SECTION 096813 - TILE CARPETING

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. RELATED DOCUMENTS
				1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
			2. SUMMARY
				1. Section Includes:

Modular carpet tile.

* + - * 1. Related Requirements:

Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

Section 096513 "Resilient Base and Accessories" for resilient wall base and accessories installed with carpet tile.

Section 096816 "Sheet Carpeting" for carpet roll goods.

* + - 1. REFERENCES
				1. AATCC - The American Association of Textile Chemists and Colorists, Research Triangle Park, NC 27709, [www.aatcc.org](http://www.aatcc.org).
				2. CRI – Carpet and Rug Institute, Dalton, GA 30722-2048, www.carpet-rug.com.
			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.

Retain subparagraph below if additional requirements are necessary.

Review methods and procedures related to carpet tile installation including, but not limited to, the following:

Retain first subparagraph for occupied buildings if delivery must be controlled and coordinated, for example, for tenant spaces in occupied office buildings with multiple tenants.

Review delivery, storage, and handling procedures.

Review ambient conditions and ventilation procedures.

Review subfloor preparation procedures.

If needed, insert list of conference participants.

* + - 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 manufacturer's written data on physical characteristics, durability, and fade resistance, including the following:

Trade name and number.

Manufacturer.

Address of mill constructing carpet.

Construction type.

Gage.

Stitches per inch.

Pile height.

Face yarn.

Face yarn weight.

Weight density factor.

Primary backing.

Secondary backing.

Total weight.

Dye method.

Tuft bind.

Static resistance.

Flammability.

Adhesive

Include manufacturer's written installation recommendations for each type of substrate.

* + - * 1. Sustainable Design Submittals:

Retain “Shop Drawings” paragraph below if Work of this Section is extensive or complex enough to justify shop drawings.

* + - * 1. Shop Drawings: For carpet tile installation, plans showing the following:

Retain, delete, or revise subparagraphs below to suit Project.

Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet tiles.

Carpet tile type, color, and dye lot.

Type of subfloor.

Type of installation.

Pattern of installation.

Pattern type, location, and direction.

Pile direction.

Type, color, and location of insets and borders.

Type, color, and location of edge, transition, and other accessory strips.

Transition details to other flooring materials.

Retain "Samples" paragraph below for single-stage Samples. Retain "Samples for Initial Selection" and "Samples for Verification" paragraphs for two-stage Samples.

* + - * 1. Samples: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.

Carpet Tile: Full-size Sample.

Exposed Edge, Transition, and Other Accessory Stripping: 12-inch- long Samples.

* + - * 1. Samples for Initial Selection: For each type of carpet tile.

Include Samples of exposed edge, transition, and other accessory stripping involving color or finish selection.

* + - * 1. Samples for Verification: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.

Carpet Tile: Full-size Sample.

Exposed Edge, Transition, and Other Accessory Stripping: 12-inch- long Samples.

* + - * 1. Product Schedule: For carpet tile. Use same designations indicated on Drawings.

Retain "Sustainable Product Certification" paragraph below if products certified according to ANSI/NSF 140 are required.

* + - * 1. Sustainable Product Certification: Provide ANSI/NSF 140 certification for carpet products.

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

* + - * 1. Qualification Data: For Installer.
				2. Product Test Reports: For carpet tile, for tests performed by a qualified testing agency.
				3. Sample Warranty: For special warranty.
			1. CLOSEOUT SUBMITTALS
				1. Maintenance Data: For carpet tiles to include in maintenance manuals. Include the following:

Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.

Precautions for cleaning materials and methods that could be detrimental to carpet tile.

* + - 1. MAINTENANCE MATERIAL SUBMITTALS
				1. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

Carpet Tile: Full-size units equal to 5 percent of amount installed for each type indicated, but not less than 10 sq. yd..

* + - 1. QUALITY ASSURANCE
				1. Installer Qualifications: The persons installing the tile carpeting and their Supervisor shall be experienced in carpeting installation, including the requirements of the tile carpeting manufacturer, and shall have been regularly employed by a company engaged in installation of carpeting for a minimum of 5 years.

Furnish to the Director’s Representative the names and addresses of 5 similar projects which the foregoing people have worked on during the past 3 years.

* + - * 1. Certifications: Furnish certification from tile carpeting installer that the substrate surfaces have been examined and are acceptable for installation of the Work of this Section.
				2. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.

Indicate area of floors represented by mockups on Drawings or draw mockups as separate elements.

Build mockups at locations and in sizes shown on Drawings.

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

* + - 1. DELIVERY, STORAGE, AND HANDLING
				1. Comply with the Carpet and Rug Institute's CRI 104.
				2. Deliver tile carpeting in original carpet mill packaging with each package having labels legible and intact.
			2. FIELD CONDITIONS
				1. Comply with the Carpet and Rug Institute's CRI 104 for temperature, humidity, and ventilation limitations.
				2. Environmental Limitations: Do not deliver or install carpet tiles until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at levels planned for building occupants during the remainder of the construction period.

Retain first paragraph below if products are adhesively applied to concrete substrates. Revise to suit Project.

* + - * 1. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet tile manufacturer.
				2. Do not install the Work of this Section until painting, finishing Work, and Work of other trades has been completed.
				3. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles before installing these items.
			1. WARRANTY

When warranties are required, verify with Director’s Representative's counsel that warranties stated in this article are not less than remedies available to Director’s Representative under prevailing local laws.

Revise "Special Warranty for Carpet Tiles" paragraph below if manufacturers have separate warranties for various characteristics.

* + - * 1. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.

Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.

Failures include, but are not limited to, the following:

More than 10 percent edge raveling, snags, and runs.

Dimensional instability.

Excess static discharge.

Loss of tuft-bind strength.

Loss of face fiber.

Delamination.

Verify available warranties and warranty periods for carpet tiles.

Warranty Period: Minimum 15 years from date of Substantial Completion.

If Installer's warranty is available and required, insert here.

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. CARPET TILE <**Insert drawing designation**>

Copy this article and re-edit for each product required.

Insert drawing designation. Use these designations on Drawings to identify each product.

Tile carpeting below is similar to tile carpeting used on design and construction floors in the Corning Tower. This tile carpeting is suitable for most locations when a “general all purpose” carpeting is required. Consult tile carpeting manufactures’ literature and modify properties below if other tile carpeting types are required for aesthetics, plushness, etc.

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=11985) Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

[Interface, LLC](http://www.specagent.com/Lookup?uid=123457134592).

[Mannington Mills, Inc](http://www.specagent.com/Lookup?uid=123457134595).

[Milliken & Company](http://www.specagent.com/Lookup?uid=123457134596).

[Shaw Contract Group; a Berkshire Hathaway company](http://www.specagent.com/Lookup?uid=123457134600).

Approved equivalent.

Generally retain "Color" and "Pattern" paragraphs below unless they are described by product designation inserted above.

* + - * 1. Color: [**As indicated by manufacturer's designations**] [**Match Director’s Representative's samples**] [**As selected by Director’s Representative from manufacturer's full range**].
				2. Pattern: [**As indicated by manufacturer's designations**][**Match Director’s Representative's samples**][**As selected by Director’s Representative from manufacturer's full range**].
				3. Fiber Content: 100 percent nylon 6, 6.
				4. Pile Characteristic: Tufted, textured loop pile (Random Pattern).
				5. Density: Minimum 5,000 oz./cu. yd..

"Pile Thickness" paragraph below is applicable only to finished level-loop and cut-pile constructions with tuft heights less than 1/4 inch.

* + - * 1. Pile Thickness: Minimum 0.130 inches for finished carpet tile according to ASTM D6859.
				2. Stitches: Minimum 8.3 per inch.
				3. Gage: Minimum 1/8 ends per inch.

Do not include weight of backings in "Surface Pile Weight" paragraph below.

* + - * 1. Surface Pile Weight: 20 oz./sq. yd..

Retain "Primary Backing/Backcoating" or "Secondary Backing" paragraph below, or both, or retain "Backing System" paragraph below to describe backing system.

Revise "Primary Backing/Backcoating" paragraph to suit Project; for example, if antimicrobial treatment is integral to backing formulation, if backing density and thickness are optional characteristics to be selected, or if performance characteristics and test method results for backings are available.

* + - * 1. Primary Backing/Backcoating: Manufacturer’s standard vinyl or thermoplastic hard-backing or integral-cushion thermoplastic backing system, recyclable content, maintaining a 100 percent moisture barrier between secondary backing and the floor substrate. Pre-adhered backing system may be used as an alternate without an applied releasable adhesive to surface substrate.
				2. Size: 24 by 24 inches.
				3. Applied Treatments:

Retain "Soil-Resistance Treatment" subparagraph below unless soil resistance is integral to carpet fiber or if soil resistance is not needed for Project; consult manufacturer.

Soil-Resistance Treatment: Manufacturer's standard treatment.

Retain "Antimicrobial Treatment" subparagraph below unless antimicrobial treatment is integral to carpet or if antimicrobial treatment is not needed for Project; consult manufacturer.

Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:

Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.

* + - * 1. Sustainable Design Requirements:

Retain "Sustainable Product Certification" subparagraph below if compliance with ANSI/NSF 140 is required. Verify availability of certification with manufacturers.

Sustainable Product Certification: [**Silver**] [**Gold**] [**Platinum**] level certification according to ANSI/NSF 140.

* + - * 1. Performance Characteristics:

Flammability Certification:

Radiant Panel Flooring Flammability Test: NFPA 253. Class I, Minimum 0.45 watts per sq centimeter.

Methenamine Tablet Test: DOC-FF-1-70 and ASTM D 2859. Meet the “Standards for the Surface Flammability of Carpets”.

Smoke Density Test: NFPA 258 and ASTM E 662. Specific optical density (DM) of 450 or less (flaming).

Appearance Retention Rating: Severe traffic, 3.5 minimum according to ASTM D7330.

Retain or revise "Critical Radiant Flux Classification" subparagraph below after verifying requirements of authorities having jurisdiction.

Critical Radiant Flux Classification: Not less than 0.45 W/sq. cm according to NFPA 253.

Dry Breaking Strength: Not less than 100 lbf according to ASTM D2646.

Tuft Bind: Not less than 12 lbf according to ASTM D1335.

Dimensional Tolerance: Within 1/32 inch of specified size dimensions, as determined by physical measurement.

Dimensional Stability: 0.2 percent or less according to ISO 2551 (Aachen Test).

Retain "Noise Reduction Coefficient (NRC)" subparagraph below if required.

Noise Reduction Coefficient (NRC): <**Insert NRC**> according to ASTM C423.

Colorfastness to Crocking: Not less than 4, wet and dry, according to AATCC 165.

First option in "Colorfastness to Light" subparagraph below is minimum recommended by the Carpet and Rug Institute for carpet for general use; second option is for carpet installed in schools.

Colorfastness to Light: Not less than 4 after 80 AFU (AATCC fading units) according to AATCC 16, Option E.

First option in "Electrostatic Propensity" subparagraph below is typical for commercial carpet tile for general use; second option may be available for greater static control.

Electrostatic Propensity: Less than 3.5 kV according to AATCC 134.

Stain Resistance: AATCC 175. Rating of 8 or better.

Dimensional Stability: Aachen Method DIN 54318, 0.2 percent or less.

Insert other performance characteristics to suit Project, such as smoke density, or additional colorfastness characteristics.

* + - 1. INSTALLATION ACCESSORIES

Revise "Trowelable Leveling and Patching Compounds" paragraph below to suit Project.

* + - * 1. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.

Revise "Adhesives" paragraph below to suit product(s) and Project.

* + - * 1. Adhesives: Water-resistant, mildew-resistant, nonstaining, pressure-sensitive type to suit products and subfloor conditions indicated, that comply with flammability requirements for installed carpet tile, and are recommended by carpet tile manufacturer for releasable installation.

Retain "Metal Edge/Transition Strips" paragraph below unless resilient edge strips for carpet tile are specified in Section 096513 "Resilient Base and Accessories." If retaining, revise to suit Project and indicate width requirements on Drawings.

* + - * 1. Metal Edge/Transition Strips: Extruded aluminum with [**mill**] <**Insert finish**> finish of profile and width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.
1. EXECUTION
	* + 1. EXAMINATION
				1. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet tile performance.
				2. Examine carpet tile for type, color, pattern, and potential defects.
				3. Concrete Slabs: Verify that finishes comply with requirements specified in Section 033000 "Cast-in-Place Concrete" and that surfaces are free of cracks, ridges, depressions, scale, and foreign deposits.

Retain "Moisture Testing" subparagraph below for adhesively applied products. Excessive moisture vapor can cause failure of systems installed on slabs-on-grade. ASTM F1869 (anhydrous calcium chloride test) and ASTM F2170 (relative humidity test) both recommend one test per 1000 sq. ft. but no fewer than three tests per test area.

Moisture Testing: Perform tests so that each test area does not exceed 1000 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.

Retain "Anhydrous Calcium Chloride Test" or "Relative Humidity Test" subparagraph below, or both.

Option in "Anhydrous Calcium Chloride Test" subparagraph below is based on the Carpet and Rug Institute's CRI 104 and on floor-covering industry practices for adhered floor coverings to avoid adhesive failures.

Anhydrous Calcium Chloride Test: ASTM F1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.

The Carpet and Rug Institute's CRI 104 recommends a maximum 75 percent relative humidity, which is the maximum relative humidity generally recommended for adhered systems.

Relative Humidity Test: Using in situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.

Perform additional moisture tests recommended in writing by adhesive and carpet tile manufacturers. Proceed with installation only after substrates pass testing.

* + - * 1. Wood Subfloors: Verify the following:

Underlayment over subfloor complies with requirements specified in Section 061600 "Sheathing."

Underlayment surface is free of irregularities and substances that may interfere with adhesive bond or show through surface.

* + - * 1. Metal Subfloors: Verify the following:

Underlayment surface is free of irregularities and substances that may interfere with adhesive bond or show through surface.

* + - * 1. Painted Subfloors: Perform bond test recommended in writing by adhesive manufacturer.

Access Flooring Systems: Verify the following:

Access floor complies with installation requirements specified in Section 096900 "Access Flooring."

Access floor substrate is compatible with carpet tile and adhesive if any.

Underlayment surface is flat, smooth, evenly planed, tightly jointed, and free of irregularities, gaps greater than 1/8 inch, protrusions more than 1/32 inch, and substances that may interfere with adhesive bond or show through surface.

* + - * 1. Proceed with installation only after unsatisfactory conditions have been corrected.
			1. PREPARATION
				1. General: Comply with the Carpet and Rug Institute's CRI 104 and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile.

Retain or revise first paragraph below to suit product and Project; dimensions are recommended by the Carpet and Rug Institute.

* + - * 1. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch unless more stringent requirements are required by manufacturer's written instructions.
				2. Concrete Substrates: Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by adhesive and carpet tile manufacturers.
				3. Metal Substrates: Clean grease, oil, soil and rust, and prime if recommended in writing by adhesive manufacturer. Rough sand painted metal surfaces and remove loose paint. Sand aluminum surfaces, to remove metal oxides, immediately before applying adhesive.
				4. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

Retain the “Existing Wood Subfloors” Article below for existing wood subfloors.

* + - * 1. Existing Wood Subfloors:

Nail loose and cracked boards.

Patch cracks and depressions with floor filler.

Remove wax using liquid stripper or sander.

Areas to Receive Direct Glue-Down Sheet Carpeting: Seal substrate with wood floor primer.

Retain “Existing Resilient Sheet Flooring” Article below for existing resilient sheet flooring substrates.

* + - * 1. Existing Resilient Sheet Flooring: Remove existing resilient sheet flooring.

Retain “Existing Resilient Tile Flooring” Article below for existing resilient tile flooring substrates.

* + - * 1. Existing Resilient Tile Flooring:

Remove wax using liquid stripper or mechanical removal.

Remove loose tiles and replace or patch as necessary.

* + - 1. INSTALLATION
				1. General: Comply with the Carpet and Rug Institute's CRI 104, Section 10, "Carpet Tile," and with carpet tile manufacturer's written installation instructions.

Revise "Installation Method" paragraph below if using mill-applied, peel-and-stick adhesives or standard adhesives. Full-spread, glue-down installation is appropriate for wheel traffic. Partial glue-down installation is appropriate for carpet tiles of moderate dimensional stability, weight, and mass. Free-lay installation is appropriate for dimensionally stable carpet tiles with heavy backings. Revise second option below for spot-glued installation if recommended in writing by manufacturer.

* + - * 1. Installation Method: [**As recommended in writing by carpet tile manufacturer**] [**Glue down; install every tile with full-spread, releasable, pressure-sensitive adhesive**] [**Partial glue down; install periodic tiles with releasable, pressure-sensitive adhesive**] [**Free lay; install carpet tiles without adhesive**].
				2. Maintain dye-lot integrity. Do not mix dye lots in same area.
				3. Maintain pile-direction patterns [**indicated on Drawings**] [**recommended in writing by carpet tile manufacturer**].
				4. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.
				5. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
				6. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on carpet tile as marked on subfloor. Use nonpermanent, nonstaining marking device.
				7. Install pattern parallel to walls and borders.

Retain "Access Flooring" paragraph below if applicable. Adhesive in seams may impede panel removal and replacement.

* + - * 1. Access Flooring: Stagger joints of carpet tiles so carpet tile grid is offset from access flooring panel grid. Do not fill seams of access flooring panels with carpet adhesive; keep seams free of adhesive.
			1. CLEANING AND PROTECTION
				1. Perform the following operations immediately after installing carpet tile:

Remove excess adhesive and other surface blemishes using cleaner recommended by carpet tile manufacturer.

Remove yarns that protrude from carpet tile surface.

Vacuum carpet tile using commercial machine with face-beater element.

* + - * 1. Protect installed carpet tile to comply with the Carpet and Rug Institute's CRI 104, Section 13.7.
				2. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

END OF SECTION 096813