

## Quality

### Quality Documentation

The plans and contract specify the minimum requirements for the quality of materials and work to be furnished or performed under the contract. The Project Manager must assure that the materials incorporated and work performed by the Contractor are in close conformance with contract requirements.

If the Project Manager has questions about or problems determining the quality requirements, contact the Region Assurance Specialist or the Contract Services Group in the Construction Section for assistance.

The Project Manager must be continually observant to verify that necessary inspection, sampling, testing, and measurements are performed and inspection reports, test results, calculations, and other confirming data are prepared promptly.

As specified in Section 00165.70, do not allow the Contractor to incorporate materials into the project without acceptable conformance documents. This condition may be temporarily waived *only* if the material must be installed for immediate traffic safety, but no payment will be made for the value of the materials, or the costs of incorporating them, until acceptable conformance documentation is received and/or testing is performed.

For each project, the Project Manager must become familiar with the quality compliance requirements for all of the materials that are to be incorporated into the project. The Project Manager must also assure that the Contractor is aware of quality documentation that it needs to submit or sampling and testing that it must perform. The Project Manager may provide the Contractor a copy of the Test Summary, as discussed below, which shows the needed quality requirements.

Consult the following sources to determine the quality requirements for a project:

- The project Special Provisions
- The project Plans
- The Standard Specifications
- The Supplemental Standard Specifications
- ODOT's Qualified Products List (QPL)
- The Non-field Tested Materials Acceptance Guide
- The Manual of Field Test Procedures that includes:
  - The Field Tested Materials Acceptance Guide
  - The Field Tested Materials Small Quantity Guideline

There are two types of material quality documentation, non-field tested and field-tested. There is a Test Summary, form 734-1902-A or B (or BQA) for each of the

two types. Some pay items may require the use of both A and B forms to enter different materials for that item.

The Project Manager must assure that the Test Summary form is completed for each pay item, before work starts, to determine what type of documentation is needed prior to receipt, placement, and payment of materials needed for the project.

As stated in Section 00195.60, before the Project Manager authorizes payment for materials on hand as requested by the Contractor, the materials shall, among other things:

- Meet contract specification requirements
- Have the required material conformance documents on file with the Engineer

Record quality documentation on the Test Summary, as the work progresses, to assure that the material complies with quality requirements. The purpose of the Test Summary is to verify that the proper and adequate quality documentation has been furnished.

The Project Manager must assure that all project documentation is continuously and currently maintained throughout the project.

#### Non-Field Tested Materials

Accept non-field tested materials according to the individual materials specifications or to the current issue of "The Non-field Tested Materials Acceptance Guide" (NTMAG).

The Project Manager may accept relatively small quantities of some non-field tested materials, without normal sampling and testing, as long as other documentation is furnished as defined in the guidelines for acceptance under the small quantity method in the NTMAG.

Record documentation for non-field tested materials on a "Test Summary A", form 734-1902-A. See example in Exhibit A. Compile all non-field tested quality documentation in pads that have tabs separating the required documentation by bid item.

Non-field tested material quality documentation includes, but is not limited to, the following:

- FIR - Field Inspection Report, form 734-3469. See Exhibit B.
- FIS - Field Inspection Sticker, form 734-2207. See Exhibit C.
- T - Test Result Certificate. See Exhibits D(1), D(2), and D(3).
- Q - Quality Compliance Certificate. See Exhibits E(1) and E(2).
- E - Equipment Lists and Drawings.

- L - Laboratory report or Inspection and Laboratory report from ODOT Materials Laboratory. See Exhibits F and G.
- CMO - Certificate of Materials Origin, form 734-2126 (see Section 00160.20. Required on all Federal Aid projects as part of the Buy America requirements). See Exhibits H(1) and H(2). (See Exhibit H-3, "What is a Certificate of Materials Origin (CMO)" for additional instructions on completing the form.)\*\*

A CMO is needed to certify that all iron or steel manufacturing process, including protective coatings, for the domestic materials occurred within the United States of America. A CMO is not needed for temporary items or for items incidental to the construction, such as tie wire, reinforcement chairs, or snap ties.

Iron or steel of unknown origin is considered to be of foreign origin. ODOT will not pay for any foreign iron or steel materials that exceed the allowable value for the project. Complete a Foreign Steel Summary, form 734-1968, listing all iron or steel of foreign or unknown origin. See Exhibit I.

- Traffic Signals
  - Submittals for Field Qualification Equipment and Material ("Blue Sheets")
  - Submittals for Conditional Qualified Controller Equipment ("Green" Sheets)
  - Obtain current copies of the Blue and Green Sheets electronically from the Traffic Section
- ODOT's Qualified Products List (QPL).
- Product Warranties.

If materials are found to be non-specification after incorporation, the Project Manager must determine if the materials are to be removed and replaced or if they may remain in place as suitable for the use intended (see Section 00150.25). Materials that are not in close conformance with requirements, but are found suitable for the use intended, may be accepted provided that an adjustment is made to the amount paid to the Contractor for that item. See the Quality Price Adjustments section (12-C) of this Manual.

### Field Tested Materials

Most ODOT projects include the Quality Assurance Program, under which the Contractor performs all sampling and field testing of materials. ODOT will perform some monitoring and will also perform verification testing to verify the quality of materials represented by the Contractor's tests.

Some projects, including many administered by local agencies, may not include the Quality Assurance Program. For those projects, the Project Manager must

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\*\* Revised July, 2002

assure that the required testing and verification or assurance testing is accomplished.

Accept field-tested materials according to the “Field Tested Materials Acceptance Guide” published in the “Manual of Field Test Procedures”, or according to the individual specifications for the material. The Project Manager may accept relatively small quantities of some field-tested materials, without normal sampling and testing, as defined in the “The Field Tested Materials Small Quantity Guideline” found in The Manual of Field Test Procedures.

Record documentation for field-tested materials on the “Test Summary B or B-QA” (form 734-1902-B or B-QA if the project includes the Quality Assurance Program described in the Manual of Field Test Procedures). See example in Exhibit J. Compile all field-tested quality documentation in pads that have tabs separating the required documentation by bid item.

Field-tested materials with failing test results must also be entered on “Test Summary B or B-QA” along with the quantity they represent. For materials with failing test results, the Project Manager must determine if the materials are to be removed and replaced or if they may remain in place as suitable for the use intended (see Section 00150.25). Materials that are not in close conformance with requirements, but are found suitable for the use intended, may be accepted provided that an adjustment is made to the amount paid to the Contractor for that item. See the Quality Price Adjustments section (12-C) of this Manual.

The Contractor also may receive a premium price adjustment (bonus) for some materials, particularly surfacing materials, that meet the contract requirements for such adjustment. Administer and calculate the adjustment in accordance with your contract. Also refer to the Quality Price Adjustments section (12-C) of this Manual.

## **Review Procedure for Quality Documentation**

### **Review by Project Manager**

The Project Manager must review all project quality records, as they are prepared, to assure that all required documentation has been received and that the material is of proper quality, or that price adjustments have been assessed if appropriate.

If the Contractor requests ODOT to release the retainage of a subcontractor, because it has finished its portion of the work, the Project Manager must review the documentation related to that work to allow release of the retainage. That process is defined at the end of the Submittal of Final Project Documentation section (37) of this Manual.

Steps in the review process include:

1. Update quantities on the Test Summary sheets.
2. Check all Contract Change Orders (CCO) and the Special Provisions for any changes to the testing and acceptance documentation. If a CCO modifies testing or acceptance requirements, include a copy of that CCO with the documentation and enter it into the Test Summary. If a CCO adds new pay items, add them to the Test Summary.
3. For all pay items and quality price adjustments, review all field and non-field testing documentation requirements.
4. Have a person review, check, sign, and date the Test Summary sheets.
5. List all quality related price adjustments, including bonuses, on the Final Materials Certification, form 734-1979 (see example in Exhibit K).
6. List all missing or unresolved quality documentation on the Documentation Review Report, form 734-1903 (see example in Exhibit L). Update the form to show resolution of previously listed items.
7. Update the Foreign Steel Summary, form 734-1968 (refer to Exhibit I).

#### Review by Region Assurance Specialist

The Region Assurance Specialist (RAS) will periodically review project documentation. The frequency of those reviews will be planned and will depend on project size, duration, complexity, and Project Manager's experience with ODOT projects.

The RAS will review and provide guidance in quality documentation procedures used to support payments to the Contractor, including:

- Quality documentation requirements as determined by the contract for field and nonfield tested materials.
- Test Summaries A and B (purpose, how to set up, how to track quality documentation, etc.).
- Types of quality documentation (quality compliance certifications, Certificate of Materials Origin, test results, warranties, Blue and Green sheets, etc.).
- Price adjustments associated with nonspecification materials and materials with superior quality (Concal, Statspec, smoothness, etc.).
- Quality documents received prior to installation and payment.

At the time of the periodic project review, the RAS will review the quality documentation to determine whether it fulfills the contract requirements and supports the payments that have been made to the Contractor. The RAS will

report any deficiencies to the Project Manager. The RAS will also address the reported deficiencies and their resolution at the next scheduled periodic review.

The RAS will list the following on the Documentation Review Report, form 734-1903, regarding quality:

- Agreement to resolution of documentation or documents that do not comply with normal ODOT requirements
- Documents or documentation for which the Project Manager and RAS are unable to agree on the acceptability of the documents, documentation, or materials

For final project documentation acceptance, see the Submittal of Final Project Documentation section (37) of this Manual.