

## SECTION 9510 ACOUSTICAL CEILING SOUND CONTROL PANELS

### **PART 1 GENERAL**

#### 1.01 SUMMARY

Specifier Note: Revise paragraphs below to suit project requirements.

##### A. Section Includes: High Ceiling Attenuation Class (CAC) lay in panels

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section.

#### 1.02 REFERENCES

##### A. ASTM International:

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 E413 Standard for Measuring Sound Transmission Loss through an assembly.

Specifier Note: Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Omit descriptions to composite and operational properties to extent necessary to link multiple components of a system and to interface with other systems.

#### 1.03 SYSTEM DESCRIPTION

##### A. Performance Requirements:

1. Surface Burning Characteristics (ASTM E84):
  - a. Flamespread: 25, maximum.
  - b. Smoke Developed: 450, maximum.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

## 1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, edge profiles and panel components, including anchorage, accessories, finish colors and textures.
- D. Samples: Submit selection and verification samples of finishes, colors and textures.
- E. Test Reports: Certified test reports showing compliance with specified performance requirements.
  - 1. Standard Systems: Submit certified copies of previous test reports substantiating performance of system in lieu of retesting.

Specifier Note: Article below should include prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 1 Quality Assurance Section.

## 1.05 QUALITY ASSURANCE

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.

- A. Regulatory Requirements and Approvals: [Specify applicable requirements of regulatory agencies].
  - 1. [Code agency name].
    - a. [Report or approval number].

Specifier Note: Article below should include special and unique requirements. Coordinate article below with Division 1 Product Requirements Section.

## 1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions. Environmental conditions required for storage are the same as for installation, see 1.07 – A, Project Conditions.

## 1.07 PROJECT CONDITIONS

- A. Environmental Requirements: Do not install panels until wet work, such as concrete and plastering, is complete; the building is enclosed; and the temperature and relative humidity are stabilized at 60 - 80 degrees F (16 - 27 degrees C) and 40% 50%, respectively.

## PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as “or equal” or “or approved equal” or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining “or equal” products.

### 2.01 ACOUSTICAL CEILING SOUND CONTROL PANELS

Specifier Note: Paragraph below is an addition to CSI SectionFormat. Retain or delete paragraph below per project requirements and specifier’s practice.

Specifier Note: Edit Paragraph below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

A. Substitutions: No substitutions permitted.

Specifier Note: Paragraphs below list proprietary lay in ceiling panels offered by Noise Control USA. Select panel type(s) appropriate to project. Panels are custom fabricated. Consult manufacturer regarding product options. Select product characteristics required; delete characteristics not required. Refer to manufacturer’s technical product information.

### 2.02 MANUFACTURED UNITS

#### A. Embassy Ceiling Panels

1. Panels shall be 1.75 inches (45 mm) thick with a .50 inch (13 mm) reveal.
2. Sizes: 2x2 ft. (610 x 610 mm) or 2x4 ft. (610 x 1220 mm) for installation in 9/16” or 15/16” grid systems.
3. Edge Detail – Square reveal
4. Facing: [100% Polyester fabric, FR701 Style 2100 by Guilford of Maine] [Factory approved customer selected fabric]
5. Acoustical Performance: Per ASTM C423: Noise Reduction Coefficient of .80 minimum Per ASTM E413: Ceiling Attenuation Class (CAC) of 53, minimum.

#### B. Quiet Tile Ceiling Panels

1. Thickness: Overall panel thickness shall be determined by the facing tile specified. Additional thickness of the Sound Deadener (damping) and mass layer bonded to the facing tile shall be no greater than 19/32 inches (15 mm).
2. Sizes: Nominal 2x2 ft. (610 x 610 mm) or 2x4 ft. (610 x 1220 mm) for installation in specified lay in grid system.
3. Edge Detail: [Based on facing tile selected by architect]
4. Ceiling facing tile as selected by Architect
5. Core: Class A fire rated mass layer weighing 1.80 lbs. per sq. ft. and a sound deadening viscoelastic layer shall be bonded to the specified facing tile and supplied by the manufacturer. Minimum panel weight shall [3.0 psf for standard QuietTile] [3.3 psf with fiberglass backer]
6. Ceiling Attenuation Class (CAC): [Minimum CAC 49 per ASTM E413] [Minimum CAC 51 per ASTM E413, includes 1-inch (25 mm) thick fiberglass backer]

## 2.03 FABRICATION

A. Embassy panels shall include a 1.80 lbs./ sq. ft. mass layer and a 1 inch (51 mm) thick 6-7 pcf fiberglass absorber assembled in an aluminum frame.

Fabric shall be stretched over the frame with no visible sagging, wrinkles, or imperfections.

B. Where Embassy panels require field cutting, the units will be supplied without the aluminum frame while matching all standard panels.

C. Quiet Tile panels will be fabricated, using the facing lay-in ceiling panel specified by the architect.

The mass layer and sound deadener shall be bonded to the back, unexposed side of the ceiling panel.

## PART 3 EXECUTION

Specifier Note: Paragraph below is an addition to CSI SectionFormat. Retain or delete paragraph below per project requirements and specifier's practice.

### 3.01 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

B. Ceiling grid to be installed to support panel weight up to 3.5 lbs. per sq. ft.

### 3.02 Examination

A. Site Verification of Conditions: Verify that substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

### 3.03 Cleaning

A. Follow manufacturer's instructions for cleaning panels soiled during installation. Replace panels that cannot be cleaned as new condition. B. Keep site free from accumulation of waste and debris.

**END OF SECTION**