Design No. U491

BXUV.U491

Fire Resistance Ratings - ANSI/UL 263

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Design/System/Construction/Assembly Usage Disclaimer

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

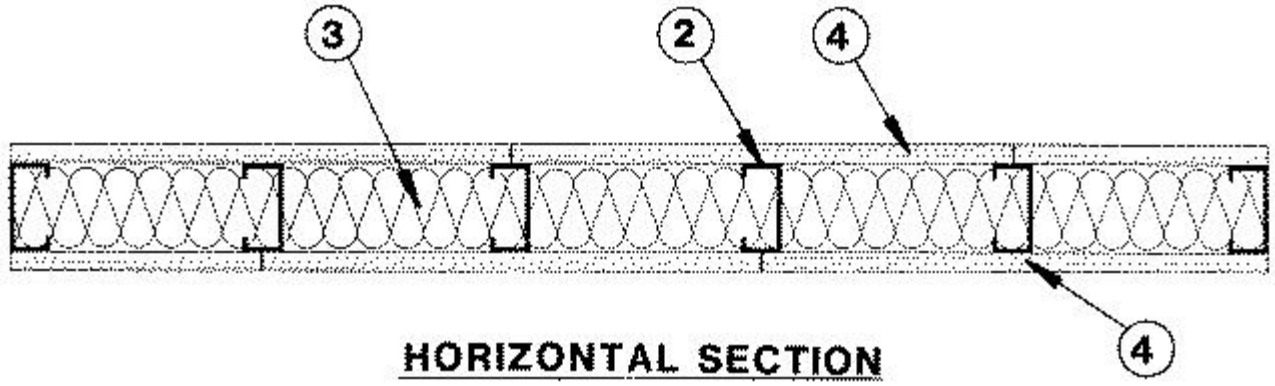
Fire-resistance Ratings - ANSI/UL 263

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

Design No. U491

February 19, 2013

Nonbearing Wall Rating — 2 HR.



1. **Floor and Ceiling Runner —** (Not Shown) — Channel shaped, fabricated from min No. 25 MSG galv steel (20 MSG for item 4A), 1 in. wide and min 3-1/2 in. deep. Attached to floor and ceiling with steel fasteners spaced 24 in. OC.

1A. **Framing Members* - Floor and Ceiling Runner —** Not shown - In lieu of Item 1 — For use with Item 2A, proprietary channel shaped runners, 1-1/4 in. wide by min 3-1/2 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ Track

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

PHILLIPS MFG CO L L C — Viper20™ Track

1B. **Framing Members*— Floor and Ceiling Runners —** Not shown - In lieu of Item 1 — For use with Item 2B, channel shaped runners, 1-1/4 in. deep by min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

DMFCWBS L L C — ProTRAK

MBA BUILDING SUPPLIES — ProTRAK

RAM SALES L L C — Ram ProTRAK

SOUTHEASTERN STUD & COMPONENTS INC — ProTRAK

STEEL STRUCTURAL SYSTEMS L L C — Tri-S ProTRAK

1C. **Framing Members* - Floor and Ceiling Runner —** Not shown - In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by min 3-1/2 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

TELLING INDUSTRIES L L C — Viper20™ Track

1D. **Framing Members*— Floor and Ceiling Runners —** Not shown - In lieu of Item 1 — For use with Item 2D, channel shaped runners, 1-1/4 in. deep by min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

TELLING INDUSTRIES L L C — TRUE-TRACK™

2. **Steel Studs —** Channel shaped, min 3-1/2 in. deep. Fabricated from min No. 25 MSG galv steel (20MSG for item 4A). Max stud spacing 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Steel studs friction-fitted into floor and ceiling runners (Item 1).

2A. **Framing Members* - Steel Studs —** Not shown - In lieu of Item 2 — For use with Item 1A, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-1/2 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height. Max stud spacing 24 in. OC.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™

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

PHILLIPS MFG CO L L C — Viper20™

2B. **Framing Members*— Steel Studs —** Not shown - In lieu of Item 2 — For use with Item 1B, channel shaped steel studs, 1-1/4 in. deep by min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height. Max stud spacing 24 in. OC.

CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD

DMFCWBS L L C — ProSTUD

MBA BUILDING SUPPLIES — ProSTUD

RAM SALES L L C — Ram ProSTUD

SOUTHEASTERN STUD & COMPONENTS INC — ProSTUD

STEEL STRUCTURAL SYSTEMS L L C — Tri-S ProSTUD

2C. **Framing Members* - Steel Studs —** Not shown - In lieu of Item 2 — For use with Item 1C, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-1/2 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height. Max stud spacing 24 in. OC.

TELLING INDUSTRIES L L C — Viper20™

2D. **Framing Members*— Steel Studs —** Not shown - In lieu of Item 2 — For use with Item 1D, channel shaped steel studs, 1-1/4 in. deep by min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height. Max stud spacing 24 in. OC.

TELLING INDUSTRIES L L C — TRUE-STUD™

3. **Batts and Blankets* —** Nom 3 in. thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.

IIG MINWOOL L L C — Type SAFB

THERMAFIBER INC — Type SAFB.

4. **Gypsum Board* —** 3/4 in. thick, 4 ft wide. One layer of gypsum board to be applied vertically on each side with joints centered over studs and staggered on opposite sides of studs. Gypsum board secured with 1-1/4 in. long Type S self-drilling, self-tapping steel screws spaced 8 in. OC along the perimeter and 12 in. OC in the field. Screws along side joints offset 4 in.

CGC INC — Type IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Type IP-X3 or ULTRACODE

USG MEXICO S A DE C V — Type IP-X3 or ULTRACODE

4A. **Gypsum Board* —** (As an alternate to Item 4, For direct attachment only) - Nom. ¾ in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs (item 2) and staggered on opposite sides of studs. Gypsum board 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. To be used with Lead Batten Strips (see Item 6) or Lead Discs or Tabs (see Item 7).

RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. **Gypsum Board* —** (As an alternate to Items 4) For Direct Application to studs Only- For use as the base layer or as the face layer. Nom 3/4 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 1-5/8 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. 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 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 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, Grades "A, B, C or D". Fasteners for face layer gypsum

panels (Items 4) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws.

MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

5. **Joint Tape and Compound —** (Not Shown) — Joints covered with joint compound and paper or mesh tape. Screw heads covered with joint compound.

6. **Lead Batten Strips —** (Not Shown, For Use With Item 4A) - Lead batten 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". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.

7. **Lead Discs or Tabs —** (Not Shown, For Use With Item 4A) - Used in lieu of or in addition to the lead batten strips (Item 11) 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 4A) 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".

*Bearing the UL Classification Mark

Last Updated on 2013-02-19

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