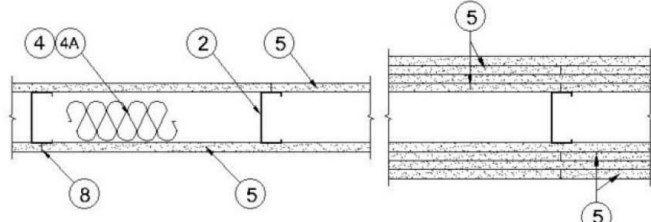


Fire Resistance Ratings - ANSUL 263

BXUV.U419
Design No. 1419
Last Update: September 26, 2008
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5)



1. Floor and Ceiling Runners — (Not shown) — For use with Item 2 - Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners 24 in. OC, max.

1A. Floor and Ceiling Runners* — (Not shown - in lieu of Item 1) — For use with Item 2A, proprietary channel shaped, min. 2-9/16 in. wide with 1-3/16 in. wide flanges, fabricated from min. 0.0150 in. (0.016 in. min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC, max.

1B. Floor and Ceiling Runners — (Not shown - in lieu of Item 1) — For use with Item 2A, proprietary channel shaped, min. 2-9/16 in. wide with 1-3/16 in. wide flanges, fabricated from min. 0.0150 in. galvanized steel, attached to floor and ceiling fasteners 24 in. OC, max.

CLARKWESTERN BUILDING SYSTEMS INC. — UltraSteel®
DIETRICH INDUSTRIES INC. — UltraSTEEL®

2. Steel Studs — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width as indicated under Item 5, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

2A. Steel Studs — In lieu of Item 2 - Proprietary channel shaped studs, min. width as indicated under Item 5, min 1-1/4 in. flanges and 1/4 in. long folded back return flange legs, fabricated from min. 0.0155 in. (0.0149 in., min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. Allowable use of studs is shown in the table below. For direct attachment of gypsum board only.

CLARKWESTERN BUILDING SYSTEMS INC. — UltraSteel®
DIETRICH INDUSTRIES INC. — UltraSTEEL®

2B. Steel Studs — (As an alternate to Item 2, For use with Item 5B) Channel shaped, fabricated from min 20 MSG (0.0327 in. thick) corrosion-protected or galv steel, 3-1/2 in. min width, min 1-1/2 in. flanges and 1/4 in. return, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

3. Wood Structural Panel Sheathing — (Optional, For use with Item 5 Only) - (Not shown) - 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DPC P51 or P52, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. in the perimeter and 12 in. OC in the field.

4. Batts and Blankets* — (Required as indicated under Item 5) — Mineral wool bats, friction fitted between studs and runners. Min. nom thickness as indicated under Item 5. See **Batts and Blankets (BKNV or BZZZ) Categories** for names of Classified companies.

4A. Batts and Blankets* — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNV or BZZZ) Categories** for names of Classified companies.

5. Gypsum Board* — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Wallboard Protection on Each Side of Wall					
Rating	Min Stud Depth, Item 2	Min Stud Depth, Item 2A	No. of Layers & Thickness of Panel	No. of Layers of Insulation (Item 4)	Min Thickness of Insulation (Item 4)
1	3-1/2	3-5/8	1 layer, 5/8 in. thick	Optional	
1	2-1/2	3-5/8	1 layer, 1/2 in. thick	Optional	1-1/2 in.
1	1-5/8	3-5/8	1 layer, 3/4 in. thick	Optional	
2	1-5/8	2-1/2	2 layers, 1/2 in. thick	Optional	
2	1-5/8	2-1/2	2 layers, 5/8 in. thick	Optional	
2	1-1/2	3-5/8	1 layer, 3/4 in. thick	Optional	
3	1-5/8	2-1/2	3 layers, 1/2 in. thick	Optional	
3	1-5/8	2-1/2	2 layers, 3/4 in. thick	Optional	
3	1-5/8	2-1/2	3 layers, 5/8 in. thick	Optional	
4	1-5/8	2-1/2	4 layers, 5/8 in. thick	Optional	
4	1-5/8	2-1/2	4 layers, 1/2 in. thick	Optional	
4	2-1/2	2-1/2	2 layers, 3/4 in. thick	Optional	2 in.

CANADIAN GYPSUM COMPANY — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SHX, WRX, IP-X1, AR, C, WRC, FREG-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE

USG MEXICO S A DE CV — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or, 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, Steel Framing Members*, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

7B. Steel Framing Members* — (Optional, Not Shown) — As an alternate to Item 7, furring channels and Steel Framing Members on only one side of studs as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, perpendicular to studs. Channels secured to studs as described in Item 6. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. Steel Framing Members* — Used to attach furring channels (Item 7a) to studs (Item 2). Clips spaced max. 48 in. OC, RSIC-1 clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-1 clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.

7C. Steel Framing Members* — (Optional, Not Shown) — Used as alternate method to attach resilient channels (Item 7). Clips attached at each intersection of the resilient channel and the steel studs (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the steel stud with min. 1 in. long Type S-12 steel screws through the center hole of the clip and the resilient channel flange.

KEENE BUILDING PRODUCTS CO INC. — Type RC Assurance.

8. Joint Tape and Compound — Vinyl or casing, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. Siding, Brick or Stucco — (Optional, not shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. Caulking and Sealants* — (Optional, not shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.

UNITED STATES GYPSUM CO — Type AS

11. Lead Batten Strips — (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-2011, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

12. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-2011, Grade "C".

*Bearing the UL Classification Mark
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 specific specifications concerning alternate materials and alternate methods of construction.
*Reprinted from the Online Certifications Directory with permission from Underwriters Laboratories Inc.
Copyright © 2008 Underwriters Laboratories Inc.®

5A. Gypsum Board* — (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.

CANADIAN GYPSUM COMPANY — Type SHX.
UNITED STATES GYPSUM CO — Type FREG-G, SHX.
USG MEXICO S A DE CV — Type SHX.

5B. Gypsum Board* — (As an alternate to Item 5 when used as the base layer on one or both sides of wall, For direct attachment only, not to be used with Item 3) - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

RAV-BAR ENGINEERING CORP. — Type RB-LBG

6. Fasteners — (Not shown) — For use with Item 2 - Type 8 or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems: First layer - 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer - 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. Three-layer systems: First layer - 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer - 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer - 2-1/4 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Fourth layer - 2-5/8 in. long for 1/2 in. thick panels, spaced 24 in. OC. Screws offset min 6 in. from layer below.

6A. Fasteners — (Not shown) — For use with Item 2A - Type 8 or S-12 steel screws used to attach panels to studs (Item 2A). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC with additional screws 1 in. and 2-1/2 in. from edges of the board when panels are horizontally or 1 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems applied vertically: First layer - 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer - 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Screws offset min 6 in. from layer below. Two layer systems applied horizontally: First layer - 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC starting 8 in. from each edge of the board with an additional screw placed 1-1/4 in. from each edge of the board. Second layer - 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC starting 8 in. from each edge of the board with an additional screw placed 1-1/4 in. from each edge of the board with screws offset 4 in. from first layer. Three layer systems: First layer - 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer - 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer - 2-1/4 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Fourth layer - 2-5/8 in. long for 1/2 in. thick panels, spaced 24 in. OC. Screws offset min 6 in. from layer below. For all layers, an additional screw shall be placed 1-1/4 in. from each edge of the board. Furring channels: First layer - 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer - 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer - 2-1/4 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Fourth layer - 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. For all layers, an additional screw shall be placed 1-1/4 in. from each edge of the board.

7. Furring Channels — (Optional, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically by a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5B.

7A. Steel Framing Members (Not Shown)* — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members on only one side of studs as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, perpendicular to studs. Channels secured to studs as described in Item 6. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. Steel Framing Members* — Used to attach furring channels (Item 7a) to studs (Item 2). Clips spaced max. 48 in. OC, RSIC-1 clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-1 clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.

PAC INTERNATIONAL INC. — Types RSIC-1, RSIC-V.

7B. Steel Framing Members (Optional, Not Shown)* — As an alternate to Item 7, furring channels and Steel Framing Members on only one side of studs as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, perpendicular to studs. Channels secured to studs as described in Item 6. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. Steel Framing Members* — Used to attach furring channels (Item 7a) to studs (Item 2). Clips spaced max. 48 in. OC, RSIC-1 clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-1 clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC. — Type Ionomax

7C. Steel Framing Members* — (Optional, Not Shown) — Used as alternate method to attach resilient channels (Item 7). Clips attached at each intersection of the resilient channel and the steel studs (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the steel stud with min. 1 in. long Type S-12 steel screws through the center hole of the clip and the resilient channel flange.

KEENE BUILDING PRODUCTS CO INC. — Type RC Assurance.

8. Joint Tape and Compound — Vinyl or casing, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. Siding, Brick or Stucco — (Optional, not shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. Caulking and Sealants* — (Optional, not shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.

UNITED STATES GYPSUM CO — Type AS

11. Lead Batten Strips — (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-2011, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

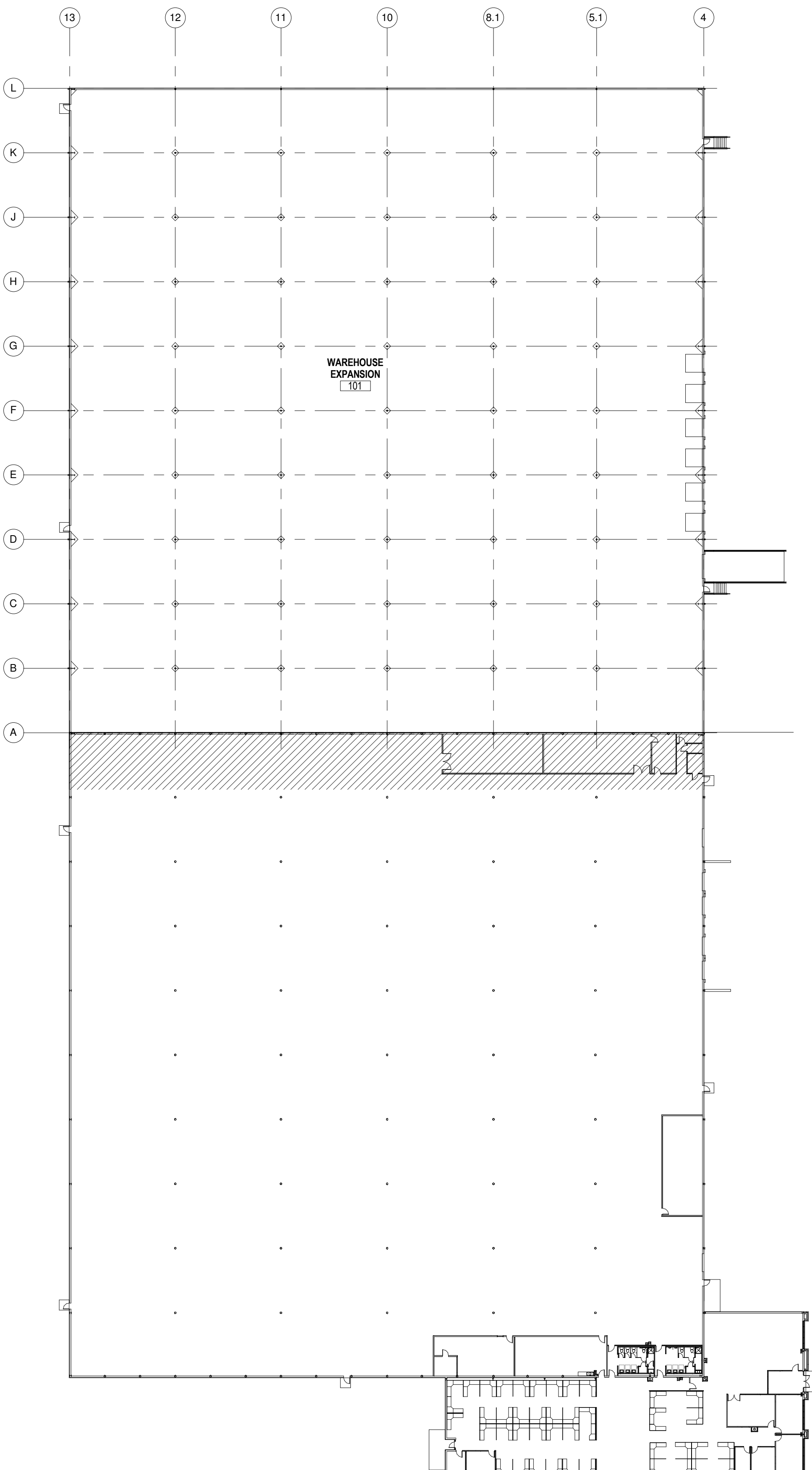
12. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-2011, Grade "C".

ARKANSAS FIRE PREVENTION DATA

CURRENT APPLICABLE CODES FOR JONESBORO, ARKANSAS
FIRE CODE: 2007 ARKANSAS FIRE PREVENTION CODE, VOLUME I
BUILDING CODE: 2007 ARKANSAS FIRE PREVENTION CODE, VOLUME II
PLUMBING CODE: 2006 ARKANSAS PLUMBING CODE
MECHANICAL CODE: 2010 ARKANSAS MECHANICAL CODE
ELECTRICAL CODE: 2011 NATIONAL ELECTRICAL CODE
GAS CODE: 2006 ARKANSAS FUEL AND GAS CODE
ENERGY CODE: 2004 INTERNATIONAL ENERGY CONSERVATION CODE
ADA REQUIREMENTS: 2003 ICC/ANSI A117.1 AMERICAN NATIONAL STANDARDS

SPIRIT FITNESS PRODUCTS - 2012 Warehousing Expansion

OCUPANCY CLASSIFICATION	Group (S-2) Storage - Low Hazard (100,800 s.f. proposed) Group (S-2) Storage - Low Hazard (100,800 s.f. existing) Group (B) Business (10,500 s.f. existing)	Code Reference
MAX. OCCUPANT LOAD	Warehousing: 201 (proposed) Warehousing: 201 (existing) Office: 105 Total: 507	T 1004.1.1
TYPE OF CONSTRUCTION	TYPE II-B (Unprotected) Building is fully sprinklered	602.2 T 601
SEPARATION	Separation of Occupancies proposed: (S-2) / (S-2) fire area separation allowable s.f. exceeded ULFH419 - (2 hr) existing: (S-2) / (B) - 1 hr separation ULF U419 - (1 hr)	Table 508.3.3
EXITS	Egress Width / 1st Floor Min. Corridor Width 44' required / 50' minimum provided (existing) 2nd Floor Min. Corridor Width NA Number of Exits: S-2: 3 required / 4 provided (proposed) S-2: 3 required / 6 provided (existing) B: 2 required / 2 provided (existing) Max. Exit Travel Distance: S-2: <400' required / <320' provided (proposed) S-2: <400' required / <220' provided (existing) B: <300' required / <120' provided (existing) Egress Corridor Capacity: 0 with sprinkler system	1017.2 T1019.1 T1016.1 T1017.1
ALLOWABLE HEIGHT	ALLOWABLE Maximum height: 4 PROPOSED 5' 1'	T 503
ALLOWABLE BUILDING AREA: (within surrounding exterior walls and firewalls)	Storage (S-2): 26,000 s.f. allowed per floor Area and Sprinkler increase requested: 143,000 s.f. allowed / fire area / floor Business (B): 23,000 s.f. allowed per floor No Area or Sprinkler increase requested:	T503
PROPOSED BUILDING AREAS (per floor)	(S-2) Storage: 100,800 s.f. (proposed) (S-2) Storage: 100,800 s.f. (existing) (B) Business: 10,500 s.f. (existing) TOTAL: 212,100 s.f. (total)	
HORIZONTAL SEPARATION (Distance from exterior wall to assumed or common property lines)	Building face / separation distance Wall Rating North 10' <26' <30' South >30' West >30' East >30'	T 602



U.L. DESIGN U-419 - RATED INTERIOR PARTITIONS
3/32" = 1'-0"

1 FLOOR PLAN - OVERALL
1" = 40'-0"

Revisions:

NEW WAREHOUSING FACILITY
SPIRIT FITNESS PRODUCTS
JONESBORO, ARKANSAS

915 Southwest Drive
Jonesboro, AR 72401
v. 870.933.6993
f. 870.933.6988
www.cahoonsteelingsstudio.com

Cahoon Steeling
Studio
Architecture

Corporate Seal
PRELIMINARY

Sheet Name:
FLOOR PLAN - OVERALL
Project No: 1125 Date: 11/02/2012
Sheet No:
A101