SECTION 09680 – CARPETING

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes
   1. Sheet Carpet
   2. Installation

B. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections, 09650 Resilient Flooring, 09690 Carpet Tile, (other applicable sections), apply to this Section.

1.02 SUBMITTALS

A. Shop Drawings showing the extent of carpet, seam direction of carpet, and accessories shall be submitted to Architect for approval prior to installation. Should also indicate columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet. Copy of approved shop drawings to be available on job site during installation.

B. Carpet schedule using same room designations indicated on drawings.

C. Product Data: Provide data on specified products, describing physical and performance characteristics, sizes, patterns, colors available, and method of installation.

D. Selection Samples: Submit manufacturer’s complete set of color samples for Architect’s initial color selection.

E. Verification Samples: Submit two 18” x 18” samples illustrating color and pattern for each carpet material specified.

F. Manufacturer’s Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

G. Maintenance Data: Include maintenance procedures, recommendations for maintenance materials and equipment, and suggested schedule for cleaning.

H. Warranty.

1.03 QUALITY ASSURANCE

A. Manufacturer Qualifications
   1. Company specializing in manufacturing specified carpet/backing with minimum 5 years documented experience.

   2. Upon request, manufacturer to provide representative to assist in project start-up and to inspect installation while in process and upon completion. Representative will notify designated contact if any installation instructions are not followed.

   3. Single Source Responsibility: Obtain each type of carpet from one source and by a single manufacturer.

   4. Upon request, manufacturer will provide a representative to provide maintenance training within 60 days of installation. Additionally, the manufacturer agrees to provide annual maintenance assessment and training.
5. for the term of the warranty.

B. Installer Qualifications
   1. Flooring contractor must be certified by the carpet manufacturer prior to bid.
   2. Flooring contractor to be a specialty contractor normally engaged in this type of work and shall have prior experience in the installation of these types of materials.
   3. Certify payment of Prevailing Wage Rates to the installers.
   4. Flooring contractor possessing Contract for the carpet installation shall not sub-contract the labor without written approval of the Project Manager.
   5. Flooring contractor will be responsible for proper product installation, including floor testing and preparation as specified by the carpet manufacturer and JOB CONDITIONS herein.
   6. Flooring contractor to provide Owner a written installation warranty that guarantees the completed installation to be free from defects in materials and workmanship for a period of one year after job completion.
   7. Flooring contractor to provide Owner a written recycling warranty that guarantees the old carpet to be 100% recycled and the Flooring contractor will provide a certificate of recycling to the Owner in close out documents.

1.04 DELIVERY, STORAGE, & HANDLING

A. Deliver materials to the site in manufacturer’s original packaging listing manufacturer’s name, product name, identification number, and related information.

B. Store in a dry location, between 60 degrees F and 80 degrees F and a relative humidity below 65%. Protect from damage and soiling. Stack carpet rolls horizontally on a flat surface, stacked no higher than two rolls.

C. Make stored materials available for inspection by the Owner’s representative.

D. Store materials in area of installation for minimum period of 48 hours prior to installation.

1.05 PROJECT CONDITIONS

A. Sub-floor preparation is to include all required work to prepare the existing floor for installation of the product as specified in this document and Manufacturer’s installation instructions.

B. All material used in sub-floor preparation and repair shall be recommended by the carpet manufacturer and shall be chemically and physically compatible with the carpet system being bid.

C. Maintain minimum 65 degrees F ambient temperature and 65% Relative Humidity for 72 hours prior to, during, and 48 hours after installation.

D. Do not install carpet until space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete, and ambient temperature and humidity conditions are and will be continuously maintained at values near those indicated for final occupancy.
1.06 EXTRA MATERIALS

A. Provide additional 3% of each type, color, and pattern furnished; product to be rolled and bound. Coordinate storage location with owner.

B. Deliver all unused carpet and large scraps to Owner for “attic stock.” Dispose of scraps less that 2 square foot in area or less than 8” in width.

1.07 CARPET WARRANTY

A. Warranty to be sole source responsibility of the Manufacturer. Second source warranties and warranties that involve parties other than the carpet manufacturer are unacceptable.

B. If the product fails to perform as warranted when properly installed and maintained, the affected area will be repaired or replaced at the discretion of the Manufacturer.

C. Chair Pads are not required for carpet warranty coverage.

D. Warranty shall not exclude carpet product installed on stairs provided it is properly installed and maintained.

E. Warranty shall be for a minimum non-prorated period of twenty-five years and shall cover against
   1. Excessive Surface Wear: More than 15% loss of pile fiber weight
   2. Excessive Static Electricity: More than 3.0 kV per AATCC 134
   3. Resiliency Loss of the Backing: More than 10% loss of backing resiliency
   4. Delamination
   5. Edge Ravel
   6. Zippering

F. Tuft Bind warranty in lieu of edge ravel and zippering is not acceptable.

G. Provide certification and warranty that product is fully or partially recyclable through manufacturers or aligned partner’s recycling program. Include information regarding what portions of the product will be recycled into other recyclable/non-recyclable products, down-cycled, landfilled, and/or incinerated.

PART 2 – PRODUCTS

2.01 FIBER

A. Nylon Fiber: Bulked Continuous Filament Nylon.

B. Blends of Solutia fibers are not allowed. Solutia LXI fibers alone are not allowed.

C. Durable stain inhibitor should be applied to the fiber during product manufacturing to resist fiber staining and soiling. Minimum average of three fluorine analyses of a single composite sample per CRI TM-102: 500 ppm.

D. Fiber to contain carbon-core filament for permanent static control. Topical treatments not allowed.

2.02 BACKING CHARACTERISTICS

A. Thermoplastic vinyl composite.

B. Primary Backing: Synthetic Non-Woven.

C. Pre-Coat (Fusion Coat): Sealant Vinyl
D. Secondary Backing: Closed-Cell, Vinyl Cushion backing system.
   1. Density (ASTM D-1667): 18.5 lbs/cu ft +/- 5%
   2. Compression Set (ASTM D-1667): Max 10%
   3. Compression Deflection (ASTM D-1667): Min. 7 psi @ 25%; Max. 25 psi @ 25%
   4. Impermeable to moisture and airflow
   5. Provide for a chemically welded seam that is also impermeable to moisture and airflow
   6. 6’ Width Roll Goods

E. Product to be installed with a mill-applied releasable “dry” adhesive system to securely attach product to sub-
   floor in compliance with ADA guidelines (Section 4.5.3) if available from Manufacturer. Free-lay, grid system,
   and stretch-in installations not allowed.

F. Product to provide asbestos enclosure properties.
   Enclosure means an airtight, impermeable, permanent barrier around ACBM (Asbestos Containing Building
   Material) to prevent the release of asbestos fibers into the air.

2.03 RECYCLING PROGRAM

A. Manufacturer must have a collection and recovery system for product and a fully established, currently operational
   recycling program at time of bid per FTC guides Section 260.7 (d).

B. Manufacturer must be able to reclaim and recycle 100% of existing carpet of similar composition back into carpet
   at time of bid.

C. Manufacturer must have product a take back program and be able to reclaim and recycle 100% of installed product
   back into carpet at the end of its service life at time of bid. Claiming a product is recyclable based on future
   expectation of technology, equipment, process or availability of that product as feed stock is not acceptable.
   Recycling process must be available for viewing.

D. Collection and recycling program must be verified by an independent, neutral third-party organization, such as
   Scientific Certification Systems.

E. Manufacturer must have written guarantee that 100% of the recovered product will be recycled and that no portion
   of the product will be landfilled or incinerated (including waste-to-energy).

2.04 ENVIRONMENTALLY PREFERABLE PRODUCT

A. Carpet must be certified as an Environmentally Preferable Product (EPP) by a neutral, independent, third party
   organization such as Scientific Certification Systems. Carpets must carry an EPP carpet label certifying its
   Environmental Preferability. Products carrying EPP carpet labels will be given higher preference than those
   carrying only an EPP fiber label.

2.05 INDOOR AIR QUALITY

A. Product must have low VOC, factory applied, “dry” adhesive.

B. Product, inclusive of floor covering adhesive, must meet CRI’s IAQ requirements for carpet only. Environmental
   chamber testing per ASTM D-5116. Emission Rates determined at 24 hours. Product, inclusive of pre-applied
   adhesive must off gas less than:
   0.5 mg/sq. meter per hour of Total Volatile Organic Compound (TVOC);
   0.05 mg/sq. meter per hour of formaldehyde;
   0.4 mg/sq. meter per hour of styrene; and
0.05 mg/sq. meter per hour of 4-Phenyl Cyclohexene (4-PC)

1. Submit Indoor Air Quality report showing CRI Green label Certification Number for carpet (inclusive of adhesive). [If results for carpet testing are not inclusive of adhesive, submit separate IAQ test reports for carpet and adhesive].

2. Indoor air quality results of the product installed must be same as those specified by the Project requirements.

3. Additionally, product, inclusive of adhesive, must meet the requirements of the State of Washington Indoor Air Quality Specifications for Carpet at 24 hours. Environmental chamber testing per ASTM D-5116. Product must not require the 30-day air out period that the State of Washington protocol allows.

2.06 PERFORMANCE CHARACTERISTICS

A. Test reports for the following performance assurance testing to be submitted upon request. Submitted results shall represent average results for production goods of the referenced style.

B. Requirements listed below must be met by all products.

1. Flooring Radiant Panel
   ASTM E-648 / NFPA 253: Class 1 (CRF: 0.45 watts/sq cm or greater)

2. Federal Flammability
   CPSC FF 1-70: Passes

3. Smoke Density
   ASTM E-662 / NFPA 258: \( \leq 450 \) Flaming Mode

4. Electrostatic Propensity
   AATCC 134 (Step & Scuff): 3.0 kV or less

5. Static Coefficient of Friction
   ASTM C-1028: Passes ADA Guidelines for Accessible Routes (Minimum 0.60)

6. Delamination of Secondary Backing of Pile Floor Coverings
   ASTM D-3936: No Delamination

7. Lightfastness
   AATCC 16E: \( \geq 4 \) @ 100 hours

8. Vetterman Drum
   ASTM D-5417: Minimum 3 @ 22,000 cycles

9. Moisture Barrier
   Moisture Penetration by Impact @ 10 psi: No Penetration of backing and seam after 10,000 impacts

10. Air Flow Barrier
    Air Permeability of Textile Fabrics: No Air Flow (0.0 ft\(^3\)/min) through backing and seam

11. Seam Integrity
    Seam to remain intact after 50,000 cycles per Phillips Chair Test

12. VOC Chamber Testing
    ASTM D-5116: Product inclusive of “dry” adhesive system meets criteria established by the State of Washington Indoor Air Quality Specification for Carpet and/or Carpet & Rug Institute’s (CRI) Indoor Air
Quality Carpet Testing Program. If “dry” adhesive (2.02E) not available from manufacturer and “wet”

2.07 MANUFACTURING SPECIFICATIONS

A. Basis of Design: Manufactured by Tandus Flooring

C-1 Style Aftermath Powerbond Cushion RS Color: TBD

<table>
<thead>
<tr>
<th>Construction</th>
<th>Loop</th>
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<tbody>
<tr>
<td>Gauge</td>
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<tr>
<td>Pile Units per Inch</td>
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<tr>
<td>Pile Height Average</td>
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<td>Tuft Density</td>
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<td>Fiber System</td>
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<td>Fusion Coat</td>
<td>Sealant Vinyl</td>
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<tr>
<td>Backing</td>
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<td>Compression Deflection</td>
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<tr>
<td>Electrostatic Propensity</td>
<td>K.V. or lower</td>
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<tr>
<td>Flooring Radiant Panel Test</td>
<td>Mean average critical radiant flux: 0.45 w/sq cm or higher</td>
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<tr>
<td>Smoke Density</td>
<td>Flaming: Mean average: 450 or lower</td>
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<tr>
<td>Flammability</td>
<td>Passes</td>
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<td>Gold</td>
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<tr>
<td>CRI Green Label Plus Certification</td>
<td>GLP9744</td>
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<td>Warranties</td>
<td>Lifetime wear, delamination, edge ravel, static, zipper, loss of resiliency</td>
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B. Basis of Design: Manufactured by Tandus Flooring

C-2 Walk Off Mat

Style **Abrasive Action** Powerbond Cushion Color: TBD

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<td>Powerbond Backing System</td>
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<tr>
<td>Fusion Coat</td>
<td>Sealant Vinyl</td>
</tr>
<tr>
<td>Backing</td>
<td>Closed cell vinyl cushion</td>
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<tr>
<td>Weight</td>
<td>35.5 oz/sq yd</td>
</tr>
<tr>
<td>Density</td>
<td>18.5 lbs/cu ft</td>
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<td>Thickness</td>
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<td>Total Weight</td>
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<tr>
<td>Compression Set</td>
<td>Max 10%</td>
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<tr>
<td>Compression Deflection</td>
<td>7 min. 25 max. lbs/sq inch @ 25%</td>
</tr>
<tr>
<td>Flooring Radiant Panel Test</td>
<td>Mean average critical radiant flux: 0.45 w/sq cm or higher</td>
</tr>
</tbody>
</table>
Smoke Density
Flamming: Mean average: 450 or lower
Flammability: Passes

C. Substitutes/Alternates
Subject to compliance with all requirements, “or equal” must provide comparable color(s) and have similar aesthetic appearance, tuft density and meet minimum performance guidelines. Substitutes/Alternates must be approved in writing by the Architect/Engineer for quality and color at least 10 days prior to bid to be considered.

2.08 ACCESSORIES

A. Materials recommended by Manufacturer for patching, priming, chemically welding the seams, etc.

B. Adhesives: Products to be supplied with a pre-cured, mill-applied or other “dry” adhesive system (2.02E) when available. Otherwise, adhesive should be full spread, extremely low VOC in compliance with CRI Indoor Air Quality Adhesive Testing Program requirements, compatible with materials being adhered, as recommended by the Manufacturer.

C. Base, Carpet Edge, and Transition Strips: As specified in applicable sections.

PART 3 EXECUTION

3.01 EXAMINATION / PREPARATION

A. Prepare sub-floor to comply with criteria established in Manufacturer’s installation instructions. Use only preparation materials that are acceptable to the Manufacturer.

1. Remove all deleterious substances from substrate(s) that would interfere with or be harmful to the installation. *(i.e. floor wax)*
2. Remove sub-floor ridges and bumps. Fill cracks, joints, holes, and other defects.

B. Verify that sub-floor is smooth and flat within specified tolerances and ready to receive carpet.

C. Verify that substrate surface is dust-free and free of substances that would impair bonding of product to the floor.

D. Verify that concrete surfaces are ready for installation and are within the limits recommended by Manufacturer.

E. There will be no exceptions to the provisions stated in the Manufacturer’s installation instructions.

3.02 INSTALLATION - GENERAL

A. Install product in accordance with Manufacturer’s installation instructions.

B. Verify carpet match before cutting to ensure minimal variation between dye lots.

C. Layout 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. *Minimize cross seams.*
2. Do not locate seams perpendicular through door openings.
3. Locate change of color or pattern between rooms under door centerline.
4. Provide monolithic color, pattern, and texture match within any one area.
6. Check pattern repeat, if any, for matching during installation and possible waste factors in ordering required amounts.

D. Install carpet tight and flat on sub-floor, well-fastened at edges, with a uniform appearance.

E. Chemically weld all seams with manufacturer’s recommended seam sealer as stated in installation instructions. Make sure the seam is fully sealed.

F. Roll with appropriate roller for complete contact of carpet with mill-applied adhesive to sub-floor.

G. Trim carpet neatly at walls and around interruptions.

H. Completed carpet is to be smooth and free of bubbles, puckers, and other defects.

3.03 PROTECTION & CLEANING

A. Remove excess adhesive and/or seam sealer from floor and wall surfaces without damage.

B. All rubbish, wrappings, debris, trimmings, etc. to be removed from site and disposed of properly.

C. Clean and vacuum carpet surfaces using a beater brush/bar commercial vacuum.

D. After each area of carpet is installed, protect from soiling and damage by other trades.

END OF SECTION

NOTE: Shaded items are at the discretion of the architect, dependent upon job requirements, and/or dependent upon the Powerbond style being specified.