SECTION 096933 - LOW-PROFILE FIXED HEIGHT ACCESS FLOORING

Revise this Section by deleting and inserting text to meet Project-specific requirements.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

1. GENERAL
   * + 1. SUMMARY
          1. Section includes low-profile, fixed-height access flooring.

Retain paragraph below if grounding work is part of a single contract. Delete if there is a separate electrical work contract.

* + - * 1. Related Requirements:

Section 260526 “Grounding and Bonding for Electrical Systems” for connection to ground of the access-flooring understructure.

Retain paragraph below if grounding work provided by a separate electrical work contract.

* + - * 1. Related Work Provided by Others:

Grounding and bonding of access-flooring understructure to be provided by the Electrical Work Contract.

* + - 1. COORDINATION
         1. Coordinate location of electrical work in underfloor cavity and wire management channels.
      2. PREINSTALLATION MEETINGS

Retain "Preinstallation Conference" paragraph below if Work of this Section is extensive or complex enough to justify a conference.

* + - * 1. Preinstallation Conference: Conduct conference at Project site.

If needed, insert list of conference participants.

Review connections between low-profile, fixed-height access flooring and electrical systems.

* + - 1. SUBMITTALS
         1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
         2. Manufacturer’s installation instructions shall be provided along with product data.
         3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
         4. Product Data: For each type of product.

Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for low-profile, fixed-height access flooring.

Include loading capacities.

* + - * 1. Sustainable Design Submittals:
        2. Shop Drawings: For low-profile, fixed-height access flooring:

Include layout of low-profile, fixed-height access flooring and relationship to adjoining Work based on field-verified dimensions.

Details and sections with descriptive notes indicating materials, finishes, fasteners, typical and special edge conditions, accessories, and understructures.

Retain "Samples" paragraph below, with a subordinate list if applicable.

* + - * 1. Samples:

Exposed Metal Accessories: Approximately 10 inches in length.

One full-size unit for each component of each type of low-profile, fixed-height access flooring required.

Retain "Floor Coverings" subparagraph for low-profile, fixed-height access flooring with factory-applied floor coverings; most manufacturers do not provide factory-applied finishes.

Floor Coverings: Full-size units for each color and texture specified.

Coordinate "Qualification Data" paragraph below with qualification requirements in "Quality Assurance" Article.

* + - * 1. Qualification Data: For Installer.
      1. MAINTENANCE MATERIAL SUBMITTALS

Increase numbers in paragraph below if desired but verify with OGS Team Leader.

* + - * 1. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

Low-Profile, Fixed-Height Access-Flooring Components: One of each type.

* + - 1. QUALITY ASSURANCE
         1. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
         2. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

Build mockup of typical low-profile, fixed-height access flooring, as shown on Drawings. Size to be an area of no fewer than five floor panels in length by five floor panels in width.

Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Director’s Representative specifically approves such deviations in writing.

Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1. PRODUCTS

Manufacturers and products listed in SpecAgent and Masterworks Paragraph Builder are neither recommended nor endorsed by the AIA or Deltek. Before inserting names, verify that manufacturers and products listed there comply with requirements retained or revised in descriptions and are both available and suitable for the intended applications.

* + - 1. PERFORMANCE REQUIREMENTS

Retain "Seismic Performance" paragraph below for projects requiring seismic design. Delete paragraph if performance requirements are indicated on Drawings. Model building codes and ASCE/SEI 7 establish criteria for buildings subject to earthquake motions. Coordinate requirements with structural engineer.

* + - * 1. Seismic Performance: Low-profile, fixed-height access flooring shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

Loads in "Structural Performance" paragraph below are examples only; revise to suit Project. If retained, verify that loading requirements coordinate with each other and match the products specified. If needed, revise the text. See the Evaluations.

* + - * 1. Structural Performance:

Loading Capacity: 250-lbf/sq. ft. live load with the following deflection and permanent set:

Top-Surface Deflection: Maximum 0.15 inch.

Permanent Set: Maximum 0.06 inch.

* + - * 1. Fire Performance:

Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

Flame-Spread Index: 25 or less.

Smoke-Developed Index: 450 or less.

* + - 1. LOW-PROFILE, FIXED-HEIGHT ACCESS FLOORING <**Insert drawing designation**>

If retaining more than one panel type, indicate location of each on Drawings and insert drawing designation. Use these designations on Drawings to identify each product.

* + - * 1. Low-Profile, Fixed-Height Access Flooring: Manufacturer's standard, modular, steel or polymer components, designed to interconnect and provide channels for installation of wiring; with manufacturer's standard factory-applied finish.

[Manufacturers:](http://www.specagent.com/Lookup?ulid=12750) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[ASM Modular Systems, Inc](http://www.specagent.com/Lookup?uid=123457062759).

[FreeAxez LLC](http://www.specagent.com/Lookup?uid=123457062763).

Global IFS.

Approved equivalent.

Retain "Module" subparagraph below if desired to restrict module size. Verify available sizes with manufacturers.

Module: Low-profile access flooring with nominal module size of 24 by 24 inches.

Retain "Height" subparagraph below if desired to restrict height. Verify available heights with manufacturers.

Height: Low-profile access flooring with nominal height of 1-1/2 inches.

Retain "Service Outlets and Wiring" paragraph below if required. Designs of outlets differ among manufacturers; if retaining, revise to suit Project.

* + - * 1. Service Outlets and Wiring: Standard UL-listed and -labeled assemblies, for recessed mounting flush with top of floor panels; for power, communication, and signal services; and complying with the following requirements:

Structural Performance: Cover capable of supporting a 300-lbf concentrated load.

Cover and Box Type: [**Hinged polycarbonate cover with opening for passage of cables when cover is closed and including frame and steel box or formed-steel plate for mounting electrical receptacles**] [**Grommet with twist-close cover and including steel junction box for electrical receptacle with provision for telephone connectors and signal cables**].

Receptacles and Wiring: Equip each service outlet with power receptacles to comply with the following requirements:

Type of Receptacle: Heavy-duty duplex, two-pole, three-wire grounding, 20 A, 125 V, NEMA WD 6, Configuration 5-20R unless otherwise indicated.

Number of Receptacles for Outlet: [**One**] [**Two**] [**Four**].

Retain one of two "Wiring Method" subparagraphs below.

Wiring Method: Factory wired for field hardwiring with armored cable, containing three insulated No. 12 AWG solid-copper conductors, terminated with a 6-inch- long pigtail.

Wiring Method: Power-in connectors, built into outlet housing, of type to fit power-in and power-out connectors of branch-circuit cables supplied with building electrical system.

* + - * 1. Fascia Closures: Where underfloor cavity is not enclosed by abutting walls or other construction, provide metal closure plates with manufacturer's standard finish.

Retain "Ramps" paragraph below if required for access from adjacent flooring. Indicate locations and details on Drawings.

* + - * 1. Ramps: Manufacturer's standard ramp construction of width and slope indicated, but not steeper than 1:12, of same materials, performance, and construction requirements as low-profile, fixed-height access flooring.

If special extrusion or other means are required, indicate details on Drawings and revise "Perimeter Support" paragraph below accordingly.

* + - * 1. Perimeter Support: Manufacturer's standard method for supporting panel edge and forming transition between low-profile, fixed-height access flooring and adjoining floor coverings at same level as low-profile, fixed-height access flooring.
      1. LOW-PROFILE, FIXED-HEIGHT ACCESS FLOORING WITH MODULAR WIRING <**Insert drawing designation**>

If retaining more than one panel type, indicate location of each on Drawings and insert drawing designation. Use these designations on Drawings to identify each product. Manufacturers listed in this article include factory-assembled wiring harnesses as an integral part of their product.

* + - * 1. Low-Profile, Fixed-Height Access Flooring with Modular Wiring: Manufacturer's standard, modular, steel or polymer components, designed to interconnect and provide channels for installation of wiring. Include factory-assembled modular wiring harnesses and service outlets; with manufacturer's standard factory-applied finish.

[Manufacturers:](http://www.specagent.com/Lookup?ulid=12751) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Byrne Electrical; KIVA Flexible Technology Distribution Solutions](http://www.specagent.com/Lookup?uid=123457062765).

[Powerflor USA, Inc](http://www.specagent.com/Lookup?uid=123457062766).

[Steelcase Inc](http://www.specagent.com/Lookup?uid=123457062764).

Approved equivalent.

Retain "Height" subparagraph below if desired to restrict height. Verify available heights with manufacturers.

Height: Provide low-profile access flooring with nominal height of [**1-1/2 inches**] [**2 inches**] [**3 inches**].

Retain "Service Outlets and Wiring" paragraph below if required. Designs of outlets differ among manufacturers; if retaining, revise to suit Project.

* + - * 1. Service Outlets and Wiring: Standard UL-listed and -labeled assemblies, for recessed mounting flush with top of floor panels; for power, communication, and signal services; and complying with the following requirements:

Structural Performance: Cover capable of supporting a 300-lbf concentrated load.

Cover and Box Type: [**Hinged polycarbonate cover with opening for passage of cables when cover is closed and including frame and steel box or formed-steel plate for mounting electrical receptacles**] [**Grommet with twist-close cover and including steel junction box for electrical receptacle with provision for telephone connectors and signal cables**].

Retain one of two "Receptacles and Wiring" subparagraphs below. Coordinate with electrical distribution system requirements and revise to suit Project.

Receptacles and Wiring: Electrical receptacles and wiring for service outlets are specified elsewhere.

Receptacles and Wiring: Equip each service outlet with power receptacles to comply with the following requirements:

Type of Receptacle: Heavy-duty duplex, two-pole, three-wire grounding, 20 A, 125 V, NEMA WD 6, Configuration 5-20R unless otherwise indicated.

Number of Receptacles for Outlet: [**One**] [**Two**] [**Four**].

Wiring Method: Factory wired for field hardwiring with armored cable, containing three insulated No. 12 AWG solid-copper conductors, terminated with a 6-inch- long pigtail.

* + - * 1. Fascia Closures: Where underfloor cavity is not enclosed by abutting walls or other construction, provide metal closure plates with manufacturer's standard finish.

Retain "Ramps" paragraph below if required for access from adjacent flooring. Indicate locations and details on Drawings.

* + - * 1. Ramps: Manufacturer's standard ramp construction of width and slope indicated, but not steeper than 1:12, of same materials, performance, and construction requirements as low-profile, fixed-height access flooring.

If special extrusion or other means are required, indicate details on Drawings and revise "Perimeter Support" paragraph below accordingly.

* + - * 1. Perimeter Support: Provide manufacturer's standard method for supporting panel edge and forming transition between low-profile, fixed-height access flooring and adjoining floor coverings at same level as low-profile, fixed-height access flooring.
      1. FABRICATION
         1. Fabrication Tolerances:

Size: Plus or minus 0.020 inch of required size.

Flatness: Plus or minus 0.035 inch, measured on a diagonal on top of panel.

1. EXECUTION
   * + 1. EXAMINATION

Coordinate requirements specified in other Sections for subfloor construction and tolerances to ensure that they are appropriate for pedestal installation.

* + - * 1. Examine substrates, with Installer and manufacturer's authorized representative present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

Verify that substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of conditions and deleterious substances that might interfere with attachment of pedestals.

* + - * 1. Proceed with installation only after unsatisfactory conditions have been corrected.
      1. PREPARATION
         1. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
         2. Lay out low-profile access flooring installation to keep the number of cut panels at floor perimeter to a minimum. Avoid using panels cut to less than 6 inches.
         3. Complete any necessary subfloor preparation, and vacuum subfloor to remove dust, dirt, and construction debris before beginning installation.
      2. INSTALLATION
         1. Install low-profile, fixed-height access flooring and accessories under supervision of low-profile, fixed-height access-flooring manufacturer's authorized representative to produce a rigid, firm installation that complies with performance requirements and is free of instability, rocking, rattles, and squeaks.
         2. Install flooring securely in place and properly seated, with panel edges flush. Do not force panels into place.
         3. Scribe perimeter panels to provide a close fit with adjoining construction, having no voids greater than 1/8 inch where panels abut vertical surfaces.

END OF SECTION 096933