

**SECTION 09 30 00
TILING**

PART 1 GENERAL

1.1 STIPULATIONS

- A. The specifications sections "General Conditions to the Construction Contract", "Special Conditions" and "Division 01 - General Requirements" form a part of this Section by this reference thereto, and shall have the same force and effect as if printed herewith in full.

1.2 SECTION INCLUDES

- A. Tile for wall applications.
- B. Cementitious backer board as tile substrate.
- C. Coated glass mat backer board as tile substrate.
- D. Ceramic trim.
- E. Non-ceramic trim.
- F. Corner soap dish.

1.3 RELATED REQUIREMENTS

- A. Section 07 92 00 - Joint Sealants: Sealing joints between tile work and adjacent construction and fixtures.

1.4 REFERENCE STANDARDS

- A. ANSI A108/A118/A136 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium) 2019.
- B. ANSI A108.1a - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar 2017.
- C. ANSI A108.1b - American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex-Portland Cement Mortar 2017.
- D. ANSI A108.1c - Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry-Set or Latex-Portland Cement 1999 (Reaffirmed 2016).
- E. ANSI A108.2 - American National Standard General Requirements: Materials, Environmental and Workmanship 2019.
- F. ANSI A108.4 - American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile-Setting Epoxy Adhesive 2009 (Revised).
- G. ANSI A108.5 - American National Standard Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar 1999 (Reaffirmed 2010).

- H. ANSI A108.6 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy 1999 (Reaffirmed 2010).
- I. ANSI A108.8 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout 1999 (Reaffirmed 2010).
- J. ANSI A108.9 - American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout 1999 (Reaffirmed 2010).
- K. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework 2017.
- L. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units 2018.
- M. ANSI A108.12 - American National Standard for Installation of Ceramic Tile with EGP (Exterior Glue Plywood) Latex-Portland Cement Mortar 1999 (Reaffirmed 2010).
- N. ANSI A108.13 - American National Standard for Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone 2005 (Reaffirmed 2016).
- O. ANSI A108.19 - American National Standard Specifications for Interior Installation of Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs by the Thin-Bed Method Bonded with Modified Dry-Set Cement Mortar or Improved Modified Dry-Set Cement Mortar 2017.
- P. ANSI A118.4 - American National Standard Specifications for Modified Dry-Set Cement Mortar 2012 (Revised).
- Q. ANSI A118.7 - American National Standard Specifications for High Performance Cement Grouts for Tile Installation 2010 (Reaffirmed 2016).
- R. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units 2019.
- S. ANSI A137.1 - American National Standard Specifications for Ceramic Tile 2019.
- T. ASTM C373 - Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products 2018.
- U. ASTM C1178/C1178M - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel 2018.
- V. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation 2019.

1.5 SUBMITTALS

- A. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.
- B. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.

- C. Samples: Mount tile and apply grout on two plywood panels, minimum 12 by 12 inches in size illustrating pattern, color variations, and grout joint size variations.
- D. Installer's Qualification Statement:
 - 1. Submit documentation of National Tile Contractors Association (NTCA) or Tile Contractors' Association of America (TCAA) accreditation.
- E. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods.
- F. Maintenance Materials: Furnish the following for Client Agency's use in maintenance of project.
 - 1. Extra Tile: 10 square feet of each size, color, and surface finish combination.

1.6 QUALITY ASSURANCE

- A. Maintain one copy of ANSI A108/A118/A136 and TCNA (HB) on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, with minimum five years of documented experience.
- C. Installer Qualifications: Natural Stone Institute (NSI) Accredited Commercial B Contractor (light commercial): www.naturalstoneinstitute.org/#sle.
- D. Installer Qualifications:
 - 1. Company specializing in performing tile installation, with minimum of five years of documented experience.

1.7 MOCK-UP

- A. Construct tile mock-up where indicated by Architect, incorporating all components specified for the location.
 - 1. Minimum size of mock-up as indicated by Architect.
 - 2. Approved mock-up may remain as part of the Work.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.9 FIELD CONDITIONS

- A. Maintain ambient and substrate temperature above 50 degrees F and below 100 degrees F during installation and curing of setting materials.

1.10 PRE-INSTALLATION MEETING

- A. Contractor shall utilize the Pre-Installation Meeting Agenda and Pre-Installation Meeting Checklist documents located in e-Builder, Z - Standard Documentation & Training project: Documents \ 03 - Construction - Training and Guidance Documents \ 03 - Role Based Training and Guidance Documents \ Contractors.

PART 2 PRODUCTS

2.1 TILE.

- A. Manufacturers: All products by the same manufacturer. Unless noted otherwise.
 - 1. American Olean Corporation: www.americanolean.com/#sle.
 - 2. Dal-Tile Corporation: www.daltile.com/#sle.
 - 3. Florida Tile: www.floridatile.com/#sle.
 - 4. Substitutions: Or equal as approved by the Professional.
- B. Porcelain Tile: ANSI A137.1 standard grade.
 - 1. Moisture Absorption: 0 to 0.5 percent as tested in accordance with ASTM C373.
 - 2. Size: 12 by 24 inch, nominal. Or as otherwise approved by the Professional.
 - 3. Color(s): To be selected by Architect from manufacturer's standard range.
 - 4. Pattern: 1/3 Offset.
 - 5. Trim Units: Matching cove base shapes in sizes coordinated with field tile.

2.2 TRIM AND ACCESSORIES

- A. Ceramic Trim: Matching cove base ceramic shapes in sizes coordinated with field tile.
 - 1. Applications:
 - a. Inside Corners: Jointed.
 - b. Floor to Wall Joints: Cove base, if available.
 - 2. Manufacturers: Same as for tile.
- B. Non-Ceramic Trim: Satin natural anodized extruded aluminum, style and dimensions to suit application, for setting using tile mortar or adhesive.
 - 1. Applications:
 - a. Open edges of wall tile.
 - b. Wall corners, outside and inside.
 - 2. Manufacturers:
 - a. Schluter-Systems: www.schluter.com/#sle.
 - b. Genesis APS International: www.genesis-aps.com/#sle.
 - c. Substitutions: Or equal as approved by the Professional.
- C. Corner Soap Dish: Model SD-02, corner mount, cast marble.

1. Manufacturers:
 - a. **Basis of Design:** Mincey Marble: www.minceymarble.com
 - b. Substitutions: Or equal as approved by the Professional.
2. Color: To be selected by the Architect.

2.3 SETTING MATERIALS

A. Manufacturers:

1. ARDEX Engineered Cements: www.ardexamericas.com/#sle.
2. Bostik Inc: www.bostik-us.com/#sle.
3. LATICRETE International, Inc: www.laticrete.com/#sle.
4. Substitutions: Or equal as approved by the Professional.

B. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4.

1. Products:

- a. ARDEX Engineered Cements; ARDEX X 5: www.ardexamericas.com/#sle.
- b. Merkrete, by Parex USA, Inc; Merkrete 735 Premium Flex:
www.merkrete.com/#sle.
- c. TEC, an H.B. Fuller Construction Products Brand; TEC Ultimate Large Tile Mortar:
www.tecspecialty.com/#sle.
- d. Substitutions: Or equal as approved by the Professional.

2.4 GROUTS

A. High Performance Polymer Modified Grout: ANSI A118.7 polymer modified cement grout.

1. Applications: Use this type of grout where indicated and where no other type of grout is indicated.
2. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.
3. Color(s): As selected by Architect from manufacturer's full line.
4. Products:
 - a. ARDEX Engineered Cements; ARDEX FL: www.ardexamericas.com/#sle.
 - b. Custom Building Products; Prism Color Consistent Grout:
www.custombuildingproducts.com/#sle.
 - c. LATICRETE International, Inc; LATICRETE PERMACOLOR Grout:
www.laticrete.com/#sle.
 - d. Substitutions: Or equal as approved by the Professional.

2.5 MAINTENANCE MATERIALS

- A. Grout Sealer: Liquid-applied, moisture and stain protection for existing or new Portland cement grout.
 - 1. Composition: Water-based colorless silicone.
 - 2. Products:
 - a. Merkrete, by Parex USA, Inc; Merkrete Grout Sealer: www.merkrete.com/#sle.
 - b. Substitutions: Or equal as approved by the Professional.

2.6 ACCESSORY MATERIALS

- A. Backer Board: Cementitious type complying with ANSI A118.9; high density, glass fiber reinforced, 1/2 inch thick; 2 inch wide coated glass fiber tape for joints and corners.
 - 1. Products:
 - a. Custom Building Products; WonderBoard Lite Backerboard: www.custombuildingproducts.com/#sle.
 - b. Substitutions: Or equal as approved by the Professional.
- B. Backer Board: Coated glass mat type complying with ASTM C1178/C1178M; inorganic fiberglass mat on both surfaces and integral acrylic coating vapor retarder.
- C. Mesh Tape: 2 inch wide self-adhesive fiberglass mesh tape.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

3.2 PREPARATION

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces and damp clean.
- C. Install backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of setting material to a feather edge.

3.3 INSTALLATION - GENERAL

- A. Install tile and grout in accordance with applicable requirements of ANSI A108.1a through ANSI A108.19 , manufacturer's instructions, and TCNA (HB) recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly.

- D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.
- E. Form internal angles square and external angles bullnosed.
- F. Install non-ceramic trim in accordance with manufacturer's instructions.
- G. Sound tile after setting. Replace hollow sounding units.
- H. Keep control and expansion joints free of mortar, grout, and adhesive.
- I. Prior to grouting, allow installation to completely cure; minimum of 48 hours.
- J. Grout tile joints unless otherwise indicated. Use standard grout unless otherwise indicated.
- K. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

3.4 INSTALLATION - SHOWER WALLS

- A. Grout with standard grout as specified above.

3.5 INSTALLATION - WALL TILE

- A. Over cementitious backer units install in accordance with TCNA (HB) Method W223, organic adhesive.
- B. Over coated glass mat backer board on studs, install in accordance with TCNA (HB) Method W245.

3.6 CLEANING

- A. Clean tile and grout surfaces.

END OF SECTION