

SECTION 3400

Precast Terrazzo Stairs, Base, Sills, Copings, and other Precast Terrazzo Amenities

Part One: GENERAL

1.1 SUMMARY

- A. Type of precast concrete work includes:
 - 1. Precast concrete stairs
 - 2. Precast concrete caps
 - 3. Precast concrete copings
 - 4. Precast concrete wall panels
 - 5. Precast concrete base
 - 6. Precast concrete _____
- B. Setting material, grouts, sealants, and caulks
- C. Installation of precast concrete stairs, caps, copings, etc.
- D. Related work not specified under this section:
 - 1. Installation of steel units to receive precast concrete
 - 2. Installation of concrete substrate to receive precast concrete

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM C-150
 - 2. ASTM C-33
 - 3. ASTM C-260
 - 4. ASTM C-494
 - 5. ASTM C-128
 - 6. ASTM C-31
- B. Precast/Prestressed Concrete Institute (PCI)
- C. American Concrete Institute (ACI)
 - 1. ACI0318

1.3 SUBMITTALS

- A. Shop Drawings: Submit shop drawings of all precast concrete items showing detail sections and profile for all precast items. Details shall show all reinforcing and special hardware required for fastening.
- B. Samples: Submit one sample, 6" x 12" size for each color, with copy of Quality Assurance and Procedure Program:
 - 1. Color to be selected from Wausau Tile, Inc. paving color chart.
 - 2. Sample to be submitted for color and texture.
 - 3. Match existing or architect's sample.
- C. Performance Requirements:
 - 1. Compressive strength 5000 psi.
 - 2. Air content: 6-8 percent.
 - 3. Water-cement ratio: .45:1
- D. Certification: Suppliers to furnish certification stating that materials meet specification requirements.

1.4 QUALITY ASSURANCE

- A. PCI Standards: comply with specified provisions and recommendations of the PCI.
- B. ACI Manual of Concrete Practice: comply with specified provisions and recommendations of the ACI.
- C. Manufacturer's Instructions: in addition to specified requirements, comply with precast concrete manufacturer's instructions and recommendations for substrate preparation, material storage, mixing and application, finishing, and curing.
- D. Qualifications: precast concrete manufacturer and trade contractor must have a minimum of five years of successful experience on projects of similar magnitude and complexity to that indicated project and be prequalified by architect prior to bidding. Failure to prequalify will void bid.
- E. Manufacturer to supply a written Quality Assurance Program and Procedure manual

1.5 DELIVERY AND STORAGE

- A. Packing and Shipping: precast concrete to be palletized and shrink-wrapped, delivered in original, unopened packaging with legible manufacturer identification including size, piece number, quantities, manufacture date, and inspector's initials.

- B. Storage and Protection: precast concrete to be stored in secure area in original packaging. Protect from damage by other trades.

1.6 WARRANTY

- A. Manufacturer/installer shall warrant installed system for a period of one year from date of substantial completion against failure of workmanship and materials.

Part Two: PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable manufacturer: Wausau Tile, Inc.
- B. Clarification Note: Drawings and specifications are based on manufacturer's proprietary literature from Wausau Tile, Inc. Other manufacturers shall comply with minimum levels of material specifications and detailing indicated on the drawings of specified herein.

2.2 MATERIALS

- A. Portland Cement: ASTM C-150 specifications for Portland Cement.
- B. Aggregates: all aggregates to meet ASTM C-33 specifications, cleaned, and properly graded to size. Aggregates shall be blended to meet individual project requirements.
- C. Coloring: pigments used shall be inorganic, resistant to alkalinity, and used per manufacturer's recommendations.
- D. Reinforcement and HARDware: to conform with ACI and manufacturer's design
 - 1. Reinforce precast with deformed rods or wire or both as recommended by precast concrete manufacturer.
- E. Caulks and Sealants: urethane or polyurethane sealant, with color selected by architect from standard color palette.
- F. Sealer: Colorless, pure acrylic water-repellent penetrating sealer, to maintain natural look of concrete surface with no glaze or gloss, darkening or color change.

2.3 MANUFACTURED UNITS

- A. Sizing Tolerances: all units to conform to shop drawings, with 1/16" tolerance in dimension
- B. Precast Surfaces and Edges:
 - 1. All exposed edges to have minimum 1/8" chamfer to prevent chipping.
 - 2. Finished surfaces to match approved color sample.
 - 3. All precast concrete finished surfaces to be sealed with a sealer approved by manufacturer.

Part Three: EXECUTION

3.1 INSPECTION

- A. Examine areas to receive precast terrazzo for the following:
 - 1. Defects in existing work
 - 2. Deviations beyond allowable tolerances for the substrates
- B. Start work only when all defects have been corrected by others.

3.2 INSTALLATION

- A. Setting:
 - 1. Set accurately as shown on approved shop drawings. Set methods are:
 - a. Mud Set c. Weld e. Setting Clips/Hangers
 - b. Thin Set d. Bolt f. Tab Set
 - 2. Alignment of precast should be straight and true to all dimensions, not to vary more than 1/8" in length, height, or width.
 - 3. Install anchors as shown on details.
 - 4. Fill joints between with manufacturer-approved caulk or as specified.
- B. Protection:
 - 1. Upon completion, the work shall be ready for final inspection and acceptance by owner or owner agent.
 - 2. General contractor shall protect the finished work once the terrazzo contractor completes the work.
- C. Finish:
 - 1. Overall uniformity in matrix and aggregate.
 - 2. All product to be sealed with approved sealer.