

Florida Department of Transportation

Concrete Field Proficiency Sample Instructions

Revision Date July 19, 2023

Please read the following instructions carefully before opening the bags.

1. You have received three (3) bags: One containing cement, one containing fine aggregate, and one containing coarse aggregate. You have also received a **sample Transmittal Card with MAC ID number and your Technician Identification Number (TIN)**. Upon receipt, check for damaged or ruptured bags. Do not use material from damaged or ruptured bags for testing. Contact **<to be determined>** for replacement bags or missing Sample Transmittal Card.
2. The entire contents of these bags containing proportioned amount of material are to be used in the designated batch, Care should be taken not to lose any material from the bags.
3. Open the bags only when you are ready to perform the testing.
4. Empty Coarse and Fine Aggregates into a watertight, clean, damp wheelbarrow and mix thoroughly with a shovel or scoop.
5. Mix the Cement with the Coarse and Fine Aggregate until thoroughly blended and mix appears uniform.
6. Add **7 pints (112 oz) of potable water** and mix the materials until the concrete is consistent in appearance. Potable water is provided by the Technicians
7. Test the sample in accordance with the current ASTM Test Methods designated below.
 - a) **ASTM C1064**, Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete.
 - b) **ASTM C173**, Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method OR **ASTM C231**, Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
 - I. You have enough material to perform ONLY ONE test method.
 - II. Do not reuse this material for any purpose.
 - c) **ASTM C143**, Standard Test Method for Slump of Hydraulic-Cement Concrete.
 - I. After testing, remix this material with unused concrete prior to making cylinder.

d) **ASTM C31**, Standard Practice for Making and Curing Concrete Test Specimens in the Field.

- I. Make **one** 4 X 8 cylinder.
- II. Cure the cylinder as required by **ASTM C31** for 48 hours.
- III. Make a copy of the Sample Transmittal Card, add Cylinder Cast Date and initial.

8. Concrete Field Proficiency Schedule (to be announced)

- a. Enter the test results in MAC. Follow the MAC data entry IA Proficiency Samples Instructions below.

[IA Data Entry for Proficiency Samples](#) (Instructions for entering proficiency sample test results in MAC)

The test report forms are available through the web address below in case you were not provided with one.

[IA Test Report Forms](#)

- b. Deliver the cylinder and the copy of the Sample Transmittal Card with the Cast Date to:
- c. Verify/Assure the data entry and validation steps were completed properly.

9. Avoid the following.

- a. Use of partial material. This can result in inaccurate test data.
- b. Improper mixing. This can result in inaccurate test data.
- c. Longer exposure of the materials to air prior to testing. This can result in inaccurate test data.
- d. Inaccurate or late data entry in MAC.
- e. Missing test results in MAC
- f. Cylinder not delivered by due date.

10. Contact **<to be determined>** for IA Evaluation Sampling (**ASTM C172**) and Water Cement Ratio (**FM5-501**) if not done in current Year.