



Construction Materials Testing – Concrete

Level IV Selected General References

Candidates are permitted to bring only the following references into the test center.

<u>Title</u>	<u>Edition*</u>
¹ ACI 228.1 R-03: In-Place Methods to Estimate Concrete Strength, American Concrete Institute (ACI)	2003
² ACI 301: Specifications for Structural Concrete, American Concrete Institute (ACI)	2016
³ ACI 318: Building Code Requirements for Structural Concrete and Commentary, American Concrete Institute (ACI)	2014
ASTM Section 4 Construction Volume 04.02 Concrete and Aggregates	2016
⁴ ASTM C33/C33M: Standard Specification for Concrete Aggregates	2016
⁵ ASTM C39/C39M: Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens	2016a
⁶ ASTM C40/C40M: Standard Test Method for Organic Impurities in Fine Aggregates for Concrete	2011
⁷ ASTM C42/C42M: Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	2013
⁸ ASTM C78/C78M: Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	2015b
⁹ ASTM C127: Standard Test Method for Relative Density (Specific Gravity) and Absorption of Coarse Aggregate	2015
¹⁰ ASTM C136/C136M: Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates	2014
¹¹ ASTM C138/C138M: Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete	2016
¹² ASTM C173/C173M: Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method	2016
¹³ ASTM C231/C231M: Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method	2014
¹⁴ ASTM C295/C295M: Standard Guide for Petrographic Examination of Aggregates for Concrete	2012
¹⁵ ASTM C457: Standard Test Method for Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete	2012
¹⁶ ASTM C494/C494M: Standard Specification for Chemical Admixtures for Concrete	2015a
¹⁷ ASTM C566: Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying	2013
¹⁸ ASTM C567: Standard Test Method for Determining Density of Structural Lightweight Concrete	2014
¹⁹ ASTM C805/C805M: Standard Test Method for Rebound Number of Hardened Concrete	2013a
²⁰ ASTM C856: Standard Practice for Petrographic Examination of Hardened Concrete	2014
²¹ ASTM C873 C873M: Standard Test Method for Compressive Strength of Concrete Cylinders Cast in Place in Cylindrical Molds	2015
²² ASTM C900: Standard Test Method for Pullout Strength of Hardened Concrete	2015



23ASTM C1077: Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation	2016
24ASTM C1231/C1231M: Standard Practice for Use of Unbonded Caps in Determination of Compressive Strength of Hardened Cylindrical Concrete Specimens	2015
25ASTM E329: Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection	2014a

*** The test questions are based on the standard editions listed above; therefore, candidates are strongly urged to bring these editions to the exam. Note: Test questions are based on the standard editions listed above; therefore, candidates are strongly urged to bring these published year editions to the exam. Note: candidates may bring older or newer editions—instead of the editions listed above—at their own risk. Exam comments that are made based on other published edition years, will not be reviewed until the next maintenance cycle. Candidates are responsible for reviewing the content outline and bringing in allowable printed references that are applicable to what is being tested. Acceptable references may be copied in whole or part.**

Note: References must be bound or secured in a three-ring binder with a title page (example provided on the main program page). They may have highlighted text and self-adhesive index tabs or dividers, however they must be permanently attached. No other additions or modifications to the references are allowed. Handwritten notes are NOT permitted. References with loose paper or pages and freestanding tabs (e.g., repositionable sticky notes/tabs of any kind) are not permitted into the testing centers.

During the exam, the following titles will be available to candidates **on-screen only**:

<u>Title</u>	<u>Edition*</u>
26AASHTO R 18: Standard Recommended Practice for Establishing and Implementing a Quality System for Construction Materials Testing Laboratories	2017

*Test questions are based on the editions listed above. These editions will be available to candidates during the exam in PDF format.

In addition to the references listed above, the following publications can provide some of the job knowledge required by a construction materials testing technician. While these books may help prepare for the exam, they are NOT permitted in the test center.

- 27ACI 211.1 (1991): Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete, American Concrete Institute (ACI)
- 28ACI 214R.11 (2011): Guide to Evaluation of Strength Test Results of Concrete, American Concrete Institute (ACI)
- 29ASTM E1155M (2014): Standard Method for Determining FF Floor Flatness and FL Floor Levelness Numbers (Metric), American Society for Testing and Materials (ASTM)
- 30NRC: 10 CFR 35.24 Authority and responsibilities for the radiation protection program, Nuclear Regulatory Commission (NRC)
- 31NRC: 10 CFR 35.50 Training for Radiation Safety Officer and Associate Radiation Safety Officer, Nuclear Regulatory Commission (NRC)
- 32OSHA 3885 (2016): Recommended Practices for Safety and Health Programs, Occupational Safety and Health Administration (OSHA).
- 33SP-002 (2007): Manual of Concrete Inspection 10th ed., American Concrete Institute (ACI)

➤ This listing is not intended to be complete or representative.