SECTION 09 54 01 - LINEAR WOOD CEILINGS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Sections included under Division 0 & Division 1 are included as a part of this Section as though bound herein.

B. Bidding and Contract Requirements of the Specifications and the Drawings govern the Work of this section. Provide materials, labor, equipment and services necessary to furnish, deliver and install work of this Section as shown on Drawings, as specified or as required by job conditions.

C. Coordinate work with that of other trades affecting or affected by work of this Section and cooperate to assure the steady progress of the Work.

1.2 SUMMARY

A. Section Includes:
1. Wood veneer ceiling planks.
2. Concealed grid suspension system.
3. Wire hangers, fasteners, main runners, wall angle moldings and accessories.

1.3 RELATED SECTIONS

A. Related Sections:
1. Section 09 54 23 – Lineal Metal Ceilings
2. Divisions 23 – HVAC
3. Division 26 Sections – Electrical Work

1.4 REFERENCES

A. American Society for Testing and Materials (ASTM):
1. ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
2. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot- Dip Process.
3. ASTM A 1008 Standard Specification for Steel, Sheet, Cold Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
4. ASTM C 635 Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
5. ASTM C 636 Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
6. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.
7. ASTM E 1264 Classification for Acoustical Ceiling Products.

B. CISCA Seismic Zones (0-2) (3-4) Ceilings and Interior Systems Construction Association Guidelines for Seismic Restraint for Direct Hung Suspended Ceiling Assemblies

1.5 SUBMITTALS

A. In accordance with Division 1 – Submittal Procedures.

B. Product Data: Submit manufacturer's technical data for each type of ceiling unit and suspension system required.

C. Installation Instructions: Submit manufacturer's installation instructions as referenced in Part 3, Installation.

D. Samples: Minimum 3-1/2 inch or 5-1/2 inch samples of specified panel; 8 inch long samples of exposed wall molding and suspension system, including main runner.

E. Shop Drawings: Layout and details of ceilings. Show locations of items which are to be coordinated with, or supported by the ceilings.

F. Certifications: Manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards.

G. All products not conforming to manufacturer's current published values must be removed, disposed of and replaced with complying product at the expense of the Contractor performing the work.

1.6 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide ceiling panel units and grid components by a single manufacturer.

B. Fire Performance Characteristics: Identify ceiling components with appropriate markings of applicable testing and inspecting organization.
   1. Surface Burning Characteristics: As follows, tested per ASTM E 84 and complying with ASTM E 1264 for Class A products.
      a. Flame Spread: 25 or less
      b. Smoke Developed: 50 or less
   2. HPVA (Hardwood Plywood and Veneer Association) certification and audit program per ASTM E-84 tunnel test.

C. Woodworking Standards: Manufacturer must comply with specified provisions of Architectural Woodworking Institute quality standards.

D. Linear Wood, as with other architectural features located at the ceiling, may obstruct or skew the planned fire sprinkler water distribution pattern, or possibly delay or accelerate the activation of the sprinkler or fire detection systems by channeling heat from a fire either toward or away from the device. Designers and installers are advised to consult a

fire protection engineer, NFPA 13, or their local codes for guidance where automatic fire detection and suppression systems are present.

E. Coordination of Work: Coordinate ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store ceiling components in a dry interior location in their cartons prior to installation to avoid damage. Store cartons in a flat, horizontal position. The protectors between the panels should not be removed until installation.

B. Do not store in unconditioned spaces with humidity greater than 55 percent or lower than 25 percent relative humidity and temperatures lower than 50 degrees F or greater than 86 degrees F. Panels must not be exposed to extreme temperatures, for example, close to a heating source or near a window with direct sunlight.

C. Handle ceiling units carefully to avoid chipped edges or damage to units in any way.

1.8 PROJECT CONDITIONS

A. Wood veneer ceiling materials should be permitted to reach room temperature and have a stabilized moisture content for a minimum of 72 hours before installation.

B. The wood veneer panels should not be installed in spaces where the temperature or humidity conditions vary greatly from the temperatures and conditions that will be normal in the occupied space.

C. As interior finish products, the wood veneer panels are designed for installation in temperature conditions between 50 degrees F and 86 degrees F, in spaces where the building is enclosed and HVAC systems are functioning and will be in continuous operation. Relative humidity should not fall below 25 percent or exceed 55 percent.

1.9 WARRANTY

A. Wood Veneer Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to:
   1. Ceiling Panels: Defects in materials or factory workmanship.
   2. Grid System: Rusting and manufacturing defects.

B. Warranty Period:
   1. Wood veneer panels: One (1) year from date of installation.
   2. Grid: Ten years from date of installation.

C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.10 MAINTENANCE

A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.
   1. Ceiling Units: Furnish quantity of full-size units equal to 5.0 percent of amount installed.
   2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to 2.0 percent of amount installed.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Ceiling Panels:
   1. Armstrong World Industries, Inc. – Basis of Design
   2. Certainteed
   3. Equals approved by the Architect in writing.

B. Suspension Systems:
   1. Armstrong World Industries, Inc. – Basis of Design
   2. Certainteed
   3. Equals approved by the Architect in writing.

2.2 WOOD VENEER CEILING UNITS

A. Ceiling Panels Type “LW”:
   1. Basis of Design: WOODWORKS Linear Veneered Planks, 6440W1 NMP, as manufactured by Armstrong World Industries:
      Armstrong Sales Contact: Rob Hager, Sales Rep Phone: 216-513-7210
   2. Veneers: Natural Variations Maple
   3. Size: 96in x 3-3/4in x 3/4in **with 3/4in reveal**
   4. Edge Banding and Trim: To match face veneer
   5. Noise Reduction Coefficient (NRC): ASTM C 423
      a. Nominal 4-1/2" Module - 0.65 with acoustical backing
   6. Flame Spread: ASTM E 1264; Class A.

2.3 SUSPENSION SYSTEMS

A. Components: All linear carriers shall be commercial quality hot dipped galvanized steel as per ASTM A 653. Linear carriers are double-web steel construction with concealed flange design. Exposed surfaces chemically cleansed, capping prefinished galvanized steel in baked polyester paint. Linear carriers shall have rotary stitching.
   1. Structural Classification: ASTM C 635, Heavy Duty.
   2. Color: Black, unless noted otherwise.
   3. Clips: Integral, factory-applied, spring steel clips on linear carriers in sufficient number to receive 8 foot linear wood (nominal 4 inch) (nominal 6 inch) planks.
   4. Acceptable Product: HD Linear Carrier as manufactured by Armstrong World Industries, Inc.

B. Attachment Devices: Size for five times design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.

C. Wire for Hangers and Ties: ASTM A 641, Class 1 zinc coating, soft temper, pre-stretched, with a yield stress load of at least time three design load, but not less than 12 gauge.

D. Accessories/Edge Moldings and Trim:
1. Linear Splices, Item #5843, for splicing planks together end-to-end

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out.

B. Proper designs for both supply air and return air, maintenance of the HVAC filters and building interior space are essential to minimize soiling. Before starting the HVAC system, make sure supply air is properly filtered and the building interior is free of construction dust.

3.2 PREPARATION

A. 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, and comply with reflected ceiling plans. Coordinate panel layout with mechanical and electrical fixtures.

3.3 INSTALLATION

A. Install suspension system and panels in compliance with ASTM C636; CISCA Seismic Guidelines; approved construction drawings; with the authorities having jurisdiction; and in accordance with the manufacturer's installation instructions, WoodWorks Linear Installation Instructions, LA-297076.

B. Suspend linear carriers from overhead construction with hanger wires spaced 4 feet on center along the length of the linear carrier. Install hanger wires plumb and straight. Hanger wires shall not be installed in convenience holes. Install linear carriers 24 inches on center (or less).

C. Install wall moldings at intersection of suspended ceiling and vertical surfaces.

D. Follow the instructions found in "WoodWorks Linear Installation Instructions", LA-297076, for border treatment of the WoodWorks Linear planks.

E. Install sound control accessory panels above entire area of Linear Wood Ceiling system.

3.4 ADJUSTING AND CLEANING

A. Replace damaged and broken panels.

B. Clean exposed surfaces of ceilings panels, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION