



GEORGIA PRECAST SOLUTIONS

Specifications for Architectural Precast Concrete – Section 034500

QUALIFICATIONS OF MANUFACTURER:

- A) All precast concrete elements shall be manufactured by a firm presently specializing on the manufacture of the type shown on the drawing.
- B) Manufacturer's plant shall have been in continuous production for the last five (5) years.
- C) Proof of successful continuous experience in similar work over the past five (5) years must be presented and approved by the Architect prior to bidding.

CONCRETE QUALITY:

- A) Minimum strength of 5000 psi at age 28 days, as determined by tests of 6" by 12" cylinders. Absorption shall not exceed 5 percent for regular weight and 12 percent for light weight concrete.

FINISH AND SAMPLES:

The finish of the exposed to view surface shall be (state type):

- 1) Acid Etch (AE)
- 2) Light Sandblast (LSB)
- 3) Medium Sandblast (MSB)
- 4) Heavy Sandblast (HSB)

The finish shall match approved sample on file.

CASTING:

- A) Casting shall be accomplished by methods and equipment that are in conformance with acceptable systems for this type of work. Work shall be accomplished at manufacturing plant only.
- B) Concrete shall be so handled as to prevent segregation of materials, and shall be vibrated either internally or externally, to achieve proper compaction, finish and distribution of concrete.
- C) All precautions must be taken to keep the reinforcing steels in the proper location during placing and consolidation of the concrete. Embedded items shall be accurately placed and maintained in their proper location during the casting operation.
- D) Casting and dimensional tolerances shall be in accordance with the following:
 - 1) Overall dimension (height and width) plus or minus one-eighth inch.
 - 2) Thickness – plus or minus one-eighth inch.

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CURING:

Curing shall be accomplished by methods generally accepted for this type of work. Curing may be accelerated by steam curing providing the temperature does not exceed 155-degree F and surfaces of the concrete are kept moist. Elements shall not be removed from the molds until they have reached a compressive strength of 2000 psi.

MOLDS:

- A) The selection of materials from which molds are to be fabricated (steel, fiberglass, reinforced plastic, rubber, wood, or concrete shall be at manufacturer's option.
- B) All elements shall be cast in molds of rigid construction, accurate I detail with precise corners and arises, and so designed as to provide a close control of dimensions and details as indicated on the drawings.
- C) Prior to casting of precast elements. Molds shall have all surface joints, radii, corners, etc., filled, ground, filed, straightened, or otherwise removed to provide a finished surface that is smooth and dense, free of honeycombing, air pockets, offsets, shrinkages, or other irregularities.

MATERIALS:

- A) Cement shall be Portland Cement conforming to A.S.T.M. C-150 Types 1, II and III.
- B) Integral color shall be pure mineral oxide, lime proof and non-fading.
- C) Aggregates for regular weight concrete shall conform to the A.S.T.M. C-33 with a maximum size of $\frac{3}{4}$ inch. Aggregates for Light weight concrete shall conform to A.S.T.M. C-330 with a maximum size of $\frac{5}{8}$ inch. Aggregates for exposed surfaces shall be quartz, marble, granite or as required to match Architects sample.

WARRANTY:

Georgia Precast Solutions warrants its products, when purchased new, to be free from defect in the materials or workmanship under normal use and service for one year from original provable date of purchase. Replacement or repair is the option of Georgia Precast Solutions of defective part shall be the sole remedy of the warranty.

Concrete Mix Design

Mix Design	One Bag Mix	One Yard
Cement	92 lbs.	842 lbs.
Concrete Sand	150 lbs.	1373 lbs.
#7 Rock	150 lbs.	1373 lbs.
W.R. Grace Polarset	2 oz	16 oz
W.R. Grace Darex Air	1/8 oz	1 oz
Water	32 lbs.	293 lbs.

Color as required per project and cannot exceed 6 lbs. of color per bag of cement

Yield	9 bags per yard	3881 lbs. / yard
Slump	3"	
Compressive Strength	ASTM C39 Cylinder Test	5000 PSI +
Water Absorption	ASTM C642 2" Cylinder Test	6% max
Air Entrainment	ASTM C231 Pot Test	5.80%