

**SECTION 09 30 14**

**TILING FOR POOLS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

**A. Principal work items include:**

1. Waterline Tile for Swimming Pools.
2. Skid-resistant Deck Depth-Marking Tile, Water-line Depth Marking Tile, Handicap Access Location Tile, No Diving Tile for Pool Structures.
3. Safety Step Edge Tile for all bodies of water with Steps
4. Thin set application over shotcrete and concrete substrates.
5. Frost resistant tile, grout and mortar.
6. Refer to Tile Council of America (TCA) handbook for assistance in selecting adhesives, mortar beds, grouts, and installation details and methods.

**B. Sections not included in this section:**

1. 03 37 14 – Shotcrete for Pools
2. 07 14 17 – Cold Fluid-Applied Waterproofing for Pools
3. 09 97 27 – Cementitious Coating for Pools
4. 13 11 33 – Elevated Swimming Pools

**1.2 SUMMARY**

**A. Related Documents: General and Supplementary Conditions of Contract, Division 1 General Requirements, and Drawings are applicable to this Section.**

**B. Section Includes:**

1. Cleavage membrane and Portland cement mortar bed.
2. Tile specified for all Pools to meet local code requirements.
  - a. No code requirements for Tile specified on Fountains.

**1.3 REFERENCES**

**A. Installation:**

1. Tile – ANSI A108.5.
2. Glass Tile – Manufacturer's Direction
3. Cementitious Grout – ANSI A108.10.

4. Epoxy Grout – ANSI A108.6.

**B. Materials:**

1. Porcelain Tile to have “Porcelain Tile Certification” of 0.5% or less of water absorption.
  - a. Per Testing Standards of ASTM C373, recommended by ANSI A137.1
2. Glass Tile - Manufacturer
3. Cementitious Grout – ANSI A118.6 or better
4. Epoxy Grout – ANSI A118.3
5. Cementitious Bond Coat – ANSI A118.4 or better

**C. TCA Handbook for Porcelain and Glass Tile Installation by Tile Council of America.**

**1.4 SUBMITTALS**

**A. Submit shop drawings, product data, and samples.**

**B. Shop Drawings:**

1. Indicate tile layout, patterns, color arrangement, perimeter conditions, and junctions with dissimilar materials, thresholds, and setting details.

**C. Submit product data, specifications, and instructions for using mortars, adhesives and grouts.**

**D. Samples: Submit color samples illustrating full color range of each type tile.**

**1.5 QUALITY ASSURANCE**

**A. Single Source Responsibility:**

1. Obtain each type and color tile material required from single source.
2. Obtain setting and grouting materials from one manufacturer to ensure compatibility.
3. Furnish a 2-year guarantee from installation material manufacturer. Guarantee is inclusive of installation materials, finish product, and labor.
4. Obtain elastomeric membrane from same manufacturer as setting material or from manufacturer approved by setting material manufacturer to ensure compatibility.

**B. Manufacturer Qualifications:**

1. Tile: Minimum ten (10) years experience in manufacture of tile products.
2. Setting Materials: Minimum ten (10) years experience in manufacture of setting and grout materials specified.

**C. Installer Certifications: Tile Council of America recognizes the following Certifications.**

1. Porcelain Tile Education Foundation (CTEF) Certified Tile Installer Program.
2. Journeyman Tile layer Apprenticeship Programs.
3. National Tile Contractors Association (NTCA) Five Star Contractor Program.
4. Tile Contractors' Association of America (TCAA)

#### 1.6 FIELD SAMPLES

##### A. Sample Installation:

1. For final review of each type tile, construct sample panel of approximately three (3) square feet. Coordinate location in field with project architect. Show workmanship of finished work and construction techniques.
2. Approved field samples may not remain as part of Work.

#### 1.7 PRE-INSTALLATION CONFERENCE

##### A. Convene three weeks prior to commencing work of this section.

1. Require attendance of installation material manufacturer, tile supplier, tile installer and installers of related work. Review installation procedures and coordination required with related work.
2. Meeting agenda includes but is not limited to:
  - a. Surface preparation.
  - b. Tile and installation material compatibility.

#### 1.8 DELIVER, STORAGE, AND HANDLING

- A. Labeling: Comply with ANSI A137.1.
- B. Deliver materials in manufacturer's unopened containers, fully identified with name, brand, type, and grade.
- C. Protect materials from contamination, dampness, freezing, or overheating in accordance with manufacturer's instructions.
- D. Broken, cracked, chipped, stained, or damaged tile will be rejected, whether built-in or not.
- E. Protect mortar and grout materials against moisture, soiling, or staining.

#### 1.9 ENVIRONMENTAL REQUIREMENTS

- A. Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during, and after installation.
- B. Do not begin installation until building is completely enclosed and HVAC system is operating and maintaining temperature and humidity conditions consistent with "after occupancy" conditions for minimum of 2 weeks.

- C. Maintain continuous and uniform building temperatures of not less than 50 degrees F during installation.
- D. Ventilate spaces receiving tile in accordance with material manufacturers' instructions.

**1.10 EXTRA MATERIALS**

- A. At completion of project, deliver to Owner extra stock of materials used on project as follows:
  - 1. Five (5) percent of each color of project tile selection.
- B. Store in location as directed by Owner.
- C. Ensure materials are boxed and identified by manufacturer, type, and color.

**1.11 MAINTENANCE DATA**

- A. Submit maintenance data.
- B. Include cleaning methods, cleaning solutions recommended; stain removal methods, and polishes and waxes recommended.

**PART 2 - PRODUCTS****2.1 MANUFACTURERS**

- A. Subject to compliance with requirements indicated herein, provide products of one of listed manufacturers.
  - 1. Porcelain Tile:
    - a. Manufactured Tile bearing "Porcelain Tile Certification" of 0.5% or less of water absorption.
      - 1) DalTile Corp
  - 2. Ceramic Tile
    - a. Inlays, Inc.
  - 3. Mortar Material:
    - a. MAPEI Corporation
    - b. Laticrete International
  - 4. Grout Material:
    - a. MAPEI Corporation
    - b. Laticrete International
  - 5. Thin Set Material
    - a. MAPEI Corporation

- b. Laticrete International

## 2.2 PRODUCTS, TILE

### A. Waterline Tile

- 1. Porcelain Tile Certification
  - a. Size: 6 -inch x 6 -inch, Frost Resistant
  - b. Model/Color Selection: Coordinate with Project Architect
  - c. Quantity: Waterline Perimeter

### B. Depth Tile Markers at Waterline

- 1. Porcelain Tile Certification or Ceramic
  - a. Tile Surface: Smooth, Frost Resistant, Black print on White background.
  - b. Tile Series:
    - 1) "FT" 6-inch x 6-inch with 4-inch numbers
    - 2) "IN" 6-inch x 6-inch with 4-inch numbers
  - c. Location and Quantity: Design per plan

### C. Depth Tile Markers Placed on Deck

- 1. Porcelain Tile Certification or Ceramic
  - a. Tile Surface: Skid Resistant, Frost Resistant, Black print on White background.
  - b. Tile Design:
    - 1) "FT" 6-inch x 6-inch with 4-inch numbers
    - 2) "IN" 6-inch x 6-inch with 4-inch numbers
  - c. Location and Quantity: Design per plan

### D. Safety Tile Markers

- 1. Porcelain Tile Certification or Ceramic
  - a. No-Diving Tile – Placed on Deck.
    - 1) Tile Surface: Skid Resistant
    - 2) Tile Design: No Diving Symbol; 6-inch x 6-inch
    - 3) Location Per Plan
  - b. Handicap Tile – Placed in Deck.
    - 1) Tile Surface: Skid Resistant
    - 2) Tile Design: Handicap Symbol; 8-inch x 8-inch
    - 3) Location: Design per plan

### E. Step Edge Safety Tile

- 1. Ceramic

- a. Manufacturer: Inlays
- b. Skid Resistant
- c. Size: 2 1/4 -inch x 6 -inch
- d. Colors Available:
  - 1) Blue: #CPC00021
  - 2) Black: #CPC00022
  - 3) Brown: #CPC00023
  - 4) Green: #CPC00024
  - 5) Location and Quantity: Design per Plan

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Verify that areas to receive tile installed by thin bed method have wood float finish, are true within 1/4 inch in 10'-0".
- B. Condition of Surfaces to Receive Tile:
  - 1. Firm, dry, clean and free of oily or waxy films, mortar and soil. Grounds, anchors, plugs, hangers, bucks, electrical and mechanical work in or behind tile installed.
- C. Air Temperature and Surfaces in Rooms to Receive Flooring: Between 60 degrees to 90 degrees F unless otherwise recommended by manufacturers of materials being installed.

#### **3.2 PREPARATION**

- A. Clean substrates, Wet down or wash dry, dusty surfaces and remove excess water immediately prior to application of tiles.
- B. Prepare surfaces in strict accordance with instructions of manufacturer whose setting materials or additives are being used.
- C. Acid Based Cleaners: Use not permitted.
- D. Scarify concrete substrates with blast track equipment if necessary to completely remove curing compounds or other substances that would interfere with proper bond of setting materials. Clean and maintain substrate in condition required by setting material manufacturer.
- E. Do not seal substrate unless required by manufacturer.
- F. Prime substrate when required by manufacturer.

- G. Blending: For tile exhibiting color variations within ranges selected during sample submittals, verify that tile has been blended in factory and packaged accordingly so that tile units taken from one package show same range in 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.

### **3.3 INSTALLATION**

#### **A. Field and Installation Requirements**

- 1. Refer to "Field and Installation requirements" section in the TCNA (Tile Council North America) Handbook for Porcelain Tile Installation. [www.tcnatile.com](http://www.tcnatile.com)

### **3.4 ADJUSTING**

- A. Sound tile after setting. Replace hollow sounding units.

### **3.5 CLEANING**

- A. Clean excess mortar from surface with water as work progresses. Perform cleaning while mortar is fresh and before it hardens on surfaces.
- B. Sponge and wash tile diagonally across joints. Polish with clean dry cloth.
- C. Remove grout haze following recommendation of mortar additive manufacturer. Do not use acids for cleaning.

### **3.6 PROTECTION**

- A. Prohibit traffic from floor finish for 72 hours after installation.
- B. Where temporary use of new floors is unavoidable, supply large, flat boards or plywood panels for walkways over Kraft paper.
- C. Protect work so that it will be without evidence of damage or use at time of acceptance.

**END OF SECTION**

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