

SECTION 09 6813 – CARPET

Maintain Section format, including the UH master spec designation and version date in **bold** in the center columns of the header and footer. Complete the header and footer with Project information.

Edit and finalize this Section, where prompted by Editor's notes, to suit Project specific requirements. Make selections for the Project at text identified in bold.

This Section uses the term "Architect." Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions.

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

Delete hidden text after this Section has been edited for the Project.

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. The Contractor's attention is specifically directed, but not limited, to the following documents for additional requirements:
 - 1. The current version of the *Uniform General Conditions for Construction Contracts*, State of Texas, available on the web site of the Texas Facilities Commission.
 - 2. The University of Houston's Supplemental General Conditions and Special Conditions for Construction.

1.2 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.

1.3 PRE-INSTALLATION MEETINGS

- A. Pre-installation Conference: During a regular scheduled construction meeting where a UH Project Manager is in attendance, address the following items 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.

1.4 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 shall clearly state the manufacturer's name, style/collection, pattern and color of the product. It shall 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.

[Retain paragraph and associated subparagraphs below if Project is to be LEED v4 certified.](#)

B. LEED Action Submittals

1. Building Product Disclosure and Optimization - Sourcing of Raw Materials:
 - a. Leadership Extraction Practices
 - 1) Extended Producer Responsibility (EPR): Submit documentation indicating that manufacturers have a take back or recycling program for the product purchased.
 - 2) Provide details of biobased material per Sustainable Agriculture Network's Sustainable Agriculture Standard or USDA certified biobased product. Indicate cost, location of extraction, manufacture, and purchase of material.
 - 3) Recycled Content: For products having recycled content, indicate percentages by weight of post-consumer and pre-consumer recycled content.
 - a) Include statement indicating costs for each product having recycled content.
 - b. Sourcing of Raw Materials: For products that are required to comply with requirements for regional materials, indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material.
 - 1) Include statement indicating distance to Project, cost for each regional material and the fraction by weight that is considered regional.

- 2) Product Certificates: For materials manufactured within 100 miles of Project, indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include distance to Project and cost for each raw material.
 2. Indoor Environmental Quality, Low Emitting Materials: Building products must be tested and compliant with the following low-emitting material criteria as applicable.
 - a. Paints, and Coatings: For wet applied on site products, include printed statement of VOC content, showing compliance with the applicable VOC limits of the California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3,-2011.
 - b. Adhesives and Sealants: For wet applied on site products, submit printed statement showing compliance with the applicable chemical content requirements of SCAQMD Rule 1168, effective July 1, 2005 and rule amendment date of January 7, 2005.
 - 1) Product Data: For installation adhesives, indicating VOC content.
 - c. Alternative tests for VOC above include ASTM D2369-10; ISO 11890 part 1; ASTM D6886-03; or ISO 11890-2.
 - d. Methylene Chloride and perchloroethylene may not be added to paints, coating, adhesive or sealants.
 - e. Carpeting: Submit documentation of VOC emissions testing compliance for carpet products in the form of Carpet and Rug Institute (CRI) Green Label Plus certification or CDPH Standard Method v1.1 compliance verification.
 - f. Provide General Emissions Evaluation certificates for adhesives, sealants showing compliance with California Department of Public Health v1.1 emissions testing or equivalent.
 3. Laboratory Test Reports: For installation adhesives indicating compliance with requirements for low-emitting materials.
- C. Shop Drawings, to 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-inch square Samples.
 3. Exposed edge, Transition strips and other accessory stripping: 12-inch long sample.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: Tests performed by a qualified testing agency on the specified products.

Retain paragraph and associated subparagraphs below if Project is to be LEED v4 certified.

- C. LEED Informational Submittals:
1. Building Product Disclosure and Optimization - Sourcing of Raw Materials:
 - a. Raw Material Sources and Extraction Reporting: Submit Raw materials supplier corporate Sustainability Reports (CSRs); documenting responsible extraction; including extraction locations, long term ecologically responsible land use, commitment to reducing environmental harms from extraction and manufacturing processes, and a commitment to meeting applicable standards or programs that address responsible sourcing criteria
 - 1) Submit manufacturers' self-declared reports
 - 2) Submit third party verified corporate sustainability reports (CSR) using one of the following frameworks"
 - a) Global Reporting Initiative (GRI) Sustainability Report
 - b) Organization for Economic Co-operation and Development (OECD)
 - c) Guidelines for Multinational Enterprises
 - d) UN Global Compact
 - e) ISO 26000
 - f) USGBC approved program.
 2. Building Product Disclosure and Optimization - Material Ingredients
 - a. Material Ingredient Optimization: Submit manufacturer's Environmental Product Declaration (EPD) or at least one of the following:
 - 1) GreenScreen V1.2 Benchmark: Third party report prepared by a licensed GreenScreen List Translator, or a full GreenScreen Assessment.
 - 2) Cradle to Cradle: Manufacturer's published literature for the product bearing the Cradle to Cradle logo.
 - 3) International Alternative Compliance Path - REACH Optimization

- 4) Declare: Manufacturer's completed Product Declaration Form
- 5) Other programs approved by USGBC
- b. Product Manufacturer Supply Chain Optimization: Submit documentation from manufacturers for products that go beyond material ingredient optimization as follows:
 - 1) Are sourced from product manufacturers who engage in validated and robust safety, health, hazard, and risk programs which at a minimum document at least 99 percent (by weight) of the ingredients used to make the building product or building material, and
 - 2) Are sourced from product manufacturers with independent third party verification of their supply chain that at a minimum verifies:
 - a) Processes are in place to communicate and transparently prioritize chemical ingredients along the supply chain according to available hazard, exposure and use information to identify those that require more detailed evaluation
 - b) Processes are in place to identify, document, and communicate information on health, safety and environmental characteristics of chemical ingredients
 - c) Processes are in place to implement measures to manage the health, safety and environmental hazard and risk of chemical ingredients
 - d) Processes are in place to optimize health, safety and environmental impacts when designing and improving chemical ingredients
 - e) Processes are in place to communicate, receive and evaluate chemical ingredient safety and stewardship information along the supply chain
 - f) Safety and stewardship information about the chemical ingredients is publicly available from all points along the supply chain.

D. Sample Warranty

1.6 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.

1.7 RECLAIMING PROCESS

- A. Comply with requirements of Section 01 7419 "Construction Waste Management and Disposal."

1.8 ATTIC STOCK SUPPLY

- A. Furnish extra materials from the same product run and dye lot that match products installed. Carpet shall 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.

1.9 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is certified by the Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements.
- B. 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] [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.
- C. Mockups: Architect or UH Project Manager may require a mockup for certain carpet applications. Verify with both Architect and UH Project Manager if mockups are required.
- D. Electrostatic Propensity: Less than **[3.5] [2] <Insert number>** kV according to AATCC 134.

1.10 WARRANTY

- A. Warranty for Modular Carpet: The warranty information listed below are minimums. 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 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 percent by weight for the first 15 years.
- B. Warranty for Broadloom Carpet: Manufacturer agrees to repair or replace components of carpet installation that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: minimum 10 years from date of 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 percent by weight for the first 15 years.

PART 2 - PRODUCTS

2.1 MODULAR CARPET

- A. Minimum specifications for modular carpet:
1. Fiber: Type 6,6 Nylon fibers
 2. Dye Method: 100 percent Solution Dyed.
 3. Pile Weight: 16 oz.
 4. Pile Construction: Loop construction.
 5. Construction: Tufted or Woven
 6. Density: High Traffic Areas & Dormitories 6,500; All other areas 5,500
 7. Backing: Integrated moisture control backing.
 8. Size: Nominal 20"x20" (19.69" x 19.69") or manufacturer's other modular size; square or plank. Utilize consistent module.
 9. Recycled Content: 25 percent minimum.
 10. Applied Soil-Resistance Treatment: Integral to carpet manufacture.
 11. Critical Radiant Flux Classification: Not less than **[0.45 W/sq. cm]** **[0.22 W/sq. cm]** according to NFPA 253.

2.2 BROADLOOM CARPET

- A. Minimum specifications for broadloom carpet.
1. Fiber: Type 6,6 Nylon fibers w/ anti-stain protection.
 2. Dye Method: 100 percent Solution Dyed.
 3. Pile Weight: 24 oz
 4. Pile Construction: Loop Construction. Under certain circumstances Owner may consider a mixed loop and tip sheer; such construction requires approval by UH FPC.
 5. Construction: Tufted or Woven
 6. Density: High Traffic Areas & Dormitories 6,500; All other areas 5,500
 7. Recycled Content: 25 percent minimum.
 8. Backing: Integrated moisture control backing.
 9. Applied Soil-Resistance Treatment: Integral to carpet manufacture.
 10. Critical Radiant Flux Classification: Not less than **[0.45 W/sq. cm]** **[0.22 W/sq. cm]** according to NFPA 253.

2.3 WALK-OFF CARPET TILE

- A. [Nylon] [Polypropylene] [Olefin] [Polyester] carpet bonded to 1/8- to 1/4-inch- (3- to 6-mm-) thick, flexible vinyl backing to form mats 3/8 or 7/16 inch (9.5 or 11 mm) thick with non-raveling edges.
1. Tapered Flexible Molding: Tapered vinyl carpet edge moldings with flanges fused to back of mat at [ends of runners] [all four edges, with mitered corners].

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 3000 "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 1053 "Miscellaneous 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 installations shall 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 the installation method and only use products recommended by the Manufacturer. Self-stick method type requires approval 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 6813