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### 093000 - Tiling

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## SECTION 09 3000 - TILING

### 1.1 SUMMARY

- A. The University prefers to use regional materials within a 500 mile radius of the campus.
- B. Section Includes:
  - 1. Ceramic tile.
  - 2. Stone thresholds.
  - 3. Waterproof membrane.
  - 4. Crack isolation membrane.
  - 5. Tile backing panels.
  - 6. Metal edge strips.
- C. General:
  - 1. Provide ceramic tile floors, ceramic tile or structural glazed tile walls, in all toilet areas.
  - 2. Custom color ceramic tile is not permitted.
  - 3. All floors shall a ceramic tile base with an acid-resistant grout.
  - 4. White grout shall not be used.
  - 5. Bathroom and Shower walls shall have full field tile floor to ceiling unless otherwise specified. Tile walls shall be coordinated with all fixtures and installed hardware so that such installed items coordinate with a full tile. No half tile landings are permitted.

### 1.2 PERFORMANCE REQUIREMENTS

- A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:
  - 1. Level Surfaces: Minimum 0.6.
  - 2. Step Treads: Minimum 0.6.
  - 3. Ramp Surfaces: Minimum 0.8.

### 1.3 SUBMITTALS

- A. LEED Submittal:
  - 1. Product Data for Credit EQ 4.1: For adhesives and sealants, including printed statement of VOC content.

1.4 EXTRA MATERIALS

- A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Tile and Trim Units: Furnish quantity of full-size units equal to 1 sq. ft. for each 200 sq. ft. of tile provided.

1.5 PRODUCTS, GENERAL

- A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.
  - 1. Provide tile complying with Standard grade requirements unless otherwise indicated.
- B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCA installation methods specified in tile installation schedules, and other requirements specified.

1.6 TILE PRODUCTS

- A. Tile Type: Factory-mounted unglazed and glazed ceramic mosaic tile.
  - 1. Composition: Porcelain.
  - 2. Module Size: 2 by 2 inches (50.8 by 50.8 mm).
  - 3. Thickness: 1/4 inch (6.35 mm).
  - 4. Face: Plain with cushion edges.

1.7 THRESHOLDS

- A. Marble Thresholds: ASTM C 503, with a minimum abrasion resistance of 10 per ASTM C 1353 or ASTM C 241 and with honed finish.
  - 1. Description: Uniform, fine- to medium-grained white stone with gray veining.

1.8 WATERPROOF MEMBRANE

- A. Chlorinated Polyethylene Sheet: Nonplasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric; 0.030-inch (0.76-mm) nominal thickness.
  - 1. Product: Noble Company (The); Nobleseal TS.

1.9 CRACK ISOLATION MEMBRANE

- A. Chlorinated Polyethylene Sheet: Nonplasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric; 0.030-inch (0.76-mm) nominal thickness.
  - 1. Product: Noble Company (The); Nobleseal CIS.

1.10 SETTING MATERIALS

- A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
  - 1. Cleavage Membrane: Asphalt felt, ASTM D 226, Type I (No. 15); or polyethylene sheeting, ASTM D 4397, 4.0 mils (0.1 mm) thick.
  - 2. Reinforcing Wire Fabric: Galvanized, welded wire fabric, 2 by 2 inches (50.8 by 50.8 mm) by 0.062-inch (1.57-mm) diameter; comply with ASTM A 185 and ASTM A 82 except for minimum wire size.
- B. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.
  - 1. Provide prepackaged, dry-mortar mix combined with acrylic resin or styrene-butadiene-rubber liquid-latex additive at Project site.
- C. Water-Cleanable, Tile-Setting Epoxy: ANSI A118.3, with a VOC content of 65 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

1.11 GROUT MATERIALS

- A. Acid Resistant Cement Grout: ANSI A118.6.
- B. Grout: ANSI A118.3.

1.12 INTERIOR TILE INSTALLATION SCHEDULE

- A. Interior Floor Installations, Concrete Subfloor:
  - 1. Tile Installation F113: Thin-set mortar; TCA F113.
    - a. Thin-Set Mortar: Latex- Portland Cement mortar.
    - b. Grout: Polymer-modified sanded grout.
  - 2. Tile Installation F121: Cement mortar bed (thickset) on waterproof membrane; TCA F121 and ANSI A108.1A.
    - a. Thin-Set Mortar for Cured-Bed Method: Latex- Portland Cement mortar.
    - b. Grout: Polymer-modified sanded grout.
  - 3. Tile Installation F122: Thin-set mortar on waterproof membrane; TCA F122.
    - a. Thin-Set Mortar: Latex- Portland Cement mortar.

- b. Grout: Polymer-modified sanded grout.
- B. Interior Wall Installations, Masonry or Concrete:
- 1. Tile Installation W202: Thin-set mortar; TCA W202.
    - a. Thin-Set Mortar: Latex- Portland Cement mortar.
    - b. Grout: Polymer-modified unsanded grout.
  - 2. Tile Installation W244: Thin-set mortar on cementitious backer units or fiber cement underlayment over cleavage membrane; TCA W244.
    - a. Thin-Set Mortar: Latex- Portland Cement mortar.
    - b. Grout: Polymer-modified unsanded grout.
- C. Interior Wall Installations, Metal Studs or Furring:
- 1. Tile Installation W244: Thin-set mortar on cementitious backer units or fiber cement underlayment; TCA W244.
    - a. Thin-Set Mortar: Latex- Portland Cement mortar.
    - b. Grout: Polymer-modified unsanded grout.
- D. Shower Receptor and Wall Installations, Concrete or Masonry:
- 1. Tile Installation B421: Thin-set mortar on waterproof membrane; TCA B421.
    - a. Thin-Set Mortar: Latex- Portland Cement mortar.
    - b. Grout: Polymer-modified unsanded grout.
- E. Shower Receptor and Wall Installations, Metal Studs or Furring:
- 1. Tile Installation B421: Thin-set mortar on waterproof membrane over cementitious backer units or fiber cement underlayment; TCA B421.
    - a. Thin-Set Mortar: Latex- Portland Cement mortar.
    - b. Grout: Polymer-modified unsanded grout.

END OF SECTION 09 3000