

SECTION 09 30 13
CERAMIC and QUARRY TILE

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work in this section.

1.2 SECTION INCLUDES

- A. This Contractor shall furnish and install all tile and accessories shown on the plans or specified.
- B. Work includes all plant facilities, services, materials, labor, tools, and appliances required.

1.3 REFERENCES

- A. ANSI A108/A118/A136.1 – American National Specifications for the Installation of Ceramic Tile - A Collection of 20 ANSI/CTI A108 Series Standards on Ceramic Tile Installation: A108.1A-C, 108.4 -.13, A118.1-.10, ANSI A136.1
- B. ANSI A137.1 – American National Standards Specifications for Ceramic Tile
- C. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar
- D. ASTM C206 - Standard Specification for Finishing Hydrated Lime
- E. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes
- F. TCNA - (Tile Council of North America) - Handbook for Ceramic Tile Installation

1.4 JOB CONDITIONS

- A. This Contractor shall inspect the job conditions before starting.
- B. All flooring variations less than 1/8" in 10 ft., chips, and cracks are the responsibility of the flooring subcontractor to feather/patch prior to the installation of tile.

1.5 SUBMITTALS

- A. Submit manufacturer's detailed technical data and tile and grout samples per Section 01 33 00.
- B. Product Data: Provide instruction for using adhesives and grouts.
- C. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, and junctions with dissimilar materials, control and expansion joints, thresholds, and setting details.
- D. Manufacturer's Certificate: Certify that products meet or exceed ANSI A137.1.

1.6 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed, packaged with protective covering for storage, and identified with labels describing contents.
- B. Furnish quantity of full-size units equal to 2.0% of amount installed.

PART 2 PRODUCTS

2.1 CERAMIC TILE (CT)

- A. Tile Products manufactured by American Olean, Dal-Tile, Inter-Ceramic, or US Tile are acceptable, providing their products equal or exceed the type and quality of the specified products and the colors match the colors specified.
- B. Provide standard grade ceramic glazed wall tile conforming to ANSI A137.1.
- C. Provide 5/16" thick standard size as shown on plans with matte glazed tile and cushioned edge.
 - 1. Use master-set, back mounted sheets.
- D. Provide standard grade ceramic unglazed floor tile conforming to ANSI A137.1.
 - 1. Tile shall meet or exceed the ADAAG slip resistance coefficient of 0.6 on static surfaces and 0.8 on ramps, and submit documentation to Architect.

2. Provide 5/16" thick standard size as shown on plans with matte unglazed tile and cushioned edge.
 3. Use master-set, back mounted sheets.
 - E. Glazed Wall Tile Trim, provide the following:
 1. Trim in a size, color, and shade to match field tile.
 2. Bull nose wainscot cap where required.
 3. In a standard, square top, cove base at tile floors.
 4. In a square top, set-on type, cove base at other floors.
 5. Square edges at inside corners.
 6. Bull nose edges at outside corners and jambs.
- 2.2 CERAMIC MOSAIC TILE (CMT)
- A. Tile Products manufactured by American Olean, Dal-Tile, Inter-Ceramic, or US Tile are acceptable, providing their products equal or exceed the type and quality of the specified products and the colors match the colors specified.
 1. Tile shall meet or exceed the ADAAG slip resistance coefficient of 0.6 on static surfaces and 0.8 on ramps, and submit documentation to Architect.
 - B. Provide standard grade ceramic mosaics conforming to ANSI A137.1.
 - C. Provide rectangular by ¼" thick porcelain type with all purpose edges and patterns.
 - D. Use master-set, back mounted sheets.
 - E. Furnish with 7½% abrasive grain content in wet areas only.
- 2.3 QUARRY TILE
- A. Use domestic quarry tile for floor and base, standard grade, slip resistant, in accordance with the minimum grade guidelines established by the TCNA.
 - B. Tile Products manufactured by American Olean, Daltile, Interceramic Inc, or USA Tile & Marble are acceptable.
 1. Tile shall meet or exceed the ADAAG slip resistance coefficient of 0.6 on static surfaces and 0.8 on ramps, and submit documentation to Architect.
 2. Floor Tile: Provide and install 6" x 6" x ½" "Quarry Naturals" conforming to ANSI 137.1.
 3. Base shall be cove, bull nose top 6" x 5" x ½" to match floor.
- 2.4 MATERIALS
- A. Anti-Fracture Membrane/Cleavage Membrane: As indicated on the drawings, and elsewhere as required for isolating the installation from cracking due to minor substrate movement and normal structural deflections.
 - B. Waterproofing and Anti-Fracture Membrane: As indicated on the drawings, and elsewhere as required for thin-set tile installations complying with ANSI 118.10 for waterproof membranes.
 - C. Sound Control/Acoustical Underlayment: As indicated on the drawings, and elsewhere as required to be load bearing, shock, and vibration resistant.
 - D. Moisture Barrier System: As indicated on the drawings and elsewhere as required for thin-set tile installations.
 - E. Self-Leveling Underlayment: As indicated on the drawings, and elsewhere as required to provide a flat, level surface for direct receipt of tile and other floor coverings on dry, interior installations.
 - F. Mortar Bed Installations: As indicated on the drawings, and elsewhere as required for mortar bed or brown coat as the substrate for tile work; work to conform to ANSI A108.1.
 - G. Cementitious Backer Units: ANSI A118.9, where indicated on the drawings, if so; and elsewhere as required for floors wet areas and dry as recommended substrate for tile, heat shield with UL listing for floors; installation to comply with ANSI A108.11 and manufacturer's installation instructions.

1. ½" Wonder Board Backer board (Exterior or Interior Floors, and Countertops)
- H. Use water resistant wallboard as specified in section 09 26 00 for walls and ceilings as indicated on drawings.
- I. Cementitious Tile Adhesives:
 1. ANSI A118.1: As indicated on the drawings, and elsewhere as required for setting tile as specified by ANSI A108.5, Dry-Set Portland Cement Mortar or Latex Portland Cement Mortar, over substrates prepared accordingly.
 2. ANSI A118.4: Polymer-Enhanced Mortars:
 3. Latex Additives: As specified, use a latex additive as the mixing liquid, per manufacturer's direction, with certain pre-packaged, dry-set mortar mixes, to achieve a Latex Portland Cement Dry Set Mortar complying with ANSI A118.4.
- J. Organic Tile Adhesives:
 1. ANSI A136.1: As indicated on the drawings, and elsewhere as required for setting tile as specified by ANSI 108.4, Organic Adhesives, over substrates prepared accordingly.
- K. Epoxy Tile Adhesives:
 1. ANSI A118.3: As indicated on the drawings, and elsewhere as required for setting tile as specified by ANSI A108.6 Chemical Resistant, Water-Cleanable Tile Setting and Grouting Epoxy, over substrates prepared accordingly.
- L. Grout: As indicated on the drawings, and elsewhere as required for filling the joints between tiles.
 1. Polymer-Modified Portland Cement Grout:
 2. Dry-Set Grout: Use grout meeting ANSI A118.6, for joints up to 1/8".
 3. Chemical Resistant, As indicated on the drawing and elsewhere as required provide Water-Cleanable Tile Setting and Grouting Epoxy; per ANSI A118.3.
 4. Elastomeric Joint Caulk: ANSI A108.01.3.7 As indicated on the drawings, and elsewhere as required provide in all joints between floors and walls and at joints between tile and dissimilar materials.

2.5 ACCESSORIES

- A. The Contractor to supply all necessary base, cap edge corner, trim, or accessory tiles required for a complete installation.
- B. Shower Pan Membrane (use at shower and drying rooms)
 1. Mud-Set Method: Shall be equal to "Chloraloy" Shower Pan Liner chlorinated polyethylene shower pan membrane by The Noble Co.
 2. Thin-Set Method: Shall be equal to "Nobleseal TS" Thin-Bed Waterproofing chlorinated polyethylene sheet membrane as manufactured by The Noble Co.
- C. Use marble thresholds at all changes of materials, maximum of ½" thick to meet handicap requirements.
- D. Sealer – after cleaning, apply two coats of joint sealer per manufacturer's recommendations.
 1. Aqua Mix Grout Sealer
 2. Penetrating Sealer – for Quarry and other Vitreous, Semi-Vitreous & Non – Vitreous Tile
 3. Other product equal to the above
- E. Install layout, pattern, and colors as designed by the Architect.
 1. Primary Color – approx. 55%
 2. Secondary Color – approx. 25%
 3. Tertiary Color – approx. 15%
 4. Accent Colors – approx. 5%

PART 3 EXECUTION

3.1 INSPECTION

- A. This Contractor shall notify the General Contractor when he has completed his work and is ready for inspection.

3.2 INSTALLATION

- A. Install tile, per TCNA F113 sloping to floor drains, where applicable, in accordance with ANSI specification A-108.5.
 - 1. Install wall tile per TCNA W202.
- B. Install tile in grid pattern with continuous and properly aligned joints in all directions.
- C. Install thresholds at all wall openings where quarry tile abuts other floor finishes.
 - 1. Provide maximum threshold height $\frac{1}{4}$ " for HDCP requirements.
 - 2. A threshold up to $\frac{1}{2}$ " in height maybe installed, if it has edges beveled at 1:2 slope.
- D. Provide a $\frac{1}{8}$ " joint between the tile, and the doorframe or other item of dissimilar material then use a sealant over the joint instead of grout.
 - 1. Caulk the joints with caulking compound that matches grout.
- E. Space tiles a minimum of $\frac{1}{2}$ -tile width from corners and edges.
- F. Use masonry saw to cut tile unless Architect and Owner approve another method.
- G. Install accent wall tile level and true to line and flush with stucco surface.
- H. Floor tile in toilet rooms shall be epoxy grouted.

3.3 ADJUSTMENT AND CLEANING:

- A. Upon completion of the building, all finishes shall be free of all mars, dents, or other visible imperfections.

3.4 WARRANTY:

- A. This Contractor shall fully guarantee all materials and labor under this section for a period of not less than 1-year from date of final acceptance of the building against all defects in both workmanship and materials, and he shall promptly correct and/or replace such faulty work if so notified.

END OF SECTION