

## 716 QMP Ancillary Concrete

### 716.1 Description

- (1) This section describes contractor mix design and testing requirements for class II and class III concrete.

#### 716.1.1 Quality Control Program

##### 716.1.1.1 General

- (1) Conform to general requirements under [701](#) and [710](#) as modified here in 716 for class II and class III concrete defined as follows:
  - Class II: ancillary concrete the department accepts based on field testing during placement.
  - Class III: ancillary concrete the department accepts by certification.

##### 716.1.1.2 Quality Control Plan

- (1) The contractor need only submit an abbreviated quality control plan as defined in [701.1.2.3](#); include the following:
  1. Identify concrete items to be designed and accepted with optimized aggregate gradations, as allowed in [501.2.7.4.2.1](#).
  2. Methods for monitoring and adjusting blended aggregate gradations, and methods for documenting corrective action.
  3. Concrete mix design conforming to one of the following:
    - Mix design for only class II concrete conforming to [710.4](#). Trial batching is not required.
    - Mix design for class II concrete also being used for class I conforming to [710.4](#) and [715.2](#).

### 716.2 Materials

#### 716.2.1 Class II Concrete

- (1) Ancillary concrete placed integrally with mainline pavement is accepted using tests of class I concrete but not eligible for incentive payment under [715.5](#). Document the locations and quantities of integral concrete and identify the class I subplot tests used for acceptance.
- (2) Perform random QC testing at the following frequencies:
  1. Test air content, temperature, and slump a minimum of once per 100 cubic yards for each mix design and placement method.
  2. Cast one set of 2 cylinders per 200 cubic yards for each mix design and placement method. Cast a minimum of one set of 2 cylinders per contract for each mix design and placement method. Random 28-day compressive strength cylinders are not required for HES or SHES concrete.
  3. For deck overlays, perform tests and cast cylinders once per 50 cubic yards of grade E concrete placed.
  4. For concrete base, one set of tests and one set of cylinders per 250 cubic yards.

The department will allow concrete startup test results for quantities under 50 cubic yards. Cast one set of 2 cylinders if using startup testing for acceptance.

- (3) The contractor will report QC test results to the engineer on the day sampled, except for long-term testing, report on the day tested.
- (4) The department will perform verification testing at the frequency specified in [701.3.3.2](#).
- (5) The department will report QV test results to the contractor within 2 business days after the department obtains the sample, or in the case of long-term testing, within 2 business days after conducting the test.
- (6) Conform to the initial curing requirements under [710.5.5](#) except the contractor may extend initial curing for 72 hours before transporting the cylinders to a department-qualified laboratory.
- (7) Except as allowed for small quantities in [710.2](#), test aggregate conforming to [710.5.6](#).
- (8) Provide concrete with a 28-day compressive strength that equals or exceeds the following:
  - If the contract specifies  $f'_c$ , then  $f'_c$ .
  - If the contract does not specify  $f'_c$ , then 3000 psi.

#### 716.2.2 Class III Concrete

- (1) Acceptance of class III concrete is based on a certificate of compliance. Submit the certificate of compliance at least 3 business days before producing concrete along with the initial concrete mix documentation as required under [710.4](#)(2).

- (2) Contractor testing for the mix and mix aggregates is not required for the items contained within the certificate of compliance. Conform to [716.2.1](#) for items not contained within the certificate of compliance.
- (3) Department verification testing is optional for class III concrete. Correct any deficiencies found during the QV testing.

**716.3 (Vacant)**

**716.4 (Vacant)**

**716.5 (Vacant)**