

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.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances

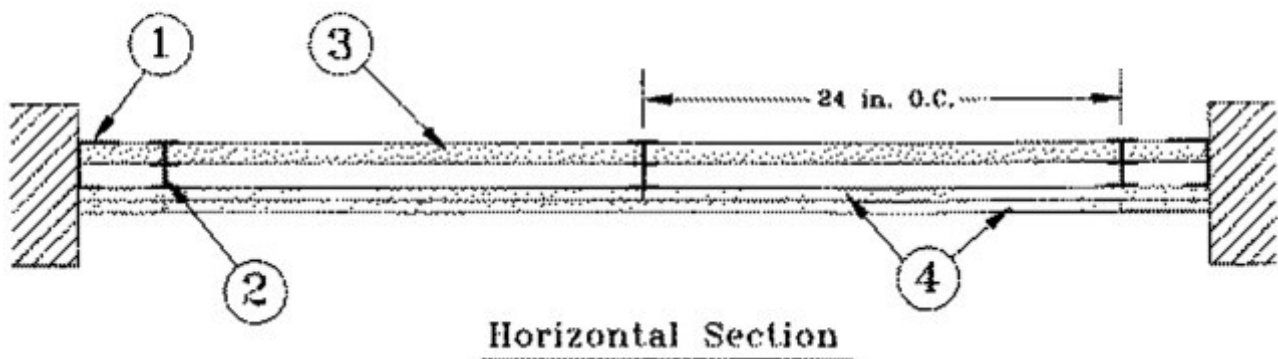
Design No. V470

August 18, 2023

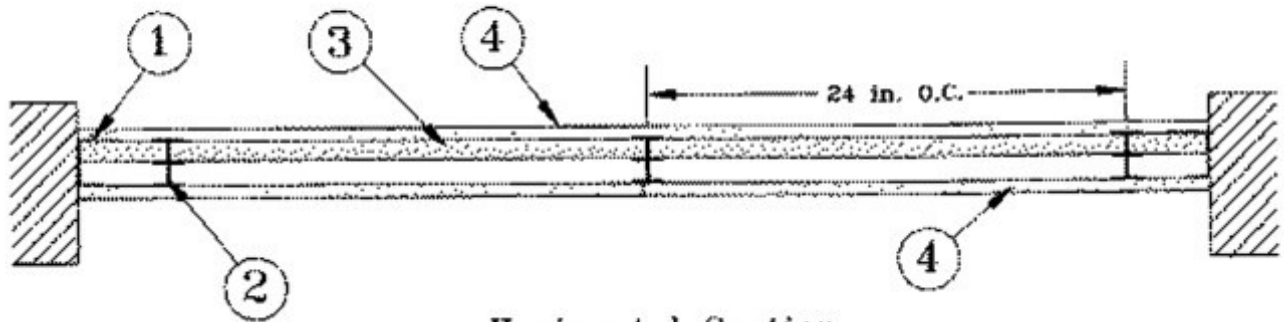
Nonbearing Wall Ratings — 1, 2 or 3 Hr

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

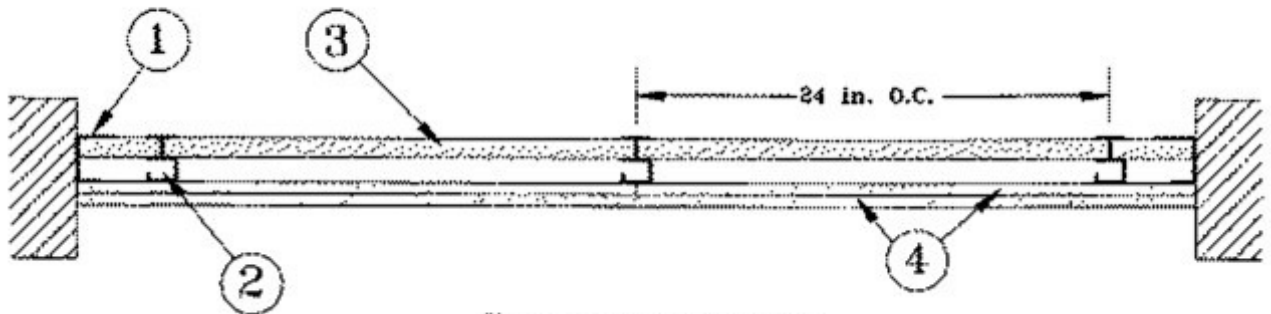
System A - 2 Hr.



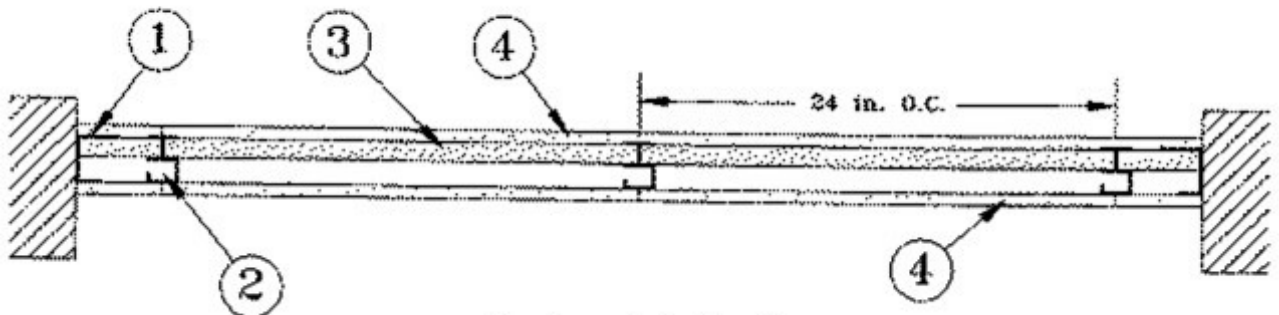
System B - 2 Hr.



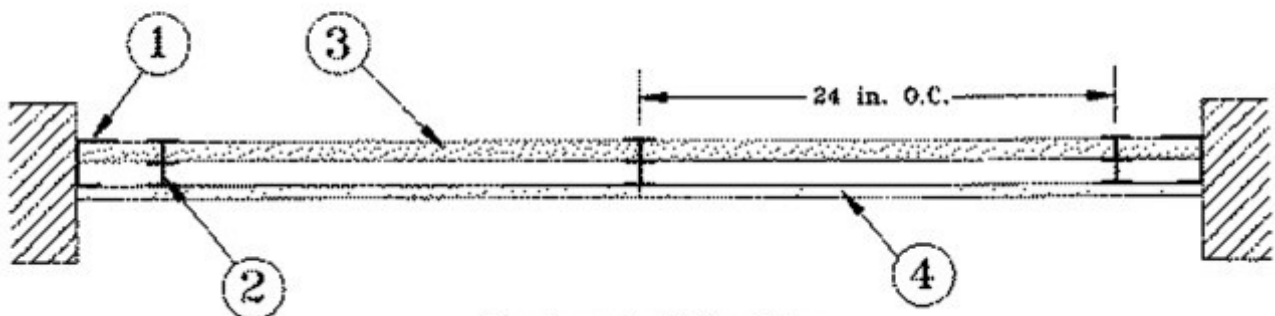
Horizontal Section
System C - 2 Hr.



Horizontal Section
System D - 2 Hr.

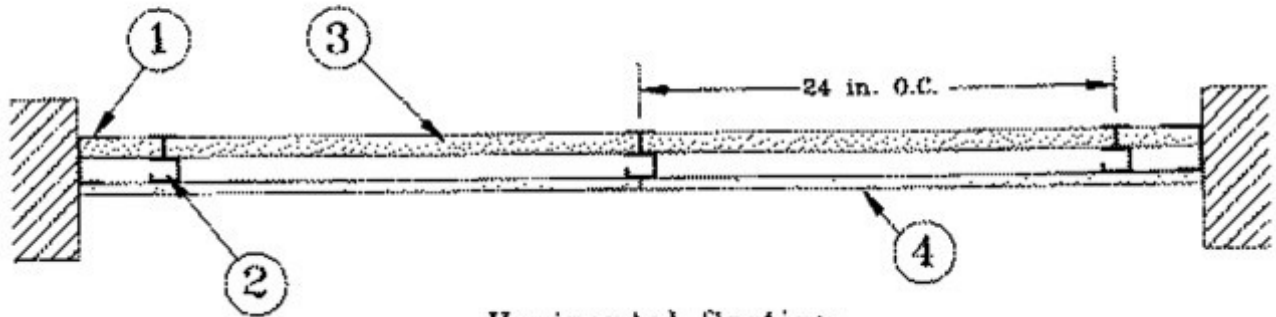


Horizontal Section
System E - 1 Hr.



Horizontal Section

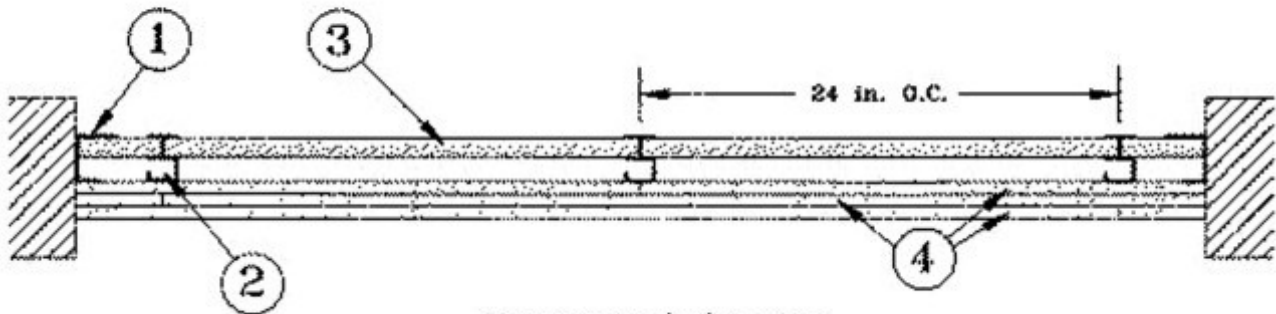
System F - 1 Hr.



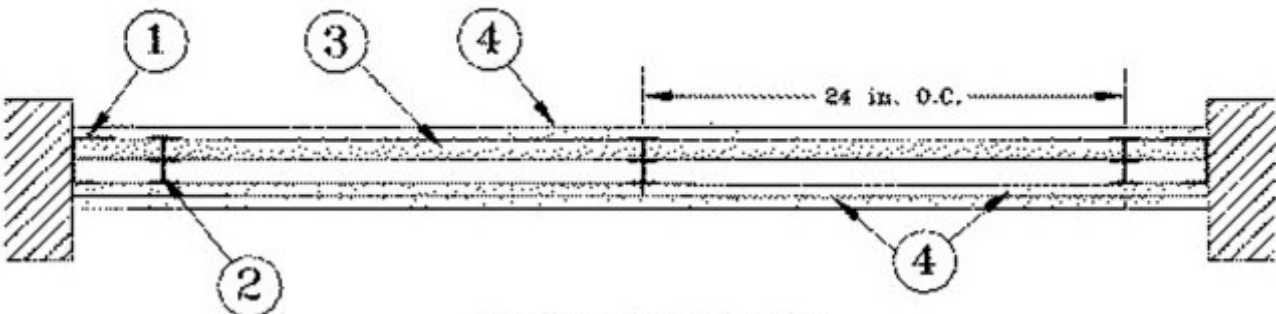
Horizontal Section
System G - 3 Hr.



Horizontal Section
System H - 3 Hr.

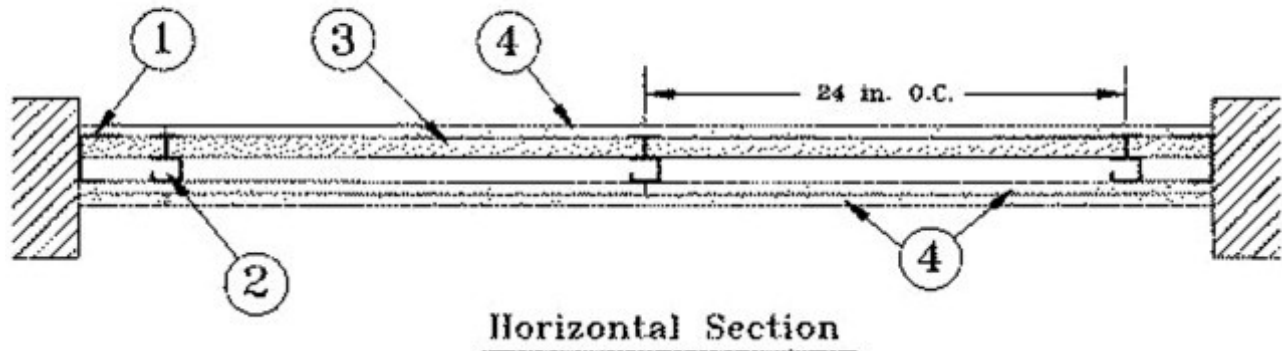


Horizontal Section
System I - 3 Hr.



Horizontal Section

System J - 3 Hr.



1. **Floor, Side and Ceiling Runners** — "J" -shaped runner, min 2-1/2 in. deep, with unequal legs of 1-1/8 in. and 2-1/8 in., fabricated from min 25 MSG galv steel. 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.

1A. **Floor, Side and Ceiling Runners** — In lieu of Item 1 - For Use with Item 2A - proprietary "J" -shaped runner, min 2-1/2 in. deep, with unequal legs of 1.18 in. and 2.17 in., fabricated from min 22 MSG galv steel. 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.

KIRII (HONG KONG) LTD — Type KIRII J-Runner

2. **Steel Studs** —

Systems A, B, E, G and I

"I" -shaped studs fabricated from min 25 MSG galv steel, min 2-1/2 in. deep, 1-1/2 in. wide. Studs contain 3/4 in. wide by 2-1/4 in. high holding tabs spaced 2-3/4 in. OC. Cut to lengths 5/8 in. less than floor-to-ceiling height and spaced 24 in.

Systems C, D, F, H and J

"C-T" -shaped studs, min 2-1/2 in. deep, 1-1/2 in. wide, fabricated from min 25 MSG galv steel. Cut to lengths 5/8 in. less than floor-to-ceiling height and spaced 24 in.

2A. **Steel Studs** — In lieu of "C-T" shaped Studs - For use with Item 1A - For use with Systems C, D, F, H and J - proprietary "C-T" shaped studs, min 2-1/2 in. deep, 1-1/2 in. wide, fabricated from min 22 MSG galv steel. Cut to lengths 5/8 in. less than floor-to-ceiling height and spaced 24 in.

KIRII (HONG KONG) LTD — Type KIRII C-T Stud

3. **Gypsum Board*** — Gypsum liner panels, nom 1 in. thick, 24 in. wide. Panels cut max 1 in. less in length than floor to ceiling height. Vertical edges inserted in "T" -shaped section of "C-T" studs or tabs holding tabs of "I" studs. Free edge of end panels attached to long leg of "J" -runners with 1-5/8 in. long Type S self-drilling, self-tapping bugle head steel screws spaced not greater than 12 in. OC.

CERTAINTED GYPSUM INC — Type EGRG Shaftliner, GlasRoc Shaftliner.

4. **Gypsum Board*** —

Systems A and C

For use with **Type EGRG Shaftliner** liner panels - Gypsum panels, nom 1/2 or 5/8 in. thick, 48 in. wide, applied in one of the following methods. Method 1 — Base layer installed horizontally to steel studs with 1 in. long Type S self-drilling, self-tapping bugle head steel screws spaced 24 in. OC. with the 1st screws installed 12 in. from the board edge. Face layer installed vertically to steel studs with 1-5/8 in. long Type S self-drilling, self-tapping bugle head steel screws spaced 12 in. OC. with the 1st and 2nd screws spaced 3/4 in. and 6-3/4 in. from the board edge, staggered 12 in. from base layer screws. Method 2 — Base layer installed vertically to steel studs with 1 in. long Type S self-drilling, self-tapping bugle head steel screws spaced 24 in. OC. with the 1st screws installed 12 in. from the board edge. Face layer installed horizontally to steel studs with 1-5/8 in. long Type S self-drilling, self-tapping bugle head steel screws spaced 24 in. OC., with the 1st and 2nd screws installed 3/4 in. and 6-3/4 in. from the board edge, staggered 12 in. from base layer screws. Additionally, Type G screws to be installed at the center of each stud cavity, spaced 12 in. OC., 1-1/2 in. from both sides of the horizontal joint. For the 1/2 in. thick and 5/8 in. thick boards, the Type G screw length shall be 1-1/4 in. and 1-1/2 in. long, respectively.

CERTAINTED GYPSUM INC — 1/2 in. thick Type C, 5/8 in. thick Type C or 5/8 in. thick Type X, EGRG, GlasRoc or GlasRoc-2

THAI GYPSUM PRODUCTS PCL — 1/2 thick Type C, 1/2 in. thick M2Tech Type C, 5/8 in. thick Type C, 5/8 in. thick M2Tech Type C or 5/8 in. thick Type X

Systems B and D

Gypsum panels, nom 1/2 or 5/8 in. thick, 48 in. wide, applied vertically to steel studs with 1 in. long Type S self-drilling, self-tapping bugle head steel screws spaced 12 in. OC. Vertical joints on opposite sides of wall staggered a min of 24 in.

CERTAINTED GYPSUM INC — 1/2 in. thick Type C, 5/8 in. thick Type C or 5/8 in. thick Type X, EGRG, GlasRoc or GlasRoc-2

THAI GYPSUM PRODUCTS PCL — 1/2 in. thick Type C, 1/2 in. thick M2Tech Type C, and 5/8 in. thick Type X

Systems E and F

Gypsum panels, nom 5/8 in. thick, 48 in. wide, applied vertically with edges centered over studs, with 1 in. long Type S self-drilling, self-tapping bugle head steel screws spaced 12 in. OC.

CERTAINTED GYPSUM INC — Type X, EGRG, GlasRoc, GlasRoc-2, or Type C

THAI GYPSUM PRODUCTS PCL — Type C, M2Tech Type C or Type X

Systems G and H

Gypsum panels, nom 5/8 in. thick, 48 in. wide applied in three layers to one side of the assembly. Base layer applied vertically, remaining layers applied vertically or horizontally. Base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. OC when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. When applied horizontally, 1-1/2 in. long Type G screws to be installed at the center of each stud cavity, 1-1/2 in. from both sides of the horizontal joint. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CERTAINTED GYPSUM INC — Type C

THAI GYPSUM PRODUCTS PCL — Type C, M2Tech Type C

Systems I and J

Gypsum panels, nom 5/8 in. thick, 48 in. wide applied in two layers to one side of the assembly and one layer to the other side. On the two layer side, base layer applied vertically, face layer applied vertically or horizontally. Base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC. Face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Screws offset 6 in. from layer below. When applied horizontally, 1-1/2 in. long Type G screws to be installed at the center of each stud cavity, 1-1/2 in. from both sides of the horizontal joint. Vertical joints centered over studs and staggered 24 in. on adjacent layers. On the one layer side, panels applied vertically and attached to studs with 1 in. long Type S steel screws spaced 12 in. OC. Vertical joints on opposite sides of wall staggered min 24 in. OC.

CERTAINTED GYPSUM INC — Type C

THAI GYPSUM PRODUCTS PCL — Type C, M2Tech Type C

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

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

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