

SECTION 09 8413
FIXED SOUND-ABSORPTIVE PANELS
(Acoustic Planks – Wood Veneer and High-Pressure Laminate)

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Factory-fabricated linear acoustical planks consisting of a perforated or grooved wood fiber substrate faced with wood veneer or high-pressure laminate, backed with an acoustically transparent fleece, together with the concealed mounting hardware, furring, trim, and accessories required for installation on [walls] [ceilings] [walls and ceilings].
 - 1. Product: AAPG Acoustic Planks.
 - 2. Facings: [Real Wood Veneers LLC “AA” architectural veneer.] [High-pressure laminate.]
- B. Products Not Furnished or Installed Under This Section:
 - 1. Blocking, backing, and structural support for plank attachment.
 - 2. Gypsum board, substrate preparation, and priming.
 - 3. Insulation within the cavity behind the plank system.

1.2 RELATED SECTIONS

- A. Section [] - Rough Carpentry (blocking and backing).
- B. Section [] - Wood and Metal Stud Framing.
- C. Section [] - Gypsum Board Assemblies.
- D. Section [] - Acoustic Insulation.
- E. Section [] - Standard Planks (non-acoustic).
- F. Section 09 8433 - Sound-Absorbing Wall Units (Panawall® Acoustic).

1.3 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - 2. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 3. ASTM E795 - Standard Practices for Mounting Test Specimens During Sound Absorption Tests.
- B. American National Standards Institute (ANSI):
 - 1. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications.
- C. Architectural Woodwork Standards, as jointly published by AWI, AWMAC, and WI, Edition 1.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer’s data for each product specified, including plank profiles, perforation or groove patterns, open area percentages, mounting hardware, and installation methods.
- B. Shop Drawings: Submit elevations and reflected ceiling plans indicating plank layout, direction, dimensions, end joint and stagger pattern, reveal widths, furring and hardware locations, and the treatment of all edges, penetrations, and transitions.
 - 1. Indicate the location and depth of any air cavity and cavity insulation required for the specified acoustical performance.
- C. Selection Samples: Submit manufacturer’s standard color, veneer, and pattern selection samples representing the full range of available finishes.

- D. Samples for Verification: Submit one plank sample, minimum 12 inches (305 mm) long and full width, for each facing and perforation pattern selected, showing the edge profile, reveal, and acoustic backer.
 - 1. Wood Veneer: Submit sample sets showing the full range of normal color and texture variation expected.
- E. Acoustical Performance Data: Submit independent laboratory test reports showing Noise Reduction Coefficient (NRC) determined in accordance with ASTM C423, with the mounting type per ASTM E795 clearly identified.
- F. Fire-Test Data: Submit independent test reports showing surface burning characteristics of the finished plank in accordance with ASTM E84.
- G. Safety Data Sheets (SDS): Submit manufacturer's Safety Data Sheets for adhesives, sealants, and other pertinent materials prior to their delivery to the site.
- H. Maintenance Instructions: Submit manufacturer's cleaning and maintenance instructions, including instructions for removing and replacing individual planks.

1.5 QUALITY ASSURANCE

- A. Single-Source Responsibility: Obtain planks, hardware, and trim from a single manufacturer.
- B. Surface Burning Characteristics: Provide finished planks with a [Class A (Class 1): flame-spread index 25 or less, smoke-developed index 450 or less] [Class C] rating when tested in accordance with ASTM E84.
- C. [Mockup: Provide a mockup of not less than 32 square feet (3 m²), including a typical end joint and a typical edge condition, for review. Approved mockup may remain as part of the Work.]

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver units and associated materials factory-packaged on sturdy pallets, properly packaged and protected against soiling, moisture, and physical damage.
 - 1. Upon delivery, carefully inspect all cartons, packages, pallets, and protective wrap for damage or material shortage.
 - 2. Immediately report any damaged or missing materials to the shipper and to AAPG.
 - 3. Do not commence installation if any components are missing or damaged.
 - 4. Contact AAPG with any questions, problems, or concerns.
- B. Storage: Store products flat, in the manufacturer's unopened packaging, in a clean, dry, conditioned interior space until ready for installation. Do not store units on edge or beneath other materials.
- C. Handling: Handle units with clean, dry hands or gloves to avoid soiling finished faces. Maintain protective wrap in place during on-site handling until ready for installation. Do not drag or stack units face-to-face after removal of protection.
- D. Store planks flat and fully supported along their length. Do not store on edge or allow long planks to bow.

1.7 PROJECT CONDITIONS

- A. Wood composite and laminate products are subject to the effects of humidity and temperature. Do not use in exterior, high-humidity, or wet locations.
- B. Do not install units until all wet work is complete and dry, the building is enclosed and weathertight, and the HVAC system is operating and balanced to normal operating conditions.
- C. Environmental Conditions: Maintain temperature, humidity, and ventilation within the limits recommended by the manufacturer. To ensure product performance, maintain a temperature range of 60 to 80°F (16 to 27°C) and a relative humidity range of 35 to 55 percent during storage, installation, and the product life cycle. Follow the environmental guidelines specified by AWI.

- D. Where planks are installed on ceilings, do not begin installation until all overhead work is complete and inspected.

1.8 COORDINATION AND SEQUENCING

- A. Coordinate plank direction, module, and end joint locations with the Architect's reflected ceiling plan and elevations before fabrication.
- B. Coordinate with lighting, sprinklers, air devices, speakers, and other penetrations so that cut-outs fall within planks as indicated.
- C. Coordinate the depth of the air cavity and any cavity insulation with the acoustical performance required.

1.9 WARRANTY

- A. Manufacturer's Warranty: Submit the manufacturer's standard written warranty covering materials and workmanship against defects for a period of [one (1) year] from the date of delivery.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Acceptable Manufacturer: American Architectural Products Group (AAPG), 248 James Street, Venice, FL 34285. Telephone: +1-844-307-9571. Email: pwest@aapgco.com.
- B. Product: AAPG Acoustic Planks.
- C. Distributor: Koroseal Interior Products, 1111 Medina Road, Medina, OH 44256. Telephone: 855-753-5474. Email: info@koroseal.com.

2.2 SUBSTITUTIONS

- A. [No substitutions permitted.] [Substitutions permitted in accordance with Section 01 25 00 - Substitution Procedures.]

2.3 PLANKS

- A. Plank Configuration:
 - 1. Face Width: Standard Nominal 7-1/4" (184mm)
 - 2. Length: Nominal 96 inches (2438 mm)
 - 3. Thickness: 3/4 inch (19 mm)
- B. Wood Fiber Substrate: Medium-density fiberboard (MDF) conforming to ANSI A208.2, industrial grade, [comprising not less than 75 percent recycled wood waste] [with No Added Formaldehyde].
- C. Acoustic Perforation Pattern: Factory-machined through the plank face and substrate.
 - 1. Pattern: [Micro-perforated: 0.020-inch (0.5 mm) diameter holes.] [Perforated: 1/8-inch (3 mm) diameter holes.] [Slotted: linear slots aligned with the plank length.] [Grooved: linear grooves with concealed perforation.]
 - 2. Open Area: [] percent, as required to achieve the specified acoustical performance.
 - 3. Pattern Alignment: Align patterns continuously from plank to plank across end joints.
- D. Acoustic Backer: Acoustically transparent non-woven black fleece factory-laminated to the plank back, continuous across all perforations.
 - 1. [Acoustic Infill: Nominal 1-inch (25 mm) thick mineral wool or polyester (PET) batt, minimum [] pcf density, installed in the cavity behind the planks.]
 - 2. [Air Space: Provide a nominal [1 inch (25 mm)] [2 inches (51 mm)] [4 inches (102 mm)] air cavity behind the planks.]
- E. Edge Profile: [Square edge, tight joint.] [Square edge with open reveal.] [Tongue-and-groove.] [Shiplap].
 - 1. Reveal Width: [1/4 inch (6 mm)] as indicated on the Drawings.

- F. Wood Veneer Planks: Real Wood Veneers “AA” architectural-grade wood veneer laminated to the perforated substrate and coated with a furniture-grade catalyzed finish as a protective topcoat.
- Edges: Square cut and sealed.
 - Balancing Backer: Wood veneer measuring between 0.015 inch (0.38 mm) and 0.025 inch (0.64 mm).
 - Veneer Face: 0.010 inch (0.25 mm) to 0.015 inch (0.38 mm), with a catalyzed finish of approximately 0.003 inch (0.08 mm).
 - Species and Cut: _____ [As selected by the Architect from the manufacturer’s selection.]
 - [Wood veneer stained to match approved submittal.] [Natural finish with clear topcoat.]
- G. High-Pressure Laminate Planks: Vertical-grade high-pressure plastic laminate adhered to the perforated wood fiber substrate.
- Edges: Square, and edged to match the face.
 - Balancing Backer: Kraft paper.
 - Color and Pattern: _____ [As selected by the Architect from the manufacturer’s standard selection.]
- H. Acoustical Performance: Provide planks achieving the following minimum Noise Reduction Coefficient (NRC) values when tested per ASTM C423:

Assembly	Mounting (ASTM E795)	NRC
Perforated plank, direct mount, no infill	Type A	[0.65]
Perforated plank, fleece, 1 in. infill	Type A	[0.95]
Perforated plank, infill, 2 in. air cavity	Type E-400	[1.00]

2.4 MOUNTING HARDWARE AND ACCESSORIES

- A. Mounting Method: [Concealed clip system on aluminum carrier rails.] [Concealed spline and clip on wood or metal furring.] [Tongue-and-groove with concealed fasteners.] [Direct mechanical fastening with concealed heads.]
- B. Carrier Rails and Furring: [Extruded aluminum carrier rail, factory-finished.] [Manufacturer’s standard furring.] Space in accordance with the manufacturer’s instructions and the plank length and thickness.
- C. Fasteners and Anchors: Corrosion-resistant, of the type and size recommended by the manufacturer for the substrate.
- D. Trim and Accessories: Provide perimeter trim, end caps, transitions, and closure pieces as required for a complete installation, factory-finished to match adjacent planks.

2.5 FABRICATION

- A. Factory-finish all planks, hardware, and accessories ready to install, except for field fabrication required by jobsite and perimeter conditions.
- Machine perforations cleanly and uniformly, free of tear-out, burning, and raised fibers.
 - Mill plank edges straight and true, with uniform width and consistent profile along the full length.
 - Refinish field-cut plank ends and edges in accordance with the manufacturer’s instructions before installation.
 - At all cut-outs, drill corners to a minimum 1/8-inch (3 mm) radius.
 - Sequence and mark planks to maintain veneer color and grain progression as shown on the shop drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Installer's Examination: Examine the substrates and conditions under which the Work of this Section is to be performed. Submit written notification to the Architect and the system manufacturer if such conditions are unacceptable. Beginning installation constitutes the installer's acceptance of conditions.
 - 1. Verify that substrates are smooth, solid, flat, dry, and free of dust, oil, and other contaminants
 - 2. Verify that cavity insulation, where required for acoustical performance, is installed and secured.
 - 3. Verify that sufficient blocking, backing, and furring are provided at the spacing required for the plank length and thickness.
 - 4. Verify that mechanical, electrical, and other items affecting the Work of this Section are placed and ready to receive this Work.

3.2 PREPARATION

- A. Conditioning: Allow planks to acclimate to a balanced environment in the installation location for 72 hours prior to installation. Ensure Moisture content is in line with AWI standards.
- B. Protect existing surfaces and completed work with drop cloths.
- C. Before installing, examine planks and arrange them to achieve the best combination of color, pattern, texture, and grain. Follow the sequence provided by the manufacturer.

3.3 INSTALLATION

- A. Install planks in strict accordance with the manufacturer's installation instructions, straight, level, plumb, and true to line.
 - 1. Install carrier rails or furring level and true, at the spacing required by the manufacturer, anchored securely to blocking or solid substrate.
 - 2. Set out the plank layout from the approved shop drawings; balance the layout so that partial planks at perimeters are of equal and acceptable width.
 - 3. Stagger end joints as indicated; where a random pattern is specified, avoid a repeating or visually banded arrangement.
 - 4. Maintain uniform reveal widths and continuous perforation alignment across adjacent planks and end joints.
 - 5. Do not compress the acoustic backer or block perforations with fasteners, adhesive, or debris.
- B. Installation Tolerances: Install plank faces flush and aligned, with a maximum variation of 1/16 inch (1.6 mm) between adjacent planks, uniform reveal width within 1/32 inch (0.8 mm), and 1/8 inch in 8 feet (3 mm in 2.4 m) from level, plumb, and line.
- C. Avoid contamination of the plank faces with adhesives, solvents, or cleaners during installation.

3.4 CLEANING AND PROTECTION

- A. Clean and remove dust and other foreign matter from plank surfaces and reveals. Vacuum perforations with a soft brush attachment; do not force debris into the acoustic backer.
- B. Clean finishes in accordance with the manufacturer's instructions; do not use solvents or abrasive cleaners.
- C. Protect installed planks from damage and soiling until Substantial Completion.

END OF SECTION 09 8413