PART 1 GENERAL

1.01 SUMMARY

Specifier Note: Revise paragraphs below to suit project requirements.

A. Section Includes: Custom fabricated acoustical baffles and clouds

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:

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 baffle / cloud components, including suspension method, 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.

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 baffles or clouds 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% to 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 BAFFLES/ CLOUDS

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

   A. Manufacturer: Noise Control USA.

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.

   B. Substitutions: No substitutions permitted.

Specifier Note: Paragraphs below list proprietary acoustical baffles/ clouds offered by Noise Control USA. Select baffle or cloud type(s) appropriate to project. Baffles and Clouds 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. PAB Baffles:
      1. Thickness shall be 1 ¾ inches
      2. Size: As indicated on drawings up to a maximum 48 inch (1219 mm) x 96 inch (2438 mm) baffle.
      3. Core: 1 ½ inch thick, 3 pcf density fiberglass with an extruded PVC frame
      4. Edge Detail: Rounded pencil
      5. Facing: [100% Polyester fabric, FR701 style 2100 by Guilford of Maine] [Factory approved customer selected fabric]
         a. Color: [As selected from panel manufacturers stocked range of colors] [As selected from fabric manufacturers full range of colors]
      6. Sound Absorption (ASTM C423) : Sabins per square foot of baffle minimum-
         \[
         \begin{array}{ccccccc}
         125\text{Hz} & 250\text{Hz} & 500\text{Hz} & 1000\text{Hz} & 2000\text{Hz} & 4000\text{Hz} \\
         .26 & .62 & 1.23 & 1.81 & 1.9 & 1.95 \\
         \end{array}
         \]
         Testing of baffles in a typical vertically suspended layout
      7. Mounting: Suspension wire, cable, or chain attached to the Zinc plated steel eye screws at the top of each baffle.
   B. KB 803 Baffles
      1. Thickness: shall be 1 ½ inches
      2. Size: As indicated on drawings up to a maximum 48 inch (1219 mm) x 96 inch (2438 mm) baffle.
3. Core: 1 ½ inch thick, 3 pcf density fiberglass

4. Facing: Baffles shall be heat sealed in a fire retardant 3 mil minimum and 4 mil maximum vinyl film
   a. Color: As selected from panel manufacturer’s standard vinyl’s.

5. Sound Absorption (ASTM C423): Sabins per square foot of baffle minimum-

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Test of baffles in a typical vertically suspended layout

6. Mounting: Suspension wire, cable, or other approved hanging mechanism attached to plated brass eyelets
   which are part of the baffle.

C. Wave Baffles Type SE

1. Baffles shall be nominal 2" thick
2. Size: As shown in drawings up to a maximum 4 ft. wide and 30 ft. long
3. Core shall be 2" thick fiberglass, 1.5 pcf density
4. Facing: [1.5 ounce sewn ripstop sailcloth] [Webcore Vinyl] All edges face wrapped and stitched. Suspension
   eyelets across each 4 ft. side as required.

Specifier Note: Webcore Vinyl recommended for natatorium/indoor pool applications.

a. Color: As selected from the manufacturer’s standard range of FR, fire rated materials.

5. Sound Absorption (ASTM C423, J Mounting): Sabins per square foot of baffle to meet the following
   minimums in each frequency band

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Testing of baffles in a typical horizontally suspended catenary position. Type E400 mounting is not acceptable.

6. Mounting: Wire, cable, or other approved hanging mechanism attached to brass plated eyelets.

Specifier Note: For corrosive environments, specify stainless steel eyelets.

D. Wave Baffle Type HB

1. Baffles shall be a nominal 1-1/2 inch thick fiberglass insulation blanket fully encapsulated in a [solid]
   [perforated] vinyl covering which is heat sealed on the edges. Vinyl shall be no less than 2.5 mils thick.

Specifier Note: Other insulation thicknesses are available. Our standard of 1-1/2 inch thick insulation is based on economy
and performance which is primarily the result of the positioning of the sound absorptive baffles and to a much lesser degree
the insulation thickness.

2. Size: As shown on drawings up to a maximum 4 ft. wide and 30 ft. long
3. Color: As selected from the manufacturer’s standard range of FR, fire rated materials.
4. Suspension on the ends of each baffle (4 ft. maximum width) shall be through a mounting bracket which is
   [a solid wood spreader board covered in vinyl (Standard)] [an aluminum spreader bar] the full width of the
   baffle.

5. Sound Absorption (ASTM C423, JMounting) Sabins per square foot of baffle to meet the following
   minimums in each frequency band

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(Perforated vinyl one side) (Solid vinyl)

Testing of baffles must be in a typical horizontally suspended catenary position replicating a ceiling/roof
installation. Type E400 mounting is not acceptable.

6. Mounting: Wire, cable, or other approved hanging mechanism attached through the mounting bracket.

7. Vertically hung baffles, as shown on the drawings, will be suspended through attachment at a top mounting
   bracket on one end of the baffle or through grommets designed to carry the baffle weight without tearing or
   pulling out.
E. Hard Side Baffles

1. Thickness shall be [1 inch (25.4 mm)] [2 inches (51 mm)] [4 inches (102 mm)]
2. Size: As indicated on the drawings up to a maximum 48 inch (1219 mm) x 120 inch (3048 mm) baffle.
3. Core: 2 layers of 6-7 pcf density fiberglass bonded for the required thickness.
4. Edge Detail: [Square] [Round] [Mitered] [Beveled] [Pencil] hardened with non-resin, Class A hardening solution.
5. Facing: 100% polyester fabric, FR 701 Style 2100 by Guilford of Maine [Factory approved customer selected fabric]
   a. Color: [As selected from panel manufacturer’s stocked range of colors] [As selected from fabric manufacturer’s full range of colors].
6. Sound Absorption (ASTM C423): Noise Reduction Coefficient as follows:
   a. 1" (25.4 mm) Panel: 0.80, minimum
   b. 2" (51 mm) Panel: 1.00, minimum
   c. 4" (102 mm) Panel: 1.10, minimum
   Baffle panels tested with an A mounting (flush) to hard surface. Suspension from ceiling will increase sound absorption.
7. Mounting: Suspension wire, cable, or chain attached to the Zinc plated steel eye screws at the top of each baffle.

F. Hard Side Cloud Acoustical Panels

1. Thickness: [1 inch (25.4 mm)] [2 inch (51 mm)]
2. Size: As indicated on the drawings up to a maximum 48 inch (1219 mm) x 120 inch (3048 mm) cloud panel.
3. Core: [1 inch (25.4)] [2 inches (51 mm)] thick fiberglass, 6-7 pcf density
4. Edge Detail: [Square] [Round] [Mitered] [Beveled] [Pencil] edges hardened with a non-resin, Class A hardening solution.
5. Facing: [100% polyester fabric, FR 701 Style 2100 by Guilford of Maine] [Factory approved customer selected fabric]
   a. Color: [As selected from panel manufacturer’s stocked range of colors] [As selected from fabric manufacturer’s full range of colors].
6. Sound Absorption (ASTM C423): Noise Reduction Coefficient as follows:
   a. 1 inch (25.4 mm) Panel: 0.80, minimum.
   b. 2 inches (51 mm) Panel: 1.00, minimum.
   Cloud panels tested with an A mounting (flush) to hard surface. Suspension below ceiling will increase sound absorption.
7. Mounting: Suspend cloud panels using wire, cable, or other acceptable mechanism attached to eye screws on the back unfaced side of the cloud panels.

G. Applique Cloud Acoustical Panels

1. Thickness: [1 ½ inches (38 mm)] [2 ½ inches (64 mm)]
2. Size: As indicated on the drawings up to a maximum 48 inch (1219 mm) x 96 inch (2438 mm) cloud panel.
3. Core: [1 inch (25.4 mm)] [2 inches (51 mm)] thick fiberglass, 3 pcf density with an extruded aluminum frame
4. Edge Detail: Pencil
5. Facing: [100% Polyester fabric, FR701 style 2100 by Guilford of Maine] [Factory approved customer selected fabric]
   a. Color: [As selected from manufacturers stocked range of colors] [As selected from manufacturers full range of colors].
6. Sound Absorption (ASTM C423): Noise Reduction Coefficient of .85 minimum for a 1 ½ inch (38 mm) panel.
   Cloud panel tested with an A mounting (flush) to hard surface. Suspension from the ceiling will increase sound absorption.
7. Mounting: Suspend cloud panels using wire, cable, or other acceptable mechanism attached to clips on the panel frame.

PART 3 EXECUTION

Specifier Note: Paragraph below is an addition to CSI Section Format and a supplement to specifications. 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.

3.02 EXAMINATION
   A. Site Verification of Conditions: Verify that the supporting structure for suspension of acoustical baffles or clouds
      previously installed under other sections, is acceptable for product installation in accordance with manufacturer’s
      instructions.
         1. Do not install baffles or clouds until unsatisfactory conditions are corrected.

3.03 CLEANING
   A. Follow manufacturer’s instructions for cleaning baffles or clouds soiled during installation. Replace baffles or
      clouds that cannot be cleaned to as new condition.
   B. Keep site free from accumulation of waste and debris.

END OF SECTION