

# ACOUSTIBuilt® Seamless Acoustical Ceiling System Overview

## Assembly and Installation Instructions

### 1. GENERAL

ACOUSTIBuilt® panels are 7/8" thick, with a nominal size of 48" x 72", and have tapered edges on all four sides for easier finishing. As ordered, ACOUSTIBuilt panels have an unfinished scrim face. Panels are installed to Armstrong® Drywall Grid using construction adhesive and drywall screws. Joints and fasteners are finished with drywall compounds. Finally, the surface is coated with Fine Texture Finish for ACOUSTIBuilt.

#### 1.1 Safety

During the installation be certain that the work site is well ventilated and avoid breathing dust. Use an appropriate NIOSH-designed dust mask. Avoid contact with your eyes and skin. Wash thoroughly after handling. For additional information, refer to the Safety Data Sheet at [armstrongceilings.com/acoustibuilt](http://armstrongceilings.com/acoustibuilt)

#### 1.2 Warranty

Failure to follow the Armstrong® Ceilings recommended installation instructions in effect at the time of installation will void the panel warranty.

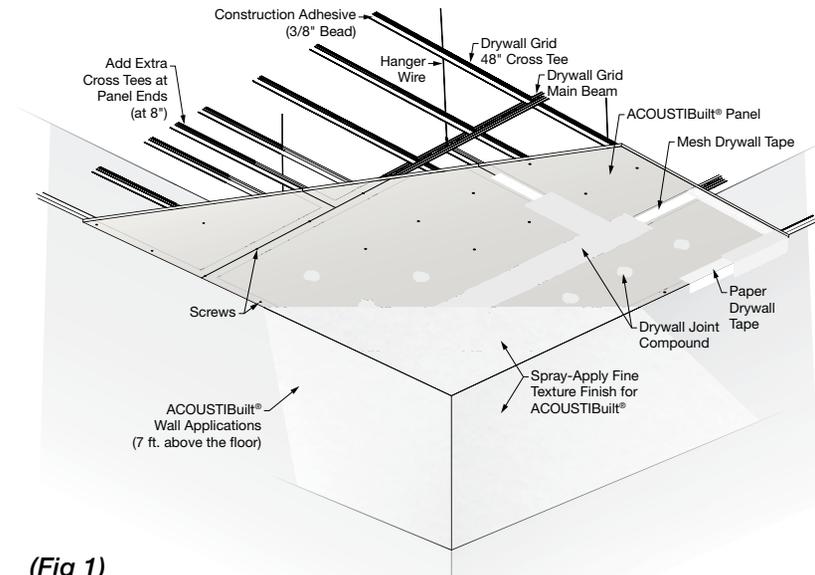
#### 1.3 Storage and Handling

Store ACOUSTIBuilt panels in a dry, interior space between 25% and 55% RH. Keep the panels in their packaging until installation. Take proper care when handling panels to avoid damaging or soiling. Store Fine Texture Finish for ACOUSTIBuilt in a conditioned, interior space between 40° F and 100° F.

#### 1.4 Site Conditions

Prior to installation, the area should be free of construction dust and debris. ACOUSTIBuilt panels should be installed in areas where the building is enclosed, and the HVAC is continuously functioning.

This product is not recommended for exterior applications, where standing water is present, or where moisture will come into direct contact with the ceiling. A finished ACOUSTIBuilt ceiling system features HumiGuard® Plus performance.



(Fig 1)

#### **ACOUSTIBuilt Installation Training:**

Installation training by one of our Installation System Specialists (ISS) is strongly recommended before your first installation.

Call 877-276-7876 six to eight weeks before beginning the project to schedule free installation training and order the spray calibration sample #BPCS-6119.

Watch the video here:



## 1.5 HVAC Design & Operation, Temperature & Humidity Control

HVAC should be designed, installed, and operated in accordance with ASHRAE Standard 62.1. It is also necessary for the area to be enclosed, and for the HVAC systems to be functioning and in continuous operations for the life of the product. ACOUSTIBuilt® is not intended for use where natural ventilation is part of the ventilation strategy. This product is not recommended in areas where a differential plenum pressure exists. ACOUSTIBuilt ceiling systems cannot be used in exterior applications.

## 1.6 Fire Performance

ACOUSTIBuilt panels with Fine Texture Finish are tested to ASTM E84 and CAN/ULC S102 surface burning characteristics. Flame Spread Index 25 or less. Smoke Developed Index 50 or less (UL labeled).

## 1.7 Seismic Performance

ACOUSTIBuilt ceiling system has been engineered and tested for application in all Seismic Design Categories when installed using the following instructions for a wall-to-wall ceiling. Layouts that vary from wall to wall (floating trim, clouds, elevation changes) may require rigid bracing at the discretion of the code official or project engineer.

## 1.8 Compatible Systems

ACOUSTIBuilt is compatible with many Armstrong products, including those listed below. Refer to the ACOUSTIBuilt Master Drawing Sheet for proper installation and common integration details:

[armstrongceilings.com/acoustibuilt](http://armstrongceilings.com/acoustibuilt)

### Armstrong® Drywall Grid Solutions

- StrongBack™
- SimpleSoffit™
- Quikstix™

### Ceiling Trims and Transitions

- Axiom® Classic with Axiom Bottom Trim for ACOUSTIBuilt
- Axiom One-Piece
- Axiom Knife Edge®
- Axiom Transitions
- Axiom Shade Pockets

### Integrated Solutions

- Linear Lighting
- Axiom Direct, Indirect, and Field Light Covers
- Plasterform Access Panels

## 2. DESIGN AND INSTALLATION CONSIDERATIONS

### 2.1 Panel Thickness

ACOUSTIBuilt panels are 7/8" thick. The installed height of the fixtures that interface with these panels, such as sprinkler heads and light fixture trims, must allow adjustment to accommodate this 7/8" thickness.

### 2.2 Finish Level

ACOUSTIBuilt is finished to a Level 4 drywall finish equivalent. Installing ACOUSTIBuilt requires special attention to the details. Light coves and low-angle lighting will exaggerate imperfections. Mock-ups and hands-on training are strongly recommended.

### 2.3 Fixture Integration

Independent support of MEP devices is required per manufacturer instructions. ACOUSTIBuilt panels may not bear load from lights, diffusers, speakers, or similar devices. Ensure detailed plans for integrations are established prior to panel installation.

### 2.4 Sprinklers

For questions about sprinklers, see NFPA 13 sprinkler code. Designers and installers are advised to consult a fire protection engineer, NFPA 13, and local codes for guidance where automatic fire detection and suppression systems are present.

### 2.5 Control Joints

Control joints are required following the standards used for gypsum board listed in ASTM C840, Section 20.

- Ceilings with perimeter relief cannot exceed 50 LF and 2500 SF between control joints.
- Ceilings without perimeter relief cannot exceed 30 LF and 900 SF between control joints.

Fastener connections of the suspension system to building structure are specified by the contractor and must follow the manufacturer's instructions and referenced code.

## 2.6 Sloped Installations

ACOUSTIBuilt® ceiling systems can be installed on slopes of any angle.

## 2.7 Soffits

ACOUSTIBuilt can be installed on soffits of any size or angle. For acoustical benefit, ACOUSTIBuilt is recommended on soffits 36" or greater in height (i.e. between finished corners). Standard drywall is recommended for soffits less than 36".

## 3. SUSPENSION SYSTEM REQUIREMENTS

The requirements listed here represent the manufacturer's minimum acceptable installation recommendations and may be subject to additional requirements established by the local authority having jurisdiction.

- All installations should comply with ASTM C754 and C1858.
- All references to grid component property testing are per ASTM E3090.
- All grid components must meet the requirements of ASTM C645.

### 3.1 Adhesive Requirements

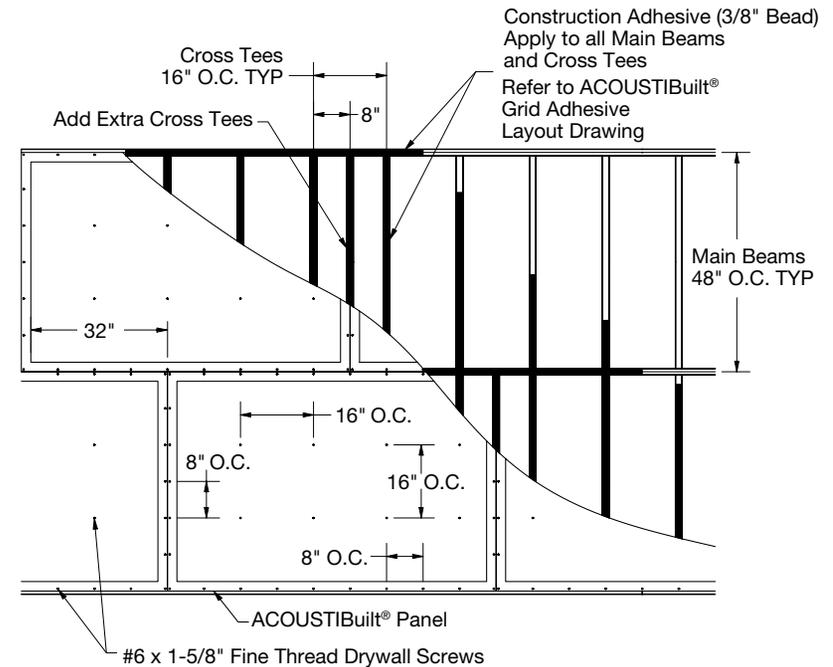
The adhesive should meet the performance requirements of ASTM C557 and be recommended by the manufacturer for bonding to galvanized steel. Recommended adhesive:

- OSI® F38 Heavy-Duty Drywall Adhesive or equivalent

### 3.2 Grid, Panel, and Fastening Details

#### 3.2.1 Grid, Adhesive, and Panel Layout

Grid for ACOUSTIBuilt is installed with mains spaced 48" O.C. and cross tees spaced 16" O.C. Panels are installed with their long dimensions parallel to the mains. Adjacent rows of panel are offset by 32". As panels are installed, extra tees are added at 12' intervals so that all the 4-foot panel edges land on the centerlines of cross tees. Grid should be wiped clean of any dirt, grease, or oil. (Fig 2)



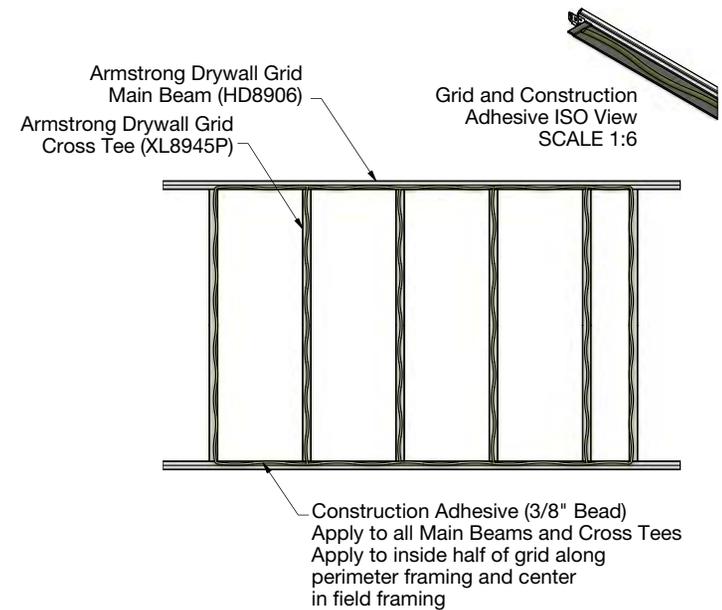
(Fig 2)

### 3.2.2 Adhesive Pattern and Usage

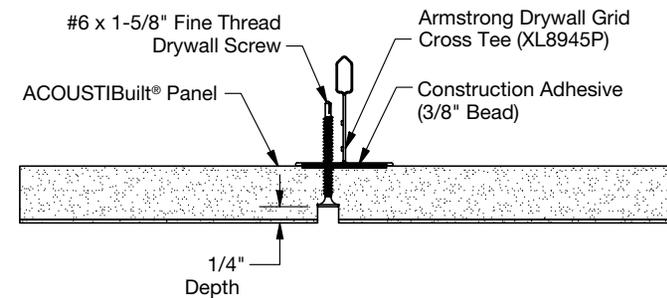
Construction adhesive is applied to all grid members including KAM, main beams, cross tees, and any additional framing members added for MEP integrations. Adhesive is applied as a continuous 3/8" bead. On-grid members that will support the perimeter of the panel, the adhesive is applied only to the inside half of the grid flange. For the interior cross tees, the adhesive is applied to the center of the tee. Adhesive consumption is approximately 2/3 of a 28-oz. cartridge for each full panel (one 28-oz. cartridge per 36 sq. ft.). (Fig 3)

### 3.2.3 Screw Layout and Installation

Screws are installed 8" O.C. around the perimeter of every panel and cutout. In the field, install screws 16" O.C. in every cross tee. Screws are driven about 1/4" beyond the face of the panel. (Fig 4)



(Fig 3)



(Fig 4)

#### 4. STEP-BY-STEP INSTALLATION INSTRUCTIONS

Use Armstrong® Drywall Grid System with mains 48" O.C. and cross-tees 16" O.C. Be sure the grid is square and level.

1. Install Armstrong® Knurled Angle Molding – KAM around the perimeter. ACOUSTIBuilt® panels are 7/8" thick, so install the KAM 7/8" above the desired finished ceiling height. Use a laser to ensure the KAM is level.



2. Install the DGS mains. Hang the mains 48" O.C. with hanger wires 48" O.C. and within 24" of the perimeter. Cut the ends of the mains at one of the center rout holes so that the tees can be installed 16" from the wall.



3. Install the 48" cross tees. Space the tees 16" O.C.



4. Level the grid to within 1/4" in 10'.



5. Square the grid within 1/8" over a 48" x 32" module. Attach the mains and perimeter cross tees to KAM with framing screws.



6. Install lights and any other fixtures. Support all fixtures using the grid or independent suspension. Adjust the height of the fixtures to accommodate the 7/8" panel thickness. For access panels and similar large openings, frame the entire perimeter of the fixture with grid, and attach the extra grid members with framing screws. Keep spans between grid members to no more than 16" O.C.



#### 4.2 Panel Installation

ACOUSTIBuilt® panels are 48 x 72 x 7/8" and feature a tapered perimeter around all four edges. This feature enables flat and narrow joints. Install the panels with the long edges parallel to the mains.

1. Install a single cross tee 72" from the wall. This tee will support the end of your first panel. Attach the tee with framing screws.



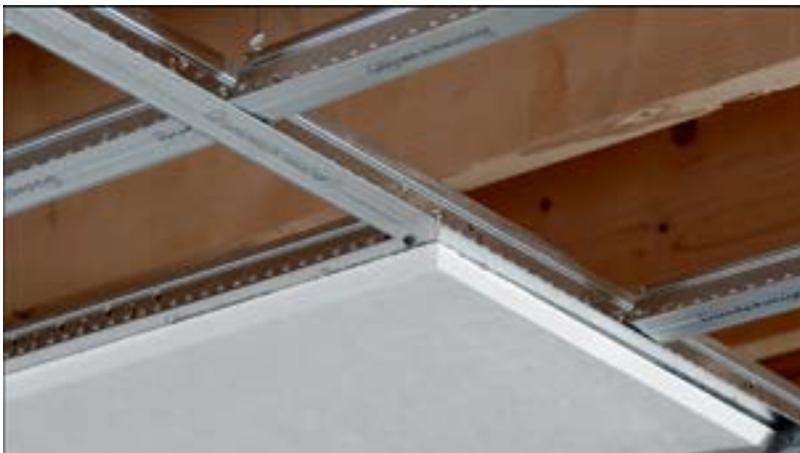
2. Prepare the first panel. Mark the locations of the field screws 16" O.C. along both the length and width of the panel.  
NOTE: the last row will land 8" from the end of the panel.



**3.** Apply the adhesive to the grid for one panel at a time. Apply a 3/8" bead to all the grid members (mains, cross tees, and KAM) that the panel will contact. On grid members that will support the perimeter of the panel, apply the adhesive only to the inside half of the grid flange. For the interior cross tees, apply the adhesive to the center of the tee. Use about 2/3 of a 28-oz. cartridge for each full panel.



**4.** Install the panel within a few minutes, before the adhesive skins over. Orient the panel so the long dimension is parallel to the mains. Align the panel edges with the center lines of the mains and tees. Once positioned, press the panel firmly against the grid to establish strong contact with the adhesive.



**5.** Install the screws. Space the screws 16" O.C. in the field, and 8" O.C. around the perimeter. ACOUSTIBuilt® panels are softer than drywall, so the screws themselves won't pull the panels tight to the grid. As you drive each screw, press the panel firmly to the grid close to the location of the screw. Use 1-5/8" fine thread sharp-point or self-drilling drywall screws.



**6.** Drive each screw about 1/4" beyond the face of the panel. The screw head will just break through the panel facing layer to create a small hole that is easily finished. Failing to break through the scrim leaves a larger indentation.



**7.** Scrape away any excess adhesive to prevent it from interfering with adjacent panels.



**9.** Cut panels to size from the face side using a utility knife. Test the fit of cut panels before applying the adhesive.



**8.** To start the second row, add an extra tee 40" from the wall. This tee should be offset exactly 32" closer to the wall than the extra tee you used to start the first row. Cut the new panel to end on the center of the new tee and install the panel with adhesive and screws like the previous panel.



**10.** Continue installing panels to fill out the entire ceiling. Since the panels are 72" long (not an even multiple of 16"), you will need to install an "extra" tee for every second panel in a run. Be sure to have a grid member behind all four edges of every panel installed. Orient any cut panels so that cut edges are positioned only at perimeters or against fixtures. Use only factory tapered edges for joints between panels.



11. Cut panel openings for MEP with a keyhole saw or rotary cutter. Apply adhesive and screws 8" O.C. around the full perimeter of each cutout.



1. Start finishing by filling any gaps or damaged areas with fast-setting compound (hot mud). After the compound is dry, apply fiberglass mesh tape to all the joints. Coat the tape with fast-setting compound using a 5" or 6" taping knife. Use paper tape with ready mixed all-purpose compound in the corners only.



#### 4.3 Finishing the Joints and Fasteners

Tape the joints with fiberglass mesh tape and embed the tape with fast-setting compound (hot mud). Finish with two coats of ready mixed lightweight compound. Keep the joints to no more than 8" wide to preserve the acoustical performance of the panels. Allow each coat to fully dry before applying the next. Joint compound may take longer to dry on ACOUSTIBuilt® than on traditional drywall. Use air movers to reduce the drying time.

2. Spot-fill the field screws with fast-setting compound. Keep the finished area around each screw small. Do not "stripe" the screws.



- 3.** After the compound is fully dry, lightly sand the joints and spot-fills using 220 grit or finer sandpaper.



- 4.** Next apply a coat of ready-mixed lightweight compound to the joints. Use an 8" or narrower taping knife or box. If using a box, remove one or both springs to minimize the force needed and avoid damaging the panels. A "Power Assist" box is also a great option. The wet compound will soften the panel, so avoid running the box multiple times on the same seam while the compound is still wet. Use a smoothing blade instead, if needed. Spot-fill the field screws again, but this time using ready-mixed lightweight compound.



- 5.** After the previous coat is fully dry, apply the final coat of ready mixed lightweight compound to the joints. Use an 8" taping knife or box. Finish the joints to no more than 8" wide to preserve the acoustical performance. Mud-in flanges, such as light fixture trims, may be floated out as needed to create a flat appearance. If needed, spot-fill the screws for a final time.



- 6.** When the compound is dry, lightly sand the seams and spot fills with 220 grit sandpaper. If you use a power sander, start at the slowest speed setting and apply gentle pressure to avoid sanding through the face of the panels. Sand the joint compound edges to eliminate any ridges.



#### 4.4 Inspecting

Proper inspection is critical to ensuring a high-quality finished ceiling. Take the time to thoroughly inspect the finishing work and correct any defects before spraying.

1. Inspect the entire ceiling with grazing light from all four directions. Use a strong, 4500+ lumen light positioned within 6 inches of the ceiling. Inspect for crowned or hollow joints with a straight-edge tool. Check for ridges at the edges of the joint compound.



2. Correct any issues and reinspect before proceeding to spray the Fine Texture Finish.



*Inspection in critical lighting conditions is essential to ensure a high-quality Level 4 equivalent finished installation. For best results, dim the light from other sources and inspect with a single light source shining across the ceiling plane. The surface should be smooth and free of tool marks and ridges.*

**Correct any imperfections before spraying the Fine Texture Finish.**

## 4.5 Applying Fine Texture Finish for ACOUSTIBuilt®

*Before operating the spray equipment, read and understand all safety, operation, and maintenance information provided by the manufacturer. The user is solely responsible for using equipment safely and in accordance with the manufacturer.*

[https://www.graco.com/content/dam/graco/tech\\_documents/manuals/3A6/3A6342/3A6342EN-F.pdf](https://www.graco.com/content/dam/graco/tech_documents/manuals/3A6/3A6342/3A6342EN-F.pdf)

Fine Texture Finish for ACOUSTIBuilt® is sprayed with the Graco® Mark V Airless Sprayer and Low Pressure Rac X LP SwitchTip, LP527. The spraying procedure is designed to produce the fine-texture finish and acoustical performance. Be sure to use the proper Graco equipment, along with your ACOUSTIBuilt Spray Calibration Sample available from the Armstrong Sample Center. Email [BPONationalSampleCenter@armstrongceilings.com](mailto:BPONationalSampleCenter@armstrongceilings.com) – Request sample: BPCS-5999. For technical assistance, contact Armstrong Techline: [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com)

1. Mix the Fine Texture Finish for ACOUSTIBuilt thoroughly with a high-speed drill and spiral mixing blade (not a low-speed mud mixer) until the consistency is uniform. Be sure any settled material on the bottom of the pail is thoroughly mixed in. Strain the finish through a 10- to 20-mesh strainer into a clean bucket.



2. Remove the filter from the Graco Mark V Airless Sprayer. Follow the setup and startup procedure from Graco.



## PRO TIPS:

- Clean and flush the sprayer with water before use.
  - Use the ceramic intake valve ball (instead of the stainless-steel ball).
  - Cover the opened pail with a wet rag to keep the finish from drying out.
  - When not actively spraying, relieve pressure to avoid packing out the finish and clogging the sprayer.
  - Set the spray tip in water between coats.
3. Using the LP527 tip, test your spray pattern on a dark surface. Begin at a low pressure, approximately 1300 PSI, and gradually increase the pressure to eliminate heavy edges. Hold the gun at least 24 inches from the surface.

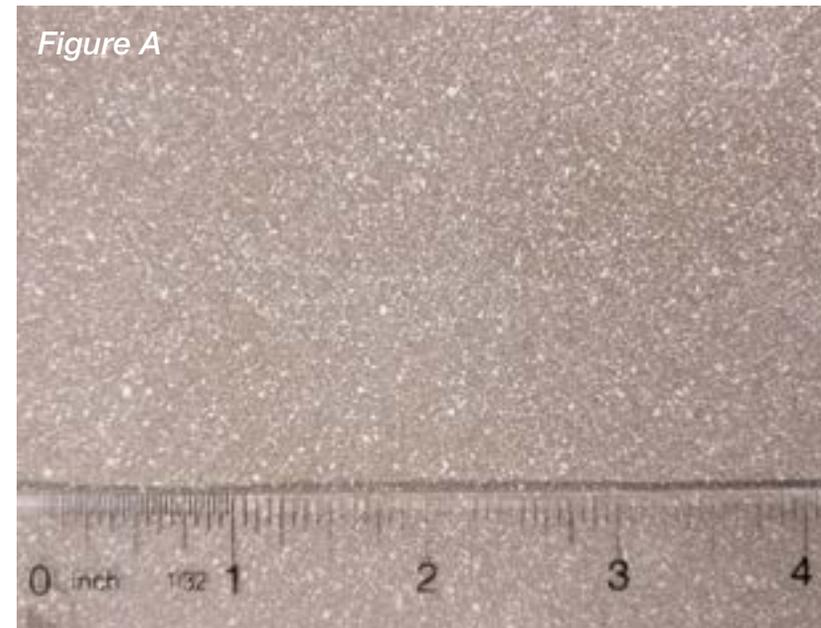
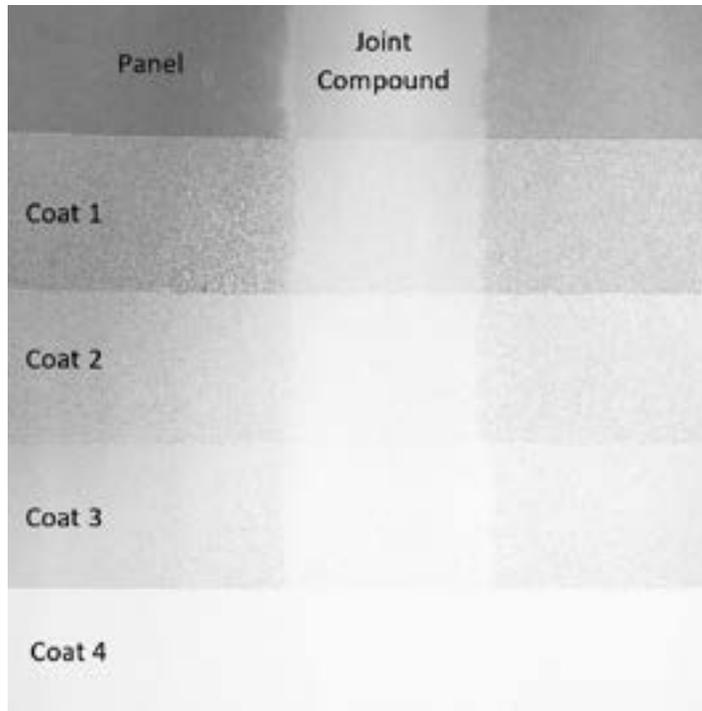


Figure A

4. Adjust your pressure and speed to match the Test Pattern Closeup in Figure A. The spray pattern should be fine and uniform.
5. Apply the finish to the ceiling in 4 to 5 fine, light coats. Compare the coverage to the Calibration Sample after each coat. With proper application, the joint compound will remain visible after the third coat and gradually disappear by the fourth or fifth coat. Move the gun swiftly and overlap each pass by 50%. Trigger the gun after moving and release before stopping. Reverse the spray tip to quickly clear clogs, pointing the gun away from the ceiling.



6. Allow the finish to dry for at least 30 minutes between coats. For each coat, alternate spray directions and inspect the ceiling once dry. Brush down any dry texture standing out from the surface with a knockdown squeegee trowel.



7. When the coverage is uniform and the finish is fully dry, assess the final appearance. Unblock any windows to view the ceiling in the natural site lighting conditions. If necessary, touch up any light areas with an additional coat.



8. Follow the cleanup procedure from the equipment manufacturer.

*Note: Store the finish between 40°F and 100°F and use within 3-5 days after opening. For best pump performance, store the finish at room temperature (60°F to 80°F). Colder finish temperature may require higher sprayer pressure. Extended dry times may be required between coats in humid or cold conditions. For additional information, see the ACOUSTIBuilt® Installation Instructions (BPLA-299099) or call an Armstrong Ceilings representative, 1 877 276 7876.*

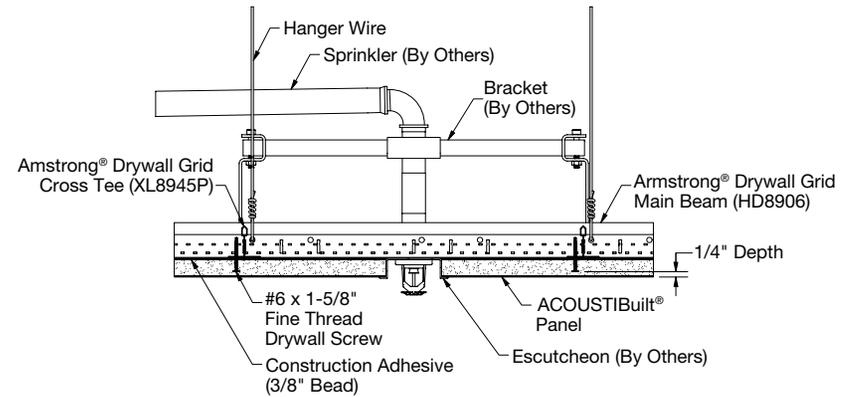
## 4.6 MEP Integration

The installed height of fixtures, such as sprinkler heads and light fixture trims, must be able to be adjusted to accommodate the 7/8" panel thickness. ACOUSTIBuilt® panels are not intended to support any load from lights, diffusers, speakers, or similar devices. All fixtures must be supported by framing members or independently per the manufacturer's instructions. (Fig 5)

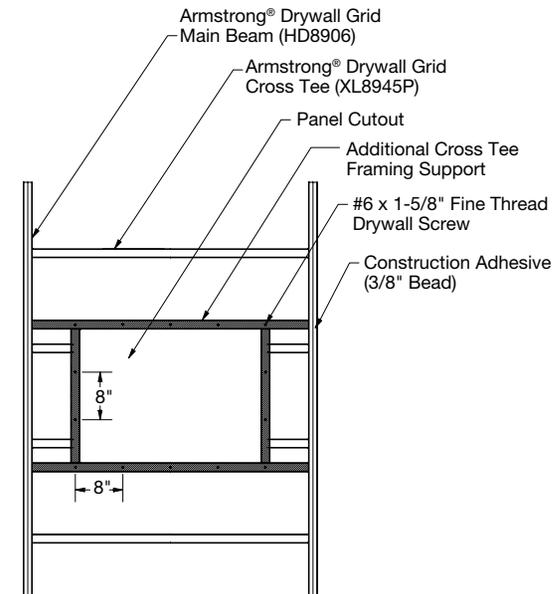
When panels are cut to accommodate fixtures, fasteners should be added to ensure the panels are fully supported.

If the largest dimension of the required cutout is more than about 12", then additional cross tees should be added around the perimeter of the opening, and fasteners should be added around this perimeter at no more than 8" O.C. (Fig 6)

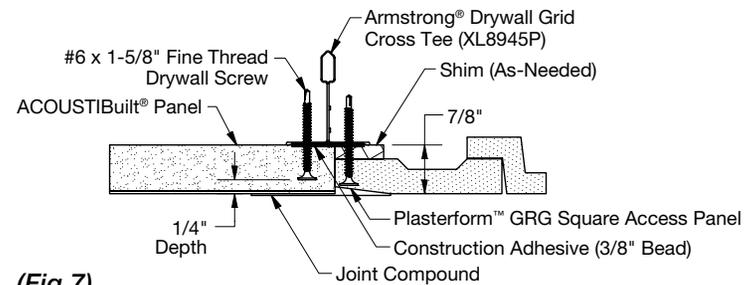
Access panels can be integrated within the system following standard installation practices. Refer to the access panel manufacturer to verify compatibility with 7/8" thick panels and for installation details. Some access panels designed for 5/8" drywall may require a 1/4" shim to install flush with ACOUSTIBuilt panels. (Fig 7)



(Fig 5)



(Fig 6)



(Fig 7)

## 4.7 Finishing to Walls

ACOUSTIBuilt® panels can be finished directly to the wall. Alternatively, ACOUSTIBuilt panels can be finished to create a reveal at the wall. (Figs 8 & 9)

## 5. AXIOM FLOATING PERIMETERS

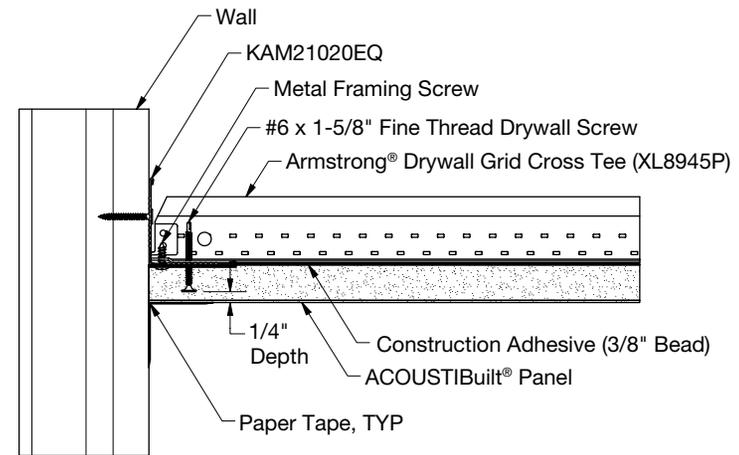
Floating perimeters must be trimmed with either Axiom® One-Piece Drywall Trim or Axiom® Classic with Bottom Trim for ACOUSTIBuilt. Refer to the installation instructions for the Axiom product you are using for instructions specific to the trim product. The following sections address requirements in addition to the standard Axiom instructions that must be followed for integration with ACOUSTIBuilt installations.

### 5.1 Suspension Rules

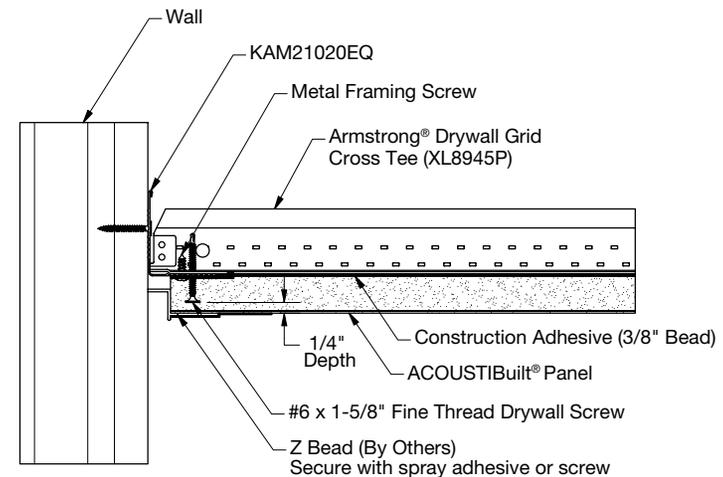
Based on the layout, the system may require additional suspension points when compared to the Axiom trim instructions.

When Axiom trim is not directly supported, the following suspension rules must be followed:

- All splices (including corners) must be supported by a connecting grid member within 24" on either side of the splice. Situations where there is no grid member that interfaces the Axiom Trim within 24" of the splice will require supplemental support directly from the Axiom Trim to structure.
- Axiom must be supported by grid members no more than 72" O.C., or be directly supported by the structure.
- All grid supporting Axiom trim must have a wire at a distance no greater than half the length of the grid member, up to a max of 12" (up to 8" in seismic installations), from the Axiom Trim.
- Refer to Axiom Classic instructions for additional installation requirements for Axiom 10" tall or greater.
- Lateral bracing may be required to square the grid and stabilize the ceiling for finishing steps



(Fig 8)



(Fig 9)

## 5.2 Grid Attachment

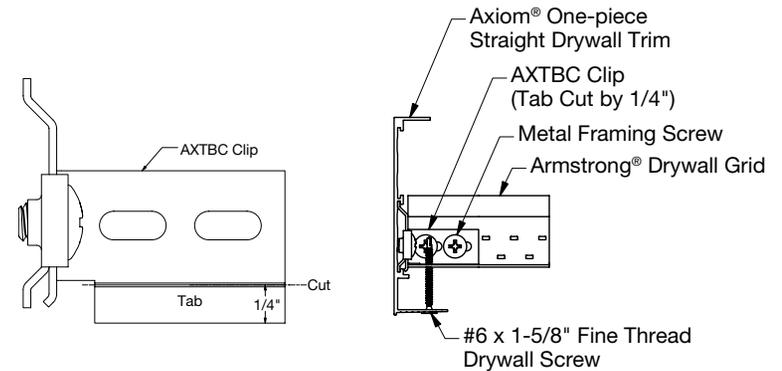
### 5.2.1 Axiom® One-Piece Drywall Trim

- The 1/4" tabs on all Axiom® T-Bar Connection Clips (AXTBC) or Axiom T-Bar Connector Twist Clips (ACCLT) must be trimmed off, typically using tin snips. (Fig 10)
- The grid flange is registered against the bottom of the AXTBC, creating the required 7/8" to 15/16" gap between the face of the grid and the Axiom taping flange. (Fig 11)
- All mains and cross tees are attached to the AXTBC clips by two metal framing screws.

### 5.2.2 Axiom Classic with Bottom Trim

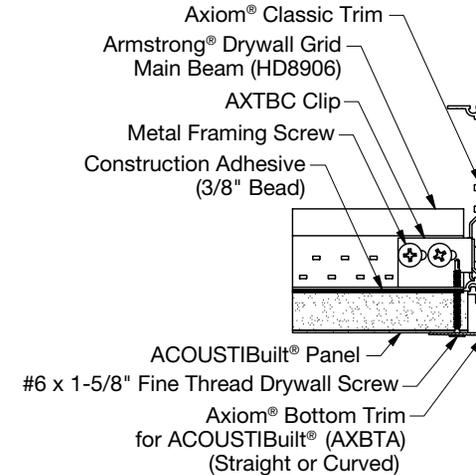
Axiom Bottom Trim for ACOUSTIBuilt® (AXBTA) is designed specifically for the 7/8" thickness of ACOUSTIBuilt panels.

- Cut off the tapered edges of panels at perimeters where Axiom Classic with Bottom Trim is used.
- AXTBC clips are installed as normal, without being trimmed, so that the drywall grid rests on the Axiom Classic flange. (Fig 12)
- After the panels are installed, the bottom trim is aligned in the groove of the Axiom Classic Trim and fastened with drywall screws through the taping flange of the trim into the bottom flange of the Axiom Classic trim. The bottom trim has two rows of pre-drilled holes. Use only the holes closest to the face to attach the bottom trim to the Axiom Classic.
- Before installing the screws, create a bevel in the AXBTA hole using a countersink tool or step bit. (Fig 13)

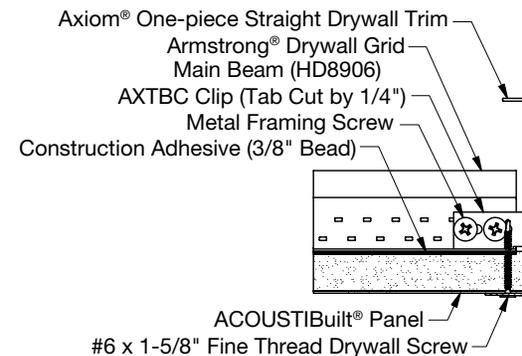


(Fig 10)

(Fig 11)



(Fig 12)



(Fig 13)

### 5.3 Panel Attachment at Floating Trim Perimeter

When panels are cut to size to fit within Axiom® with a taping flange (Axiom One-Piece Trim and Bottom Trim for ACOUSTIBuilt® ceiling system), screws should be inserted through the taping flange, securing the panels to cross tees at no more than 16" O.C. Additional cross tees may be required along the perimeter to meet this requirement. (Fig 14)

## 6. TRANSITIONS

The ACOUSTIBuilt ceiling system can be transitioned on the same plane or to different elevations.

### 6.1 Axiom® Transitions

#### 6.1.1 Elevation Change Transitions 2" - 10"

Axiom® Transitions Trim (items AXTR2 – AXTR10) can be used for elevation change transitions utilizing the Axiom Bottom Trim for ACOUSTIBuilt, and following the steps in Section 5.2.2.

Each suspension system attached to the Axiom transitions should be supported to structure within 8" of the transition. (Fig 15)

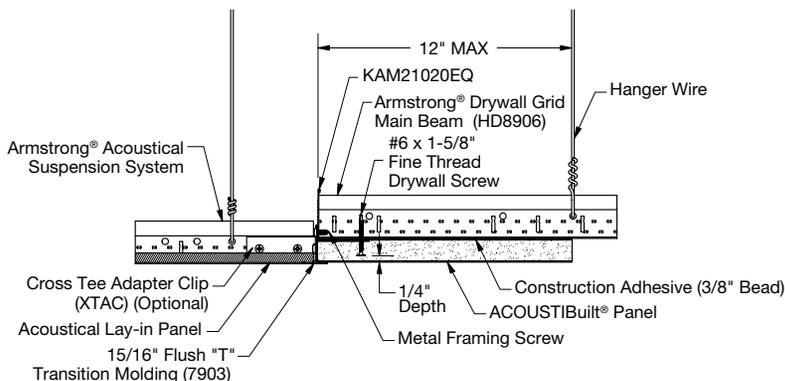
#### 6.1.2 No Elevation Change

Axiom transitions that have an integrated taping flange for drywall can be used with ACOUSTIBuilt panels by modifying the AXTBC in the same method as in Section 5.2.1.

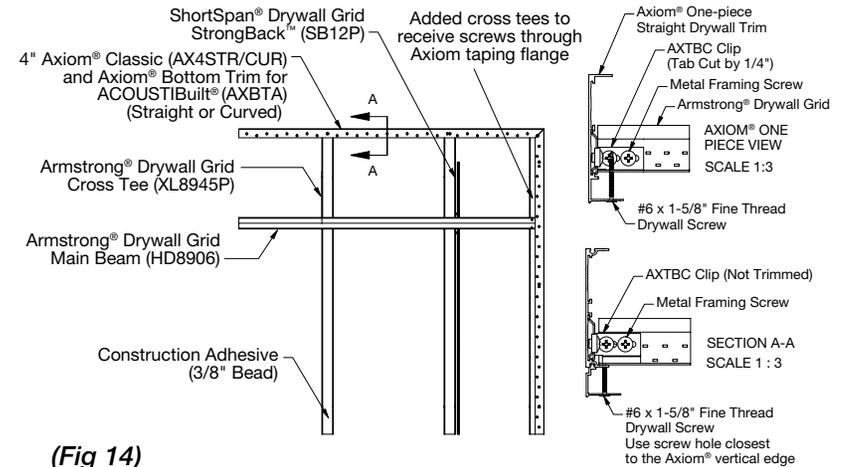
Each suspension system attached to the Axiom transition should be supported to structure within 8" of the transition. (Fig 16)

### 6.2 Transition Molding

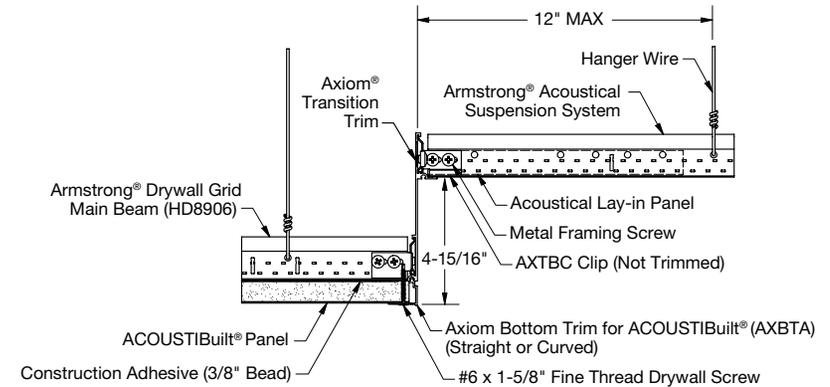
Transition molding can be used for transitions on the same plane between ACOUSTIBuilt panels and other acoustical ceiling products. (Fig 17)



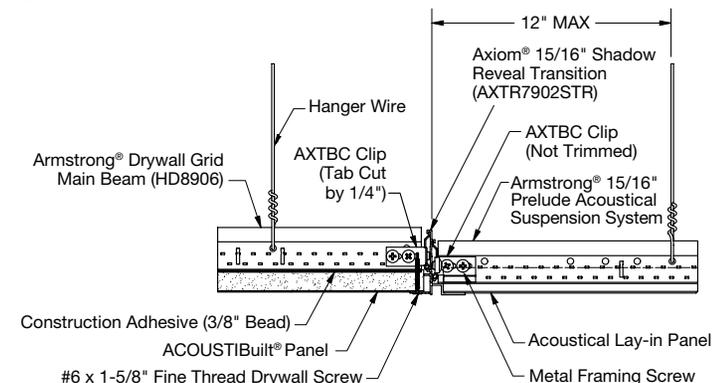
(Fig 17)



(Fig 14)



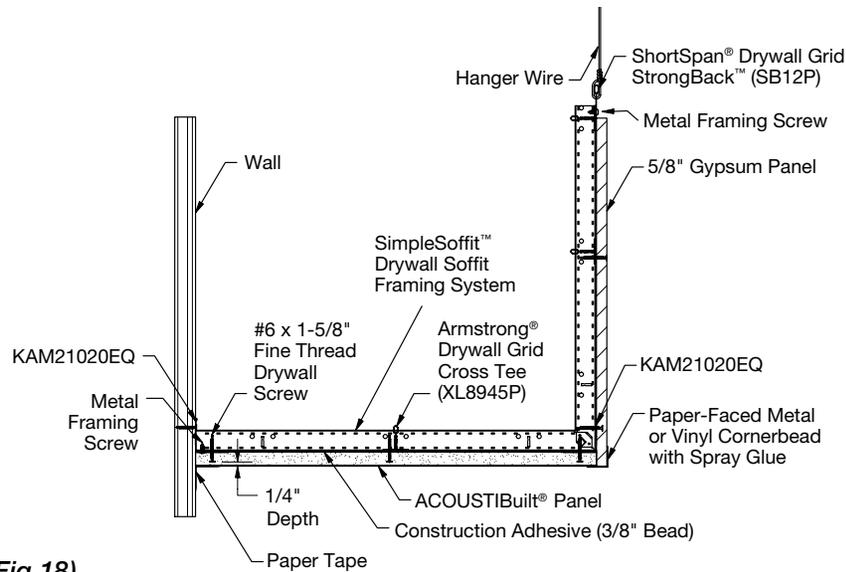
(Fig 15)



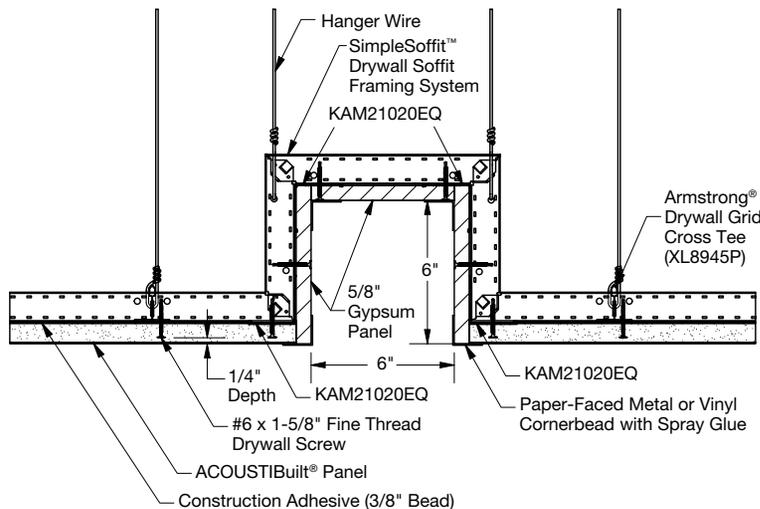
(Fig 16)

## 7. SIMPLESOFFIT™

SimpleSoffit™ can be used to create soffits of virtually any geometry with ACOUSTIBuilt®. (Figs 18 & 19)



(Fig 18)

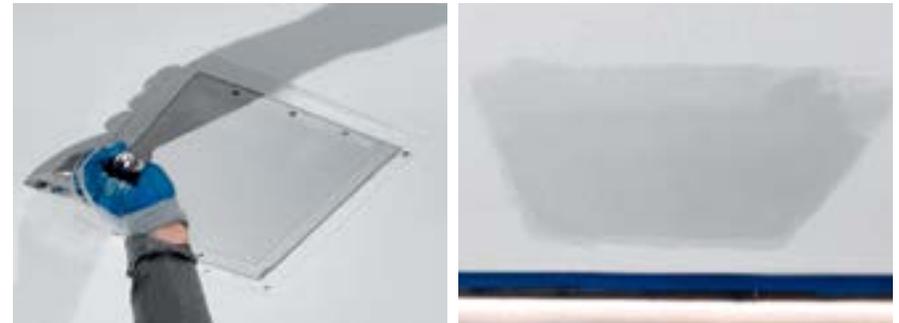


(Fig 19)

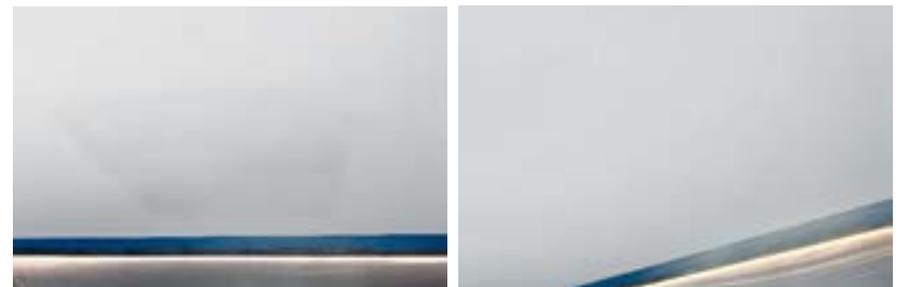
## 8. TOUCHUP AND REPAIR

ACOUSTIBuilt is a patchable and repairable system; however, it is best to plan integrations to avoid patching the finished ceiling. Patched areas are covered with joint compound, diminishing the sound-absorbing performance. Custom colors may be more challenging to repair completely.

1. Cut away and replace the damaged area with a piece of drywall or ACOUSTIBuilt panel. Add framing and adhesive, as needed, to support the patch. Set the new piece slightly recessed from the surrounding ceiling. Sand the finish texture smooth around the perimeter of the patch. Apply mesh tape and joint compound as typical to finish the patch. Float out the joint compound to create a flat and even surface. Use a lightweight or topping compound on the final coats. Inspect with critical light and a straight-edge tool.



2. Apply about four light coats of Fine Texture Finish for ACOUSTIBuilt® with a portable electric HVLP sprayer. Strain the finish, calibrate the spray pattern, and allow dry time between coats as described in Section 4.5. Feather the final coat into the surrounding area until the appearance is uniform.



## SYSTEM COMPONENTS

Item #	Description	Ordered Separately / Included with	Required for Install?	Sold by the	Pcs/Ctn
<b>SUSPENSION SYSTEM</b>					
HD8906	12' HD Drywall Main Beam	Ordered separately (by Armstrong)	Yes	Ctn	12
XL8945P	4' Drywall Cross Tee	Ordered separately (by Armstrong)	Yes	Ctn	36
KAM10 or KAM12	12' Knurled Angle Molding	Ordered separately (by Armstrong)	Based on layout	Ctn	10
7891	12-gauge hanger wire	Ordered separately (by Armstrong)	Yes	Bundle	140
<b>PANELS AND ADHESIVE</b>					
2604	ACOUSTIBuilt® Panel – tapered edges, 48 x 72 x 7/8"	Ordered separately (by Armstrong)	Yes	Ctn	10 panels (240 sq. ft.)
Screws	#6 x 1-5/8" fine thread, sharp point or self-drilling drywall screw	Ordered separately (by others)	Yes	Varies	Varies
Construction Adhesive	Recommended: OSI® F38 Heavy Duty drywall adhesive. Other adhesives must meet the requirements of ASTM C557 and be recommended by the manufacturer for use with galvanized steel. OSI® is a trademark of Henkel Corp., USA	Ordered separately (by others)	Yes	Varies	Varies
<b>TAPE, COMPOUND, AND FINISH</b>					
Mesh Joint Tape	Self-adhesive mesh drywall joint tape	Ordered separately (by others)	Yes	Varies	Varies
Paper Tape	Paper tape (for corners only)	Ordered separately (by others)	Yes	Varies	Varies
Fast-Setting Compound (hot mud)	Setting-type drywall joint compound, 5- to 90-minute, to embed mesh joint tape	Ordered separately (by others)	Yes	Varies	Varies
Ready Mixed Lightweight Compound	Ready mixed lightweight or topping drywall joint compound that is easy to sand and low shrinkage (NOT All-Purpose)	Ordered separately (by others)	Yes	Varies	Varies
Ready Mixed All-Purpose Compound	Ready mixed all-purpose or taping compound, used on corners to embed paper tape	Ordered separately (by others)	Based on layout	Varies	Varies
2605WH	Fine Texture Finish for ACOUSTIBuilt Panels – White Off-white tints may be custom ordered	Ordered separately (by Armstrong)	Yes	Pail	4 gal/pail
<b>PERIMETER TRIMS &amp; ACCESSORIES</b>					
AX1PC – STR AX1PC – CUR	Axiom® Classic Available for 2"-16" heights – Straight or Curved	Ordered separately (by Armstrong)	Based on layout	Piece	
AXBTASTR AXBTACUR	Axiom Bottom Trim (7/8") for ACOUSTIBuilt – Straight or Curved	Ordered separately (by Armstrong)	Required for Axiom Classic	Piece	10
AXAKEACBSTR AXAKEACBIC AXAKEACBOC	Axiom Angled Knife Edge Trim for ACOUSTIBuilt – Inside or Outside Corner	Ordered separately (by Armstrong)	Based on layout	Piece	

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## TOOLS AND EQUIPMENT

### SUSPENSION SYSTEM

Standard drywall grid installation tools

### PANEL INSTALLATION

Impact driver or drill driver

Adhesive gun (Recommended: Cordless 29-oz. adhesive gun)

Cutting tools (Recommended: Utility knife, rotary cutout tools)

### PANEL FINISHING

Knives or flat boxes up to 8"

Power sander or pole sander and sanding blocks (Recommended: 220 grit sandpaper)

Inspection tools (Recommended: 4500+ lumen light and 12" straight-edge tool)

### FINE TEXTURE FINISH FOR ACOUSTIBUILT® PANELS

Required: Graco® Mark V Airless Sprayer (Standard, ProContractor, or IronMan) with Low Pressure RAC X LP SwitchTip, LP527

Pressure-tank assemblies with a specific spray gun may be used as an alternative to the Graco Mark V. Contact your Armstrong rep for more information. For small touchups, a portable electric HVLP sprayer is recommended.

# ACOUSTIBuilt® Seamless Acoustical Walls System Overview

## Assembly and Installation Instructions

This installation guide contains instructions for installing and finishing ACOUSTIBuilt® wall applications. This guide is a supplement to the standard ACOUSTIBuilt Installation Instructions, "ACOUSTIBuilt® Seamless Acoustical Ceiling System Overview". Refer to that document for additional information about product requirements and Fine Texture Finish application.

### APPLICATIONS

The ACOUSTIBuilt System can be installed to walls or interior partitions at least 7 feet above the floor. It can be installed as an acoustical treatment to a new or existing drywall wall assembly. (Fig 1)

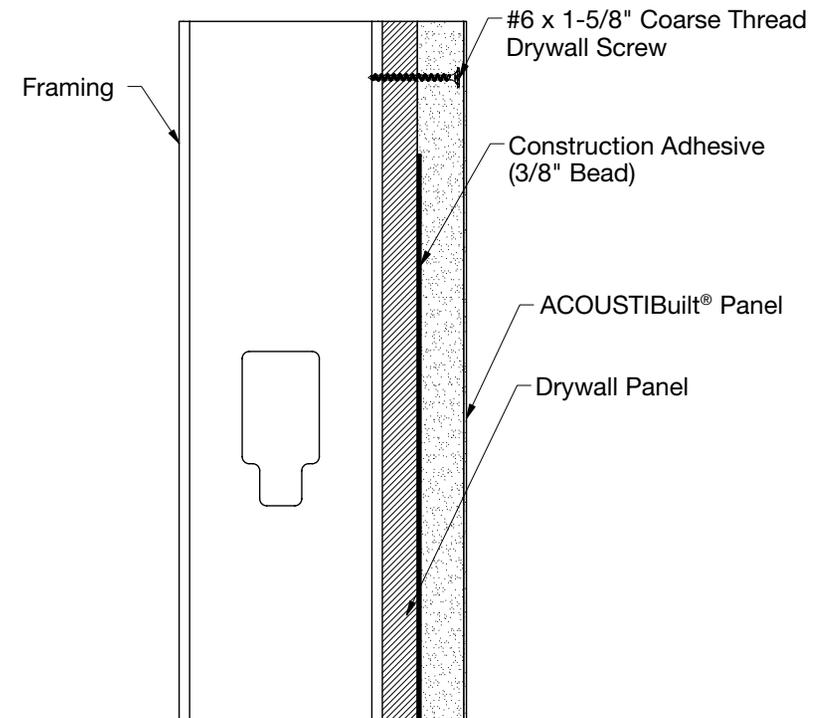
### INSTALLATION CONSIDERATIONS

#### Wall or Partition Assembly

ACOUSTIBuilt panels with Fine Texture Finish weigh approximately 1.1 lb/sq. ft. The framing and drywall assembly to receive ACOUSTIBuilt panels must be constructed in accordance with local code and manufacturer requirements. The drywall must be properly fastened to framing, and the framing must be installed and braced properly with considerations to load-carrying capacity. The drywall joints should be finished to at least Level 1. ACOUSTIBuilt panels are not intended to support fixtures or wall hangings.

#### Surface Considerations

Surfaces must be dry and free of dust, grease, oil, dirt, or any other material that may inhibit adhesion. If the drywall paint is flaking or peeling it must be removed. Existing finish paint must be well-bonded. Avoid applying to a newly painted wall or partition. Glossy painted surfaces must be abraded. It is recommended that the wall surface for attachment be free of irregularities and be flat within 1/4" in 12'.



(Fig 1)

# PANEL INSTALLATION

## Panel Installation Overview

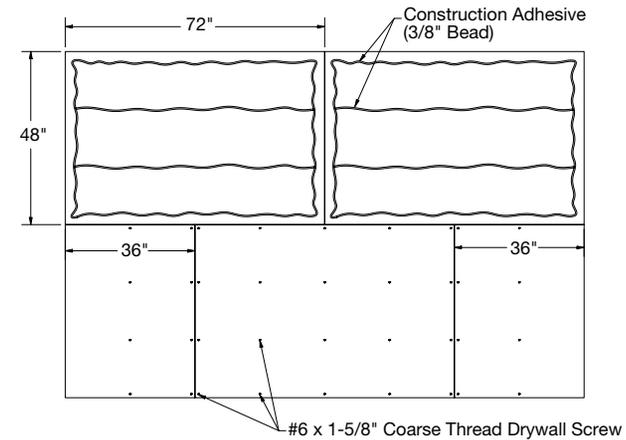
ACOUSTIBuilt® panels can be installed in vertical or horizontal orientations. ACOUSTIBuilt panel joints should be offset from the drywall joints beneath. When installing more than one row of panels, stagger the rows 36 inches so the short joints intersect at the midpoints of the adjacent panels. ACOUSTIBuilt panels are attached to drywall using screws and a recommended construction adhesive: Loctite® PL Premium® Polyurethane Construction Adhesive, or OSI® F38 Drywall Panel Adhesive. (Figs 2 & 3)

## Adhesive application

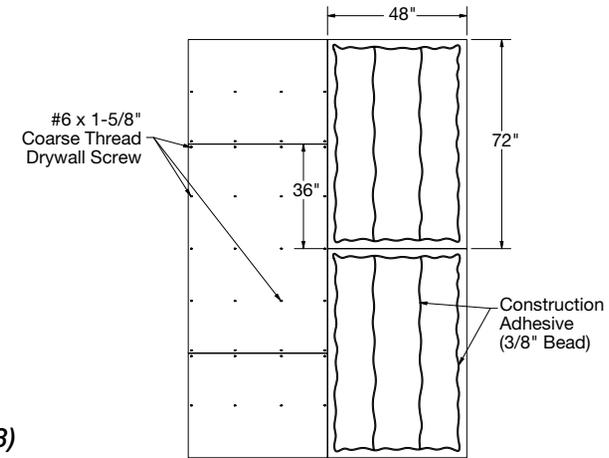
Use adhesive in accordance with all manufacturer requirements. Apply a 3/8" bead of adhesive around the full perimeter of the back of the panel, 2 to 4 inches from the edges. Apply additional beads across the full length of the panel spaced no more than 16 inches apart. Join the ACOUSTIBuilt panel to the drywall within 15 minutes of application. Confirm the fit of precut panels before applying the adhesive. If a panel must be repositioned, reapply adhesive. (Fig 4)

## Screw installation

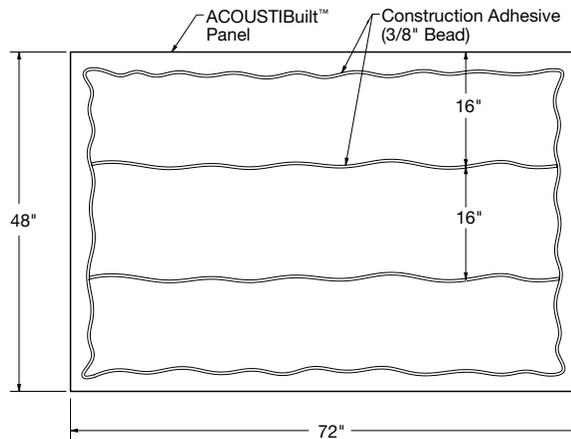
Position the panel to the wall or partition and install the field screws to hold the panel in place. Along all the glue lines, press the panel firmly against the wall to spread the adhesive and ensure the panel is flush with the drywall surface. Finally, install the perimeter screws within 1 inch of the panel edges. The location of the screws should coincide with the adhesive. Space screws 18 inches on center along the panel length, and 16 inches on center along the panel width. (Fig 5)



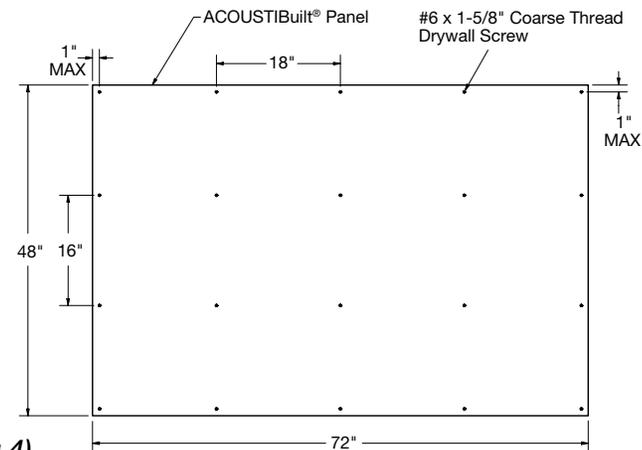
(Fig 2)



(Fig 3)



(Fig 5)



(Fig 4)

## Driving the screws

Install the screws using a drill driver or impact driver. Drive each screw 1/4" to 3/8" into the face of the panel. At this depth, the screw head will break through the panel facing layer to create a small hole that is easily finished. Failing to break through the facing creates a larger indentation. It is also important to drive the screw heads at least 1/4" deep to prevent "screw pops". (Fig 6)

## Panel Cutouts and Integrations

When installing field-cut ACOUSTIBuilt® panels, apply a 3/8" bead of adhesive around the perimeter of the cut section 2 to 4 inches from the edge. Install the panel with screws at each corner of the cutout and intersecting joints, and no more than 18" on center around the perimeter. (Fig 7)

## Screw installation

Position the panel to the wall or partition and install the field screws to hold the panel in place. Along all the glue lines, press the panel firmly against the wall to spread the adhesive and ensure the panel is flush with the drywall surface. Finally, install the perimeter screws within 1 inch of the panel edges. The location of the screws should coincide with the adhesive. Space screws 18 inches on center along the panel length, and 16 inches on center along the panel width.

## FINISHING

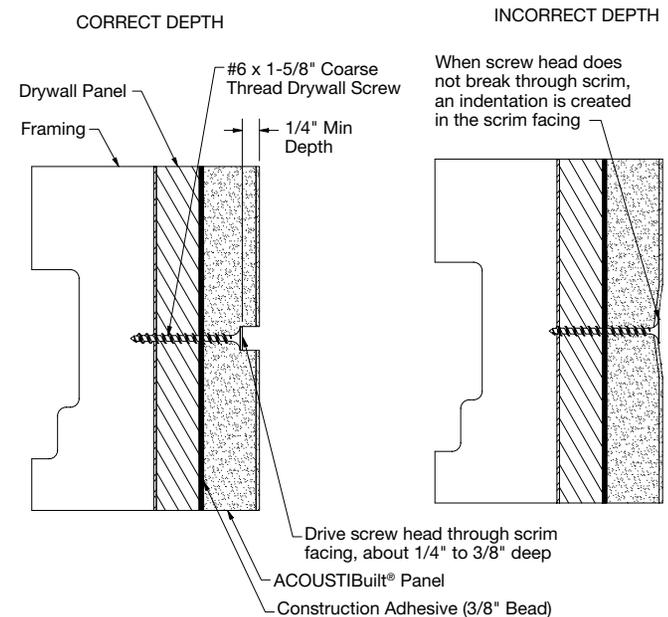
### Tape and Joint Compound

Tape the joints with fiberglass mesh tape. Apply setting-type compound over the tape using a 5- or 6-inch taping knife. Pull the compound tight to fully embed the mesh but allow room for the topping coats.

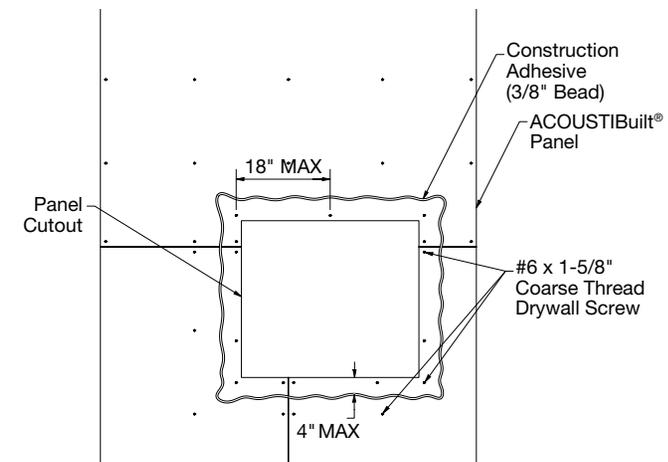
Apply setting-type compound to the field screw locations. If the compound bulges, hold the knife nearly perpendicular to the face of the panel and scrape the bulge flat. Do not "stripe" the field fasteners. Apply compound only in a small area around the screws.

After the setting compound is fully dried, apply a coat of premixed topping compound to the joints and perimeters using a 6- or 8-inch taping knife. Also apply a coat of topping compound to the field screws.

After the first coat of topping compound is dry, apply a second coat of topping compound the joints and perimeters using an 8-inch taping knife. Also apply a coat of topping compound to the field screws, if needed.



(Fig 6)



(Fig 7)

## Sanding and Inspecting Procedure

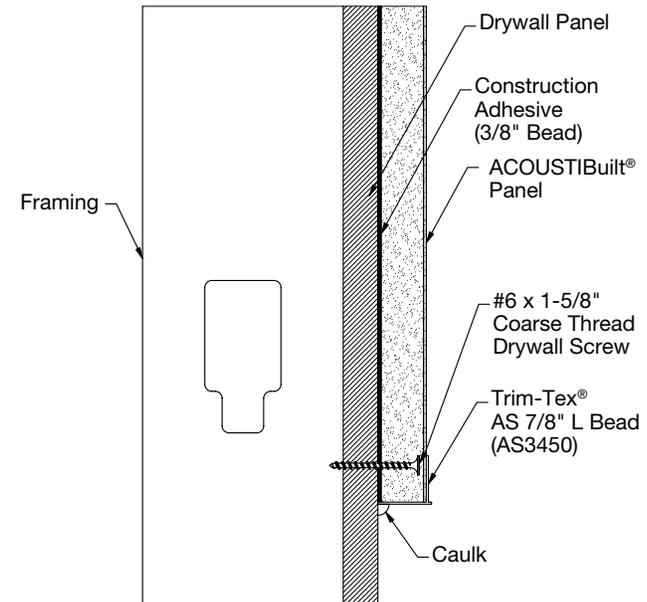
Sand all finished areas flat with fine, 220 grit sandpaper. Inspect frequently with critical light and a straight-edge tool. Use care to avoid damaging the panel facing. Drywall power sanders may be used with care, operating with 220 grit paper on a low-speed setting. Soft sanding blocks are recommended to eliminate ridges at compound edges.

Inspect the entire installation for high/low spots with critical light and a 24-inch straight edge. Check every finished fastener and joint every 2-3 feet. Touch up any high/low spots and confirm the entire installation is flat before spraying the Fine Texture Finish. All compound should be smooth and free of tool marks and ridges.

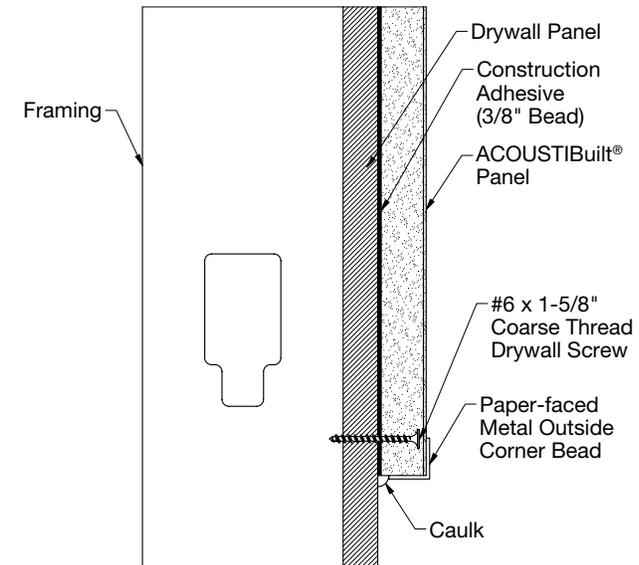
## PERIMETERS AND TRANSITIONS

### Perimeters

Around the perimeter, the Trim-Tex® AS 7/8" L Bead (AS3450) is recommended. Apply using spray adhesive and mesh tape. Apply caulk bead where the trim meets drywall. Perimeters may also be finished with paper-faced beads. Tear away part of the paper on the 7/8" edge, if necessary. *(Figs 8 & 9)*



*(Fig 8)*



*(Fig 9)*

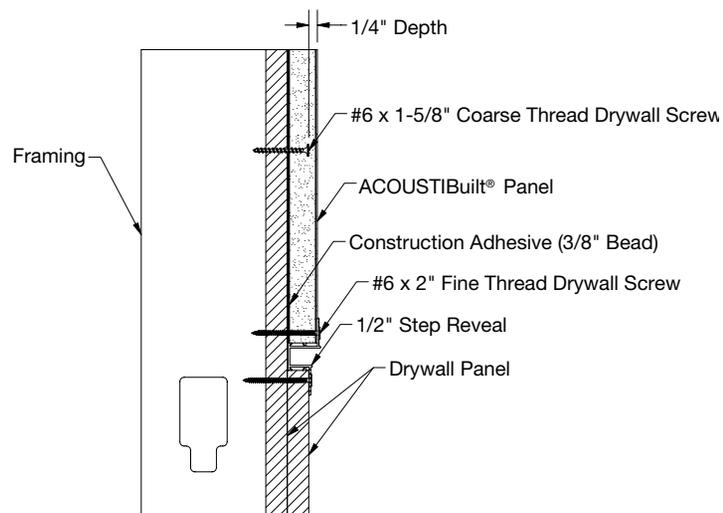
## Transitions

The ACOUSTIBuilt® System can be transitioned to other wall and ceiling assemblies. Drywall beads may be used to create reveals or finished edges where the system transitions to other wall finishes.

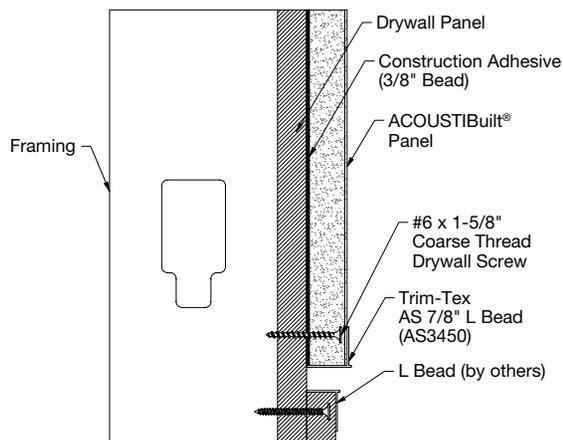
Finish inside corners with paper tape and joint compound, as shown in (Figs 10 through 13).

## FINE TEXTURE FINISH

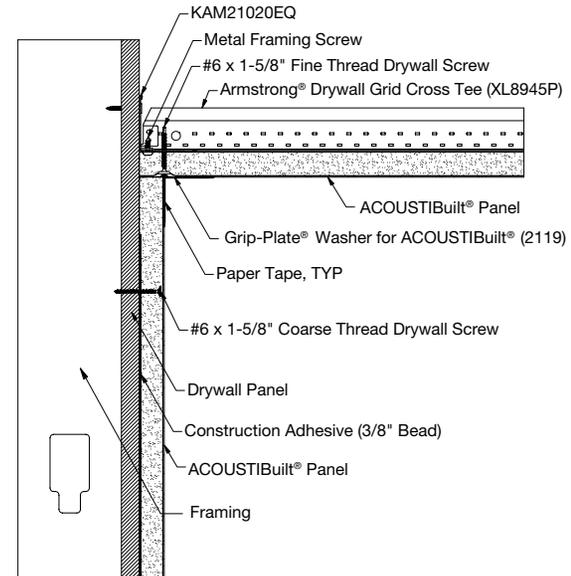
Apply Fine Texture Finish for ACOUSTIBuilt per Section 4.5 of the standard installation instructions, "ACOUSTIBuilt® Seamless Acoustical Ceiling System Overview".



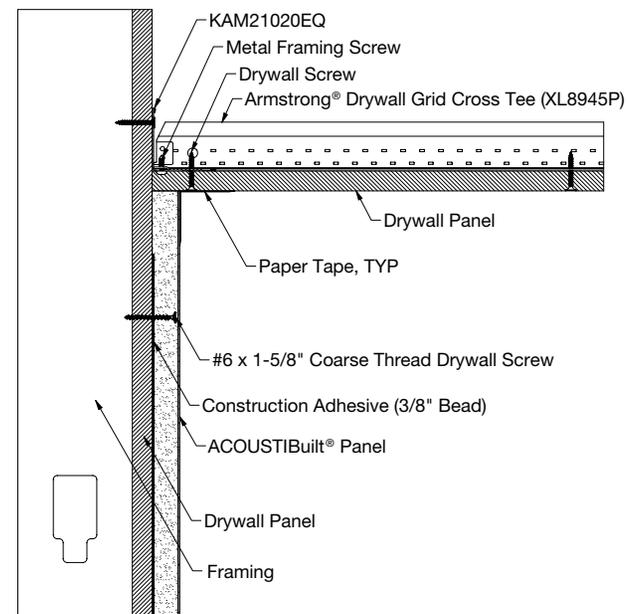
(Fig 10)



(Fig 11)



(Fig 12)



(Fig 13)

## SYSTEM COMPONENTS

Item #	Description	Sold by the:	Pcs/Ctn
2604	ACOUSTIBuilt® Panel – tapered edges, 48 x 72 x 7/8"	Pallet	10 Panel increments
2605WH	Fine Texture Finish for ACOUSTIBuilt Panels – White	Pail	4 gal/pail
Screws	Coarse-thread drywall or laminating screws	Varies	Varies
Recommended Adhesives	Loctite® PL Premium® Polyurethane Construction Adhesive, OSI® F38 Drywall Panel Adhesive	Varies	Varies
Tape	Self-adhesive mesh drywall joint tape	Varies	Varies
Setting-Type Compound	Setting-type drywall joint compound, lightweight, used for first coat	Varies	Varies
Drying-Type Compound	Pre-mixed topping compound, lightweight or ultra lightweight, used for top coats	Varies	Varies

### MORE INFORMATION

For more information, or for an Armstrong Ceilings representative, call 1 877 276-7876.

For complete technical information, detail drawings, CAD design assistance, installation information, and many other technical services, call TechLine customer support at 1 877 276-7876 or FAX 1 800 572-TECH.

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