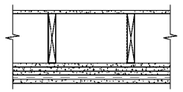
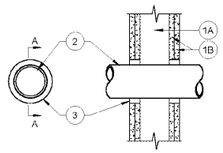


Base Layer 5/8" type x gypsum wallboard applied at right angles to 2 x 8 wood joists 24" o.c. with 1- 1/4" Type W drywall screws 12" o.c. Second layer 5/8" type X gypsum wallboard applied at right angles to joists with 2" Type W drywall screws 12" o.c. Second layer joints offset 24" from base layer joints. Third layer 5/8" type X gypsum wallboard applied at right angles to joists with 2 1/2" Type W drywall screws 12" o.c. Third layer joints offset 12" from second layer joints. Hat-shaped rigid furring channels 24" o.c. applied at right angles to joists over third layer with two 2 1/2" long Type W drywall screws at each joist. Face layer 5/8" type X gypsum wallboard applied at right angles to furring channels with 1 1/8" Type S drywall screws 12" o.c. Wood joists supporting 3/4" T & G edge plywood floor applied at right angles to joists with 8d nails 6" o.c. at joints and 12" at intermediate I-joists. Ceiling provides two-hour fire-resistance protection for wood framing.

11 2 HR. ELEVATOR SHAFT CEILING

1 1/2" = 1'-0"

GA FILE NO. FC 5725
2 HOUR FIRE RATING
APPROXIMATE CEILING WEIGHT: 12 PSF
FIRE TEST: UL R4024, ONK26545, 4-27-01, UL DESIGN L556



1. Wall Assembly -- The hr. fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Stud -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of 2 x 4 lumber spaced 16" O.C. Steel studs to be min. 3-5/8 in. wide and spaced 24" O.C.

B. Wallboard, Gypsum* -- One Layer of 5/8 in. thick gyp. bd., as specified in the individual wall and partition design. Max diam of opening is 3-1/8"

2. Through-Penetrants -- One nonmetallic pipe or tubing installed either concentrically or eccentrically within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assebly. The following types and sizes of nonmetallic pipes or tubing may be used:

A. Polyvinyl Chloride (PVC) Pipe -- 2" diam. (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) piping systems.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe -- 2" diam. (or smaller) SDR 17 CPVC pipe for use in closed (process or supply) piping systems. The annular space between pipe and periphery of opening shall be min. 1/4" to max. 1/2"

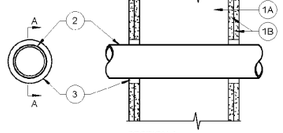
C. Crosslinked Polyethylene (PEX) Tubing - 3/4" diam. (or smaller) SDR 9 PEX tubing for use in closed (process or supply) piping systems. The annular space between tubing and periphery of opening shall be min 1/4" to max 5/8

3. Fill, Void or Cavity Material* -- Sealant -- Min 5/8" thichness of fill material applied within the annulus, flush both surfaces of wall
OSI Sealants, Inc - Flame Seal
*Bearing the UL Classification Marking

10 PIPE PENETRATION

1 1/2" = 1'-0"

UL SYSTEM NO. W-L-2138
F RATING - 1 HR
T RATING - 1 HR



1. Wall Assembly -- The 1 or 2 hr. fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Stud -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of 2 x 4 lumber spaced 16" O.C. Steel studs to be min. 2-1/2 in. wide and spaced 24" O.C.

B. Wallboard, Gypsum* -- 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastenertype and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 2-1/2"

2. Cables - One cable to be centered within the firestop system. A Nomannular space of 1/4" is required within the firestop system. Cable to be rigidly supported on both sides of wall assembly. The following types and sizes of cables may be used:

A. Max 50 pair No. 24 AWG (or smaller) copper conductor telephone cables with polyvinyl chloride (PVC) insulation and jacket materials.
B. Max 3/C (with ground) - No. 10 AWG (or smaller) PVC insulated and jacketed non metallic sheathed (Romex) Cable
C. Max 3/C (with ground) - No. 2/O AWG aluminum conductor service entrance cable with PVC insulation and jacket materials.

2A. Through-Penetrants* - As an alternate to item 2 max four copper conductor No. 2 AWG (or smaller) aluminum steel Armored Cable+ or 4/C No. 2/0 AWG Metal-Clad Cable+, Max one armored cable or metal clad cable centered within the firestop system. The annular space between the through- penetrating produst and the periphery of the opening shall be 0 in. Throught- Penetrating product to be rigidly supported on both sides of wall assembly.
KAF-TECH Inc.

3. Fill, Void or Cavity Material* -- Sealant or Putty-- Fill material applied within the annulus flush with both surfaces of wall. Additional fill material to be installed such that a minimum thickness of fill material is achieved. The "F" Rating of the firestop system is dependent upon the "Hourly Rating", "Type of Through- Penetrant", "Thickness of Wall (HR)" and the "Maximum Fill Material" in Annular Gap (Crown) (In.)" of fill material as tabulated below:

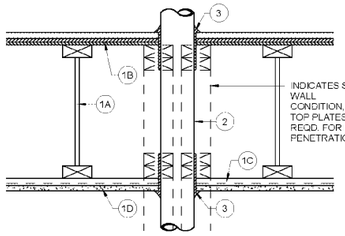
1	Telephone Cable	Sealant	5/8	1/4	1
2	Telephone Cable	Sealant	5/8	1/4	2
1	Telephone Cable	Putty	5/8	1/4	1
2	Telephone Cable	Putty	5/8	1/4	2
1	Romex Cable	Sealant	5/8	1/4	1
2	Romex Cable	Sealant	5/8	1/4	2
1	Romex Cable	Putty	5/8	1/4	1
2	Romex Cable	Putty	5/8	1/4	2
2	Service Cable	Sealant	5/8	1/4	1/2
1	Service Cable	Sealant	5/8	1/4	1/2
2	Armored Cable	Sealant	5/8	1/4	1/2
1	Armored Cable	Sealant	5/8	1/4	1/2
2	Metal Clad Cable	Sealant	5/8	1/4	1/2
1	Metal Clad Cable	Sealant	5/8	1/4	1/2

+Specified Technologies Inc. - SpecSeal 100, 101, 102 or 105 Sealant or SpecSeal Putty
*Bearing the UL Classification Marking
+Bearing the UL Listing Mark

9 PIPE PENETRATION

1 1/2" = 1'-0"

UL SYSTEM NO. W-I-2138
F RATING - 1 HR
T RATING - 1 HR



1. Foor Assembly -- The fire rated wood truss or combination wood and steel truss Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individuel L500 Series Design in the UL Fire Resistance Directory and shall include the following con-construction features:

A. Trusses -- Min. 12" deep parallel chord trusses fabricated from nom 2 x 4 lumber in conjunction with galv. steel truss plates or *Structural Wood Members** with bridging as required.

B. Flooring -- 3/4" thick plywood flooring with or without *Floor Topping Mixture**. Max diam. of opening hole-sawed in flooring is 5 in.

C. Furring Channels -- Rigid or resilient galv. steel furring channels installed perpendicular to bottom chord of trusses.

D. Wallboard, Gypsum* -- 4 ft. wide by 5/8 in. thick, screw attached to furring channels. Max diam. of hole-sawed opening in gypsum wallboard ceiling is 5 in.

2. Pipe or Conduit -- 4" diam (or smaller) Schedule 10 (or heavier) steel pipe, steel conduit or steel EMT, or cast iron pipe or 3" diam. (or smaller) Type L (or heavier) copper tubing. Pipe to be installed approx. midway between trusses and centered in circular cutouts in flooring (Item 1B) and gypsum wallboard ceiling (Item 1D). Diam. of circular cutouts in flooring and gypsum wallboard ceiling to be 1/4 in. to 1/2 in. larger than diam. of pipe. Pipe to be rigidly supported on both sides of Floor-Ceiling assembly.

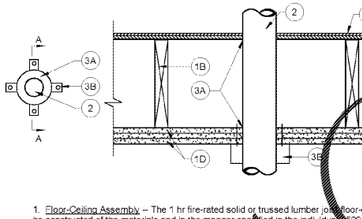
3. Fill, Void or Cavity Materials* -- Caulk -- Caulk forced into annular space throughout the thickness of the flooring and gypsum allboard ceiling and with a min. 1/4" diam bead of caulk applied to perimeter of pipe at its egress from the top of the flooring and the underside of the gypsum wallboard ceiling.
Minnesota Mining & Mfg. Co.-Type CP-25 WB, CP-25 WB+

*Bearing the UL Classification Marking

8 PIPE PEN. AT CEILING/FLOOR

1 1/2" = 1'-0"

UL SYSTEM NO. F-C-1006
(STUD WALLS, SIM)
(FORMERLY SYSTEM NO. 453)
F RATING - 1 HR
T RATING - 1 HR



1. Floor-Ceiling Assembly -- The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual U300 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The F and T Ratings of the firestop system shall be constructed of the materials and in the manner specified. The F and T Ratings of the firestop system are equal to the hourly fire rating of the floor-ceiling assembly. The general construction features of the floor-ceiling assembly are summarized below:

A. Flooring System -- Lumber or plywood subfloor with finish floor of lumber, plywood or *Floor Topping Mixture** as specified in the individual Floor-Ceiling Design. Max Diam. of floor opening is 4-3/4".

B. Wood Joists -- For 1 hr fire - rated floor-ceiling assemblies, 10 in. deep (or deeper) lumber, steel combination lumber and steel joists, trusses or *Structural Wood Members** with bridging as required and with ends firestopped. For 2 hr fire - rated floor - ceiling assemblies, 2 x 10 lumber joists spaces 16" with 1 x 3 lumber bridging and ends firestopped.

C. Furring Channels -- (Not Shown) -- In 2 hr fire rated assemblies resilient galv. steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D). Furring channels spaced 16" O.C. In 1 hr fire - ratec assemblies, resilient galv. steel furring installed perpendicular to wood joists between wallboard and wood joists as specified in the individual *Floor Ceiling Design*. Furring channels spaced max 24" O.C.

D. Wallboard, Gypsum* -- 4 ft wide by 5/8 in. thick as specified in the individual *Floor Ceiling design*. First layer of wallboard laid to wood joists. Second layer of wallboard (2 hr fire rated assembly only) applied at right angles to first layer with 1" Type S drywall screws spaced 24" O.C. in a random pattern. All joints staggered from joints in first layer of wallboard. Apply wallboard with the long dimension perpendicular to joists. Stagger end joints over joists. Cut wallboard to fit around penetrating items. Fit tightly but do not force wallboard into place. Where practical, locate joints over framing members. Attach wallboard to joists with 1" Type S drywall screws spaced 12" O.C. in the field and 8" O.C. at perimeter. Locate screws not less than 3/8" from ends and not less than 1/2" from edges of wallboard. Where end joints occur between framing members, provide 1" x 3" wood backing plate behind joint. Screw attach backing plate to each framing member. Locate screws not less than 3/8" from ends and not less than 1/2" from edges of wallboard. Where end joints occur between framing members, provide 1" x 3" wood backing plate behind joint. Screw attach backing plate to each framing member. Locate screws not less than 3/8" from ends and not less than 1/2" from edges of wallboard.

2. Nonmetallic Pipe -- 4" diam. (or smaller) Schedule 40 solid core polyvinyl chloride (PVC) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. One pipe to be installed either concentrically or eccentrically within the firestop system. For pipes 2" in diam. (or smaller) the annular space shall be min. 0" to max 3/8". Pipe to be rigidly supported on both sides of floor of wall assembly.

3. Firestop System -- The firestop system shall consist of the following:
A. Fill, Void or Cavity Material* -- Caulk -- Min. 3/4" thickness of fill material applied within the annulus on top surface of floor. Additional fill material to be installed such that a min. 3/4" crown is formed around the penetrating item on top surface of floor. Min. 1/4" thickness of fill material applied within the annulus, flush with bottom surface of ceiling. Additional fill material to be installed such that a min. 1/4" crown is formed around the penetrating item on the bottom surface of the ceiling.
Tremco Inc. -- TREMstop - WBM

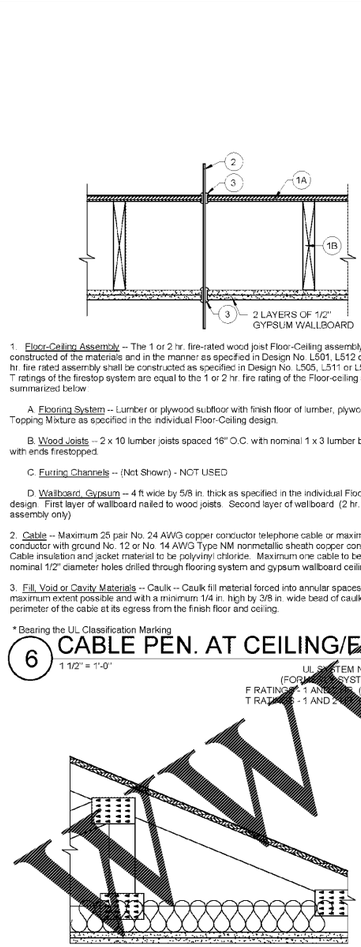
B. Firestop Device* -- Firestop device shall be installed in accordance with the accompanying installation instructions. Device wrapped over the pipe and secured by using the attached hose clamp. Device slid along the pipe until it abuts the bottom of the ceiling. Device secured to floor with 1/4 in. by 1-3/4 in. long hollow wall anchors in conjunction with 1-1/4" diameter fender washers.
Tremco Inc. -- TREMstop D.

*Bearing the UL Classification Marking

7 PIPE PEN. AT CEILING/FLOOR

1 1/2" = 1'-0"

SYSTEM NO. F-C-2049
F RATINGS - 1 AND 2 HR (SEE ITEM 1)
T RATINGS - 1 AND 2 HR (SEE ITEM 1)



1. Floor-Ceiling Assembly -- The 1 or 2 hr. fire-rated wood joist Floor-Ceiling assembly shall be constructed of the materials and in the manner as specified in Design No. L601, L512 or L537. The 2 hr. fire rated assembly shall be constructed as specified in Design No. L505, L511 or L536. The F and T ratings of the firestop system are equal to the 1 or 2 hr. fire rating of the Floor-ceiling assembly is summarized below:

A. Flooring System -- Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture as specified in the individual Floor-Ceiling design.

B. Wood Joists -- 2 x 10 lumber joists spaced 16" O.C. with nominal 1 x 3 lumber bridging and with ends firestopped.

C. Furring Channels -- (Not Shown) - NOT USED

D. Wallboard, Gypsum -- 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling design. First layer of wallboard nailed to wood joists. Second layer of wallboard (2 hr. fire rated assembly only)

2. Cable -- Maximum 25 pair No. 24 AWG copper conductor telephone cable or maximum two-conductor with ground No. 12 or No. 14 AWG Type NM nonmetallic sheath copper conductor cable. Cable insulation and jacket material to be polyvinyl chloride. Maximum one cable to be installed in nominal 1/2" diameter holes drilled through flooring system and gypsum wallboard ceiling.

3. Fill, Void or Cavity Materials -- Caulk -- Caulk fill material forced into annular spaces to fill spaces to maximum extent possible and with a minimum 1/4 in. high by 3/8 in. wide bead of caulk applied to the perimeter of the cable at its egress from the finish floor and ceiling.

* Bearing the UL Classification Marking

6 CABLE PEN. AT CEILING/FLOOR

1 1/2" = 1'-0"

UL SYSTEM NO. F-C-[illegible]
(FORMERLY SYSTEM NO. [illegible])
F RATING - 1 AND 2 HR (SEE ITEM 1)
T RATING - 1 AND 2 HR (SEE ITEM 1)

1. Floor-Ceiling Assembly -- The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual U300 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The F and T Ratings of the firestop system shall be constructed of the materials and in the manner specified. The F and T Ratings of the firestop system are equal to the hourly fire rating of the floor-ceiling assembly. The general construction features of the floor-ceiling assembly are summarized below:

A. Flooring System -- Lumber or plywood subfloor with finish floor of lumber, plywood or *Floor Topping Mixture** as specified in the individual Floor-Ceiling design. Max Diam. of floor opening is 4-3/4".

B. Wood Joists -- For 1 hr fire - rated floor-ceiling assemblies, 10 in. deep (or deeper) lumber, steel combination lumber and steel joists, trusses or *Structural Wood Members** with bridging as required and with ends firestopped. For 2 hr fire - rated floor - ceiling assemblies, 2 x 10 lumber joists spaces 16" with 1 x 3 lumber bridging and ends firestopped.

C. Furring Channels -- (Not Shown) -- In 2 hr fire rated assemblies resilient galv. steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D). Furring channels spaced 16" O.C. In 1 hr fire - ratec assemblies, resilient galv. steel furring installed perpendicular to wood joists between wallboard and wood joists as specified in the individual *Floor Ceiling Design*. Furring channels spaced max 24" O.C.

D. Wallboard, Gypsum* -- 4 ft wide by 5/8 in. thick as specified in the individual *Floor Ceiling design*. First layer of wallboard laid to wood joists. Second layer of wallboard (2 hr fire rated assembly only) applied at right angles to first layer with 1" Type S drywall screws spaced 24" O.C. in a random pattern. All joints staggered from joints in first layer of wallboard. Apply wallboard with the long dimension perpendicular to joists. Stagger end joints over joists. Cut wallboard to fit around penetrating items. Fit tightly but do not force wallboard into place. Where practical, locate joints over framing members. Attach wallboard to joists with 1" Type S drywall screws spaced 12" O.C. in the field and 8" O.C. at perimeter. Locate screws not less than 3/8" from ends and not less than 1/2" from edges of wallboard. Where end joints occur between framing members, provide 1" x 3" wood backing plate behind joint. Screw attach backing plate to each framing member. Locate screws not less than 3/8" from ends and not less than 1/2" from edges of wallboard. Where end joints occur between framing members, provide 1" x 3" wood backing plate behind joint. Screw attach backing plate to each framing member. Locate screws not less than 3/8" from ends and not less than 1/2" from edges of wallboard.

2. Nonmetallic Pipe -- 4" diam. (or smaller) Schedule 40 solid core polyvinyl chloride (PVC) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. One pipe to be installed either concentrically or eccentrically within the firestop system. For pipes 2" in diam. (or smaller) the annular space shall be min. 0" to max 3/8". Pipe to be rigidly supported on both sides of floor of wall assembly.

3. Firestop System -- The firestop system shall consist of the following:
A. Fill, Void or Cavity Material* -- Caulk -- Min. 3/4" thickness of fill material applied within the annulus on top surface of floor. Additional fill material to be installed such that a min. 3/4" crown is formed around the penetrating item on top surface of floor. Min. 1/4" thickness of fill material applied within the annulus, flush with bottom surface of ceiling. Additional fill material to be installed such that a min. 1/4" crown is formed around the penetrating item on the bottom surface of the ceiling.
Tremco Inc. -- TREMstop - WBM

B. Firestop Device* -- Firestop device shall be installed in accordance with the accompanying installation instructions. Device wrapped over the pipe and secured by using the attached hose clamp. Device slid along the pipe until it abuts the bottom of the ceiling. Device secured to floor with 1/4 in. by 1-3/4 in. long hollow wall anchors in conjunction with 1-1/4" diameter fender washers.
Tremco Inc. -- TREMstop D.

*Bearing the UL Classification Marking

5 CEILING/ROOF ASSEMBLY

1 1/2" = 1'-0"

GA FILE NO. RC 2902
1 HOUR FIRE RATING

APPROXIMATE CEILING WEIGHT: 5 PSF
FIRE TEST: FM FC 172, 2-25-72; ITS, 8-6-98

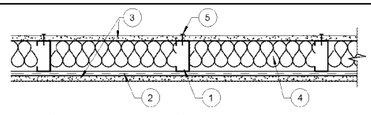
Base Layer 5/8" type X gypsum wallboard applied at right angles to wood trusses 24" o.c. with 1 1/4" Type W or S drywall screws 24" o.c.
Face layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to trusses with 1 7/8" Type W or S drywall screws 12" o.c. at joints and intermediate trusses and 1 1/2" Type G drywall screws 12" o.c. placed 2" back on either side of end joints. Joints offset 24" from base layer joints. Wood trusses supporting 1/2" wood structural panels applied at right angles to trusses with 8d nails. Appropriate roof covering.

Base layer 5/8" type X gypsum wallboard applied at right angles to 2 x 10 wood joists 24" o.c. with 1 1/4" Type W or S drywall screws 24" o.c. Face layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to joists with 1 7/8" Type W or S drywall screws 12" o.c. at joints and intermediate joists and 1 1/2" Type G drywall screws 12" o.c. placed 2" back on either side of end joints. Joints offset 24" from base layer joints. Wood joists supporting 1/2" plywood with exterior glue applied at right angles to joists with 8d nails. Ceiling provides one hour fire resistance protection for framing, including trusses.

4 FLOOR/CEILING ASSEMBLY

1 1/2" = 1'-0"

GA FILE NO. FC 5107
1 HOUR FIRE RATING
(AT CORRIDOR)



1. Metal Studs -- Channel-shaped, min 2-1/2 in. wide by 1-1/4 in. deep with 5/16 in. folded back return flange legs. Fabricated from No. 25 MSG galv steel. Max stud spacing 24 in. OC. Studs to be cut 1 in. less than assembly height.

2. Furring Channel -- Resilient, 25 MSG galv. steel. Furring channels spaced vertically 24" O.C. flange portion screw attached to one side of studs with 1-1/4" long diamond-shaped point, double lead Phillips head steel screws.

3. Wallboard, Gypsum* -- 1/2 or 5/8 in. thick, 4 ft wide. Screw attached one side to resilient or furring channels with 1 in. long, Type S steel screws spaced 12 in. OC. Gypsum board on direct attached side secured to studs with 1 in. long Type S-12 steel screws spaced 12 in. Gypsum board joints oriented vertically, located over studs and offset between layers.

4. Batts and Blankets* -- Placed in stud cavity, 1-1/2 in. min thickness.

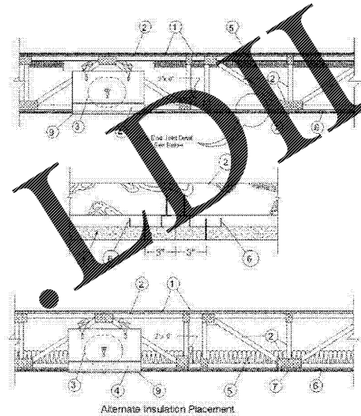
5. Joints and Screw heads -- Gypsum board joints covered with paper tape and joint compound. Screw heads covered with joint compound. As an alternate, 3/32" thick gyp. veneer plaster may be applied to the entire surface of classified veneer baseboard with the joints reinforced with paper tape.

*Bearing the UL Classification Marking

12 WALL ASSEMBLY

1 1/2" = 1'-0"

UL DESIGN NO. U451
1 HOUR FIRE RATING



1. Flooring System — The flooring system shall consist of one of the following:

Subflooring—Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood or panels secured to trusses with construction adhesive and No. 8d ringed shank nails, spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 8d nails.

Finish Floor —Min 1 by 4 in. T & G lumber installed perpendicular to trusses, or min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

2. Trusses — Parallel chord trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Min truss depth is 12 in. when no Ceiling Damper* is used and 18 in. when a Ceiling Damper* is used. Truss members secured together with min 0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on 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 approx. 7/8 in. centers with four rows of teeth per inch of plate width.

3. Air Duct* — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.

4. Ceiling Damper* — For use with min 18 in. deep trusses. Max nom area shall be 324 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. A steel grille (Item 9) shall be installed in accordance with installation instructions.

5. Batts and Blankets* — (Optional) - Glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. When the resilient channels (Item 6) or furring channels (Item 6A) are spaced 24 in. OC, no insulation shall be installed in the concealed space. When the resilient channels (Item 6) or furring channels (Item 6A) are spaced 16 in. OC, the insulation shall be a max of 3-1/2 in. thick, and shall be secured against the subflooring with staples at 12 in. OC or held suspended in the concealed space with 0.058 in. diam galv. steel wires attached to the wood trusses at 12 in. OC. When the resilient channels (Item 6) or furring channels (Item 6A) are spaced a max of 12 in. OC or when the Steel Framing Members (Item 6B) are used, there is no limit in the overall thickness of insulation, and the insulation can be secured against the subflooring, held suspended in the concealed space or draped over the resilient or furring channels (or Steel Framing Members) and gypsum panel membrane.

6. Resilient Channels — Formed from min 25 MSG galv steel installed perpendicular to trusses. When there is no insulation installed in the concealed space the resilient channels are spaced 24 in. OC. When insulation , Item 5 is secured to the underside of the subfloor the resilient channels are spaced16 in. OC. When insulation, Items 5, 5A or 5B is applied over the resilient channel/gypsum panel ceiling membrane, the resilient channels are spaced 12 in. OC. Channels secured to each truss with 1-1/4 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint as shown in the above illustration. Additional channels shall extend min 6 in. beyond each side edge of panel.

7. Gypsum Board* — Nom 5/8 in. thick, 48 in. wide gypsum panels. When resilient channels (Item 6) are used, gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. When insulation (Items 5 or 5A) is applied over the resilient channel/gypsum panel ceiling membrane screw spacing shall be reduced to 8 in. OC. End joints secured to both resilient channels as shown in end joint detail.

8. Finishing Compound and Tape and Joint Reinforcement — Applied in accordance with manufacturer's instructions. Joints and fastener heads covered with joint compound and paper tape. Two additional coats of joint compound applied over all joints. As an alternate, 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum panels.

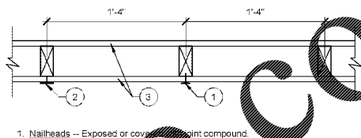
9. Grille — Steel grille, installed in accordance with the instructions provided with the ceiling damper.

3 FLOOR/CEILING ASSEMBLY

1 1/2" = 1'-0"

1 HOUR FIRE RATING

Fire Resistance Ratings - ANSI/UL 263
UL# L550



1. Nailheads -- Exposed or covered with joint compound.

2. Joints -- Exposed or covered with paper tape and joint compound, except where required for specific edge configuration. Square, tapered, rounded-edged wallboard, joints covered with joint compound or finished and joint compound. As an alternate, 3/32" thick gypsum veneer plaster may be applied to the entire surface of classified veneer baseboard. Joints reinforced.

3. Wallboard, Gypsum* -- 5/8 in. thick wallboard paper or vinyl surfaced, with beveled, square, or tapered edges. Wallboard nailed 7" O.C. with 6d cement-coated nails 1-7/8 in. long, 0.0915 in. shank diameter, 1/4" diameter heads. When used in widths of other than 48" wallboard is to be applied horizontally.

4. Canadian Gypsum Co. Ltd. - Types SCX, SHX, WRX (finish rating 26 min), Type C (finish rating 26 min).

Celotex Corp. - Type 1, Type SF3 (finish rating 20 min), Type A (finish rating 21 min), Type B (finish rating 20 min), Type C (finish rating 21 min) or FRP.

Domtar Gypsum - Type C (finish rating 26 min), Type 4 (finish rating 26 min), Type 5 (finish rating 26 min), Type 6, Type 8 (finish rating 23 min) or Type 9 (finish rating 26 min).

Georgia-Pacific Corp., Gypsum Div. - Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS3 (finish rating 20 min), Type GPFS4 (finish rating 20 min), Type GPFS6 (finish rating 26 min) or Type GPFS-C (finish rating 20 min).

Gold Bond Building Products - Type FSW (finish rating 20 min), Type FSW-G (finish rating 20 min), Type FSW2 (finish rating 24 min). Type FSW3 (finish rating 20 min), Type FSW4 (finish rating 20 min). Type FSK (finish rating 20 min) or FSK-G (finish rating 20 min).

Pabco Gypsum - Type PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), PG-3W (finish rating 20 min), PG-4 (finish rating 20 min), PG-6 (finish rating 23 min), PG-3WS (finish rating 20 min).

Republic Gypsum Co. - Type RG-1 (finish rating 20 min), Type RG-2 (finish rating 20 min), Type RG-3 (finish rating 20 min) or Type RG-4 (finish rating 26 min), Type RG-6 (finish rating 20 min).

Standard Gypsum Corp. - Type SGC (finish rating 20 min), Type SGC-3 (finish rating 20 min) or SGC-G (finish rating 20 min).

United States Gypsum Co. - Type SCX (finish rating 26 min), Type C (finish rating 26 min), Type WRX (finish rating 26 min), Type WR-C (finish rating 26 min), Type D (finish rating 23 min), Type IP-X1 (finish rating 26 min), Type FCV (finish rating 26 min), Type IP-X2 (finish rating 26 min), Type SI-X (finish rating 26 min) or Type SHC (finish rating 26 min).

Weyerhaeuser Co. Gypsum Div. - Type DDN1 (finish rating 20 min), Type DDG2 (finish rating 20 min), Type DDW3 (finish rating 20 min) or Type DDDG3 (finish rating 20 min).

4. Steel Corner Fasteners -- (Optional) - For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8" wide cleats protruding into the 5/8" wide channel, fabricated from 24 gauge galv. steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the wallboard, no greater than 2" from corner of wallboard, max spacing 16" O.C. Nailed to adjacent stud through tab using one No. 6d cement-coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 8d cement-coated nails.

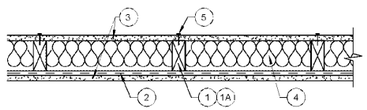
5. Batts and Blankets* (Not shown) -- optional glass fiber or mineral wool insulation. Owens-Corning Fiberglas Corp. USG Interiors Inc. United States Gypsum Co.

*Bearing the U.L. Classification Marking.

2 WALL ASSEMBLY

1 1/2" = 1'-0"

UL DESIGN NO. U305
(INTERIOR WALLS)
BEARING WALL RATING - 1 HOUR



1. Wood Studs -- 2 x 4, spaced 16" or 24" O.C. Effectively cross braced.

2. Furring Channel -- Resilient, 25 MSG galv. steel. Furring channels spaced vertically 24" O.C. flange portion screw attached to one side of studs with 1-1/4" long diamond-shaped point, double lead Phillips head steel screws.

3. Wallboard, Gypsum* -- 5/8 in. thick, 4 ft. wide. Screw attached one side to furring channels with 1" long, self-drilling, self-tapping steel screws spaced 12" O.C., vertical joints located midway between studs and back-blocked with furring channels, attached with 1" long self-drilling, self-tapping screws, spaced 12" O.C., along each edge. Wallboard attached other side to studs with 1-1/4 in. long diamond-shaped point, double lead Phillips head steel screws spaced 12" O.C., vertical joints located over studs.

CGC INC - Types C, SCX, SHX, FRX-G, IP-X1, IP-X2, IPC-AR, ULX
United States Gypsum Co - Types C, SCX, SHX, ULX, FRX-G, IP-X1, IP-X2, IPC-AR
USG Mexico S A DE C V - Types C, SCX, FRX-G, IP-X1, IP-X2, IPC-AR, ULX

4. Batts and Blankets* -- 3" thick mineral wool batts, placed to fill interior of wall, attached to the 4" face of the studs with staples placed 24" OC.
Thermafiber INC - Type SAFB

4a. Glass Fiber Insulation -- (As an alternate to Item 4) - 3" thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

5. Joints and Screw heads -- Gypsum board joints covered with paper tape and joint compound. Screw heads covered with joint compound. As an alternate, 3/32" thick gyp. veneer plaster may be applied to the entire surface of classified veneer baseboard with the joints reinforced with paper tape.

*Bearing the UL Classification Marking

1 WALL ASSEMBLY

1 1/2" = 1'-0"

UL DESIGN NO. U327
1 HOUR FIRE RATING

WOOLPERT
115 Northridge Road
Suite 300
Atlanta, GA 30350
770.391.4095
FAX: 770.391.4104

WOODSPRING SUITES

CYPRESS CREEK, FLORIDA

Pasco County
Cypress Creek, FL

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