Attiro Magnetic Hardwood Plank System
Combination Bolted Stringer/Cornerlock LFFH Understructure System
SECTION 09 69 00

ACCESS FLOORING

PART 1 - GENERAL

1.1 Section Includes

A. Work of this section includes, but is not limited to: access floor panels and understructure.

1.2 Related Sections

A. Protection of the access floor against damage due to construction activity.

B. Subfloor concrete sealer shall be compatible with pedestal adhesive, see Division 3.

C. See Division 26 Section "Grounding and Bonding for Electrical Systems" for connection to ground of access flooring understructure. Note: The electrical engineer or contractor shall determine requirements for grounding and the electrical contractor shall provide the necessary labor and materials to electrically connect the access flooring to the building ground if it is required.

D. Modular wiring and cabling components.

1.3 Coordination

A. Coordinate location of mechanical and electrical work in underfloor cavity to prevent interference with access flooring pedestals.
B. Mark pedestal locations on subfloor using a grid to enable mechanical and electrical work to proceed prior to installation of access flooring pedestals.
C. Maintain protection on the access floor to prevent damage and possible replacement.

1.4 Pre-installation Conference

A. Review procedures for keeping underfloor space clean.
B. Inform all trades of the load limits of the system being installed.
C. Review procedures for removing and reinstalling panels in the floor.

1.5 Environmental Conditions for Storage and Installation

A. Area to receive and store access floor materials shall be enclosed and maintained at ambient temperatures between 50° to 86° F and relative humidity levels between 40% to 60%. All areas of installation shall be enclosed and maintained at ambient temperature between 50° to 86° F and at relative humidity levels between **40% to 60%** and shall remain within these environmental limits throughout occupancy. Product shall be allowed to acclimate to these conditions for 2 days prior to start of installation. Do not remove packaging until you are ready to begin installation.

1.6 **References**

A. CISCA (Ceilings & Interior Systems Construction Association) - "Recommended Test Procedures for Access Floors" shall be used as a guideline when presenting load performance product information.

1.7 **Country-of-Origin and Product Marking**

A. Access floor materials shall comply with the provisions outlined in FAR Subpart 25.2 – Buy American Act – Construction Materials.

B. Floor panels shall be permanently marked with manufacturer's name and manufacturing date. Removable Product ID stickers are not acceptable.

1.8 **Performance Requirements:** Provide access-floor system capable of complying with the following performance requirements**.**

A. **Pedestal Axial Load**: Pedestal support assembly shall provide a 6000 lb. axial load without permanent deformation when tested in accordance with CISCA A/F, Section 5 "Pedestal Axial Load Test".

B. **Pedestal Overturning Moment**: Pedestal support assembly shall provide an average overturning moment of 1000 in-lbs. when glued to a clean, sound, uncoated concrete surface when tested in accordance with CISCA A/F, Section 6 "Pedestal Overturning Moment Test".

C. **Stringer Concentrated Load:** Stringer shall be capable of withstanding a concentrated load of 450 lbs. placed in its midspan on a one square inch area using a round or square indentor without exceeding a permanent set of 0.010" after the load is removed when tested in accordance with CISCA A/F, Section 4, "Stringer Load Testing".

1.9 **Design Requirements:**

A. Access floor system, where indicated on the design documents, shall consist of modular and removable fully encased cementitious filled welded steel panels supported on all four edges by structural steel members which are designed to bolt onto adjustable height pedestal assemblies forming a modular grid pattern.

B. Panel shall be easily removed by one person with a suction cup lifting device and shall be interchangeable except where cut for special conditions.

C. Quantities, finished floor heights (FFH) and location of accessories shall be as specified on the contract drawings.

1.10 **Submittals for Review**

A. Detail sheets, for each proposed product type, which provide the necessary information to describe the product and its performance.

B. Test reports, certified by an independent testing laboratory with a minimum of five years experience testing access floor components in accordance with CISCA Recommended Test Procedures, certifying that component parts perform as specified.

1.11 **Submittals for Information**

A. Manufacturer's installation instructions and guidelines.

B. Manufacturer's Owner Manual outlining recommended care and maintenance procedures.

PART 2 - PRODUCTS

2.1 **Manufacturers**

A. Source Limitations: Obtain access-flooring system from single source manufacturer.

B. Access floor system shall be as manufactured by Tate Access Floors, Inc. and shall consist of the ConCore access floor panel supported by a LFFH Combination Bolted Stringer / Cornerlock understructure system.

C. Alternative products shall meet or exceed all requirements as indicated herein and must receive prior written approval by the architect or designer.

D. Access floor manufacture shall be ISO9001: 2000 certified demonstrating it has a robust and well documented quality management system with continuous improvement goals and strategies.

E. Access floor manufacturer's facilities shall be ISO14001:2004 certified demonstrating that they maintain an environmental management system.

F. Access floor manufacturer's facilities shall be OHSAS 18001:2007 certified demonstrating that they maintain an Occupational Health and Safety Management system.

2.2 **Support Components**

Pedestals:

A. Pedestal assemblies shall be corrosive resistant, all steel construction. Zinc electroplating shall be prohibited on all pedestal components, including head plate, threaded rod, base plate, and all fasteners.

B. Pedestal assembly for a 4" FFH system shall have an adjustment range of +/- 1/2".

C. Pedestal assembly for a 3" FFH system shall have an adjustment range of +1/2" -1/8".

D. Pedestal assemblies shall provide a means of leveling the assembly at a selected height.

E. Hot dip galvanized steel pedestal head shall have a threaded core to accept a 3/4"-10 stud for height adjustment.

F. Hot dip galvanized pedestal base assembly shall consist of a formed steel plate with no less than 16 inches of bearing area, resistance welded to a 3/4”-10 steel stud.

Stringers:

A. Stringers shall support each edge of panel.

B. [Steel stringer shall have conductive galvannealed coating. Zinc electroplating shall be prohibited on stringers and stringer fasteners.] [Steel box stringer shall have conductive hot dipped galvanized coating and factory applied gasket. Zinc electroplating shall be prohibited on stringers and stringer fasteners.]

C. Stringers shall be individually and rigidly fastened to the pedestal with one machine screw for each foot of stringer length. Bolts shall provide positive electrical contact between the stringers and pedestals. Connections depending on gravity or spring action are unacceptable.

D. Stringer grid shall be 2’ x 2’.

Floor Panels

A. Panels shall consist of a top steel sheet welded to a formed steel bottom pan filled internally with a lightweight cementitious material. Mechanical or adhesive methods for attachment of the steel top and bottom sheets are unacceptable.

B. Floor panels shall be protected from corrosion by electro-deposited epoxy paint. The use of zinc electroplating shall be prohibited.

C. Cementitious fill material shall be totally encased within the steel welded shell except where cut for special conditions. Note: This greatly reduces the potential for dust in the environment from exposed cement materials.

2.4 Finishes

A. Bare panels to be covered after installation with freelay white oak hardwood planks consisting of 5/32” thick hardwood on a 15/32” plywood board with .040” magnetic backing. Planks are to be 7.48” wide x 59” to 90” random lengths. Top edge of planks to have a micro-bevel.

B. Hardwood shall be A/B grade, with the exception of @ 1% which will be supplied as B grade and will be identified with a red dot.

C. Hardwood planks to have [Light Brushed Rovere-Puro] [Light Brushed Tamarindo] [Light Brushed Tortora] [Light Brushed Biancospino] [Light Brushed Montblanc] [Light Brushed Testa Di Moro] [Brushed Citta Della Pieve] [Brushed Ostuni] [Brushed Pienza] [Brushed Fiesole] [Saw Cut San Gimignano] [Saw Cut Montalcino] [Saw Cut Bagno Vignoni] shading.

D. Hardwood planks to be finished with factory applied Oleonature oil based finish.

E. Installation shall have a color matched 5/16” wide silicone expansion joint every 50’ in width and every 100’ in length, and around the perimeter of the installation.

2.5 Fabrication Tolerances

A. Floor panel flatness measured on a diagonal:	+/- 0.015”
B. Floor panel flatness measured along edges:	+/- 0.010”
C. Floor panel width or length of required size:	+/- 0.020”
D. Floor panel squareness tolerance:	within 0.040”
E. Thickness tolerance range:	within 0.035”

2.6 Accessories

A. Provide manufacturer’s standard steps, ramps, fascia plate, and perimeter support.

B. Provide _____ spare floor panels and _____ square feet of understructure systems for each type used in the project for maintenance stock. Deliver to project in manufacturer’s standard packaging clearly marked with the contents.

C. Provide _____ panel lifting devices.

PART 3 – EXECUTION

3.1 Preparation

A. Examine structural subfloor for unevenness, irregularities and dampness that would affect the quality and execution of the work. Do not proceed with installation until structural floor surfaces are level, clean, and dry as completed by others.

B. Concrete subfloor sealers, if used, shall be identified and proven to be compatible with pedestal adhesive. Verify that adhesive achieves bond to slab before commencing work.

C. Verify dimensions on contract drawings, including level of interfaces including abutting floor, ledges and doorsills.

D. The General Contractor shall provide clear access, dry subfloor area free of construction debris and other trades throughout installation of access floor system.

E. Area to receive and store access floor materials shall be enclosed and maintained at ambient temperatures between 50° to 90° F and relative humidity levels between 20% to 80%. All areas of installation shall be enclosed and maintained at ambient temperature between 40° to 86° F and at relative humidity levels between **40% to 60%** and shall remain within these environmental limits throughout occupancy. Product shall be allowed to acclimate to these conditions for 2 days prior to start of installation. Do not remove packaging until you are ready to begin installation.

3.2 Installation

A. Pedestal locations shall be established from approved shop drawings so that mechanical and electrical work can be installed without interfering with pedestal installation.

B. Installation of access floor shall be coordinated with other trades to maintain the integrity of the installed system.

C. Floor system shall be installed under the supervision of the manufacturer's authorized representative and according to manufacturer's installation guidelines.

D. No dust or debris producing operations by other trades shall be allowed in areas where access floor is being installed to ensure proper bonding of pedestals to subfloor and prevent contamination of access floor surface.

E. Access floor installer shall keep the subfloor broom clean as installation progresses.

F. Partially complete floors shall be braced against shifting to maintain the integrity of the installed system where required.

G. Install additional pedestals as needed to support panels where floor is disrupted by columns, walls, and cutouts.

H. Understructure shall be aligned such that all uncut panels are interchangeable and fit snugly but do not bind when placed in alternate positions.

I. Finished floor shall be level, not varying more than 0.062" in 10 feet or 0.125" overall.

3.3 Acceptance

A. General Contractor shall accept floor in whole or in part prior to allowing use by other trades.

End

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