



STRAIGHT BAFFLE

SECTION 09 84 00

SOUND-ABSORBING WALL AND CEILING UNITS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Acoustic Ceiling Baffles.

1.02 RELATED SECTIONS

- A. Section 09 84 33 - Sound-Absorbing Wall Units
- B. Section 09 84 36 - Sound-Absorbing Ceiling Units
- C. Section 05 31 00 - Steel Decking: Acoustical steel deck.
- D. Section 09 11 10 - Non-Loadbearing Metal Framing: Ceiling suspension systems.
- E. Section 09 26 00 - Gypsum Board Assemblies.
- F. Section 09 51 10 - Suspended Acoustical Ceilings: Conventional grid-supported acoustic ceilings.
- G. Section 09 90 00 - Paints and Coatings

1.03 REFERENCES

- A. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method; 2009a.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2016.
- C. ASTM E795 - Standard Practices for Mounting Test Specimens During Sound Absorption Tests; 2016.

1.04 SUBMITTALS

- A. General: Submit manufacturer's documentation for each type of product under provisions of Section 01 30 30 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's printed data sheets for products specified.
- C. Shop Drawings: Fabrication and installation details, panel layout.
- D. Selection Samples: Manufacturer's color charts for applicable material, indicating full range of material, colors, and patterns available.
- E. Verification Samples: Fabricated samples of each type of product specified; 6" minimum length and width, showing construction, edge details.
- F. Test Reports: Certified test data from an independent test agency verifying that panels meet specified requirements for acoustical and fire performance.
- G. Maintenance Materials: Furnish maintenance information and recommendations for Owners use.

1.05 QUALITY ASSURANCE

- A. Source Limitations: All similar products to be obtained from a single manufacturer through one source providing a comprehensive material and installation package.

- B. Installer Qualifications: Utilization of an installer with demonstrated experience and quality in projects of similar size and complexity.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect acoustical units from moisture during shipment, storage, and handling. Deliver in factory-wrapped bundles; do not open bundles until units are needed for installation. Ensure all supplied hardware, material, and components are maintained until product is fully installed.
- B. Store units flat, in dry, well-ventilated space; do not stand on end.
- C. Protect edges from damage.
- D. Acclimatize product for minimum 24 hours at temperature and humidity approximately that of occupancy prior to installation.

1.07 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install materials until spaces are enclosed from the exterior environment, wet work in spaces is complete and dry, and HVAC system is maintaining an ambient temperature at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Installer to verify field measurements and dimensions as indicated in Design Submittal.
 - 1. Coordinate location of other product and trades with product layout.
- C. Ensure that Design Submittal signoffs and other required information are supplied in time to prevent interruption of construction process. Ensure that products of this section are supplied to affected trades in time to prevent interruptions.

1.08 WARRANTY

- A. Special Warranty: Refer to manufacturer's standard warranty for specific products, terms, and limitations.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. Acceptable Manufacturer: TURF; Located at 2000 Fox Ln. Elgin, Illinois, 60123; Phone: 844.TURF.OMG (844.887.3664); Email: hello@turf.design; Web: www.turf.design
- B. Substitutions: Not permitted.

2.02 SOUND-ABSORBING AND SOUND-DIFFUSING PANELS

- A. Basis of Design:
 - 1. Turf Design; Product: 'STRAIGHT BAFFLE' <https://turf.design/>
- B. Material Minimum Performance Attributes:
 - 1. Surface Burning Characteristics: Flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
 - 2. UL Tested ASTM E-84: Class A
 - 3. Noise Reduction Coefficient (NRC):
 - i. Tested in accordance with ASTM C423 for Type J ceiling mounting, per ASTM E795.
 - ii. NRC 500hz > 0.61
 - iii. NRC 1000hz > 0.90
 - iv. Avg. apparent NRC > 0.75
- C. Product Attributes:
 - 1. Baffle Size: As indicated in Submittal Drawings and per Architects approval.
 - a. 9.375"D typical by up to 119"L.
 - 2. Baffle Thickness: 9mm baffle, 27mm stiffener.
 - 3. Edges: Exposed felt, machined edge.
 - 4. Corners: Square, exposed felt, machined edge.

5. Material: Polyester (PET) felt, 60% pre-consumer recycled.
6. Color: As selected by Architect from manufacturer's full range.
7. Patterns: As selected by Architect from manufacturer's full range and outlined in Submittal Drawings.
8. Mounting Method: Horizontally suspended from ceiling
 - a. Suspended with Unistrut P1000 series supplied by installer via integrated flexible felt Feltlock™ connections.
 - b. Suspended with T-Grid supplied by installer via integrated flexible felt Gridlock™ connections.
 - c. Suspended with 3/64" steel aircraft cable, inserted into integral spring clips, supplied by manufacturer.
 - d. Suspended with integrated magnetic attachment to ferrous T-Grid supplied by installer.
 - e. Suspended with integrated threaded rod post.

2.03 FABRICATION

- A. General: CNC fabricate panels to sizes, configurations and patterns on 9 mm PET felt. Factory installed hardware.
- B. Tolerances: Fabricate to finished tolerance of plus or minus 1/16 inch for thickness, overall length and width, and square-ness from corner to corner.

2.04 ACCESSORIES

- A. Ceiling-Suspended Accessories: Manufacturer's standard accessories at locations indicated on each acoustical unit, sized appropriately for weight of acoustical unit.
 1. Contractor to provide and install Unistrut as required for baffle installation.
 - a. Suspend Unistrut at elevations indicated by the Architects drawings and Submittals.
 - b. Install Unistrut at lengths indicated on drawings
 2. Contractor to provide and install T-Grid as required for baffle installation.
 - a. Verify grid dimensions in field.
 - b. Ensure grid is flat and level.
 - c. Ferrous grid required for magnetic connections.
 3. Contractor to select and provide all anchors to building for mounting based on site requirements, conditions, and as appropriate for application.
 4. Provide ceiling mounting points for cable suspension from ceilings.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates for conditions detrimental to installation of acoustical units. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install acoustical units in locations indicated, following manufacturer's installation instructions and in accordance with local jurisdiction authorities.
- B. Align panels accurately, with edges plumb and top edges level. Trim baffle blade in field as required for obstructions maintaining stiffener integrity and 2 connection points.
- C. Install acoustical units to construction tolerances of plus or minus 1/16 inch for the following:
 1. Plumb and level.
 2. Flatness.
 3. Width of joints.

3.03 CLEANING

- A. Clean felt facing upon completion of installation from dust and other foreign materials, following manufacturer's instructions.
- B. Vacuum occasionally to remove any particulate matter and air-borne debris or dust. Compressed air can be used to dust the material in difficult to reach areas or for large assemblies.

3.04 PROTECTION

- A. Provide protection of installed acoustical panels until completion of the work.
- B. Replace panels that cannot be cleaned and repaired to satisfaction of the Architect.

END OF SECTION