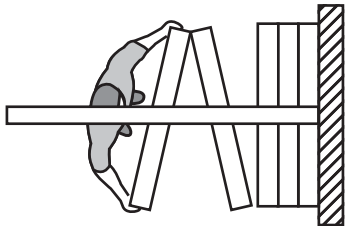


1. SERIES 642 SPECIFICATIONS

Paired Panels



Top Supported Center Stack Paired Panels

Manually Operated

Maximum Height: 24'3" [7391]

Maximum Opening Width: Unlimited

STC Ratings: 43, 47, 49, 52, 54,
55, and 56

PRODUCT OVERVIEW:

Select for Durability and Aesthetics: The 642 offers panel finishes for the ultimate in design flexibility. Even the frames may be color matched to coordinate with the faces. The 642 is a popular choice for hotel meeting rooms, convention centers, commercial facilities, or other high use facilities.

Standard Features: The panels are nominally 4" [102] thick, and have a 16 ga. steel frame. The top and bottom horizontal sound seals are retractable and provide floor clearance (to accommodate out-of-level floors). The retractable seals are Quick-Set™ which means they are easily extended or retracted with only a 1/2 turn of the removable handle. The faces may be covered from a wide selection of vinyl colors and patterns or other materials.

Paired Panels: Select for wall-to-wall space division. Panels are hinged in pairs allowing fast setup. They may be stacked at either or both ends of the track or in a "pocket". One or more pair of panels may be placed anywhere along the track for use as sight dividers.

How to Obtain: Hufcor partitions are sold, installed, and serviced by factory-trained local authorized Distributors in the United States and by Licensees and Distributors outside the U.S.A.

Delivery: Panels are custom built for your specific project. Lead times vary due to seasonal fluctuations. Check with your Distributor for the current schedule.

Warranty: Track and panels are guaranteed for **two years** against defects in material and workmanship.

"Standard" Product Features and Benefits:

Look for these features when comparing similar products.

- Feature:** Protective vertical trim (Available option: no protective vertical face trim.)
Benefit: Trim protects the panel edges and faces plus it provides a handhold when moving panels.
- Feature:** Quick-Set™ Retractable Seals
Benefit: The retractable seals are Quick-Set™ which means they are easily extended or retracted with only a 1/2 turn of the removable handle. No tedious cranking needed to set the seals.
- Feature:** 2" [51] retractable top and bottom seals
Benefit: Retractable seals accommodate out-of-level floor conditions. When retracted, nothing drags on the floor or track when the panels are moved. Panels can be "locked" in place.
- Feature:** Retractable seals exert seal force
Benefit: Provides constant force against track and floor for optimum acoustics even on carpet or other porous floor materials. Maintains panel stability when the seals are set.
- Feature:** Waist high seal activator for quick set retractable seals.
Benefit: Fast, easy seal activation without bending or stooping.
- Feature:** Removable operating handle.
Benefit: Prevents unauthorized operation.
- Feature:** Expanding Jamb Closure (Lever Closure) Panel
Benefit: Exerts 250 lbs [113.4 kg] of force against the fixed wall. The compression creates tight panel joints for optimum sound control.
- Feature:** Interlocking vertical seals
Benefit: Ensures panel-to-panel alignment and prevents sound leaks between panels.
- Feature:** Low profile hinges
Benefit: Safety and aesthetics - no unsightly hinges protruding from the panel faces.



Optional track systems, seals, and accessories enable the standard product to be modified for optimum versatility. See details provided or ask your Hufcor representative about the features you want.

GENERAL SPECIFICATIONS/SERIES 642

Paired Operable Partitions

PART 1 - GENERAL

1.01 DESCRIPTION

A. General

1. Furnish and install operable partitions and suspension system.
Provide all labor, materials, tools, equipment, and services for operable walls in accordance with provisions of contract documents.

1.02 RELATED WORK BY OTHERS

- A. Preparation of opening will be by General Contractor. Any deviation of site conditions contrary to approved shop drawings must be called to the attention of the architect.
- B. All header, blocking, support structures, jambs, track enclosures, surrounding insulation, and sound baffles as required in 1.04 Quality Assurance.
- C. Pre-punching of support structure in accordance with approved shop drawings.
- D. Paint or otherwise finishing all trim and other materials adjoining head and jamb of operable partitions.

1.03 SUBMITTALS

- A. Complete shop drawings are to be provided prior to fabrication indicating construction and installation details. Shop drawings must be submitted within 60 days after receipt of signed contract.

1.04 QUALITY ASSURANCE

- A. Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions
- B. The partition STC (Sound Transmission Classification) shall be achieved per the standard test methods ASTM E90.
- C. Noise isolation classifications shall be achieved per the standard test methods ASTM E336 and ASTM E413.
- D. Noise Reduction Coefficient (NRC) ratings shall be per ASTM C423.
- E. Rack testing for 10 years. (tensional strength stress test)
- F. The manufacturer shall have a quality system that is registered to the ISO 9001 standards.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Proper storage of partitions before installation and continued protection during and after installation will be the responsibility of the General Contractor.

1.06 WARRANTY

- A. Partition system shall be guaranteed for a period of two years against defects in material and workmanship, excluding abuse.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Upon compliance with all of the criteria specified in this section, Manufacturers wishing to bid products equal to the product specified must submit to the architect 10 days prior to bidding complete data in support of compliance and a list of three past installations of products similar to those listed. The submitting manufacturer guarantees the proposed substituted product complies with the performance items specified and as detailed on the drawings.

2.02 MATERIALS

- A. Product to be top supported Series 642 paired panels as manufactured by Hufcor Inc.
 1. Panels shall be nominally 4" [102] thick, to 48" [1219] in width, and hinged in pairs.
 2. Panel faces shall be laminated to appropriate substrate to meet the STC requirement in 2.04 Acoustical Performance.
 - a. Optional face material (Not all substrates are available for all STC ratings. Consult your Hufcor Distributor for more information):
 - Steel
 - Non-steel
 - Medium Density Fiberboard
 - b. Horizontal Splice: Heights over 16'3" [4953] with non-steel faces require a structural splice placed at approximately 12'3" [3734] from the floor.
 3. Frames shall be of 16 gauge [1.42mm] steel with integral factory applied aluminum vertical edge and face protection.
Optional: Face finish shall wrap around the vertical panel edges and

provide no protective vertical face trim.

4. Vertical sound seals shall be of tongue and groove configuration, ensure panel-to-panel alignment and prevent sound leaks between panels.
 5. Horizontal top seals shall be retractable, provide 1" [25] nominal operating clearance, and exert upward force when extended. All panels, including pass door panels and lever closure panels must have retractable top and bottom seals.
Optional top seals: Horizontal top seals shall be fixed continuous contact dual 4 finger vinyl.
 6. Horizontal bottom seals shall be retractable, provide up to 2" [51] nominal operating clearance, and exert downward force when fully extended.
Optional bottom seals: Horizontal bottom seals shall be fixed continuous contact 4-finger vinyl.
 7. Horizontal trim shall be of aluminum.
 8. Low profile hinges on basic panels shall be of steel and project no more than 1/4" [6] beyond panel faces. Each pair of panels to have a minimum of three hinges.
- B. Weight of the panels shall be 7.8-13.6 lbs./sq. ft. [37.8-66.4 kg/sq.m] based on options selected.
- C. Suspension system:
 1. Track shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6. Track design shall provide precise alignment at the trolley running surfaces and provide integral support for adjoining ceiling, soffit, or plenum sound barrier. Track shall be connected to the structural support by pairs of minimum 3/8" [10] dia. threaded steel hanger rods. Guide rails and/or track sweep seals shall not be required.
 - a. Each panel shall be supported by one 4-wheeled carrier. Wheels to be of hardened steel ball bearings encased with molded polymer tires.
 2. Optional tracks may be used providing the height and weight limits are within manufacturers guidelines. See page 6 "Optional Tracks".
 3. Plenum closure (by others): Design of plenum closure must permit lifting out of header panels to adjust track height. Plenum closure required for optimum sound control of partition.
 4. Option (available for select layouts-consult your Hufcor Distributor): The panels shall be supported by the Unispan truss and post system fabricated of steel and aluminum. Unispan is attached to the building structure for lateral support only. The load of the truss and partition is supported by end columns. The columns are connected to floor plates that distribute the load of the system at the floor.
- D. Finishes
 1. Face finish shall be: (**select as required**):
 - a. Factory applied reinforced vinyl fabric with woven backing, weighing not less than 20 oz. per lineal yard [620 g/m]. Color shall be selected from manufacturer's standard color selector.
 - b. Standard upgrade fabrics (color shall be selected from manufacturer's standard color selector):
 - (1) Factory applied vertical ribbed carpet (N.R.C. .20)
 - (2) Factory applied stain resistant fabric
 - c. Optional:
 - (1) Customer selected (requires factory approval for manufacturing compatibility)
 - (2) Unfinished for field decoration
 - (3) Wood veneer (factory installed on trimmed models)
 - (4) High pressure laminate (factory installed on trimmed models)
 2. Exposed metal trim and seal color shall be (**select from Hufcor's Standard Trim selector**):
 - a. Lamb's Wool (standard)
 - b. Brown (standard)
 - c. Gray (standard)
 - d. Custom powder coated (optional upgrade for metal trim)
 3. Aluminum track shall be clear anodized
 - a. Optional upgrade:
 - (1) Custom anodized
 - (2) Custom powder coated
- E. Available Accessories/Options
 1. ADA compliant pass door of the same thickness and construction as the basic panels. Pass door panel legs require bottom seals that



provide downward force to maintain stability during door operation. Pass door leaf has perimeter trim to protect face finish and to provide visual identification as required by International Building Code. Pass door leaf incorporates a self-adjusting retractable bottom seal providing sound control when door is closed.

- a. Automatic door closer
- b. Door lock
- c. Exit sign (consult your local code)
- d. Prepped for window
- e. Peep hole
- 2. Markerboards, inset or full height
- 3. Inset tackboards (not available with STC 55 or 56)
- 4. Inset eraser pocket
- 5. Segmented faces
- 6. Finished end cover
- 7. Pocket doors
- 8. Inset chair rail pan (for field installation of chair rail).
- 9. Custom design options (consult your local Hufcor Distributor)
- 10. Field sound test

2.03 OPERATION

- A. Panels shall be manually moved from the storage area, positioned in the opening, and seals set.
- B. Retractable Horizontal Seals
 - 1. Retractable horizontal seals shall be activated by a removable quick-set operating handle located approximately 42" [1067] from the floor in the panel edge.
 - 2. All retractable seals in each hinged panel group shall be operated simultaneously.
 - 3. Seal activation requires a 190 degree turn of the removable handle.
- C. Final partition closure to be by lever closure panel with expanding jamb which compensates for minor wall irregularities and provides a minimum of 250 lbs. [113.4 kg] seal force against the adjacent wall for optimum sound control. The jamb activator shall be located approximately 45" [1143] from

the floor in the panel face and be accessed from either side of the panel. The jamb is equipped with a mechanical rack and pinion gear drive mechanism and shall extend 4"-6" [102-152] by turning the removable operating handle.

D. Stack/Store Panels

- 1. Retract seals with removable operating handle and move to storage area. Panels may be stored at either or both ends of the track or in a pocket.

2.04 ACOUSTICAL PERFORMANCE

A. Acoustical performance shall be tested at a laboratory accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) and in accordance with ASTM E90 Test Standards. Standard panel construction shall have obtained an STC rating of ____ (select those required): 43, 47, 49, 52, 54, 55, 56 (Not all substrates are available in all STC ratings)

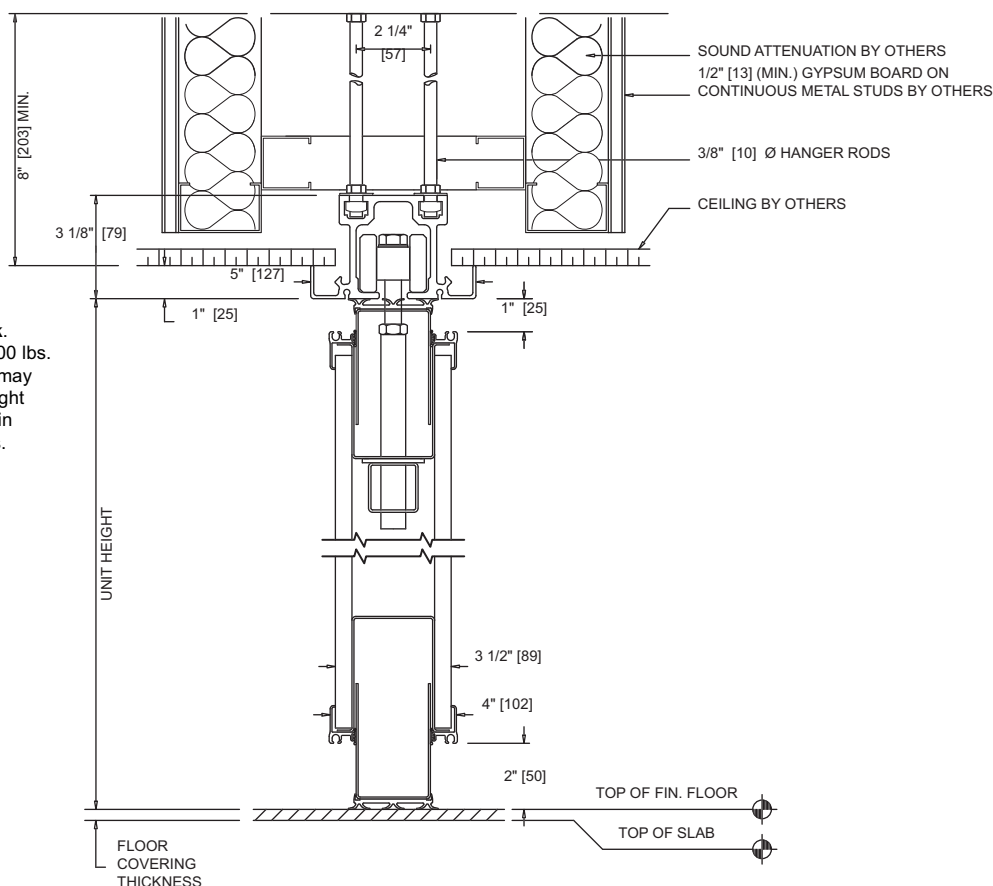
- 1. Complete, unaltered written test report is to be made available upon request.

PART 3 - EXECUTION

- A. Installation. The complete installation of the operable wall system shall be by an authorized factory-trained installer and be in strict accordance with the approved shop drawings and manufacturer's standard printed specifications, instructions, and recommendations.
- B. Cleaning
 - 1. All track and panel surfaces shall be wiped clean and free of handprints, grease, and soil.
 - 2. Cartoning and other installation debris shall be removed to onsite waste collection area, provided by others.
- C. Training
 - 1. Installer shall demonstrate proper operation and maintenance procedures to owner's representative.
 - 2. Operating handle and owners manuals shall be provided to owner's representative.

Header shown for plenum sound enclosure is one of several that may be used. See ASTM E557 Standard Practice for Archl Application & Installation of Operable Partitions for other recommendations.

Type 40 Aluminum track. Standard for weights to 900 lbs. [408 kg]. Alternate track may be used providing the height and weight limits are within manufacturer's guidelines.



VERTICAL SECTION

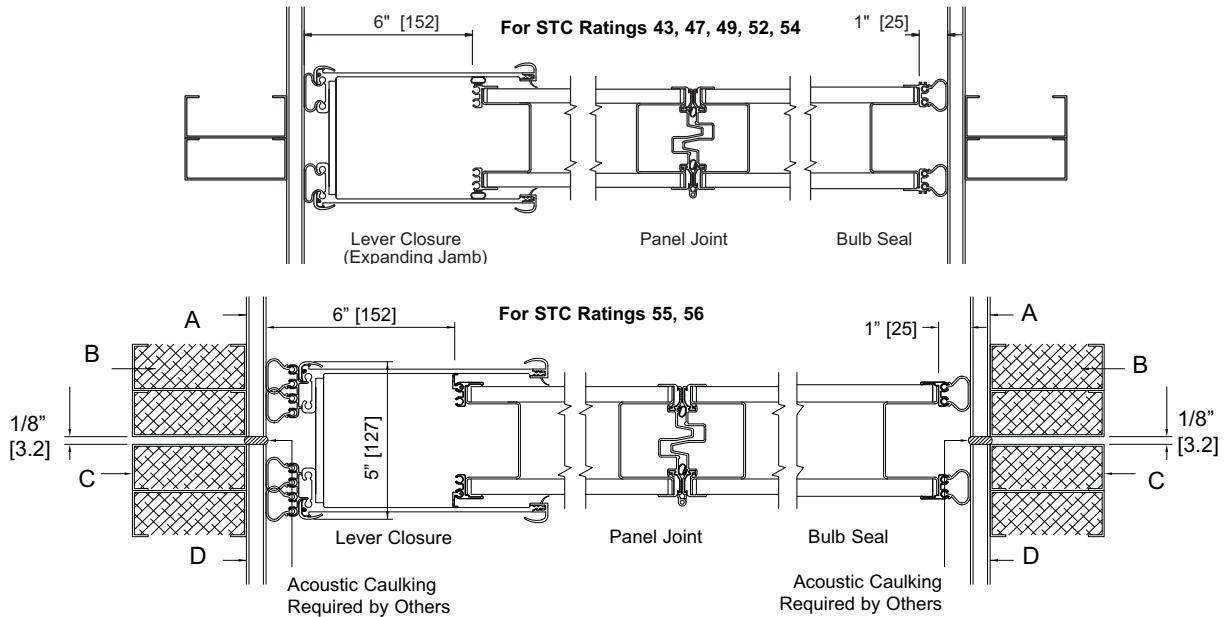
No Scale



HORIZONTAL SECTION with Vertical Trim

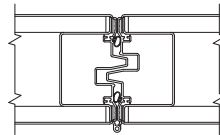
No Scale

Final partition closure using an Expanding Jamb (Lever Closure). Solid blocking is required at both ends to withstand 250 lbs. [113.4 kg] of lateral force.

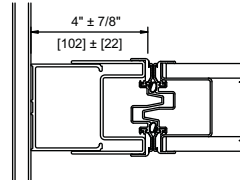


- A. Discontinuous Finish Material and Framing by Others
- B. Mineral Wool Insulation by Others
- C. Ganged Steel Studs Secured Top and Bottom by Others
- D. Gypsum Board by Others

Optional: No vertical face trim panel joint.

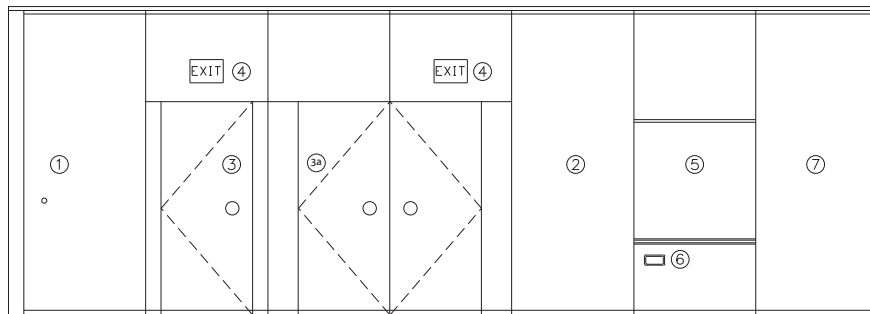


Optional: Wall Jamb Assembly



OPTIONS & ACCESSORIES

ELEVATION



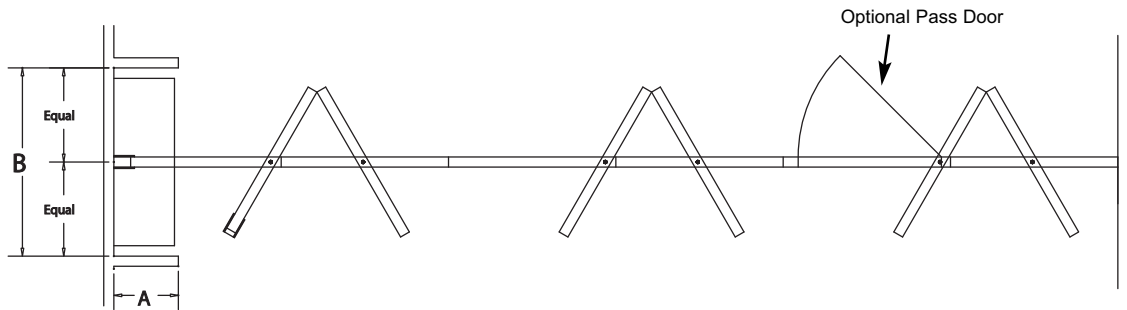
1. **Expanding Jamb Closure (Lever Closure) Panel.**
Expanding jamb exerts 250 lbs. [113.4kg] force against adjacent wall for optimum sound control.
2. **Basic panel**
3. **ADA compliant pass doors** - Single 3/0 x 7/0 [914 x 2132] or 3/0 x 6/8 [914 x 2030]. Of the same construction, thickness, and finish as the basic panels. Push/pull latching handle. Options include key lock, windows, and automatic door closer. No threshold is required.
3a. Double doors ("batwing") also available.
4. **Exit Sign** - Recessed or surface mounted, self-illuminated.
5. **Work Surfaces** 4'0" [1219] high x panel width, recessed, mounted approx. 30" [762] above the floor:
 - a. Markerboard surfaces (from Hufcor standard colors)
 - b. Tackboards of 2mm cork board covered with vinyl (from Hufcor standard color selector).
 - c. Marker tray (standard on inset markerboards).
 - d. Full height markerboard
6. **Recessed Eraser Pocket** (8" x 2" x 1-1/4" deep [203 x 50 x 31]).
7. **Lead panel** with bulb seal to prevent sound leaks at adjacent wall.
Optional: Lead panel closure to 4" [102] adjustable, full height, acoustic wall jamb assembly.

Paired Operable Partitions

STACK DIMENSIONS

The following stack depth and width dimensions are based on standard construction with vinyl faces. Optional construction and/or face covering may increase stack depth requirements.

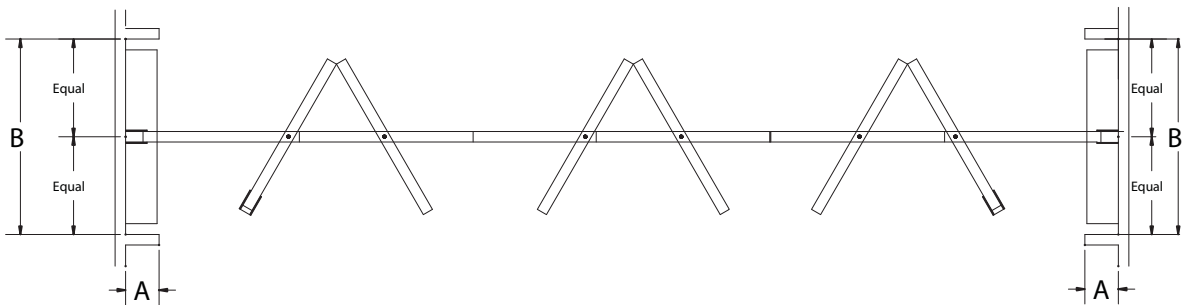
Single Opening. Using an Expanding Jamb (Lever Closure) Panel



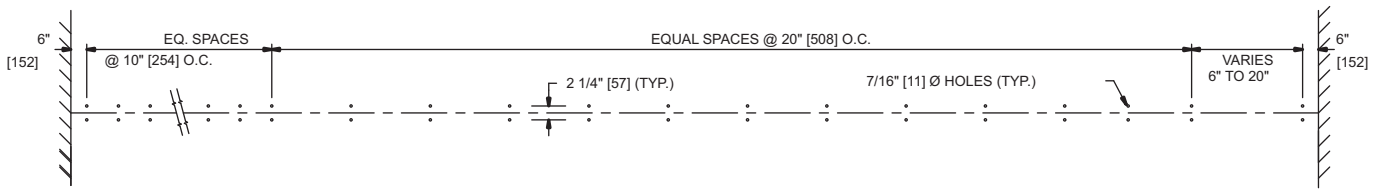
A = Stack Depth, 4-1/4" [108] per panel plus 1" [25]
 Optional panic hardware will add to the depth of the stack.
 Please contact your Hufcor distributor for assistance.

B = Stack Width:
 No Pocket: Panel width + 3" [76].
 Pocket without pocket doors: Panel width + min. 8" [204]

Optional - Bi-parting (with expanding jamb (lever closure) panels at both ends). (same stack formula at each end as single)



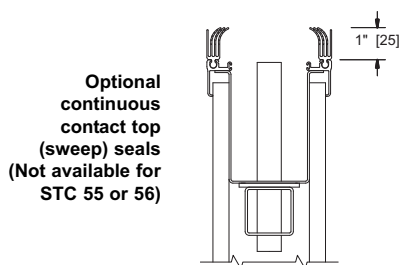
HANGER ROD LAYOUT - For Type 38, & 40 Tracks



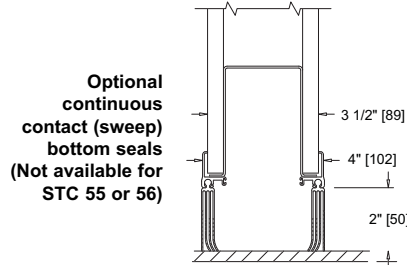
HANGING WEIGHT

STC	Lbs./Sq. Ft.	Kg./Sq. M
43	7.8	37.8
47	8.0	38.7
49	8.5	41.2
52	9.5	46.0
54	10.9	53.2
55	12.8	62.5
56	13.6	66.4

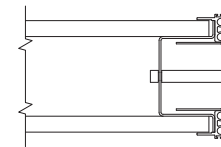
OPTIONS



Optional continuous contact top (sweep) seals
(Not available for STC 55 or 56)

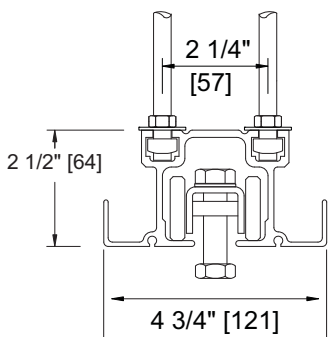


Optional continuous contact (sweep) bottom seals
(Not available for STC 55 or 56)

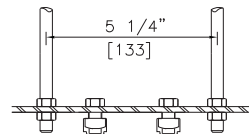


Optional finished end cover - provides finished panel end when partition run does not extend from wall-to-wall.

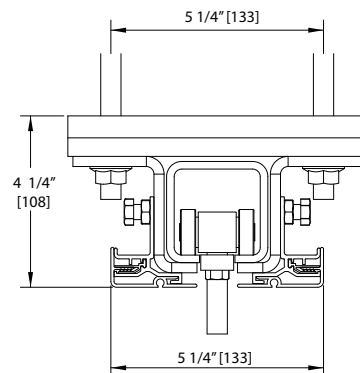
OPTIONAL TRACKS - Alternate Hufcor track may be used providing the height and weight limits are within manufacturer's guidelines.



Type 38 Aluminum Track
Optional for panel weights to 400 lbs. [182 kg].



Optional suspension bracket available for 5-1/4" [133] spacing.



Type 11L Steel Track

For panel weights to 900 lbs. [408 kg]. Track is of 3/16" [5] formed steel. Track trim is clear anodized aluminum. Each carrier has four steel wheels with precision ground radial bearings. Minimum dimension from the ceiling to the structure is 8" [203].

Worldwide headquarters:

Hufcor Inc.
2101 Kennedy Rd.
P.O. Box 5591
Janesville, WI USA 53547-0591
1-800-542-2371 ext. 214; 1-608-756-1241
FAX: 1-608-758-8253
E-mail: info@hufcor.com
Website: www.hufcor.com

The manufacturer reserves the right to improve and change product without notice.

Series 642 Paired Panel Specifications

Part 1 - General

1.01 DESCRIPTION

A. General

1. Furnish and install operable partitions and suspension system. Provide all labor, materials, tools, equipment, and services for operable walls in accordance with provisions of contract documents.

1.02 RELATED WORK BY OTHERS

- A. Preparation of opening will be by General Contractor. Any deviation of site conditions contrary to approved shop drawings must be called to the attention of the architect.
- B. All header, blocking, support structures, jambs, track enclosures, surrounding insulation, and sound baffles as required in 1.04 Quality Assurance.
- C. Prepunching of support structure in accordance with approved shop drawings.
- D. Paint or otherwise finishing all trim and other materials adjoining head and jamb of operable partitions.

1.03 SUBMITTALS

- A. Complete shop drawings are to be provided prior to fabrication indicating construction and installation details. Shop drawings must be submitted within 60 days after receipt of signed contract.

1.04 QUALITY ASSURANCE

- A. Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions
- B. The partition STC (Sound Transmission Classification) shall be achieved per the standard test methods ASTM E90.
- C. Noise isolation classifications shall be achieved per the standard test methods ASTM E336 and ASTM E413.
- D. Noise Reduction Coefficient (NRC) ratings shall be per ASTM C423.
- E. Rack testing for 10 years. (tensional strength stress test)
- F. The manufacturer shall have a quality system that is registered to the ISO 9001 standards.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Proper storage of partitions before installation and continued protection during and after installation will be the responsibility of the General Contractor.

1.06 WARRANTY

- A. Partition system shall be guaranteed for a period of two years against defects in material and workmanship, excluding abuse.

Part 2 Products

2.01 ACCEPTABLE MANUFACTURERS

- A. Upon compliance with all of the criteria specified in this section, Manufacturers wishing to bid products equal to the product specified must submit to the architect 10 days prior to bidding complete data in support of compliance and a list of three past installations of products similar to those listed. The submitting manufacturer guarantees

the proposed substituted product complies with the performance items specified and as detailed on the drawings.

2.02 MATERIALS

- A. Product to be top supported Series 642 paired panels as manufactured by Hufcor Inc.
 - 1. Panels shall be nominally 4" [102] thick, to 48" [1219] in width, and hinged in pairs.
 - 2. Panel faces shall be laminated to appropriate substrate to meet the STC requirement in 2.04 Acoustical Performance.
 - a. Optional face material (Not all substrates are available for all STC ratings. Consult your Hufcor Distributor for more information):
 - Steel
 - Non-steel
 - Medium Density Fiberboard
 - b. Horizontal Splice: Heights over 16'3" [4953] with non-steel faces require a structural splice placed at approximately 12'3" [3734] from the floor.
 - 3. Frames shall be of 16 gauge [1.42mm] painted steel with integral factory applied aluminum vertical edge and face protection. Optional: Face finish shall wrap around the vertical panel edges and provide no protective vertical face trim.
 - 4. Vertical sound seals shall be of tongue and groove configuration, ensure panel-to-panel alignment and prevent sound leaks between panels.
 - 5. Horizontal top seals shall be retractable, provide 1" [25] nominal operating clearance, and exert upward force when extended. All panels, including pass door panels and lever closure panels must have retractable top and bottom seals. Optional top seals: Horizontal top seals shall be fixed continuous contact dual 4 finger vinyl.
 - 6. Horizontal bottom seals shall be retractable, provide up to 2" [51] nominal operating clearance, and exert downward force when fully extended. Optional bottom seals: Horizontal bottom seals shall be fixed continuous contact 4-finger vinyl.
 - 7. Horizontal trim shall be of aluminum.
 - 8. Low profile hinges on basic panels shall be of steel and project no more than 1/4" [6] beyond panel faces. Each pair of panels to have a minimum of three hinges.
- B. Weight of the panels shall be 7.8-13.6 lbs./sq. ft. [37.8-66.4 kg/sq.m] based on options selected.
- C. Suspension system:
 - 1. Track shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6. Track design shall provide precise alignment at the trolley running surfaces and provide integral support for adjoining ceiling, soffit, or plenum sound barrier. Track shall be connected to the structural support by pairs of minimum 3/8" [10] dia. threaded steel hanger rods. Guide rails and/or track sweep seals shall not be required.
 - a. Each panel shall be supported by one 4-wheeled carrier. Wheels to be of hardened steel ball bearings encased with molded polymer tires.
 - 2. Plenum closure (by others): Design of plenum closure must permit lifting out of header panels to adjust track height. Plenum closure required for optimum sound control of partition.

3. Option (available for select layouts-consult your Hufcor Distributor): The panels shall be supported by the Unispan pre-engineered truss and post system fabricated of steel and aluminum. Unispan is attached to the building structure for lateral support only. The load of the truss and partition is supported by end columns. The columns are connected to floor plates that distribute the load of the system at the floor.

D. Finishes

1. Face finish shall be: (select as required):
 - a. Factory applied reinforced vinyl fabric with woven backing, weighing not less than 20 oz. per lineal yard [620 g/m]. Color shall be selected from manufacturer's standard color selector.
 - b. Standard upgrade fabrics (color shall be selected from manufacturer's standard color selector):
 - (1) Factory applied vertical ribbed carpet (N.R.C. .20)
 - (2) Factory applied stain resistant fabric
 - c. Optional:
 - (1) Customer selected (requires factory approval for manufacturing compatibility)
 - (2) Unfinished for field decoration
 - (3) Wood veneer (factory installed on trimmed models)
 - (4) High pressure laminate (factory installed on trimmed models)
2. Exposed metal trim and seal color shall be (select from Hufcor's Standard Trim selector):
 - a. Lamb's Wool (standard)
 - b. Brown (standard)
 - c. Gray (standard)
 - d. Custom powder coated (optional upgrade for metal trim)
3. Aluminum track shall be clear anodized
 - a. Optional upgrade:
 - (1) Custom anodized
 - (2) Custom powder coated

E. Available Accessories/Options

1. ADA compliant pass door of the same thickness and construction as the basic panels. Pass door panel legs require bottom seals that provide downward force to maintain stability during door operation. Pass door leaf has perimeter trim to protect face finish and to provide visual identification as required by International Building Code. Pass door leaf incorporates a self-adjusting retractable bottom seal providing sound control when door is closed.
 - a. Automatic door closer
 - b. Door lock
 - c. Exit sign (consult your local code)
 - d. Prepped for window
 - e. Peep hole
2. Inset chalk/writing/projection surfaces
3. Inset tackboards (not available with STC 55 or 56)
4. Inset eraser pocket

5. Segmented faces
6. Finished end cover
7. Pocket doors
8. Inset chair rail pan (for field installation of chair rail).
9. Custom design options (consult your local Hufcor Distributor)
10. Field sound test

2.03 OPERATION

- A. Panels shall be manually moved from the storage area, positioned in the opening, and seals set.
- B. Retractable Horizontal Seals
 1. Retractable horizontal seals shall be activated by a removable quick-set operating handle located approximately 42" [1067] from the floor in the panel edge.
 2. All retractable seals in each hinged panel group shall be operated simultaneously.
 3. Seal activation requires a 190 degree turn of the removable handle.
- C. Final partition closure to be by lever closure panel with expanding jamb which compensates for minor wall irregularities and provides a minimum of 250 lbs. [113.4 kg] seal force against the adjacent wall for optimum sound control. The jamb activator shall be located approximately 45" [1143] from the floor in the panel face and be accessed from either side of the panel. The jamb is equipped with a mechanical rack and pinion gear drive mechanism and shall extend 4"-6" [102-152] by turning the removable operating handle.
- D. Stack/Store Panels
 1. Retract seals with removable operating handle and move to storage area. Panels may be stored at either or both ends of the track or in a pocket.

2.04 ACOUSTICAL PERFORMANCE

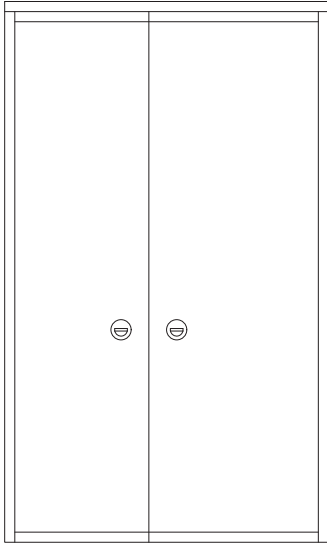
- A. Acoustical performance shall be tested at a laboratory accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) and in accordance with ASTM E90 Test Standards. Standard panel construction shall have obtained an STC rating of ___ (select those required): 43, 47, 49, 52, 54, 55, 56
(Not all substrates are available in all STC ratings)
 1. Complete, unaltered written test report is to be made available upon request.

Part 3 - Execution

- A. Installation. The complete installation of the operable wall system shall be by an authorized factory-trained installer and be in strict accordance with the approved shop drawings and manufacturer's standard printed specifications, instructions, and recommendations.
- B. Cleaning
 1. All track and panel surfaces shall be wiped clean and free of handprints, grease, and soil.
 2. Cartoning and other installation debris shall be removed to onsite waste collection area, provided by others.
- C. Training
 1. Installer shall demonstrate proper operation and maintenance procedures to owner's representative.
 2. Operating handle and owners manuals shall be provided to owner's representative.

2. POCKET DOORS

Pocket Doors



Type 2 Pocket Door Shown

**Manual Operation
Opening Height**

& Width: Custom built to job site requirements.

PRODUCT OVERVIEW:

Hufcor offers pocket doors to close the openings of operable wall storage pockets.

It has been our experience that one of the types shown in these specifications will work for most pocket openings; however, if needed, they can be modified to suit a particular application.

Pocket doors are factory covered with the same material as the operable wall panels or may be manufactured unfinished for field decoration to match the perimeter walls.

Delivery: Doors are custom built for your specific project. Lead times vary due to seasonal fluctuations. Check with your Distributor for the current schedule.

Warranty: Pocket doors are guaranteed for **two years** against defects in material and workmanship.

"Standard" Product Features and Benefits:

Look for these features when comparing similar products.

- 1. Feature:** The operating mechanism is internal.
Benefit: Aesthetically pleasing and allows more space inside the pocket to stack panels.
- 2. Feature:** Adjustable Jambes
Benefit: Doors may be properly aligned for easy operation.
- 3. Feature:** Low profile hinges.
Benefit: Safety and aesthetics - no unsightly hinges protruding from the door jambes.
- 4. Feature:** Finish options.
Benefit: Aesthetics. The doors may match the partitions or the perimeter wall finish.
- 5. Feature:** Custom engineering.
Benefit: Doors can be designed to meet your specific job site requirements.



The standard product may be modified for optimum versatility. See details provided or just ask your Hufcor representative for the features you want.

GENERAL SPECIFICATIONS/POCKET DOORS

Pocket Doors

PART 1 - GENERAL

1.01 DESCRIPTION

A. General

- Operable wall manufacturer shall furnish and install pocket doors and provide all labor, materials, tools, equipment, and services for pocket doors in accordance with provisions of contract documents.

1.02 RELATED WORK BY OTHERS

- Preparation of opening will be by General Contractor. Any deviation of site conditions contrary to approved shop drawings must be called to the attention of the architect.
- All header, blocking, support structures, jambs, track enclosures, surrounding insulation, and sound baffles as required in 1.04 Quality Assurance.
- Paint or otherwise finishing all trim and other materials adjoining head and jamb of pocket doors.

1.03 SUBMITTALS

- Complete shop drawings are to be provided prior to fabrication indicating construction and installation details. Shop drawings must be submitted within 60 days after receipt of signed contract.

1.04 QUALITY ASSURANCE

- Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.
- The manufacturer shall have a quality system that is registered to the ISO 9001 standards.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- Proper storage of pocket doors before installation and continued protection during and after installation will be the responsibility of the General Contractor.

1.06 WARRANTY

- Pocket doors shall be guaranteed for two years against defects in material or workmanship.

PART 2 - PRODUCTS

2.02 MATERIALS

- Product to be (**select as required**): (Type 1) (Type 2) (Type 3) (Type 4) pocket doors as manufactured by Hufcor Inc.
 - Pocket door(s) shall be nominally 3" [76] thick.
 - Panel faces shall be laminated to appropriate substrate to meet the STC requirement. STC rating shall be determined by the partitions selected for use with the pocket doors.
Optional face material (Not all substrates are available for all STC ratings. Consult your Hufcor Distributor for more information):
Steel
Non-steel
Medium Density Fiberboard
 - Frames shall be of 16 gauge [1.42mm] painted steel with integral factory applied aluminum vertical edge and face protection. Optional: Face finish shall wrap around the vertical panel edges and provide no protective vertical face trim. This option is only available with steel faces.
 - Pocket doors at heights of 16'3" and over, without face steel, will have horizontal splice rail(s). Location and quantity of splice rails is dependent upon height of door.
 - Horizontal top and bottom seals shall be of continuous contact multi-ply vinyl sweepstrips. When the pocket doors are in the closed position, the seals shall contact an aluminum head member which extends across the pocket from the track to the pocket walls.
 - Pocket doors shall be secured in the closed position by the face-activated expanding internal mechanism.
 - The operating mechanism to be located approximately 46" [1168] from the floor in the door face.

- The top mechanism extends from the top rail of the pocket door and latches in the horizontal header.
- A jamb plate shall be attached to the floor to capture the bottom mechanism.

- Hinges shall be of steel and project no more than 1/4" [6] beyond panel faces. Each pocket door "leaf" to have a minimum of four hinges.
 - Jambs shall be of 6063-T6 aluminum and be adjustable + or - 3/8" [9.5].
- B. Weight of the pocket doors shall be 5.7-8.9 lbs. per sq. ft. [27.8-43.5 kg/sq.m] based on sound rating of the partition selected.

C. Finishes

- Face finish shall be: (**select as required**):
 - Factory applied reinforced vinyl fabric with woven backing, weighing not less than 20 oz. per lineal yard [620 g/m]. Color shall be selected from manufacturer's standard color selectors.
 - Standard upgrade fabrics (color shall be selected from manufacturer's standard color selector):
 - Factory applied vertical ribbed carpet (N.R.C. .20)
 - Factory applied stain resistant fabric
- Optional:
 - Customer selected (requires factory approval for manufacturing compatibility)
 - Unfinished for field decoration
 - Wood veneer (factory installed on models with edge protection)
 - High pressure laminate (factory installed on models with vertical edge protection.)

- Exposed metal trim, jambs, and seal color shall be (**select from Hufcor's Standard Trim selector**):

- Lamb's Wool (standard)
- Brown (standard)
- Gray (standard)
- Custom powder coated (optional upgrade for metal trim)

- Aluminum track shall be clear anodized

- Optional upgrade:
 - Custom anodized

D. Available Accessories/Options

- Key lock - one side
- Limit switches. Required for use with electric partitions. Limit switches are a safety feature which prevent the partition from operating until the pocket doors are completely open.

2.03 OPERATION

- Pocket doors shall be manually opened and closed.
- Pocket doors shall be secured in the closed position by the face-activated expanding internal mechanism.
- Pocket doors used with electrically operated partitions are to be equipped with limit switches which prevent the partition from operating until the pocket doors are completely open.

PART 3 - EXECUTION

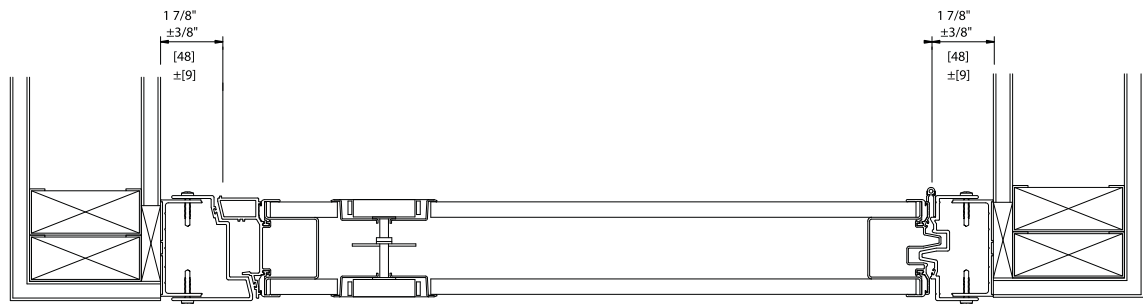
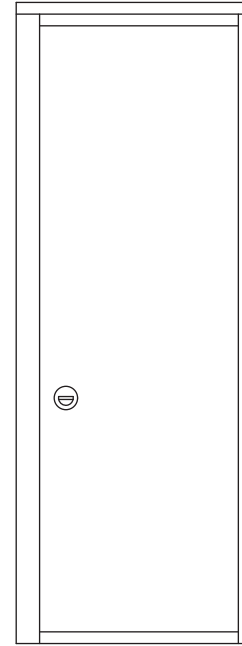
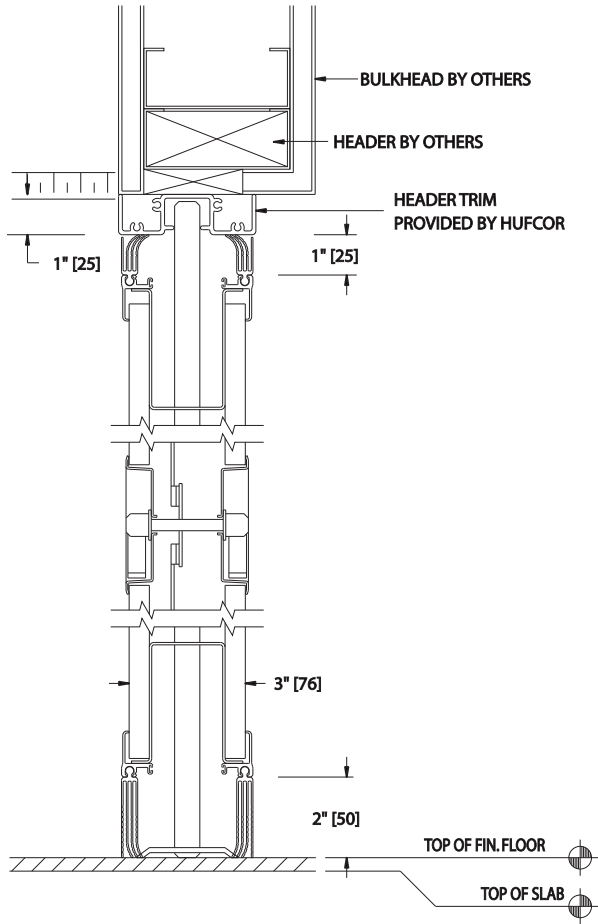
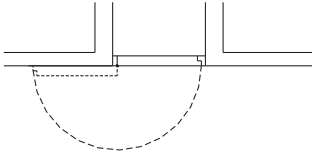
A. Installation

The pocket doors will be installed by an authorized factory-trained installer and be in strict accordance with the approved shop drawings and manufacturer's standard printed specifications, instructions, and recommendations.

TYPE 1 - Not to Scale

Pocket Doors

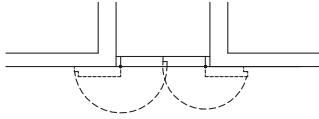
Type 1 pocket door allows the operable wall to seal against the face of the pocket door. Leaf swings outward or inward and may be left or right handed.



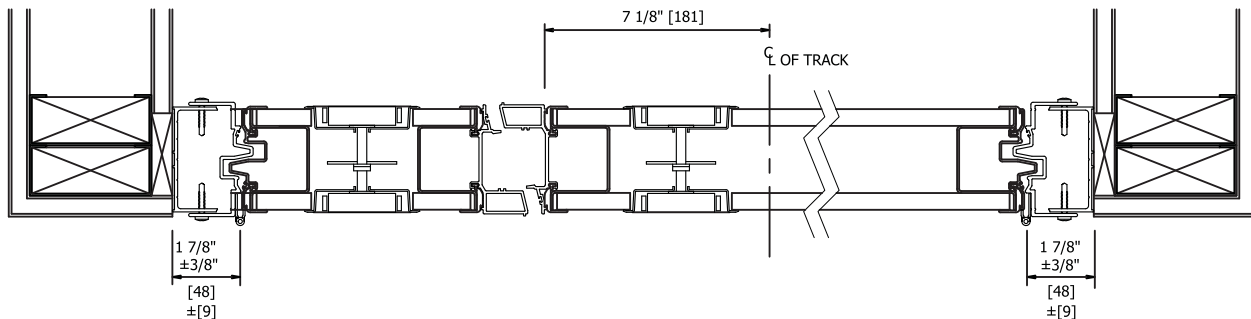
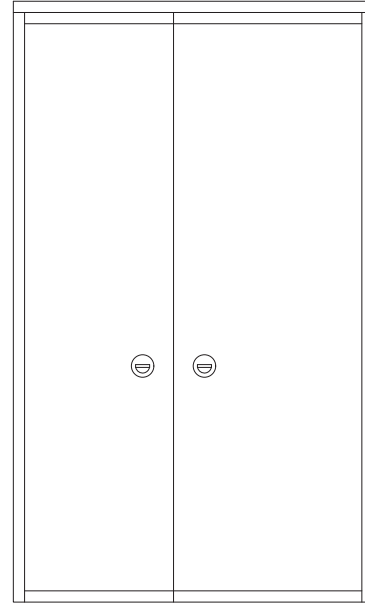
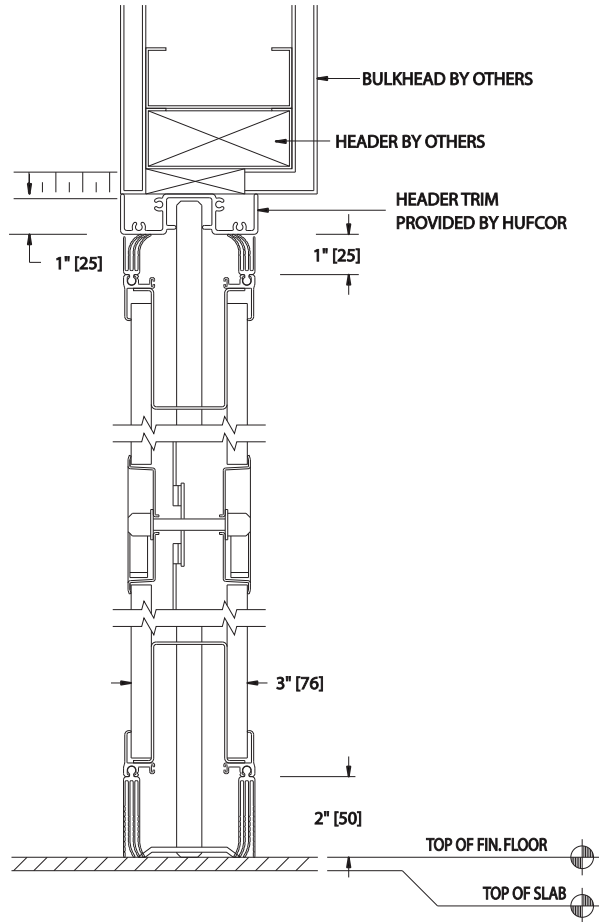
No Scale

TYPE 2 - Not to Scale

Pocket Doors

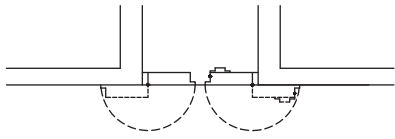


Type 2 pocket doors have two leaves and allow the operable wall to seal against the face of the pocket door. Both leaves swing outward or inward.

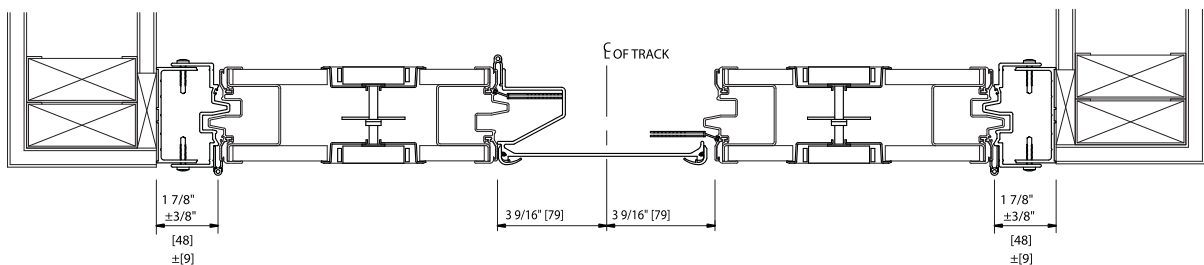
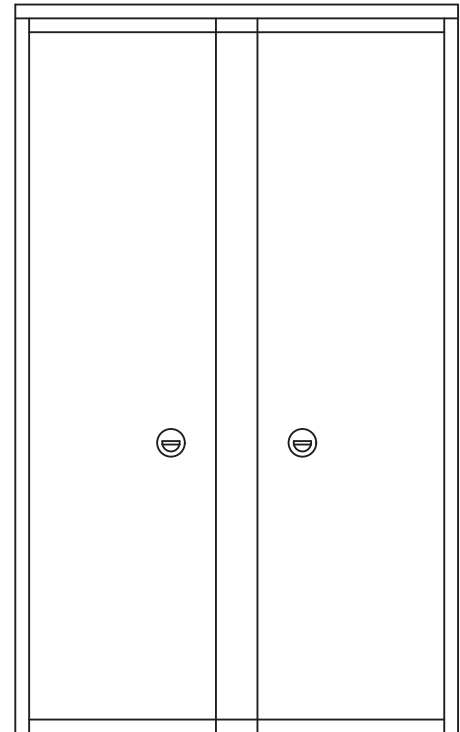
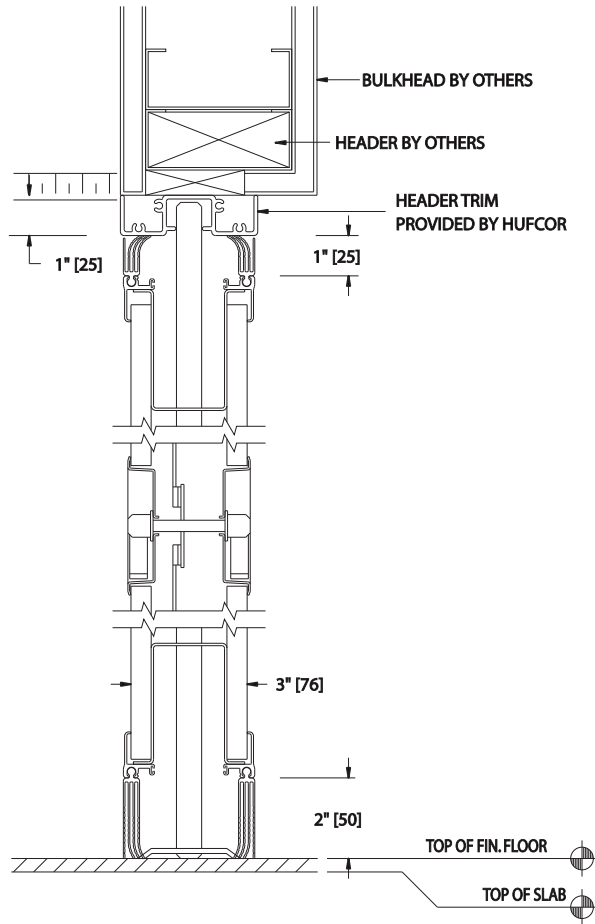


TYPE 3 - Not to Scale

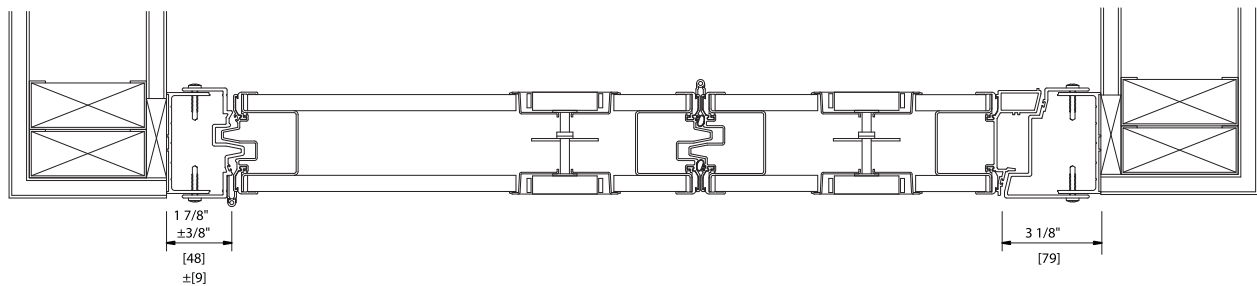
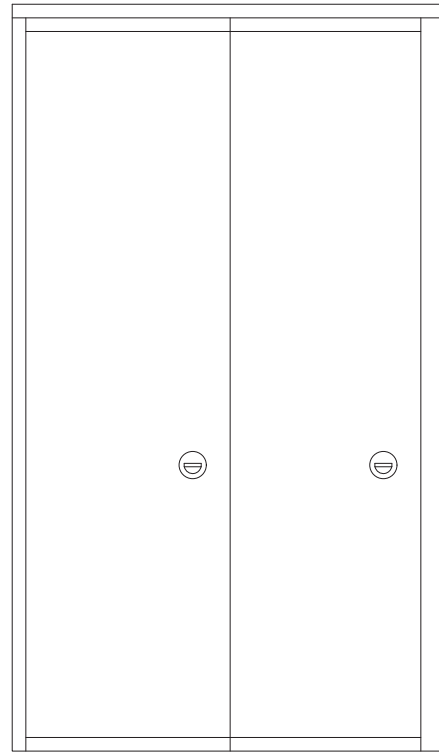
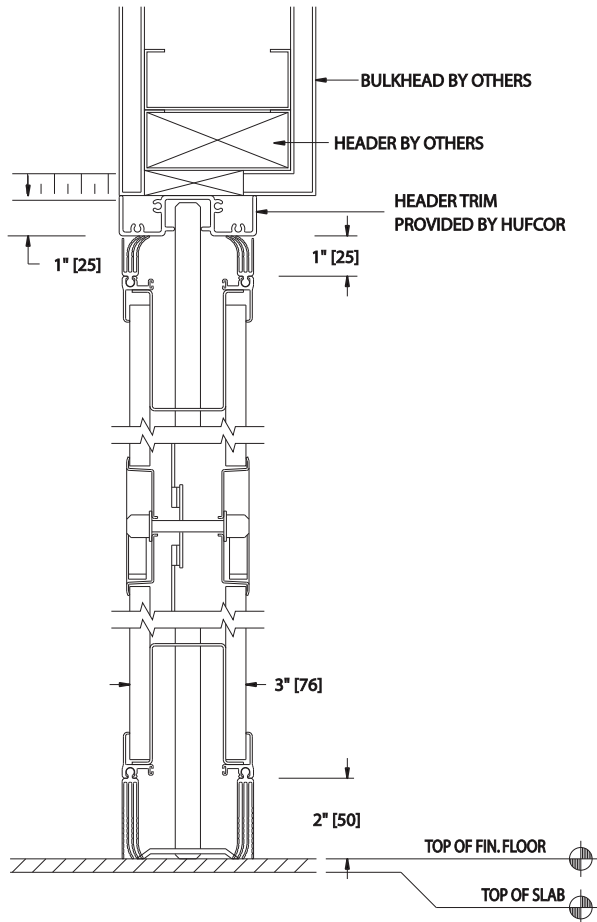
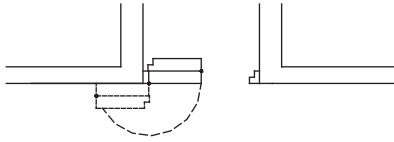
Pocket Doors



Type 3 pocket doors allow the operable wall to extend to the back wall of the pocket for optimum acoustics. Both doors (leaves) swing outward or inward. A narrow flipper panel completes pocket closure when doors are closed. When used with electrically operated operable walls, pocket doors are equipped with limit switches. To prevent damage to the pocket doors, the limit switches will not allow the partition to operate until the pocket doors are completely open.



Type 4 pocket doors have two leaves and allow the operable wall to seal against the face of the pocket door. Both leaves are hinged together and swing outward or inward. Door can be left or right handed.



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 E-mail: info@hufcor.com
 Website: www.hufcor.com

The manufacturer reserves the right to improve and change product without notice.

Pocket Door Specifications

Part 1 - General

1.01 DESCRIPTION

A. General

1. Operable wall manufacturer shall furnish and install pocket doors and provide all labor, materials, tools, equipment, and services for pocket doors in accordance with provisions of contract documents.

1.02 RELATED WORK BY OTHERS

- A. Preparation of opening will be by General Contractor. Any deviation of site conditions contrary to approved shop drawings must be called to the attention of the architect.
- B. All header, blocking, support structures, jambs, track enclosures, surrounding insulation, and sound baffles as required in 1.04 Quality Assurance.
- C. Paint or otherwise finishing all trim and other materials adjoining head and jamb of pocket doors.

1.03 SUBMITTALS

- A. Complete shop drawings are to be provided prior to fabrication indicating construction and installation details. Shop drawings must be submitted within 60 days after receipt of signed contract.

1.04 QUALITY ASSURANCE

- A. Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.
- B. The manufacturer shall have a quality system that is registered to the ISO 9001 standards.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Proper storage of pocket doors before installation and continued protection during and after installation will be the responsibility of the General Contractor.

1.06 WARRANTY

- A. Pocket doors shall be guaranteed for two years against defects in material or workmanship.

Part 2 - Products

2.02 MATERIALS

- A. Product to be (select as required): (Type 1) (Type 2) (Type 3) (Type 4) pocket doors as manufactured by Hufcor Inc.
 1. Pocket door(s) shall be nominally 3" [76] thick.
 2. Panel faces shall be laminated to appropriate substrate to meet the STC requirement. STC rating shall be determined by the partitions selected for use with the pocket doors.
 - a. Optional face material (Not all substrates are available for all STC ratings. Consult your Hufcor Distributor for more information):
 - Steel
 - Non-steel
 - Medium Density Fiberboard
 - b. Horizontal Splice: Heights over 16'3" [4953] with non-steel faces require a structural splice placed at approximately 12'3" [3734] from the floor.

3. Frames shall be of 16 gauge [1.42mm] painted steel with integral factory applied aluminum vertical edge and face protection. Optional: Face finish shall wrap around the vertical panel edges and provide no protective vertical face trim. This option is only available with steel faces.
4. Pocket doors at heights of 16'3" and over, without face steel, will have horizontal splice rail(s). Location and quantity of splice rails is dependent upon height of door.
5. Horizontal top and bottom seals shall be of continuous contact multi-ply vinyl sweepstrips. When the pocket doors are in the closed position, the seals shall contact an aluminum head member which extends across the pocket from the track to the pocket walls.
6. Pocket doors shall be secured in the closed position by the face-activated expanding internal mechanism.
 - (a). The operating mechanism to be located approximately 42" [1066] from the floor in the door face.
 - (b). The top mechanism extends from the top rail of the pocket door and latches in the horizontal header.
 - (c). A jamb plate shall be attached to the floor to capture the bottom mechanism.
7. Hinges shall be of steel and project no more than 1/4" [6] beyond panel faces. Each pocket door "leaf" to have a minimum of four hinges.
8. Jambs shall be of 6063-T6 aluminum and be adjustable + or - 3/8" [9.5].
- B. Weight of the pocket doors shall be 5.7-8.9 lbs. per sq. ft. [27.8-43.5 kg/sq.m] based on sound rating of the partition selected.
- C. Finishes
 1. Face finish shall be: (select as required):
 - a. Factory applied reinforced vinyl fabric with woven backing, weighing not less than 20 oz. per lineal yard [620 g/m]. Color shall be selected from manufacturer's standard color selectors.
 - b. Standard upgrade fabrics (color shall be selected from manufacturer's standard color selector):
 - (1) Factory applied vertical ribbed carpet (N.R.C. .20)
 - (2) Factory applied stain resistant fabric
 - c. Optional:
 - (1) Customer selected (requires factory approval for manufacturing compatibility)
 - (2) Unfinished for field decoration
 - (3) Wood veneer (factory installed on models with edge protection)
 - (4) High pressure laminate (factory installed on models with vertical edge protection.)
 2. Exposed metal trim, jambs, and seal color shall be (select from Hufcor's Standard Trim selector):
 - a. Lamb's Wool (standard)
 - b. Brown (standard)
 - c. Gray (standard)
 - d. Custom powder coated (optional upgrade for metal trim)
 3. Aluminum track shall be clear anodized

- a. Optional upgrade:
 - (1) Custom anodized
- D. Available Accessories/Options
 - 1. Key lock - one side
 - 2. Limit switches. Required for use with electric partitions. Limit switches are a safety feature which prevent the partition from operating until the pocket doors are completely open.

2.03 OPERATION

- A. Pocket doors shall be manually opened and closed.
- B. Pocket doors shall be secured in the closed position by the face-activated expanding internal mechanism.
- C. Pocket doors used with electrically operated partitions are to be equipped with limit switches which prevent the partition from operating until the pocket doors are completely open.

Part 3 - Execution

- A. Installation. The pocket doors will be installed by an authorized factory-trained installer and be in strict accordance with the approved shop drawings and manufacturer's standard printed specifications, instructions, and recommendations.

3. ROUGH CARPENTRY

PART ONE GENERAL

1.1 SECTION INCLUDES

- A. Requirements for rough carpentry required to properly construct the project. Materials and installation requirements shall be as specified and accepted practices of the trade for work and materials commonly assigned to rough carpentry and as specified in other sections of the work.
- B. Rough carpentry work includes, but is not limited to, the following:
 - 1. Wood framing and/or blocking of walls, roofs, parapets and decks.
 - 2. Wood grounds, nailers, blocking and sleepers.
 - 3. Temporary railings, enclosures, forms and rough hardware and anchoring devices.
 - 4. Installation of hollow metal frames.

1.2 RELATED SECTIONS

1.3 QUALITY ASSURANCE

- A. Lumber Standards: Shall comply with PS-20 for each indicated use, including moisture content not to exceed 19 percent, and actual size related to the indicated nominal sizes, except as otherwise indicated.
- B. Plywood Standards: Shall comply with PS-1-74 and APA's requirements, except as otherwise indicated for each use.
- C. Factory mark each piece of lumber and plywood with type, grade, mill and grading agency identification; except omit marking from surfaces to receive transparent finish and submit mill certificate that material has been inspected and graded in accordance with requirements if it cannot be marked on a concealed surface.
- D. Certificate of inspection and grading by a recognized agency may be submitted with each shipment, in lieu of factory marking at Contractor's option.

1.4 SUBMITTALS

- A. Wood Treatment Data:
 - 1. Submit chemical treatment manufacturer's instructions for proper use and handling of treated material.
 - 2. Submit certification of drying to 19 percent moisture content after treatment.
 - 3. For pressure treatment of each type specified, submit certificates of compliance from the treating plant stating chemicals and process used, net amount of salts retained and conformance to the following specifications:
 - a. Wolmanized (CCA), meeting AWPA
 - b. Conforming to AWPA standard P-5
 - c. AWPA standard U1

1.5 PRODUCT HANDLING

- A. Keep rough carpentry materials dry during delivery, storage, and handling. Store lumber and plywood in stacks with provisions for air circulation within stacks. Protect bottom of stacks against contact with damp surfaces. Protect exposed materials against weather.

1.6 JOB CONDITIONS

- A. Time delivery and installation of carpentry work to comply with protection and storage requirements.
- B. Examine substrates and supporting structure and conditions under which work is to be installed and notify project manager in writing of conditions detrimental to work. Do not proceed with installation until unsatisfactory conditions have been corrected.
- C. Correlate location of furring, nailers, blocking, grounds and similar supports so that attached work will comply with design requirements.

PART TWO PRODUCTS

2.1 MATERIALS

- A. All materials that could be exposed to moisture, such as roof blocking, plates, grounds, etc., shall be wolmanized treated.
- B. Light Framing: For framing 2 inches to 4 inches thick and not exceeding 6 inches in width, provide:
 - 1. Southern Pine, Grade Number 2.
 - 2. Douglas Fir-Larch, Grade Number 2.
- C. Board Lumber:
 - 1. Where lumber less than 2 inches in nominal thickness is shown or specified, provide boards dressed S4S, Grade Number 2, Southern Pine.
 - 2. Moisture Content: 19 percent maximum, mark boards "S-DRY".
- D. Miscellaneous Lumber: Provide wood for support or attachment of other work such as cant strips, bucks, nailers, blocking, furring, grounds, stripping and similar members. Provide lumber of the sizes shown or specified, worked to shapes shown and as follows: Grade: Construction Grade light framing size lumber of any species or board size lumber as required. Provide Construction Grade boards or Number 2 boards (SPIB or WWPA).
- E. Anchorage and Fastening Materials: Select proper type, size material and finish for each application. Comply with the following:
 - 1. Nails and Staples: FS FF-N-105.
 - 2. Wood Screws: FS FF-S-111.
 - 3. Bolts and Studs: FS FF-B-575.
 - 4. Nuts: FS FF-N-836.
 - 5. Washers: FS FF-W-92.
 - 6. Lag Screws or Lag Bolts: FS FF-B-561.
 - 7. Masonry Anchoring Devices: For expansion shields, nails, and drive screws, comply with FS FF-S-325.
 - 8. Bar and Strap Anchors: ASTM A575 carbon steel bars.
 - 9. Framing Anchors: Shall be of the type best suited for the connection or detailed as manufactured by Simpson, Silver, Hickman, or equal, having ICBO approval, or proper gauge and galvanized metal.

PART THREE EXECUTION

3.1. INSTALLATION

- A. General
 - 1. Discard units of material which are unsound, warped, bowed, twisted, improperly treated, not adequately seasoned or too small to fabricate work with a minimum of joints or the optimum joint arrangement.
 - 2. Fit carpentry work to other work. Scribe and cope as required for accurate fit.

3. Set carpentry work accurately to required levels and lines with members plumb and true.
 4. Shim with metal or slate for bearing on concrete and wood at masonry substrates. Where indicated, grout with one part Portland cement to three (3) parts sand for full bearing.
 5. Securely attach carpentry work to substrates by anchoring and fastening as shown and as required such as Hilti pneumatic fastening, or equal.
 - a. Provide washers under bolt heads and nuts in contact with wood.
 - b. Nail plywood to comply with the recommendations of the American Plywood Association.
 - c. All fasteners exposed to exterior shall be galvanized or cadmium plated.
 6. Store all timber open-stacked in piles at least one foot above the ground surface, properly supported to prevent warping. Timber shall be covered to shed water and for protection from weather. Timber shall not be stored in flood prone areas.
- B. Fasteners: Use common wire nails, except as otherwise shown or specified herein. Use finishing nails for exposed work. Do not wax or lubricate fasteners that depend on friction for holding power. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; pre-drill as required. Do not drive threaded friction type fasteners; turn into place. Tighten bolts and lag screws at installation and retighten as required for tight connections prior to closing in or at completion of work.
- C. Wood Grounds, Nailers, Blocking and Sleepers:
1. Provide wherever shown and where required for screeding or attachment of other work. Form to shapes as shown and cut as required for true line and level of work to be attached or screeded.
 2. Coordinate location with other work; refer to shop drawings of such work if applicable.
 3. Attach to substrates securely with anchor bolts or other attachment devices as shown and as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise indicated. Build into masonry as work progresses, cutting to fit masonry unit size involved. Anchor to formwork before concrete placement.
 4. Provide grounds of dressed, key beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material involved. Remove temporary grounds when no longer required. Where indicated as permanent grounds, provide treated lumber.
- D. Wood Furring:
1. Install plumb and level with closure strips at edges and openings. Shim with wood as required. Fire stop furred spaces on walls at each floor level with wood blocking or incombustible materials accurately fitted to close furred spaces. Comply with governing regulations. Use only as necessary.
 2. Tolerance: Shim and level wood furring to a tolerance of 1/8-inch in 10 feet.
 3. Installation shall be provided where shown and as necessary for facing materials specified. Except as shown otherwise, furring strips shall be 1-inch by 3-inches continuous, and spaced 24 inches on center. Furring shall be erected vertically or horizontally as necessary. Furring strips shall be nailed to trusses and to masonry. Wood plugs shall not be used. Furring strips shall be anchored near ends and at a 2 foot interval between. Furring strips shall be provided around openings, behind bases, and at angles and corners. Furring shall be plumb, rigid and level, and shall be shimmed as necessary to provide a true, even plane with surfaces suitable to receive the finish required. Furring for cornices, offsets and breaks in walls or ceilings shall be formed on 1-inch by 3-inch wood strips spaced 16 inches on center.
 4. Plywood: Comply with recommendations of American Plywood Association for fabrication and installation of plywood work. Provide thickness shown, or if not shown, provide as recommended by APA "Guide to Plywood Sheathing for Floors, Walls, and Roofs" for spacing of supports and types of substrates involved in the work.

4. GYPSUM BOARD

PART ONE GENERAL

1.1 SECTION INCLUDES

- A. Gypsum board wall panels.
- B. Accessories and Trim.

1.2 RELATED SECTIONS

- A. Section 5. Painting.

1.3 REFERENCES

- A. ASTM C473 - Standard Test Methods for Physical Testing of Gypsum Panel Products.
- B. ASTM C 475 - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
- C. ASTM C 514 - Standard Specifications for Nails for the Application of Gypsum Board.
- D. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board.
- E. ASTM C 1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
- F. ASTM C 1047 - Standard Specification for Accessories For Gypsum Wallboard and Gypsum Veneer Base.
- G. ASTM C 1396 - Standard Specification for Gypsum Board.
- H. ASTM D 3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
- I. GA-214 - Recommended Levels of Gypsum Board Finish.
- J. GA-216 - Application and Finishing of Gypsum Board.
- K. GA-231 - Assessing Water damage to Gypsum Board.
- L. GA-238 - Guidelines for the Prevention of Mold Growth on Gypsum Board.

1.4 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Design data test reports.
 - 4. Installation methods.
- B. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
- B. Installer Qualifications: Company specializing in performing Work of this section with minimum three years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging indicating manufacturer and product name and protect until ready for installation.
- B. Store gypsum in accordance with GA-238 and manufacturer recommendations.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) in accordance with ASTM C 840 and within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART TWO PRODUCTS

2.1 GYPSUM BOARD WALL PANELS

- A. Standard Gypsum Board Products:
 - 1. Regular Gypsum Board: Gypsum core panel solid set core enclosed in paper. Complying with ASTM C1396.
- B. Moisture and Mold Resistant Products:
 - 1. Moisture and Mold Resistant Gypsum Board: Gypsum core panel with enhanced core formulated for resistance to moisture and mold; surfaced with moisture/mold resistant paper on front, back, and long edges. Complying with ASTM C 1396.
 - 2. Fire Rated Moisture and Mold Resistant Gypsum Board: Gypsum core panel with enhanced core formulated for resistance to moisture and mold; for use in fire- resistant Type X designs. Surfaced with moisture/ mold resistant paper of front, back, and long edges. Complying with ASTM C 1396.
- C. High Performance Products:
 - 1. Abuse Resistant Gypsum Board: Gypsum core panel with enhanced core to provide resistance to abuse. Complying with ASTM C 1396.
 - 2. Fire Rated Abuse Resistant Gypsum Board: Gypsum core panel with enhanced core to provide resistance to abuse for use in fire-resistive Type X designs. Complying with ASTM C 1396, Type X.
 - 3. Fire Rated Shaft Liner Gypsum Board: Gypsum core shaftwall panel with enhanced fire resistant core. Complying with ASTM C 1396 Type X.

2.2 GYPSUM BOARD CEILING AND SOFFIT PANELS

- A. Interior Ceiling Board.
 - 1. Regular Gypsum Ceiling Board: Gypsum Core panel with enhanced sag resistant core. Complying with ASTM C 1396.

2.3 ACCESSORIES

- A. Interior Trim: Complying with ASTM C 1047.
 - 1. Corner Bead
 - 2. Control Joint

- B. Fasteners:
 - 1. Screws: ASTM C 954 or ASTM C 1002 as recommended by panel manufacturer.
 - 2. Adhesive: Recommended by panel manufacturer.
- C. Joint Treatment:
 - 1. Tape: Comply with ASTM C 475.
 - 2. Joint Compound: Comply with ASTM C 475.
- D. Sealants and Caulking: Provide Joint Sealant and Acoustical Sealant as required and in accordance with manufacturer's recommendations.
- E. Insulation: Thermal and acoustical insulation to match existing insulation.

PART THREE EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until supports and substrates have been properly prepared.
- B. Verify that framing and supports are ready to receive work and opening dimensions are as indicated on the Drawings.
- C. If support and substrate preparation is the responsibility of another installer, notify Owner/Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Examine gypsum board panels for damage and existence of mold. Install undamaged panels.
- C. Examine gypsum board in accordance with GA 231 for water damage.
- D. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's written instructions, and ASTM C 840 and GA 216.
- B. Erect single layer gypsum board in most economical direction with ends and edges occurring over firm bearing.
- C. Erect single layer fire rated gypsum board with edges and ends occurring over firm bearing.
- D. Place control joints consistent with lines of building spaces as indicated on Drawings.
- E. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.

3.4 FINISHING

- A. General: Comply with ASTM C 840, GA 214 and GA 216.
 - 1. Level 1: All areas to receive flat sheen paint finish.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

5. PAINTING

PART ONE GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation and field painting of exposed interior items and surfaces, including mechanical and electrical equipment that do not have a factory-applied finish.

1.2 RELATED SECTIONS

- A. Section 4. Gypsum Board

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM) D 16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications.

1.4 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
 - 2. Preparation instructions and recommendations.
 - 3. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.
- B. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- C. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.
- C. Paint exposed surfaces. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Owner will select from standard colors and finishes available.
- D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
- E. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect or Owner.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45°F (7°C). Maintain storage containers in a clean condition, free of foreign materials and residue.
- C. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- D. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90°F (10 and 32°C), unless manufacturer's instructions specifically states.
- E. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95°F (7 and 35°C).
- F. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and, in the quantities, described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
- B. Quantity: Furnish Owner with an additional three percent, but not less than 1 gal (3.8 l) or 1 case, as appropriate, of each material and color applied.

PART TWO PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: BEHR.
- B. Acceptable Manufacturer: Sherwin Williams.
- C. Acceptable Manufacturer: Benjamin Moore.
- D. Substitutions: Permitted upon approval by owner/architect.

2.2 PAINT MATERIALS - GENERAL

- A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. VOC Classification: Provide materials, including primers, undercoats, and finish-coat materials, that meet local air quality management district regulations.

- C. Color – Refer to IFB requirements.
- D. Application Rate: Coating thickness for primer, intermediate, barrier and finish coats shall be measured as Dry Film Thickness (DFT) and comply with manufacturer's published recommendations.

2.3 INTERIOR PAINT SYSTEMS

- A. Drywall / Gypsum Wallboard: MPI Gloss Level 1 - Flat, <5 at 60°:
 - 1. One Prime Coat: (If primer is required per product instruction)
 - a. Latex Interior/Exterior Water-Based Primer.
 - 2. Two finish coats:
 - a. Interior Flat Enamel Paint.
 - b. Interior Flat Paint.
 - c. Interior Ceiling Paint
 - d. Interior Dead Flat Paint.
 - e. Interior Flat Paint.
- B. Drywall / Gypsum Wallboard: MPI Gloss Level 2 - Low Sheen, <10 at 60°:
 - 1. One Prime Coat: (If primer is required per product instruction)
 - a. Latex Interior/Exterior Water-Based Primer.
 - 2. Two finish coats:
 - a. Interior Flat Enamel Paint.
 - b. Interior Eggshell Paint.
- C. Drywall / Gypsum Wallboard: MPI Gloss Level 3 - Eggshell, 10-25 at 60°:
 - 1. One Prime Coat: (If primer is required per product instruction)
 - a. Latex Interior/Exterior Water-Based Primer.
 - 2. Two finish coats:
 - a. Interior Eggshell Enamel Paint.
 - b. Interior Eggshell Paint.
- D. Drywall / Gypsum Wallboard: MPI Gloss Level 4 - Satin, 25-35 at 60°:
 - 1. One Prime Coat: (If primer is required per product instruction)
 - a. Latex Interior/Exterior Water-Based Primer.
 - 2. Two finish coats:
 - a. Interior Satin Enamel Paint.
- E. Drywall / Gypsum Wallboard: MPI Gloss Level 5 - Semi-Gloss, 35-70 at 60°:
 - 1. One Prime Coat: (If primer is required per product instruction)
 - a. Latex Interior/Exterior Water-Based Primer.
 - 2. Two finish coats:
 - a. Interior Semi-Gloss Enamel Paint.
 - b. Interior Semi-Gloss Paint.
- F. Drywall / Gypsum Wallboard: MPI Gloss Level 6 - Gloss, 70-85 at 60°:
 - 1. One Prime Coat: (If primer is required per product instruction)
 - a. Latex Interior/Exterior Water-Based Primer.
 - 2. Two finish coats:
 - a. Interior/Exterior Hi-Gloss Enamel Paint.
- G. Drywall / Gypsum Wallboard Gloss Level 7 - Gloss, 85+ at 60°:
 - 1. One Prime Coat: (If primer is required per product instruction)
 - a. Latex Interior/Exterior Water-Based Primer.
 - 2. Two finish coats:
 - a. Interior/Exterior HIGH GLOSS ENAMEL Paint.

- H. Wood - Millwork, Paint Grade:
 - 1. One Prime Coat: (If primer is required per product instruction)
 - a. Latex Interior/Exterior Water-Based Primer.
 - 2. Two finish coats:
 - a. Interior Paint.
 - d. Interior/Exterior SEMI-GLOSS ENAMEL.
 - e. Interior/Exterior HIGH GLOSS ENAMEL.

PART THREE EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Owner of unsatisfactory preparation before proceeding.
- C. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
 - 1. Notify Owner about anticipated problems when using the materials specified over substrates primed by others.
 - 2. If a potential incompatibility of primers applied by others exists, obtain the following from the primer Applicator before proceeding:
 - a. Confirmation of primer's suitability for expected service conditions.
 - b. Confirmation of primer's ability to be top coated with materials specified.

3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.
 - 1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
 - 1. Provide barrier coats over incompatible primers or remove and re-prime.
 - 2. Provide barrier coats over incompatible primers or remove primers and re-prime substrate.
 - 3. Cementitious Substrates: Prepare concrete, brick, concrete masonry block, and cement plaster surfaces to be coated. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods to prepare surfaces.
 - a. Use abrasive blast-cleaning methods if recommended by coating manufacturer.
 - b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not coat surfaces if moisture content exceeds that permitted in manufacturer's written instructions.

4. Wood Substrates: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Smoothly sand surfaces exposed to view and dust off.
 - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer, before applying primer.
 - b. Immediately on delivery, prime edges, ends, faces, undersides, and backsides of wood to be coated.
 - c. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - d. Determine moisture content of surfaces by performing a moisture test. Do not coat if moisture content exceeds 15 percent.
- D. Material Preparation: Carefully mix and prepare coating materials according to manufacturer's written instructions.
 1. Maintain containers used in mixing and applying coatings in a clean condition, free of foreign materials and residue.
 2. Stir materials before applying to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into the material. Remove film and, if necessary, strain coating material before using.
 3. Use only the type of thinners approved by manufacturer and only within recommended limits.
 4. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
- B. General: Apply high-performance coatings according to manufacturer's written instructions.
 1. Use applicators and techniques best suited for the material being applied.
 2. Do not apply high-performance coatings over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable coating film.
 3. Coating surface treatments and finishes are indicated in the coating system descriptions.
 4. Provide finish coats compatible with primers used.
 5. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convector covers, grilles, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
- C. Application Procedures: Apply coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
 1. The number of coats and film thickness required is the same regardless of application method.
 2. Completed Work: Match approved Samples for color, texture, and coverage. Remove, refinish, or recoat work that does not comply with specified requirements.

3.4 FIELD QUALITY CONTROL

- A. Owner reserves the right to invoke the following test procedure at any time and as often as Owner deems necessary during the period when paint is being applied:
 1. Owner will engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to Project will be taken, identified, sealed, and certified in the presence of Contractor.

2. Owner may direct Contractor to stop painting if test results show material being used does not comply with specified requirements. Contractor shall remove non-complying paint from Project site, pay for testing, and repaint surfaces previously coated with the non-complying paint. If necessary, Contractor may be required to remove non-complying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

3.5 CLEANING

- A. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.6 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
- C. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces.

6. ACOUSTICAL PANEL CEILINGS

PART ONE GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general conditions of Contract.

1.2 SUMMARY

A. Section Includes:

1. Acoustical ceiling panels.
2. Exposed grid suspension system.
3. Wire hangers, fasteners, main runners, cross tees, and wall angle moldings.

B. Alternates

1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and approved products will be set forth by the Addenda. If included in a Bid are substitute products which have not been approved by Addenda, the specified products shall be provided without additional compensation.
2. Submittals which do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); Underwriters' Laboratories Classified Acoustical performance; Panel design, size, composition, color, and finish; Suspension system component profiles and sizes; Compliance with the referenced standards.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM C 635 Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
2. ASTM C 636 Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
3. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.
4. ASTM E 1414 Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.
5. ASTM E 1111 Standard Test Method for Measuring the Interzone Attenuation of Ceilings Systems.
6. ASTM E 1264 Classification for Acoustical Ceiling Products.
7. ASTM E 1477 Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
8. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
9. ASTM E 119 Standard Test Methods for Fire Tests of Building Construction and Material.

B. ASHRAE Standard 62.1-2004, "Ventilation for Acceptable Indoor Air Quality"

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each type of acoustical ceiling unit and suspension system required.

- B. Samples: Minimum 6 inch x 6 inch samples of specified acoustical panel; 8 inch long samples of exposed wall molding and suspension system, including main runner and 4 foot cross tees.

- C. Shop Drawings: Layout and details of acoustical ceilings. Show locations of items, which are to be coordinated with or supported by the ceilings.
- D. Certifications: Manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards. For acoustical performance, each carton of material must carry an approved independent laboratory classification of NRC, CAC, and AC.
- E. If the material supplied by the acoustical subcontractor does not have an Underwriter's Laboratory classification of acoustical performance on every carton, subcontractor shall be required to send material from every production run appearing on the job to an independent or NVLAP approved laboratory for testing, at the architect's or owner's discretion. All products not conforming to manufacturer's current published values must be removed, disposed of and replaced with complying product at the expense of the Contractor performing the work.

1.5 QUALITY ASSURANCE

- A. Single-Source Responsibility: To match the existing system, provide acoustical panel units and grid components by a single manufacturer.
- B. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate markings of applicable testing and inspecting organization.
 - 1. Surface Burning Characteristics: As follows, tested per ASTM E 84 and complying with ASTM E 1264 for Class A products.
 - a. Flame Spread: 25 or less
 - b. Smoke Developed: 50 or less
- C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

1.7 PROJECT CONDITIONS

- A. Space Enclosure: All ceiling products and suspension systems must be installed and maintained in accordance with Armstrong written installation instructions for that product in effect at the time of installation and best industry practice. Prior to installation, the ceiling product must be kept clean and dry, in an environment that is between 32°F (0°C) and 120°F (49°C) and not subject to Abnormal Conditions. Abnormal conditions include: exposure to chemical fumes, vibrations, moisture from conditions such as building leaks or condensation, excessive humidity, or excessive dirt or dust buildup. HumiGuard Plus Ceilings: Installation of the products shall be carried out where the temperature is between 32°F (0° C) and 120°F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. All wet work (plastering, concrete, etc.) must be complete and dry. The ceilings must be maintained to avoid excessive dirt or dust buildup that would provide a medium for microbial growth on ceiling panels. Microbial protection does not extend beyond the treated surface as received from the factory and does not protect other materials that contact the treated surface such as supported insulation materials.

1.8 WARRANTY

- A. Acoustical Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace acoustical panels that fail within the warranty period. Failures include, but are not limited to:

1. Acoustical Panels: Sagging and warping as a result of defects in materials or factory workmanship.
 2. Grid System: Rusting and manufacturer's defects
 3. Acoustical Panels with BioBlock Plus or designated as inherently resistive to the growth of micro-organisms installed with Armstrong suspension systems: Visible sag and will resist the growth of mold/mildew and gram positive and gram negative odor and stain causing bacteria.
- B. Warranty Period Humiguard:
1. Acoustical panels: Ten (10) years from date of substantial completion.
 2. Grid: Ten (10) years from date of substantial completion.
 3. Acoustical panels and grid systems with HumiGuard Plus or HumiGuard Max performance supplied by one source manufacturer is thirty (30) years from date of substantial completion.
- C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.9 MAINTENANCE

- A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.
1. Acoustical Ceiling Units: Furnish quality of full-size units equal to 5.0 percent of amount installed.
 2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to 2.0 percent of amount installed.

PART TWO PRODUCTS

2.1 MANUFACTURERS

- A. Ceiling Panels:
1. Match existing panels

2.2 ACOUSTICAL CEILING UNITS

- A. Acoustical Panels Type ACT-1:
1. Surface Texture: Fine
 2. Composition: Mineral Fiber
 3. Color: White
 4. Size: 24in X 24in X 3/4in
 5. Edge Profile: Flat non-regular for interface with compatible Armstrong grid.
 6. Noise Reduction Coefficient (NRC): ASTM C 423; Classified with UL label on product carton, 0.65.
 7. Ceiling Attenuation Class (CAC): ASTM C 1414; Classified with UL label on product carton, 35
 8. Emissions Testing: Section 01350 Protocol, < 13.5 ppb of formaldehyde when used under typical conditions required by ASHRAE Standard 62.1-2004, "Ventilation for Acceptable Indoor Air Quality"
 9. Flame Spread: ASTM E 1264; Class A (UL)
 10. Light Reflectance (LR): ASTM E 1477; White Panel: Light Reflectance: 0.86.
 11. Dimensional Stability: HumiGuard Plus - Temperature is between 32°F (0° C) and 120°F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. All wet work (plastering, concrete, etc) must be complete and dry.
 12. Antimicrobial Protection: BioBlock Plus - Resistance against the growth of mold/mildew and gram positive and gram negative odor and stain causing bacteria.

- B. Acoustical Panels Type ACT-2:
 - 1. Surface Texture: Fine
 - 2. Composition: Mineral Fiber
 - 3. Color: White
 - 4. Size: 24in X 24in X 3/4in
 - 5. Edge Profile: Flat non-regular for interface with compatible Armstrong grid.
 - 6. Noise Reduction Coefficient (NRC): ASTM C 423; Classified with UL label on product carton, 0.65.
 - 7. Ceiling Attenuation Class (CAC): ASTM C 1414; Classified with UL label on product carton, 35
 - 8. Emissions Testing: Section 01350 Protocol, < 13.5 ppb of formaldehyde when used under typical conditions required by ASHRAE Standard 62.1-2004, "Ventilation for Acceptable Indoor Air Quality"
 - 9. Flame Spread: ASTM E 1264; Class A (UL)
 - 10. Light Reflectance (LR): ASTM E 1477; White Panel: Light Reflectance: 0.86.
 - 11. Dimensional Stability: HumiGuard Plus - Temperature is between 32°F (0° C) and 120°F (49° C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. All wet work (plastering, concrete, etc) must be complete and dry.
 - 12. Antimicrobial Protection: BioBlock Plus - Resistance against the growth of mold/mildew and gram positive and gram negative odor and stain causing bacteria.

PART THREE EXECUTION

3.1 EXAMINATION

- A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations. (Exception: HumiGuard Max Ceilings)

3.2 PREPARATION

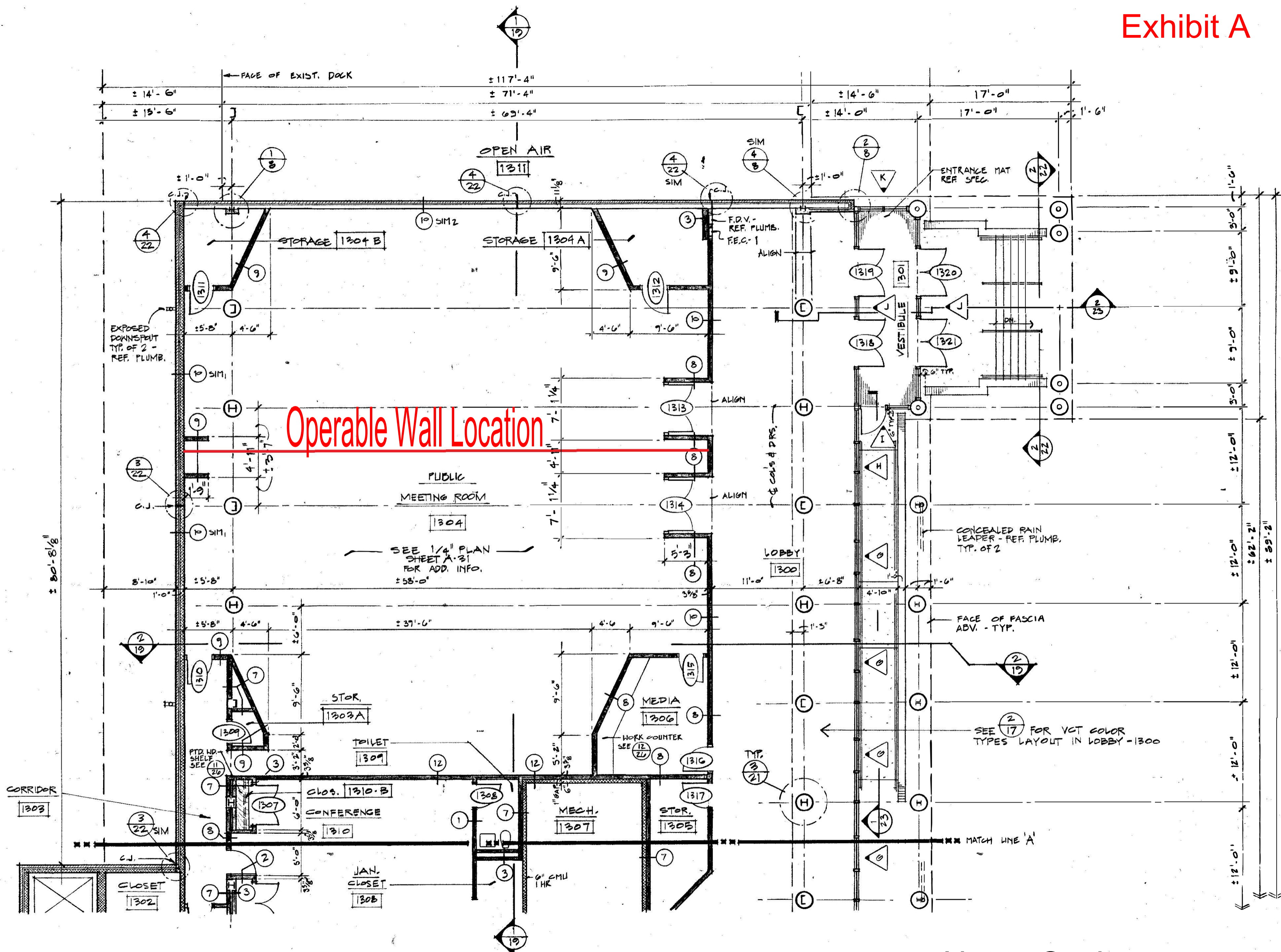
- A. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less than half width units at borders and comply with reflected ceiling plans. Coordinate panel layout with mechanical and electrical fixtures.
- B. Coordination: Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.
 - 1. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.

3.3 INSTALLATION

- A. Install suspension system and panels in accordance with the manufacturer's instructions, and in compliance with ASTM C 636 and with the authorities having jurisdiction.
- B. Suspend main beam from overhead construction with hanger wires spaced 4'-0" on center along the length of the main runner. Install hanger wires plumb and straight.
- C. Install wall moldings at intersection of suspended ceiling and vertical surfaces. Miter corners where wall moldings intersect or install corner caps.
- D. For reveal edge panels: Cut and reveal or rabbet edges of ceiling panels at border areas and vertical surfaces.
- E. Install acoustical panels in coordination with suspended system, with edges resting on flanges of main runner and cross tees. Cut and fit panels neatly against abutting surfaces. Support edges by wall moldings.

3.4 ADJUSTING AND CLEANING

- A. Replace damaged and broken panels.
- B. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage.
 - 1. Ceiling Touch-Up Paint, (Item #5760, 8oz. bottles) (Item #5761, quart size cans), "global white" latex paint should be used to hide minor scratches and nicks in the surface and to cover field tegularized edges that are exposed to view.
- C. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.



Operable Wall Location

NEW CONDITIONS
FIRST FLOOR PLAN - SOUTH

Not to Scale

1/8" = 1'-0"

Operable Wall Replacement - Augusta County Government Center