

Acoustical Design: EXPOSED STRUCTURE

Armstrong®
World Industries

EXPOSED STRUCTURE
Acoustical Solutions

Preserve an industrial visual with acoustical solutions attached or applied directly to structure, or create a design statement that puts acoustical materials front and center.

We've got the broadest portfolio of ceiling and wall options to get the look you want and control noise, so you can achieve the best of both worlds. Optimize performance in the workplace, in educational facilities, and hospitality with the right aesthetics and acoustics for the space.

FeltWorks® acoustical panels; ▶
Gensler Charlotte Office, Charlotte NC



8

BLADES
FeltWorks® Blades
SoundScapes® Blades
Tectum® Blades
MetalWorks™ Blades
WoodWorks® Custom Blades

BAFFLES
Tectum® Baffles



18

CANOPIES
SoundScapes® Canopies
MetalWorks™ Canopies
WoodWorks® Custom Canopies
WoodWorks® Canopies
Serpentina® Classic & Waves™

CLOUDS
AcoustiBuilt® Clouds
FeltWorks® Open Cell Panels
SoundScapes® Shapes
Tectum® Clouds
Tectum® Shapes
Formations™ Clouds
DesignFlex® for Formations™ Clouds



36

DIRECT-TO-STRUCTURE

Ceiling & Wall Panels
Tectum® Create!™
Tectum® Direct-Attach
Tectum® Finale™, Finale™ PB
Lyra® PB Direct-Apply
FeltWorks® Panels
InvisAcoustics™ Panels
SoundScapes® Shapes

Ceiling Panels
Optima® Capz™ Panels
MetalWorks™ Capz™ Panels

Wall Panels
Soundsoak® Panels
WoodWorks® Wall Panels
WoodWorks® MicroPerf Panels



52

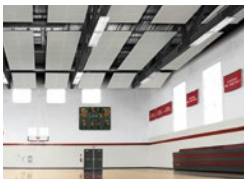
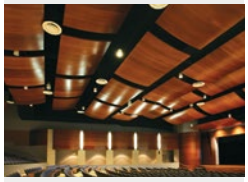
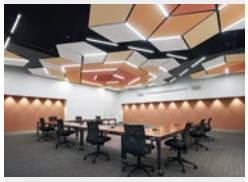
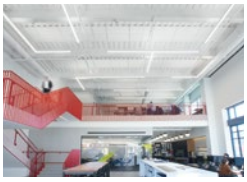
ACOUSTICS INFORMATION
Acoustical Terms
Design Comparisons
Coverage Recommendations
Project Support

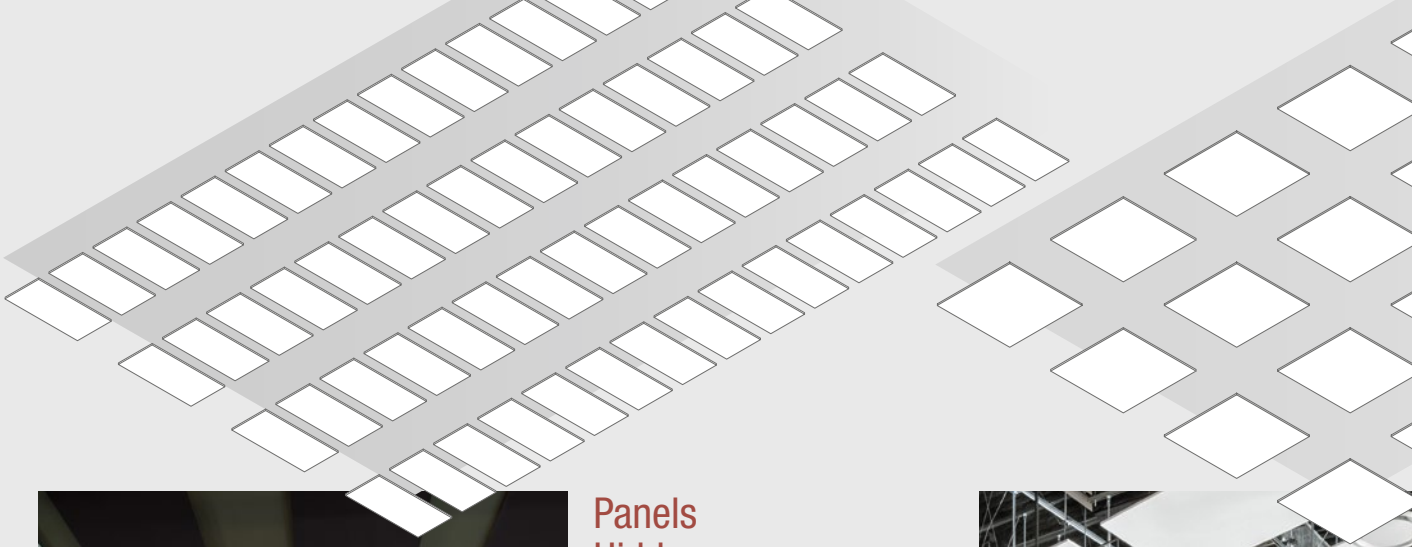

Gensler
Gensler

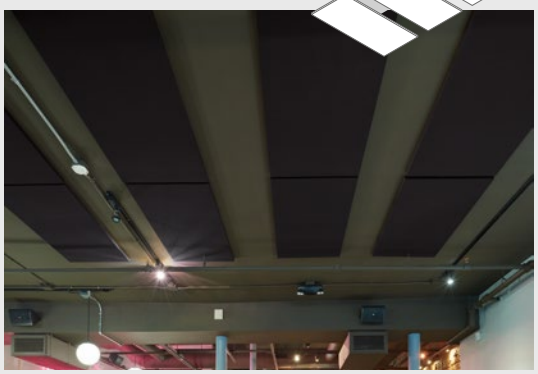
EXPOSED STRUCTURE ACOUSTICAL SOLUTIONS AT-A-GLANCE

VERTICAL

HORIZONTAL

	BLADES & BAFFLES	CLOUDS	CANOPIES	DIRECT-TO-STRUCTURE Ceiling & Wall Panels	
METAL	 METALWORKS™ Blades Pgs. 16-17	 SERPENTINA® Classic & Waves™ Pgs. 34-35	 METALWORKS™ Canopies Pg. 32	 METALWORKS™ Capz™ Panels Pg. 47	
WOOD	 WOODWORKS Custom Baffles Pg. 9		 WOODWORKS® Custom Canopies Pg. 33	 WOODWORKS® Wall Panels Pg. 50 WOODWORKS Custom Wall Panels – Pg. 51	
MINERAL FIBER		 ACOUSTIBUILT® Clouds Pgs. 20-21 FORMATIONS™ Clouds & DESIGNFLEX® for FORMATIONS™ Pgs. 30-31	 SOUNDSCAPES® Canopies Pgs. 26-27	 INVISACOUSTICS™ Panels Pgs. 44-45 SOUNDSOAK® Panels Pg. 48	HIDDEN
FIBERGLASS	 SOUNDSCAPES® Blades Pgs. 12-13	 SOUNDSCAPES® Shapes Pgs. 24-25		 LYRA® PB Direct-Apply Pg. 41 SOUNDSCAPES® Shapes Pg. 49 OPTIMA® PB Capz™ Panels Pg. 46	HIDDEN
TECTUM® WOOD FIBER – CEMENTITIOUS	 TECTUM® Blades & Baffles Pgs. 14-15	 TECTUM® Shapes & Clouds Pgs. 28-29		 TECTUM® Direct-Attach Pgs. 38-39 TECTUM® Finale™ & Finale™ PB Pg. 40	
FELTWORKS® FELT	 FELTWORKS® Blades Pgs. 10-11	 FELTWORKS® Open Cell Pgs. 22-23		 FELTWORKS® Acoustical Panels Pgs. 42-43	HIDDEN



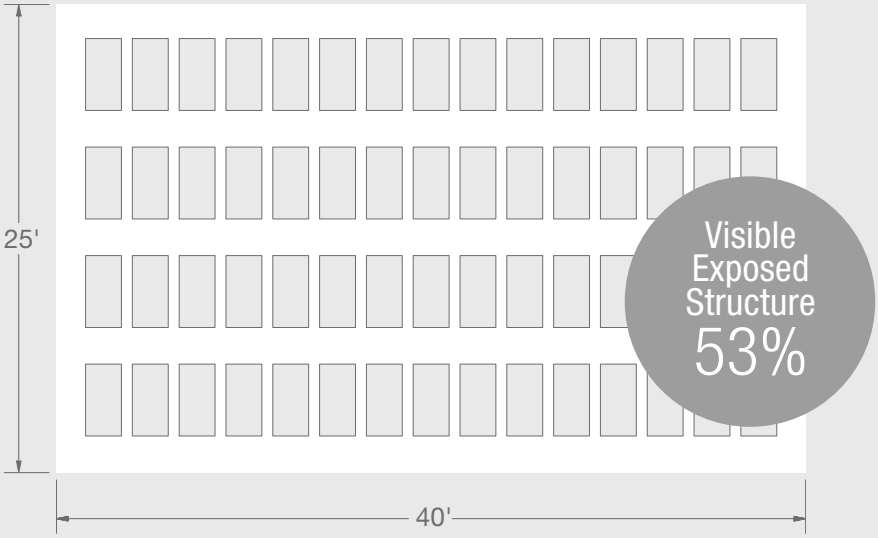


Panels Hidden Within the Structure



HORIZONTAL OR VERT

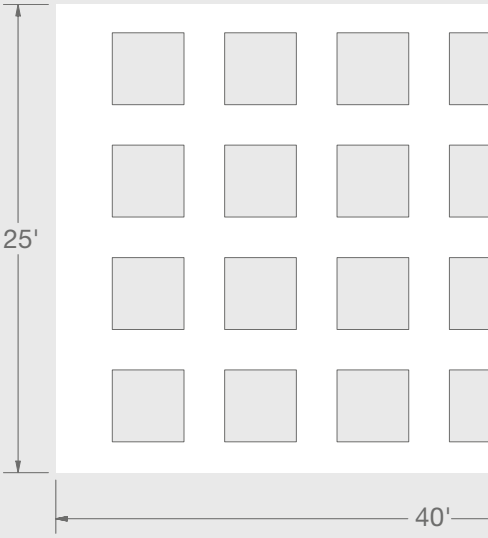
Layout solution shown represents **BETTER** reverberation time



DECK COVERAGE / NOISE REDUCTION	Reverberation Time (RT)		
1,000 SF (25' x 40') Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 24" x 48" LYRA® PB Direct-Apply Panels	30	59	125
% of Deck Coverage	24%	47%	100%

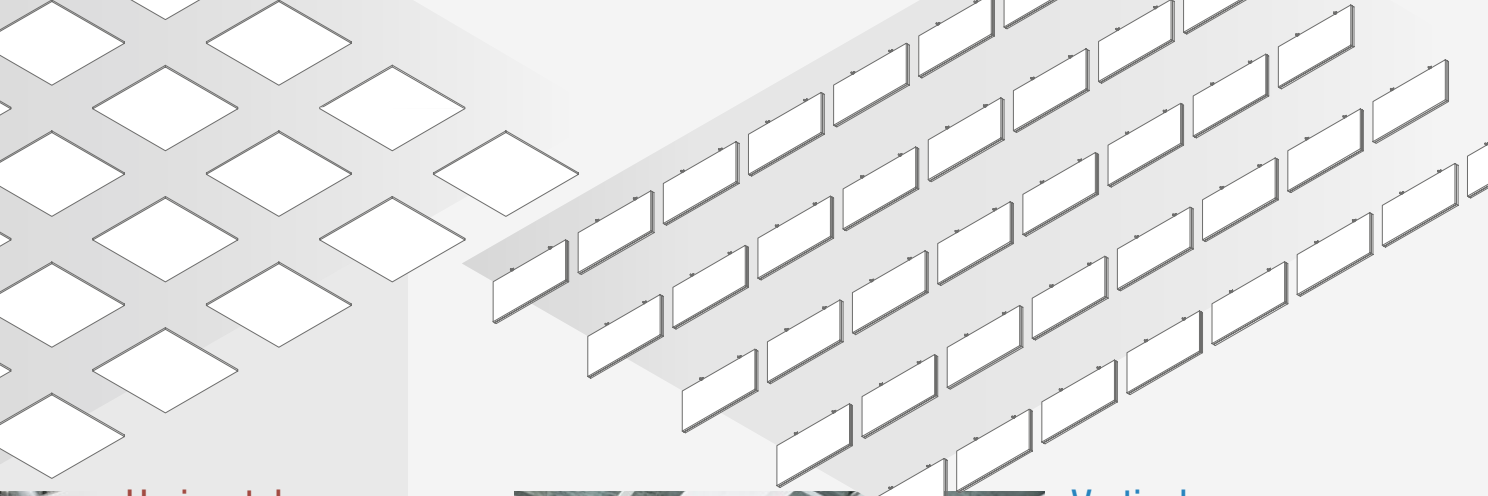
* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

Layout solution shown represents B



DECK COVERAGE / NOISE REDUCTION
1,000 SF (25' x 40') Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet
# of 48" x 48" SOUNDSCAPES® Shapes
% of Deck Coverage

* Long RTs (≤ 1.4 sec) = for lively acoustic environm
** Short RTs (< 1 sec) = high-quality speech intelligi





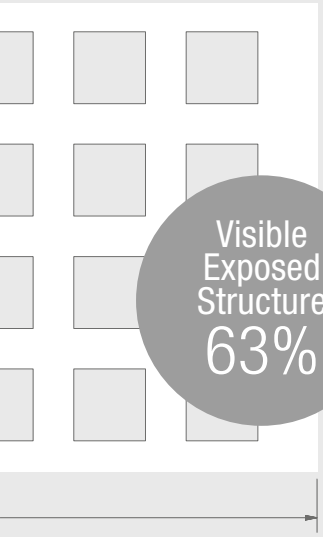
Horizontal Panels as a Design Element



Vertical Panels as a Design Element

TICAL?

BETTER reverberation time

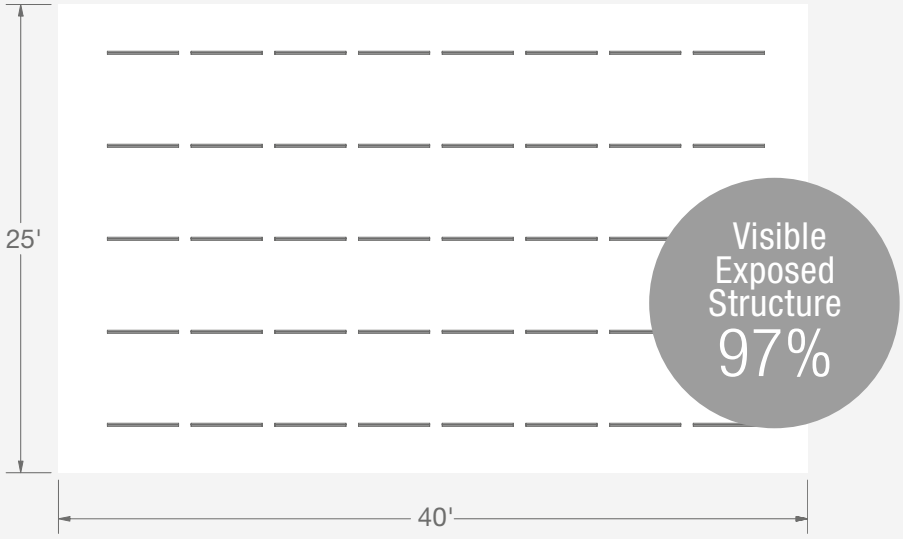


	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
Reverberation Time (RT)			
	12	24	49
	19%	37%	78%

ments (auditoriums/hospitality)
bility (classrooms/open plan spaces)

It's Up to You. They All Absorb Noise Effectively.

Layout solution shown represents **BETTER** reverberation time



DECK COVERAGE / NOISE REDUCTION	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
	Reverberation Time (RT)		
1,000 SF (25' x 40') Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet			
# of 22 x 46 x 2" SOUNDSCAPES® Blades	20	40	86
% of Deck Coverage	1%	3%	6%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

HORIZONTAL OR VERTICAL ACOUSTICAL TREATMENTS?

LIFT HERE

ACOUSTICS & AESTHETICS

Get the look you want with the right acoustics for your next exposed structure project with a custom Reverberation Report. It will help you compare acoustical solutions and suggest coverage recommendations to meet the needs of your project.
armstrongceilings.com/reverbrequest

Experience what PROJECTWORKS® design and pre-construction service can bring to your next project. We'll help you bring your ideas to life!
armstrongceilings.com/projectworks



Custom MetalWorks™ Baffle ▶
Santa Anita Mall, Arcadia, CA
ProjectWorks®

ProjectWorks®
helping to bring your one-of-a-kind ideas to life



▲ SoundScapes® Shapes, WoodWorks® Grille, and Axis Stencil Pendant Light Fixtures; Freddie Mac Cafeteria, Reston, VA Project 308 Design, Alexandria, VA

OPEN UP THE POSSIBILITIES

Multi-format

Take design to a new level that's uniquely yours by combining horizontal and vertical formats.

NOW YOU SEE IT
NOW YOU DON'T

Discreetly add peace and quiet to exposed structure spaces, or add a pop of color with your treatments.

▼ InvisAcoustics™ Acoustical Panels

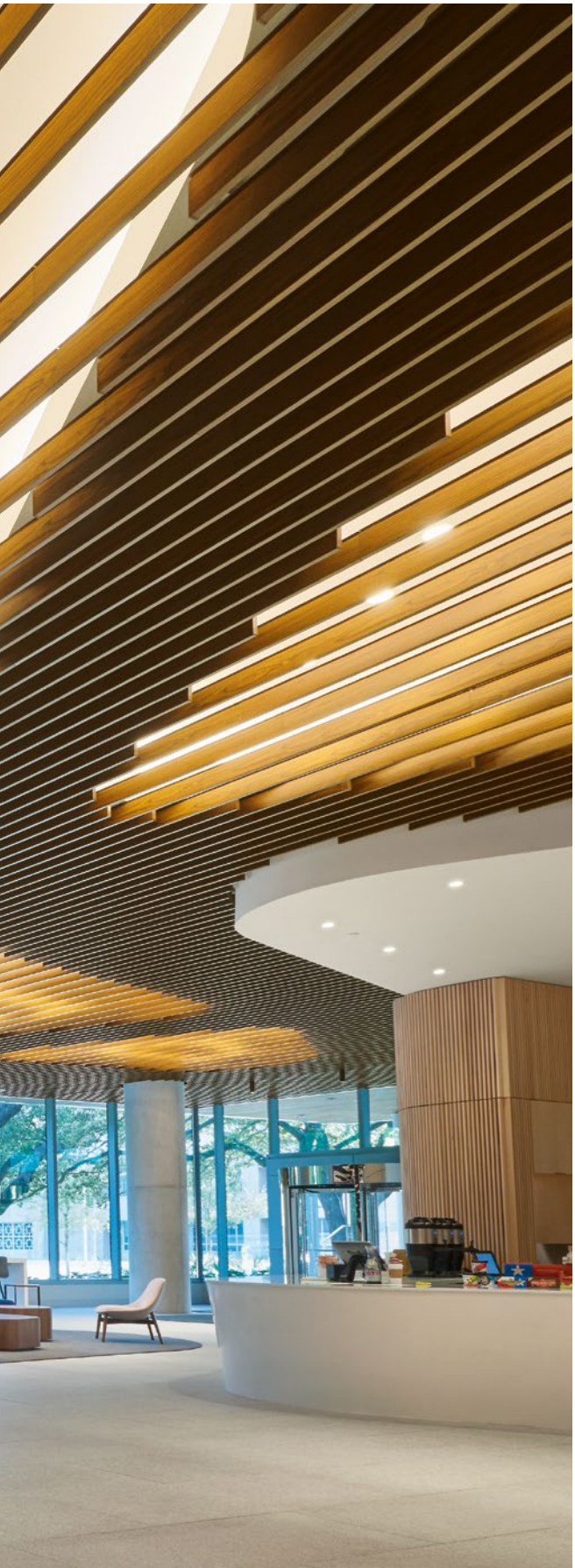


▼ InvisAcoustics™ Acoustical Panels



▼ MetalWorks™ Blades – Classics; South by Southwest Headquarters, Austin, TX; Pei Cobb Freed & Partners, Gensler, Austin, TX





Blades & Baffles
ALL ABOUT THE LINES

Straight or wavy, parallel or intersecting, monochromatic or multi-colored – these vertical elements control noise with panache.



▲ WoodWorks® Custom Baffles ceiling system; Washington University Brown School, St. Louis, MO



▲ FeltWorks® Blades Peaks & Valleys
The Stone Independent School, Lancaster, PA

▼ FeltWorks® Blades Ebbs & Flows



▲ FeltWorks® Blades Peaks & Valleys; The Stone Independent School, Lancaster, PA

FELTWORKS® Blades QUIET IN A KIT

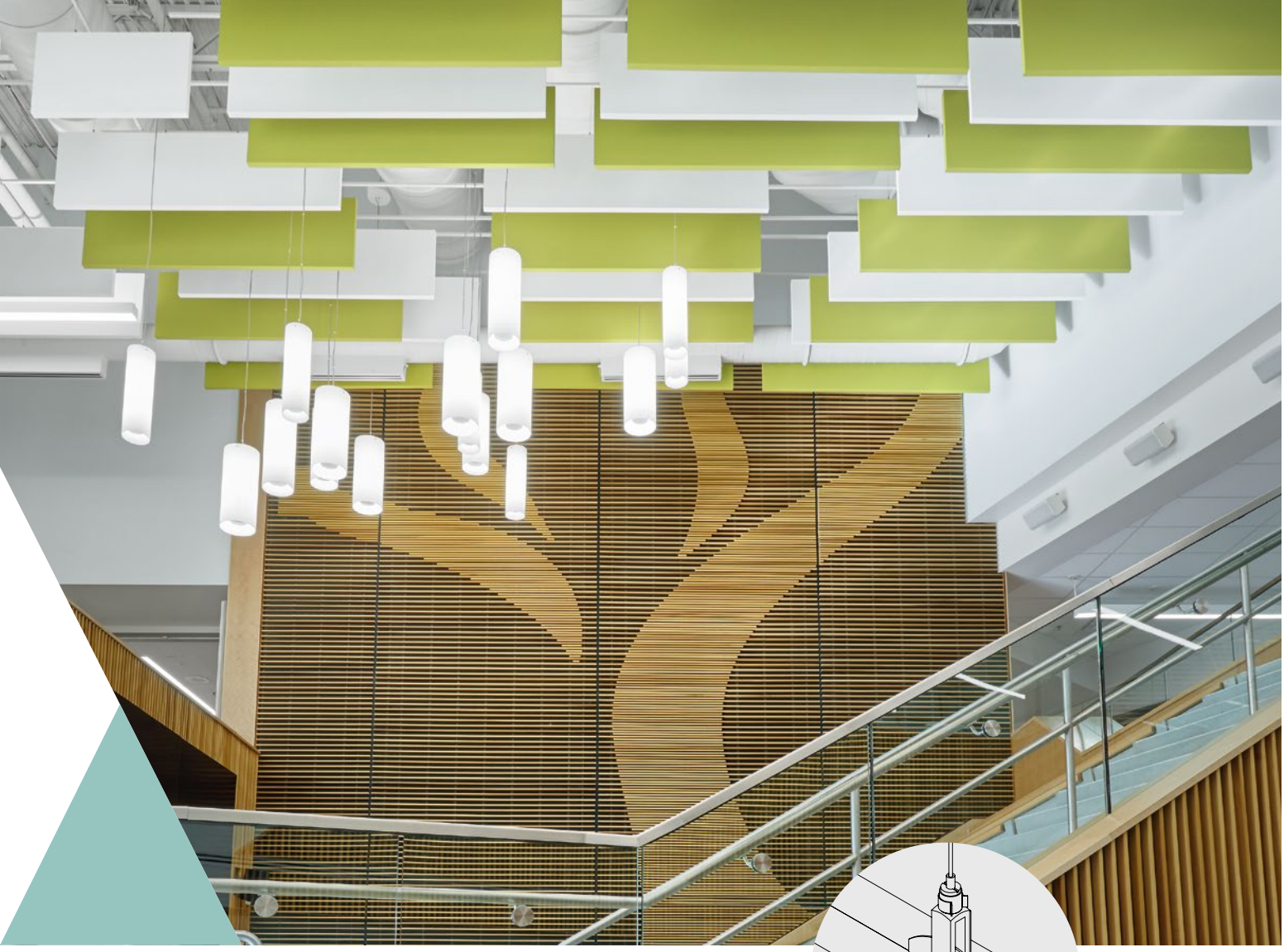
Quiet spaces redefine the visual plane, changing the topography of the ceiling while adding warmth to spaces.

- Installs with aluminum suspension bar and aircraft cables
- Sound absorption – 0.70 Sabins/SF
- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- 3/8" thick blades provide a sleek linear visual – 3 standard profiles and a variety of blade heights offer dramatic visuals
- Part of the Sustain® portfolio, meeting the most stringent industry sustainability standards today

FELTWORKS® BLADES NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 10 x 96 x 3/8" Blades	50	98	207
% of Deck Coverage	1%	2%	5%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



▲ SoundScapes® Blades vertical panels and custom WoodWorks® Grille wall panels
Lake Stevens Elementary School, Lake Stevens, WA; NAC Architecture, Seattle, WA



SOUNDSCAPES® Blades ALL ABOUT THE SPACE

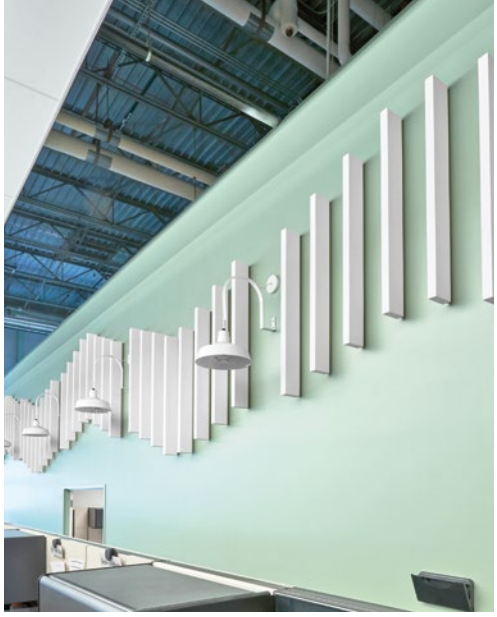
Reduce noise with new layout designs, coupled with size, shape, and color to allow for a unique look for any space.

SOUNDSCAPES® BLADES NOISE REDUCTION

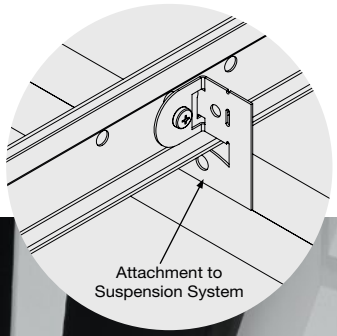
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT) GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 22 x 46 x 2" Blades	20	40	86
% of Deck Coverage	1%	3%	6%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

- Flexible installation from the deck, ceiling, drywall, suspension system, or on a wall
- Excellent sound absorption – 1.38 Sabins/SF
- Over 20 standard sizes with custom shape and color options available
- Seismic-tested



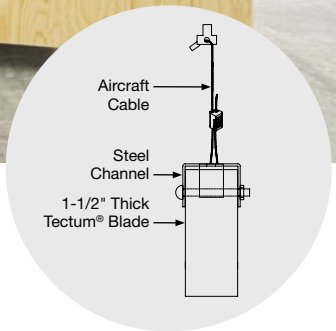
▲ SoundScapes® Blades wall application
Armstrong Campus, Lancaster, PA



▼ SoundScapes Blades vertical panels in Wavelengths
Interstate Drywall Corporate Office, Lyndhurst, NJ



▲ Tectum® Blades custom panels; Cisco Umbrella, San Francisco, CA; Min Design, San Francisco, CA



TECTUM®
Blades & Baffles
MADE TO FIT

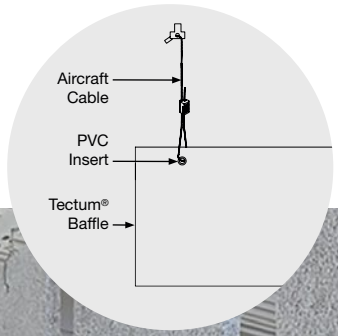
Customize the edges, heights, and thickness of panels for the acoustics and aesthetics you need.

- Upscale linear visual adds acoustics and aesthetics to any space
- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- Custom shapes and sizes available to meet your project demands
- Suspend with aircraft cable or hanger wire

TECTUM® BLADES & BAFFLES NOISE REDUCTION

1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT) GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 24 x 48 x 1" Blades & Baffles	75	148	312
% of Deck Coverage	3%	5%	10%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



▼ Tectum® Baffles; Capital One Labs, San Francisco, CA; Studio O+A, San Francisco, CA

METALWORKS™ Blades – Classics

ANYTHING BUT ORDINARY

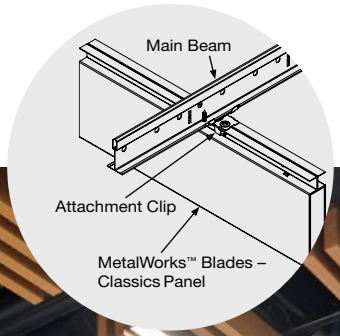
Create a look that visually tells your story.
Durable and flexible.

- Join or cut panels for creative design layouts and easy installation
- Standard blade sizes in multiple lengths with either 4" depth and 1" width, or 6" depth with 1" or 2" widths
- new - 1" or 2" wide custom blade options:
  Length: 12" – 120"
  Depth: 4" – 10" (in 2" increments)
- new - 17 standard Effects™ wood-look finishes and three standard colors
- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- Part of the Sustain™ portfolio, meeting the most stringent industry sustainability standards today
- Panel spacing is variable for all standard items to accommodate a variety of design and acoustical needs

METALWORKS™ BLADES NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 4 x 96 x 1" Blades	90	179	377
% of Deck Coverage	6%	12%	25%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



▼ MetalWorks™ Blades – Classics in Effects™ finish
Cuesta College, Casa Robles, CA; PMSM Architects, San Luis Obispo, CA

MetalWorks Blades: see more



▲ MetalWorks™ Blades – Classics in Effects™ finish, Fine Fissured™ acoustical panels installed above blades; NN, Inc. at Waverly Hub, Charlotte, NC
IA Interiors Architects, Charlotte, NC – ProjectWorks®

Canopies & Clouds
TWO-FACED ACOUSTICS

Both sides of the panels soak up the sound. Select from a wide range of standard and custom shapes, colors, perforations, and materials.

▼ Serpentina® Waves™; University of Florida Chemical Biology Building, Gainesville, FL







▲ Custom SoundScapes® Shapes; Gardere Wynne Sewell, LLP, Dallas, TX; Gensler, Dallas, TX – ProjectWorks®

▼ AcoustiBuilt® seamless acoustical ceiling system, Vincennes University, Vincennes, IN





▲ AcoustiBuilt® seamless acoustical ceiling system, Vincennes University, Vincennes, IN

new

ACOUSTIBUILT® Seamless Clouds ABOVE AND BEYOND

Smooth in appearance, these acoustical clouds rise to the occasion.

- Installed system achieves acoustical performance of up to 1.33 Sabins/SF
- The look of drywall with the benefits of Total Acoustics® and Sustain® performance
- Similar installation and finishing methods as drywall ceilings; easier to install than acoustical plaster – and at lower cost
- Installs with most drywall compatible light fixtures, including: Axis, USAI®, BASO™, and Price®

ACOUSTIBUILT® CLOUDS NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
Area of AcoustiBuilt® Clouds	248 SF	483 SF	N/A
% of Deck Coverage	25%	48%	N/A

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

AcoustiBuilt: click to see more

FELTWORKS® Open Cell Panels CREATE DRAMA WITH DIMENSION

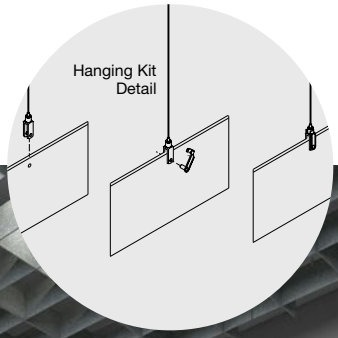
Kitted, acoustical, and dimensional panels with a geometric, cellular visual.

- Kits available in 3 designs: Ebbs & Flows, Peaks & Valleys, and Rectangular panels (6" or 12" depths)
- Kits can be installed as individual square or rectangular clouds, or interlinked to create a wall-to-wall installation
- Get custom looks from standard products using easy-to-specify-and-order kits with short lead times
- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- Sound absorption – 0.52 Sabins/SF
- Part of the Sustain® portfolio
- Made from up to 60% post-consumer recycled PET fibers

FELTWORKS® OPEN CELL PANELS

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 96" x 96" Clouds	3	6	14
% of Deck Coverage	1%	2%	4%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

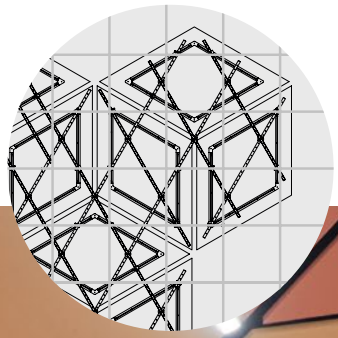


▼ FeltWorks Open Cell rectangle panels



▲ FeltWorks® Open Cell Peaks & Valleys panels

▼ SoundScapes® Shapes acoustical clouds;
Armstrong World Industries Inc. Dialogue Room, Lancaster, PA





▲ SoundScapes® Shapes acoustical clouds, Watchguard Corporate Office, Allen, TX; GFF, Inc., Dallas, TX

new - Now available in triangle, trapezoid, and parallelogram shapes with 60° frame alignment kit

- Address acoustics and aesthetics with a superior engineered solution up to 1.18 Sabins/SF
- Quick to install from the deck, drywall, suspension system, or on a wall in adjustable heights and angles
- Grouping Frame Kit provides superior rigidity, perfect alignment, minimizes hanging points, ensures consistent panel spacing, and is engineered for use in DEF seismic zones

SOUNDSCAPES® Shapes VISUAL MOTION

Deliver acoustics in playful installations with angles, layers, shapes, sizes, and colors.

SOUNDSCAPES® SHAPES NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 48" x 48" Shapes	12	23	49
% of Deck Coverage	19%	37%	78%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

SOUNDSCAPES® Canopies
HANGIN' AROUND

Floating acoustics, placed exactly where you need them most.

- Hill and valley shape canopies
- Aesthetically define spaces and enhance acoustics
- Ideal in spaces where viewed from above and below, such as mezzanines, since clouds are fully finished on all sides
- Quick to install from the deck, ceiling, drywall, or suspension system
- Canopy kits include easy-to-install cable and hardware

SOUNDSCAPES® CANOPIES NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 72" x 48" Canopies	9	17	37
% Coverage	22%	41%	88%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

▼ SoundScapes® acoustical canopies and Optima® Capz™ 48" x 48" with White caps
Morningstar Enterprises Inc., Kelowana, British Columbia, Canada





▲ SoundScapes® acoustical canopies; United Health Administrative Office Building, Fresno, CA; Neenan Archistruction, Fort Collins, CO



▲ Tectum Shapes; Retail Me Not, Austin, TX; STG Design, Austin, TX

TECTUM® Shapes EXPRESSIVE

Standard or custom shapes to meet your specifications.

- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- Wide variety of color options available or field paint on site without impacting acoustics
- Part of the Sustain® portfolio
- Custom shapes, colors, and sizes for any project need
- Durable and flexible, installs on walls or ceilings

TECTUM® SHAPES NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 48 x 48 x 1-1/2" Shapes	23	44	N/A
% of Deck Coverage	37%	70%	N/A

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- Floating cloud system in multiple square and rectangle sizes; custom sizes available
- Panel sizes in 1-1/2" or 2" panel thickness; widths: 23-3/4" to 47-3/4"; lengths: up to 96"
- Available in White, Natural, and custom colors or field paint on site without impacting acoustics
- Easy to install with sleek, adjustable aircraft cable hanging kit

TECTUM® CLOUDS NOISE REDUCTION

1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT) GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 48 x 48 x 1-1/2" Clouds	23	44	N/A
% of Deck Coverage	37%	70%	N/A

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

TECTUM® Clouds FLOATING NOISE CONTROL

Acoustical performance and design flexibility.

▼ Tectum Clouds



Tectum Clouds: click to see more

FORMATIONS™ Clouds OUT OF THE BOX

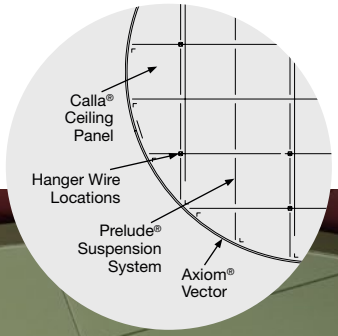
Floating circular or rectangular clouds with crisp Axiom® trim pre-cut and ready to install.

- Easy-to-specify and install cloud system with pre-cut components and a wide range of specialty options like wood and metal
- Reduce noise levels in open spaces

FORMATIONS™ CLOUDS NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 96" x 96" Ultima® Squares	4	8	N/A
% of Deck Coverage	26%	51%	N/A

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



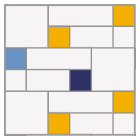
▼ Formations™ acoustical accent clouds; Collierville High School, Collierville, TN
Renaissance Group, Lakeland, TN



Formations Clouds: click to see more



▲ DesignFlex for Formations acoustical cloud with Shapes Pattern SH-FC-5







- DesignFlex® for Formations™ acoustical clouds options include shapes, sizes, and colors in 9 standard cloud kits
- Shapes and square/rectangle panel options available in popular Calla®, Lyra®, Ultima®, and Optima®
- Easy to specify and install with pre-cut suspension and trim components in a kit
- Shaped lighting options available from our DesignFlex partners

DESIGNFLEX® for FORMATIONS™

MIX & MATCH

Floating shaped clouds with geometric panels ready to install.



▲ MetalWorks canopies hill and valley panels microperforated in Silver Grey; Spartanburg High School, Spartanburg, SC; McMillan Pazdan Smith, Spartanburg, SC

METALWORKS™ Canopies RIPPLE EFFECT

It's easy to improve acoustics, brighten, and add movement to any space.

- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- Easy to clean and maintain
- Great aesthetic above and below
- Easy installation
- Available in a variety of microperf options

METALWORKS™ CANOPIES NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 72" x 48" Canopies	7	14	30
% of Deck Coverage	17%	34%	72%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

- Choose from hill, valley, or s-curve dual radius canopies
- Real wood and bamboo veneers
- Perforated option available for sound absorption on hill and valley canopies
- Concealed mounting hardware for a clean look above and below
- WoodWorks® custom capabilities

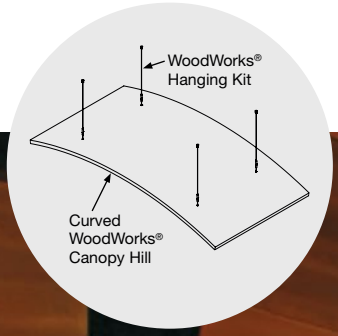
WOODWORKS® Canopies ACOUSTICAL WARMTH

Now with more options than ever with WoodWorks custom capabilities.

WOODWORKS® CANOPIES NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 72" x 48" Canopies	12	23	N/A
% of Deck Coverage	38%	74%	N/A

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



▼ WoodWorks custom canopies; Allegro™ curved wood panels; Laurel High School, Laurel, MD

SERPENTINA® Clouds & Canopies

GREAT CURVES

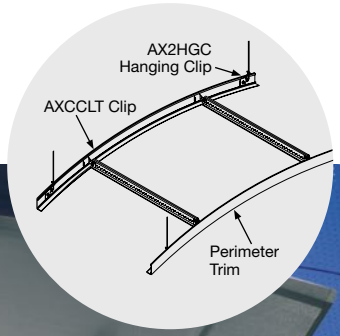
Curved metal clouds combine easy installation with striking visual power and acoustical performance.

- Maximum design flexibility – in both Classic and Waves
- Wide variety of standard finishes; custom colors available
- Install perforated clouds with acoustical infill panels for maximum sound absorption

SERPENTINA® CLOUDS NOISE REDUCTION

1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT) GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 96" x 96" Clouds (R042 perforation with fleece and polybag infill panel)	3	6	12
% of Deck Coverage	19%	38%	77%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



▼ Serpentina® Waves™; Destiny USA Mall, Syracuse, NY
Holmes-King-Kallquist & Associates, Architects, Syracuse, NY



▲ Serpentina® Classic; Iron Forge Education Center, Boiling Springs, PA; Crabtree, Rohrbaugh & Associates, Philadelphia, PA

DIRECT-TO-STRUCTURE

Flat Panels for Ceilings & Walls SOUND DOWN

Add aesthetics and durability for your designs – in just about as many configurations as you can imagine. And there's an installation option for your project.



▲ Tectum® Create!™ Direct-Attach Ceiling and Wall Panels in Rustic Plank Design



▼ InvisAcoustics™ Direct-Attach application, Maine Beer Company, Freeport, Maine



TECTUM® Direct-Attach Panels

INTELLIGIBLE INSTRUCTION

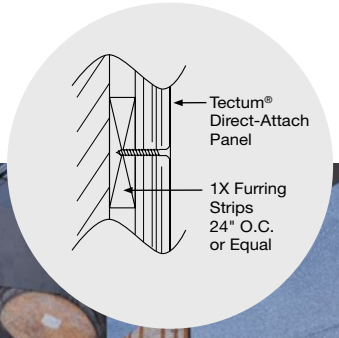
Durable, sustainable noise control to withstand the crowds.

- Quick, easy install to wall, deck, or I-Beam using furring strips or truss fastening kit for truss installations
- Part of the Sustain® portfolio
- new - Tectum® Direct-Attach now has UL® Certified acoustics with acoustical testing and reporting that align with industry-wide best practices
- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- Unlimited design flexibility – cut or paint panels in the field or factory to meet your design needs
- Durable for heavy-use interiors
- new - Now design your own Tectum® Create!™ ceiling and wall panels with custom artwork or choose from four standard designs
- new - Now combine texture, shapes, linear designs, patterns, and colors with Tectum® DesignArt™ ceiling and wall panels

TECTUM® PANELS NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
Area of 1" Tectum Direct-Attach Panels	216 SF	430 SF	934 SF
% of Deck Coverage	22%	43%	93%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



▼ Tectum® Create!™ Direct-Attach Custom Wall Panels



▲ Tectum® Direct-Attach ceiling acoustical panels; Portland State University School of Business at Karl Miller Center, Portland, OR; SRG Partnership; Behnisch Architekten, Stuttgart, Germany



▲ Tectum Finale Direct-Attach application; Financial Services Company, US; Unispace, San Diego, CA

TECTUM® Finale™ & Finale™ PB CAMOUFLAGE

Easy-to-install acoustic control for an understated, inconspicuous look.



- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- Composite panel design combines Tectum® panel, acoustical infill, and furring strips in one for maximum sound control and fast, efficient installation
- Finale™ PB panels are manufactured with a plant-based binder infill and are part of the Sustain® portfolio
- Excellent sound absorption – 1" panels have NRC up to 0.90 (mounting method dependent)
- Durable for heavy-use interiors

TECTUM® FINALE™ PANELS NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
Area of 1" Tectum Finale Panels	210 SF	410 SF	890 SF
% of Deck Coverage	21%	41%	89%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

LYRA® PB Direct-Apply Panels QUICK & EASY

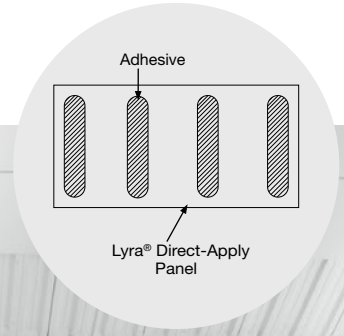
Great acoustics, simple installation.

- Easy installation on ceilings and walls with recommended adhesive to concrete, plaster, drywall, and metal decking
- Made with a plant-based binder and part of the Sustain® portfolio of products
- Concrete visual – Get hidden acoustics with the look of raw concrete
- High sound absorption up to NRC 0.95
- Made-to-order sizes and colors available
- For areas that need direct attachment rather than adhesive, consider Optima® Capz™

LYRA® PB DIRECT-APPLY PANELS NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
Area of 1" Lyra PB Direct-Apply Panels	240 SF	470 SF	1,000 SF
% of Deck Coverage	24%	47%	100%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



▼ Lyra® PB Direct-Apply panels; Gensler Raleigh-Durham office, Raleigh, NC

Lyra PB Direct-Apply Panels: click to see more

FELTWORKS® Acoustical Panels INSTANT SOFTNESS

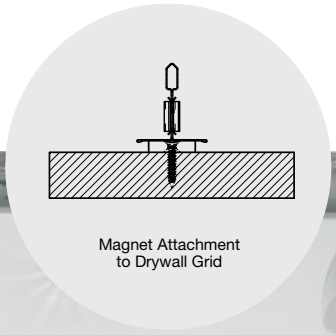
Absorb up to 90% of the sound that strikes them.

- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim
- Quick and easy retrofit with three installation methods
- No need to field-finish cut edges with color throughout panels
- Part of the Sustain® ceiling portfolio

FELTWORKS® PANELS NOISE REDUCTION

1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT) GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 1" thick FeltWorks Panels (7/8" Hat Channel with Magnets) # of 48 x 96 x 1" Panels	8	15	31
% of Deck Coverage	26%	48%	99%

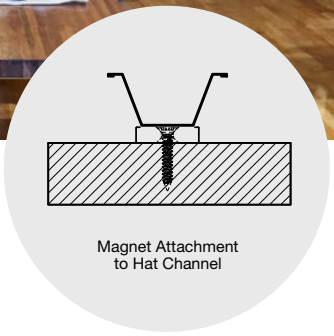
* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



Magnet Attachment to Drywall Grid

▼ FeltWorks® acoustical panels; Gensler Charlotte Office, Charlotte NC

▲ FeltWorks® acoustical panels; Nirmal's Restaurant, Seattle, WA



Magnet Attachment
to Hat Channel



▲ InvisAcoustics™ Direct-Attach application; Lancaster Science Factory, Lancaster, PA

INVISACOUSTICS™ Panels ABRACADABRA

Empower your exposed structure design while bringing quiet to your space.

- new - Direct-apply to concrete, plaster, and drywall ceilings and walls with recommended adhesive
- Foolproof, all-in-one screw allows fast installation without danger of overdriving and damaging the panel
- Quick, easy install to wall, deck, or I-Beam using hat channel or furring strips – truss fastening kit for truss installations
- new - Concrete visual – Get hidden acoustics with the look of raw concrete
- Field paintable option – can be sprayed same color as the deck

INVISACOUSTICS™ PANELS NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
Area of 3/4" InvisAcoustics Panels	280 SF	550 SF	N/A
% of Deck Coverage	28%	55%	N/A

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

InvisAcoustics panels: click to see more



▲ InvisAcoustics™ truss application



▲ InvisAcoustics I-beam application
Lancaster Science Factory, Lancaster, PA

▼ InvisAcoustics Direct-Attach application; Bert's Bottle Shop, Millersville, PA

OPTIMA® PB Capz™ SNEAKY

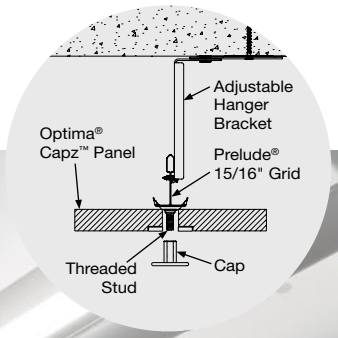
Large format acoustical panels quiet spaces.

- OPTIMA® PB Capz™ panels are manufactured with a plant-based binder and are part of the Sustain® portfolio
- 48" x 96" panels for sleek, monolithic look
- Easy alignment suspension system
- Panels can be designed in long runs or grouped based on the acoustical needs
- Absorbs up to 90% of the sound that strikes it

OPTIMA PB CAPZ NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
Area of Optima Capz Panels	190 SF	370 SF	800 SF
% Coverage	19%	37%	80%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)



▼ Optima Capz panels; Atlantic Packaging, Charlotte, NC; Redline Design Group, Charlotte, NC

Optima Capz: click to see more



▲ MetalWorks™ Capz™ panels

- Easy installation and durability plus acoustics
- Perforated panels can be designed in long runs or grouped based on the acoustical needs
- Custom colors available
- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim

METALWORKS CAPZ NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
Area of MetalWorks Capz Panels	200 SF	400 SF	850 SF
% of Deck Coverage	20%	40%	85%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

METALWORKS™ Capz™ SLEEK

Capz™ accent hardware pairs with MetalWorks™ panels and standard grid.



▲ Soundsoak® Acoustical wall panels with custom imprint; Suburban Beer Garden, Malvern, PA

SOUNDSOAK® Acoustical Wall Panels DOUBLE-DUTY ACOUSTICS

Make your mark and control sound.

- Easy-to-install wall system available in a variety of standard and custom fabrics
- Create your own design
- Variety of impact resistant acoustical wall panels available for high-traffic and high-abuse areas
- Available in multiple standard and custom sizes and shapes
- CleanAssure™ family of products – includes disinfectable panels, suspension systems, and trim

SOUNDSOAK® PANELS NOISE REDUCTION

1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT) GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 24 x 96 x 1" Panels	16	32	68
% of Wall Coverage	13%	26%	56%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

- Installs on walls or ceilings
- Quick to install from the deck, ceiling, drywall, suspension system, or on a wall in adjustable heights and angles
- Available in multiple standard and custom sizes

SOUNDSCAPES® PANELS NOISE REDUCTION

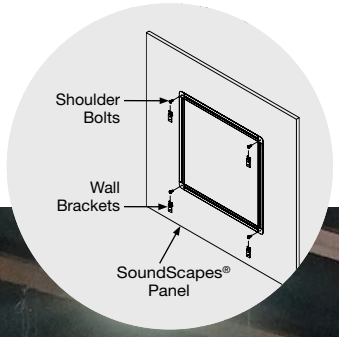
	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
# of 48" x 48" Hexagon Panels	20	38	82
% of Wall Coverage	14%	26%	56%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

SOUNDSCAPES® Shapes

SOAK UP THE EXCITEMENT

Reduce noise and add character.



▼ SoundScapes® Blades and SoundScapes® Shapes wall applications
Lancaster Science Factory, Lancaster, PA



SoundScapes Walls: click to see more

WOODWORKS® Wall Panels

ADD ANOTHER DIMENSION

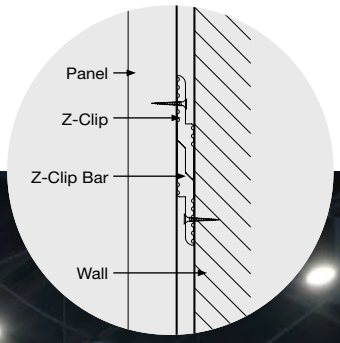
Accentuate one or more walls while improving sound quality.

- Install on the wall, the ceiling, or create 90º angled ceiling-to-wall transitions
- Perforated panel with acoustical backing improves sound quality and reduces noise within a space
- Shorter lead times and lower cost than custom millwork

WOODWORKS® WALL PANELS NOISE REDUCTION

	Reverberation Time (RT)		
1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	GOOD* RT=1.4s	BETTER** RT=1.0s	BEST** RT=0.6s
Area of WoodWorks W4 Walls w/Infill	214 SF	424 SF	920 SF
% of Wall Coverage	11%	22%	47%

* Long RTs (≤ 1.4 sec) = for lively acoustic environments (auditoriums/hospitality)
** Short RTs (< 1 sec) = high-quality speech intelligibility (classrooms/open plan spaces)

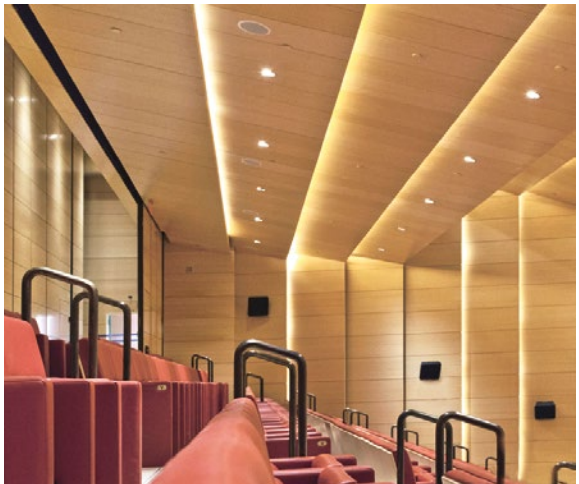


▼ WoodWorks® channeled walls; College Football Hall of Fame, Atlanta, GA; tvsdesign, Atlanta, GA

WoodWorks Walls: click to see more

▲ WoodWorks® custom microperforated ceiling and wall panels and Grille panels; Armstrong Campus, Lancaster, PA

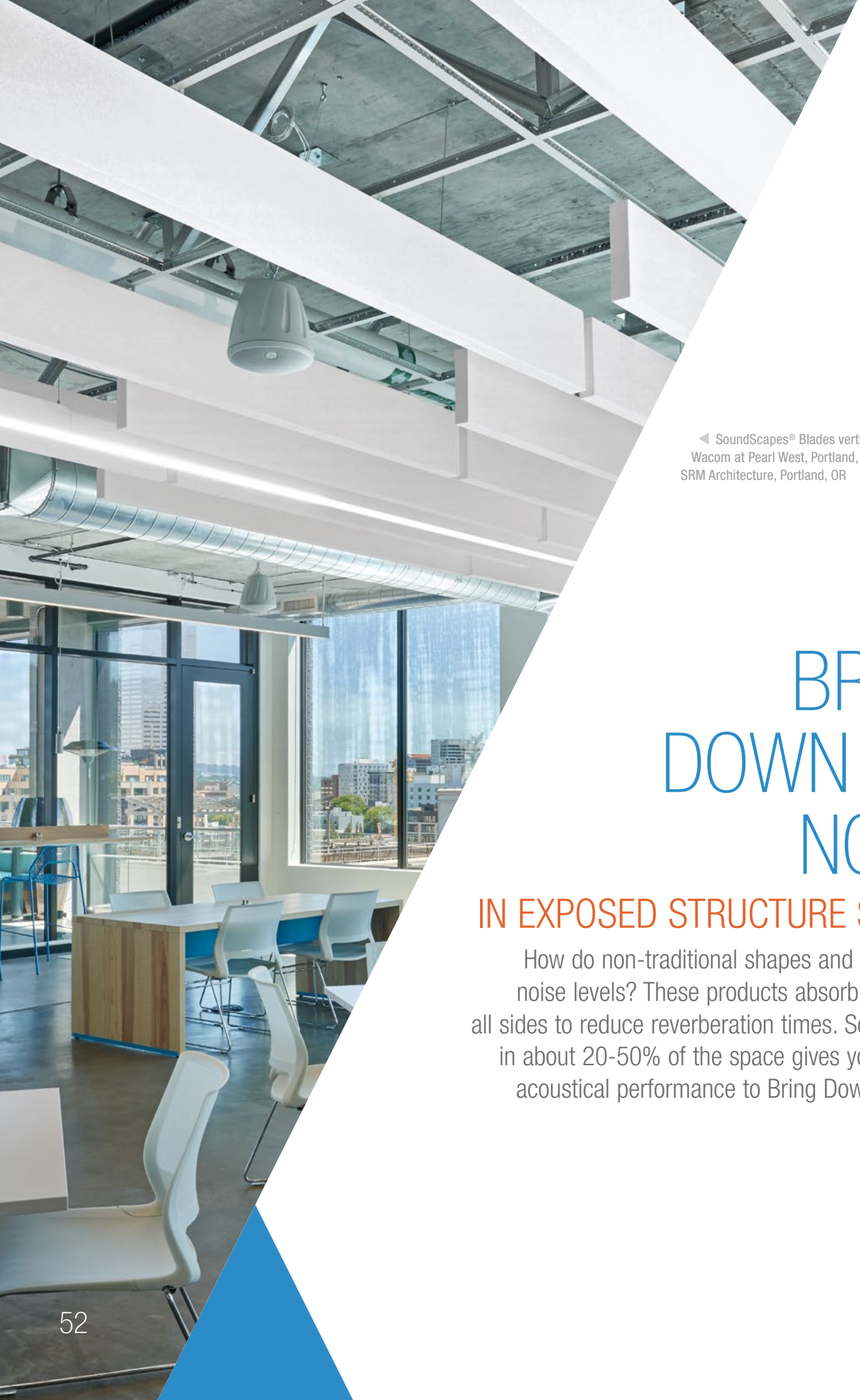




WOODWORKS® Custom Panels WARM WOOD WITH ACOUSTICS

Perforated wood backed with hidden acoustics.

ACGI Custom Walls: click to see more



◀ SoundScapes® Blades vertical panels
Wacom at Pearl West, Portland, OR
SRM Architecture, Portland, OR

BRING DOWN THE NOISE

IN EXPOSED STRUCTURE SPACES

How do non-traditional shapes and forms affect noise levels? These products absorb sound from all sides to reduce reverberation times. So placement in about 20-50% of the space gives you impactful acoustical performance to Bring Down the Noise.

EXPOSED STRUCTURE ACOUSTICAL DESIGN

Acoustical absorption is important to:
- Reduce noise levels and reverberation time
- Enhance speech intelligibility

Reverberation Time (RT)

Reverberation Time (RT) is the persistence of sound in an enclosed space after the source of the sound has stopped. The level of the reverberant sound within a room is dependent upon both the volume of the room and the amount of sound absorption installed within the room, such that large hard-surfaced rooms are “louder” than small well-treated rooms.

With the TechLine custom reverberation reports you can calculate approximate reverb times for your space as you design. Compare the times of your product choices to find out which ones will work best with your space and design.

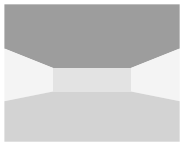
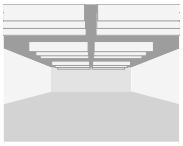
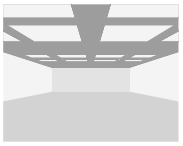
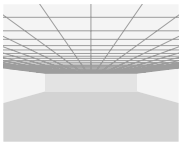
Rules of thumb:
Short RTs (< 1 sec) are preferred for high-quality speech intelligibility in classrooms and open plan office spaces.
Long RTs (≤ 1.4 sec) are preferred for lively acoustic environments such as auditoriums and hospitality.

Acoustical solutions, like Canopies, Clouds, Baffles, or Blades vertical elements installed in a way that covers 20% to 50% of the ceiling, will provide significant reverberation time improvement to an exposed structure installation, since sound is absorbed from both the front and back of the panels. Blades are especially effective as the required coverage is much smaller to get the RT reduction because most of the surface area is vertical.

Direct-to-structure solutions on decks or walls absorb sound from one side.

Our Acoustical Experts have done the math for you on the product recommendation charts on pages 54 and 55. You'll be able to compare products to see the recommended coverage for GOOD, BETTER, or BEST performance levels to reduce reverberation times.

Comparison: Exposed Structure Options Versus Continuous Ceiling

Example:	Exposed Structure	Blades & Baffles	Direct-To-Deck	Canopies & Clouds	Wall Panels	Continuous Ceiling
						
1,000 SF Exposed Structure (40' x 25'), 15' to deck, drywall with 20% window coverage and commercial carpet	**No Treatment (0% Coverage)**	**SoundScapes® Blades (4% ceiling coverage, 196 SF of material)**	**InvisAcoustics™ (50% coverage)**	**SoundScapes® Shapes (50% coverage)**	**SoundScapes® Wall Panels (50% coverage)**	**Continuous Optima® Ceiling (100% Coverage)**
Deck	**Exposed Structure**	**30 Blades (10 x 94 x 2")**	**62 Panels (24 x 48 x 3/4")**	**32 Shapes 48" x 48" Squares**	**2 Walls**	**Suspended 60" Below Deck**
Absorption	0	1.38 Sabins/SF	0.75 NRC	1.49 Sabins/SF	0.70 NRC	0.90 NRC
Reverberation Time (RT)	2.4 sec	1.2 sec	1.1 sec	0.8 sec	0.3 sec	0.5 sec
	Short RTs (< 1 sec) are preferred for high-quality speech intelligibility in classrooms and open plan office spaces. Long RTs (≤ 1.4 sec) are preferred for lively acoustic environments such as auditoriums and hospitality.					
Reverberation Time Improvement	–	50%	54%	67%	87%	79%
Noise Reduction	–	-2.0 dB	-2.6 dB	-3.6 dB	-7.5 dB	-4.5 dB

REDUCE REVERBERATION TIME & IMPROVE ACOUSTICS RECOMMENDATIONS

For each of the products featured in this brochure, here are recommendations for the square-foot coverage suggested to reduce reverberation times at three different levels:

BEST levels are recommended to meet specific standards, such as ANSI S12.60 in classrooms, LEED®, and WELL Building Standard™.

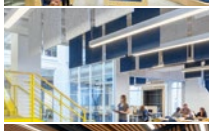
BETTER levels are appropriate for collaborative spaces like cafeterias, corridors, and lobbies where speech privacy is not critical.

GOOD levels are suitable for casual spaces such as music performance and hospitality.

The examples that follow demonstrate how much product is needed in order to treat a sample 1,000 square-foot area to create quieter spaces.

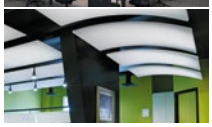
Contact your Armstrong Ceilings Representative or TechLine for a detailed reverberation time calculation for your project. A custom Reverberation Report will provide you with recommended acoustical solutions, or request your own by visiting armstrongceilings.com/reverbrequest



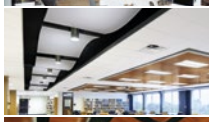
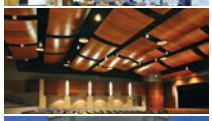




BLADES & BAFFLES	Model Room 1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT) GOOD RT=1.4s	 BETTER RT=1.0s	 BEST RT=0.6s
FeltWorks® Blades Pages 10-11	Area of Blades	333 SF	653 SF	1380 SF
	# of 10 x 96 x 3/8" Blades	50	98	207
	% of Deck Coverage	1%	2%	5%
SoundScapes® Blades Pages 12-13	Area of Blades	141 SF	281 SF	604 SF
	# of 22 x 46 x 2" Blades	20	40	86
	% of Deck Coverage	1%	3%	6%
Tectum® Blades Page 14	Area of Blades	600 SF	1,184 SF	2,496 SF
	# of 24 x 48 x 1" Blades	75	148	312
	% of Deck Coverage	3%	5%	10%
Tectum® Baffles Page 14	Area of Baffles	600 SF	1,184 SF	2,496 SF
	# of 24 x 48 x 1" Baffles	75	148	312
	% of Deck Coverage	3%	5%	10%
MetalWorks™ Blades Page 16	Area of Blades	240 SF	477 SF	1,005 SF
	# of 4 x 96 x 1" Blades	90	179	377
	% of Deck Coverage	6%	12%	25%
CLOUDS & CANOPIES				
AcoustiBuilt® Clouds Page 21	Area of Clouds	248 SF	483 SF	N/A
	% of Deck Coverage	25%	48%	N/A
FeltWorks® Open Cell Panels Pages 22-23	Area of Cloud Material	384 SF	768 SF	1,792 SF
	# of 96" x 96" Clouds	3	6	14
	% of Coverage	1%	2%	4%
SoundScapes® Shapes Page 25	Area of Shapes	192 SF	368 SF	784 SF
	# of 48" x 48" Shapes	12	23	49
	% of Deck Coverage	19%	37%	78%
SoundScapes® Canopies Pages 26-27	Area of Canopies	216 SF	408 SF	888 SF
	# of 72" x 48" Canopies	9	17	37
	% of Coverage	22%	41%	88%



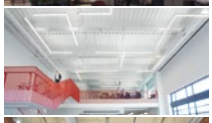


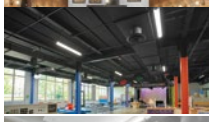




CLOUDS & CANOPIES (CONTINUED)

	Model Room 1,000 SF Exposed Structure (15' to metal deck), drywall with 20% window coverage, commercial carpet	Reverberation Time (RT) GOOD RT=1.4s	 BETTER RT=1.0s	 BEST RT=0.6s
Tectum® Shapes & Clouds Pages 28-29	Area of Clouds	368 SF	704 SF	N/A
	# of 48 x 48 x 1-1/2" Clouds	23	44	N/A
	% of Deck Coverage	37%	70%	N/A
Formations™ Clouds & DesignFlex® for Formations™ Clouds Pages 30-31	Area of Clouds	256 SF	512 SF	N/A
	# of 96" x 96" Ultima®	4	8	N/A
	% of Deck Coverage	26%	51%	N/A
MetalWorks™ Canopies Page 32	Area of Canopies (P2)	168 SF	336 SF	720 SF
	# of 72" x 48" Canopies	7	14	30
	% of Deck Coverage	17%	34%	72%
WoodWorks® Custom Canopies Page 33	Area of Canopies	384 SF	736 SF	N/A
	# of 72" x 48" Canopies	12	23	N/A
	% of Deck Coverage	38%	74%	N/A
Serpentina® Clouds & Canopies Pages 34-35	Area of Clouds (R062 w/infill)	192 SF	384 SF	768 SF
	# of 96" x 96" Clouds	3	6	12
	% of Deck Coverage	19%	38%	77%












DIRECT-TO-STRUCTURE CEILING & WALL PANELS

Tectum® Direct-Attach Panels Pages 38-39	Area of 1" thick Tectum® Panels (C-20 Mount)	216 SF	430 SF	934 SF
	% of Deck Coverage	22%	43%	93%
Tectum® Finale™ Page 40	Area of 2" thick Tectum® Finale Panels (A Mount)	210 SF	410 SF	890 SF
	% of Deck Coverage	21%	41%	89%
Lyra® PB Direct-Apply Page 41	Area of Ceiling Panels (A Mount)	240 SF	470 SF	1000 SF
	# of 24 x 48 x 1" Panels	30	59	125
	% of Deck Coverage	24%	47%	100%
FeltWorks® Acoustical Panels Pages 42-43	Area of 1" thick FeltWorks Panels	256 SF	480 SF	992 SF
	# of 48 x 96 x 1" Panels	8	15	31
	% of Deck Coverage	26%	48%	99%
InvisAcoustics™ Panels Pages 44-45	Area of Ceiling Panels (D-40)	280 SF	550 SF	N/A
	# of 24 x 48 x 1" Panels	35	69	N/A
	% of Deck Coverage	28%	56%	N/A
Optima® PB Capz™ Panels Page 46	Area of Ceiling Panels	190 SF	370 SF	800 SF
	% of Coverage	19%	37%	80%
Metalworks™ Capz™ Panels Page 47	Area of Ceiling Panels	200 SF	400 SF	850 SF
	% of Deck Coverage	20%	40%	85%
Soundsoak® Acoustical Wall Panels Page 48	Area of Wall Panels (Fabric)	256 SF	512 SF	1,088 SF
	# of 24 x 96 x 1" Panels	16	32	68
	% of Wall Coverage	13%	26%	56%
SoundScapes® Shapes Page 49	Area of Wall Panels	266 SF	505 SF	1,090 SF
	# of 48" x 48" Hexagon Panels	20	38	82
	% of Wall Coverage	14%	26%	56%
WoodWorks® Wall Panels Page 50	Area of W4 Wall Panels	214 SF	424 SF	920 SF
	% of Wall Coverage	11%	22%	47%

N/A indicates that the option is not recommended to achieve a BEST level reverberation time.
"% of Deck Coverage" is defined as the visible deck area covered by a ceiling solution.

Near Right: SoundScapes® Shapes ▶
exposed structure solution
Fermilab Office, Batlava, IL; Gastinger,
Walker, Harden Architects, Chicago, IL

Far Right: Calla® ceiling panels with ▶
Total Acoustics® performance
Fermilab Office, Batlava, IL; Gastinger,
Walker, Harden Architects, Chicago, IL



RIGHT ACOUSTICS

FOR THE RIGHT SPACES

No matter what type of space you are designing, Armstrong has a broad range of solutions to meet your acoustic and aesthetic needs. Bring down the noise in exposed structure spaces with Clouds & Canopies, Blades & Baffles, and Direct-to-Structure solutions – or get Total Acoustics® performance with wall-to-wall ceilings where quiet concentration and privacy are needed.





TAKE THE NEXT STEP

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On the cover: ▶
FeltWorks® acoustical panels;
Gensler Charlotte Office, Charlotte NC

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