

SECTION 09 5426

SUSPENDED DECORATIVE CEILINGS

(AAPG Wood Veneer and High-Pressure Laminate Drop-In Ceiling Tiles)

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Factory-fabricated square lay-in ceiling tiles consisting of a wood fiber substrate faced with wood veneer or high-pressure laminate, sized to drop into a nominal 15/16-inch (23.8 mm) exposed-tee suspension grid, together with the trim, hold-down clips, and accessories required for installation.
 - 1. Products: AAPG Drop-In Ceiling Tiles, [decorative (non-acoustic)] [acoustic (perforated with acoustically transparent backer)].
 - 2. Facings: [Real Wood Veneers LLC "AA" architectural veneer.] [High-pressure laminate.]
 - 3. Edge Profiles: [Square lay-in.] [Tegular reveal.]
- B. Products Not Furnished or Installed Under This Section:
 - 1. Suspension system (main beams, cross tees, wall molding, hanger wire, and seismic bracing).
 - 2. Structural support and anchorage for the suspension system.
 - 3. Insulation laid over or within the plenum above the tiles.
- C. The suspension system is specified in Section [09 5100 - Acoustical Suspension Assemblies] and is not furnished under this Section. Tiles specified herein are designed to be compatible with the Armstrong PRELUDE XL 15/16-inch Exposed Tee system or an approved equal heavy-duty exposed-tee grid.

1.2 RELATED SECTIONS

- A. Section [09 5100] - Acoustical Suspension Assemblies (exposed-tee grid).
- B. Section [] - Rough Carpentry (backing and structural support for the suspension system).
- C. Section [] - Mechanical, Electrical, and Fire-Protection penetrations of the ceiling plane.
- D. Section [] - Thermal Insulation (plenum insulation).
- E. Section 09 8413 - Fixed Sound-Absorptive Panels (Acoustic Planks), for fixed-mounted linear planks.

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.
 - 4. ASTM C635 - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.
 - 5. ASTM C636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - 6. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.
- B. American National Standards Institute (ANSI):

1. ANSI A208.1 - Particleboard.
 2. ANSI A208.2 - Medium Density Fiberboard (MDF) for Interior Applications.
- C. International Building Code (IBC), Chapter 8 - Interior Finishes, and applicable seismic design requirements.
- D. 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 tile dimensions, thickness, weight per tile, edge profiles, facing materials, and — for acoustic tiles — perforation pattern and open area percentage.
- B. Shop Drawings: Submit reflected ceiling plans indicating tile layout, grid module, edge and border conditions, hold-down clip locations, and the treatment of all edges, penetrations, light fixtures, diffusers, and transitions.
1. Indicate compatibility with the specified suspension system, including the exposed-tee face width and the tile edge detail engaging the grid flange.
 2. For acoustic tiles, indicate the plenum depth and any plenum 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 full-size tile of each type, facing, and edge profile specified.
- E. Test Reports: Submit independent laboratory test reports for the products specified:
1. Surface burning characteristics (ASTM E84), reporting flame-spread index and smoke-developed index for the finished tile.
 2. For acoustic tiles, sound absorption (ASTM C423) reporting the Noise Reduction Coefficient, with the ASTM E795 mounting type identified and the plenum depth stated.
- F. Maintenance Data: Submit manufacturer's cleaning and maintenance instructions, and quantities of attic-stock tiles as specified.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm regularly engaged in the manufacture of architectural wood ceiling products of the type specified, with not less than five years of documented experience.
- B. Single-Source Responsibility: Obtain tiles and their compatible trim and hold-down accessories from a single manufacturer.
- C. Grid Compatibility: Tiles shall be manufactured to the tolerances required to seat correctly in the specified 15/16-inch exposed-tee grid without forcing, binding, or gapping. The suspension system shall comply with ASTM C635 and be installed in accordance with ASTM C636.
- D. Mock-Up: Provide a mock-up of not less than [one grid bay by one grid bay] [] for review of appearance, seating, edge alignment, and hold-down before proceeding.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver tiles in the manufacturer's original protective packaging with labels intact.
- B. Store tiles flat, off the floor, in a dry, conditioned, and enclosed space. Do not store or install in spaces that are not weathertight.
- C. Acclimatize tiles in the installation space for not less than 72 hours before installation. The building shall be enclosed and the HVAC system operating at service conditions.

1.7 PROJECT CONDITIONS

- A. Environmental Limits: Do not install until the space is enclosed and maintained at service conditions. Maintain 60 to 80 °F (16 to 27 °C) and 35 to 55 percent relative humidity during storage, installation, and the life of the installation.
- B. Wood fiber tiles are dimensionally responsive to humidity. Sustained humidity outside the stated range may cause sag, warping, or joint opening and will void the manufacturer's warranty. This product is not suitable for exterior, high-humidity, or wet locations.

1.8 WARRANTY

- A. Manufacturer's Warranty: Submit the manufacturer's standard warranty against defects in materials and manufacture for a period of one (1) year from the date of Substantial Completion, provided the tiles are installed and maintained within the specified environmental limits.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis of Design: American Architectural Products Group (AAPG), 248 James Street, Venice, Florida 34285. Telephone: 844-307-9571. www.aapgco.com.
 - 1. AAPG Drop-In Ceiling Tiles.
- B. Substitutions: Not permitted.

2.2 TILES, GENERAL

- A. Substrate: Medium-density fiberboard (MDF) conforming to ANSI A208.2, industrial grade. [Provide substrate comprising not less than 75 percent recycled wood waste.] [Provide No Added Formaldehyde (NAF) substrate.]
- B. Nominal Module: Tiles sized to fit a nominal 15/16-inch (23.8 mm) exposed-tee grid at:
 - 1. [24 by 24 inches (610 by 610 mm).]
 - 2. [24 by 48 inches (610 by 1219 mm).]
- C. Nominal Thickness: [] inch ([] mm). Confirm thickness against the load capacity of the specified suspension system and the required hold-down method.
- D. Weight: [] pounds per tile ([] kg), as published by the manufacturer. Confirm that the total suspended load, including tiles, is within the load capacity of the specified suspension system and its seismic bracing.
- E. Edge Profile:
 - 1. [Square lay-in: tile rests on the exposed-tee flange, with the grid face exposed below.]
 - 2. [Tegular reveal: tile edge is rabbeted to drop below the grid face, producing a reveal and a recessed tile.]

2.3 FACINGS

- A. Wood Veneer Facing: Real Wood Veneers LLC "AA" architectural-grade veneer, 0.010 to 0.015 inch (0.25 to 0.38 mm), with a furniture-grade catalyzed finish of approximately 0.003 inch (0.08 mm), over a balancing backer of equivalent thickness on the reverse face.
 - 1. Veneer Matching: [Book matched.] [Sequence matched within each ceiling plane.] [Random matched.]
 - 2. Species and Cut: [].
- B. High-Pressure Laminate Facing: Vertical-grade high-pressure decorative laminate complying with NEMA LD 3, with a kraft paper balancing backer on the reverse face.
 - 1. Color and Finish: [], as selected from the manufacturer's full range.
- C. Balancing Backer: Provide a balancing sheet on the reverse face of every tile to equalize the finish face and resist warping. Unbalanced tiles are not acceptable.

2.4 ACOUSTIC TILES

- A. Where acoustic tiles are specified, provide tiles perforated or grooved through the facing and substrate, backed with an acoustically transparent non-woven black fleece factory-laminated continuously across all perforations.
 - 1. Perforation Pattern: [Micro-perforated 0.020 inch (0.5 mm) diameter holes.] [Perforated 1/8 inch (3 mm) diameter holes.] [Slotted.] [Grooved.]
 - 2. Open Area: [] percent.
- B. Plenum Insulation: Where required to achieve the specified acoustical performance, provide [] inch ([] mm) mineral wool or polyester batt laid over the tiles or within the plenum. Plenum insulation is specified in Section [] and is not furnished under this Section.
- C. Decorative (non-acoustic) tiles have negligible sound absorption and shall not be represented as providing acoustical performance.

2.5 PERFORMANCE

- A. Surface Burning Characteristics: Provide tiles with a finished-face surface burning classification, tested in accordance with ASTM E84, of:
 - 1. [Class A (Class 1): flame-spread index 25 or less, smoke-developed index 450 or less.]
 - 2. [Class [B] [C]: as permitted by the authority having jurisdiction for the occupancy and location.]
 - 3. Submit independent test reports for the finished tile. The specifier and the authority having jurisdiction shall confirm the fire classification required for a suspended ceiling in the applicable occupancy before the tile facing is selected.
- B. Acoustical Performance (Acoustic Tiles): Provide acoustic tiles with a Noise Reduction Coefficient (NRC) of not less than [], determined in accordance with ASTM C423 with the mounting per ASTM E795 [Type E-400 (suspended over a plenum)] and the tested plenum depth identified.
 - 1. Substantiate the specified NRC with an independent laboratory test report of the tile as manufactured. Values shall not be extrapolated from other products or mounting conditions.
 - 2. Decorative (non-acoustic) tiles: no NRC is claimed.
- C. Humidity Resistance: Tiles shall be warranted against sag when installed and maintained within the environmental limits of Article 1.7. Where sustained elevated humidity is anticipated, confirm the suitability of the product with the manufacturer in writing before specifying.

2.6 ACCESSORIES

- A. Hold-Down Clips: Provide the manufacturer's hold-down clips compatible with the specified suspension system where required by the tile weight, by air-pressure conditions, or by the authority having jurisdiction. Wood fiber tiles are heavier than mineral fiber lay-in and may require hold-downs the standard grid does not.
- B. Edge and Border Trim: Provide the manufacturer's trim for perimeter and border tiles, cut to suit the room dimensions, with edges finished to match the tile faces.
- C. Attic Stock: Deliver [] percent of each tile type, facing, and edge profile installed, as extra stock for the Owner's maintenance use, in the manufacturer's original packaging.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until the suspension system has been installed in accordance with ASTM C636 and the reflected ceiling plan, leveled, and inspected. The suspension system, its hanger wires, and its seismic bracing shall be complete and capable of supporting the tile load before tiles are placed.

- B. Verify that the exposed-tee face width and grid module match the tiles supplied. Report discrepancies and do not proceed until they are resolved.
- C. Verify that the space is enclosed, the HVAC system is operating at service conditions, and the tiles have been acclimatized as specified.

3.2 INSTALLATION

- A. Install tiles in accordance with the manufacturer's current published installation instructions and the approved shop drawings.
- B. Lay tiles into the grid so that the edge profile seats correctly on or below the exposed-tee flange without forcing. Do not trim tiles to force a fit; recut the border layout instead.
- C. Handle finished tiles with clean gloves. Orient veneer tiles for grain direction and match as indicated on the shop drawings. Return unused tiles to protective packaging.
- D. Install hold-down clips where specified, at the spacing recommended by the manufacturer, and wherever required by the authority having jurisdiction.
- E. At borders, penetrations, light fixtures, and diffusers, cut tiles cleanly, seal cut edges as recommended by the manufacturer, and support cut tiles as required. Cut edges of veneer and HPL tiles shall not be left raw where exposed to view.

3.3 INSTALLATION TOLERANCES

- A. Install tiles level and in alignment with the grid, with a maximum variation of 1/16 inch (1.6 mm) between adjacent tile faces, and 1/8 inch in 12 feet (3 mm in 3.6 m) from level.
- B. Reveal (tegular tiles): maintain uniform reveal within 1/32 inch (0.8 mm) around each tile.

3.4 CLEANING AND PROTECTION

- A. Clean exposed faces in accordance with the manufacturer's instructions. Replace any tile that is chipped, delaminated, warped, stained, or otherwise damaged; do not repair damaged tiles in place.
- B. Protect installed tiles from damage and from moisture and humidity outside the specified limits through the remainder of construction.

END OF SECTION