

## SECTION 09680

### CARPET

#### PART 1 - GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

##### 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Tufted carpet.
  - 2. Modular, tufted carpet tile.
  - 3. Installation of modular, tufted carpet tile in elevator.
- B. Related Sections include the following:
  - 1. Division 9 Section "Resilient Flooring" for resilient wall base and accessories installed with carpet.

##### 1.03 SUBMITTALS

- A. General: Submit in accordance with Section 01300.
- B. Product Data: For each type of product indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance. Include installation recommendations for each type of substrate required.
- C. Shop Drawings: Show the following:
  - 1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet.
  - 2. Existing flooring materials to be removed.
  - 3. Existing flooring materials to remain.
  - 4. Carpet type, color, and dye lot.
  - 5. Carpet tile type, color, and dye lot.
  - 6. Locations where dye lot changes occur.
  - 7. Seam locations, types, and methods for carpet.
  - 8. Type of installation for each type of substrate.
  - 9. Type of installation.
  - 10. Pattern type, repeat size, location, direction, and starting point.
  - 11. Pile direction.
  - 12. Type, color, and location of insets and borders.
  - 13. Type, color, and location of edge, transition, and other accessory strips.
  - 14. Transition details to other flooring materials.
- D. 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.
  - 1. Carpet: **12-inch**- square Sample.
  - 2. Carpet Tile: Full-size Sample.
- E. Test Results: Provide results of specified moisture tests, alkalinity and adhesion tests, and manufacturer's written moisture requirements for each type of carpet and carpet tile specified.

- F. Adhesive Certificates: Signed by manufacturers that proposed adhesives comply with specifications and local requirements for comply with local regulations controlling use of volatile organic compounds (VOC's).
  - 1. Carpet and carpet tile manufacturers shall certify that proposed adhesives are acceptable for use with their carpet or carpet tile.
- G. Maintenance Data: For carpet and carpet tile to include in maintenance manuals specified in Division 1. Include the following:
  - 1. Methods for maintaining carpet/carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
  - 2. Precautions for cleaning materials and methods that could be detrimental to carpet/carpet tile.
- H. Warranty: Special warranty specified in this Section.

#### 1.04 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: Provide products with the critical radiant flux classification indicated in Part 2, as determined by testing identical products per ASTM E 648 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Source Limitations: Obtain each type of carpet and carpet tile through a single source from a single manufacturer.
- C. Preinstallation Conference: Conduct conference at project site to comply with requirements of Division 1 Section "Project Meetings." Review specified moisture test results, alkalinity and adhesion tests, ambient conditions, ventilation procedures, installation process, adhesive application, seam sealing procedures and seam layouts.

#### 1.05 LAYOUT

- A. Carpet Seam Layout: Layout differing from approved Shop Drawings that is found unacceptable by Architect shall be sufficient reason for rejection.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. General: Comply with CRI 104, Section 5, "Storage and Handling."
- B. Deliver materials to Project site in original factory wrappings and containers, labeled with identification of manufacturer, brand name, and lot number.
- C. Store materials on-site in original undamaged packages, inside well-ventilated area protected from weather, moisture, soilage, extreme temperatures, and humidity. Lay flat, with continuous blocking off floor.

#### 1.07 PROJECT CONDITIONS

- A. General: Comply with CRI 104, Section 7.2, "Site Conditions; Temperature and Humidity" and Section 7.12, "Ventilation."
- B. Environmental Limitations: Do not install carpet and carpet tile until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at and will be continuously maintained at levels indicated for Project when occupied for its intended use.
- C. Do not install carpet or carpet tile over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet manufacturer.
- D. Where demountable partitions or other items are indicated for installation on top of carpet/carpet tile, install carpet/carpet tile before installing these items.

## 1.08 WARRANTY

- A. General Warranty: Special warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Special Carpet Warranty: Written warranty, signed by carpet manufacturer agreeing to replace carpet that does not comply with requirements or that fails within specified warranty period. Warranty does not include deterioration or failure of carpet due to failure of substrate, vandalism, or abuse. Warranty shall not require use of chair pads. Failures include, but are not limited to, edge raveling, snags, zippering, backing resiliency loss, and delamination.
1. Warranty Period: 15 years from date of Substantial Completion.
- C. Special Carpet Tile Warranty: Written warranty, signed by carpet tile manufacturer agreeing to replace carpet tile that does not comply with requirements or that fails within specified warranty period. Warranty does not include deterioration or failure of carpet tile due to failure of substrate, vandalism, or abuse. Warranty shall not require use of chair pads. Failures include, but are not limited to, edge raveling, snags, zippering, dimensional stability, excess static discharge, backing resiliency loss, and delamination.
1. Warranty Period: 15 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.01 CARPET

- A. C-3: Shall be Crossley Carpet, "Union Square," Style No. 30335, in color indicated in Materials Legend; no substitutions. No seconds or imperfections shall be acceptable. Carpet shall meet the following minimum construction:
1. Construction: Woven cut and loop pile.
  2. Pile Fiber and Type: Antron Legacy nylon.
  3. Dye Method: Skein dyed.
  4. Stitches per Inch: 8.8 per inch.
  5. Pile Height: 0.256 inch
  6. Face Weight: 44 oz./sq. yd.
  7. Backing: CrossLoc Backing.
  8. Width: 12 feet.

### 2.02 CARPET TILE

- A. C-1: Shall be Collins & Aikman, "Intersection," Style No. 01911, in color indicated in Materials Legend; no substitutions. No seconds or imperfections shall be acceptable. Carpet shall meet the following minimum construction:
1. Construction: Textured patterned multilevel loop.
  2. Pile Fiber and Type: Antron Legacy nylon.
  3. Dye Method: Yarn dyed.
  4. Gauge: 15/64.
  5. Stitches per Inch: 9.8.
  6. Face Weight: 20 oz./sq. yd
  7. Pile Height: .187 inch.
  8. Backing: Powerbond ER3 RS Module Tile.
  9. Tile Size: 18 by 18 inches.
- B. C-2: Shall be Collins & Aikman, "Lenox," Style No. 02016, in color indicated in Materials Legend; no substitutions. No seconds or imperfections shall be acceptable. Carpet shall meet the following minimum construction:
1. Construction: Textured loop pile.
  2. Pile Fiber and Type: Antron Legacy nylon.
  3. Dye Method: Solution dyed/yarn dyed.

- 4. Gauge: 1/13.
- 5. Stitches per Inch: 11.0.
- 6. Total Weight: 131.14 oz./sq. yd. ± 5%.
- 7. Pile Height: 0.135 inch.
- 8. Backing: Powerbond ER3 RS Module Tile.
- 9. Width: 18 by 18 inches.

C. C-4: Shall be Collins & Aikman, "Haiku," Style No. 02127, in color indicated in Materials Legend; no substitutions. No seconds or imperfections shall be acceptable. Carpet shall meet the following minimum construction:

- 1. Construction: Loop pile, textured pattern.
- 2. Pile Fiber and Type: Dynex (100% nylon).
- 3. Dye Method: Yarn dyed.
- 4. Gauge: 5/64.
- 5. Stitches per Inch: 10.0.
- 6. Total Weight: 131.1 oz. per sq. yd. ± 5%.
- 7. Pile Thickness: 0.187 inch.
- 8. Backing: Powerbond ER3 RS Module Tile.
- 9. Width: 18 by 18 inches.

D. C-5 thru 8: Shall be Collins & Aikman, "Plexus Accents II," Style No. 05112, in colors indicated in Materials Legend; no substitutions. No seconds or imperfections shall be acceptable. Carpet shall meet the following minimum construction:

- 1. Construction: Tufted tip sheared and textured loop.
- 2. Pile Fiber and Type: Antron Legacy nylon.
- 3. Dye Method: Piece dyed.
- 4. Gauge: 1/10.
- 5. Stitches per Inch: 11.0.
- 6. Total Weight: 145.1 oz. per sq. yd. ± 5%.
- 7. Pile Thickness: 0.218 inch.
- 8. Backing: Powerbond RS ER3 Module Tile.
- 9. Width: 18 by 18 inches.

## 2.03 INSTALLATION ACCESSORIES

- A. Concrete Slab Primer: Nonstaining type provided by or recommended by carpet and carpet tile manufacturers.
- B. Trowelable Leveling and Patching Compounds: Portland-cement-based formulation provided by or recommended by the carpet and carpet tile manufacturers.
- C. Carpet Adhesives: Premium grade water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet and that is recommended by the carpet manufacturers, permitting a moisture emission rate up to **5 lb/1000 sq. ft./24 hours**.
- D. Carpet Tile Adhesive: Premium grade water-resistant, mildew-resistant, nonstaining, 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.
- E. Seaming Cement for Carpet: Adhesive product recommended by carpet manufacturer for sealing seams and butting cut edges at backing to form secure seams and to prevent pile loss at seams.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. 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 and carpet tile performance. Verify that substrates and conditions are satisfactory for carpet and carpet tile installation and comply with requirements specified.
- B. Examine carpet and carpet tile for type, color, pattern, and potential defects.
- C. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
  - 1. 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 bond and moisture tests recommended by carpet and carpet tile manufacturers, and with the following specified requirements:
    - a. An independent testing agency shall perform alkalinity and adhesion tests, calcium chloride moisture tests, and relative humidity tests.
      - 1) Perform tests on slabs to receive glue down carpet installation at rate of 1 test/1000 sq. ft. of floor area for slabs-on-grade and 1 test per 2000 sq. ft. of floor area for elevated slabs.
      - 2) Maintain a minimum temperature of 70 deg F (21 deg C) in spaces to be tested for at least 72 hours prior to and during the tests.
    - b. Alkalinity and Adhesion Testing: Shall result in pH range recommended by carpet and carpet tile manufacturers when subfloor is wetted with potable water and pHydron paper is applied. Perform pH tests on concrete floors regardless of age or grade level.
    - c. Calcium Chloride Moisture Tests: Tests shall be conducted in accordance with ASTM F 1869-02, except that area of CaCl<sub>2</sub> dish shall not be deducted.
    - d. Relative Humidity Test: Conduct in accordance with ASTM F 2170.
  - 2. Subfloor finishes comply with requirements specified in Division 3 Section "Cast-in-Place Concrete" for slabs receiving carpet.
  - 3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits of any kind.
  - 4. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours, relative humidity tests are acceptable, and meet manufacturers' requirements for alkalinity and adhesion.
- D. If conditions detrimental to work are encountered, prepare written report, signed by Installer, documenting unsatisfactory conditions and send to the Architect.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. General: Comply with CRI 104, Section 7.3, "Site Conditions; Floor Preparation," and carpet and carpet tile manufacturers' written installation instructions for preparing substrates indicated to receive carpet and carpet tile installation.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates. Fill or level cracks, holes and depressions 1/8 inch (3 mm) wide or wider, and protrusions more than 1/32 inch (0.8 mm), unless more stringent requirements are required by manufacturer's written instructions.
- C. Level subfloor within 1/4 inch in 10 feet (6 mm in 3 m), noncumulative, in all directions using product recommended by manufacturer. Sand or grind protrusions, bumps, and ridges.
  - 1. Use leveling and patching compounds to fill cracks, holes, and depressions in subfloor as recommended by carpet manufacturer.

- D. 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 and carpet tile manufacturers.
- E. Broom and vacuum clean substrates to be covered immediately before installing carpet and carpet tile. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Proceed with installation only after unsatisfactory conditions have been corrected.
- F. Concrete Subfloor Preparation: Apply concrete slab primer, according to manufacturer's directions, where recommended by carpet and carpet tile manufacturers.

### 3.03 CARPET INSTALLATION

- A. Direct-Glue-Down Installation: Comply with CRI 104, Section 9, "Direct Glue-Down Installation."
- B. Comply with carpet manufacturer's written recommendations for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams under the door in closed position.
- C. Do not bridge building expansion joints with carpet.
- D. Where demountable partitions or other items are indicated for installation on top of finished carpet, install carpet before installation of these items.
- E. Cut and fit carpet 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 manufacturer.
- F. Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- G. 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.
- H. Install pattern parallel to walls and to comply with CRI 104, Section 15, "Patterned Carpet Installations" and with carpet manufacturer's written recommendations.

### 3.04 CARPET TILE INSTALLATION

- A. General: Comply with CRI 104, Section 14, "Carpet Modules," and with carpet tile manufacturer's written installation instructions.
- B. Installation Method: Glue down; install every tile with full-spread, releasable, pressure-sensitive adhesive .
- C. Maintain dye lot integrity. Do not mix dye lots in same area.
- D. 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.
- E. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- F. 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.
- G. Install pattern parallel to walls and borders.

3.05 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet and carpet tile:
  - 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet and carpet tile manufacturers.
  - 2. Remove yarns that protrude from carpet surface.
  - 3. Vacuum carpet and carpet tile using commercial machine with face-beater element.
  
- B. Protect installed carpet and carpet tile to comply with CRI 104, Section 16, "Protection of Indoor Installations."
  
- C. Protect carpet and 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 and carpet tile manufacturers to ensure carpet and carpet tile is without damage or deterioration at the time of Substantial Completion.

END OF SECTION