

## Section 9.3 Volume II

### CONCRETE PAVEMENT PRODUCTION FACILITIES GUIDE

#### 9.3.6 CONCRETE PRODUCERS ROLES AND RESPONSIBILITIES

##### 9.3.6.1 Material Requirements

Meet the requirements of **FDOT Specifications Section 350**, including the following:

##### 9.3.6.1.1 Cementitious Materials

Acceptance of the cementitious materials at the Plant shall be based upon the delivery ticket and mill certificate. As a check on current quality, samples may be obtained and tested by the Producer or the Department.

~~Each brand or type of~~ **Clearly label and store each** cementitious material ~~shall be stored~~ in a separate and clearly labeled weatherproof **facility storage container**. ~~Provide suitable, safe, and convenient means of collecting cementitious material samples.~~

Measure the cementitious materials by mass within an accuracy of 1 percent of the required total amount. For concrete batches of 3 cubic yards or less, an accuracy of 2 percent is allowed. Weigh the cementitious materials separately from other materials. When weighing the cementitious materials in a cumulative weigh hopper, weigh the cement first.

#### 9.3.7 DESIGN MIXES

Design mixes shall meet the requirements of **Specifications Section 346**.

Follow **ACI 301** Section 4, and **ACI 211** as guidelines to design the concrete mixes. Design a concrete mix to provide a required compressive strength ( $f_{cr}$ ) that exceed the specified strength ( $f_c$ ) by overdesign value.

$$f_{cr}' = f_c' + \text{Overdesign}$$

The concrete producer shall submit design mix verification requests directly to the DMRO in the District where the design mix will be verified. If a design mix is to be verified at a location that is out-of-state, submit the design mix

design to the DMRE closest to that location.

Ensure that the preparation and testing of the trial mixes is performed by a laboratory that is inspected and meets the requirements of ASTM C1077. Personnel performing plastic or hardened concrete testing shall be qualified as described in ***Specifications Section 105***.

Make a separate submittal for each combination of component materials to be used at a trial mix concrete temperature of 68°F to 86°F, or for hot weather mixes at a minimum concrete temperature of 94°F. Concrete pavement slab replacement mixes do not require hot weather verification for mix design approval. Use only design mixes approved by the SMO for Department use. Ensure that the 28-day strength (or strength at any other designated age) of all trial mixes meets the overdesign requirement, of 1,200 psi.