

PART 1 GENERAL**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Porcelain tile.
 - 2. Ceramic tile.
 - 3. Stone thresholds.
 - 4. Waterproof membrane.
- B. Related Sections:
 - 1. Division 1 Section "Sustainable Design Requirements".
 - 2. Division 7 Section "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.
 - 3. Division 9 Section "Gypsum Board" for glass-mat, water-resistant backer board.

1.3 DEFINITIONS

- A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.
- B. ANSI A108 Series: ANSI A108.01, ANSI A108.02, ANSI A108.1A, ANSI A108.1B, ANSI A108.1C, ANSI A108.4, ANSI A108.5, ANSI A108.6, ANSI A108.8, ANSI A108.9, ANSI A108.10, ANSI A108.11, ANSI A108.12, ANSI A108.13, ANSI A108.14, ANSI A108.15, ANSI A108.16, and ANSI A108.17, which are contained in "American National Standard Specifications for Installation of Ceramic Tile."
- C. Module Size: Actual tile size plus joint width indicated.
- D. Face Size: Actual tile size, excluding spacer lugs.

1.4 QUALITY ASSURANCE

- A. The work of this section shall be performed by a company which specializes in the type of tiling work required for this Project, with a minimum of 5 years of documented successful experience and shall be performed by skilled workmen thoroughly experienced in the necessary crafts.
 - 1. Work shall be performed in compliance with Owner's insurance underwriters' requirements and UL approvals and testing for materials, assemblies and procedures.
- B. Manufacturer shall specialize in manufacturing the type of tiling specified in this section, with a minimum of 5 years of documented successful experience, and have the facilities capable of meeting all requirements of Contract Documents as a single-source responsibility and warranty.
- C. Source Limitations for Tile: Obtain tile of each type and color or finish from one source or producer.
 - 1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.
- D. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from one manufacturer and each aggregate from one source or producer.
- E. Source Limitations for Other Products: Obtain each of the following products specified in this Section from a single manufacturer for each product:
 - 1. Stone thresholds.
 - 2. Waterproof membrane.
 - 3. Joint sealants.
- F. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review requirements in ANSI A108.01 for substrates and for preparation by other trades.

- G. Manufacturer's identification tags or marks are not acceptable on surfaces which will remain exposed to view after installation.
 - 1. Evidence of "patching" after removal of tags or marks is not acceptable.

1.5 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 C1028:
 - 1. Level Surfaces: Minimum 0.06.

1.6 SUBMITTALS

- A. Submit the following according to Conditions of the Construction Contract and Division 1 Specification Sections.
- B. Product Data: For each type of product indicated.
- C. LEED Submittal:
 - 1. Product Data for Credit EQ 4.1: For adhesives and sealants, including printed statement of VOC content.
 - 2. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
 - 3. Product Data for Credit MR 5.1 and Credit MR 5.2: For products and materials required to comply with criteria for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
 - 4. LEED Submittal: EQc4.3 – Provide manufacturer's product data, including certificates stating that all flooring materials comply with:
 - a. Hard Surface Flooring Materials: FloorScore Standard.
 - b. Tile Setting Adhesives and Grouts – Sealers: SCAQMD Rule 1168, VOC limits corresponding to an effective date of July 1, 2005 and rule amendment date of January 7, 2005.
- D. Shop Drawings: Show locations of each type of tile and tile pattern.
 - 1. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.
 - 2. Tile patterns with full layout of all tile surfaces.
 - 3. Locations of access doors and fixtures.
- E. Samples for Initial Selection: For each type of tile and grout indicated. Include Samples of accessories involving color selection.
- F. Samples for Verification:
 - 1. Full-size units of each type and composition of tile and for each color and finish required. For porcelain tile in color blend patterns, provide full sheets of each color blend.
 - 2. Assembled samples mounted on a rigid panel, with grouted joints, for each type and composition of tile and for each color and finish required. Make samples at least 12 inches (300 mm) square, but not fewer than 4 tiles. Use grout of type and in color or colors approved for completed Work.
 - 3. Full-size units of each type of trim and accessory for each color and finish required.
 - 4. Stone thresholds in 6-inch (150-mm) lengths.
- G. Qualification Data: For qualified Installer.
- H. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.
- I. Product Certificates: For each type of product, signed by product manufacturer.
- J. Material Test Reports: For each tile-setting and -grouting product.
- K. Hazardous Materials Notification: In the event no product or material is available that does not contain asbestos, PCB or other hazardous materials as determined by the Owner, a "Material Safety Data Sheet" (MSDS) equivalent to OSHA Form 20 shall be submitted for that proposed product or material prior to installation.

- L. Asbestos and PCB Certification: After completion of installation, but prior to Substantial Completion, Contractor shall certify in writing that products and materials installed, and processes used, do not contain asbestos or polychlorinated biphenyls (PCB), using format in Article 3 of General Conditions.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with General Conditions and Division 1 Section "Product Requirements."
- B. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.
- C. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.
- D. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.
- E. Store liquid materials in unopened containers and protected from freezing.
- F. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

1.9 WARRANTY

- A. Comply with General Conditions and Division 1 Section "Product Requirements".

1.10 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 3 percent of amount installed for each type, composition, color, pattern, and size indicated.
 2. Grout: Furnish quantity of grout equal to 3 percent of amount installed for each type, composition, and color indicated.

PART 2 PRODUCTS

2.1 UNAUTHORIZED MATERIALS

- A. Materials and products required for work of this section shall not contain asbestos, polychlorinated biphenyls (PCB) or other hazardous materials identified by the Owner.

2.2 ACCEPTABLE MANUFACTURERS

- A. Products of the manufacturers specified in this section establish the minimum functional, aesthetic and quality standards required for work of this section.
- B. Substitutions: Comply with General Conditions using form in Division 1 Section "Substitution Request Form."

2.3 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.

- C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.
- D. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.
 - 1. Where tile is indicated for installation in wet areas, do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance.
- E. Factory-Applied Temporary Protective Coating: Where indicated under tile type, protect exposed surfaces of tile against adherence of mortar and grout by precoating with continuous film of petroleum paraffin wax, applied hot. Do not coat unexposed tile surfaces.
- F. Recycled Content: For materials containing post-industrial (pre-consumer) and/or post-consumer recycled content, Contractor shall document the cost and percentage (by weight) of each material broken out by post-industrial (pre-consumer) and post-consumer content.
- G. VOC Content: Adhesive and sealants used inside the waterproofing system and applied on site shall have VOC content equal to or less than the applicable VOC limits. Refer to Division 1 Section "Sustainable Design Requirements" for additional information.
- H. Flooring products shall meet the following requirements:
 - 1. Hard Surface Flooring Materials: Materials shall meet or exceed FloorScore Standard.
 - 2. Tile Settings Adhesives and Grouts: Sealers shall meet or exceed SCAQMD Rule 1168, VOC limits corresponding to an effective date of July 1, 2005 and rule amendment date of January 7, 2005.

2.4 TILE PRODUCTS

- A. Floor Tile Type: **CT-1**.
 - 1. Manufacturer: Casalgrande Padana.
 - 2. Series: Granitoker.
 - 3. Style: Metalwood.
 - 4. Color: Platino.
 - 5. Size: 12" x 24" x 3/8".
 - 6. Finish: Matte.
- B. Floor Accent Tile Type: **CT-2**.
 - 1. Manufacturer: Casalgrande Padana.
 - 2. Series: Granitoker.
 - 3. Style: Metalwood.
 - 4. Color: Argento.
 - 5. Size: 12" x 24" x 3/8".
 - 6. Finish: Matte.
- C. Wall Tile Type: **CT-3**.
 - 1. Manufacturer: Casalgrande Padana.
 - 2. Series: Granitoker.
 - 3. Style: Metalwood.
 - 4. Color: Platino.
 - 5. Size: 12" x 24" x 3/8".
 - 6. Finish: Matte.
- D. Wall Base Tile Type: **CT-4**.
 - 1. Manufacturer: Casalgrande Padana.
 - 2. Series: Granitoker.
 - 3. Style: Metalwood.
 - 4. Color: Argento.
 - 5. Size: 12" x 24" x 3/8".
 - 6. Finish: Matte.

- E. Shower Floor and Wall Tile Type: **CT-5**.
1. Manufacturer: Dal-Tile.
 2. Series: Keystones.
 3. Color: Artic White.
 4. Size: 3" x 3".
 5. Finish: Matte.

2.5 THRESHOLDS

- A. General: Fabricate to sizes and profiles indicated or required to provide transition between adjacent floor finishes.
1. Bevel edges at 1:2 slope, with lower edge of bevel aligned with or up to 1/16 inch (1.5 mm) above adjacent floor surface. Finish bevel to match top surface of threshold. Limit height of threshold to 1/2 inch (12.7 mm) or less above adjacent floor surface.
- B. Marble Thresholds: ASTM C503, with a minimum abrasion resistance of [10] [12] per ASTM C1353 or ASTM C241 and with honed finish.
1. Description: Match Architect's sample.

2.6 WATERPROOF MEMBRANE

- A. General: Manufacturer's standard product, that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.
- B. Chlorinated Polyethylene Sheet: Nonplasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric; 0.030-inch (0.76-mm) nominal thickness.
1. Products: Subject to compliance with requirements, provide the following:
 - a. Noble Company (The); Nobleseal TS.
- C. Fabric-Reinforced, Fluid-Applied Membrane: System consisting of liquid-latex rubber or elastomeric polymer and continuous fabric reinforcement.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Bostik, Inc.; Hydroment Blacktop 90210.
 - b. Laticrete International, Inc.; Laticrete 9235 Waterproof Membrane.
 - c. MAPEI Corporation; Mapelastc L (PRP M19).

2.7 SETTING MATERIALS

- A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
1. Cleavage Membrane: Asphalt felt, ASTM D226, Type I (No. 15); or polyethylene sheeting, ASTM D4397, 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 A185 and ASTM A82 except for minimum wire size.
 3. Expanded Metal Lath: Diamond-mesh lath complying with ASTM C847.
 - a. Base Metal and Finish for Interior Applications: Uncoated or zinc-coated (galvanized) steel sheet, with uncoated steel sheet painted after fabrication into lath.
 - b. Configuration over Studs and Furring: Flat.
 - c. Configuration over Solid Surfaces: Self furring.
 - d. Weight: 2.5 lb/sq. yd. (1.4 kg/sq. m).
 4. Latex Additive: Manufacturer's standard, acrylic resin, or styrene-butadiene-rubber water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed portland cement and aggregate mortar bed.
- B. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Laticrete International, Inc.
 - b. MAPEI Corporation.
 2. Provide prepackaged, dry-mortar mix containing dry, redispersible, vinyl acetate or acrylic additive to which only water must be added at Project site.
 3. Provide prepackaged, dry-mortar mix combined with acrylic resin or styrene-butadiene-rubber liquid-latex additive at Project site.
 4. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to the other requirements in ANSI A118.4.

- C. Organic Adhesive: ANSI A136.1, Type I, with a VOC content of 65 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Laticrete International, Inc.
 - b. MAPEI Corporation.

2.8 GROUT MATERIALS

- A. Polymer-Modified Tile Grout: ANSI A118.7.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Laticrete International, Inc.
 - b. MAPEI Corporation.
 - 2. Polymer Type: Ethylene vinyl acetate or acrylic additive, in dry, redispersible form, prepackaged with other dry ingredients.
 - 3. Polymer Type: Acrylic resin or styrene-butadiene rubber in liquid-latex form for addition to prepackaged dry-grout mix.

2.9 ELASTOMERIC SEALANTS

- A. General: Provide sealants, primers, backer rods, and other sealant accessories that comply with the following requirements and with the applicable requirements in Division 7 Section "Joint Sealants."
 - 1. Use sealants that have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - 2. Use primers, backer rods, and sealant accessories recommended by sealant manufacturer.
- B. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints unless otherwise indicated.

2.10 MISCELLANEOUS MATERIALS

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
- B. Temporary Protective Coating: Either product indicated below that is formulated to protect exposed surfaces of tile against adherence of mortar and grout; compatible with tile, mortar, and grout products; and easily removable after grouting is completed without damaging grout or tile.
 - 1. Petroleum paraffin wax, fully refined and odorless, containing at least 0.5 percent oil with a melting point of 120 to 140 deg F (49 to 60 deg C) per ASTM D87.
 - 2. Grout release in form of manufacturer's standard proprietary liquid coating that is specially formulated and recommended for use as temporary protective coating for tile.
- C. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.
- D. Grout Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Custom Building Products; Tile Lab Grout & Tile Sealer.

2.11 MIXING MORTARS AND GROUT

- A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
- B. Add materials, water, and additives in accurate proportions.
- C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 EXECUTION**3.1 EXAMINATION**

- A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.
 - 1. Verify that substrates for setting tile are firm, dry, clean, free of coatings that are incompatible with tile-setting materials including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
 - 2. Verify that concrete substrates for tile floors installed with adhesives or thin-set mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.
 - a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
 - b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.
 - 3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
 - 4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with adhesives or thin-set mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.
- B. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot (1:50) toward drains.
- C. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.
- D. Field-Applied Temporary Protective Coating: If indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.3 TILE INSTALLATION

- A. Comply with TCA's "Handbook for Ceramic Tile Installation" for TCA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 Series "Specifications for Installation of Ceramic Tile" that are referenced in TCA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.
 - 1. For the following installations, follow procedures in the ANSI A108 Series of tile installation standards for providing 95 percent mortar coverage:
 - a. Tile floors in wet areas.
- B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- D. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
 - 1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.
 - 2. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
 - 3. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.

- E. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
 - 1. Porcelain Tile: 1/16 inch (1.6 mm).
 - 2. Ceramic Tile: 1/16 inch (1.6 mm).
- F. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
 - 1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
 - 2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."
- G. Stone Thresholds: Install stone thresholds in same type of setting bed as adjacent floor unless otherwise indicated.
 - 1. At locations where mortar bed (thickset) would otherwise be exposed above adjacent floor finishes, set thresholds in latex-portland cement mortar (thin set).
 - 2. Do not extend waterproofing membrane under thresholds set in latex-portland cement mortar. Fill joints between such thresholds and adjoining tile set on waterproofing membrane with elastomeric sealant.
- H. Grout Sealer: Apply grout sealer to cementitious grout joints in tile floors according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

3.4 WATERPROOFING INSTALLATION

- A. Install waterproofing to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness and bonded securely to substrate.
- B. Do not install tile or setting materials over waterproofing until waterproofing has cured and been tested to determine that it is watertight.
- C. Flood Testing:
 - 1. Upon completion of waterproofing membrane work, flood testing is required in the presence of Architect and Owner's Representative.
 - 2. Dam the perimeter of completed waterproofing work as required to retain water for flood testing.
 - 3. Submerge entire waterproofing membrane area with clean water to a depth necessary to check all seams and perform flood testing for a minimum of 24 consecutive hours.
 - 4. Carefully observe for possible leaks.
 - a. If leaks occur, drain water and repair leaks as recommended by waterproofing membrane manufacturer, then submerge entire area again with clean water and continue flood testing for a minimum of 24 consecutive hours from the time each leak is repaired.
 - 5. Waterproofing membrane system must be completely watertight and accepted in writing by Architect before starting the tile work.

3.5 CLEANING AND PROTECTING

- A. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
 - 1. Remove latex-portland cement grout residue from tile as soon as possible.
 - 2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.
 - 3. Remove temporary protective coating by method recommended by coating manufacturer and that is acceptable to tile and grout manufacturer. Trap and remove coating to prevent drain clogging.
- B. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.
- C. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.
- D. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

3.6 INTERIOR TILE INSTALLATION SCHEDULE

- A. Interior Floor Installations, Concrete Subfloor:
1. Tile Installation F113: Thin-set mortar; TCA F113.
 - a. Tile Type: Porcelain or ceramic.
 - b. Thin-Set Mortar: Latex portland cement mortar.
 - c. Grout: Polymer-modified unsanded grout.
 - d. Locations: Dry Areas.
 2. Tile Installation F122: Thin-set mortar on waterproof membrane; TCA F122.
 - a. Tile Type: Porcelain or ceramic.
 - b. Thin-Set Mortar: Latex portland cement mortar.
 - c. Grout: Polymer-modified unsanded grout.
 - d. Locations: Wet Areas.
- B. Interior Wall Installations, Metal Studs or Furring:
1. Tile Installation W242: Organic adhesive on gypsum board; TCA W242.
 - a. Tile Type: Porcelain or ceramic.
 - b. Grout: Polymer-modified unsanded grout.
 - c. Locations: Dry Areas.
 2. Tile Installation W245: Thin-set mortar on coated glass-mat, water-resistant gypsum backer board; TCA W245.
 - a. Tile Type: Porcelain or ceramic.
 - b. Thin-Set Mortar: Latex portland cement mortar.
 - c. Grout: Polymer-modified unsanded grout.
 - d. Locations: Wet Areas.
- C. Bathtub/Shower Wall Installations, Metal Studs or Furring:
1. Tile Installation B411: Cement mortar bed (thickset); TCA B411 and ANSI A108.1A.
 - a. Tile Type: Ceramic.
 - b. Bond Coat Mortar for Wet-Set Method: Latex portland cement mortar.
 - c. Grout: Polymer-modified unsanded grout.
 - d. Location: Showers.

END OF SECTION