

## Basics of Concrete Materials and Testing

ONE DAY, 7.5 HOURS

Economy, constructibility, and long-term performance of concrete

### Program Content:

- **Fundamental Concrete Concepts**
  - Understanding the concrete needs for your project
  - Matching materials to project requirements
  - Moving from materials to completed project
- **Selection and Use of Materials**
  - Cementitious materials
  - Aggregates
  - Chemical admixtures
  - Water
  - Fibers
- **Codes and Specifications**
  - What's a Code and what's a Specification?
  - Requirements of ACI 318
  - Requirements of ACI 301
- **Concrete Production**
  - Ordering and basis of sale
  - Production facility
  - Delivery issues
  - Resolving disputes
  - Inspection and certification
- **Sampling and Control Tests for Concrete**
  - Why do we test concrete?
  - When do we test concrete?
  - How do we test concrete?
- **Evaluation of Test Results**
  - General review of a test report
  - Evaluating cylinder data
  - Identifying trends in the test data
- **In-Place Evaluation of Strength**
  - Evaluation process
  - Testing methods

### Who should attend:

Anyone new to the industry or anyone desiring a refresher or update

### Instructors:

W. Calvin McCall, Charles K. Nmai, and John J. Schemmel.

### Seminar handouts:

ACI 301, Specifications for Structural Concrete  
CCS-0, Concrete Fundamentals  
Excerpts from ACI 318-14, Building Code Requirements for Structural Concrete and Commentary  
E-1(16), Aggregates for Concrete—free download  
E2-00, Reinforcement for Concrete—free download  
E3-13, Cementitious Materials for Concrete—free download  
E4-12, Chemical Admixtures for Concrete—free download  
Seminar lecture notes



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