

**1999**  
..... **DIVISION**  
**INSPECTION-IN-DEPTH GUIDELINE FOR**  
**MATERIALS CONTROL**

**References**

..... 1993 Standard Specifications,  
..... 1994 SI Metric Standard Specifications,  
..... July 1, 1998 Supplemental Specifications,  
..... July 1, 1998 SI Metric Supplemental Specifications,  
..... Materials Procedures (MP's)  
..... 1980 Construction Manual.

**SCOPE**

This inspection is made to determine the adequacy of the Department of Highways materials control and testing procedures. This determination may include testing performed, either by the contractor as part of the quality control of materials, or by the Department as part of testing performed for materials acceptance. The inspection guidelines are broken into two parts:

**(1) The office review, where the records and test results on selected items are followed through the documentation process. This may include pretested materials and/or materials sampled and tested by the project, the District, and the contractor's personnel.**

**(2) The field review, where testing performed in the field by both contractor's and State's personnel should be observed and evaluated.**

The Area Engineer performing these reviews should determine the extent of the review, including the number of items reviewed and whether office, field or a combination of the two needs to be conducted.

**PROJECT INFORMATION**

**Project Number:**

**County:**

**Inspection Made by:**

**Inspection Made in Company with:**

**Date of Inspection:**

**Percent Work Completed:    %**

**Percent Time Elapsed:    %**

**OFFICE REVIEW**

**I. Examine the Contractor's Quality Control Plan for Sampling and Testing.**

A. Note items called for in the plan to be sampled and tested:

1. Does the plan cover all applicable items in the contract?
2. If no, which items are missing?

## II. Job Control Sampling and Testing

A. List item or items selected for review:

B.

1. Has the plan been approved?
2. When?

Comments:

C. Sampling location specified?

Comments:

D. Sampling frequency stipulated?

Comments:

## III. Acceptance Testing

A. Has acceptance testing been performed for the item(s) reviewed?

B. Has acceptance testing been performed by State personnel or by observing the contractor's job control testing?

**(Note, it is required that acceptance testing be performed by State personnel and that the frequency be a minimum of 10% of the contractor's quality control tests.)**

Comments:

C. What is the actual frequency of the acceptance testing as compared to the contractor's quality control testing plan?

Comments:

D. How is acceptance testing tracked and documented on the project?

Comments:

#### **IV. Failing Material**

- A. Are there any test results that were out of specification tolerances? If yes, what was the disposition of the material?

Comments:

- B. Was any additional sampling and testing performed in problem areas?

Comments:

- C. Which test results were used to determine the pay factor for this material (Contractor, STA, or a combination)?

#### **V. HL-440 Review- Follow the documentation referencing for one or two days.**

- A. Do the sampling locations correspond to the Inspector's Daily Report (IDR)? (Check the IDR for mention of whether the test was performed by the State or the contractor.)

- B. Is the proper testing frequency being used?

- C. Are sufficient tests being performed for the quantity placed?

- D. Are the location of the test sites noted? (Cross check the lab report and the IDR)

Comments:

#### **VI. General Project Control**

- A. How does the Project Supervisor assure that the materials sampling and the testing being performed is complete and properly documented? (This should include your general impression of the Supervisor's knowledge of the testing program, interest, assignments of the project staff and any other pertinent observations.)

Comments:

- B. How does the project staff stay informed of the status of testing, delays, failing materials, or problems? This is critical for off site testing, for example at concrete or asphalt plants. (Ex. Personal inspections, reports, phone calls, etc.)

Comments:

**VII. Pre-sampled Material (Manufacturer's Certification) - Examine the documentation flow for pre-tested materials. A starting point would be the HL-441 form - Weekly Suppliers Report.**

A.

1. Is delivered material pre-tested?
2. Is it green tagged?
3. Is the sampling and shipping report checked against the shipment of pre-sampled material?
4. Is the tag number recorded?

Comments:

- B. Who is responsible to ensure that pretested material delivered to the project is tested?

Comments:

- C. Do project procedures provide for visual inspection of all pre-sampled materials as they arrive on the project?

Comments:

- D. For materials tested by the Central Office Lab, are the certification/test results received at the project?

Is this receipt timely?

Are any discrepancies noted? \_\_\_\_\_ If so, how are they resolved?

Comments:

- E. Review the acceptance of small quantities, including the criteria for establishing the items (i.e. plan note, special provision) and the project's basis for acceptance and documentation.

Comments:

F. For pre-tested materials delivered to the project, the Department allows a reasonable amount of time (starting from the date the material is placed on a progress estimate) to obtain test reports at the project.

1. What procedures are used by the project to track the materials?

Comments:

2. What happens if test results are not received?

Comments:

### **Field Review**

**Observe the sampling and testing of active items available. This may include at the site, plant, quarry or manufacturer.**

A. Note the item(s) being sampled and tested.

Comments:

B. Is the sampler the Contractor's representative or State personnel?

Comments:

C. Are proper sampling and testing procedures being observed? (Include a comment in regard to technique observed)

Comments:

D. Is sampling and testing being conducted in accordance with the Quality Control Plan?

Comments:

E. Note the location sites of the sampling and testing.

Comments:

F. Note the test results.

Comments:

G. Is the test equipment/laboratory adequate?

Comments:

- H. Is testing being performed within a reasonable time period after the material is sampled and incorporated into the project?

Comments:

- I. What happens to the test results?

Comments:

- J. What action is being taken on failing material by the sampling and testing personnel?

Comments:

- K. Are Control Charts being maintained properly?

Comments:

- L. Other Observations:

Comments:

### **Closeout Conference**

- A. Are there any recommendations from the review or from the project personnel as to the sampling and testing program?

Comments:

- B. Hold a closeout conference and discuss all findings and come to an agreement on corrective actions when required.

Comments: