

The following specification refers to the Stepstone, LLC product known as:

Wall Cap Installations



Stepstone, LLC also manufactures If you need any additional information, please call Stepstone, LLC at 800-572-9029 or visit our website stepstoneprecast.com

July 2024

CONCRETE WALL AND PIER CAPS

Section 03 48 00

PART 1 - GENERAL

1.1 SUMMARY

1. Section Includes: Concrete wall and pier caps
2. Related sections:

1. Division 09 Section: Concrete and Masonry Coatings

1.2 REFERENCES

1. American Society of Testing and Materials (ASTM International)

ASTM C33 Concrete Aggregates

ASTM C39 Concrete Compressive Strength

ASTM C144 Aggregate for Masonry Mortar

ASTM C150 Portland cement

ASTM C595 Standard Specification for Blended Hydraulic Cements

ASTM C642 Water Absorption, Density, Voids in Hardened Conc

ASTM C666 Rapid Freeze/Thaw Resistance of Conc

ASTM C979 Pigments for Integrally Colored Concrete

1.3 SUBMITTALS

1. Samples: Submit two full-sized samples of each type of precast concrete unit to show the full range of color and texture of unit for selection and approval. If sealer is to be applied to precast concrete slab, apply sealer on one sample.
2. Product Data: Submit product data for specified products.
3. Warranty: Provide certified copies of manufacturer's product warranties.
4. Shop Drawings (Optional)
5. Indicate layout, corners, terminals, radius sizes, junctions with dissimilar materials, accessories and setting details.

1.4 SUBSTITUTIONS

1. Refer to Section () for procedures.

*Note to Specifier: Insert appropriate section.*

1. Proposed substitutions: No known equal.

1.5 QUALITY ASSURANCE

1. Compliance with Regulations: Comply with requirements of state and local building codes and with rules and regulations relating to building accessibility.

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

1. Qualifications of Manufacturer: Company specializing in manufacture of precast concrete wall cap units with a minimum of 10 continuous years of documented experience.
2. Qualifications of Subcontractor: Subcontractor shall submit evidence of skill and not less than 5 years of experience in this product type.
3. Pre-installation Conference: As directed by the Architect
4. Precast concrete units shall have a compressive strength of 5,000 PSI minimum.

1.6 DELIVERY, STORAGE AND HANDLING

1. Deliver all materials to the installation site in the manufacturer's original packaging. Packaging shall contain manufacturer's name, customer name, order, identification number, and other related information.
2. Handle and store precast concrete units in accordance with manufacturer's recommendations.
   1. ENVIRONMENTAL REQUIREMENTS
   2. Install mortar, set caps and grout 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).
   3. Do not install mortar, set caps or grout when inclement weather conditions are expected within 48 hours of completion.

1.8 EXTRA MATERIALS

A. Extra materials: Provide \_ pcs of each size, color and accessories specified.

1.9 WARRANTY

1. Provide warranty covering precast concrete wall cap units against defects in material and workmanship for a period of 5 years. Unusual abuse and neglect are excepted.
2. Ordering: Comply with manufacturer’s ordering instructions and lead time requirements to avoid construction delays.

PART 2 - PRODUCTS

2.1 MANUFACTURER

Stepstone, LLC

17025 South Main Street

Gardena, CA 90248

(310) 327-7474

(800) 572-9029

FAX (310) 217-1424

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2.2 MATERIALS

1. Precast concrete wall cap units shall be precast concrete, consisting of Portland cement, aggregate, and color admixtures.
   1. Portland cement: ASTM C 150, Type III, high early strength.
   2. Aggregate: ASTM C 33.
   3. Color Admixture: By Davis Colors, or equal, as required to achieve color as selected.
   4. Aggregate for exposed aggregate surface: As selected.
   5. Portland Cement Mortar that meets or exceeds ANSI A118.4 requirements when mixed with water or a latex admixture, and is designed for installation of large format tile – Pedestrian Installation.
   6. Grout that meets or exceeds ANSI A118.7 when mixed with water or a latex admixture.
2. Precast concrete wall cap unit style
   1. Classic Wall Cap by Stepstone®
   2. Sonorastone® Peaked Wall Cap
   3. Sonorastone® Flat Wall Cap
   4. Square Modular Wall Cap

2.3 COLORS AND FINISHES

1. Colors: Davis Colors (or equal), integral color admixture. Integral color shall be throughout entire product. Finish color shall not be added as a face mix.

*Note to Specifier: Select one or more of the standard colors. Custom colors are available.*

|  |  |  |
| --- | --- | --- |
| With Slag  1401 Granada White  1404 French Gray  1405 Iceberg Green  1406 Almond  1407 Cafe Brown  1410 Caramel  1412 Agave  1413 Porcelain  1416 Brick Red  1421 Kona  1421 Pebble  1425 Adobe | Without Slag  1801 Granada White  1804 French Gray  1805 Iceberg Green  1806 Almond  1807 Cafe Brown  1810 Caramel  1812 Agave  1813 Porcelain  1816 Brick Red  1821 Kona  1824 Pebble  1825 Adobe | Slate-Finish (Sonorastone)  1501 Granada White  1504 French Gray  1506 Almond  1507 Cafe Brown  1510 Caramel  1512 Agave  1513 Porcelain  1516 Brick Red  1521 Kona  1524 Pebble  1525 Adobe |

*Note to Specifier: Select one or more of the finishes listed below.*

1. Finishes: Walking surfaces of precast concrete units shall have minimum coefficient of friction of 0.60, wet and dry.
   1. Smooth
   2. Sandblasted
      1. Light Sandblast
      2. Medium Sandblast
      3. Heavy Sandblast
   3. Slate, also known as “Sonorastone”

*Note to Specifier: Include or delete a factory applied sealer, (item C below). Factory applied sealer provides minimal protection against freeze-thaw climates. Field applied sealer is mandatory in freeze-thaw climates. Specifier shall indicate if field applied sealer is required.*

1. Factory Application of Sealer: Factory apply one coat of penetrating sealer to all surfaces of wall cap units. Sealer shall be non-staining, penetrating material, suitable for exterior or interior use, type which does not discolor or darken the surface.
2. Field Application of Sealer:
   1. In geographic regions exposed to freeze-thaw conditions field-applied sealing the entire area, including joints, after installation is mandatory.
   2. Conform to sealer manufacturer's recommendations for application and maintenance of sealer.

2.4 PHYSICAL PROPERTIES:

1. Compressive strength: Minimum 5,000 PSI.

*Note to Specifier: Select one or more of the sizes and finishes listed below. Not all sizes are available in all finishes. Refer to size and finish chart in section in 2.4.B to determine which finish is available in each size.*

1. Size and Finish Schedule:
   1. Classic Wall Cap

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Smooth | Sandblast | Slate |
| 8" x 24" x 2-1/2" | X | X |  |
| 10-1/4" x 24" x 2-1/2" | X | X |  |
| 12" x 24" x 2-1/2" | X | X |  |
| 14" x 24" x 2-1/2" | X | X |  |
| 16" x 24" x 2-1/2" | X | X |  |
| 24" x 24" x 2-1/2" | X | X |  |

Classic Pilaster Cap-Flat

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Smooth | Sandblast | Slate |
| 14” x 14” x 2-1/2" | X | X |  |
| 16” x 16" x 2-1/2" | X | X |  |
| 19” x 19" x 2-1/2" | X | X |  |
| 22” x 22" x 2-1/2" | X | X |  |
| 24" x 24" x 2-1/2" | X | X |  |
| 28” x 28” x 2-1/2” | X | X |  |

Classic Pilaster Cap-Peaked

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Smooth | Sandblast | Slate |
| 14” x 14” x 3-3/4" | X | X |  |
| 16” x 16" x 4" | X | X |  |
| 19” x 19" x 4-1/4" | X | X |  |
| 22” x 22" x 4-3/8" | X | X |  |
| 24" x 24" x 4-1/2" | X | X |  |
| 28” x 28” x 5” | X | X |  |

* 1. Sonorastone® Peaked Wall Cap

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Smooth | Sandblast | Slate |
| 9-1/4" x 24" x 3" |  |  | X |
| 12-1/4” x 24" x 3-1/4" |  |  | X |
| 16-1/4” x 24" x 3-3/4" |  |  | X |

Sonorastone® Peaked Pilaster Cap

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Smooth | Sandblast | Slate |
| 13-1/4" x 13-1/4" x 3-1/2" |  |  | X |
| 18-1/4" x 18-1/4” x 4" |  |  | X |
| 22-1/4" x 22-1/4" x 4-3/8" |  |  |  |
| 24-1/4" x 24-1/4" x 4-3/4" |  |  | X |

* 1. Sonorastone® Flat Wall Cap

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Smooth | Sandblast | Slate |
| 7-1/4" x 24" x 2-1/2" |  |  | X |
| 9-1/4" x 24" x 2-1/2" |  |  | X |
| 13-1/4" x 24" x 2-1/2" |  |  | X |

Sonorastone® Flat Pilaster Cap/Seat Wall Cap

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Smooth | Sandblast | Slate |
| 18-1/4" x 18-1/4" x 3" |  |  | X |
| 18-1/4" x 24-1/4" x 3" |  |  | X |
| 24-1/4" x 24-1/4" x 3" |  |  | X |

* 1. Square Modular Wall Cap

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Smooth | Sandblast | Slate |
| 7-1/4" x 24" x 3-3/8" | X | X |  |
| 9-1/4" x 24" x 3-3/8" | X | X |  |
| 13-1/4" x 24" x 3-3/8" | X | X |  |
| 20-1/4" x 24" x 3-3/8" | X | X |  |

Square Modular Pilaster Cap

|  |  |  |  |
| --- | --- | --- | --- |
| Size | Smooth | Sandblast | Slate |
| 13” x 13" x 3-3/8" | X | X |  |
| 15” x 15" x 3-3/8" | X | X |  |
| 20" x 20" x 3-3/8" | X | X |  |
| 23” x 23" x 3-3/8" | X | X |  |
| 25” x 25" x 3-3/8" | X | X |  |

1. All wall cap styles have straight, end and corner pieces. Select wall cap styles have coordinating standard radius pieces.
2. Unit size: Within 1/8” of designated length, width and thickness.
3. Weight: 133 lbs/ft3
4. Water absorption: Not more than 6.0 % average, not more than 7.0 % for any individual unit for standard colors.
5. Wall Cap units will contain on average 6% entrained air, with no individual piece under 5%.
6. Resistance to Freeze-Thaw: Wall cap units will resist 300 freeze thaw cycles in accordance with ASTM C666 Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing.

2.5          FABRICATION

1. Wall Cap units shall be hand-made, wet-cast of cement conforming to ASTM C 150, Type III, aggregates conforming to ASTM C 33, and pigments for integrally colored concrete conforming to ASTM C979.

2.6          SOURCE QUALITY CONTROL

1. Concrete for Wall Cap units shall be tested frequently to assure that mixes provide units having not less than 5,000 psi compressive strength at 28 days (average test strength not less than 4,500 psi).
2. Minor chips, hairline cracks, air voids and slight variations in color and finish are normal in precast concrete. When viewed in typical daylight illumination from a distance of 20 feet, minor chips, hairline cracks and air voids that cannot be seen with the naked eye are not grounds for rejection.

3.1 EXAMINATION

1. Examine all surfaces.
2. Verify all dimensions of in-place and subsequent construction.
3. Notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work.
4. Do not proceed with the work until unsatisfactory conditions have been corrected.
5. Installation of precast concrete wall caps, and associated construction, constitutes acceptance of the adjacent and underlying construction.

3.2 PREPARATION

* 1. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
     + 1. Ensure all substrates are clean and free of contaminants and have a roughened surface to encourage bonding.

3.3 CLEANING

1. Clean exposed surfaces of precast concrete units. Use cleaners appropriate for precast concrete finishes and colors. Acid based cleaners will permanently alter finish and color.

3.4 SEALING

1. Field-applied sealer for the prevention of freeze-thaw is optional in mild climates. If precast concrete units are factory sealed, test for compatibility before applying additional sealer.
2. In geographic regions exposed to freeze-thaw conditions field-applied sealing the entire area, including joints, after installation is mandatory in order to maintain Stepstone's warranty. Follow sealer manufacturer’s instructions for application and maintenance of the sealer.

3.5 COMPLETION

1. Protect precast concrete units from damage due to subsequent building operations.
2. After installation and before completion, inspect precast concrete units for construction damage and obtain new precast concrete units if required.
3. Immediately prior to final acceptance of project, clean precast concrete units.

END OF SECTION