

SECTION 09310 - CERAMIC TILE

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Ceramic wall tile, floor tile and accessories, Owner furnished, Contractor installed.

B. Related Requirements:

1. Section 01351 – Regulatory Compliance:
 - a. Disposal and removal of hazardous construction and universal waste.
 - b. Work practice control methods for airborne respirable dust.
2. Division 3 - Concrete: Flooring substrate finish and preparation.
3. Section 07900 - Joint Sealers: Sealant at tile penetrations and control/construction joints.
4. Section 09250 - Gypsum Board Systems: Wall tile substrate.
5. Appendix A – Products and Work By Owner or Separate Contractor
 - a. General procedures related to Owner furnished products.
 - b. Manufacturers, suppliers, vendor contacts and product names and numbers related to Owner furnished products.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. Publications are referenced within the text by the basic designation only.
- B. American National Standards Institute (ANSI):
 1. ANSI A108/A118/A136.1 – Specifications for the Installation of Ceramic Tile
 - a. A108 – Installation Standards
 - 1) .02 – General Requirements: Materials, Environmental, and Workmanship
 - 2) .5 – Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar
 - 3) .15 – Alternate Method: Installation of Paper-Faced Glass Mosaic Tile
- C. Occupational Safety and Health Administration (OSHA):
 1. OSHA 01926.1153 Respirable Crystalline Silica.
- D. Tile Council of America, Inc. (TCA):
 1. TCA Handbook for Ceramic Tile Installation.

1.3 ENVIRONMENTAL REQUIREMENTS

- A. Minimize dust emissions or provide equipment that suppresses dust.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Section 01600 - Product Requirements: Transport, Handle, Store, and Protect Products.
- B. Transport, handle, store, and protect products in compliance with the requirements of Section 01600.
- C. Receive Owner Furnished products in accordance with the requirements of Appendix A.
- D. Product Delivery: Owner's Supplier will deliver products to site to be received by Contractor. Contact Owner's Supplier to coordinate product delivery and installation.

- E. Acceptance at Site: Inspect products upon delivery to Site to verify quantity, and report discrepancies in quantity delivered or damage.
- F. Product Packaging: Products will be delivered in manufacturer's original packaging with identification markings on each component or package.
- G. Store packaged materials in original containers with seals unbroken and labels intact until time of use.
- H. Prevent damage or contamination to materials by water, freezing, foreign matter, and other causes.

1.5 SITE CONDITIONS

- A. Do not install adhesives in a closed, unventilated environment.
- B. Maintain 50 degrees F during installation of mortar materials.

PART 2 PRODUCTS

2.1 OWNER FURNISHED PRODUCTS

- B. Owner's Supplier will furnish products as specified in Appendix A (Section 09310) for installation by Contractor.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces and adjacent areas where products will be installed and verify that surfaces conform to product manufacturer's requirements for substrate conditions. Do not proceed until unsatisfactory conditions have been corrected.
- B. Beginning of installation indicates acceptance of substrate conditions.

3.2 PREPARATION

- A. Protect surrounding work from damage or disfiguration.
- B. Interior Concrete Slab:
 1. Vacuum clean existing substrate and damp clean.
 2. Seal substrate surface cracks with filler.
 3. Level existing substrate surfaces in accordance with TCA installation requirements and remove peaks or valleys using floor leveling compound specified. Prime, clean and prepare concrete surface as required by manufacturer and apply leveling compound in accordance with manufacturer's instructions.
- C. Prepare substrate surfaces which do not need joint repair with sealers or conditioners as recommended by adhesive manufacturer.

3.3 INSTALLATION TRAINING

- A. Pre-Construction Training Meeting: Prior to tile installation, a training meeting shall be conducted by the Contractor with mandatory attendance by the General Contractor, tile installation contractor, Walmart Construction Testing Laboratory, and the Walmart Construction Manager. The meeting program shall include a viewing of the Latacrete Manufacturer's Tile Installation Instruction Video. The video will be provided to the Contractor by the Walmart pre-negotiated supplier with the Walmart furnished products.
- B. Attendance Verification: An attendance roster shall be prepared by the Contractor showing attendees and a statement attesting each attendee has completed the training. Roster shall be verified and signed by the

Construction Manager.

3.4 INSTALLATION

- A. ANSI Tile Installation Standards: Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that apply to types of setting and grouting materials shown and specified.
- B. TCA Installation Guidelines: TCA's "Handbook for Ceramic Tile Installation." Comply with applicable TCA installation methods.
- C. Transition Strip: Install transition strip at transitions between ceramic tile and concrete or VCT. Install during tile placement in accordance with edge strip manufacturer's instructions.
- D. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
 - 1. Lay tile to grid pattern shown at vestibule. Customers must have access to at least half the vestibule entrance at all times.
- E. Cut tile using saws equipped with integrated water delivery system that continuously feeds water to the blade.
- F. Fit tile tight to penetrations. Form corners and bases neatly. Align floor and base joints.
- G. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
- H. Sound tile after setting. Replace hollow sounding units.
- I. Expansion Joints: Provide tile expansion joints at control/construction joints in concrete slab. Keep joints free of mortar or grout.
 - 1. Installation Method: TCA EJ171.
- J. Allow tile to set for a minimum of 48 hours prior to grouting.
- K. Grout tile joints.
 - 1. Grout space shall be 1/8-inch for all tile joints.
- L. Apply sealant to junction of tile and dissimilar materials, at tile penetrations, and at tile expansion joints.

3.5 FIELD QUALITY CONTROL

- A. Inspect ceramic tile installation, joints, grout line alignment, and attachment to substrate.
- B. Correct deficiencies in Work which inspection indicates are not in compliance with Contract Documents.

3.6 CLEANING

- A. Remove excess mortar and grout from floor, base, and wall surfaces without damage.
- B. On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
 - 1. Initially clean and remove grout residue from tile as soon as possible according to tile and grout manufacturer's written instructions. Use 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.
 - 2. Begin final cleaning approximately 1 hour after initial cleaning of the grout. Mix cleaning additive to 2 gallons of clean, cool water. Use a white scrub pad to lightly scrub apart any of the leftover residue remaining on the surface of the tile. Drag a clean, damp sponge diagonally over the scrubbed surfaces to

- remove any froth and residue. Rinse sponge often and change water every 50 square feet of surface. Allow cleaned areas to dry and inspect entire surface of tile. Repeat if haze remains.
3. If haze remains 24 hours after installation, clean surfaces using straight white vinegar or bleaching type cleanser by methods described in preceding paragraph.
- C. Dispose of construction waste in accordance with the requirements of Section 01351.
 - D. Perform final cleaning of tile with cleaning materials recommended by tile manufacturer one day prior to Date of Substantial Completion.

3.7 PROTECTION

- A. 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.
- B. Prohibit traffic from floor finish for 72 hours after installation.

END OF SECTION