#### SPECIFICATIONS FOR PRECAST CONCRETE TILE

#### **PART 1 GENERAL**

#### 1.1 SUMMARY

- A. Provide and install tile materials as shown on the Drawings and specified herein.
- B. Provide all related materials, equipment, and labor required to complete the work specified.

#### 1.2 QUALITY STANDARDS

- A. Provide experienced, well-trained workers competent to complete the work as specified.
- B. Use only materials approved by the paver manufacturer for use with its product.
- C. All work shall comply with governing building and safety codes.
- D. Installation and grouting of tiles shall comply with current CTMA Specifications.

#### 1.3 SUBMITTALS

- A. Submit dimensioned template drawings for all custom shapes prior to fabrication.
- B. Submit sample of specified color for review.

#### 1.4 MATERIALS HANDLING

- A. Provide all materials required to complete the work as shown on the drawings and specified herein.
- B. Deliver, store, and transport materials to avoid damage to the product or to any other work and return any products or materials delivered in an unsatisfactory condition.
- C. Materials and products delivered will be certified by the manufacturer to be as specified.
- D. Store materials in a safe, secure location, protected from moisture, corrosion and damage until installation.
- F. If spread grouting, clean tile surface frequently with clean water. Installation and material shall comply with ANSI A108 and TCA Handbook (current edition).

## 1.5 PRECONSTRUCTION AND PREPARATION

A. Examine and verify that job conditions are satisfactory for speedy and acceptable work

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- B. Confirm there are no conflicts between this work and work of other trades, and that work of other trades that must precede this work has been completed.
- C. Cold-Weather Protection: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and place unit paver work damaged by frost or freezing.

D. Lay out floor in advance to predetermine tile cuts.

#### 1.6 PROJECT CONDITIONS

A. Maintain minimum temperature of 70F in spaces to receive precast tile for at least 48 hours before, during and after installation. Store materials in space where they will be installed for at least 48 hours or as required to ensure that the materials have reached 70F before starting installation.

B. Do not install tile on concrete slabs until they have been cured and are sufficiently dry to achieve bond with adhesive, as determined by manufacturer's recommended bond and moisture test.

#### **PART 2 MATERIALS**

#### 2.1 MANUFACTURER

A. Precast concrete tiles shall be manufactured by Get Real Surfaces, Inc., Poughkeepsie, NY (845.452.3988).

- B. Dimensional tolerances (from planned thickness) for tile shall be as follows:
  - 1. Length +0, minus 1/16"
  - 2. Width +0, minus 1/16"
  - 3. Thickness +1/16, minus 1/8"

#### 2.2 ACCESSORIES

- A. Floor Adhesives
  - 1. 'Thin-set' latex-portland cement mortar for use in all areas except as specified in paragraph 2 below.
- B. Wall Adhesive
  - 1. 'Thin-set' latex-portland cement mortar.
- C. Sealer and Finish
  - 1. Sealers shall be recommended by Manufacturer based on application of product.

#### PART 3 CONSTRUCTION AND INSTALLATION

## 3.1 GENERAL

- A. Do not use tile with chips, cracks, voids, discolorations, and other defects that might be visible or cause staining in finished work.
- B. Mix tile from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures.

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D. Joint pattern as indicated; 3/8" wide joints; allow for adequate expansion, control, cold and isolation joints per TCA Handbook.

- E. Tolerances: Do not exceed 1/32-inch (0.8-mm) unit-to-unit offset from flush (lippage) nor 1/8 inch in 10 feet (3 mm in 3 m) from level, or indicated slope, for finished surface of paving.
- F. Always follow manufacturers instructions for mixing and application of thin-set.
- G. Do not use rubber mallet directly on tile; instead use a beating block to adjust tile if needed. Carefully place tile into position. Do not drop the tile into place.
- H. Clean all tile surfaces as they are installed; do not leave thin-set or mortar-set residue, or 'cement haze', on the tile.
- I. Never use acids to clean concrete tiles or grout.
- J. TILE AND SLAB MUST BE MOIST, BUT NOT SATURATED, WITH WATER WHEN MORTAR IS APPLIED.
- K. Start of work constitutes acceptance that all conditions are satisfactory.

#### 3.2 CONCRETE SUBFLOOR

- A. Installer shall inspect subfloor surfaces to ensure that they are clean, dry, flat, smooth, level and free from cracks, holes, ridges, coatings preventing adhesion and other defects impairing performance or appearance. Do not proceed with installation until defective conditions have been corrected.
- B. Perform bond and moisture tests on subfloor to determine if surfaces are sufficiently cured and dry as well as to ascertain presence of curing, sealing, hardening or any other compounds.
  - 1. Moisture vapor transmission shall no exceed 3 pounds per 1,000 square feet in 24 hours. Test shall be in accordance with ASTM F1869.

#### 3.3 WOOD SUBFLOOR

- A. No tile shall be bonded directly to wood. Acceptable methods are as follows:
  - 1. Cement backer board installer per manufacturer's instructions.
  - 2. Pre-floated 1-1/4" 2" mortar bed with slip sheet membrane (asphalt felt or polyethylene sheeting).
- B. Verify that underlayment surface is free of irregularities and substances that may interfere with adhesive bond, show through surface or stain flooring.
- C. Substrate shall be a minimum (2) layers ¾" plywood with staggered seams.

## 3.4 PREPARATION

- A. Remove deleterious coatings from sub-floor which would prevent a positive adhesive bond.
- B. Level subfloor as required with self-leveling or patching compound.
- C. General Contractor shall mechanically abrade (either by grinding or shot-blasting) concrete slabs to roughen smooth surfaces or remove carbonation or foreign substances as required.

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#### 3.2 THIN-SET

- A. Mix thin-set per manufacturer's instructions; do not re-temper thin-set.
- B. Spread and press thin-set in both directions with the trowel's flat side to break 'surface tension'.
- C. 'Backbutter' all tiles; obtain 100% coverage by pressing thinset onto individual tiles with the flat side of trowel.
- D. Do not allow thin-set to 'skin-over'.

#### 3.3 MORTAR SET

- A. Spread and press mortar in both directions with the trowel's flat side to break 'surface tension'.
- B. Slurry coat the back of each individual tile.
- C. Do not allow mortar to lose plasticity and become stiff.

#### 3.4 GROUTING

- A. Use 'Saltillo' type course, sanded grout for joints up to ½" wide.
- B. If mixing own grout, use a mixed gradation of 30/60/90 silica sand in a 2 to 2-1/2 ratio to 1 cement.
- C. Do not use excessive water.
- D. Do not under any circumstances use acids to clean tile after grouting.
- E. If bag grouting (recommended) fill joints higher than tile surface and tool when grout starts to set up.
- F. If spread grouting, clean tile surface frequently with clean water. Installation and material shall comply with ANSI A108 and TCA Handbook (current edition).
- G. Damp cure entire installation when finished.

#### 3.5 SEALING

A. For permanent chemical, stain and wear resistance tiles shall be sealed by tile manufacturer prior to shipping unless otherwise specified.

### 3.6 GROUT SEALING

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#### 3.7 CLEANUP

A. Thoroughly clean all surfaces of dirt and debris. Protect all tile from abrasion and avoid as much traffic as possible until construction is complete.

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#### 3.7 MAINTENANCE

- A. Routine cleaning
  - 1. Sweep or vacuum floors frequently to remove dirt which might scratch the tile surface.
  - 2. Promptly wipe spills to minimize risk of staining.
  - 3. Place protective pad on legs of moveable furniture.
  - 4. Damp mop with a neutral pH cleaner.
- B. If surfaces begin to show wear, contact manufacturer for recommended maintenance.

Heavily soiled areas can be cleaned by scrubbing with a floor machine equipped with a scrubbing brush and a high quality commercial floor cleaning detergent (such as TileLab® Heavy Duty Cleaner & Stripper).

Do not use cleaners containing ammonia, acids or bleach.

#### PROACTIVE PROTECTION FOR YOUR FLOOR

- A. When moving appliances or heavy furniture, lay a plywood panel on your floor and "walk" the item across it. This protects your floor from scuffing and tears.
- B. Use floor protectors on furniture to reduce indentation. As a general rule of thumb, the heavier the item, the wider the floor protector needed.
- C. Be careful with rolling casters. They can damage the floor. Therefore, we do not recommend them. If you choose to use them, the double wheel type are the best option.
- D. Place a walk-off mat at outside entrances to reduce the amount of dirt brought into your home. We do not recommend the use of rubber- or latex-backed mats because the chemical (antioxidant) used to keep the backing from becoming brittle can permanently stain your floor. We suggest a non-staining vinyl-backed mat or a woven rug that is colorfast. Most of these products are identified "colorfast" by the manufacturer

#### **SCUFF MARK REMOVAL**

A. Use a Scotchbrite® pad with a little of the low-ph cleaner like Tile Lab Grout and Tile cleaner® or Kemiko Nutra-Clean® and gently scrub the scuff marks away.

\* Use non-metallic guides and casters to move furniture across floor to avoid scratching and discoloration of tile surface.

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## **END SECTION**