State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

March 28, 2022	Springfield	Number 96-1A

TO: CONSULTING ENGINEERS

SUBJECT: FOR AERONAUTICS 2020 STANDARD SPECIFICATIONS, ITEM 610, STRUCTURAL PORTLAND CEMENT CONCRETE: JOB MIX FORMULA APPROVAL & PRODUCTION TESTING.

I. This policy memorandum addresses the Job Mix Formula (JMF) approval process and production testing requirements when Item 610 is specified for an airport construction contract.

II. PROCESS

a. The contractor may submit a mix design with recent substantiating test data, or he may submit a mix design generated by the Illinois Division of Highways with recent substantiating test data for approval consideration. The mix design should be submitted to the Resident Engineer. An Item 501 PCC Pavement mix can be used in lieu of a Class SI mix, with the approval of the Division.

b. The Resident Engineer should verify that each component of the proposed mix meets the requirements set forth under Item 610 of the *2020 Standard Specifications for Construction of Airports* and/or the contract special provisions.

c. The mix design should also indicate the following information:

1. The name, address, and producer/supplier number for the concrete.
2. The source, producer/supplier number, gradation, quality, and SSD weight for the proposed coarse and fine aggregates.
3. The source, producer/supplier number, type, and weight of the proposed flyash and/or cement.
4. The source, producer/supplier number, dosage rate or dosage of all admixtures.

d. After completion of Items b and c above, the mix with substantiating test data shall be forwarded to the Division of Aeronautics for approval. Once the mix has been approved, the production testing shall be at the rate in Section III as specified herein.

III. PRODUCTION TESTING

a. When directed by the Resident Engineer, the Contractor shall make, cure and store one set of cylinders in accordance with AASHTO T23 for acceptance testing for each day the mix is used. In addition, at least one slump, one mix temperature, and one air test shall be conducted for each day the mix is used.

b. The concrete shall have a maximum slump of four inches (4") and minimum slump of two inches (2") when tested in accordance with AASHTO T119.

c. The air content of the concrete shall be between 5% and 8% by volume when tested in accordance with AAHSTO T152.

d. At no time shall the temperature of the concrete exceed 90 degrees Fahrenheit.

e. Acceptance testing for concrete provided under this item shall have a 14-day compressive strength of not less than 3,500 psi when tested in accordance with AASHTO T22. The testing lab shall be IDOT or AASHTO approved. The Resident Engineer will be responsible for the strength tests on the specimens at no expense to the contractor.

f. If more than 100 cubic yards of the mix is placed in a given day, additional tests at a frequency of 1 per 100 cubic yards shall be taken for strength, slump, mix temperature, and air.

g. The Resident Engineer shall collect actual batch weight tickets for every batch of Item 610 concrete used for the project. The actual batch weight tickets shall be kept with the project records and shall be available upon request of the Department of Transportation.

William C. Eves, P.E.
Acting Chief Engineer

Supersedes Policy Memorandum 96-1 (2020) dated December 3, 2020