

Design No. U905

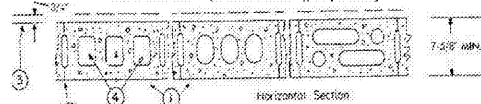
April 09, 2018

Bearing Wall Rating — 2 HR.

Nonbearing 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 B2313 or B2313.7.

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



1. Concrete Blocks — Various designs. Classification D-2 (2 hr). See Concrete Blocks category for list of eligible manufacturers.

2. Mortar — Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean shert sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. Portland Cement Stucco or Gypsum Plaster — Add 1/2 fir to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. Loose Masonry Fill — If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kilm Process), water repellent vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. Foamed Plastic* — (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).

ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation", "EnergyShield Pro 2 Wall Insulation", EnergyShield CGF Pro and EnergyShield Ply Pro

CARLISLE COATINGS & WATERPROOFING INC — Type R2+ SHEATHE

FIRESTONE BUILDING PRODUCTS CO L L C — "Everge™ CI Foil Exterior Wall Insulation" and "Everge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS — Types Xci-Class A, Xci 286

MAX OPERATING L L C — "TSX-8500", "TSX-8510", "Thermasheath-XP", "ECOMAXci", "Thermasheath-3", "Durasheath-3"

THE DOW CHEMICAL CO — Types Thermo Sheathing, Thermo Light Duty Insulation, Thermo Heavy Duty Insulation, Thermo XARMOR ci Exterior Insulation, Thermo White Finish Insulation, Thermo ci Exterior Insulation, Thermo XARMOR ci Exterior Insulation, Thermo IH Insulation, Thermo Plus Liner Panel, Thermo Heavy Duty Plus (HDP) and TUFF-R™ ci Insulation

6. Building Units* — As an alternate to Items 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 96 in.

MAX OPERATING L L C — "Thermasheath-SF", "ECOBASEci", "ThermaBase-CF"

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

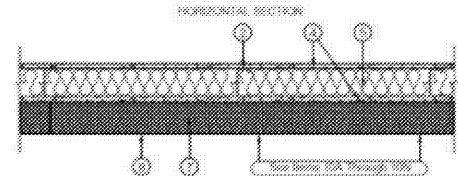
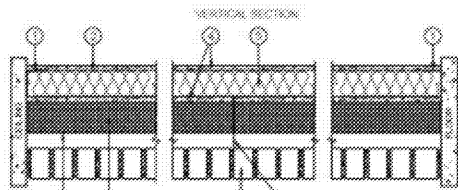
Last Updated on 2018-04-09

Design No. V454

July 11, 2018

Bearing and Non-Bearing Wall Rating - 1 Hr (See Item 5B)

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



1. Steel Floor and Ceiling Tracks — Top and bottom tracks of wall assemblies shall consist of steel members, min No. 20 MSG (0.0329 in., min bare metal thickness) steel or min No. 20 GSG (0.036 in. thick) galv steel or No. 20 MSG (0.033 in. thick) primed steel, that provide a sound structural connection between steel studs, and to adjacent assemblies such as a floor, ceiling, and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. O.C.

2. Steel Studs — Corrosion protected steel studs, min No. 20 MSG (0.0329 in., min bare metal thickness) steel or min 3- 1/2 in. wide, min No. 20 GSG (0.036 in. thick) galv steel or No. 20 MSG (0.033 in. thick) primed steel, cold formed, shall be designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute. All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing of wall assemblies shall not exceed 24 in. O.C. Studs attached to floor and ceiling tracks with 1/2 in. long Type S-12 steel screws on both sides of studs or by welded or bolted connections designed in accordance with the AISI specifications.

3. 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.

4. Gypsum Board* — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305. Nom 5/8 in. thick, 4 ft wide. Gypsum board applied vertically with joints centered over studs. Fastened to both sides of the steel studs with 1 in. long Type S self-drilling, self-tapping steel screws spaced 8 in. O.C. along the edges and 12 in. O.C. in the field of the board.

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

CERTAINTEED GYPSUM INC (View Classification) — CKNX R3860

CGC INC (View Classification) — CKNX R19751

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (View Classification) — CKNX R18482

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX R2747

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX R6937

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

THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX R27517

UNITED STATES GYPSUM CO (View Classification) — CKNX R1319

USG MEXICO S A DE C V (View Classification) — CKNX R19088

5. Batts and Blankets* — (Optional) — Any glass fiber or mineral wool batt material bearing the UL Classification. Marking as to Fire Resistance, of a thickness to completely fill stud cavity. See Batts and Blankets* (B.Z.I.Z.) category for names of Classified companies.

5A. Foamed Plastic* — As an alternate to Item 5 — Closed-cell, rigid spray polyurethane foam panels formed from Voracor CE 3019 or Dow 3019 Isocyanate Component (Part A) and Voracor CY 3049 STYROFOAM™ RS 2060 Polyol, or STYROFOAM™ CM 2060 Polyol Resin Component (Part B), maximum thickness of 1-1/2 in., spray-applied in the steel cavity against the gypsum board on the exterior side of the wall.

THE DOW CHEMICAL CO — Types Voracor CE 3019 or Dow 3019 Isocyanate Component (Part A) and Voracor CY 3049 STYROFOAM™ RS 2060 Polyol, or STYROFOAM™ CM 2060 Polyol Resin Component (Part B).

5B. Foamed Plastic* — As an alternate to Item 5 — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.

BASF CORP — Enerlite® NM, Enerlite® G, Spraylite® G, Comfort Foam® 178, Spraylite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, Spraylite® G, Comfort Foam® 158, and Spraylite® 81206

a. For Use in Bearing Walls — Enerlite® NM, Enerlite® G, Spraylite® G, Comfort Foam® 178, Spraylite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, Spraylite® G, Comfort Foam® 158, and Spraylite® 81206

b. For Use in Non-Bearing Walls — Enerlite® NM, Walltite® G, Spraylite® G, Comfort Foam® 178, Spraylite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, Spraylite® G, Comfort Foam® 158, and Spraylite® 81206

5C. Foamed Plastic* — As an alternate to Item 5 — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.

NCFI POLYURETHANES — NCFI 11-016, NCFI 11-017

6. Vapor Barrier* — (Optional, Not Shown) — 4 mil min polyethylene installed between steel studs and gypsum wallboard.

7. Foamed Plastic* — Max 4-1/2 in. thick rigid polyethylene insulation attached through the gypsum board to the studs with min 4-1/2 in. long Type S-12 wafer head steel screws spaced 12 in. O.C. Length of screws to be such that they engage studs minimum 1/2 in.

ATLAS ROOFING CORP — Type ThermoStar

THE DOW CHEMICAL CO — Type STYROFOAM

BASF CORP STYRENIC FOAMS DIV — Neopor™ F Series

7A. Foamed Plastic* — (As an alternate to Item 7) — Max 4 in. thick rigid polyisocyanurate insulation attached through the gypsum board to the studs with min 4-1/2 in. long Type S-12 wafer head steel screws spaced 12 in. O.C.

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

7B. Foamed Plastic* — (As an alternate to Item 7) — Max 4 in. thick rigid polyisocyanurate insulation attached through the gypsum board to the studs with min 4-1/2 in. long Type S-12 wafer head steel screws spaced 12 in. O.C.

ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation", "EnergyShield Pro 2 Wall Insulation", EnergyShield CGF Pro and EnergyShield Ply Pro

CARLISLE COATINGS & WATERPROOFING INC — Type R2+ SHEATHE

FIRESTONE BUILDING PRODUCTS CO L L C — "Everge™ CI Foil Exterior Wall Insulation" and "Everge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS — Type Xci-Class A, Xci 286, "Xci CG", "Xci Foil", "Xci CG NH", "Xci Foil NH"

MAX OPERATING L L C — "TSX-8500", "TSX-8510", "Thermasheath-XP", "ECOMAXci", "Thermasheath-3", "Durasheath-3"

7C. Construction Tape or Sealant* — (Optional, Not Shown) — Min 2 in. wide plastic tape placed over joints of foamed plastic on exterior surface of wall or sealant placed within the joints of the foamed plastic.

7D. Foamed Plastic* — (As an alternate to Item 7) — Spray applied, foamed plastic insulation spray applied between Item 4 (Gypsum Board) and Item 10 (Exterior Facings), having a 1 in. min air space.

BASF CORP — SPRAYTITE® 178 Series, SPRAYTITE® 81206 Series, WALLTITE® 200, WALLTITE® US Series, WALLTITE® US-N Series

7E. Building Units* — (As an alternate to Item 7) — Max 4 in. thick rigid polyisocyanurate composite insulation attached through the gypsum board to the studs with min 4-1/2 in. long Type S-12 wafer head steel screws spaced 12 in. O.C.

HUNTER PANELS — Type "Xci NB" and "Xci Ply"

MAX OPERATING L L C — "Thermasheath-SF", "ECOBASEci", "ThermaBase-CF"

7F. Foamed Plastic* — (As an alternate to Item 7) — Spray applied, foamed plastic insulation spray applied between Item 4 (Gypsum Board) and Item 10 (Exterior Facings), having a 1 in. min air space.

NCFI POLYURETHANES — NCFI 11-016, NCFI 11-017

8. Wall Anchor Ties* — Wall anchors attached to steel studs with self-drilling, self-tapping steel screws, of sufficient length to penetrate steel studs a min. of 1/2 in. spaced max 24 in. O.C. For use with Item 10H.

9. Vapor Retarder, Water Barrier or Water Resistive Barrier* — (Optional) — As required.

10. Exterior Facings* — One of the following exterior facings is to be installed in accordance with the manufacturer's installation instructions.

10A. Aluminum Siding* — (Not Shown) — 0.019 in. min thick painted aluminum meeting AAMA 1402. Fastened over Foamed Plastic (Item 7 or 7A) to steel studs.

10B. Steel Siding* — Min No. 17 GSG gauge painted steel. Fastened over Foamed Plastic (Item 7 or 7A) to steel studs.

10C. Vinyl Siding* — (Not Shown) — 0.035 in. min thick vinyl, UL Classified exterior plastic siding (Modified Plastic). Fastened over Foamed Plastic (Item 7 or 7A) to steel studs.

10D. Wood Siding* — (Not Shown) — 1/2 in. min thick lumber, plywood or OSB wood based siding. Fastened over Foamed Plastic (Item 7 or 7A) to steel studs. As an option, the Wood Siding may be placed between the Foamed Plastic and Fiber-Cement Siding (Item 10J) or One-Coat Stucco (Item 10K).

10E. Hard board Siding* — (Not Shown) — 0.25 in. min thick hard board exterior siding. Fastened over Foamed Plastic (Item 7 or 7A) to steel studs.

10F. Fiber-Cement Siding* — (Not Shown) — 1/8 in. min thick fiber-cement based siding. Fastened over Foamed Plastic (Item 7 or 7A) to steel studs.

10G. Stone* — (Not Shown) — 2.0 in. min (natural stone) or 1.5 in. (cast artificial) thick stone. Fastened over Foamed Plastic (Item 7 or 7A) to steel studs.

10H. Brick Veneer* — (Not Shown) — 4 in. wide brick. Min 1 in. airspace provided between veneer and Foamed Plastic (Item 7 or 7A). Fastened over Foamed Plastic (Item 7 or 7A) to steel studs with Wall Anchor Ties (Item 8).

10I. Concrete Masonry Veneer* — (Not Shown) — 2.0 in. min thick concrete masonry units. Fastened over Foamed Plastic (Item 7 or 7A) to steel studs with metal ties.

10J. Stucco* — (Not Shown) — Portland cement type, 0.750 in. min thickness. Metal lath or mesh base fastened over Foamed Plastic (Item 7 or 7A) to steel studs.

10K. One-Coat Stucco* — (Not Shown) — 0.375 in. min thickness. Wire fabric lath fastened over Foamed Plastic (Item 7 or 7A) to steel studs.

10L. Exterior Insulation and Finish System (EIFS)* — (Not Shown) — Base coat with reinforcing mesh applied over Foamed Plastic (Item 7 or 7A) followed by finish coat.

10M. Metal Panel* — (Not Shown) — 0.039 in. min. thick metal panel or metal-composite-metal (MCM) panel. Fastened over Foamed Plastic (Item 7 or 7A) to steel studs.

10N. Wall and Partition Facing and Accessories* — (Not Shown) Installed in accordance with the manufacturer's installation instructions. Min. 0.25 in. (6 mm) thick panel fastened to the exterior surface.

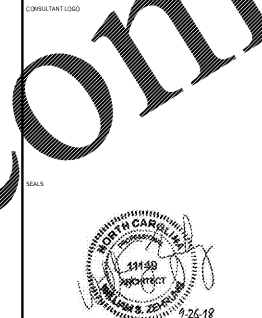
KEENE BUILDING PRODUCTS CO INC — Types Drivall Rainscreen 020, Drivall Rainscreen 10 and CAV-AIR-ATOR

11. Joint Tape and Compound* — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads. Paper tape, 2 in. wide, embedded in first layer of compound over all joints.

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

Last Updated on 2018-07-11

mcmillan pazdan smith ARCHITECTURE



WINDSOR AUGHTRY HOME2 ASHEVILLE 390 AIRPORT RD. ARDEN, NC 28704

Table with 3 columns: Number, Description, Date. Revisions section.

PRINCIPAL IN CHARGE: BZ PROJECT ARCHITECT: BZ DRAWN BY: BT SHEET TITLE: UL DETAILS

SHEET NO. PROJ. NO. 017376.00

G212

Order Plans