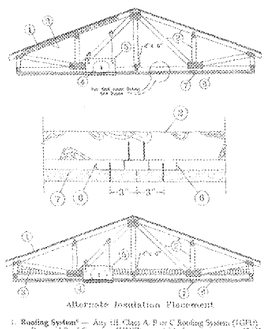
Design No. P522
Unrestrained Assembly Rating — 1 Hr
Finish Rating — 25 Min (See Items 3 & 5A)

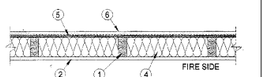


Alternate Installation Placement

1. **Roofing System*** — Any UL Class A, B or C Roofing System, (TGFU), or Proposed Roof Coverings (TGWU) acceptable for use over steel from 18/20 ga. thick plywood sheathing, from 15/32 in. thick plywood sheathing secured to trusses with construction adhesive and No. 6d stripped shank nails. Nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
2. **Trusses** — Pitched or parallel chord wood trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber with number assigned units easily or mechanically. Truss members secured together with 10/16 in. thick galv steel plates. Plates have 9/16 in. long teeth protruding per perpendicular to the plane of the plate. The teeth are in pairs facing each other (except by the same punch), forming a split tooth type plate. Each tooth has a sharp point at its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/16 in. centers with the pairs perpendicular to the plate. The teeth are inserted in pairs facing each other (except by the same punch), forming a split tooth type plate. Each tooth has a sharp point at its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/16 in. centers with the pairs perpendicular to the plane of the plate. The truss members are joined at the panel points by the same plates, forming a solid joint by the teeth penetrating the wood members. Plates are applied to both faces of the truss at the panel points. Where the truss members meet with the interior face of the exterior walls, the top truss depth may be reduced to 3 in., if the joists and trusses (Item 3) are nailed as shown in the above illustration (Alternate Installation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing.
3. **Batts and Blankets*** — (Optional) — Glass fiber insulation, secured to the plywood sheathing with staples spaced 12 in. OC or to the trusses with 6d nails on 16 in. centers OC. Any glass fiber insulation having the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, dropped over the resilient channel/gypsum wallboard ceiling membranes when resilient channels and gypsum wallboard attachment is installed as specified in Items 4 and 7. The finished rating when loose fill material is used has not been determined.
4. **Air Duct*** — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturers
5. **Ceiling Dampers*** — Max nom area, 784 sq in. Max square size, 28 in. by 28 in., rectangular sizes not to exceed 245 sq in. with a max width of 18 in. Max damper height is 14 in. Installed in accordance with manufacturers' installation instructions provided with the damper. Max damper opening, wall to wall, 242 sq in. per 100 sq ft of ceiling area.
   5A. **Loose Fill Material*** — As an alternate to Item 3 — Any thickness of loose fill material meeting the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf, fitted in the concealed space, dropped over the resilient channel/gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is installed as specified in Items 4 and 7. The finished rating when loose fill material is used has not been determined.
6. **Resilient Channels** — Formed of 25 MSG galv steel, installed perpendicular to the trusses (Item 2), spaced a max of 16 in. OC when no insulation (Item 3 or 5A) is fitted to the concealed spaced, or a max of 12 in. OC when insulation (Item 3 or 5A) is fitted in the concealed space, dropped over the resilient channel/gypsum wallboard ceiling membranes. Two runners of resilient channel positioned 6 in. OC at wallboard butt-joints (2 in. from each end of wallboard). Channels are installed opposite at wallboard butt-joints. Channel splices overlapped 6 in. or fastened with one clip. Channels located 24 in. OC in the direction parallel to trusses with 1 in. long Type S screws.
7. **Gypsum Board*** — One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to trusses. Attached to the resilient channels using 1 in. long Type S-bugle head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field when no insulation (Item 3 or 5A) is fitted in the concealed spaced, or a max of 8 in. OC along butted end-joints and in the field when insulation (Item 3 or 5A) is fitted in the concealed space, dropped over the resilient channel/gypsum wallboard ceiling membranes.
   CANADIAN GYPSUM COMPANY—Types C, IPC-AR, IPC-AR, UNITED STATES GYPSUM CO.—Types C, IPX2, IPC-AR, YESO PANAMERICANO S. A DE C. V.—Types C, IPX2, IPC-AR
8. **Finishing System** — (Not Shown) — Vinyl, 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. As an alternate, nom 2 1/2 in. thick veneer plaster may be applied to the entire surface of gypsum wallboard.
   Alternate Ceiling Membrane — Not Shown — May be used when insulation (Item 6 or 6A) is used.
9. **Steel Framing Members** —
   a. **Main runners** — Installed perpendicular to Structural Steel Members (Item 1) at 4 ft. 0 in. OC. Formed of 0.5 mm thick galv. steel, 24 MSG, 1 1/2 in. wide face, spaced 4 ft OC. Main runners hung a min of 2 in. from bottom chord of Structural Steel Members with 12 SWG galv steel wire. Wire located a max of 48 in. OC.
   b. **Cross tees or channels** — Nom 4 ft long, 15/16 in. or 1 1/2 in. wide face of cross channels, nom 0.4 gauge, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross channels, each 24 inches long and 8 in. from ends side of butted wallboard end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate fabrication.
   c. **Wall angles or channels** — Used to support steel framing members ends at perimeter of ceiling membranes and at the gypsum wallboard. Formed of galv steel angles with 1 in. legs or channels with 1 in. legs and 1-9/16 in. depth attached to walls at perimeter of ceiling with fasteners 16 in. OC.
      CGC INTERIORS, DIV OF
      CGC Inc.—Type CRC or SR.
      USG INTERIORS INC.—Type ECL or RX.
10. **Gypsum Board*** — For use with Steel Framing Members (Item 9). One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimensions parallel to the main runners. Wallboard fastened to each cross tee or channel with five screws, two additional screws, with one screw located at the midspan of the cross tee or channel, one screw located 12 in. from end on each side of the cross tee or channel and one screw located 4-1/2 in. from each wallboard side joint. Screws are spaced a max of 12 in. OC along butted end-joints and in the field when no insulation (Item 3 or 5A) is fitted in the concealed space, or a max of 8 in. OC along butted end-joints and in the field when insulation (Item 3 or 5A) is fitted in the concealed space, dropped over the resilient channel/gypsum wallboard ceiling membranes.
    CANADIAN GYPSUM COMPANY—Types C, IPC-AR, IPC-AR, UNITED STATES GYPSUM CO.—Types C, IPX2, IPC-AR, YESO PANAMERICANO S. A DE C. V.—Types C, IPX2, IPC-AR

5 DETAIL: UL# P522
SCALE: N.T.S.

Design No. U356
(Exposed to Fire on Interior Face Only)
Bearing Wall Rating — 1 Hr
Finish Rating — 25 Min



HORIZONTAL SECTION

1. **Wood Studs** — Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5) and effectively fire stopped at top and bottom of wall.
2. **Gypsum Board*** — Any Classified 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1 7/8 in. long with 1/4 in. diam head.
   See **Gypsum Board** (CKNX) Category for names of Classified Companies.
3. **Joints and Nailheads** — (Not Shown) — Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound.
4. **Batts and Blankets*** — Mineral fiber or glass fiber insulation, 3-1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min density of 0.9 pcf (min R-13 thermal insulation rating).
   See **Batts and Blankets** (BKNV) Category in the Building Materials Directory and Batts and Blankets (BZIZ) Category in the Fire Resistance Directory for names of Classified Companies.
5. **Wood Structural Panel Sheathing** — Min 7/16 in. thick, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing", installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.
6. **Exterior Facings** — Installed in accordance with the manufacturer's installation instructions. One of the following exterior facings is to be applied over the sheathing:
   A. **Vinyl Siding — Molded Plastic*** — Contoured rigid vinyl siding having a flame spread value of 20 or less.
      See Molded Plastic (BTAT) category in the Building Materials Directory for names of manufacturers.
   B. **Particle Board Siding** — Hardboard exterior sidings including patterned panel or lap siding.
   C. **Wood Structural Panel or Lap Siding** — APA Rated Siding. Exterior plywood, OSB or composite panels with veneer faces and structural wood core, per PS 1 or APA Standard PRP-108, including textured, rough sawn, medium density overlay, brushed, grooved and lap siding.
   D. **Cementitious Stucco** — Portland cement or synthetic stucco systems with self-furring metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.
   E. **Brick Veneer** — Any type on nom 4 in. wide brick veneer. When brick veneer is used, the fastening is applicable with exposure on either face. Brick veneer fastened with corrugated metal wall ties attached over sheathing to wood studs with #8 nail; per tie; ties spaced not more than each sixth course of brick and max 32 in. OC horizontally. One in. air space provided between brick veneer and sheathing.
   F. **Exterior Insulation and Finish System (EIFS)** — Nom 1 in. Foamed Plastic* insulation bearing the UL Classification Marking, attached over sheathing and finished with coating system, or Portland cement or synthetic stucco systems, in accordance with manufacturer's instructions. See **Foamed Plastic** (BRYX and CCVW) categories for names of Classified companies.
7. **Siding** — Aluminum or steel siding attached over sheathing to studs.

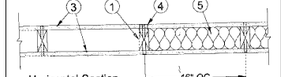
*Bearing the UL Classification Mark

2 DETAIL: UL# U356
SCALE: N.T.S.

FIRE RESISTANCE DIRECTORY (BXRH)

Fire Resistance Ratings - ANSI/UL 263 (BXUV)–*Continued*

Design No. U365
Bearing Wall Rating — 1 Hr
Finish Rating — 18 Min

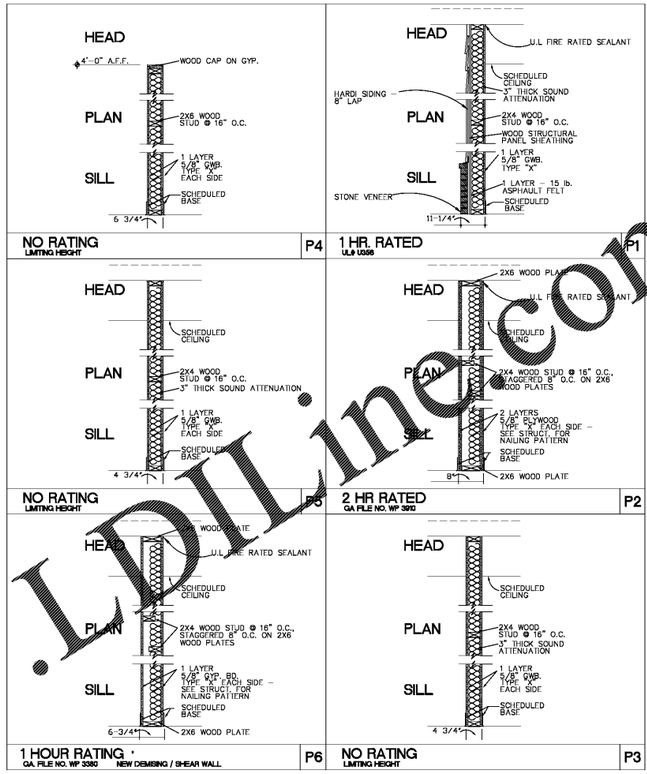


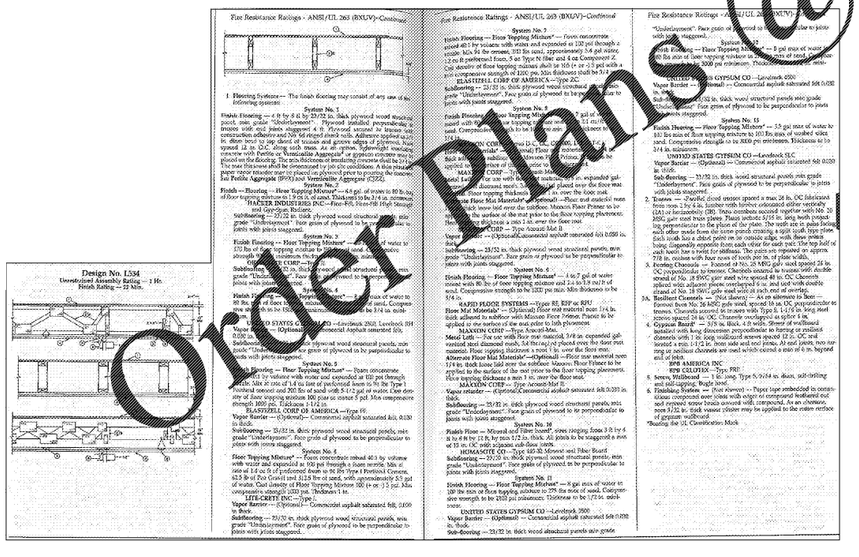
Horizontal Section

1. **Wood Studs** — Nom 2 by 4 in., spaced 16 in. OC.
2. **Bearing Plate** — (Not Shown) – Nom 2 by 4 in.
3. **Gypsum Board*** — 5/8 in. thick wallboard paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Wallboard fastened with **Wall and Partition Facings and Accessories*** **(Item 4).** When used in widths of other than 48 in., wallboard is to be installed horizontally.
   AMERICAN GYPSUM CO—Types AGX-1, AGX-2, AGX-3, AGX-7, AGX-11, AGC.
   BEIJING NEW BUILDING MATERIALS CO LTD — Type DBX-1.
   CANADIAN GYPSUM COMPANY—Type AR, C, FCV, IP-X1, IP-X2, IPC-AR, SCX, SHC, WRC, WRX, FRX.
   BPB AMERICA INC—Type Wallboard.
   BPB CELOTEX—Type 1, SE3, A, B, C or FRP.
   CONTINENTAL GYPSUM COMPANY—Type CG1-1, CG-2, CG-3, CG3-3, CG4-3, CG5-3, CG6-6, CG-3W, CG-5W, CG-3WS, CG-5WS, CG-6, CG6-6, CG-C, CG7G-6, CG9-9, CG7E-6, CG7C-C.
   G-P GYPSUM CORP, SUB OF
   GEORGIA-PACIFIC CORP—Type 5, 6, 9, C, DGG, GPTS1, GPTS2, GPF56.
   JAMES HARDIE GYPSUM INC—Type Fire X, Max"C" .
   LAFARGE GYPSUM, DIV OF
   LAFARGE CORP—Type LGFC2, LGFC3, LGFC5, LGFC-C, LGFC6A, LGFC2A, LGFC-C/A
   NATIONAL GYPSUM CO—Type FSK, FSK-C, FSK-G, FSW, FSW-2, FSW-3, FSW-C, FSW-G.
   NATIONAL GYPSUM CO—Type FS or WR
   PABCO GYPSUM, DIV OF
   PACIFIC COAST BUILDING PRODUCTS INC—Types C, PC-2, PC-3, PC-5W, PG-5W, PG-4, PG-6, PC-5WS, PC-5WS, PG-5, PG-9 or PG-C.
   REPUBLIC GYPSUM CO—Type RG-1, RG-2, RG-3, RG-4, RG-6 or RG-C.
   SIAM GYPSUM INDUSTRY CO LTD—Type EX-1.
   STANDARD GYPSUM I. I. C.—Type SGC, SGC-3, SG-C or SGC-G.
   TEMPLE-INLAND FOREST PRODUCTS CORP—Types T, VPB-Type T, WR-T, T SHTG, FRX-6, VPBX-6, FRWRX-6, TG-C or FRX-6 Exterior Gypsum Soffit Board.
   UNITED STATES GYPSUM CO—Types AR, C, FCV, FRX, IP-X1, IP-X2, IPC-AR, SCX, WRX, WRC, SHC.
   WESTROC INC—Type Westroc Fireboard.
   YESO PANAMERICANO S A DE C V—Types AR, C, FCV, IP-X1, IP-X2, IPC-AR, WRX, WRC, SHC, SCX.
4. **Wall and Partition Facings and Accessories*–Staples** — 2 in. long 16 ga wire staples max 8 in. OC along vertical joints and 6 in. OC in the field.
   PASLODE
   ILLINOIS TOOL WORKS CO
5. **Batts and Blankets*** — (Optional, Not Shown) glass fiber or mineral wool insulation.
   CERTAINTEED CORP
   JOHNS MANVILLE INTERNATIONAL INC
   KNAUF FIBER GLASS GMBH
   ROCK WOOL MANUFACTURING CO—Delta Board
   ROXUL INC
   THERMAFIBER LLI GAF-Elk SAFB
6. **Finishing System** — Wallboard joints covered with joint tape and joint compound. Screw heads covered with joint compound.

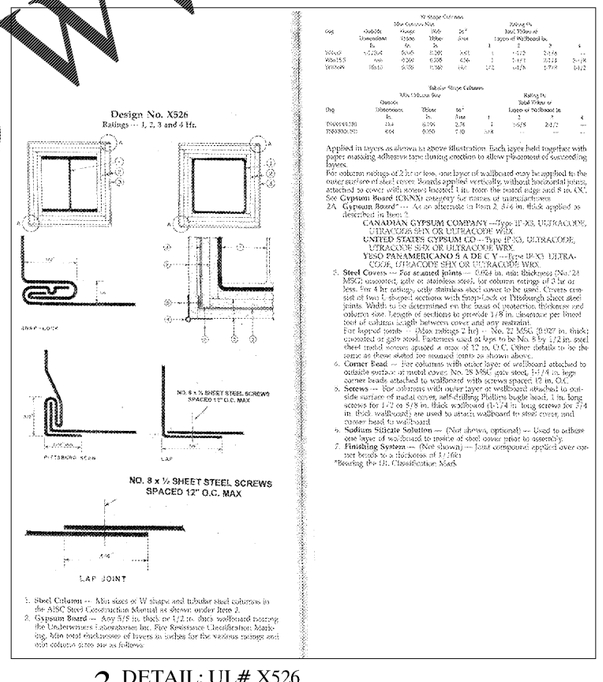
*Bearing the UL Classification Mark

1 DETAIL: UL# U365
SCALE: N.T.S.

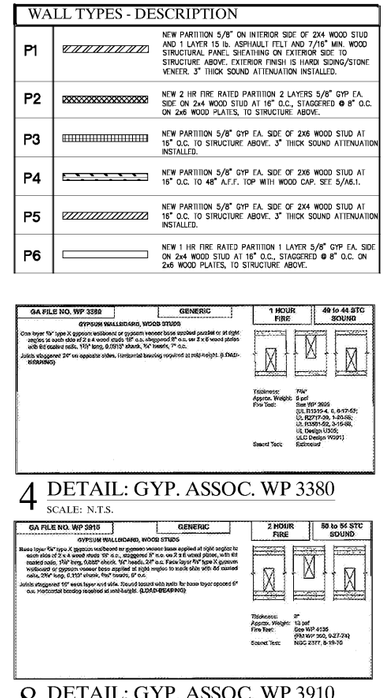




6 DETAIL: UL# L534
SCALE: N.T.S.



3 DETAIL: UL# X526
SCALE: N.T.S.



8 DETAIL: GYP. ASSOC. WP 3910
SCALE: N.T.S.

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4 DETAIL: GYP. ASSOC. WP 3380
SCALE: N.T.S.

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7 DETAIL: GYP. ASSOC. WP 3242
SCALE: N.T.S.

WALL TYPES - DESCRIPTION

P1		NEW PARTITION 5/8" ON INTERIOR SIDE OF 2X4 WOOD STUD AND 1 LAYER 15 lb. ASPHAULT FELT AND 7/16" MIN. WOOD STRUCTURAL PANEL SHEATHING ON EXTERIOR SIDE TO STRUCTURE ABOVE. EXTERIOR FINISH IS HARDI SIDING/STONE VENEER. 3" THICK SOUND ATTENUATION INSTALLED.
P2		NEW 2 HR FIRE RAITED PARTITION 2 LAYERS 5/8" GYP EA. SIDE ON 2x4 WOOD STUD AT 16" O.C., STAGGERED @ 8" O.C. ON 2x6 WOOD PLATES, TO STRUCTURE ABOVE.
P3		NEW PARTITION 5/8" GYP EA. SIDE OF 2X6 WOOD STUD AT 16" O.C. TO STRUCTURE ABOVE. 3" THICK SOUND ATTENUATION INSTALLED.
P4		NEW PARTITION 5/8" GYP EA. SIDE OF 2X6 WOOD STUD AT 16" O.C. TO 48" A.F.F. TOP WITH WOOD CAP. SEE 5/A6.1.
P5		NEW PARTITION 5/8" GYP EA. SIDE OF 2X4 WOOD STUD AT 16" O.C. TO STRUCTURE ABOVE. 3" THICK SOUND ATTENUATION INSTALLED.
P6		NEW 1 HR FIRE RATED PARTITION 1 LAYER 5/8" GYP EA. SIDE ON 2x4 WOOD STUD AT 16" O.C., STAGGERED @ 8" O.C. ON 2x6 WOOD PLATES, TO STRUCTURE ABOVE.

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F-2 UNIT
WISTERIA RIDGE
Will-O-War LLC
75 North Main Street
Watkinsville, GA 30677

Issue & Revisions:

No.	Date	Description
1	04.01.19	CLARIFICATION

PARTITION TYPES/DETAILS

Drawn: MWB
Checked: KEP
Contract No.: 07-03
Scale: AS NOTED
030519
040119
A6.1
of sheets

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