
CHAPTER 9

FINAL ESTIMATES TRAINING AND QUALIFICATION PROGRAM

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9.1 PURPOSE

The purpose of the ***Final Estimates (FE) Training and Qualification Program*** is to establish a specific level of knowledge and administrative skills for the persons responsible for measuring pay item quantities, completing FE forms and documents, processing progress payments, and preparing a final estimate package for a construction contract. This course provides appropriate methods for measurements and documentation for Lump Sum, Design Build, Plan Quantity, and Final Measured Concept Pay Items.

9.2 BACKGROUND

Prior to 2003, the Department had two existing training courses with one certification. The first course was called ***District Specific Training for Final Estimates Preparation, TRESS No. BT-06-0037***. This course targeted all District and Consultant Senior Inspectors, Inspectors, Inspector Aides, Contract Support Specialist, Administrators, and Mapping Technicians. The second course was called ***Statewide Seminar for Final Estimates, TRESS No. BT-06-0042***. This course targeted Consultant Engineers, Mapping Technicians, and DOT Project Administrators. The Department provided a certification for Final Estimates Training only for this second course. The State Construction Office (SCO) conducted training and a certificate was provided to personnel of Consultant Engineering and Inspection Firms upon completion of the course.

For over 20 years, the Department has maintained a ***Final Estimates Self Study (FESS) Manual*** and corresponding Examination. The FE Level 1 Training Course and Examination replaces the FESS Course and Examination.

9.3 QUALIFICATION REQUIREMENTS BY JOB FUNCTION

9.3.1 Final Estimates Level 1 Qualification

This is the individual responsible for taking and documenting final measurements used in the documentation of pay quantities on progress and final estimates. All Inspectors/Senior Inspectors are required to have this qualification.

9.3.2 Final Estimates Level 2 Qualification

All persons responsible for producing monthly, progress, and final payments and/or compiling final estimates packages.

9.4 QUALIFICATIONS AND COURSES

There are two levels of Final Estimates Training Qualification.

Level 1 targets all persons responsible for documenting quantities on the appropriate site source records in accordance with the ***Construction Project Administration Manual (CPAM)***, ***Topic No. 700-000-000***.

Level 2 targets all persons responsible for proper payment of items on a construction contract and submittal of the required documentation for the FE package all in accordance with the ***CPAM, Topic No. 700-000-000*** and the ***Review and Administration Manual (R&AM), Topic No. 700-050-005***.

9.4.1 FE Level 1 Qualification Requirements

All applicants seeking the FE Level 1 qualification must pass the FE Level 1 written examination.

After obtaining this qualification requirement, the applicant's Department qualification date will be added to the Training and Qualification Data Base System (TQDBS). Level 1 qualification shall be for five (5) years (60 months) from the date the qualification examination requirement was satisfied.

9.4.1.1 FE Level 1 Training Course

The Level 1 Training Course is approximately eight (8) hours long and is computer based. Topics covered in this course are:

- (1) Contract Documents:

Review of Supplemental Agreements, Plans, Order of Precedence for documents, etc.
- (2) Methods of Measurements:

Definitions of Lump Sum, Plan Quantity & Final Measure Pay Item Concepts.
- (3) Final Measurements:
 - a) Methods of calculating areas
 - b) Methods of calculating volume

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- c) Methods of calculating linear measurements, weights, etc.
 - (4) Types of documentation:

Field books, site source records for asphalt, concrete, piling, etc., final “As-Built” plans.
 - (5) Introduction of electronic documentation.

Prerequisites

Trainees taking the FE Level 1 examination should be familiar with the current specifications and the **CPAM, Topic No. 700-000-000**.

Suggested prerequisites for the FE Level 1 course are:

- (1) **Construction Math, TRESS No. BT-06-0007.**
- (2) **Contract Plans Reading, TRESS No. BT-06-0008.**

Written Examination

A closed book written examination is administered, by an approved CTQP proctor for the FE Level 1 qualification course. A passing score for this examination is 70%.

The written examinations are electronically graded by the CTQP and posted in the Training Qualification Data Base System (TQDBS). Two weeks should be allowed for grading and posting of the examination results.

9.4.2 FE Level 2 Qualification Requirements

A qualified FE Level 2 person will compile, verify, and process the necessary documentation for proper payment of progress estimates during a construction contract in accordance with the contract documents, **CPAM, Topic No. 700-000-00**, etc. In addition, this person will be responsible for the submittal of the completed FE package that includes all the necessary documentation and forms used to support the final contract amount, for the construction project.

All applicants seeking FE Level 2 qualification must pass the FE Level 2 written examination.

After obtaining this qualification requirement, the applicant's Department qualification date will be added to the Training and Qualification Database System. Qualification shall be for five (5) years (60 months) from the date the last qualification examination requirement was satisfied.

9.4.2.1 FE Level 2 Training Course

This is a two (2) day course and includes a multiple choice examination at the end of the second day.

Topics covered in this course are:

- (1) Refreshers (Procedures, Contract Administration, and Specification Changes)
- (2) Specific Final Estimates Contract Language: Retainage, Liquidated Damages, Contract Documents, etc.
- (3) Unpaid Bills
- (4) Contract Time
- (5) Fuel and Bituminous Adjustments
- (6) Methods of Measurement/Documentation (Plan Summary Boxes and Quantities, Referencing, and Backup Documentation)
 - (a) Asphalt Records (Penalties and Bonuses)
 - (b) Earthwork (Regular Excavation, Embankment, Subsoil, Channel Excavation, and Lateral Ditch Excavation)
 - (c) Structures (Bridge, Pile Driving, and Drilled Shafts), (Penalties and Shaft Reduction)
- (7) Final Plans
- (8) Certification of Materials (NFTR)

Prerequisites

Applicants for the FE Level 2 course are required to hold a FE Level 1 qualification.

Written Examination

A closed book, written examination is administered, by an approved CTQP proctor, on the last day of the FE Level 2 qualification course. A passing score for this examination is 70%.

Training course attendance is encouraged, but is not required for qualification. All examinations are electronically graded by the CTQP and the results posted in the Training Qualification Data Base System (TQDBS). Two weeks should be allowed for grading and posting the examination results.

9.5 REQUALIFICATION

Due to frequent changes in specifications, methods of documentation, and other processes, requalification requirements are issued as follows:

9.5.1 FE Level 1 Requalification

Applicants for the FE Level 1 requalification must pass the written examination for the FE Level 1 Training Course.

After an applicant has successfully met the requalification requirement, the requalification date will be added to the TQDBS. Requalification shall be for five (5) years (60 months) from the date of expiration.

Any applicant who fails to become requalified by the 60th month shall become disqualified on the last day of the 60th month and must reapply for qualification.

9.5.2 FE Level 2 Requalification

Applicants for the FE Level 2 requalification must pass the written FE Level 2 examination.

After the FE Level 2 requalification requirement has been met, the requalification date will be added to the TQDBS. Requalification shall be for five (5) years (60 months) from the date of expiration.

If the Level 2 Qualification/Requalification is maintained, the Level 1 status is considered current and no additional action is required.

Any qualified FE Level 2 who fails to become requalified by the 60th month shall become disqualified on the last day of the 60th month. That person

must reapply for qualification for both FE Level 1 and Level 2 and is required to pass both FE Level 1 and 2 examinations.

9.6 SUSPENSION AND REVOCATION OF QUALIFICATION

9.6.1 Suspension

CTQP FE Level 2 qualified personnel will be subject to evaluations and must achieve acceptable results in order to maintain qualified status. This will be based on a review of all active qualifications. See **Chapter 15** of the **Review and Administration Manual (R&AM), Topic No. 700-050-005**.

Suspensions may be appealed to the State Construction Engineer (SCE) within 30 days of the notice of suspension. The SCE's decision concerning suspension is final.

The State Final Estimates Engineer (SFEE), will notify by email, the District Final Estimates Manager (DFEM) and the District Construction Engineer (DCE) regarding the suspension. This information will also be copied into the CTQP for updating of the Training Qualification Data Base System (TQDBS).

Prior to having the qualification reinstated, the applicant must attend and complete any applicable Qualification course(s), and obtain a passing score on any applicable written examination(s). This includes meeting all initial, conditional requirements.

9.6.2 Disqualification

Active, qualified personnel must conform to the Department's practices with regard to Quality Control operations. Should any qualified person falsify Department records, his/her qualification will be subject to possible revocation by the SFEE or the DCE, jointly. Falsification of project related documentation may be subject to further investigation and penalty under State Statutes and Federal Law.

The SFEE and the DCE (jointly) shall be the authority which revokes qualification. Both the SFEE and the DCE must sign the letter of revocation. Notification that a qualification has been revoked shall be by email. A copy of the notification shall be sent to the employee's supervisor/manager (in-house or consultant), State Construction Training Administrator (SCTA), and the CTQP for TQDBS update. This decision may be appealed to the SCE. The Trainee has 90 days from receipt of notice to appeal this decision. The SCE's decision regarding revocation is final. Anyone having their

qualification revoked shall be eligible to apply for new qualification after a period of two years.

The following responsibilities are unique to the FE Qualification Program and are in addition to those listed in the end of **Chapter 1** of this manual.

9.7 DEPARTMENT RESPONSIBILITIES

9.7.1 State Construction Office (SCO)

- (1) Maintain the list of all Department (in-house and consultant) active qualified FE Level 1 and Level 2 personnel for at least five years. The database should be accessible to all District Construction Engineers (DCE), the District Final Estimates Managers (DFEM), the State Final Estimates Engineer (SFEE), the State Construction Engineer (SCE), and the District Construction Training Manager (DCTM).
- (2) Conduct Process Reviews (PR) on Certified Final Estimate Projects and within the field.

9.7.2 District Construction Engineer (DCE) or Designee

Conduct IA Reviews on selected CTQP qualified FE Level 2 personnel. Conduct Post Audit Reviews (PAR) on Certified Final Estimate Projects. See **Chapter 4** of the **R&AM**.

9.7.3 Final Estimates Technical Review Team (FETRT)

Review and recommend revisions to the manuals, training aids, examinations, and qualification procedure.