SECTION 09652 – RESILIENT SHEET FLOORING

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes the following:

1. Sheet Vinyl Flooring
2. Transition Strips

B. Related Sections include the following:

1. Section 09651 – RESILIENT TILE FLOORING for resilient base.

1.02 SUBMITTALS

A. Product Data: Submit manufacturers data, installation instructions, and maintenance manuals for resilient flooring

B. Samples for Verification: Physical samples of each different color and pattern of flooring system specified, showing the full range of variations expected in these characteristics.

C. Heat-Welded Seam Samples: For each flooring product and welding bead color and pattern combination required; with seam running lengthwise and in center of 6-by-9-inch Sample applied to a rigid backing and prepared by Installer for this Project.

D. Product Certificates: Signed by manufacturers of resilient products certifying that each product furnished complies with requirements.

1.03 QUALITY ASSURANCE

A. Manufacturer: Provide flooring by a firm with a minimum of 10 years experience in the production of resilient flooring of the type equivalent to that specified.

B. Installer Qualifications: Engage an experienced installer with a minimum of 5 years experience to perform work of this Section who has specialized in installing resilient flooring products similar to those required for this Project and with a record of successful in-service performance.

C. Source Limitations: Obtain each type, color, and pattern of product specified from one source with resources to provide products of consistent quality in appearance and physical properties without delaying the Work.

D. Slip Resistance: Flooring products shall have a Dynamic Coefficient of Friction (DCOF) AcuTest value shall not be less than 0.42 in accordance to ANSI A 137.1.

E. Fire-Test-Response Characteristics: Provide products with the following fire-test response characteristics as determined by testing identical products per test method indicated below by a testing and inspecting agency acceptable to authorities having jurisdiction.

1. Critical Radiant Flux: 0.45 W/sq. cm or greater when tested per ASTM E 648.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to Project site in manufacturer's original, unopened cartons and containers, each bearing names of product and manufacturer, Project identification, and shipping and handling instructions.

B. Store products in dry spaces protected from the weather, with ambient temperatures maintained between 55 and 85 deg F.

C. Store the indoor resilient surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to Project.

D. Move products into spaces where they will be installed at least 48 hours before installation, unless longer conditioning period is recommended in writing by manufacturer.

1.05 PROJECT CONDITIONS

A. Maintain a temperature of 70 deg F plus or minus 5 deg F in spaces to receive products for at least 48 hours before installation, during installation, and for at least 48 hours after installation, unless manufacturer's written recommendations specify longer time periods. After post-installation period, maintain a temperature of not less than 55 deg F or more than 85 deg F.

B. Do not install products until they are at the same temperature as the space where they are to be installed.

C. Close spaces to traffic during flooring installation and for time period after installation recommended in writing by manufacturer.

D. Install flooring and accessories after other finishing operations, including painting, have been completed.

E. Do not install flooring over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive, as determined by flooring manufacturer's recommended bond and moisture test.

1.06 WARRANTY

A. Special Limited Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace flooring that fails within specified warranty period.

1. Material warranty must be direct from the product manufacturer.

2. Failures include, but are not limited to, the following:

a. Material manufacturing defects.

b. Surface wear and deterioration to the point of wear-through.

c. Failure due to substrate moisture exposure not exceeding the manufacturer’s required value for relative humidity when tested according to ASTM F2170 or for moisture vapor emission rate when tested according to ASTM F1869.

3. Warranty Period: Fifteen (15) years from the date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS AND PRODUCTS

A. Sheet Vinyl Flooring (**RF-02** & **RF-03**)

1. Sheet Vinyl: ASTM F1303, Type 1, Grade 1, Class B backed heterogeneous sheet vinyl flooring with UV cured factory finish.
    a. Wear-Layer Thickness: 0.020-inch
    b. Overall Thickness: 0.080-inch
2. Seaming Method: Heat Welded.
3. Adhesive Method:
    a. Full-spread adhesive to completely adhere flooring to substrate.
4. Roll Size:
    a. Roll Width: 12-feet.
5. Color and Pattern: As schedule.
6. Performance Criteria:
    a. Static Load Limit/ Maximum Static Load:
        i. ASTM F 970: Passes, ≤0.005-inch
        ii. Modified ASTM F 970 for maximum static load, 2000 psi
    b. Residual Indentation: ASTM F1914; Passes ≤0.012-inch

B. Accessories Integral Flash Cove Base:

1. Reducers: Butt-to transition, polyvinyl chloride (PVC), high quality additives, and colorants, ASTM E 648 Class 1.

2.02 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic cement based formulation provided or approved by floor covering manufacturer for applications indicated.

B. Adhesives: Flooring manufacturer's trowel on solvent-free, two part epoxy adhesive recommended by manufacturer to install heterogenous vinyl backed resilient products and substrate conditions indicated.

1. Adhesive shall be solvent free with zero VOC content, low odor , no ammonia and non-flammable in wet state.
2. Slab Moisture Design Tolerance:
    a. Maximum relative humidity of 85 percent when tested according to ASTM F 2170.
    b. Maximum moisture vapor emission rate of 5 pounds of water per 1000 sq. ft. in 24 hours when tested according to ASTM F1869.

C. Heat Welding Bead: Solid-strand product of floor covering manufacturer. Color to match flooring.

D. Vapor Retarder (Where Required): Two-part, fluid- applied, epoxy based membrane compatible with flooring adhesive. For field applications that are inside the weatherproofing system, vapor retarder products shall have the a VOC content of not more than 100 g/L.

1. Slab-Cote Extreme Moisture Vapor Barrier Coating as manufactured by Bostik, Inc.
2. Drytek Moisture Vapor Barrier as manufactured by Laticrete.
3. Vapor Seal – HM as manufactured by Dependable Floor Products.
4. Or approved equal.

E. Integral Flash Cove Base Accessories:

1. Top Edge Cap Trim: Fabricated to act as edge cap for resilient sheet flooring. Round Cap No. 040, Mercer or pre-approved equal.
   a. Top Shape: Curved.
   b. Colors: Ash 603.
2. Cove Fillet Support Strip: Curved cove providing transition from floor to wall. Cove Stick No. 725 Merstick, Mercer or pre-approved equal.
   a. Curve Radius: 1- inch.

F. Transition Strips: Rubber transition strip; Johnsonite Slim Line Transition, Model # SLT-38-B

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions where installation of vinyl products will occur, with Installer present, for compliance with manufacturer's requirements. Verify that substrates and conditions are satisfactory for resilient product installation and comply with requirements specified.

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 act as a bond breaker. Substrate surface shall be smooth and flat to within 1/8 inch per 10 feet.
2. Slab shall be tested for moisture vapor emissions in accordance with ASTM F 1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Sub-floor Using Anhydrous Calcium Chloride or relative humidity in accordance with ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes based of the flooring and adhesive manufacturer’s recommendations or requirements.
   a. ASTM F 1869 Testing: One test shall be conducted for every 1000 square feet of flooring and the results not to exceed the value required by the floor or adhesive manufacturer per 100 square feet per 24 hours whichever is more stringent.

b. ASTM F 2170 Testing: Preform three (3) tests for the first 1000 square feet and at least one additional test for each additional 1000 square feet of flooring and the results shall not to exceed the value required by the floor or adhesive manufacturer whichever is more stringent.

3. Perform alkalinity and adhesion tests recommended in writing by manufacturer.

4. Subfloor finishes comply with requirements specified in Section 03300 - CAST-IN-PLACE CONCRETE for slabs receiving resilient flooring.

5. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.

C. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. General: Comply with resilient product manufacturer's written installation instructions for preparing substrates indicated to receive resilient products.

B. Apply the specified vapor retarder or approved equal in strict accordance to the manufacturer’s written instructions.

C. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates. Substrate tolerance: level to within 1/8" in 10' at all locations.

D. Remove coatings, including curing compounds, and other substances that act as bond breakers and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.

E. Broom and vacuum clean substrates to be covered immediately before product installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust.

3.03 FLOOR INSTALLATION, GENERAL

A. General: Comply with tile manufacturer's written installation instructions.

B. Scribe, cut, and fit floor covering to butt neatly and tightly to vertical surfaces and permanent fixtures, including built-in furniture, cabinets, pipes, outlets, edgings, door frames, thresholds, and nosings.

C. Extend floor covering into toe spaces, door reveals, closets, and similar openings.

D. 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 chalk or other nonpermanent, nonstaining marking device.

E. Adhere floor coverings to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

F. Flooring to be adhered to the concrete slab in all locations eliminating the possibility of waves or wrinkles forming caused by the floor shifting, moving or by rolling loads displacing it

3.04 SHEET VINYL INSTALLATION

A. Unroll sheet vinyl floor coverings and allow them to stabilize before cutting and fitting. Lay out sheet vinyl flooring maintaining uniformity of floor covering direction. Minimize the number of seams keeping seams a minimum 6-inches away from parallel joints in the floor covering. Match edges of flooring for color shading at seams. Avoid cross seams.

B. Heat-Welded Seams: Comply with ASTM F 1516. Rout joints and use welding bead to permanently fuse sections into a seamless floor covering. Prepare, weld, and finish seams to produce surfaces flush with adjoining floor covering surfaces.

C. Integral-Flash-Cove Base: Cove floor coverings 4 inches up vertical surfaces. Support floor coverings at horizontal and vertical junction by cove strip. Butt at top against cap strip.

3.05 CLEANING AND PROTECTING

A. Perform the following operations immediately after installing resilient products:

1. Remove adhesive and surface blemishes using cleaner recommended by resilient product manufacturers.
2. Sweep or vacuum floor thoroughly.
3. Do not wash floor until after time period recommended by flooring manufacturer.

B. Protect flooring against mars, marks, indentations, and other 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 flooring manufacturer.

1. Cover products installed on floor surfaces with undyed, untreated building paper until inspection for Substantial Completion.
2. Do not move heavy and sharp objects directly over floor surfaces. Place plywood or hardboard panels over flooring and under objects while they are being moved. Slide or roll objects over panels without moving panels.

C. Clean floor surfaces not more than 4 days before dates scheduled for inspections intended to establish the Substantial Completion date in each area of Project. Clean products according to manufacturer's written recommendations.

END OF SECTION