

GYPSON BOARD SHAFT WALL SYSTEMS - SECTION 09275

Use this guide specification to specify gypsum drywall Shaft Wall systems by U.S. Gypsum Co., incorporating specially shaped light gage steel framing members for construction of fire-rated partitions enclosing elevator shaftways, mechanical shaftways, stairways, etc. Review a copy of USG publication SA-926 before editing this specification.

Use the following for ALL Systems. Re-number and re-letter after making all selections. Delete all bolded instructions.

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Tested and rated gypsum board/steel stud enclosures for stairways, vertical and horizontal shaftways, and soffits.

1.02 REFERENCES

- A. See Section 01091-Reference Standards.

1.03 DEFINITIONS

- A. Shaft Wall: An assembly of steel framing, gypsum boards, and other materials used to enclose stairways, elevator shaftways, shaftways used for air supply and return, and shaftways housing mechanical and electrical components.
 - 1. Shaft wall assemblies must have passed successfully fire and sound tests performed by recognized testing laboratories.
 - 2. When utilizing additional layers of the same gypsum boards used in the fire and sound tests, a shaft wall assembly may be estimated to have a higher fire-resistance rating than that of the basic test.
- B. Adhere: Fasten with adhesive.
- C. Attach: Fasten with steel screws, power-driven or non-power-driven.
- D. Ductside - That side of a shaft wall that used as a duct or vent in which pressurized air flows.
- E. Floorside: That side of a shaft wall that has a floor upon which people may stand.

- F. Horizontal: Long dimension of board perpendicular to studs.
- G. Inside: That space between studs and between inside faces of inner board faces.
- H. Position: Place without attaching or adhering.
- I. Roomside: That surface of a duct or shaft which is in a room or space.
- J. Shaftside: That side of shaft wall that does not have floor upon which people may stand (such as an elevator shaft, airway, and the like), but which may contain a landing(s) (such as a stairway).
- K. Vertical: Long dimension of board parallel with studs.
- L. Abbreviations: See Section 01092-Abbreviations.

1.04 SYSTEM DESCRIPTION

*****Select one or more of the following Systems. Delete those not selected.*****

A. Vertical Shaft Wall Assembly; System A:

1. UL Design U469, 1 hr. Framing - steel studs 24 in. o.c. Shaftside - vertical liner boards positioned into studs; floorside - vertical gypsum face boards attached to studs.

A. Vertical Shaft Wall Assembly; System B:

1. UL Design U438, 2 hr, STC 39. Framing - steel studs 24 in. o.c. Shaftside - vertical liner boards positioned into studs; floorside - vertical gypsum baseboards attached to studs, vertical gypsum face boards attached to studs through baseboards.

A. Vertical Shaft Wall Assembly; System B:

1. UL Design U438, 2 hr, STC 47. Framing - steel studs 24 in. o.c. Shaftside - vertical liner boards positioned into studs; floorside - vertical gypsum baseboards attached to studs, vertical gypsum face boards attached to studs through baseboards; inside - sound insulation friction-fit between studs.

A. Vertical Shaft Wall Assembly; System C:

1. UL Design U492, 2 hr, STC 52. Framing - steel studs 24 in. o.c. Shaftside - vertical liner boards positioned into studs; floorside -

vertical gypsum face boards attached to studs through baseboards; inside - sound insulation friction-fit between studs

A. Vertical Shaft Wall Assembly; System D:

1. UL Design U459, 2 hr. Framing - steel studs 24 in. o.c. Shaftside - vertical liner boards positioned into studs; floorside - vertical gypsum baseboards attached to studs, vertical cement face boards adhered to baseboards and attached to studs through baseboards; inside - sound insulation friction-fit between studs.

A. Vertical Shaft Wall Assembly; System E:

1. UL Design U467, 2 hr. Framing - steel studs 24 in. o.c. Shaftside - vertical liner boards positioned into studs, vertical gypsum face boards attached to studs; floorside - vertical gypsum baseboards attached to studs.

A. Vertical Shaft Wall Assembly; System F:

1. Based upon UofC 2-8-72 and 6-23-75, 2 hr estimated. Framing - steel studs 24 in. o.c. Shaftside - vertical liner boards positioned into studs; floorside - horizontal resilient channels attached to studs, horizontal gypsum baseboards attached to resilient channels, vertical gypsum face boards attached to resilient channels through baseboards; inside - sound insulation friction-fit between studs.

A. Vertical Shaft Wall Assembly; System G:

1. Based upon UofC 2-16-72, 3 hr estimated. Framing - steel studs 24 in. o.c. Shaftside - vertical liner boards positioned into studs; floorside - vertical gypsum inner baseboards attached to studs, horizontal outer baseboards attached to studs through inner baseboards, vertical gypsum face boards attached to studs through inner baseboards.

A. Vertical Shaft Wall Assembly; System H:

1. Based upon UofC 5-24-72, 4 hr estimated. Framing - steel studs 24 in. o.c. Shaftside - vertical liner boards positioned into studs; floorside - vertical liner boards attached to studs, vertical gypsum inner baseboards attached to studs through attached liner boards, horizontal furring channels attached to studs through inner baseboards and attached liner boards, vertical gypsum outer baseboards attached to furring channels, vertical gypsum face boards attached to furring channels through outer baseboards.

A. Horizontal Shaft Wall Ceiling/Soffit Assembly; System AA:

1. NER 258, 1 hr. Framing - steel studs 24 in. o.c. horizontally.
Ductside - liner boards positioned into studs horizontally, roomside
- horizontal gypsum face boards attached to studs horizontally.

A. Horizontal Shaft Wall Ceiling/Soffit Assembly; System AB:

1. NER 258, 2 hr. Framing - steel studs 24 in. o.c. horizontally.
Ductside - liner boards positioned into studs horizontally, roomside
- horizontal gypsum baseboards attached to studs horizontally,
horizontal gypsum face boards attached to studs horizontally
through baseboards.

A. Horizontal Shaft Wall Duct Assembly; System AC:

1. NER 258, 2 hr, both sides. Framing - steel studs 24 in. o.c.
horizontally (soffit) and vertically (wall). Ductside - liner boards
positioned into studs horizontally (soffit) and vertically (wall),
roomside - horizontal gypsum inner baseboards attached to studs
horizontally (soffit) and vertically (wall), horizontal gypsum outer
boards attached to studs horizontally (soffit) through baseboards,
horizontal gypsum face boards attached to studs horizontally
(soffit) and vertically (wall) through baseboards.

A. Vertical Shaft Wall Vent Shaft Assembly; System VA:

1. UL Design U505, 2 hr. Framing - steel perimeter angles and
horizontal bracing angles. Shaftside - vertical gypsum baseboards
attached to perimeter and bracing angles, floorside - vertical
gypsum liner boards adhered to baseboards, vertical gypsum face
boards adhered to liner boards and attached to perimeter and
bracing angles through liner boards.

*****Use the following for ALL Systems.*****

B. The shaft wall assembly for system(s) shown must have following additional attributes:

1. Must be UL Classified.
2. Must be listed in National Evaluation Report NER-258.
3. Must have been used in successful tests of all major elevator manufacturers' frames and doors at Underwriters Laboratories.
4. Must be a component in the successful ASTM E152 test in which the door frames specified for this project were used.
5. Must have undergone successful testing of penetration details for elevator call boxes and position indicators.
6. Must have undergone successful testing of smoke and fire dampers.
7. Must have been successfully tested to at least 1,000,000 positive-

- negative pressure cycles.
8. Must contain studs which give continuous edge support for liner boards to achieve airtight, smoke-tight, and rattle-free performance.
 9. Must be free from projecting, bendable tabs.
 10. Must have been used in the construction industry in the United States at least 20 years.

1.05 SUBMITTALS

- A. Follow Section 01340-Product Data, Shop Drawings, and Samples.
- B. Product Data: Submit manufacturer's product specifications and installation instructions for systems shown.
- C. Shop Drawings: Submit installation drawings which:
 1. Show shaft wall dimensions relative to other work.
 2. Locate all openings in shaft wall with details indicating special construction for work of other Sections and conformance with requirements of fire-rated construction.
- D. Certificates: Submit manufacturer's certification of compliance with fire and sound requirements for each system shown. Include name of manufacturer and complete description of door frames, elevator door frames, electrical boxes, and other penetrations included in each tested assembly for each system shown.
- E. Additional Certificates: Submit manufacturer's certification of -
 1. Fire test verification of shaft wall damper penetration conformance to applicable code requirements.
 2. Fire test verification of horizontal shaft wall assembly conformance to applicable code requirements.
 3. For each system enclosing elevators, successful completion of fatigue failure resistance of shaft walls through 1,000,000 cycles at a pressure of 7.5 psf with a maximum deflection of L/240.
 4. Compliance of shaft wall assembly or assemblies with applicable code.
- F. History of 20 years' experience in manufacturing of successful shaft wall assemblies.
- G. NESC Report: Submit National Evaluation Service Committee of the Council of American Building Officials Report No. NER-258 as evidence of compliance of systems shown with codes of council members.

1.06 QUALITY ASSURANCE

- A. Single Source Responsibility: Provide steel framing, gypsum boards, insulation, fasteners, joint treatments, and other materials in the assembly or assemblies from the single manufacturer which has utilized these materials in recognized fire containment and sound tests.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Follow Section 01610-Delivery, Storage, and Handling.

1.08 PROJECT CONDITIONS

- A. Do no joint finishing when temperature in space being finished is less than 55°F (13°C). Ventilation must be adequate to carry off excess moisture.

PART 2 PRODUCTS

2.01 MATERIALS

Select one or more of the following System paragraphs. Select size(s).
Delete remaining [Systems] and System paragraphs.

A. Runners:

1. J-Runners; [System A], [System B], [System C], [System D], [System E], [System F], [System G], [System H], [System AA], [System AB], [System AC]: Galvanized steel; width and metal thickness (24 ga. minimum) to accommodate adequately loads imposed from studs selected from stud manufacturer's published limiting height table; [212JR24], [212JR20], [400JR24], [400JR20], [600JR20]; lengths as required; ASTM C645; as supplied by USG.
1. Angle Runners and Bracing Angles; System VA: Galvanized steel; 1-1/4 in. x 3/4 in. x 22 ga.; lengths as required; ASTM C645; as supplied by USG.

*****Use this for ALL Systems.*****

B. Runner Fasteners:

1. Power-driven type; must withstand 193 lb. single shear and 200 lb. bearing force when driven into sill without exceeding allowable design stress in runner, fastener, or structural support.

*****Continue selections.*****

B. Studs:

1. CH-Studs; [System A], [System B], [System E], [System F], [System G], [System H], [System AA], [System AB], [System AC]: Galvanized steel; width and metal thickness (25 ga. minimum) as selected from stud manufacturer's published limiting height table; [212CH25], [212CH22], [212CH20], [400CH25], [400CH20], [600CH20]; unspliced lengths, as required, providing continuous edge support for liner board edges; ASTM C645; as supplied by USG.
1. CH-Studs; [System D]: Galvanized steel; width and metal thickness (20 ga. minimum) as selected from stud manufacturer's published limiting height table; [212CH20], [400CH20], [600CH20]; unspliced lengths, as required, providing continuous edge support for liner board edges; ASTM C645; as supplied by USG.
1. CH Studs; [System C], [System VA]: Galvanized steel; width and metal thickness (25 ga. minimum) as selected from stud manufacturer's published limiting height table; [400CH25], [400CH20], [600CH20]; unspliced lengths, as required, providing continuous edge support for liner board edges; ASTM C645; as supplied by USG.
2. E-Studs; [System A], [System B], [System E], [System F], [System G], [System H], [System AA], [System AB], [System AC], [System VA]: Galvanized steel; width and metal thickness (25 ga. minimum) as selected from stud manufacturer's published limiting height table; [212ES25], [212ES22], [400ES25], [400ES20], [600ES25], [600ES20]; unspliced lengths, as required, providing continuous edge support for liner board edges; ASTM C645; as supplied by USG.
2. E-Studs; [System D]: Galvanized steel; width and metal thickness (20 ga. minimum) as selected from stud manufacturer's published limiting height table; [212ES20], [400ES20], [600ES20]; unspliced lengths, as required, providing continuous edge support for liner board edges; ASTM C645; as supplied by USG.
2. E-Studs; [System C]: Galvanized steel; width and metal thickness (20 ga. minimum) as selected from stud manufacturer's published limiting height table; [400ES20], [600ES20]; unspliced lengths, as required, providing continuous edge support for liner board edges; ASTM C645; as supplied by USG.

Use the following for ALL Systems. Select design load and deflection. Delete remaining loads and deflections.

C. Selection Criteria:

1. Stud, runner, and strut selection based upon:
 - a. Design load(s): Intermittent air pressure load as selected from stud manufacturer's published limiting height table; [5 psf], [7.5 psf], [10 psf], [15 psf].
 - b. Allowable deflection: As selected from stud manufacturer's published limiting height table; [L/120], [L/240], [L/360].
 - c. End reaction and bending stress: Do not exceed maximum allowable for given stud height.
2. Studs, runners, and struts must have the same, or greater, section properties as those used in the initial fire containment and sound tests.

*****Use the following for ALL Systems.*****

D. Other Metal Components:

1. Jamb Struts: Galvanized steel, 20 ga.; 3 in. back leg, same width as steel studs; lengths, as required; ASTM C645; as supplied by USG.
2. Z-Clips: Galvanized steel; 16 ga. x runner or stud width x stand-off distance x 1-1/2 in. each leg; ASTM A446/A446M, A 525.

*****Continue selections.*****

3. Resilient channels; System H: Galvanized steel, modified-hat shaped channel; 25 ga. x 2-1/2 in. overall width x 1-1/2 in. face width x 1/2 in. depth; ASTM C645; RC-1 as supplied by USG.

*****Use this for ALL Systems.*****

E. Gypsum Boards:

1. Liner boards: Gypsum boards; 1 in. thick x 24 in. wide x lengths as required; beveled edges, water-resistant green face paper; with UL Classification Label affixed; exceed ASTM C442; SHEETROCK Brand.

*****Continue selections.*****

2. Baseboards; System D: Gypsum boards; 5/8 in. thick x 48 in. wide x lengths as required; tapered edges; with UL Classification Label affixed; ASTM C36; FIRECODE Core, SHEETROCK Brand.
2. Baseboards; [System B], [System F], [System AB], [System AC]: Gypsum boards; 1/2 in. thick x 48 in. wide x lengths as required; tapered edges; with UL Classification Label affixed; ASTM C36; FIRECODE C Core, SHEETROCK Brand.
2. Baseboards, [System G], [System H], [System VA]: Gypsum

boards; 5/8 in. thick x 48 in. wide x lengths as required; tapered edges; with UL Classification Label affixed; ASTM C36; FIRECODE C Core, SHEETROCK Brand.

3. Face boards, [System VA]: Gypsum boards; 5/8 in. thick x 48 in. wide x lengths as required; tapered edges; with UL Classification Label affixed; ASTM C36; FIRECODE Core, SHEETROCK Brand.
3. Face boards, [System A], [System G], [System H], [System AA]: Gypsum boards; 5/8 in. thick x 48 in. wide x lengths as required; tapered edges; with UL Classification Label affixed; ASTM C36; FIRECODE C Core, SHEETROCK Brand.
3. Face boards, [System B], [System E], [System F], [System AB], [System AC]: Gypsum boards; 1/2 in. thick x 48 in. wide x lengths as required; tapered edges; with UL Classification Label affixed; ASTM C36; FIRECODE C Core, SHEETROCK Brand.
3. Face boards, System C: Gypsum boards; 3/4 in. thick x 48 in. wide x lengths as required; tapered edges; with UL Classification Label affixed; ASTM C36; ULTRACODE Core, SHEETROCK Brand.

F. Cement Boards:

1. Face boards, System D: Aggregated portland cement board with polymer-coated, glass-fiber mesh embedded in front and back surfaces; 1/2 in. thick x 48 in. wide x 4' to 10' lengths as required; formed, smooth, reinforced edges; Cement Board, DUROCK Brand.

G. Sound Insulation:

1. Blankets; System C: Paperless, semi-rigid spun mineral fiber mat, 3 in. thick; ASTM C665, Type I; THERMAFIBER Sound Attenuation Fire Blankets (SAFB).
1. Blankets; [System B], [System D], [System F]: Paperless, semi-rigid spun mineral fiber mat, 1-1/2 in. thick; ASTM C665, Type I; THERMAFIBER Sound Attenuation Fire Blankets (SAFB).

*****Use the following for ALL Systems.*****

2.02 OTHER MATERIALS

A. Corner Reinforcement:

1. External corner reinforcement: Galvanized steel; 1-1/4 x 1-1/4 in., lengths as required; ASTM A446/A446M, A526 Coating Designation Z90; No.103, DUR-A-BEAD Brand.

B. Metal Trim:

1. L-shaped: Galvanized steel; 1/2 in., lengths as required; ASTM A446/A446M, A526 Coating Designation Z90; No. 200-B,

SHEETROCK Brand.

C. Fasteners:

1. Steel framing: Steel screws; lengths as recommended by gypsum board products manufacturer; Type S, pan head; ASTM C1002.
2. Steel framing: Steel screws; lengths as recommended by gypsum board products manufacturer; Type S-12, pan head and low-profile head ASTM C954.
3. Gypsum board to steel framing: Steel screws; lengths as recommended by gypsum board products manufacturer, Type S-12 bugle head and pancake head; ASTM C954.
4. Gypsum board to resilient or furring channels: Steel screws; lengths as recommended by gypsum board products manufacturer, Type S-12 bugle head and pancake head; ASTM C954.
5. Cement board to steel framing: Steel screws; lengths as recommended by gypsum board products manufacturer; DUROCK Steel Screws.

*****Continue selections.*****

D. Laminating Adhesive:

1. Joint compound; [System VA]: Vinyl based, without asbestos; ASTM C475; SHEETROCK Brand All Purpose Joint Compound Ready-Mixed (ready-mixed drying type).
1. Adhesive; [System D]: Organic, Type 1; DUROCK Ceramic Tile Adhesive.

*****Use the following for ALL Systems.*****

E. Joint Treatment:

1. Tape: High-strength fiber, 1-31/32 in. wide; ASTM C475; SHEETROCK Brand Joint Tape.
2. Taping compound: Vinyl based, without asbestos; ASTM C475; SHEETROCK Brand Taping Joint Compound Ready-Mixed (ready-mixed drying type).
3. Finishing compound: Vinyl based, without asbestos; ASTM C475; SHEETROCK Brand All Purpose Joint Compound (powder-mixed drying type).
4. Optional joint treatment materials: Other tapes, taping compounds, and finishing compounds may be used pursuant to gypsum board manufacturer's published recommendations.

F. Calk: Latex type; ASTM C919; SHEETROCK Brand Acoustical Sealant.

2.03 MANUFACTURER:

- A. United States Gypsum Company.

2.04 SUBSTITUTIONS

- A. Products of other manufacturers will not be considered.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine locations to receive materials for conditions which will adversely affect installation. Do not start materials installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Field Dimensions: Verify location and dimensions where materials are to be installed.
- B. Review shop drawings and coordinate work of other Sections which is integral with shaft wall installation.

If you wish a brief Part 3, use Articles 3.03 through 3.07. If you wish a comprehensive Part 3, delete Articles 3.03 through 3.07 and continue with 3.08. Don't forget to renumber the Articles.

3.03 FRAMING INSTALLATION

- A. Comply with gypsum products manufacturer's published instructions.

3.04 GYPSUM BOARD APPLICATION

- A. Comply with gypsum products manufacturer's published instructions.

3.05 GYPSUM BOARD FINISHING

Select one or more of the following System paragraphs. Delete remaining [Systems] and System paragraphs.

- A. [System A], [System B], [System C], [System D], [System E], [System F], [System G], [System H], [System AA], [System AB], [System AC], [System VA]:
 - 1. Level 1. Comply with gypsum products manufacturer's published

instructions.

- A. [System A], [System B], [System C], [System D], [System E], [System F], [System G], [System H], [System AA], [System AB], [System AC], [System VA]:

- 1. Level 2. Comply with gypsum products manufacturer's published instructions.

- A. [System A], [System B], [System C], [System D], [System E], [System F], [System G], [System H], [System AA], [System AB], [System AC], [System VA]:

- 1. Level 3. Comply with gypsum products manufacturer's published instructions.

- A. [System A], [System B], [System C], [System D], [System E], [System F], [System G], [System H], [System AA], [System AB], [System AC], [System VA]:

- 1. Level 4. Comply with gypsum products manufacturer's published instructions.

- A. [System A], [System B], [System C], [System D], [System E], [System F], [System G], [System H], [System AA], [System AB], [System AC], [System VA]:

- 1. Level 5. Comply with gypsum products manufacturer's published instructions.

3.06 CLEANING

- A. Follow Section 01710-Final Cleaning.

3.07 PROTECTION

- A. Protect the work from damage; repair to Architect's satisfaction or replace damaged materials.

END OF SECTION

*****END for brief Part 3.*****

*****Continue here for a comprehensive Part 3.*****

*****Select for Systems A, B, C, D, E, F, G, H, and VA.*****

3.08 VERTICAL WALL INSTALLATION

A. Runners, Studs, and Liner Boards:

1. Attach J-Runners plumb with one another, long leg on shaftside, at floor and structure overhead using power-driven fasteners located 2 in. from each end and 24 in. o.c. between. Cut jamb J-Runners or E-Studs not less than 3/8 in. nor more than 1/2 in. less than distance from floor to structure above. Position J-Runners or E-Studs at wall structural jambs. Do not attach to floor or overhead J-Runners.
2. With steel frame construction attach J-Runners to beams and J-Runners or E-Studs to columns prior to fireproofing application. Where fireproofing is more than 1 in. thick, position Z-Clips at jambs no more than 4 in. from floor and structure above and no more than 24 in. o.c. between. Attach Z-Clips to steel frame with power-driven fasteners. Attach J-Runners and E-Studs to Z-Clips with two (2) 1/2 in. Type S-12 screws. Remove excess fireproofing from insides of J-Runners and E-Studs before installing liner boards.
3. Cut liner boards 1 in. less than distance from floor to structure above; erect vertically into floor and overhead J-Runners, and into jamb J-Runner or E-Stud. Where wall height exceeds maximum length of liner board, position board end joints within upper and lower 1/3 of height from floor to structure above; stagger joints in adjacent boards. Achieve tight fit at mating board ends.
4. Cut C-H Studs not less than 3/8 in. nor more than 1/2 in. less than distance from floor to structure above. Fit first C-H Stud over leading edge of first liner board. Install remaining liner boards and C-H Studs. Do not attach C-H Studs to J-Runners.
 - a. Do not splice C-H Studs or E-Studs. For wall heights exceeding 16 ft. attach C-H studs, E-Studs, or jamb J-runners to floor and overhead J-Runners with two (2) 1/2 in. Type S-12 screws on shaftside and one (1) on floorside. Always fit liner boards tightly into studs or jamb runners. Always fit studs or jamb runners tightly over liner boards.
5. Corners and intersections: Position jamb J-Runners or E-Studs at corners and T-intersections.
6. Door openings: Install E-Studs plumb at each jamb of swinging doors. Install jamb struts plumb with long legs on shaftside at each jamb of elevator doors. Attach jamb strut studs to floor and overhead J-Runners with two (2) 3/8 in. Type S-12 screws pan head on shaftside and one (1) on floorside. Attach strut studs to door jamb anchors with two (2) 1/2 in. Type S-12 pan head screws per anchor.
 - a. For walls above doors miter-cut J-Runners legs and position J-Runner horizontally to fit tightly between strut studs to serve as opening head. At each jamb extend J-Runner upward into overhead J-Runner. Attach J-Runner webs to strut stud webs with 3/8 in. Type S-12 screws spaced not more than 12 in. o.c., 2 in. above opening head, and not more than 4 in. from overhead J-Runner, using not less than 3 screws per jamb.

Install C-H Studs horizontally at not less than 24 in. o.c.; attach to each mitered jamb J-Runner one (1) 3/8" Type S-12 screw shaftside and one (1) floorside.

- b. Provide additional liner boards, gypsum shims and fillers at elevator door frames as necessary to maintain fire integrity of the tested labelled frame construction. Construct opening in conformance with frame manufacturer's fire test report; secure copy of fire test report from frame manufacturer and maintain on site for elevator inspector.
7. Small openings: Frame openings with E-Studs or J-Runners at jambs; frame heads and sills with J-Runners. Attach head and sill J-Runners to jambs with two (2) 3/8 in. Type S-12 screws on shaftside and one (1) on floorside.
8. Do not exceed allowable stresses in C-H Studs, E-studs or J-Runners.

*****Select for System H.*****

B. Resilient Channels:

1. Position resilient channels at right angles to studs, spaced no more than 24 in. o.c.; attach to stud flanges with one (1) 3/8" Type S pan head screw driven through holes in channel mounting flange. Install channels with mounting flange down. Locate channels no more than 6 in. from floor and structure above. Extend channels into corners and attach to corner framing. Cantilever channel ends no more than 6 in. Splice channels by lapping 3 in. directly over, and centered upon, a stud; screw attach through both flanges; drive one (1) additional screw at each end of lap. Install 3 in. wide gypsum board filler strips below each channel at floor and above each channel at structure overhead.