

Seaside Rehabilitation and Health Care Center
Portland, Maine

SECTION 096800 - CARPET

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.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Tufted carpet.
 - 2. Independent testing of concrete.
- B. Related Sections include the following:
 - 1. Division 09 Section "Resilient Flooring" for resilient wall base and accessories installed with carpet.

1.3 SUBMITTALS

- A. General: Submit in accordance with Division 01 Section "Submittal Procedures."
- B. Product Data: For the following, including installation recommendations for each type of substrate:
 - 1. Installation Adhesive: Include printed statement of VOC content.
- 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. Carpet type, color, and dye lot.
 - 3. Seam locations, types, and methods.
 - 4. Type of subfloor.
 - 5. Type of installation.
 - 6. Pattern type, repeat size, location, direction, and starting point.
 - 7. Pile direction.
 - 8. Type, color, and location of insets and borders.
 - 9. Type, color, and location of edge, transition, and other accessory strips.
 - 10. 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. Exposed Edge Stripping and Accessory: 12-inch- long Samples.
 - 3. Carpet Seam: 6-inch Sample.
 - 4. Mitered Carpet Border Seam: 12-inch- square Sample. Show carpet pattern alignment.
- E. Product Schedule: For carpet. Use same room and product designations indicated on Drawings.

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- F. Test Results: Provide results of specified alkalinity and adhesion tests, calcium chloride moisture tests, and relative humidity tests. Include manufacturer's written moisture requirements for each carpet type specified.
 - 1. Provide results of adhesive bond tests for all adhesive products used.
- G. Adhesive Certificates: Carpet manufacturer shall certify that proposed adhesives are acceptable for use with carpet.
- H. Maintenance Data: For carpet to include in maintenance manuals. Include the following:
 - 1. Methods for maintaining carpet, 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.
- I. Warranties: Special warranties specified in this Section.

1.4 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 through a single source from a single manufacturer.
- C. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review specified moisture test results, alkalinity and adhesion tests, ambient conditions, ventilation procedures, installation process, adhesive application, seam sealing procedures and seam layouts. Compare results with manufacture's specified requirements for each product.

1.5 LAYOUT

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

1.6 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.

1.7 PROJECT CONDITIONS

- A. General: Comply with CRI 104, Section 7.2, "Site Conditions; Temperature and Humidity" and Section 7.12, "Ventilation."
- B. Radiant heat in floor slabs shall operate continuously for a minimum of two weeks before the testing for moisture content and adhesive bond and before the application of floor coverings.

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- C. Environmental Limitations: Do not install carpet until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at and will be continuously maintained at the levels indicated for Project when occupied for its intended use.
- D. 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.
- E. Where demountable items are indicated for installation on top of carpet, install carpet before installing these items.

1.8 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 Warranty for Carpet: Written warranty, signed by carpet cushion manufacturer agreeing to replace carpet that does not comply with requirements or that fails within specified warranty period.
 - 1. 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.
 - 2. Failures include, but are not limited to, surface wear including more than 10 percent loss of face fiber, edge raveling, snags, loss of tuft bind strength, zippering, backing resiliency loss, and delamination.
 - 3. Warranty Period:
 - a. Face Wear, Moisture Barrier, Wick-Back, Delamination, Tuft Bind, Unraveling, and Static Protection: Lifetime Limited Warranty.
 - b. Bleach Resistant Warranty: 15 Year Limited Warranty from date of Substantial Completion.
 - c. Stain Resistant Warranty: 15 Year Limited Warranty from date of Substantial Completion.

1.9 EXTRA MATERIALS

- A. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Carpet: Scraps large enough for patching for each type indicated.

PART 2 - PRODUCTS

2.1 CARPET

- A. Carpet, F-2: Shall be Mannington Commercial, Unedited, in color selected by Architect from manufacturer's full range of options. No seconds or imperfections shall be acceptable. Carpet shall meet the following minimum construction:
 - 1. Construction: Tip sheared loop.
 - 2. Dye Method: Solution dyed.
 - 3. Pile Fiber and Type: Invista Antron Lumena Type 6,6 with permanent stain and bleach protection, static control and soil-resistance.
 - 4. Gauge: 5/64.

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| 5. | Stitches per Inch: | 12.0. |
| 6. | Pile Height: | 0.111 inch. |
| 7. | Face Weight: | 26.0 oz./sq. yd. |
| 8. | Backing System: | Integra HP with chemically weldable seams for complete moisture barrier. |
| 9. | Width: | 12 feet 6 inches. |

2.2 INSTALLATION ACCESSORIES

- A. Concrete Slab Primer: Nonstaining type provided by or recommended by carpet manufacturer.
- B. Trowelable Leveling and Patching Compounds: Portland-cement-based formulation provided by or recommended by carpet manufacturer.
- C. Adhesives for Carpets: 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 manufacturer.
 - 1. VOC Limits: Provide adhesives with VOC content not more than 50g/L when calculated according to 40 CFR 59, Subpart D (EPA method 24).
 - 2. Adhesives shall be compatible with radiant heat systems.
- D. Seaming Cement: 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

3.1 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 performance. Verify that substrates and conditions are satisfactory for carpet installation and comply with requirements specified.
- B. Examine carpet for type, color, pattern, and potential defects.
- C. Concrete Slabs : 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 manufacturer, and with the following specified requirements:
 - a. An independent testing agency shall perform alkalinity and adhesion tests, calcium chloride moisture tests, and relative humidity test. Field technician shall be International Concrete Repair Institute (ICRI) certified to a Grade 1, Moisture Testing Technician level. Testing shall be conducted as follows:
 - 1) Perform tests on slabs to receive glue down carpet installation at rate of 1 test/1000 sq. ft. of floor area.
 - 2) Maintain a minimum temperature of 70 deg F in spaces to be tested for not less than 72 hours prior to and during tests.
 - 3) Provide additional tests at floors after radiant heat has been in operation for not less than 2 weeks.

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- b. Alkalinity and Adhesion Testing: Shall result in pH range recommended by carpet manufacturer when subfloor is wetted with potable water and pHydration 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 CaCl₂ dish shall not be deducted.
 - d. Relative Humidity Test: Perform test using in situ probes, ASTM F 2170.
 - 1) Locate radiant heat tubing in test location before drilling holes for probes.
 - e. 80 percent of the moisture tests conducted shall be relative humidity tests.
- 2. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours, a maximum 75 percent relative humidity level measurement, or greater if permitted by the carpet manufacturer, and manufacturer's requirements for alkalinity and adhesion are met.
 - 3. Subfloor finishes comply with requirements specified in Division 03 Section "Cast-in-Place Concrete" for slabs receiving carpet.
 - 4. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits of any kind.
- 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.

3.2 PREPARATION

- A. General: Comply with CRI 104, Section 7.3, "Site Conditions; Floor Preparation," and with carpet manufacturer's written installation instructions for preparing.
- 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, unless more stringent requirements are required by manufacturer's written instructions.
- C. Level subfloor within 1/4 inch in 10 feet, 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 manufacturer.
- E. Broom and vacuum clean substrates to be covered immediately before installing carpet. 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 manufacturer.

3.3 CARPET INSTALLATION

- A. Comply with CRI 104 and carpet manufacturer's written installation instructions for the following:

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1. Direct-Glue-Down Installation: Comply with CRI 104, Section 9, "Direct Glue-Down Installation."
- B. Comply with carpet manufacturer's written recommendations and Shop Drawings 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.
 1. Bevel adjoining border edges at seams with hand shears.
- 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 borders to comply with CRI 104, Section 15, "Patterned Carpet Installations" and with carpet manufacturer's written recommendations.

3.4 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 surface.
 3. Vacuum carpet 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 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 manufacturers and carpet adhesive manufacturer to ensure carpet is without damage or deterioration at the time of Substantial Completion.

END OF SECTION 096800