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SECTION 09660 - RESILIENT FLOORING

**PART 1 GENERAL**

1.01 SUMMARY

A. Section Includes:

1. Vinyl floor tile, base and required accessories.

1.02 REFERENCE STANDARDS

- A. Comply with the latest editions of all applicable codes and regulations including the following:
1. ASTM: F489 Static Coefficient of Friction of Shoe Sole and Heel Materials as Measured by the James Machine.
  2. ASTM: F609 Static Slip Resistance of Footwear Sole, Heel, or Related Materials by Horizontal Pull Slip meter (HPS).
  3. NBS: Technical Note 895.
  4. RTI: Installation Specifications for Vinyl Composition Tile Flooring.

1.03 QUALITY ASSURANCE

- A. Manufacturer: Provide each type of resilient flooring and accessories as produced by a single manufacturer, including recommended primers, adhesives, sealants, and leveling compounds.
- B. Fire Test Performance: Provide resilient flooring which complies with the required fire test performance criteria as determined by an independent testing laboratory acceptable to authorities having jurisdiction.
- C. Allowable tolerance: 1/8 in. in 10 ft. from indicated plane or elevation.
- D. Color and pattern matching: Provide tile from the same manufacturing lot to complete each individual area and space contiguous to that area.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each type of resilient flooring and accessory. Include copy of maintenance and cleaning instructions to be used during construction and to be furnished to Owner.
- B. Samples: Submit 2 samples of each type, color, and pattern of resilient flooring specified, showing full range of color and pattern variations.

1. Tile samples as requested by the Resident shall be a minimum of 12" x 12".
  2. 12 in. long samples of resilient flooring accessories.
- C. Maintenance data and instructions: Provide manufacturer's recommendations.
- D. Friction test reports for resilient tile flooring: Submit tests reports to Resident.

#### 1.05 PROJECT CONDITIONS

- A. Maintain rooms and subfloors receiving vinyl tiles between 70 and 85 degrees F for a minimum of 48 hours before, during and after installation of tile.

#### 1.06 EXTRA MATERIALS

- A. Furnish additional floor covering materials for replacement and maintenance stock. Furnish each size, color, pattern, and type of material included in the work, from same manufactured lot as materials installed and enclosed in protective packaging with appropriate identifying labels.
1. Resilient tile: Furnish one box for each 50 boxes, or fraction thereof, installed in the project.
  2. Reducer strips and base: Furnish 5% of lineal footage installed in the Project, but not less than 20 ft. for each style, color, and size.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver to project site in good condition in manufacturer's unopened containers with product data clearly marked on.
- B. Store materials in area protected from temperature and weather extremes and maintained between 65 to 100 degrees F.

#### 1.08 WARRANTY

- A. Provide a minimum 1-year warranty for defects in materials and workmanship.

## **PART 2 PRODUCTS**

### 2.01 ACCEPTABLE MANUFACTURERS

- A. Vinyl Composition tile:
1. Armstrong Cork Co.
  2. Azrock Floor Products Div. of Ulvade Rock Asphalt Co.
  3. GAF Corp.
  4. Kentile Floors

B. Resilient wall base:

1. Burke Flooring Products Div. of Burke Industries.
2. Flexco Div. of Textile Rubber Co. Inc.
3. Mercer Plastics Co. Inc.
4. The Johnson Rubber Co.
5. R.C. Musson.
6. Roppe Rubber Corp.

C. Resilient reducer strips:

1. The Johnson Rubber co.
2. Mercer Plastics Co. Inc.
3. Roppe Rubber Corp.

D. Equivalent products of other manufacturers which meet the requirements of the Drawings and this Section may be provided if approved by the Resident.

2.02 MATERIALS

A. Vinyl composition tile: ASTM F1066, composition 1, Class 2, FS SS-T-312, Type IV, for heavy traffic areas, 12 in. x 12 in. face size by 1/8 in. thick, color as selected by Resident.

1. Coefficient of friction shall be not less than .50 in accord with NBS Technical Note 895. Tests made in accord with ASTM F489 and F609. If tests have been made by tile manufacturer, submit tests reports to Resident.

B. Resilient Wall Base: Vinyl base, FS SS-W-40, Type II, with matching end stops and preformed or molded internal and external corner units, color as selected by Resident.

1. General: Provide uncut factory rolls only.
2. Height: 4 inch.
3. Thickness: 1/8 in. gage.
4. Style: Standard top-set cove, Style B.
5. Finish: Matte.
6. Color: As selected by Resident.

C. Resilient Edge Strips: Homogeneous vinyl composition, tapered edge, color to match flooring, or as selected by Resident from available standard colors. Width of a minimum of 1 inch x 1/8 inch thickness to match adjacent tile thickness.

D. Adhesive: Provide adhesive as recommended by the flooring manufacturer to suit material and substrate conditions for each flooring product and conditions of installation. Provide manufacturer's accepted urethane formulated cove base adhesive for installation of vinyl wall base.

E. Primer: Non-staining type recommended by floor covering manufacturer.

- F. Crack Filler, Leveling and Patching Compounds: Latex type as recommended by floor covering manufacturer.
- G. Cleaner, wax and other finishing material: Type recommended by floor covering manufacturer for the particular type of flooring material.

### **PART 3 EXECUTION**

#### 3.01 EXAMINATION

- A. Inspect subfloors and walls for acceptable installation conditions. Examine subfloor surfaces to determine that they are smooth and free from cracks, holes, ridges, coatings preventing adhesive bond, and other defects impairing performance or appearance. Minimum subfloor variation from scope or level: 1/8 inch in 10 feet. Proceed only when conditions for installation are proper and correct.
- B. Bond and Moisture Test: Perform bond and moisture tests to determine suitability of concrete subfloors to receive tile shall be tested as recommended by the flooring manufacturer to determine moisture content.
- C. Do proceed with resilient flooring work until subfloor surfaces are satisfactory

#### 3.02 CONDITION OF SURFACES

- A. Concrete Substrates: Dry, plane, smooth steel trowel finish, without raised joints, pits or bond-breaking substances at surface, and cured not less than 28 days.
  - 1. Repair defects by grinding high spots and filling depressions with a non-shrinking, feathering, water resistant latex patching compound approved by the tile manufacturer. Do not use plaster type patching compounds.
  - 2. Test slabs for moisture content using rubber mats laid on the floor for 24 hours, or, if more precise measurements are required, through test procedures recommended by the Rubber Manufacturers Association.
  - 3. Do not install flooring materials on concrete surfaces that have been exposed to wet weather within 21 days before installation begins.
- B. Install flooring when temperature of the slab has been above 60°F for the last 24 hours, and maintain the same minimum temperature for 48 hours after completion.
- C. Application of flooring constitutes acceptance of the substrate as being in suitable condition for the satisfactory performance of the tile.

#### 3.03 PREPARATION

- A. Clean floor and remove adhered materials. If wet methods are used for cleaning, allow surface to dry before proceeding. A. Use leveling and patching compounds as recommended

by resilient flooring manufacturer for filling small cracks, holes and depressions in subfloors.

1. Remove curing or hardening compounds, if detrimental to adhesive bonding, by sanding or grinding. Only treating compounds approved by the Resilient Floor Covering Institute will be considered non-detrimental.
  2. Treat floors with dusting problems or showing other defects that may impair bonding with sealers or surface treatment materials recommended by the flooring manufacturer and approved by Resident.
- B. Broom clean or vacuum surfaces to be covered.
- C. Apply concrete slab primer as recommended by flooring manufacturer, prior to application of adhesive.

### 3.04 INSTALLATION OF FLOORING

- A. Installation shall be in accordance with the manufacturer's instructions following direction for trowel notching, coverage, open time and safety precautions. If conflict occurs between this section and manufacturers instructions, the more stringent of the two shall apply. Extend resilient flooring into toe spaces, door reveals, and into closets and similar areas.
- B. Lay out from the center of main spaces so that cut units are held to a minimum, and occur at the borders and inconspicuous locations. Avoid cut tiles less than one-half full size at room perimeters. Run tile under cabinets where the floor is exposed to view, into closets and recesses unless a different finish is scheduled. Scribe, cut, and fit neatly resilient flooring to permanent fixtures, built-in furniture and cabinets, pipes, outlets and permanent columns, walls, partitions and other terminations or penetrations.
- C. Lay tile with grain running in one direction.
1. Set tile in checkerboard pattern with unbroken joints parallel to main walls, and directional pattern in the tile in one direction only, unless a different pattern is selected by the Resident.
  2. Install pattern selected by the Resident, where different from the above standard, at no additional cost to the Owner.
- D. Prime porous substrates. Lay tile in coat of adhesive, roll into adhesive, and wipe up excess.
- E. Carry tile within 1/4" of walls so that base toes cover exposed edges.
- F. Lay tile square to room axis, unless otherwise shown.
- G. Tightly cement resilient flooring to sub-base using full spread of adhesive applied in compliance with flooring manufacturer's directions. Apply flooring without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections. Hand roll resilient flooring at perimeter of each covered area to assure adhesion.

- H. Walk down or roll tile until firmly embedded, without lifted sides or corners.
  - 1. Replace damaged tiles, repair deficient work, and clean excess adhesive from the surface.

### 3.05 INSTALLATION OF BASE

- A. Provide bases with outstanding toe at hard flooring materials. Set bases solidly on floor so that toe is compressed upward, keeping the top of the base straight. Repair floor or wall at locations where bases do not butt firmly against floor.
- B. Provide flush bottom bases at carpet and at stair skirts.
- C. Wipe or roughen backs of bases for maximum adhesion. Set bases in full bed of base adhesive.
  - 1. Where premolded corners will not fit, heat and bend base runners to conform to required angle. Make no joints within 8" of corners. If portions of base spring away from wall, heat to reduce pull and re-adhere.
- D. Provide beveled edge strips at edges exposed to view.
- E. Apply wall base to walls, columns, pilasters, casework and other permanent fixtures in rooms or areas where base is scheduled.
- F. Install base in lengths as long as practicable, with preformed corner units, with mitered or coped inside corners.
- G. Tightly bond base to substrate throughout length of each piece, with continuous contact at horizontal and vertical surfaces.
- H. On masonry surfaces, or other similar irregular substrates, fill voids along top edge of resilient wall base with manufacturer's recommended adhesive filler material.

### 3.06 INSTALLATION OF EDGE STRIPS

- A. Provide at locations where floor covering terminates exposing the edge of the covering.
- B. Place resilient edge strips tightly butted to flooring and secure with adhesive. Install edging strips at edges of flooring which would otherwise be exposed.
- C. Cut materials to lengths and sizes required for installation.
- D. Apply adhesives and bond securely to substrates in straight true lines.

- E. Meet visible and related features of building construction with a maximum deviation of 1/8 in. in 10 ft.
- F. Center under door, where floor covering terminates at door openings.
- G. Fit end edges to door frames and abutting surfaces and other edges to adjoining materials.

### 3.07 CLEANING AND MAINTENANCE

- A. Upon completion of the installation, after the period of time recommended by the flooring manufacturer, perform initial maintenance as follows:
  - 1. Sweep or vacuum floor thoroughly.
  - 2. Damp mop. Remove black marks, scuffing, stains. Do not wash floor until time period recommended by resilient flooring manufacturer has elapsed to allow resilient flooring to become well-sealed in adhesive.
  - 3. Apply two coats of slip resistant wax or other floor polish approved by flooring manufacturer, following instructions of the polish manufacturer.
  - 4. Do not wash the floor for at least four or five days after installation to prevent excess moisture from interfering with adhesion.
  - 5. Remove any excess adhesive or other surface blemishes, using appropriate cleaner recommended by resilient flooring manufacturers.
- B. Protect floor from rolling loads for 48 hours after installation by covering with hardboard or plywood, and from normal traffic and construction soiling by covering with untreated non-staining paper until final acceptance.
- C. Apply protective floor polish to resilient flooring surfaces free from soil, excess adhesive or surface blemishes. Use commercially available metal cross-linked acrylic product acceptable to resilient flooring manufacturer.

END OF SECTION