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SECTION 096813 - TILE CARPETING

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, tufted carpet tile.
          2. Related Requirements:

Section 024119 "Selective Demolition" for removing existing floor coverings.

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

Section 096816 "Sheet Carpeting."

* + - 1. PREINSTALLATION MEETINGS
         1. Pre installation Conference: Conduct conference at [**Project site**] <**Insert location**>.

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

Review delivery, storage, and handling procedures.

Review ambient conditions and ventilation procedures.

Review subfloor preparation procedures.

Follow manufacturer's modular carpet installation guidelines and/or Carpet & Rug Institute Installation Standard 2011 where applicable.

* + - 1. ACTION SUBMITTALS
         1. Product Data: For each type of product.

Include manufacturer's written specifications and lab documents for any physical testing.

Include installation recommendations for each type of substrate as specified in arpet manufacturer's installation guidelines and/or Carpet & Rug Institute Installation Standard 2011, where applicable.

Include carpet maintenance recommendations as outlined by the carpet manufacturer.

Carpet Manufacturer shall also submit a plan for recycling the specified carpet at the end of the useful life of the carpet.

* + - * 1. LEED Submittals:

Product Data for Credit EQ 4.3 and 4.1:

For carpet tile, documentation indicating compliance with testing and product requirements of CRI's "Green Label Plus" program and SCAQMD.

For installation adhesive, documentation including printed statement of VOC content.

Product Data for Credit MR 4:

For carpet tile, documentation indicating pre-consumer, post-consumer, and total recycled content.

* + - * 1. Shop Drawings: Show the following:

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.

Installation method (monolithic, quarter turn, ashlar, brick random, interactive patterning).

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.

* + - * 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- (300-mm-) long Samples.

* + - * 1. Product Schedule: For carpet tile. Use same designations indicated on Drawings.
        2. Sustainability: Provide the Statement of the Achievement Level the carpet has attained for Platinum points, based on specific Sustainable Attribute Performance for all product stages according to ANSI/NSF 140.
      1. INFORMATIONAL SUBMITTALS
         1. Qualification Data: For Installer.
         2. Product Test Reports: For carpet tile, for tests performed by a qualified independent testing agency.
      2. 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 10.67 sq. yd. (8.9 sq. m).

* + - 1. QUALITY ASSURANCE
         1. Manufacturer Qualifications: Carpet manufacturer shall have no less than 5 years experience of producing recyclable carpet tile and shall have published product literature clearly indicating compliance with requirements of this section.

Certification: ISO 9001 and ISO 14001 certified manufacturer.

Commitment to Sustainability: Carpet manufacturer must practice environmental responsibility through programs of recycling, reuse, conservation, and source reduction. Manufacturer should have a public demonstration of such efforts through reporting documents such as an annual sustainability report that contains third party verification and confirmation.

Carpet manufacturer must take back modular carpet tile to be recycled free of charge for quantities of 500 sq. yards (418 sq. m) or more within continental U.S. Program variations exits for other some geographical locations.

* + - * 1. Installer Qualifications: An installer with a minimum of 5 years commercial carpet installation experience, and who is certified by the International Certified Floorcovering Installers Association at the [**Commercial II**] [**Master II**] <**Insert description**> certification level.
        2. Fire-Test-Response Ratings: Where indicated, provide carpet tile identical to those of assemblies tested for fire response according to NFPA 253 by a qualified testing agency.
        3. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

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 carpet manufacturer's installation recommendations and the Carpet & Rug Institute Installation Standard 2011 where applicable.
      2. FIELD CONDITIONS
         1. Comply with carpet manufacturer's installation recommendations and the Carpet & Rug Institute Installation Standard 2011 for temperature, humidity, and ventilation limitations.
         2. Environmental Limitations: Do not deliver or install carpet tiles until spaces are enclosed and weather tight, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at occupancy levels during the remainder of the construction period.
         3. HVAC system should be operational and running prior to carpet installation and remain running after carpet installation.
         4. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to allow bond between adhesive and concrete. Concrete slabs should have moisture and pH readings that are within the specified tolerance of the adhesive to be used.
         5. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles before installing these items.
      3. WARRANTY
         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, more than 10 percent face fiber loss, edge raveling, dimensional instability, excess static discharge, loss of tuft bind strength, delamination, and where face fiber is 100 percent solution dyed, inability to remove acid based stains, lack of colorfastness to atmospheric contaminants.

Carpet must be manufactured and warranted by same manufacturer.

Warranty Period: Lifetime Commercial Limited Warranty.

1. PRODUCTS
   * + 1. CARPET TILE
          1. Basis-of-Design Product: Subject to compliance with requirements, provide Patcraft; Refract Light I0288 or comparable product by one of the following:

<**Insert manufacturers' names**>.

**<Insert manufacturers' names>.**

* + - * 1. Source Limitations:

Single Source Responsibility: Provide products that have components manufactured by a single source. Fiber and backing, as well as final carpet product, should be manufactured and warranted by same company.

Commitment to sustainability: Carpet manufacturer must practice environmental responsibility through programs of source reduction, recycling, reuse, and conservation.

* + - * 1. Color: [**As selected by Architect from manufacturer's full range**] <**Insert color**>.
        2. Pile Characteristics: Multi Level Pattern Loop
        3. Fiber Content Nylon - 100 percent trilobal, minimum 24 denier per filament DPF nylon 6. Fiber must contain a minimum of 45 percent recycled content 20 percent pre consumer recycled content and 25 percent post consumer recycled content.
        4. Fiber Name: Eco Solution Q Nylon
        5. Dye Method: Solution Dye/Yarn Dye
        6. Gauge: 1/12
        7. Stitches: 10.5
        8. Pile Thickness: 0.109
        9. Surface Pile Weight: 22 oz
        10. Density: 7266
        11. Primary Backing: Nonwoven synthetic.
        12. Secondary Backing: High performance precoat laminated to a proprietary thermoplastic polyolefin compound with a fiberglass reinforced layer. Backing must contain a minimum of 40 percent recycled content and be SCS NSF 140 Platinum certified. Backing should be recyclable, PVC free, free of 4-PCH, brominated flame retardants, and phthalate plasticizers.

Total Backing Weight: Not to exceed 80 oz./sq yd (339.1 g/sq m).

* + - * 1. Backing System: EcoWorx.
        2. Applied Soil-Resistance Treatment: SSP Shaw Soil Protection.
        3. Total Weight: 94oz for finished carpet tile.
        4. Size: 24 by 24 inches
        5. Texture Appearance Retention Rating (T.A.R.R.):

Texture Appearance Retention Rating (T.A.R.R.): Severe

* + - * 1. Recycling Requirements:

Total Carpet Product Recycled Content:

Pre-Consumer Recycled Content: 32.5 percent.

Post-Consumer Recycled Content: 11.9 percent.

Total Recycled Content: 44.4 percent.

Recycled Content: Preference will be given to manufacturer's recycling 100 percent of reclaimed carpet tile back into carpet tile with recycled content.

Carpet Disassembly and Recycling: Carpet capable of disassembly and recycling, with nylon being recycled into nylon and backing being recycled into backing.

Carpet product must meet guidelines of Presidential Executive Order 13101, and must meet the spirit of section 6002 of the Resource and Recovery Act (RCRA).

* + - * 1. Performance Characteristics: As follows:

Critical Radiant Flux Classification, Flooring Radiant Panel ASTM E 648: Not less than 0.45 W/sq. cm.

Smoke Density: Less than 450 per ASTM E662.

Methanamine Pill Test CPSC FF1-70: Must pass pill test.

Tuft Bind: Not less than 8 lbf (36 N) according to ASTM D 1335.

Delamination: Not less than **3.5 lbf/in.** according to ASTM D 3936.

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

Dimensional Stability: 0.119 percent or less according to ISO 2551 (Aachen Test).

Colorfastness to Crocking: Not less than 4, wet and dry, according to AATCC 129 ad AATCC 164.

Colorfastness to Light: Not less than 4 after 60 AFU (AATCC fading units) according to AATCC 16, Option E.

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

Emissions: Provide carpet tile that complies with testing and product requirements of Carpet & Rug Institute's "Green Label Plus" program.

* + - 1. INSTALLATION ACCESSORIES
         1. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.
         2. Trowelable Adhesives: Water-resistant, mildew-resistant, nonstaining, premium grade, pressure-sensitive type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for releasable installation such as Shaw 5000 or Shaw 5100 or available equivalent where slab moisture does not exceed 85 percent per ASTM F 2170 or 5 lbs per ASTM F 1869. Where slab moisture does not exceed 85 percent and antimicrobial protection is needed to pass AATCC 174, use Shaw 5036. Where moisture exceeds 85 percent or 5 lbs but does not exceed 90 percent or 10 lbs, use Shaw 5900 or available equivalent.

Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

Adhesives shall comply with the testing and product requirements of the Carpet and Rug Institute Green Label Plus Program.

* + - * 1. Non-Trowelable Adhesive: Water-resistant, mildew-resistant, non-staining, pressure-sensitive type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for releasable installation such as LokDots where slab moisture does not exceed 95 percent per ASTM F 2170 or 10 lbs per ASTM F 1869. Each carpet tile must be adhered to the subfloor.
        2. 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. Examine carpet tile for type, color, pattern, and potential defects prior to installation. See manufacturer's requirements for substrate conditions and ambient conditions.
          2. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:

Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing moisture and pH tests as recommended by carpet tile manufacturer.

Subfloor finishes comply with requirements specified in Section 033000 "Cast-in-Place Concrete" for slabs receiving carpet tile.

Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.

Lightweight concrete and gypcrete subfloors may require a primer such as Shaw 9050 or equivalent to reduce surface porosity.

Where previous surface treatments are unknown, or where other concerns exist as to the ability of the adhesive to bond to the substrate, a 24 hour bond test is recommended.

* + - * 1. For wood subfloors, verify the following:

Underlayment over subfloor complies with requirements specified in Section 061000 "Rough Carpentry."

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

Unfinished wood should be primed using a liquid latex primer, such as Shaw 9050 or equivalent.

* + - * 1. For metal subfloors, verify the following:

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

* + - * 1. For painted subfloors, verify the following:

Perform bond test recommended in writing by adhesive manufacturer.

* + - * 1. For raised access flooring systems, verify the following:

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 Carpet & Rug Institute Installation Standard 2011, "Site Conditions; Floor Preparation," and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile installation.
         2. Use trowelable leveling and patching compounds that contain a cementitious base with a latex additive, 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.
         3. 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 carpet tile manufacturer.
         4. Clean metal substrates of grease, oil, soil and rust, and prime if directed by adhesive manufacturer. Rough sand painted metal surfaces and remove loose paint. Sand aluminum surfaces, to remove metal oxides, immediately before applying adhesive.
         5. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.
      2. INSTALLATION
         1. General: Comply with Carpet & Rug Institute installation Standard 2011, "Carpet Modules," and with carpet tile manufacturer's written installation instructions.
         2. Installation Method: Glue down; install every tile with full-spread, releasable, pressure-sensitive adhesive, such as LokDots**.** Any non-spreadable adhesive system must adhere the carpet to the substrate.
         3. Maintain dye lot integrity. Do not mix dye lots in same area unless the specific carpet style in manufactured as a merg-able dylot product.
         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 finish flooring as marked on subfloor. Use nonpermanent, nonstaining marking device.
         7. Install pattern parallel to walls and borders.
         8. 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.
         9. Roll the entire installation with a 75 lb roller once installation is completed.
      3. 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 Carpet & Rug Institute Installation Standard 2011, "Protecting Indoor Installations."
        2. When construction or move-in activities will continue where new carpet is installed, provide non-staining building material paper to protect carpet. Do not use plastic sheeting as it can trap moisture, and self-sticking plastic sheeting can transfer adhesive residue to carpet that will attract soil.
        3. When heavy objects are moved over carpet within 24 hours of installation, use plywood over carpet to prevent buckling and wrinkling.
        4. 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