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# **INSPECTION for QUALITY ASPHALT PAVEMENTS**

## **PROPER INSPECTION IS A KEY COMPONENT**

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On asphalt construction projects, there will be one or more inspectors assigned to observe the work being done is meeting the project specifications, and to monitor progress. But what are inspectors looking for, exactly? It's not intended to be a mystery; their focus is making sure that the road is built with quality construction and materials, workmanship and that best practices are followed during the construction process.

## **Inspection Roles**

A variety of people may be involved in project inspection activity, either through the contractor building the road or with the agency that owns the road. Inspecting the quality of the work is an important responsibility for the agency. Contractors may have pay incentives tied to quality and be involved with inspections, depending on the type of project and specifications involved. For example, a QC/QA specification involves a combination of **quality control (QC)** (now known as process control (PC)), for which inspections and testing are performed by the contractor, and **quality assurance (QA)** (now known as owner's acceptance (OA)) by the agency to validate the contractor's results.

Regardless of the parties involved, one key aspect is that inspectors are in a separate chain of command from the crews who are actually building the road. **They are there to monitor and observe, rather than to give direction to the contractor or crew.** If inspectors notice an issue that requires action on the part of the contractor, they should communicate with a designated representative on the contractor's team, such as a project foreman, superintendent or project manager, with the authority to make decisions and direct workers accordingly.

Some of the items an Inspector should look into are:

- Proper prime / tack placement
- Uniform coating of asphalt over the aggregate particles
- Proper treatment of core holes before paving the subsequent layer
- Proper cleaning of trucks before they tip into the paver (to avoid contamination)
- Proper placement of the asphalt materials for width, thickness and smoothness
- Quality joints (both transverse and longitudinal) by using a straight edge
- The compaction process and roller patterns
- Any segregation in the paved mat and thereby initiating corrective measures

## Inspection Documentation

If you ask an inspector which of their observations need to be documented, they would probably tell you, "All of them." Inspection documentation should include anything that might impact the construction or performance of the road being built. This extends beyond construction activity to factors ranging from site characteristics to weather conditions to traffic control. Inspectors are often responsible for documenting essential information about project operations, such as the composition of work crews and equipment, or quantities of construction materials as they are placed or removed. This documentation may be needed to allocate contractor payments, track progress, or serve as evidence if questions about the work arise later on. Basically, if it is not documented, it didn't happen!

The typical standard used by most agencies is that inspectors should file daily reports so their supervisors can review the information quickly and address any concerns related to the project promptly. Inspectors should also be able to contact their supervisors directly for issues that require more immediate attention. Documentation involves paper records such as project diaries, inspection reports, and notes in field books. As technology improves, agencies are looking for ways to capture more of that information directly in electronic form such as tables and other hand held electronic devices.

## Creating Confidence in Construction Quality

Inspections aren't supposed to be about mysterious or secret criteria, everything inspectors look for should be in the plans and specifications. Having inspectors there to observe is designed to keep good work from staying a secret. Inspections play a critical part in making sure the agency, and in turn the general public that uses the road, can have confidence in the quality of its construction. When a construction project produces a quality pavement, that's something to be proud of, and you want everyone to know about it.

The RMAEC offers an Inspector Education Course held concurrently with the LabCAT Inspector Certification Program. The content of both of the sessions are the same and held concurrently, attendees who register for only the training course are interested in the Elements of Inspection, but do not need certification. This provides a good interaction between those who require certification and those seeking training as they are all in the room at the same time. Training course attendees are dismissed prior to the Inspector Certification written exam.

**Elements of Inspection Topics:** Specifications, Surface Preparation, Materials Transfer, Sampling of Asphalt Mixtures, Paving Operations including Compaction, High Speed Profiler, and Understanding Mat Defects.