

**(Specifier Notes:**

***The purpose of this guide specification is to assist the specifier in correctly specifying ornamental limestone and their installation. The specifier needs to edit this guide specification to fit the needs of each specific project.***

***Throughout the guide specification, there are Specifier Notes to assist in the editing of this guide specification. Brackets [ ] have been used to indicate when a selection or a decision is required. References have been made to MasterFormat Division numbers and titles and should be coordinated with other Sections.)***

SECTION 04 44 00

ORNAMENTAL LIMESTONE

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Ornamental limestone, including following:

***(Specifier Note: EarthWorks, Inc. can produce many different ornamental limestone designs, some of which are listed in the subparagraphs below. There are a large number of variations; consult EarthWorks, Inc.)***

1. Quoins.
2. [Solid][Multiple piece] arches [with keystones].
3. Keystones.
4. Headers.
5. Sills.
6. Bandings.
7. Watertables and base courses.
8. Balustrades and balusters.
9. Urns.
10. Chimney caps.
11. [Solid][Multiple piece] columns [with capitals and bases].
12. Entablatures.
13. Gabled porticos.
14. [Parapet][Pool] copings.
15. Risers.
16. Treads.
17. Benches.
18. Fireplace [mantel][surrounds][hearths].
19. Firepits.
20. Exterior window surrounds.
21. Exterior entry surrounds.
22. Interior cased opening surrounds.
23. Signage.
24. Bollards.
25. Carvings.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's technical literature for each product indicated, specified, or required.
- B. Shop Drawings: Detailed plans, elevations, sections, and large-scale details for fabrications; include following:
  1. Descriptions, types, sizes, and profiles.

2. Adjacent and adjoining construction.
3. Anchors, fasteners, and attachment devices.
4. Fabrication and installation tolerances.

C. Samples for Verification:

1. Limestone: 12 inch square units for each different limestone color and finish showing full range to be expected.
2. Ornamental Units: Full-size units for each in color and finish specified.

### 1.3 QUALITY ASSURANCE

A. Mockups: Before beginning work of this Section, build as many mockups as required to verify selections made under submittals and to demonstrate aesthetic effects and for work execution. Use materials and installation methods specified.

1. Build for each type of ornamental units.
2. Locate at locations indicated or, if not indicated, as directed by Architect; facing south.
3. Clean exposed faces.
4. Notify Architect 7 days in advance of dates and times when mockup will be constructed.
5. Protect approved mockups from elements with weather-resistant covering.
6. Maintain during construction in an undisturbed condition as a standard for judging completed work.
7. Approval is for following qualities; approval does not constitute approval of deviations from Contract Documents, unless specifically approved by Architect in writing:
  - a. Color, texture, and blending of limestone units.
  - b. Relationship of sealant colors to limestone units.
  - c. Tooling of joints.
  - d. Other aesthetic qualities as determined by Architect.
8. When directed, demolish and remove mockups from site, including foundations.

### 1.4 DELIVERY, STORAGE, AND HANDLING

A. Limestone and Accessories: Store and handle according to following:

1. To prevent deterioration or damage due to contaminants, breaking, chipping, or other causes.
2. ILI's The Contractors Handbook on Indiana Limestone.

## PART 2 - PRODUCTS

### 2.1 LIMESTONE

- A. Material Quality Standard: ASTM C 568, Classification II or III.

### 2.2 ORNAMENTAL LIMESTONE UNITS

- A. Basis of Design: Contract Documents are based on units fabricated by Earthworks, Inc. to establish a standard of quality.

***(Specifier Note: The paragraph and subparagraphs below is the template for specifying each ornamental limestone unit. Use the template for each individual unit type and modify as required for each unit.)***

- B. [ - unit name - ]:

1. Basis of Design: [Aux Vases Buff][Aux Vases Blue][EW Gold][Cottonwood][Pewter Mist][Chocolate Marble].
2. Description: [ - insert information - ].
3. Dimensions: [ - insert for width, length, height, and depth as required - ].
4. Finish: [Smooth][Sandblasted][Bushhammered][Rockface][Split face][Profiled as indicated].

## 2.3 INSTALLATION MATERIALS

- A. Adhesive: Two component epoxy consisting of epoxy resin and hardener, inert mineral filler (not more than 50 percent by weight), and thixotropic agent with minimum physical properties specified in ILI's Indiana Limestone Handbook.

***(Specifier Note: Consider using Type 316 stainless steel in humid, coastal areas because it has more resistance to corrosion than Type 304.)***

- B. Metals in Contact with Limestone: ASTM A 666, Type 304.

## 2.4 FABRICATION

- A. Fabrication Quality Standards: In addition to standards specified elsewhere, perform work according to following, unless otherwise specified:

1. ILI's Indiana Limestone Handbook.
2. Approved submittals.
3. Contract Documents.

- B. Shop Assembly/Fabrication: Fabricate, including assembly and finishing, at shop before shipment to Project to maximum extent possible. Disassemble components only as necessary for shipment and for installation. Where necessary for fitting at Project, provide ample allowance for scribing, trimming, and fitting.

- C. Cutting: Cut limestone to produce units of thickness, size and shape indicated on approved submittals, specified, or required by field conditions.

- D. Sinkages and Holes: Cut and drill for anchors, fasteners, supports, and lifting devices as indicated or needed to set stone securely in place.

- E. Assembly with Adhesives:

1. Mix adhesive components according to manufacturer's instructions.
2. Use suitable clamps or bracing to keep limestone in proper alignment until adhesive hardens properly.
3. Do not move assembled units until adhesive hardens properly.

- F. Tolerances: According to ILI's Indiana Limestone Handbook.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Acceptance of Surfaces and Conditions:

1. Examine substrates for compliance with requirements, installation tolerances and other conditions affecting performance.
2. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents.

3. Starting work within a particular area will be construed as acceptance of surface conditions.

### 3.2 INSTALLATION

- A. Installation Quality Standards: In addition to standards specified elsewhere, perform work according to following, unless otherwise specified:
  1. ILI's Indiana Limestone Handbook.
  2. Approved submittals.
- B. Setting and Fastening: Set ornamental limestone units plumb, level, true, and in alignment with established lines and floor levels.
- C. Tolerances: According to ILI's Indiana Limestone Handbook.

END OF SECTION