SECTION 56

CONCRETE FOR INCIDENTAL CONSTRUCTION (CLASS M)

56.1 DESCRIPTION

A. General

This work consists of site preparation, form construction, and the furnishing, handling, placing, curing, and finishing of Class M concrete for minor structures and incidental construction.

B. Related Work

Section 55	Concrete Masonry
Section 57	Reinforcement for Concrete Masonry
Section 100	Portland Cement
Section 101	Air-Entraining Admixtures
Section 102	Chemical Admixtures for Concrete
Section 104	Water for Use in Portland Cement Concrete
Section 105	Fine Aggregate for Use in Portland Cement Concrete
Section 106	Masonry Mortar Sand and Epoxy Resin Mortar Sand-
Section 107	Coarse Aggregate for Use in Portland Cement Concrete
Section 108	Concrete Curing Materials
Section 113	Preformed Expansion Joint Filler for Concrete
Section 114	Concrete Joint Sealer
Section 123	Reinforcement

56.2 MATERIALS

A. Cement

Cement shall conform to the requirements of Section 100. Unless otherwise specified, Type II cement shall be used.

B. Fine Aggregate

Fine Aggregate shall conform to the requirements of Section 105.

C. Coarse Aggregate

Coarse Aggregate shall conform to the requirements of Section 107.

D. Water

Water shall conform to the requirements of Section 104.

E. Admixtures

Admixtures shall conform to the requirements of Sections 101 and 102.

F. Reinforcing Steel

Reinforcing Steel shall conform to the requirements of Sections 57 and 123.

G. Curing Materials

Curing Materials shall conform to the requirements of Section 108 and shall be white pigmented.

H. Joint Filler

Joint Filler shall conform to the requirements of Section 113.

I. Joint Sealer

Joint Sealer shall conform to the requirements of Section 114.

56.3 CONSTRUCTION REQUIREMENTS

The supplier of Class M Concrete will be required to furnish a written statement certifying that the concrete furnished meets the applicable requirements of Section 56 for Class M-5 or M-6 concrete.

A. Concrete Quality and Proportion

Class M concrete will be designated on the plans as Class M-5 Concrete or Class M-6 Concrete. If no designation is given, it shall be assumed to be M-6 Concrete. M-5 concrete is acceptable only for special applications with written approval of the Engineer.

When Class M-5 concrete is designated, the following requirements shall apply:

1. The concrete aggregate mixture shall contain a minimum of fifty percent (50%) coarse aggregate by weight.

2. The mixture shall contain at least five hundred (500) pounds of cement per cubic yard.

3. The minimum twenty-eight (28) day compressive strength shall be three thousand (3000) psi.

When Class M-6 concrete is designated, the following requirements shall apply:

1. The concrete aggregate mixture shall contain a minimum of fifty percent (50%) coarse aggregate by weight.

2. The mixture shall contain at least six hundred (600) pounds of cement per cubic yard.
3. The minimum twenty-eight (28) day compressive strength shall be four thousand (4000) psi.

Class M-5 and M-6 concrete shall conform to the following slump and entrained air requirements:

1. The slump at time of placement shall not exceed four and one half (4 ½) inches.

2. The concrete destined to experience repeated freeze and thaw cycles shall contain between four and five tenths percent (4.5%) and seven and five-tenths percent (7.5%) entrained air. Air shall be, entrained by an approved air-entraining admixture. Where the concrete is not required to experience freeze-thaw and is to receive a burnished finish, air entrainment add mixtures shall be deleted from the mix.

B. Equipment

1. Batching, mixing, and hauling equipment shall be to the satisfaction of the Engineer.

2. Wood and metal forms shall meet the requirements of Section 55.

C. Handling, Measuring, and Batching Materials

Handling, measuring, and batching materials shall be to the satisfaction of the Engineer.

D. Mixing Concrete

Concrete shall be mixed to the satisfaction of the Engineer.

E. Limitations of Mixing

Limitations of mixing shall conform to Section 55.

F. Concrete Delivery Requirements

Concrete delivery requirements shall conform to Section 55.

G. Concrete Placing Requirements

Concrete placing requirements shall conform to Section 55. Placement of concrete on a frozen surface or frost of any depth will not be permitted.

H. Depositing Concrete in Water

Depositing concrete in water shall conform to the requirements of Section 55.

I. Protection of Concrete

Unless otherwise provided on the plans or other contract documents, concrete shall be maintained above thirty-two (32) degrees F. until it has attained a compressive strength of one thousand five hundred (1500) psi as determined by a properly calibrated maturity meter or by compressive cylinder testing.

J. Removal of formwork, construction of superimposed elements, backfilling, and application of live loads shall be as approved by the Engineer.

K. Joints

Joints shall be constructed as per Section 55.

L. Curing Concrete

Curing concrete shall conform to the requirements of Section 55.

M. Surface Finish

Surface finish shall conform to the requirements of Section 55.

56.4 METHOD OF MEASUREMENT

Class M concrete shall be measured in accordance with neat line dimensions shown on the plans, unless changes are ordered during construction. Volumes will be computed to the nearest one-tenth (0.1) cubic yard.

Deductions will not be made for concrete displaced by pipes or conduits less than six (6) inches in diameter, reinforcing and structural steel, weep holes, joints, drains and chamfers or fillets less than one square inch in cross section.

56.5 BASIS OF PAYMENT

The accepted quantity of Class M concrete will be paid for at contract unit price per cubic yard to the nearest tenth (0.1) cubic yard.

Payment will be full compensation for labor, equipment, materials, and incidentals not paid for under a separate item, required to furnish Class M concrete in place.

END OF SECTION