

This MANU-SPEC™ utilizes the Construction Specifications Institute (CSI) *Manual of Practice*, including *MasterFormat™*, *SectionFormat™* and *PageFormat™*. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies an acoustical ceiling system. These products are manufactured by Tectum Inc. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

SECTION 095100
ACOUSTICAL CEILINGS
(CEMENTITIOUS WOOD FIBER CEILINGS)

PART 1 GENERAL

1.01 SUMMARY

Specifier Note: Edit paragraphs below depending on whether ceiling suspension grid is specified in this section or another section.

- A. Section Includes: Cementitious wood fiber plank acoustical ceiling system [And suspension grid].

Specifier Note: Revise paragraph below to suit project requirements. If a reader of this section could reasonably expect to find a product or component specified in this section, but it is actually specified elsewhere, then the related section number(s) should be listed in the paragraph below. Add section numbers and titles per CSI *MasterFormat* and specifier's practice. In the absence of related sections, delete paragraph below.

- B. Related Sections:

Specifier Note: Ceiling suspension grid system must be at minimum intermediate-duty with 1½ inch (38 mm) high square bulb main runners and cross tees.

1. Division 9 Sections: Acoustical Suspension.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain References 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. It is a listing of all references used in this section.

1.02 REFERENCES

- A. ASTM International:

1. ASTM C635 Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
2. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
3. ASTM E1264 Standard Classification for Acoustical Ceiling Products.

- B. Ceilings and Interior Systems Construction Association (CISCA):

1. CISCA Code of Practices.

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

1.03 SYSTEM DESCRIPTION

A. Performance Requirements:

1. Provide acoustical ceiling assembly designed and tested to provide surface burning characteristics (ASTM E84) as follows:
 - a. Flamespread: 0.
 - b. Smoke Developed: 0.
2. Provide acoustical ceiling system which has been manufactured, fabricated and installed to provide Noise Reduction Coefficient (NRC) rating as follows:
 - a. [1.0] [Specify required NRC rating.].

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 manufacturer's product data and installation instructions.
- C. Samples: Submit selection and verification samples: 6 inch x 6 inch (152 x 152 mm) sample for each wood fiber ceiling unit required, showing full range of exposed texture to be expected in completed work.
- D. Quality Assurance/Control Submittals: Submit the following:
 1. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.

Specifier Note: Article below should include statements of 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

- A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

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.

- B. Regulatory Requirements and Approvals: [Comply with requirements below.] [Specify applicable requirements of regulatory agencies.].
 1. International Code Council (ICC):
 - a. ICC-ES Evaluation Report ESR-1112.
 2. State of California:
 - a. DSA Number PA-008.
 3. Underwriters' Laboratories of Canada (ULC) label.
 - a. Structural Cement-Fiber Unit-535X
- C. Certifications: [Specify requirement for certifications.].

Specifier Note: Retain paragraph below if pre-installation meeting is required.

- D. Pre-installation Meetings: [Specify requirements for meeting.].

Specifier Note: Article below should include specific protection and environmental conditions required during storage. Coordinate article below with Division 1 Product Requirements Section.

1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirement Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
 1. Provide labels indicating brand name, style, size and thickness.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
 1. Prevent soiling, physical damage or wetting.
 2. Store cartons open at each end to stabilize moisture content and temperature.

Specifier Note: In article below, state physical or environmental limitations or criteria for installation such as weather, temperature, humidity, ventilation or illumination required for proper installation or application.

1.07 PROJECT/SITE CONDITIONS

A. Environmental Requirements:

1. Do not install ceiling panels until building is closed in and HVAC system is operational.
2. Locate materials onsite at least 24 hours before beginning installation to allow materials to reach temperature and moisture content equilibrium.
3. Maintain the following conditions in areas where acoustical materials are to be installed 24 hours before, during and after installation:
 - a. Relative Humidity: 65 - 75%.
 - b. Uniform Temperature: 55 - 70 degrees F (13 - 21 degrees C).

1.08 MAINTENANCE

- A. Extra Materials: Provide [A recommended percentage of] [Specify percentage.] additional material for use by owner in building maintenance and repair.
- B. Provide new unopened cartons of extra materials, packaged with protective covering for storage and identified with appropriate labels.

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 SYSTEM

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

A. Manufacturer: Tectum Inc.

1. Contact: 105 South Sixth Street, Newark, OH 43055; Telephone: (888) 977-9691, (740) 345-9691; Fax: (800) 832-8869; E-mail: info@tectum.com; website: www.tectum.com.
- B. Proprietary Systems. Acoustical ceiling systems, including the following:

Specifier Note: Retain one or more of the products below to suit project requirements.

1. Tectum Lay-In Grid Panels:

- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
- b. Thickness and Back Rabbet: [1 inch (25.4 mm) thick] [1½ inches (38 mm) thick, ¾ inch (19.1 mm) rabbet] [2 inches (51 mm) thick, 1¼ inch (32 mm) rabbet].
- c. Length:
 - 1) 1 inch (25.4 mm) thickness: [Specify length from 48 inches – 96 inches (610 - 2438 mm)].
 - 2) 1½ inch (38 mm) and 2 inch (51 mm) thicknesses: [24 inches (610 mm)] [48 inches (1219 mm)].
- d. Width: [23 ¾ inches (603 mm)] [47 ¾ inches (1213 mm)].
- e. Color: [Natural] [Factory painted white] [Custom Color].
- f. Mounting Style: ["E-400"].

2. Tectum Tonico Ceiling Panels:

- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
- b. Thickness and Reveal: [1 inch (25.4 mm) thick, 13/32 inch (10.3 mm) reveal] [1½ inches (38 mm) thick, ¾ inch (19.1 mm) reveal] [2 inches (51 mm) thick, 1 inch (25.4 mm) reveal].
- c. Length: [Specify length from 48 inches – 96 inches (610 - 2438 mm)].
- d. Width: [23 ¾ inches (603 mm)] [47 ¾ inches (1213 mm)].
- e. Color: [Natural] [Factory painted white] [Custom Color].
- f. Mounting Style: ["E-400"].

3. Tectum Soft Look Tonico Ceiling Panels:

- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.

- b. Thickness and Reveal: [1 inch (25.4 mm) thick, 13/32 inch (10.3 mm) reveal].
 - c. Length: [Specify length from 48 inches – 96 inches (610 - 2438 mm)].
 - d. Width: [23 ¾ inches (603 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["E-400"].
4. Tectum Designer Ceiling Panels:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness and Reveal: [1 inch (25.4 mm) thick, 13/32 inch (10.3 mm) reveal] [1½ inches (38 mm) thick, ¾ inch (19.1 mm) reveal].
 - c. Length: [Specify length from 48 inches – 96 inches (610 - 2438 mm)].
 - d. Width: [23 ¾ inches (603 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["E-400"].
5. Tectum Designer Series Plus Ceiling Panels:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness and Reveal: [1 inch (25.4 mm) thick, 13/32 inch (10.3 mm) reveal] [1½ inches (38 mm) thick, ¾ inch (19.1 mm) reveal].
 - c. Length: [23 ¾ inches (603 mm)].
 - d. Width: [23 ¾ inches (603 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["E-400"].
6. Tectum V-Line Ceiling Panels:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness and Reveal: [1 inch (25.4 mm) thick, ¼ inch (6.4 mm) reveal] [1½ inches (38 mm) thick, ¼ inch (6.4 mm) reveal] [2 inches (51 mm) thick, ¼ inch (6.4 mm) reveal].
 - c. Length: [Specify length from 48 inches – 96 inches (610 - 2438 mm)].
 - d. Width: [23 ¾ inches (603 mm)] [31 ¾ inches (806 mm)] [47 ¾ inches (1213 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["A"] ["C-20"] ["C-40"] ["D-20"]. Provide all fasteners, [Furring strips] and [OCF 703 fiberglass insulation] for a complete single source installation.
7. Tectum Multi-Plane Ceiling Panels:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness and Reveal: [1 inch (25.4 mm) thick, 13/32 inch (10.3 mm) reveal] [2 inches (51 mm) thick, 1 7/16 inch (27 mm) reveal] [2½ inches (64 mm) thick, 1 15/16 inch (49 mm) reveal] [3 inches (76 mm) thick, 2 7/16 inch (62 mm) reveal].
 - c. Length: [23 ¾ inches (603 mm)] [47 ¾ inches (1207 mm)] [60 inches (1524 mm)].
 - d. Width: [23 ¾ inches (603 mm)] [30 inches (762 mm)] [47 ¾ inches (1213 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["E-400"].
8. Tectum Full-Span Corridor Panels:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness: [1 inch (25.4 mm)] [1½ inches (38 mm)] [2 inches (51 mm)].
 - c. Length: [Specify length from 48 inches – 144 inches (610 - 3658 mm)].
 - d. Width: [23 ¾ inches (603 mm)] [29 ¾ inches (756 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["E-400"].
9. Tectum Concealed Corridor Ceiling Panels:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness: [1½ inches (38 mm)] [2 inches (51 mm)].
 - c. Length: [Specify length from 48 inches – 144 inches (610 - 3658 mm)].

- d. Width: [23 ¾ inches (603 mm)] Center line of bevels = 23 3/8" (594 mm).
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["E-400"].
10. Tectum Radius Cloud Panels:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness: [1½ inches (38 mm)] [2 inches (51 mm)].
 - c. Length:
 - 1) 23 ¾ inches (603 mm) width: [23 ¾ inches (603 mm)] [47 ¾ inches (610 mm)].
 - 2) 47 ¾ inches (1213 mm) width: [47 ¾ inches (610 mm) only]
 - d. Width: [23 ¾ inches (603 mm)] [47 ¾ inches (1207 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["E-400"].
11. Tectum Square Cloud Panels:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness: [1½ inches (38 mm)] [2 inches (51 mm)].
 - c. Length: [23 ¾ inches (603 mm) up to 144 inches (3658 mm)].
 - d. Width: [23 ¾ inches (603 mm)] [47 ¾ inches (1207 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["E-400"].
12. Tectum Acousti-Tough Ceiling System:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness: [1 inch (25.4 mm)] [1½ inches (38 mm)] [2 inches (51 mm)].
 - c. Length: [23 ¾ inches (603 mm)] [47 ¾ inches (1207 mm)].
 - d. Width: [23 ¾ inches (603 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["E-400"].
13. Tectum Correctional Ceiling Panels:
- a. Panel Material: Aspen wood fibers bonded with inorganic hydraulic cement, 24 gauge steel backing.
 - b. Grid Material (ASTM C635): 6063 T-5 aluminum alloy, heavy duty.
 - c. Suspension Rods: ¼ inch (6.4 mm) steel.
 - d. NRC Rating: 0.40.
 - e. Flamespread: Conforms to ASTM E1264.
 - f. Thickness: [1 inch (25.4 mm)].
 - g. Length:
 - 1) Direct-Attached: [48 inches (1219 mm)] [96 inches (2438 mm)].
 - 2) Lay-In: [23 ¾ inches (603 mm)] [47 ¾ inches (1213 mm)].
 - h. Width:
 - 1) Direct-Attached: [24 inches (610 mm)].
 - 2) Lay-In: [23 ¾ inches (603 mm)]
 - i. Color: [Natural] [Factory painted white] [Custom Color].
 - j. Mounting Style:
 - 1) Direct-Attached: ["A"] Provide all fasteners, [Furring strips] and [OCF 703 fiberglass insulation] for a complete single source installation.
 - 2) Lay-In: ["E-400"].
14. Tectum Bevel/Bevel Direct Attachment Panels:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Thickness: [1 inch (25.4 mm)] [1½ inches (38 mm)] [2 inches (51 mm)].
 - c. Length: [Specify length from 48 inches – 96 inches (610 - 2438 mm)].

- d. Width: [23¾ inches (603 mm)] [47¾ inches (1213 mm)].
 - e. Color: [Natural] [Factory painted white] [Custom Color].
 - f. Mounting Style: ["A"] ["C-20"] ["C-40"] ["D-20"]. Provide all fasteners, [Furring strips] and [OCF 703 fiberglass insulation] for a complete single source installation.
15. Tectum Concellico Ceiling System:
- a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
 - b. Color: [Natural] [Factory painted white] [Custom Color].
 - c. Thickness: 1½ inches (38 mm).
 - d. Length: [48 inches (1219 mm)] [60 inches (1524 mm)] [72 inches (1829 mm)].
 - e. Width: [23 3/8 inches (594 mm)].
 - f. Edge Detail: Long sides concealed edge detail. Short sides T & G.
 - g. Mounting Style: ["E-400"].

Specifier Note: Edit Article 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.

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

Specifier Note: Coordinate accessories below with manufacturer's literature.

2.03 ACCESSORIES

- A. Provide accessories as follows:

1. Acousti-Tough Keep Clips (For use with Sq./Sq Lay-In Ceiling Panels):
 - a. Material: Steel.
 - b. Manufacturer Designation: [ATC-100 for 1 inch (25.4 mm) panels] [ATC-200 for 1½ inch (38 mm) and 2 inch (51 mm) panels].
2. Tectum Painted Head Drywall Screws (For use with Direct-Attached Ceiling Panels):
 - a. Material: Steel.
 - b. Length: [1 5/8 inches (41 mm)] [2¼ inches (57 mm)] [3 inches (76 mm)].
 - c. Color: [Natural] [White].
3. Torx Tamper-Resistant Screws (self-drilling & self tapping)(For use with Correctional Panels):
 - a. Material: Steel.
 - b. Length: [1¾ inches (44 mm)] [2¼ inches (57 mm)] [2¾ inches (70 mm)].
 - c. Color: [Natural] [White].
4. Tectum Molding:
 - a. Material: Plastic.
 - b. Designation: [CHC] [CHH].
5. Tectum Touch-Up Paint:
 - a. Color: [Natural] [White].
6. Stabilizer Bars (For use with Concellico Ceiling System):
 - a. Material: Steel.
 - b. Manufacturer Designation: As supplied by Tectum Inc. part number: 711 – 1024

PART 3 EXECUTION

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise article below to suit project requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Comply with the instructions and recommendations of the ceiling system manufacturer.
- B. Install materials in accordance with governing regulations, fire resistance rating requirements and industry standards applicable to work.
 1. Comply with CISCA Code of Practices.

3.02 EXAMINATION

- A. Site Verification of Conditions:
 - 1. Examine surfaces scheduled to receive suspended or directly attached acoustical units for unevenness, irregularities and dampness that would affect quality and execution of work.
 - 2. Do not proceed with installation of ceiling system until unacceptable conditions are corrected.

Specifier Note: Coordinate article below with manufacturer's recommended installation requirements. Retain language applicable to project and to the products specified in Part 2.

3.03 INSTALLATION

- A. General: Do not begin installation until materials sufficient to complete an entire room are received and prepared for installation.
- B. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less-than-half width units at borders.
- C. Symmetrically locate grid layout in each space. Coordinate work with other trades so that lighting fixtures, grilles and other ceiling fixtures work with grid layout.
- D. Do not use universal splices or other splices that would obstruct passage of recessed lighting fixtures through grid openings or limit fixture relocation upon flanges of ceiling grids.
- E. Support suspension system from structure above, not from ductwork, metal deck, equipment or piping.
- F. Space hangers not more than 6 inches (152 mm) from ends and not more than 4 feet (1219 mm) on centers on runners.
- G. Install wall moldings at the perimeter of each acoustical ceiling area and at locations where edge of units would otherwise be exposed.
 - 1. Secure moldings to supporting construction by fastening with screw anchors into the substrate, through holes drilled in vertical leg. Space holes not more than 3 inches (76 mm) from each end and not more than 16 inches (406 mm) on center along each molding.
 - 2. Level moldings with ceiling suspension system, to a level tolerance of 1/8 inch (3.2 mm) in 12 feet (3658 mm).
 - 3. Miter corners of moldings accurately to provide hairline joints, securely connected to prevent dislocation. Cope exposed flanges of intersecting suspension system members, so that flange faces will be flush.
 - 4. Furnish additional tees for supporting grilles, diffusers and light fixtures. Refer to reflected ceiling, HVAC and electrical plans for locations.
 - 5. Provide reveal edge at walls, other abutting vertical surfaces.
- H. Field paint cut edges to match surface color and sheen.
- I. Arrange acoustical units and orient directionally patterned units, if any, in manner shown on reflected ceiling plans.

Specifier Note: Specify the final actions required to clean installed equipment or other completed work to properly function or perform. Coordinate article below with Division 1 Execution Requirements (Cleaning) Section.

3.04 CLEANING

- A. Clean exposed surfaces of acoustical ceilings, trim, edge moldings and suspension members to comply with manufacturer's instructions for cleaning.
- B. Touch up any minor finish damage.
- C. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

Specifier Note: Specify provisions for protecting work after installation but prior to acceptance by the owner. Coordinate article below with Division 1 Execution Requirements Section.

3.05 PROTECTION

- A. Protect installed work from damage due to subsequent construction activity, including temperature and humidity limitations and dust control, so that the work will be without damage and deterioration at the time of acceptance by the Owner.

END OF SECTION