



## Design No. U412

### BXUV.U412

### 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.

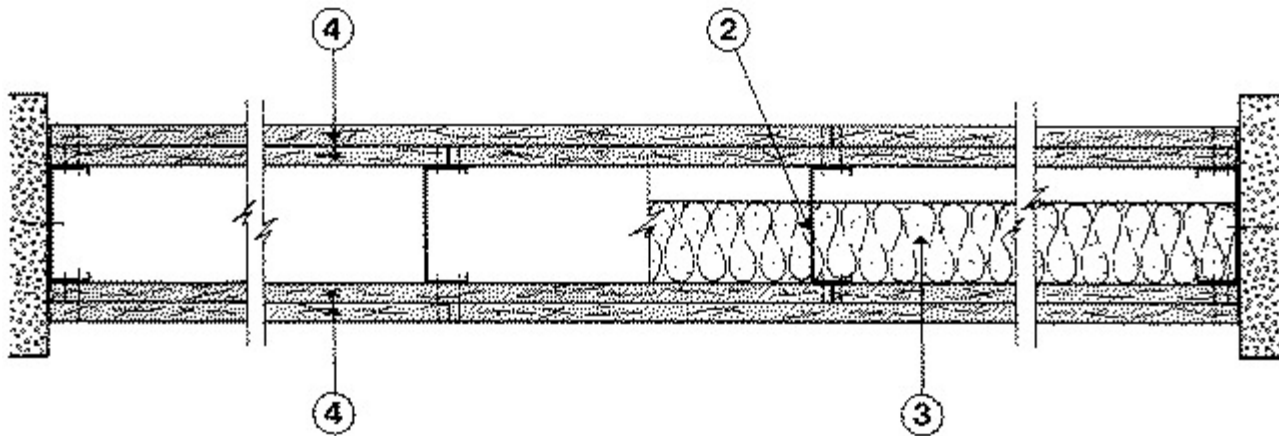
#### Fire-resistance Ratings - ANSI/UL 263

[See General Information for Fire-resistance Ratings - ANSI/UL 263](#)

## Design No. U412

June 06, 2013

**Nonbearing Wall Rating — 2 HR.**



1. **Floor and Ceiling Runner** — (Not Shown) — 25 MSG (min) galv steel 1 in. high, return legs 1-5/8 in. wide (min), attached to floor and ceiling with fasteners 24 in. OC max.

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

**ALLSTEEL & GYPSUM PRODUCTS INC** — Type SUPREME Framing System

**CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV** — Type SUPREME Framing System

**QUAIL RUN BUILDING MATERIALS INC** — Type SUPREME Framing System

**SCAFCO STEEL STUD MANUFACTURING CO** — Type SUPREME Framing System

**STEEL CONSTRUCTION SYSTEMS INC** — Type SUPREME Framing System

**UNITED METAL PRODUCTS INC** — Type SUPREME Framing System

**1B. Framing Members - Floor and Ceiling Runner\*** — Not shown - In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 1-1/4 in. deep by min 1-5/8 in. wide 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™

**1C. Framing Members\*— Floor and Ceiling Runners** — (Not shown) — As an alternate to Item 1 - For use with Item 2C, channel shaped, min 1-5/8 in. wide fabricated from min 0.015 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 BUILDING SUPPLIES** — ProTRAK

**RAM SALES L L C** — Ram ProTRAK

**SOUTHEASTERN STUD & COMPONENTS INC** — ProTRAK

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

**1D. Framing Members\*— Floor and Ceiling Runners** — (Not shown) — As an alternate to Item 1 - For use with Item 2D, channel shaped, min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners 24 in. OC. max.

**TELLING INDUSTRIES L L C** — TRUE-TRACK™

**1E. Framing Members\*— Floor and Ceiling Runners** — (Not shown) — As an alternate to Item 1 - For use with Item 2E, channel shaped, min 1-5/8 in. wide fabricated from min 25 MSG steel, attached to floor and ceiling with fasteners 24 in. OC. max.

**KIRII (HONG KONG) LTD** — Type KIRII

**1F. Framing Members - Floor and Ceiling Runner\*** — Not shown - In lieu of Item 1 — For use with Item 2F, proprietary channel shaped runners, 1-1/4 in. deep by min 1-5/8 in. wide 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

2. **Steel Studs** — 1-5/8 in. wide (min), 1-1/4 in. legs, 1/4 in. return, formed of 25 MSG (min) galv steel max stud spacing 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

2A. **Framing Members\*— Steel Studs** — As an alternate to Item 2 - For use with Item 1A, channel shaped studs, min 1-5/8 in. wide, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

**ALLSTEEL & GYPSUM PRODUCTS INC** — Type SUPREME Framing System

**CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV** — Type SUPREME Framing System

**QUAIL RUN BUILDING MATERIALS INC** — Type SUPREME Framing System

**SCAFCO STEEL STUD MANUFACTURING CO** — Type SUPREME Framing System

**STEEL CONSTRUCTION SYSTEMS INC** — Type SUPREME Framing System

**UNITED METAL PRODUCTS INC** — Type SUPREME Framing System

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 1-5/8 in. wide fabricated from min 0.020 in. thick galv steel. Studs to be cut 3/4 in. less in length than assembly height.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper20™

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

**PHILLIPS MFG CO L L C** — Viper20™

2C. **Framing Members\*— Steel Studs** — As an alternate to Item 2 - For use with Item 1C, channel shaped studs, min 1-5/8 in. wide fabricated from min 0.015 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

**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

2D. **Framing Members\*— Steel Studs** — As an alternate to Item 2 - For use with Item 1D, channel shaped studs, min 1-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

# TELLING INDUSTRIES L L C — TRUE-STUD™

2E. **Framing Members\* — Steel Studs** — As an alternate to Item 2 - For use with Item 1D, channel shaped studs, min 1-5/8 in. wide fabricated from min 25 MSG steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

**KIRII (HONG KONG) LTD** — Type KIRII

2F. **Framing Members\* - Steel Studs** — Not shown - In lieu of Item 2 — For use with Item 1F, channel shaped steel studs, 1-1/4 in. deep by min 1-5/8 in. wide fabricated from min 0.020 in. thick galv steel. Studs to be cut 3/4 in. less in length than assembly height.

**TELLING INDUSTRIES L L C** — Viper20™

3. **Batts and Blankets\*** — (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity.

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

3A. **Fiber, Sprayed\*** — As an alternate to **Batts and Blankets** (Item 3) — (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/ft<sup>3</sup>. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft<sup>3</sup>, 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. INS765LD and INS770LD are to be used for dry application only.

3B. **Fiber, Sprayed\*** — As an alternate to **Batts and Blankets** (Item 3) and Item 3A - 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

3C. **Fiber, Sprayed\*** — As an alternate to Batts and Blankets (Item 3) - 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<sup>3</sup>.

**INTERNATIONAL CELLULOSE CORP** — Celbar-RL

4. **Gypsum Board\*** — 1/2 in. thick. Gypsum board applied vertically in two layers. (Laminated System) Inner layer attached to studs with 1 in. long Type S steel screws spaced 24 in. O.C. along vertical edges and 24 in. O.C. in the field. Outer layer laminated to inner layer with joint compound, applied with a notched spreader producing continuous beads of compound about 3/8 in. in diameter, spaced not greater than 2 in. O.C. Joints of laminated outer layer offset 12 in. from inner layer joints. Outer layer gypsum board attached to inner layer with 1-1/2 in. long Type G steel screws spaced 24 in. O.C. along edges and center line of each sheet.

Optional, (Direct Attached System) Gypsum board applied vertically in two layers. Inner layer attached to studs with 1 in. long Type S steel screws spaced 24 in. O.C. in the field and along the vertical edges. Outer layer attached to the studs over the inner layer with 1-5/8 in. long Type S steel screws spaced 12 in. O.C. in the field, along the vertical edges, and to the floor and ceiling runners. Joints of screw-attached outer layer offset from inner layer joints.

Optional, (Direct Attached System) Inner layer gypsum board applied vertically, outer layer wallboard applied horizontally. Inner layer attached to studs with 1 in. Type S steel screws spaced 24 in. O.C. along vertical edges and in the field. Outer layer attached to the studs 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 gypsum board with 1-1/2 in. long Type G steel screws located midway between studs and 1 in. from the horizontal joint.

Outer layer gypsum board joints covered with joint tape and min two coats of joint compound, and screw heads covered with min two coats of joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

**AMERICAN GYPSUM CO** — Types AG-C.

**CERTAINTED GYPSUM INC** — Type FRPC, Type C.

**CERTAINTED GYPSUM CANADA INC** — Type C.

**CGC INC** — Type C, IP-X2, IPC-AR or WRC.

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

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

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

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

**PANEL REY S A** — Type PRC

**TEMPLE-INLAND** — Type TG-C.

**THAI GYPSUM PRODUCTS PCL** — Type C.

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

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

4A. **Gypsum Board\*** — (As an alternate to Item 4) — 5/8 in. thick. Two layers installed by any method as described in Item 4.

**NATIONAL GYPSUM CO** — Type FSMR-C.

\*Bearing the UL Classification Mark

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