3.20 FIELD TESTS

3.21 FIELD TESTING ON CONSTRUCTION PROJECTS

Materials I.M. 204

All sampling, measuring, and testing for construction project acceptance shall be performed as prescribed in Materials I.M. 204, Inspection of Construction Project Sampling and Testing.

Project Verification Sampling and Testing

Construction inspection personnel are responsible for the field sampling and testing portion of project verification tests. All gradation testing for aggregates shall be performed by certified aggregate inspectors. This will require project engineers to review inspector assignments and maintain a program of continuing recertification for present personnel and certification for additional employees if required. Samples taken by inspectors and submitted to District or Central Materials Laboratories must be properly and completely identified on "Identification of Sample for Test" (Form 820193) or other appropriate forms as required.

Materials I.M. 204 shows the minimum required frequency of tests for various types of work. Additional tests should be made as necessary for adequate project control. All tests should be recorded in field books. Reports showing test results must include all tests made.

"Noncompliance Notice" (Form 830245)

Test results and work performed on contract items falling outside specification limits will be reported by the project inspector on a "Noncompliance Notice" (Form 830245).

- Original copy will be immediately delivered to the contractor with the carbon copy retained by the inspector for project files.
- Inspector should also immediately advise the project engineer.

When non-complying tests occur before a material is placed, the material will be rejected and a "Noncompliance Notice" (Form 830245) is not needed. A "Noncompliance Notice" (Form 830245) is issued when non-complying tests occur for work in progress or where material is being placed.

When contractor quality control testing (when used in the acceptance decision) or verification testing (when used as the sole basis of acceptance) identifies that a lot is non-complying, the "Noncompliance Notice" (Form 830245) is to be issued. When the lot is non-complying, subsequent material shall not be placed until corrective action has been taken and the material is complying.

Independent Assurance Sampling and Testing

Materials I.M. 205 discusses the requirements of the Independent Assurance Program (IAP). It is important to understand that independent assurance is intended to evaluate sampling and testing procedures, personnel, and equipment used in the acceptance decision. Results of individual independent assurance tests should never be used in the acceptance decision for the material tested. When an IAP test result indicates non-complying material, the Engineer should investigate. When possible, additional verification samples should be taken. When an IAP test result indicates a problem with the test procedure or the equipment, the Engineer should investigate the recent quality control or verification test results from that equipment or person.

It is also important to note that each individual holding a certification and performing sampling and testing that is included in the acceptance process must participate in the Independent Assurance Program. While it is the responsibility of the Central and/or District Materials Offices to track independent assurance testing that has been performed, it is the responsibility of the individual holding the certification to ensure that they are being included in the IAP.

> Example: An individual is certified in AGG I & II, PCC I & II and HMA I or HMA Sampler. The individual maintains all of the certifications over a three year period but is only involved in verification testing for HMA including aggregate gradations, sampling of HMA mix on the grade, and sampling and testing of HMA density cores during that timeframe. The individual should be sure that they are being included in the IAP for each of the sampling and testing tasks that they perform throughout that three year period. This would include sampling and testing of aggregates, sampling of HMA, and sampling and testing of HMA density cores. The individual would not need to be included in the IAP for the PCC certifications that they hold unless sampling and testing is being performed using those certifications.

3.22 CONTRACTOR ASSISTED SAMPLING AND VALIDATION OF CONTRACTOR TEST RESULTS

Verification sampling of the following materials will be done by contractor personnel as directed and witnessed by agency personnel:

PCC and Compacted HMA Cores
Aggregates for gradation
Asphalt Binder
Uncompacted HMA Mixture from behind the paver

Materials IM 204 lists the minimum frequency and IM method to be used for sampling. If the contractor is required to transport the samples, the agency personnel will seal the sample with a security tag before giving it contractor.

Quality control sampling and testing for the following materials and tests may be used in the acceptance decision:

HMA Mixture properties	IM 511
Aggregate gradation	IM 511 or IM 527 and IM 528
Smoothness testing	IM 341

For the quality control test result to be used in the acceptance decision, it must be compared to the agency verification test result. Unless the test results compare satisfactorily (are validated), the quality control test results can not be used in the acceptance decision. There is a dispute resolution process the Engineer or District Materials Engineer can use to resolve the test result differences.

Evaluation of Test Results

Specification 1105.04 requires project engineers to determine if project work is acceptable and within reasonably close conformity with contract documents. If the work is not in reasonably close conformity, the project engineer is permitted to allow the work to remain in place if it is reasonably acceptable and to provide an adjustment in the contract unit price for work that is deficient. However, the contractor may elect to remove the deficient work with no extra payment and replace it with construction that complies.

Whenever deviations from specification limits or tolerances occur, whether the deviation is to the extent that payment adjustments will be made or not, the contractor shall take immediate corrective action that will insure subsequent compliance. If immediate corrective action is not taken, the inspector will stop the work.

When test results are within specifications but continuously near the limits or tolerances on any sieve, the inspector will inform the contractor that corrective action would be advisable and document this advice in the project diary. Work will not be stopped, pending such corrective action, unless noncompliance has occurred.