



Florida Department of Transportation

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****Expired****

MATERIALS BULLETIN NO. 12-05

DCE MEMORANDUM NO. 28-05

**TO: DISTRICT MATERIALS ENGINEERS
DISTRICT CONSTRUCTION ENGINEERS
QUALIFIED TESTING LABORATORIES**

FROM: Thomas O. Malerk, P.E., Director, Office of Materials
Brian Blanchard, P.E., Director, Office of Construction

COPIES: Greg Schiess, Bob Burleson

SUBJECT: ASTM International Changes to Concrete Testing

In October, 2005, ASTM International will be publishing the new versions of test methods. The following tests methods are specified in the current Florida Department of Transportation Standard Specification for Roadway and Bridge Construction and have been updated as follows:

New Test Method	Changes	Affected Area
Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens (ASTM C 39/C 39M - 04a)	<ul style="list-style-type: none"> (1) Added additional safety warning with footnote to 1.3. (2) Revised 4.4 to require the laboratory technician to meet the requirements of ASTM C 1077. (3) Revised 5.1.1.1 to update the frequency of verification to test machines. (4) Deleted 5.4 and Note 8. (5) Added 6.4 to clarify requirement of density of test specimen. (6) Revised 7.5 and added Note 10 to provide new requirements for rate of loading. (7) Revised Figure 2 to update the typical fracture patterns. (8) Added 8.3 and 9.1.9 to give the calculations for density of a specimen. (9) Revised 10.1 to update the within-test precision 	CTQP Concrete Lab Technician - Level I & II

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New Test Method	Changes	Affected Area
Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete (ASTM C 42/C 42M – 04)	(1) The wording in 7.4 was clarified and the requirements in 7.4.2 were revised.	CTQP Concrete Lab Technician – Level I & II
Standard Test Method for Slump of Hydraulic-Cement Concrete (ASTM C 143/C 143M – 05)	(1) Added additional safety warning with footnote to 1.4. (2) Added a new 5.1.1 about checking critical dimensions and renumbered subsequent sections. (3) Revised 5.1.2.1 to clarify and alter testing criteria for alternate materials. (4) Added new Note 3 to clarify the term “consecutive pairs.” (5) Added new 5.3 to provide description of suitable measuring device.	CTQP Concrete Field Technician – Level I & II
Standard Practice for Sampling Freshly Mixed Concrete (ASTM C 172 – 04)	(1) Made an addition to 1.5 safety caveat. (2) Replaced “unit weight” with “density” in 6.1.	CTQP Concrete Field Technician – Level I & II
Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method (ASTM C 231 – 04)	(1) Revised 5.1 to include a minimum calibration frequency	CTQP Concrete Field Technician – Level I & II
Standard Specification for Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes (ASTM C 533 – 05)	(1) Added new section for temperature measuring devices as section 5. (2) Revised section 6 to indicate temperature recorders can be used in lieu of thermometers. (3) Revised section 7 to indicate temperature recorders can be used in lieu of thermometers.	CTQP Concrete Field Technician – Level I & II
Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete (ASTM C 1064/C 1064M – 05)	(1) Deleted old 9.1 and replaced with new 9.1-9.4 and Note 1.	CTQP Concrete Field Technician – Level I & II

ASTM C 31/C 31M – 03a, ASTM C 78 – 02, ASTM C 138/C 138M – 01a, ASTM C 173/C 173 – 01^{e1}, ASTM C 617 – 98 (Reapproved 2003), and ASTM C 1231/C 1231M - 00^{e1} are still the acceptable test methods.

As of November 1, 2005, the Florida Department of Transportation will start using these updated test methods for acceptance of concrete. This will affect all current and proposed construction projects. The Independent Assurance Checklist will be updated with these changes accordingly. Please contact Charles Ishee at 352-955-6667 if you have any questions.