

## CONCRETE TILE 09 30 33



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This 3-part specification utilizes the Construction Specifications Institute (CSI) *Manual of Practice*, including *MasterFormat*, *SectionFormat*, and *PageFormat* and is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and masterguide specifications. Optional text is indicated by brackets [ ]; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This 3-part specification specifies concrete tile manufactured by Arto Brick California Pavers. Revise section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

### PART 1 GENERAL

#### 1.01 SUMMARY

- A. Section Includes: Handmade concrete tile for use as flooring & wall veneer
- B. Related sections:
  - 1. Division 09 Section: Concrete and Masonry Coatings
  - 2. Division 09 Section: Waterproofing Membranes

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 01 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section.

#### 1.02 REFERENCES

- A. American National Standards Institute (ANSI)
  - 1. A108/A118 American National Standards for the Installation of Ceramic Tile
- B. American Society of Testing and Materials (ASTM International)
  - 1. C33 Specification for Concrete Aggregates
  - 2. C39/C39M Test Method for Compressive Strength of Cylindrical Concrete Specimens
  - 3. C67 Test Methods for Sampling and Testing Brick and Structural Clay Tile
  - 4. C140 Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
  - 5. C150 Specification for Portland Cement

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6. C157/C157M Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete
7. C260 Specification for Air-Entraining Admixtures for Concrete
8. C270 Specification for Mortar for Unit Masonry
9. C482 Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste
10. C494/C494M Specifications for Chemical Admixtures for Concrete
11. C979 Specification for Pigments for Integrally Colored Concrete
12. C1028 Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
13. C1116/C1116M Specification for Fiber-Reinforced Concrete
14. C1353 Test Method Using the Taber Abraser for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic.
15. C1602/C 1602M Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

### 1.03 SYSTEM REQUIREMENTS

#### A. Performance Requirements

1. Absorption (ASTM C140): Not more than 12%.
2. Freeze Thaw Resistance (ASTM C67): Unaffected after 50 cycles.
3. Compressive Strength (ASTM C39): Not less than 4000 psi (27,560 kPa).
4. Length Change (ASTM C157): +/-0.1% max.
5. Bond Strength (ASTM C482): 50 psi (0.3 MPa).
6. Abrasion Resistance (ASTM C1353): 20 wear index.
7. Coefficient of Friction (ASTM C1028): 0.6 dry; 0.6 wet.
8. Breaking Load (ASTM C67): Minimum load 300 lbs

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 01 Submittal Procedures Section.

### 1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 01 Submittal Procedures Section.
- B. Product Data: Submit product data for specified products.

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- C. Shop Drawings: Indicate layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, accessories and setting details.
- D. Maintenance Data: Include recommended cleaning methods, cleaning materials, stain removal methods and polishes and waxes.

Specifier Note: Article below should include prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 01 Quality Assurance Section.

- E. Samples: Submit selection and verification samples of finishes, colors and textures.

### 1.05 QUALITY ASSURANCE

#### A. Qualifications

- 1. Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project for a minimum of 5 years.

#### B. Regulatory Requirements and Approvals: [Specify applicable requirements of regulatory agencies].

- 1. [Code agency name].
  - a. [Report or approval number].

Specifier Note: Retain paragraph below for erected assemblies (either onsite or offsite) required for review of construction, coordination of work of several sections, testing or observation of operation. Mock-ups, when accepted or approved, establish standards by which work will be judged. Coordinate below with Division 01 Quality Control (Mock-Up Requirements) Section.

- C. Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, texture and pattern and workmanship standard(s). Comply with Division 01 Quality Control (Mock-Up Requirements) Section.
  - 1. Mock-Up Size: [Specify mock-up size].
  - 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required
  - 3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.

Specifier Note: Article below should include special and unique requirements. Coordinate article below with Division 01 Product Requirements Section.

### 1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 01 Product Requirements Section.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

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- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer

### 1.07 ENVIRONMENTAL REQUIREMENTS

- A. Install mortar, set and grout tile when surface temperature is a minimum of 50 degrees F (10 degrees C) and rising but no greater than 90 degrees F (32 degrees C).
- B. Do not install mortar, set or grout tile when inclement weather conditions are expected within 48 hours of completion.

### 1.08 EXTRA MATERIALS

- A. Extra materials: Provide \_ ft2 of each size, color and surface finish of tile specified.

## PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

### 2.01 TILES

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to 3-part specification. Retain or delete paragraph below per project requirements and specifier's practice.

- A. Manufacturer: Arto Brick / California Pavers.
  - 1. Contact: 15209 S. Broadway St., Gardena, CA 90248-1823; Telephone: (310) 768-8500; Fax: (310) 768-8544; website: [www.artobrick.com](http://www.artobrick.com).

Specifier Note: Edit Paragraph below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 01 Project Requirements (Product Substitutions Procedures) Section.

- B. Substitutions: No substitutions permitted.

Specifier Note: Paragraphs below list proprietary products offered by Arto Brick California Pavers. All measurements are nominal; consult manufacturer regarding exact measurements and product options. Select product characteristics required; delete characteristics not required.

### 2.02 TILES

- A. Style/Size
  - 1. Artillo
  - 2. Country
  - 3. Roman

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4. Rustic
5. Slate
6. Veranda

Specifier Note: Select color(s) below. If more than one color is selected, create color designators and coordinate with drawings.

### B. Color

1. Antik Gray
2. Artillo
3. Artillo Café
4. Beachwood Flash
5. Buff
6. Café Olay
7. Cauqi
8. Charcoal
9. Charley Brown
10. Chicago
11. City Hall Red
12. Cotto Dark
13. Cotto Gold
14. Desert
15. Early Gray
16. El Segundo
17. Flagstone
18. Gold
19. Grey Myst
20. Hacienda
21. Hacienda Flash
22. Hancock
23. Hermosa Blend
24. Jose Gray
25. Lopez Brown

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26. Los Angeles
27. Metro
28. Mission Red
29. Natural Gray
30. Normandy Cream
31. Ocean Green
32. Old California
33. Plumish
34. Red Flash
35. Rice
36. Rosa
37. Rosa White Wash
38. Sangria
39. Santa Monica
40. Sidewalk Gray
41. Smoke
42. Sonora Sunset
43. Tuscan Mustard
44. Urban
45. Used Desert
46. Used Red

Specifier Note: Refer to Arto color chart to view color options. Request samples from Arto or distributor to approve color variation.

### C. Texture

1. Standard
2. Acid Wash
3. Limestone
4. Luna
5. Sandblast
6. Travertine
7. Sand Blast

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### 2.03 ACCESSORIES

- A. Artillo Coping
- B. Artillo Stairtread
- C. Artillo Surface Bullnose
- D. Decorative Tiles/Liners

Specifier Note: Indicate if color and texture specified for accessories differ from tile color and texture.

### 2.04 MATERIALS

- A. Mortar
  - 1. Thin set mortar
    - a. Useful for transitions or areas with limited clearance.
  - 2. Medium bed mortar
    - a. Recommended for larger format (8x8 or larger) tiles.
  - 3. Mortar bed
    - a. Traditional method used by masons.
- B. Grout
  - 1. Grout with sanded Type S mortar or other grout specified. Ensure grout selected is appropriate for grout joint width specified and installation location.
  - 2. Grout using a grout bag and remove excess grout once it has set up but before it has hardened. Tiles can be presealed to ease grout removal.
- C. Sealer
  - 1. Seal tiles to protect surface finish and color.
  - 2. Types of sealer
    - a. Penetrating – seals below surface, matte finish, breathable surface
    - b. Topical – seals above surface, glossy finish, superior stain protection
  - 3. Sealing recommendations
    - a. Interior applications – penetrating or topical, depending on look and stain protection desired
    - b. Exterior applications – penetrating only for superior durability and slip fall resistance
- D. Waterproofing membrane
  - 1. Recommended for interior applications

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- E. Anti-fracture membrane
  - 1. Can be used to bridge existing cracks or for entire slab
- F. Cleavage membrane
  - 1. Must be used with slabs cured less than 28 days

### PART 3 EXECUTION

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to this three-part specification. Retain or delete paragraph below per project requirements and specifier's practice.

#### 3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

#### 3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
  - 1. Concrete slabs shall have roughened or troweled surfaces to allow for bonding.
  - 2. Ensure all substrates are clean and free of contaminants.
  - 3. Maximum substrate variation from required plane shall be 1/8" in 10 feet or as otherwise specified.
- B. Movement joints
  - 1. Must be included per ANSI/TCA guidelines

#### 3.03 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

#### 3.04 CLEANING

- A. Clean with water and soft nylon brushes only; do not allow mortar to set up on surfaces.
  - 1. Excessive water may affect curing of grout and mortar bed.
- B. Do not use acid or alkali cleansers which may damage the surface of the tile.
- C. Test all products before wholesale application.

#### 3.05 PROTECTION

- A. Protect installed products until completion of project.



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B. Repair or replace damaged products prior to Substantial Completion.

**END OF SECTION**