SECTION 09 30 50

TILE SETTING MATERIALS AND ACCESSORIES

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\*\* NOTE TO SPECIFIER \*\* SGM, membranes, underlayments, mortars, adhesives, grouts and accessories.

 This section is based on the products of SGM, Inc., which is located at:
 1502 S.W. 2nd Place
 Pompano Beach, FL 33069
 Toll Free Tel: (800) 641-9247
 Tel: (954) 943-2288
 Fax: (954) 943-2402
 Email: sales@sgm.cc.
 Website: [www.sgm.cc/html/Product.html](http://www.sgm.cc/html/Product.html)
 [ [Click Here](http://www.arcat.com/arcatcos/cos35/arc35619.cfm) ] for additional information.

 SGM manufactures a wide range of tile setting materials including membranes, underlayments, mortars, adhesives, grouts and accessories. Refer to our website for our extended product line, including spa and deck finishes, decorative concrete finishes, concrete repair and restoration products and plaster finishes.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Setting materials.
		2. Grout materials.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 09 30 00 - Tiling.
		2. Section 09 30 13 - Ceramic Tiling.
		3. Section 09 30 13 - Porcelain Tiling.
		4. Section 09 30 16 - Quarry Tiling.
		5. Section 09 30 19 - Paver Tiling.
		6. Section 09 30 23 - Glass Mosaic Tiling.
		7. Section 09 30 33 - Stone Tiling.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete any references below not relevant to this project. Add others as required.

* + 1. ANSI A108.6 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy.
		2. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework.
		3. ANSI A118.1 - American National Standard Specifications for Dry-Set Portland Cement Mortar.
		4. ANSI A118.3 - American National Standard Specifications for Chemical Resistant, Water Cleanable Tile Setting and Grouting Epoxy and Water Cleanable Tile Setting Epoxy Adhesive.
		5. ANSI A118.4 - American National Standard Specifications for Latex-Portland Cement Mortar.
		6. ANSI A118.6 - American National Standard Specifications for Ceramic Tile Grouts.
		7. ANSI A118.10 - American National Standard Specifications for Load Bearing, Bonded, Waterproof Membranes For Thin-Set Ceramic Tile And Dimension Stone Installations.
		8. ANSI A136.1 - American National Standard for Organic Adhesives for Installation of Ceramic Tile.
		9. TCA (HB) - Handbook For Ceramic Tile Installation; Tile Council of America.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00.
		2. [ [Product Data](http://www.arcat.com/arcatcos/cos35/arc35619.cfm) ]:
			1. Manufacturer's [ [Product Data](http://www.arcat.com/arcatcos/cos35/arc35619.cfm) ] indicating compliance with specified requirements.
			2. Manufacturer's installation instructions.
		3. Selection Samples:
			1. Grout Materials: For each grout type specified, minimum 2 inch (51 mm) long samples indicating manufacturer's full range of available colors.
		4. Verification Samples:
			1. Grout Colors: For each color, two 2 inch (51 mm) long samples.
			2. Accessories: For each accessory; two units, or two 12 inches (305 mm) long samples of linear accessories.
	2. QUALITY ASSURANCE
		1. Qualifications:
			1. Setting Materials and Grout Materials Manufacturer: Tile Council of America, Inc. Licensee for Dry-Set Mortar and Grouts, with minimum five years documented experience producing respective products specified in this section.
			2. Installer: Minimum five years documented experience installing respective products specified in this section.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project. Delete if not required.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
			1. Finish areas designated by Architect.
			2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
			3. Refinish mock-up area as required to produce acceptable work.
	1. DELIVERY, STORAGE AND HANDLING
		1. Deliver materials on site a minimum of 24 hours before use.
		2. Accept only materials in original containers, with seals unbroken and labels intact.
		3. Store materials in dry, heated area on site in original containers, with seals unbroken and labels intact, until time of use; prevent damage to materials such as chipping, breakage, freezing, or excessive heat; prevent contamination by water, moisture, foreign matter, or other causes.
	2. PROJECT CONDITIONS
		1. Maintain ambient and surface temperatures at minimum 60 degrees F (16 degrees C) during installation of cementitious materials and for 72 hours after installation.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph below if no epoxy materials in project.

* + 1. Maintain ambient and surface temperatures between 65 degrees F (18 degrees C) and 95 degrees F (35 degrees C) during installation of epoxy setting and grouting materials and for 72 hours after installation.
		2. Vent temporary heaters to outside to avoid carbon dioxide damage to new tilework.
1. PRODUCTS
	1. MANUFACTURERS

\*\* NOTE TO SPECIFIER \*\* Delete products listed below that are not required for project.

* + 1. Acceptable Manufacturer, Setting Materials and Grout: SGM, Inc.; 1502 S.W. 2nd Place, Pompano Beach FL 33069; ASD. Toll Free Te1: (800)641-9247. Tel: (954)943-2288, Fax: (954) 943-2402. E-mail: sales@sgm.cc . Website: [www.sgm.cc/html/Product.html.](http://www.sgm.cc/html/Product.html.)

\*\* NOTE TO SPECIFIER \*\* Delete one of the two paragraphs below; coordinate with Division 1 requirements.

* + 1. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.
		2. Substitutions: Not permitted.
		3. Supply each specified product from a single manufacturer; supply all setting materials and grout materials from a single manufacturer.
	1. MEMBRANES AND UNDERLAYMENTS

\*\* NOTE TO SPECIFIER \*\* Delete membranes and underlayments not required. If more than one of a particular generic type is required, give each a unique name or Type Number.

* + 1. Two-Part Membrane Underlayment:
			1. Acceptable Product: SGM, Inc.; Southcrete No.1100 Crack Suppression and Waterproofing Kit.
			2. Characteristics: Anti-fracture, load-bearing, bondable membrane material for bridging minor shrinkage cracks in substrate; conforming to ANSI A118.10.
		2. One-Part Liquid Anti-Fracture Underlayment:
			1. Acceptable Product: SGM, Inc.; Southcrete No.1132 Liquid Applied Membrane.
			2. Characteristics: Anti-fracture, load-bearing, bondable material for bridging minor shrinkage cracks in substrate.
		3. Self-Leveling Cementitious Underlayment:
			1. Acceptable Product: SGM, Inc.; Self-leveling Underlayment No. 815 (Cementitious).
			2. Characteristics: Portland cement, modified with acrylic admixtures for improved self-leveling and curing performance.
		4. Waterproof Membrane:
			1. Acceptable Product: SGM, Inc.; Southcrete 1132 Liquid Applied Membrane:
			2. Characteristics: Anti-fracture, load-bearing, bondable membrane material; conforming to ANSI A118.10.
		5. Sound Control Underlayment:
			1. Acceptable Product: SGM, Inc.; Southcrete 60 Sound Control.
			2. Characteristics: Lightweight cementitious underlayment designed to reduce sound transmission.
	1. MORTARS AND ADHESIVES

\*\* NOTE TO SPECIFIER \*\* Delete mortars and adhesives not required. If more than one mortar of a generic type is required, identify each with a unique name or Type Number.

* + 1. Dry-Set Mortar for Setting Ceramic, Mosaic and Quarry Tiles:
			1. Acceptable Product: SGM, Inc.; TCA-759 (Premium) Thinset Mortar.
			2. Characteristics: Portland cement and sand, with water-retentive admixtures, factory-mixed; conforming to ANSI A118.1.
		2. Dry-Set Mortar for Setting Absorptive, Semi-Vitreous and Vitreous Floor and Wall Tiles:
			1. Acceptable Product: SGM, Inc.; Floor and Wall Thinset Mortar No. 727.
			2. Characteristics: Portland cement and sand, with water-retentive admixtures, factory-mixed; conforming to ANSI A118.1.
		3. Latex-Portland Cement Mortar for Setting Absorptive, Semi-Vitreous and Vitreous Floor and Wall Tiles:
			1. Acceptable Product: SGM, Inc.; TCA-759 (Premium) Thinset Mortar, gauged with Southcrete 25 Acrylic Mortar Admixture.
			2. Characteristics: Dry-set mortar with latex to be used as replacement for all or part of gauging water; conforming to ANSI A118.4.
		4. Fast Setting, Latex-Portland Cement Mortar for Use Interior and Exterior for Floor and Wall Tiles :
			1. Acceptable Product: SGM, Inc.; Floor and Wall Thinset Mortar, gauged with Kwik Set Acrylic Mortar Admixture.
			2. Characteristics: Dry-set mortar with latex to be used as replacement for all or part of gauging water; conforming to ANSI A118.4.
		5. Latex-Portland Cement Mortar for Setting Absorptive, Semi-Vitreous and Vitreous Floor and Wall Tiles:
			1. Acceptable Product: SGM, Inc.; Floor and Wall Thinset Mortar No. 727, gauged with Southcrete 25 Acrylic Mortar Admixture.
			2. Characteristics: Dry-set mortar with latex to be used as replacement for all or part of gauging water; conforming to ANSI A118.4.
		6. Latex-Portland Cement Mortar for Use in Job-Site Mixes:
			1. Acceptable Product: SGM, Inc.; Southcrete 40, with Crete-Mix Filler Powder.
			2. Characteristics: Portland cement mortar with latex to be used as replacement for all or part of the gauging water; conforming to ANSI A118.4.
		7. Medium-Bed Latex-Portland Cement Mortar for Setting Large Ceramic Tiles, Translucent, White Marble or other Dimension Stone:
			1. Acceptable Product: SGM, Inc.; Marble Set.
			2. Characteristics: Portland cement mortar with dry polymers added in re-emulsifiable powder form, factory-mixed; conforming to ANSI A118.4.
		8. Portland Cement Mortar for Setting Impervious Porcelain, Large Format Tile and Glass Mosaics:
			1. Acceptable Product: SGM, Inc.; Porcelain Set.
			2. Characteristics: Portland cement mortar with dry polymers, factory-mixed; conforming to ANSI A118.4.
		9. Epoxy Mortar for use in Setting Green, Black or Moisture Sensitive Marble:
			1. Acceptable Product: SGM, Inc.; EGS 100% Epoxy Mortar & Grout.
			2. Characteristics: Chemical-resistant, water cleanable, 100 percent solids epoxy mortar; conforming to ANSI A118.3.
		10. Organic Adhesive for Setting Interior Wall and Floor Tile :
			1. Acceptable Product: SGM, Inc.; Southcrete 555 Floor & Wall Type 1 Adhesive.
			2. Characteristics: Conforming to ANSI A136.1, Type I.
	1. GROUTS

\*\* NOTE TO SPECIFIER \*\* Delete grout types not required. If more than one of a particular generic type is required, give each a unique name or Type Number.

* + 1. Sanded Grout (Un-Modified) for Use in Grout Joint Widths from 1/4 inch (6 mm) to 5/8 inch (13 mm):
			1. Acceptable Product: SGM, Inc.; Quarry Grade (AR) Grout.
			2. Characteristics: Portland cement, with sand and mineral filler coloring agents, factory-mixed; conforming to ANSI A118.6 H-2.1.

\*\* NOTE TO SPECIFIER \*\* Delete one of two following paragraphs

* + - 1. Color: Selected from manufacturer's full range of available colors.
			2. Color: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
		1. Unsanded Grout (Polymer-Modified) for Use in Grout Joint Widths 1/8 inch (3 mm) or Less:
			1. Acceptable Product: SGM, Inc.; Dry-Set (Unsanded) Joint Filler.
			2. Characteristics: Portland cement, with mineral filler coloring agents and water-retentive admixtures, factory-mixed; conforming to ANSI A118.6 H-2.3.

\*\* NOTE TO SPECIFIER \*\* Delete one of two following paragraphs

* + - 1. Color: Selected from manufacturer's full range of available colors.
			2. Color: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
		1. Latex-Portland Cement Grout (Polymer-Modified) for Use in Joint Widths 1/8 inch (3 mm) to 5/8 inches (13 mm):
			1. Acceptable Product: SGM, Inc.; Security Polymer Grout.
			2. Characteristics: Dry-set grout with dry polymers added in re-emulsifiable powder form, factory-mixed; conforming to ANSI A118.6 H-2.4.

\*\* NOTE TO SPECIFIER \*\* Delete one of two following paragraphs

* + - 1. Color: Selected from manufacturer's full range of available colors.
			2. Color: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* The following epoxy grout is for use when heavy or extra heavy performance levels are required or when acid resistance is needed.

* + 1. Epoxy Grout for Use in Joint Widths up to 1/4 inch (6 mm):
			1. Acceptable Product: SGM, Inc.; EGS 100 Epoxy Mortar & Grout.
			2. Characteristics: Chemical-resistant, water cleanable, 100 percent solids epoxy grout: conforming to ANSI A118.3 E-2.1.

\*\* NOTE TO SPECIFIER \*\* Delete one of two following paragraphs

* + - 1. Color: Selected from manufacturer's full range of available colors.
			2. Color: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* The following glow-in-the-dark epoxy grouting system utilizes a phosphorescent additive that will luminesce in the absence of external light source after irradiation by sunlight or UV source.

* + 1. Epoxy Grout for Use in Joint Widths up to 1/4 inch (6 mm):
			1. Acceptable Product: SGM, Inc.; Nite Brite Grout; phosphorescent additive added to EGS Epoxy Grout.
			2. Characteristics: Chemical-resistant, water cleanable, 100 percent solids epoxy grout: conforming to ANSI A118.3 E-2.1.

\*\* NOTE TO SPECIFIER \*\* Delete one of two following paragraphs.

* + - 1. Color: Selected from manufacturer's full range of available colors.
			2. Color: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	1. ACCESSORIES
		1. Spacers for Porcelain Paver Tile: Plastic; size specified in manufacturer's printed installation instructions for tile thicknesses and joint widths indicated.
		2. Exposed Tile Edges and Where Indicated: Stainless steel angle, leg length equal to depth of tile or panel and setting bed.
		3. Thresholds: Marble, white; full door frame width, full depth of frame, thickness equal to depth of tile and setting bed, one long edge beveled 45 degrees.
		4. Miscellaneous Accessories: Supply additional components specified in ANSI and TCA specifications for indicated installations.
1. EXECUTION
	1. EXAMINATION
		1. Verification of Conditions:
			1. Verify that moisture content of substrates are within tolerances recommended by setting materials manufacturer.
			2. Verify that horizontal substrates are formed to required slopes.
			3. Verify that substrates meet requirements specified in referenced TCA details.

\*\* NOTE TO SPECIFIER \*\* Note that TCA Handbook specifications require Architect/Engineer to indicate types and locations of expansion joints on drawings.

* + - 1. Verify that locations and widths of required expansion joints are indicated on drawings.
		1. Installer's Examination:
			1. Have installer examine conditions under which construction activities of this section are to be performed, including but not limited to conditions specified in paragraph above, and submit written notification if substrates or conditions are unacceptable.
			2. Transmit two copies of installer's report to Architect within 24 hours of receipt of report.
			3. Proceeding with construction activities of this section before unacceptable substrates and conditions have been corrected is prohibited.
			4. Beginning construction activities of this section indicates installer's acceptance of substrates and conditions under which construction activities of this section are to be performed.
	1. PREPARATION
		1. Horizontal Cementitious Substrates:
			1. Grind high spots of concrete slabs to achieve specified tolerances.
			2. Install specified underlayment to bring horizontal substrates to specified tolerances.
			3. Clean surfaces free of dust and debris; acid-etch concrete slabs.
		2. Vertical Cementitious Substrates:
			1. Grind high spots of concrete surfaces to achieve specified tolerances.
			2. Apply skim coat of specified latex-Portland cement mortar to bring vertical cementitious substrates; including concrete, concrete unit masonry, plaster, and cementitious backer units; to specified tolerances.
			3. Clean surfaces free of dust and debris; acid-etch concrete surfaces.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraph if installation over cementitious backer units is not required.

* + 1. Cementitious Backer Units:
			1. Fill gaps between panels with specified latex-Portland cement mortar; embed 2 inch wide fiberglass mesh tape in skim coat of the same mortar over joints and in corners.
			2. Apply skim coat of same mortar to bring wall to acceptable tolerances; do not exceed manufacturer's recommended thickness of materials.
			3. Allow material to cure in accordance with mortar manufacturer's instructions before application of additional materials.
		2. Protect surface of adjacent products and materials before beginning construction activities of this section.
	1. INSTALLATION - GENERAL
		1. Install in accordance with the TCA Method indicated, and as follows.

\*\* NOTE TO SPECIFIER \*\* Delete if no waterproof membrane.

* + 1. Install waterproof membrane, where required in referenced TCA Methods, in accordance with manufacturer's instructions.
		2. Mix and install proprietary materials in accordance with manufacturer's instructions.
		3. Expansion control:
			1. Form expansion control joints in accordance with TCA EJ171.
			2. Except where saw-cut cold expansion joints are indicated on drawings or otherwise indicated, provide expansion control joints where tile abuts vertical surfaces, where tile abuts dissimilar surfaces, where structural joints or changes of materials occur in tile substrate, as indicated on drawings, and as follows:
				1. Tile expansion joints over structural joints: Provide joint in tile same width as structural joint.
				2. For thickset tile installation, provide tile edge each side of tile expansion joint.
				3. Provide removable joint filler strips in expansion joints; allowing mortar or grout to migrate into joint cavities is prohibited.
				4. After grout has cured, and after cleaning of tile surfaces, remove filler strips and install joint backing materials and sealers in accordance with Section 07 90 00.
		4. Install tile in accordance with referenced TCA details, including specifications and references contained therein.
			1. Extend into recesses, and under or behind equipment and fixtures, to form complete covering without interruptions, except as otherwise indicated.
			2. Cut tiles only with powered cut-off blade and drill holes in tiles, where required, using powered carbide-tip drill bit; cut or drilled tiles having chipped or broken edges are prohibited.
			3. Cut tiles less than 1/2 full tile dimension each way are prohibited.
			4. Maintain joint widths between tiles as specified in tile manufacturer's installation instructions; use spacers at corners of tile units or factory-assembled sheets of tile units.
	1. INSTALLATION - FLOORS
		1. General:
			1. Provide tile edge where floor tile abuts dissimilar floor covering materials.
			2. Provide thresholds at doors and openings, except where tile is continuous between spaces; field-cut notches for door stops.
			3. Unless otherwise indicated, install tile in grid pattern perpendicular and parallel to adjacent vertical surfaces, centered in space.

\*\* NOTE TO SPECIFIER \*\* In the following paragraphs TCA installation methods are referenced. For best results, use the TCA Handbook to determine which methods are appropriate to the project. The methods describe the type of mortar to use, as well as membranes and reinforcement. In some cases, methods include options that are normally the contractor's choice -- if that is not so, be sure to specify which option is required. The applications listed are only those most commonly encountered. Delete applications not required. The methods generally do not specify the grout type, so if a particular grout type is required add it to the installation description or include it in a schedule.

* + 1. Exterior Concrete Floors and Slabs:
			1. On-grade, thickset: TCA F101; \_\_\_\_\_\_\_\_\_\_\_ bond coat.
			2. On-grade, thinset: TCA F102.
			3. Elevated, thickset, over drainage layer: TCA F103; with waterproof membrane, wire mesh reinforcement, and filter fabric.
		2. Interior Concrete Floors:
			1. On-grade:

\*\* NOTE TO SPECIFIER \*\* Interior On-Grade Concrete Floors - Thickset:
 \*\* NOTE TO SPECIFIER \*\* F112 - (Portland) Cement Mortar - Thickset
 \*\* NOTE TO SPECIFIER \*\* F132 - Epoxy Mortar and Grout - Thickset
 \*\* NOTE TO SPECIFIER \*\* Interior On-Grade Concrete Floors - Thinset:
 \*\* NOTE TO SPECIFIER \*\* F113 - Dry-Set Mortar or Latex-Portland Cement Mortar - Thinset
 \*\* NOTE TO SPECIFIER \*\* F115 - Dry-Set Mortar, Epoxy or Furan Grout - Thinset
 \*\* NOTE TO SPECIFIER \*\* F116 - Organic Adhesive - Thinset (Residential Only)
 \*\* NOTE TO SPECIFIER \*\* F122 - Latex-Portland Cement Mortar - Thinset, Waterproof Membrane
 \*\* NOTE TO SPECIFIER \*\* F131 - Epoxy Mortar and Grout - Thinset

* + - * 1. Toilet Rooms: TCA \_\_\_\_.
				2. All Other Areas: TCA \_\_\_\_.
			1. Elevated:

\*\* NOTE TO SPECIFIER \*\* Interior Elevated Slab - Thickset:
 \*\* NOTE TO SPECIFIER \*\* F111- (Portland) Cement Mortar - Wire Mesh Reinforcement, Cleavage Membrane
 \*\* NOTE TO SPECIFIER \*\* F112 - (Portland) Cement Mortar - (limited to small areas)
 \*\* NOTE TO SPECIFIER \*\* F114 - (Portland) Cement Mortar, Epoxy or Furan Grout - Wire Mesh Reinforcement, Cleavage Membrane
 \*\* NOTE TO SPECIFIER \*\* F121 - (Portland) Cement Mortar - Wire Mesh Reinforcement, Waterproof Membrane

* + - * 1. Toilet Rooms: TCA \_\_\_\_.
				2. All Other Areas: TCA \_\_\_\_.
		1. Interior Wood Floors:

\*\* NOTE TO SPECIFIER \*\* Interior Wood Subfloor - Thickset:
 \*\* NOTE TO SPECIFIER \*\* F141- (Portland) Cement Mortar - Wire Mesh Reinforcement, Cleavage Membrane.
 \*\* NOTE TO SPECIFIER \*\* Interior Wood Subfloor - Thinset:
 \*\* NOTE TO SPECIFIER \*\* F142 - Organic Adhesive.
 \*\* NOTE TO SPECIFIER \*\* F143 - Epoxy Mortar and Grout.
 \*\* NOTE TO SPECIFIER \*\* F144 - Dry-Set Mortar or Latex-Portland Cement Mortar - Cementitious Backer Unit substrate to eliminate second layer of plywood subfloor.

* + - 1. Toilet Rooms: TCA \_\_\_\_.
			2. All Other Areas: TCA \_\_\_\_.
		1. Stairs:

\*\* NOTE TO SPECIFIER \*\* Delete two of three paragraphs following.

* + - 1. TCA S151, thickset on concrete.
			2. TCA S151, thickset on metal pan.
			3. TCA S151, thickset on wood.
		1. Marble Thresholds: TCA TR611.
	1. INSTALLATION - WALLS
		1. General:
			1. Set full tile units, or full factory-assembled sheets of tile units, adjacent to outside corner units; cut tile only at inside corners.
			2. Unless otherwise indicated, install tile in grid pattern plumb and level.
			3. Provide trim shapes as follows:
				1. Coved base with bullnose cap for walls not receiving wall tile.
				2. Coved base with square cap for walls receiving wall tile.
				3. External corners for walls and base.
				4. Other trim shapes specified in manufacturer's installation instructions for project conditions.
			4. Where wall tile and floor tile have same modular dimensions, align wall tile joints with floor tile joints.

\*\* NOTE TO SPECIFIER \*\* In the following paragraphs TCA installation methods are referenced. For best results, use the TCA Handbook to determine which methods are appropriate to the project. The methods describe the type of mortar or adhesive to use, as well as membranes and reinforcing. In some cases, methods include options that are normally the contractor's choice -- if that is not so, be sure to specify which option is required. The applications listed are only those most commonly encountered. Delete applications not required. The methods generally do not specify the grout type, so if a particular grout type is required add it to the installation description or include it in a schedule.

* + 1. Exterior Masonry and Concrete Walls, Thickset: TCA 201, with waterproof membrane and wire mesh reinforcement.
		2. Exterior Masonry and Concrete Walls, Thinset: TCA W202.
		3. Interior Walls:
			1. Masonry and Concrete, Thickset: W211.
			2. Masonry and Concrete, Thickset: TCA W201, with metal lath, scratch coat, and waterproof membrane at wet areas.
			3. Masonry and Concrete, Thinset: W202.
			4. On Gypsum Board: TCA W242, organic adhesive.
			5. On Gypsum Board: TCA W243, dry-set or latex-portland cement mortar.
			6. On Cementitious Backer Units: TCA W244, with waterproof membrane at wet areas.

\*\* NOTE TO SPECIFIER \*\* Interior Walls - Other Solid Backing:
 \*\* NOTE TO SPECIFIER \*\* W221 - (Portland) Cement Mortar - Thickset, Metal Lath and Scratch Coat, Waterproof Membrane
 \*\* NOTE TO SPECIFIER \*\* W222 - (Portland) Cement Mortar - Thickset, Metal Lath and Scratch Coat, Waterproof Membrane
 \*\* NOTE TO SPECIFIER \*\* W223 - Organic Adhesive - Thinset

* + - 1. On Other Solid Backing: TCA \_\_\_\_.
			2. Directly On Wood Studs or Furring: TCA W231, with metal lath, scratch coat, and waterproof membrane.
			3. Directly On Metal Studs or Furring, Thickset: TCA W241, with metal lath, scratch coat, and waterproof membrane.
	1. INSTALLATION - TUBS AND SHOWERS
		1. Bathtub Walls:
			1. On Cementitious Backer Units: TCA B412.
			2. Directly on Wood or Metal Studs: TCA B411.
			3. On Water-Resistant Gypsum Board: TCA B413.
		2. Showers:
			1. On Cementitious Backer Units: TCA B415
			2. Directly on Wood or Metal Studs: TCA B411.
			3. On Water-Resistant Gypsum Board: TCA B416.
			4. Receptors: TCA B414, thickset.
	2. INSTALLATION - OTHER APPLICATIONS
		1. Interior Ceilings and Soffits, Thickset: TCA C311, on metal lath and scratch coat.
		2. Interior Ceilings and Soffits, Thickset: TCA C311, on cementitious backer unit.
		3. Interior Ceilings and Soffits, Thinset, on Gypsum Board: TCA C312, \_\_\_\_\_\_ bond coat.
		4. Countertops: TCA C511, thickset, with metal lath and scratch coat.
		5. Countertops: TCA C512, thinset, with organic adhesive.
		6. Countertops: TCA C512, thinset, with epoxy mortar,
		7. Countertops: TCA C513, thinset, with cementitious backer unit substrate.
		8. Miscellaneous Applications:
			1. Tile Tubs and Fountains: TCA B417.
			2. Swimming Pool: TCA P601.
			3. Window Stools: TCA WS610.
			4. Refrigerator Rooms, Thickset: TCA R612.
			5. Steam Rooms, Thickset: TCA SR613.
			6. Steam Rooms, Thinset: TCA SR614.

\*\* NOTE TO SPECIFIER \*\* TCA also has installation methods for renovation, over tile, and over other substrates. Since each condition may be different, consult the TCA Handbook for appropriate methods.

* 1. GROUTING
		1. Cure set tile in accordance with the following:
			1. Cure tile 72 hours before grouting when temperature is low or humidity is high.
			2. Cure tile 48 hours before grouting when hot, dry conditions exist.
			3. Check bond strength of tile before grouting.
		2. Grout tile in accordance with the following, using grout materials specified:

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs if both are not required.

* + - 1. Latex Portland Cement Grout: ANSI A108.10.
			2. Epoxy Grout: ANSI A108.6.
			3. Remove grout from tile surfaces while still plastic, as grouting progresses.
	1. CLEANING
		1. After completion of setting and grouting, clean tile surfaces using cleaning methods and materials recommended by tile manufacturer and grout materials manufacturer.
		2. Except as specifically recommended by both tile manufacturer and grout materials manufacturer, acid cleaning of tile and grout surfaces is prohibited; in such instance, clean tile and grout surfaces in strict accordance with manufacturers' instructions for acid cleaning, including protection of adjacent products and materials.
	2. PROTECTION
		1. Leave finished installation clean and free of cracked, chipped, broken, unbonded, or otherwise defective work.
		2. When recommended by tile manufacturer, apply protective coat of neutral protective cleaner to completed tile walls and floors.
		3. Protect installed tile in accordance with ANSI specifications and manufacturer's instructions; use Kraft paper or other heavy covering during construction period to prevent staining, damage, and wear.
		4. Remove protective coverings and rinse neutral cleaner from tile surfaces not more than 24 hours before final inspection.
	3. SCHEDULE

\*\* NOTE TO SPECIFIER \*\* If more than one type or color of tile or grout is specified, include a schedule either in the specification or on the drawings to indicate which type is to be used in each location. Types of mortars and underlayments are usually determined by the application, not the tile type or appearance, and so would be specified in PART 3 rather than scheduled.

END OF SECTION