

PART 1 - GENERAL

1.1 WORK INCLUDES

- A. Base Bid: Unless noted otherwise, the General Prime Contractor shall provide all labor and materials for the complete installation of work as specified in this section.
  - 1. Solid vinyl floor tile.
  - 2. Rubber floor tile.
  - 3. Vinyl composition floor tile.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.3 RELATED WORK

- A. Related Requirements:
  - 1. Section 024119 "Selective Demolition" for removing existing floor coverings.
  - 2. Section 096513 "Resilient Base and Accessories", Section 096519 "Resilient Tile Flooring" for resilient wall base and accessories installed with carpet tile.
  - 3. Section 096816 "Sheet Carpeting" for carpet roll goods.

1.4 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. LEED Submittals:
  - 1. Product Data for Credit IEQ 4.1: For adhesives and sealants, documentation including printed statement of VOC content.
  - 2. Laboratory Test Reports for Credit IEQ 4.1: For adhesives, documentation indicating that products comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

3. Product Data for Credit IEQ 4.3: For adhesives, documentation including printed statement of VOC content.
  4. Product Data for Credit IEQ 4.3: For resilient tile flooring, documentation from an independent testing agency indicating compliance with the FloorScore standard.
  5. Laboratory Test Reports for Credit IEQ 4.3: For flooring system, documentation indicating that products comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- C. Shop Drawings: For each type of floor tile. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.
1. Show details of special patterns.
- D. Samples: Full-size units of each color and pattern of floor tile required.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Maintenance data.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
- B. FloorScore Compliance: Resilient tile flooring shall comply with requirements of FloorScore certification.
- C. Low-Emitting Materials: Flooring system shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

#### 2.2 SOLID VINYL FLOOR TILE

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
1. Mannington Mills, Inc.
  2. Tandus; A Tarkett Company
  3. Mohawk Group
- B. Tile Standard: ASTM F 1700.

1. Class: As indicated by product designations
  2. Type: [**A, smooth surface**] [**B, embossed surface**].
- C. Thickness: [**0.080 inch**] [**0.100 inch**] [**0.120 inch**] [**0.125 inch**].
- D. Size: As selected by Architect.
- E. Colors and Patterns: As selected by Architect from full range of industry colors.

### 2.3 RUBBER FLOOR TILE

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
1. Mannington Mills, Inc.
  2. Roppe
  3. Johnsonite
- B. Tile Standard: ASTM F 1344, [**Class I-A, homogeneous rubber tile, solid color**] [**Class I-B, homogeneous rubber tile, through mottled**] [**Class II-A, laminated rubber tile, solid-color wear layer**] [**Class II-B, laminated rubber tile, mottled wear layer**].
- C. Hardness: Manufacturer's standard hardness, measured using Shore, Type A durometer per ASTM D 2240.
- D. Wearing Surface: [**Smooth**] [**Textured**] [**Molded pattern**].
1. Molded-Pattern Figure: [**Raised discs**] [**Raised squares**].
- E. Thickness: 0.125 inch
- F. Size: As selected by Architect.
- G. Colors and Patterns: As selected by Architect from full range of industry colors.

### 2.4 VINYL COMPOSITION FLOOR TILE

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
1. Mannington Mills, Inc., Touchstone
  2. Armstong
  3. Johnsonite
- B. Tile Standard: ASTM F 1066, [**Class 1, solid-color**] [**Class 2, through-pattern**] [**Class 3, surface-pattern**] tile.
- C. Wearing Surface: [**Smooth**] [**Embossed**].
- D. Thickness: 0.125 inch.

- E. Size: 12 by 12 inches.
- F. Colors and Patterns: As selected by Architect from full range of industry colors.

## 2.5 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.
  - 1. Adhesives shall comply with the following limits for VOC content:
    - a. Vinyl Composition Tile Adhesives: 50 g/L or less.
    - b. Rubber Floor Adhesives: 60 g/L or less.
  - 2. Adhesives shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- C. Floor Polish: Provide protective, liquid floor-polish products recommended by floor tile manufacturer.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare according to ASTM F 710.
  - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  - 2. Remove substrate coatings and other substances that are incompatible with installation adhesives and flooring products. This includes any surface materials, such as paint, wax, grease, oil, adhesive residues, etc. Floors must be free of any sealers, curing, hardening or parting compounds that would adversely affect the adhesive used with the flooring. Refer to ACI and ASTM F170.
  - 3. A vapor retarder shall be installed prior to pouring of on-grade or below-grade slabs.
  - 4. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
    - a. Alkalinity: Minimum 7.0 pH and Maximum 10.0 pH per ASTM F710
  - 5. Moisture Testing: Owner's testing agency to perform recommended moisture test according to floor covering manufacturer as follows. Proceed with installation only after substrates pass testing.

- a. Perform relative humidity test using in situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 85% relative humidity level measurement.
  - b. Perform anhydrous calcium chloride test, ASTM F 1869, only if recommended by manufacturer. Proceed with installation only after substrates have maximum of 10 lb moisture-vapor-emission rate.
  - c. If moisture related failure occurs, the Relative Humidity Test (ASTM F 2170) results will be the qualifying standard.
- C. Access Flooring Panels: Remove protective film of oil or other coating using method recommended by access flooring manufacturer.
  - D. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
  - E. Do not install floor tiles until they are the same temperature as the space where they are to be installed.
  - F. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

### 3.2 FLOOR TILE INSTALLATION

- A. Comply with manufacturer's written instructions for installing floor tile.
- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
  - 1. Lay tiles: Verify with Architect.
- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
  - 1. Lay tiles: Verify with Architect.
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.

- G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.
- H. Adhere floor tiles to flooring 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.

### 3.3 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.
- B. Floor Polish: Remove soil, adhesive, and blemishes from floor tile surfaces before applying liquid floor polish.
  - 1. Apply three coats.
- C. Cover floor tile until Substantial Completion.

END OF SECTION 09 65 19