

Missouri Department of Transportation Job Description

Job Title: Senior Materials Inspector

Title Code: R05772

Salary Grade: 9

Exemption Status: Non-Exempt

Supervisory Responsibilities: Lead Worker

District/Division: District Offices - Materials

Effective Date: 09-01-2026

Replaces (Effective Date): 05-01-2025

General Summary

The senior materials inspector supervises or performs inspection, sampling and testing of materials used in state highway construction and maintenance to ensure that materials supplied by contractors and producers comply with specifications, standards, and/or contract provisions. Responsibilities are performed under general supervision.

Minimum/Required Qualifications

- Bachelor's degree in engineering from an ABET-accredited college or university curriculum.
- Certification to operate nuclear gauges may be required.
- Four years of experience in highway or transportation engineering.
- OSHA 10-Hour Certification required within 90 days.
- Successful completion of a work simulation examination and a medical-physical examination.

Special Working Conditions/Job Characteristics

- Job requires moderate physical activity.
- Job requires exposure to physical hazards, health and safety risks, and/or adverse or otherwise undesirable characteristics in the environment.
- A postsecondary degree is the best measure to ensure candidates possess required engineering knowledge, including in applied physics and mathematics, drafting, engineering processes and procedures, project management, industry ethical standards, and analyzing and modeling data.

Examples of Work

1. Performs or provides technical supervision of inspection, sampling and testing of general materials such as steel, pipe, paint, asphalt, guard rail, bridge bearings, cement, and prestressed and precast concrete; determines if materials conform to specifications and approves/rejects materials for intended use.
2. Performs or provides technical supervision of sampling and testing programs required on federal aid projects.
3. Reviews, processes, and reports contractor's proposed concrete and asphalt mix designs and quality control plans by checking computations and adherence to department specifications.
4. May perform or provide technical supervision of inspections at plants producing bituminous mixtures, determines if the material produced conforms to specifications, and approves or rejects the bituminous material.
5. Conducts and/or observes sampling and testing of aggregates and bases at various sites including quarries, sand plants, concrete and asphalt plants, and on department jobsites.
6. Sets up contracts in site manager; prepares and maintains records of test results, production records and reports of general materials and aggregates inspected and approved for each project or for maintenance use; records summaries of materials used on each project.
7. Performs or provides technical supervision of the review of manufacturer's and supplier's quality control procedures and the sampling of products to ensure compliance with the department's pre-acceptance list requirements.
8. Serves as a resource for contractors, suppliers, producers, consultants, and other department employees in the interpretation and application of standard plans, project plans, shop drawings, contract proposals, standard specifications, testing methods, and materials and construction manuals.
9. Performs lead worker responsibilities, which may include providing general instruction, assigning and reviewing work, coaching and training, providing guidance and instruction in the proper and most efficient methods of accomplishing tasks, and providing input to the direct supervisor on staffing decisions and performance management.
10. Performs other responsibilities as required or assigned.