

Concrete Transportation Construction Inspector

Definition:

A **Concrete Transportation Construction Inspector** is a person who has demonstrated proficiency in concrete inspection methods for transportation projects, including preplacement, placement, and post-placement operations.

A **Concrete Transportation Construction Inspector-in-Training** is a person who has demonstrated knowledge in concrete inspection methods for transportation projects, but does not have the experience required to qualify as an ACI Concrete Transportation Construction Inspector.

Scope and Knowledge:

The program requires a knowledge of concrete construction, including plan reading, soil-cement, piling installations, formwork installation and removal, reinforcements, embedments, sampling and testing freshly mixed concrete, conveying, placing, consolidation, finishing, jointing, curing, and protection.

The technical resource materials used in these programs include the following:

ACI PUBLICATIONS

- SP-2—Manual of Concrete Inspection
- ACI Concrete Terminology
- 117—Tolerances for Concrete Construction and Materials
- 213R—Guide for Structural Lightweight-Aggregate Concrete
- 301—Specifications for Structural Concrete
- 304R—Measuring, Mixing, Transporting and Placing Concrete
- 304.2R—Placing Concrete by Pumping Methods
- 305R—Hot Weather Concreting
- 306R—Cold Weather Concreting
- 308—Curing Concrete
- 309R—Consolidation of Concrete
- 318—Building Code Requirements for Reinforced Concrete
- 325.9R—Construction of Pavements and Bases
- 325.10R—Roller Compacted Concrete Pavements
- 336.3R—Construction of Drilled Piers
- 345R—Highway Bridge Deck Construction
- 347—Formwork for Concrete
- 543R—Design, Manufacture and Installation of Concrete Pile

PCA PUBLICATIONS

- Soil-Cement Construction Handbook
- Soil-Cement Inspector's Manual

CRSI PUBLICATIONS

- Manual of Standard Practice (MSP)

Certification Requirements:

For Concrete Transportation Construction Inspector:

ACI will grant certification only to those applicants who:

1. Obtain a passing grade on the written inspection examination; and
2. Obtain a passing grade on the written plans reading examination; and
3. Fulfill the requirements in ACI Concrete Field Testing Technician—Grade I as follows:
 - Be currently certified as an ACI Concrete Field Testing Technician—Grade I**OR**
 - Have been certified as an ACI Concrete Field Testing Technician—Grade I at one time**AND**
 - Pass the current ACI Concrete Field Testing Technician—Grade I written exam within one year of passing the Inspector exam.
4. Possess at least one of the following qualifications:
 - A minimum of two years of college or technical school, earning at least 60 credit hours, PLUS two years of satisfactory work experience; or
 - A high school diploma, or equivalent, PLUS a minimum of three years of satisfactory work experience; or
 - Five years of satisfactory work experience.

If the ACI Concrete Field Testing Technician—Grade I requirement is not held at the time of testing for Concrete Construction Special Inspector, the requisite ACI Concrete Field Testing Technician—Grade I certification or validation of prior ACI Concrete Field Testing Technician—Grade I certification with successful completion of the current ACI Concrete Field Testing Technician—Grade I written examination must be obtained within one year of the first examination passed for Inspector. Otherwise, the written inspection and plans reading examinations must be retaken in their entirety.

The work experience must include:

- Decision-making authority and responsibility;
- Verification of compliance with plans, specifications, and codes;
- Evaluation of concrete construction in the field;
- Documentation and reporting of inspection results; and
- Proficiency in appropriate areas of concrete construction inspection.

Verification of the amount and range of work experience by the applicant's employer(s) is required.

The three-hour written inspection examination is open-book and consists of approximately 80 multiple-choice questions. The one-hour plans-reading examination consists of approximately 20

questions and is designed to test the examinee's ability to read and understand engineering drawings. The minimum passing grade for each examination is 70%.

Recertification is necessary every five years and requires fulfillment of the Field Testing Technician requirements and successful completion of the inspection and plans reading examinations.

For Concrete Transportation Construction Inspector-in-Training:

ACI will grant certification to those applicants who meet the Field Testing Technician requirements and pass both written examinations. Individuals with Inspector-in-Training certification can upgrade to full Inspector status upon submittal and approval of sufficient education/work experience.

Recertification is necessary every five years and requires fulfillment of the Field Testing Technician requirements and successful completion of the inspection and plans reading examinations.