



**Design No. W413
BXUV.W413
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.
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BXUV - Fire Resistance Ratings - ANSI/UL 263

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

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

[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada](#)

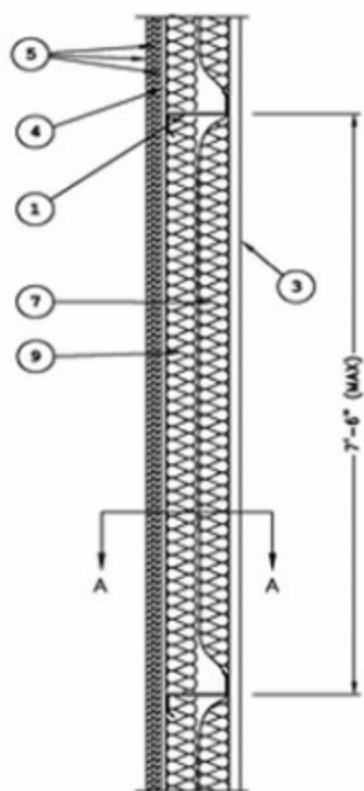
Design No. W413

May 26, 2015

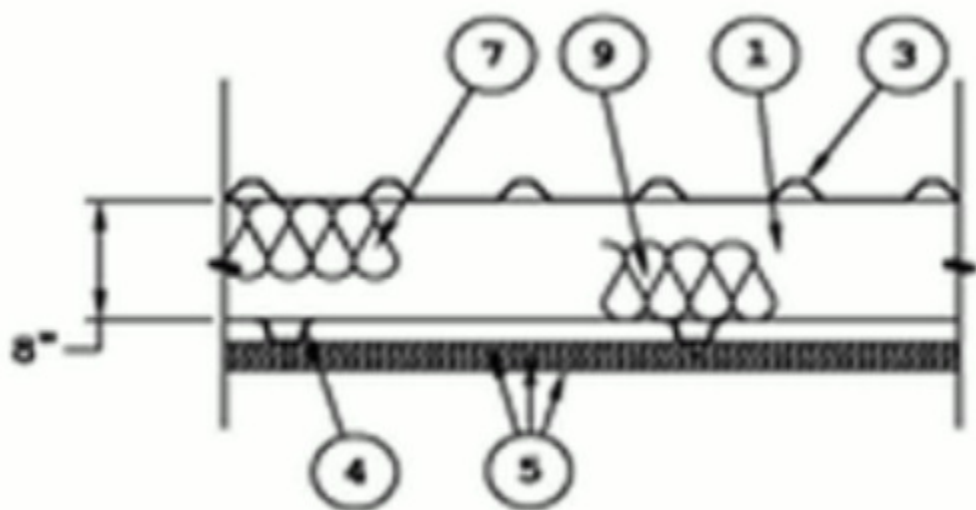
Non Load Bearing Wall Rating — 2 Hr.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide [BXUV](#) or [BXUV7](#)

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

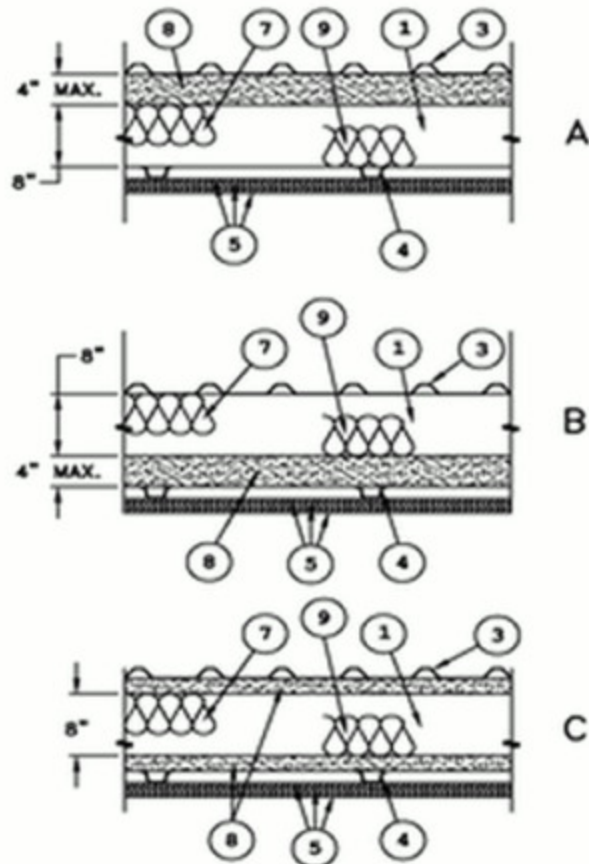


VERTICAL SECTION



SECTION A-A

OPTIONAL DETAILS FOR THERMAX



1. **Girts** — "Z" or "C" shaped girts, minimum 0.056 in. thick steel, minimum 8 inch deep, with minimum 3 in. wide flanges, including the angled returns. Girts placed horizontally (with flanges up or down) and spaced maximum 90 in. OC. Girts are secured to columns with girt clips, Item 2, or bolted to the column through the girt flange.

2. **Girt Clips** — (Optional, not shown) - Steel clips secured to column by welds or bolts.

3. **Steel Wall Panels** — Minimum No. 26 MSG, minimum 1-1/8 in depth, minimum 36 in. wide coated steel panels. Vertical raised rib profiles of adjacent panels are overlapped and attached to each other with self-drilling or self-tapping screws spaced 15 in. OC (max.) along the lap. Metal panel attachment to steel girt using self-drilling or self-tapping screws spaced 12" OC (max) along girt.

3A. **Brick or Masonry Veneer** — (Optional, not shown) - Brick or masonry veneer meeting the requirements of local code agencies may be installed over additional furring channels (not shown), Item 4, on exterior of wall in place of steel wall panels. Brick or masonry veneer attached to furring channels with corrugated metal wall ties attached to each furring channel with steel screws, not more than each sixth course of brick. When a minimum 3-3/4 in. thick brick or masonry veneer facing is used, the fire resistance rating applies from either side of the wall.

4. **Furring Channels** — Hat shaped, minimum 20 MSG galvanized steel, nominally 3 in. wide, 1-1/2 in. deep, spaced maximum 24 in. OC perpendicular to girts. Channels are secured to each girt with 3/8 in. (minimum) long self-drilling sheet steel type screws. Two screws are used at each fastening location, one through each leg of the furring channel.

4A. **Furring Channels (Optional)** — In place of the furring channels, the following standard steel framing for rated gypsum board walls may be used:

Steel framing (steel studs, runners and their attachment) for support of the gypsum board wall shall be constructed of the materials and in the manner specified in UL Design No. V497.

Lateral Support Members — (Not shown) — Where required for lateral support of studs, support may be provided by means of steel straps, channels or other similar means as specified in the design of a particular steel stud wall system.

5. **Wallboard, Gypsum*** — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305. Three layers on interior face of wall of any 5/8 in. thick gypsum wallboard bearing the UL Classification Mark for Fire Resistance. All layers applied horizontally or vertically. First layer attached to furring channels, Item 4, using 1 in. long Type S bugle head drywall screws spaced 24 in. OC maximum vertically and horizontally. Second layer attached to furring channels using 1-5/8 in. long Type S bugle head drywall screws spaced 24 in. OC maximum vertically and 24 in. OC maximum horizontally. Third layer attached to furring channels using

2-1/4 in. long Type S bugle head drywall screws spaced 12 in. OC maximum vertically and 12 in. OC maximum horizontally. The horizontal or vertical joints of the third layer of wallboard shall be offset a minimum of 12 in. from those of the first two layers. Wallboard joints finished dry or premixed joint compound applied in two coats to joints and screw heads of face layer of gypsum wallboard. Paper or glass fiber tape embedded in first layer of compound over all joints.

An optional fourth layer of gypsum board may be attached to furring channels using 2-7/8 in. long Type S screws spaced 12 in. OC. Joints shall be offset 12 in. from the third layer. The 4th layer joints and screw heads shall be finished as described above.

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

CERTAINTED GYPSUM INC ([View Classification](#)) — CKNX.R3660

CGC INC ([View Classification](#)) — CKNX.R19751

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

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C ([View Classification](#)) — CKNX.R18482

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

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

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

6. **Column Protection** — (Not shown) - Horizontal wall girts, Item 1, are attached to vertical structural steel columns. See Column Design No. X524 or X530 if protected columns are required.

7. **Batts and Blankets*** — Min. 3.5 in thick (R-10) glass fiber blankets placed in the cavities of exterior walls, and attached to the girts. As an alternate, 1" min. Rigid Foam Board, Item 8, shall be permitted, in addition to the glass fiber blankets.

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

8. Rigid Foam Board* — (Optional) - Min. 1 in. thick rigid foam board (Thermax). Applied horizontally or vertically within the wall cavity (between steel wall panels and/or gypsum wallboard), on exterior face only or on interior face only or on both faces. First layer attached to furring channels, Item 4, or to girt, Item 1.

The following fastener diameter, length and spacing is required for each thickness when Thermax is attached on the metal panel side (see optional details A & C):

Thermax Thickness:	Fastener Diameter and Spacing Required:
1"	Min. 2-in. long, #12-14 self-drilling or self-tapping screws spaced 12" OC along girt
2"	Min. 3-in. long, #12-14 self-drilling or self-tapping screws spaced 12" OC along girt
3"	Min. 4-in. long, #1/4-14 self-drilling or self-tapping screws spaced 12" OC along girt
4"	5" long, #1/4-14 self-drilling or self-tapping screws spaced 12" OC along girt

The following fastener diameter, length and spacing is required for each thickness when Thermax is applied under furring channels on the interior side (see optional details B & C):

Thermax Thickness:	Fastener Diameter and Spacing Required:
1"	Min. 2-in. long, #12-14 self-drilling or self-tapping screws, (2) at each girt location through the furring channel legs
2"	Min. 3-in. long, #12-14 self-drilling or self-tapping screws, (2) at each girt location through the furring channel legs
3"	Min 4-in. long, #1/4-14 self-drilling or self-tapping screws, (2) at each girt location through the furring channel legs
4"	Min. 5-in. long, #1/4-14 self-drilling or self-tapping screws, (2) at each girt location through the furring channel leg

See Optional Details A, B and C for allowable configurations.

THE DOW CHEMICAL CO — Type Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel and Thermax Heavy Duty Plus (HDP)

9. Mineral Wool Insulation — Min. 4 in. thick mineral fiber batts with a min. 4 lb/cu ft. density placed in the cavities of the exterior walls. If 4 layers of gypsum board (Item 5) are used, mineral wool is optional.

*** 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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