

## SECTION 09 68 13 – CARPET

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This section covers the specification standards for modular and broadloom carpet. It includes construction, submittals, installation and warranty information regarding both modular and broadloom carpets.
- B. Related Requirements:
  - 1. Section **02 41 19 "Selective Structure Demolition"** for removing existing floor coverings.
  - 2. **[Section 09 65 13 "Resilient Base and Accessories"] [Section 09 65 19 "Resilient Tile Flooring"]** for resilient wall base and accessories installed with carpet tile.

#### 1.2 PRE-INSTALLATION MEETINGS

- A. Pre-installation Conference: During a regular scheduled construction meeting where a UH FPC Project Manager is in attendance, the following items shall be addressed prior to the installation of modular or broadloom carpet.
  - 1. Review methods and procedures related to modular and broadloom carpet installation including, but not limited to, the following:
    - a. Review delivery, storage, and handling procedures.
    - b. Review ambient conditions and ventilation procedures.
    - c. Review subfloor preparation procedures.
    - d. Review of submitted installation drawings indicating all carpets on project, patterns and/or layouts, seaming diagrams and flooring transitions.

#### 1.3 ACTION SUBMITTALS

- A. Product Data
  - 1. Include Manufacturer's written specification and warranty information in its entirety regarding the specified carpet to be installed on the project. The specification must clearly state the Manufacturer's name, style/collection, pattern and color of the product. It must also include all physical attributes e.g. durability, fade resistance) of the product within the specification.
  - 2. Include installation recommendations for each type of substrate related to the project. All installations shall adhere to the Manufacturer's recommendations.

B. LEED Submittals (Projects authorized for LEED certification only)

1. Product Data for Credit EQ 4.3:

- a. For modular and broadloom carpet, documentation indicating compliance with testing and product requirements of CRI's "Green Label Plus" program.
- b. For installation adhesive, documentation including printed statement of VOC content.
- c. Sustainability: Provide the Statement of the Achievement Level the carpet has attained for [Bronze, 28 to 36] [Silver, 37 to 51] [Gold, 52 to 70] points, based on specific Sustainable Attribute Performance for all product stages according to ANSI/NSF 140.
- d. Laboratory Test Reports for Credit EQ 4: For carpet and installation adhesives, documentation indicating that products 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."

C. Shop Drawings: (must include the following details)

1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet.
2. Type of subfloor.
3. Type of installation.
4. Carpet Specifications.
5. Pattern type, location, and direction.
6. Pile direction.
7. Type, color, and location of insets and borders.
8. Type, color, and location of edge, transition, and other accessory strips.
9. Transition details to other flooring materials.
10. Carpet type, color, and dye lot.
11. Locations where dye lot changes occur.
12. 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 Tile: (2) - Full-size Samples.
2. Broadloom: (2) - 12" square Samples.
3. Exposed edge, Transition strips and other accessory stripping: 12" long sample.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

- B. Product Test Reports: Tests performed by a qualified testing agency on the specified products.
- C. Sample Warranty

#### 1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Include the following:
  - 1. Manufacturer's methods for maintaining carpet, including cleaning and stain-removal products and procedures. Manufacturers recommended maintenance schedule.
- B. Warranty: Full warranty information from the manufacturer. Must include "Proof of Purchase" indicating original install dates.

#### 1.6 RECLAIMING PROCESS

- A. When a project involves removal of existing carpet the Architect must discuss the reclaiming options with the UH FPC Project Manager. Currently most Fiber and Carpet Manufacturer's offer a reclaiming program. The Architect should document the approved reclamation procedures in the Construction Documents. The Architect shall specify that the Contractor provide a certificate of completion for the reclamation.

#### 1.7 MAINTENANCE MATERIAL (ATTIC STOCK) SUPPLY

- A. Furnish extra materials, from the same product run and dye lot that match products installed. Carpet should be in its original packaging with protective covering for storage and identified with labels describing contents.
  - 1. Carpet Tile: Full-size units equal to 5 percent of amount installed for each type indicated, but not less than 10 sq. yd. Attic stock shall be provided for each carpet type.

#### 1.8 QUALITY ASSURANCE

- A. Installer Qualifications: The Architect shall request evidence of the qualifications of the installation company. Installers shall have experience in similar installation methods.
- B. Architect shall review all required shop drawings under section 1.3 Action Submittal.
- C. Fire-Test-Response Ratings: Where indicated, provide carpet identical to those of assemblies tested for fire response according to NFPA 253 by a qualified testing agency.
- D. Mockups: The Project Architect or the UH FPC Project Manager may require a mockup for certain carpet applications. Verify with both Architect and UH FPC Project Manager if mockup/mockups are necessary.

## 1.9 WARRANTY REQUIREMENTS

- A. Warranty for Modular Carpet: The Warranty information listed below are the minimums that the University of Houston will allow. Manufacturer agrees to repair or replace components of modular carpet installation that fail in materials or workmanship within specified warranty period.
1. Warranty Period: Minimum 15 years from date of UH occupancy. Chairpads shall not be required to maintain warranty.
  2. Back Delamination – lifetime.
  3. Edge Ravel – lifetime.
  4. Static Protection –lifetime.
  5. Wear – surface wear shall not be greater than 10% by weight for the first 15 years.
- B. Warranty for Broadloom Carpet: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.
1. Warranty Period: Minimum 10 years from date of UH occupancy. Chairpads shall not be required to maintain warranty.
  2. Back Delamination – lifetime.
  3. Edge Ravel – lifetime.
  4. Static Protection –lifetime.
  5. Wear – surface wear shall not be greater than 10% by weight for the first 15 years.

## PART 2 - PRODUCT SPECIFICATIONS

- 2.1 MODULAR CARPET –Required in all areas carpet unless noted otherwise below under Section 2.2 – Broadloom Carpet.
- A. Listed below are the minimum specifications for modular carpet.
1. Fiber: UH FPC prefers to use Type 6,6 Nylon fibers. The University understands that with technology many Manufacturers offer quality Type 6 options. The following Type 6 Nylon fibers may be considered: Mannington’s Quantum Nylon, Interface Aquafil, Lee’s Smartstrand, Tandus Dynex SD, Shaw Eco-Solution Q.Dynex SD® Nylon
  2. Dye Method: 100% Solution Dyed. Antron Legacy w/ Duracolor may be used.
  3. Pile Weight: 17 oz
  4. Pile Construction: Loop construction. Under certain circumstances the University will consider a mixed loop and tipsheer but must have approval from UH FPC.
  5. Gauge: 1/10”
  6. Construction: Tufted or Woven
  7. Density: High Traffic Areas & Dormitories 6,500; All other areas 5,500
  8. Backing: High performance backing with moisture barrier
  9. Size: 18”x18” or 24”x24”
  10. Recycled Content: 25%
  11. Applied Soil-Resistance Treatment: Each manufacturer has their own unique soil-resistance treatment system. Please review the Manufacturer’s method with the UH FPC Project Manager prior to the selection.

12. Flammability: Radiant Panel Test ASTM E-648, Class 1. Methenamine Pill Test, ASTM-D 285-96, shall pass FF1-70 or FF2-70. Smoke Density ASTM E-662 rating must be less than 450 in flaming mode. Verify that all Flammability guidelines meet the most strenuous regulations.

## 2.2 BROADLOOM CARPET – May be used in office suites and other areas approved by UH PFC.

- A. Listed below are the minimum specifications for broadloom carpet.
  1. Fiber: UH FPC prefers to use Type 6,6 Nylon fibers w/ anti-stain protection. Only the following Type 6 Nylon fibers may be considered: Mannington's Quantum Nylon, Aquafil, Lee's Smartstrand, Tandus Dynex SD, Shaw Eco-Solution Q.
  2. Dye Method: 100% Solution Dyed. Antron Legacy w/ Duracolor, may be used.
  3. Pile Weight: 24 oz
  4. Pile Construction: Loop Construction. Under certain circumstances the University will consider a mixed loop and tipsheer but must have approval from FPC.
  5. Gauge: 1/10"
  6. Construction: Tufted or Woven
  7. Density: High Traffic Areas & Dormitories 6,500; All other areas 5,500
  8. Recycled Content: 25%
  9. Backing: Unitary performance backing. Backing must be approved by UH FPC.
  10. Applied Soil-Resistance Treatment: Each manufacturer has their own unique soil-resistance treatment system. Please review the Manufacturer's method prior to the selection with the UH FPC Project Manager.
  11. Flammability: Radiant Panel Test ASTM E-648, Class 1. Methenamine Pill Test, ASTM-D 285-96, shall pass FF1-70 or FF2-70. Smoke Density ASTM E-662 rating must be less than 450 in flaming mode. Verify that all Flammability guidelines meet the most strenuous regulations.

## 2.3 WALK-OFF CARPET TILE

- A. Provide walk-off carpet at all main building entrances. Architect to specify exact locations and UH FPC Project Manager must approve.

## PART 3 - EXECUTION

### 3.1 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 tile performance. Examine carpet tile for type, color, pattern, and potential defects.
- B. 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 tile manufacturer.
  - 2. Subfloor finishes comply with requirements specified in Section 03 30 00 "Cast-in-Place Concrete" for slabs receiving carpet tile.
  - 3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.
- C. For wood subfloors, verify the following:
- 1. Underlayment over subfloor complies with requirements specified in Section 06 10 00 "Rough Carpentry."
  - 2. Underlayment surface is free of irregularities and substances that may interfere with adhesive bond or show through surface.
- D. For metal subfloors, verify the following:
- 1. Underlayment surface is free of irregularities and substances that may interfere with adhesive bond or show through surface.
- E. For painted subfloors, verify the following:
- 1. Perform bond test recommended in writing by adhesive manufacturer.
- F. For raised access flooring systems, verify the following:
- 1. Access floor substrate is compatible with carpet tile and adhesive if any.
  - 2. Underlayment surface is flat, smooth, evenly planed, tightly jointed, and free of irregularities, gaps greater than [1/8 inch (3 mm)] <Insert dimension>, protrusions more than 1/32 inch (0.8 mm), and substances that may interfere with adhesive bond or show through surface.
- G. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 FIELD CONDITIONS AND INSTALLATION

- A. General: Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and with Manufacturer's written installation instructions for preparing substrates indicated to receive carpet installation.
- B. 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.
- C. 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 Manufacturer.

- D. 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.
- E. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.
- F. Comply with Manufacturer's requirements for temperature, humidity, ventilation limitations and installation methods for the particular subfloor or substrate. If the manufacturer does not have a set standard, reference the Carpet and Rug Institute Carpet Installation Standard 2011, First Edition.
- G. Environmental Limitations: Do not deliver or install carpet 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.
- H. Do not install carpet 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.
- I. Where demountable partitions or other items are indicated for installation on top of carpet, install carpet before installing these items.
- J. All installation must meet the Manufacturer's guidelines. This is extremely important when concerning the warranty of the product.
- K. Installation Method: A "NO-Glue Grid" method of installation is preferred if feasible and available on modular carpet only. Other adhesives shall be of low odor/solvent content. Verify that the installation method and only use products recommended by the Manufacturer. Self-stick method type must be approved by UH FPC.
- L. Maintain dye lot consistency throughout the project.
- M. 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 Manufacturer.
- N. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- O. 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, non-staining marking device.
- P. Stagger joints of modular carpet 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.

### 3.3 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet:
  - 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.
  - 2. Remove yarns that protrude from carpet tile surface.
  - 3. Vacuum carpet according to manufacturer's guidelines.
- B. Protect installed carpet tile to comply with CRI 104, Section 16, "Protecting Indoor Installations."
- C. Protect carpet 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 Manufacturer.

END OF SECTION 09 68 13