spaced 8 in. OC. For the 2-hour system: base layer panels attached to steel studs and floor runner with 1 in. long Type S (With Item 2) or Type S-12 (With Item 2A or 2B) steel screws spaced 16 in., face layer panels attached to steel studs and floor runner with 1-5/8 in. long Type S (With Item 2) or Type S-12 (With Item 2A or 2B) steel screws spaced 8 in. OC. For 1 hr rating (Horizontal application) — One layer of 5/8 in. thick gypsum board applied horizontally to studs with 1 in. long Type-S bugle head screws spaced 8 in. OC at the perimeter and in the field with the 1st screw installed 4 in. from the board edge. Horizontal joints need not be staggered on opposite faces or backed by steel framing. For 2 hr rating (Horizontal application) — Two layers of 5/8 in. thick gypsum board applied horizontally. The base layer is attached to the studs, with #6 x 1 in. long Type-S bugle head screws, spaced 16 in. OC with the 1st and 2nd screws installed 1 in. and 8 in. from the board edge, respectively; and to the track spaced 16 in. OC. with the 1st screw installed 3 in. from the board edge. The face layer attached to the studs with 1-5/8 in. long Type S bugle head screws spaced 16 in. OC. with the 1st and 2nd screws installed 1 in. and 8 in. from the board edge, respectively; and to the track spaced 16 in. OC. with the 1st and 2nd screws installed 2 in. and 11 in. from the board edge. Horizontal joints need not be staggered on opposite faces or backed by steel framing. Face layer horizontal joints must be staggered a minimum 12 in. from the base layer when applied horizontally.

**CERTAINTED GYPSUM INC** — Type X, Type X-1, Easi-Lite Type X-2, Type EGRG, GlasRoc, GlasRoc-2

**SAINT-GOBAIN GYPROC MIDDLE EAST FZE** — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air, Gyproc DuraLine, Gyproc DuraLine MR, Gyproc DuraLine M2TECH, Gyproc DuraLine ACTIV'Air, Gyproc DuraLine MR ACTIV'Air, Gyproc DuraLine M2TECH ACTIV'Air

**THAI GYPSUM PRODUCTS PCL** — Type C or Type X

6. **Joint Tape and Compound** — (Not Shown) — Outer layer joints covered with joint compound and paper or mesh tape. Screw heads covered with joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges.

7. **Steel Framing Members (Not Shown)\*** — (Optional on one or both sides, not shown, for single or double layer systems) — 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 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 5.

b. **Steel Framing Members\*** — Used to attach furring channels (Item 7a) to studs (Item 2). Clips spaced max. 48 in. OC., and 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. 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).

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 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 5.

b. **Steel Framing Members\*** — Used to attach furring channels (Item 7Aa) 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

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, 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 a double strand of No. 18 AWG twisted steel wire. Gypsum board attached to furring channels as described in Item 5.

b. **Steel Framing Members\*** — Used to attach furring channels (Item 7Ba) 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

7C. **Steel Framing Members\*** — (Optional, 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 5.

b. **Steel Framing Members\*** — Used to attach resilient channels (Item 7Ca) 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

8. **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.

