

SECTION 09 68 00

CARPETING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Carpet, direct-glued.
 - 2. Accessories.
- B. Related Sections:
 - 1. Section 09 65 00 - Resilient Flooring: Base finish.

1.02 REFERENCES

- A. American Association of Textile Chemists & Colorists:
 - 1. AATCC 134 - Electricstatic Propensity of Carpets.
- B. ASTM International:
 - 1. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials.
 - 2. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 3. ASTM E662 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
- C. Carpet and Rug Institute:
 - 1. CRI 104 - Standard for Installation of Textile Floor Covering Materials.
 - 2. [CRI Green Label Plus Testing Program.]
 - 3. [CRI Green Label Testing Program.]
- D. National Fire Protection Association:
 - 1. NFPA 258 - Test Method for Determining Smoke Generation of Solid Materials.
- E. South Coast Air Quality Management District:
 - 1. SCAQMD Rule #1168 - Adhesive and Sealant Applications.

1.03 DESIGN REQUIREMENTS

- A. Carpet Layout and Seams:
 - 1. Layout carpet in full roll widths, with only one lesser width permitted to complete an area.
 - 2. Layout carpet in largest possible lengths using a minimum number of sections.
 - 3. Layout carpet with seams in the same direction unless otherwise noted.
 - 4. Layout seams in area of least traffic, out of areas of pivoting traffic, and parallel to main traffic.
 - 5. Locate changes of color or pattern between rooms directly under door.
 - 6. Center seams occurring parallel to door directly under door.
 - 7. Seams are not permitted perpendicular to doors or entries or within 18 inches thereof.
 - 8. Seams occurring at corridor change in direction to follow wall line parallel to carpet direction.
 - 9. Layout patterned carpet with pattern repeats matched in both length and width.

- B. Installed carpet to have monolithic color, pattern, and texture match within any one room or area.
- C. Carpet installed within a corridor or suite of rooms to be from the same dye lot.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate delivery of carpet to avoid conflict with work and conditions at the site.
- B. [Preinstallation Meeting:]
- C. Sequencing:
 - 1. Do not install carpet until area to be carpeted is entirely closed in, wet work and painting are completed, ceiling and overhead work has been installed, tested, and completed, and heating system is in operation.
 - 2. Do not allow heavy traffic or rolling of equipment on the carpet for a minimum period of 48 hours after installation, or longer if recommended by the adhesive manufacturer.
- D. Scheduling:
 - 1. Arrange deliveries of product in accordance with construction schedules.
 - 2. Do not install carpet until work above ceilings is complete and ambient temperature and humidity conditions are and will be continuously maintained at values near those for final occupancy.
 - 3. Schedule installing products specified in this Section with other construction to minimize possibility of damage and soiling during remainder of construction period.

1.05 [SUSTAINABLE CHARACTERISTICS]

- A. Section 01 35 63 - Sustainability Project Requirements: Requirements for sustainable design compliance.
- B. Materials and Resources Characteristics:
 - 1. [Recycled Content Materials: Furnish materials with maximum available recycled content including:
SPEC NOTE *List materials specified in this section required to have recycled content.*
 - a. [Carpet shall be made from recycled content.]
 - b. [Carpet to be 100% recyclable, within a closed loop system with take-back services]
 - 2. [Regional Materials: Furnish materials extracted, processed, and manufactured within 500 miles of Project site.]
SPEC NOTE *List materials specified in this section required to be regional materials.*
 - a. [_____.]

- C. Indoor Environmental Quality Characteristics:
 - 1. [Interior] Adhesives: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.
 - 2. [Interior] Carpet: Maximum volatile organic compound content in accordance with CRI Green Label Plus Testing Program.
 - 3. [Interior] Carpet Cushion: Maximum volatile organic compound content in accordance with CRI Green Label Testing Program.

1.06 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.

- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation and accessory items required.
- C. Certifications: Submit the following certifications indicating that:
 - 1. Installer meets qualifications specified in this Section.
- D. Shop Drawings: Indicate seaming plan, method of joining seams, direction of carpet pile, location of edge moldings and edge bindings.
- E. Samples: Submit four samples 18 by 18 inch in size illustrating color and pattern for each carpet material specified.
- F. Manufacturer's Installation Instructions: Indicate special procedures.
- G. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

1.07 [SUSTAINABLE DESIGN SUBMITTALS]

- A. Section 01 81 13 - Sustainable Design Requirements: Requirements for sustainable design submittals.
- B. Manufacturer's Certificate: Certify products meet or exceed specified sustainable design requirements.
 - 1. Materials Resources Certificates:
 - a. Certify recycled material content for recycled content products.
 - b. Certify source for regional materials and distance from Project site.
 - 2. Indoor Air Quality Certificates:
 - a. Certify volatile organic compound content for each interior adhesive and related primer.
 - 1) Provide product data for adhesives, primers and aerosol adhesives used in the interior of the building highlighting VOC content of each product used. Adhesives and sealants must meet or exceed the VOC limits of SCAQMD Rule #1168. Refer to the LEED 2009 for New Construction and Major Renovations for acceptable VOC limits
 - 2) Provide a listing of each indoor adhesive, primers, and aerosol adhesive product used in the interior of the project. Include manufacture's name, product name, specific VOC data (g/L less water) for each product, and the corresponding allowable VOC from the referenced standard.
- C. Product Cost Data: Submit cost of products to verify compliance with Project sustainable design requirements. Exclude cost of labor and equipment to install products.
 - 1. Provide cost data for the following products:
 - a. Products with recycled material content.
 - b. Regional products.

1.08 QUALITY ASSURANCE

- A. General Standard: Refer to current edition of "Carpet Specifier's Handbook" by The Carpet and Rug Institute; for definitions of terminology not otherwise defined herein, and for general recommendations and information.
- B. Flame/Smoke Resistance Standards: Provide materials complying with ratings as indicated for the following test standards:

1. Tunnel Test: Test for surface burning characteristics, with ratings for flame spread, fuel contribution, and/or smoke density; ASTM E84.
 - a. Flame Spread: 25 or less.
 - b. Smoke Developed: 450, or less.
 2. Pill Test: Test for flammability; ASTM D2859.
 3. Smoke Density Test: Test in radiant heat chamber, with and without flame, for density of smoke generated; ASTM E662, or NFPA No. 258. Smoke density shall be less than 100.
 4. Static Resistance: Minimum 3.0 KV resistance when tested under standard shuffle test, 20 percent relative humidity at 70 degrees Fahrenheit (21 degrees Celsius), AATCC 134.
- C. Accessibility Requirements
1. Carpet to be securely attached to floor.
 2. Pile height shall not exceed 1/2 inch.
 3. Changes in level do not exceed 1/2 inch beveled at a 1:2 gradient (1/4 inch vertical is allowable).
- D. Installer's Qualifications: Installer of carpet shall be licensed or otherwise certified by carpet manufacturer and shall have been regularly providing installations of the types required for no less than five years and proving a background of not less than three years of installations of comparable size to that herein specified.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original factory wrappings and containers, labeled with identification of manufacturer, brand name, and lot number.
- B. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents, and that products are properly protected and undamaged. Notify University's Representative immediately of any discrepancies.
- C. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.
- D. Storage:
1. Store materials in conformance with referenced standards, with seals and labels intact and legible.
 2. Store materials on-site in original undamaged packages, inside well-ventilated area protected from weather, moisture, soilage, extreme temperatures, and humidity.
 3. Store materials subject to damage by the elements in weathertight enclosures.
 4. Lay flat, with continuous blocking off ground.
 5. Maintain temperature and humidity within the ranges required by referenced standards.
 6. Arrange storage in a manner to provide easy access for inspection.
 7. Store carpet materials areas to receive carpet for not less than 48 hours prior to installation to achieve temperature stability.
- E. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.

1.10 SITE REQUIREMENTS

- A. Comply with CRI 104, Section 6: Site Conditions.
- B. Environmental Conditions:
1. Maintain temperature in storage area between 55 and 90 degrees Fahrenheit.

2. Preheat the areas to receive resilient materials to 68 degrees Fahrenheit minimum for at least 72 hours prior to installation.
 3. Once that installation has begun, the above criteria are to be observed 24 hours a day seven days a week until completion of the installation, and for a minimum of 72 hours following the installation. Thereafter maintain minimum temperature of 55 degrees Fahrenheit.
- C. Close spaces to traffic during installation of products specified in this Section.
- D. Provide for continuous ventilation during installation using as close to 100 percent outside air as possible.
- E. Subfloor Moisture Conditions: Moisture emission rate of not more than 3 pounds per 1000 square feet per 24 hours (14.6 kg per 1000 square meters per 24 hours) when tested by calcium chloride moisture test in compliance with CRI 104, 6.2.1, with subfloor temperature not less than 55 degrees Fahrenheit (12.7 degrees Celsius).
- F. Subfloor Alkalinity Conditions: A pH range of 5 to 9 when subfloor is wetted with potable water and pHdriion is applied.

1.11 WARRANTY

- A. Manufacturers minimum 15 year commercial warranty.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Carpet:
1. Shaw, Commercial Grade, Loop Carpet, **EcoWorx and EcoSolution Q**
 2. or equal.

2.02 CARPET

- A. Carpet: Tufted, nylon, conforming to the following criteria:
1. Pile Weight: 28 oz/sq yd.
 2. Secondary Backing:
 - a. Material: TekLok; or equal.

2.03 ACCESSORIES

- A. Edge Strips:
1. Joiner (Carpet to Resilient):
 - a. Description: **PVC free**; profile as shown.
 - b. Product: Johnsonite Inc.'s "Johnsonite No. CTA-XX-A"; Burke Flooring's "Tile - Carpet Joiner No. 150"; Roppe's "No. 177"; or equal.
 - c. Color: As selected from manufacturer's standard range.
 2. Edge (Reducer) Strip (Carpet to Other Finish Floor Surfaces):
 - a. Description: **PVC free**; profile as shown.
 - b. Product: Johnsonite Inc.'s "Johnsonite Edge Guard EG-XX-H"; Burke Flooring's "No. 700 Imperial Reducer"; Roppe's "No. 174"; or equal.
 - c. Color: As selected from manufacturer's standard range.
 3. Snap-Down Divider (Carpet to Tile):
 - a. Description: **PVC free**; profile as shown.

- b. Product: Johnsonite Inc.'s "Johnsonite No. CE-XX-A by CBD-00A"; Burke Flooring's "No. 365 Cerco Edge T by 970"; Roppe's "No. 154 by 178"; or equal.
 - c. Color: As selected from manufacturer's standard range.
 4. Binder Bar: Profile as shown;
 - a. Extruded Aluminum, Clear Anodized: Wm. L. Bonnell Co., Inc.'s "Trimedge"; Kinthead Industries, Inc.'s "Kintrim"; B&T Metals Co.'s "Chromedge"; or equal.
 - b. Solid Brass: Manufactured by Roberts Consolidated Industries, Inc.; or equal.
- B. Edge Strips (ES)
 1. ES-1, Between Carpet and Resilient Flooring:
 - a. Description: **PVC free**; profile as shown.
 - b. Product: Burke Flooring's "Tile - Carpet Joiner No. 150"; or equal.
 - c. Color: As selected from manufacturer's standard range.
 2. ES-2, Between Carpet and Exposed Concrete:
 - a. Description: **PVC free**; profile as shown.
 - b. Product: Burke Flooring's "No. 700 Imperial Reducer"; or equal.
 - c. Color: As selected from manufacturer's standard range.
 3. ES-3, Between Carpet and Ceramic Tile: Snap-Down Divider (Carpet to Tile):
 - a. Description: **PVC free**; profile as shown.
 - b. Product: Burke Flooring's "No. 930 Snap-Down T by 970"; or equal.
 - c. Color: As selected from manufacturer's standard range.
- C. Carpet Divider-Saddle:
 1. Description: **PVC free**, flame-resistant, self-extinguishing; profile as shown.
 2. Product: [_____]; or equal.
 - a. Color: As selected from manufacturer's standard range.

2.04 RELATED MATERIALS

- A. Sub-Floor Filler: Type recommended by carpet manufacturer.
- B. Moldings and Edge Strips: Rubber, color as selected.
- C. Seam Adhesive: Recommended by manufacturer.
- D. Concrete-Slab Primer: Nonstaining type as recommended by the carpet manufacturer.
- E. Carpet Adhesives: Adhesive must meet the following requirements:
 1. Solvent-free, water-resistant, mildew-resistant, non-flammable, low odor adhesive to suit carpeting and substrate conditions indicated.
 2. Have VOC content of less than 100 g/L.
 3. [Meet all applicable air quality requirements.]
 4. [Meet or exceed VOC limits for adhesives and sealants. Adhesives must meet or exceed the VOC limits of SCAQMD Rule #1168 by, and all sealants used as filler must meet or exceed Bay Area Air Quality Management District Reg. 8, Rule 51.]
 5. Recommended by carpet manufacturer.
 6. Must be compatible with carpet backing.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas, conditions, and surfaces under which work of this Section will be performed and verify that:

1. Sub-floor surfaces are smooth and flat and are ready to receive carpet.
 2. Sub-floor surfaces are dust-free, and free of substances which would impair bonding of adhesives to sub floor surfaces.
 3. Concrete sub-floor surfaces are ready for carpet installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by carpet manufacturer and adhesive materials manufacturer.
 4. Required floor-mounted utilities are in correct location.
- B. Carefully check all dimensions and other conditions affecting the Work in the field, and be responsible for proper layout and installation of carpet in areas designated.
- C. Correct conditions detrimental to timely and proper completion of the Work.
- D. Do not start installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. [Remove and dispose of existing materials designated for removal.]
- B. [Application over Existing floor Material:]
1. Use a liquid stripper to remove old polish, dirt, dust, oils, grease, and any deleterious materials that will effect proper installation.
 2. Repair minor floor irregularities with sub-floor filler material.
- C. Verify maximum size of carpet rolls that can be delivered on jobsite. Visit the site to determine physical capacity of [elevators,][stairs][and]corridors that are on the path to be used for delivery of carpet materials. Review proposed route of delivery with University's Representative.
- D. Clean floor and remove sub-floor dirt, grease, ridges, and bumps. Remove all debris, concrete chips, [old adhesive residue, [and other foreign matter. Sweep floor clean of dirt and dust. After sweeping, vacuum floor with commercial vacuum unit or use damp mop. Use suitable cleaning agent to remove paint, grease, wax, oil, or similar items.
- E. Sub-Floor Filler:
1. Apply according to manufacturer's directions wherever sub-floor presents uneven surface and bring to true level surface.
 2. Fill low spots, cracks, joints, holes and other defects with underlayment; apply, trowel and float underlayment to leave smooth, flat, hard surface.
 3. Apply underlayment to 1/8 inch maximum thickness and allow to cure prior to application of succeeding layers.
 4. Do not install latex type underlayment in excess of 3/8 inch total thickness.
 5. Include floated filler ramps, at slopes not to exceed 1:36, at doors and other locations where resilient flooring adjoins higher dissimilar flooring as follows:
 - a. Carpet pile shall finish 1/8 inch higher than adjoining dissimilar flooring sills and similar item where transition strips are used.
 - b. Unless otherwise noted on the Drawings, resilient flooring shall finish flush with all other dissimilar flooring, sills, and similar items.
 6. Prohibit traffic until filler is cured.
- F. Clean substrate. Apply sealer where required to prevent dusting.
- G. Provide sufficient lighting for installation operations.

3.03 INSTALLATION - GENERAL

- A. Install carpet and cushion in accordance with manufacturer's instructions and CRI 104.
- B. Verify carpet match before cutting to ensure minimal variation between dye lots.
- C. Lay out carpet and locate seams in accordance with shop drawings:
 - 1. Locate seams in area of least traffic, out of areas of pivoting traffic, and parallel to main traffic.
 - 2. Do not locate seams perpendicular through door openings.
 - 3. Align run of pile in same direction as anticipated traffic and in same direction on adjacent pieces.
 - 4. Locate change of color or pattern between rooms under door centerline.
 - 5. Provide monolithic color, pattern, and texture match within any one area.
- D. Install carpet tight and flat on subfloor, well fastened at edges, with a uniform appearance.

3.04 DIRECT-GLUED CARPET

- A. Adhere carpet directly to floor with adhesive.
- B. Adhesive Application:
 - 1. Evenly spread adhesive over entire area to be carpeted.
 - 2. Apply contact adhesive to floor uniformly at rate recommended by manufacturer.
 - 3. When applying adhesive, use spread rate recommended by adhesive and carpet manufactures.
 - 4. Apply adhesive using proper notched trowel and let dry to a tacky state in accordance with manufacturer's written recommendations.
 - 5. Grid and perimeter applications of adhesive will not be acceptable.
- C. After sufficient open time, press carpet into adhesive.
- D. Seams:
 - 1. Double cut carpet seams, with accurate pattern match.
 - 2. Make cuts straight, true, and unfrayed. pply seam adhesive to cut edges of woven carpet immediately.
 - 3. Apply seam adhesive to the base of the edge glued down.
 - 4. Lay adjoining piece with seam straight, not overlapped or peaked, and free of gaps.
- E. Roll with appropriate roller for complete contact of adhesive to carpet backing.
- F. Trim carpet neatly at walls and around interruptions.
- G. Complete installation of edge strips, concealing exposed edges.
- H. Remove excess adhesive with approved solvent.

3.05 CLEANING

- A. Remove and dispose of debris and unusable scraps.
- B. Remove visible adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.
- C. Remove spots and replace carpet where spots cannot be removed. Remove any protruding face yarn using sharp scissors.

- D. Vacuum carpet using commercial machine with face-beater element. .
- E. Comply with minimum requirements of specifications Section 01 74 00 - Cleaning.

3.06 PROTECTION

- A. General: Comply with CRI 104, Section 15: Protection of Indoor Installation.
- B. Provide final protection and maintain conditions to protect installed carpet from damage or deterioration from traffic and subsequent construction operations at the time of Substantial Completion.
- C. Remove protection when no longer needed.

END OF SECTION