

Who we are:

Transportation is so basic that many of us overlook its overwhelming importance in our daily lives. Practically everything used in our homes, offices, or schools across Tennessee – from furniture to food items to clothing – requires a large and complex transportation network. The Tennessee Department of Transportation provides citizens of Tennessee and travelers with one of the best transportation systems in the country. TDOT is a multimodal agency with responsibilities in building and maintaining roads, aviation, public transit, waterways, railroads, cycling and walking. Our involvement ranges from airport improvements to funding transit buses to planning for river ports. The Department of Transportation has approximately 3,500 employees with four statewide region facilities in Knoxville, Chattanooga, Nashville, and Jackson.



Pavements Engineering Technician 4

Materials and Tests Division – Materials and Pavements Section

Nashville, TN

\$57,912 annually

Job Overview

The Pavements Engineering Technician 4 supports Project Teams, Materials & Tests Field Services Teams and Regional Operations by assisting with pavement related design, construction, and maintenance operations and efforts. This position is an expert in the full spectrum of pavement topics from characteristics of component materials to the quality and disposition of in-place pavements. This position employs Department specifications, policies, technical guidance, and procedures in assisting with the evaluation of existing pavements to determine condition, recommends appropriate courses of action, and ensures the sustainability of the Department's Work Program.

The Pavements Engineering Technician 4 collaborates with both internal and external stakeholders, including Project Teams, TDOT Divisions, Regions, and contractors to ensure contractual requirements are met. This position must effectively articulate pavement related technical concepts through training, mentoring, and collaborating as part of a matrix organization.

Essential Job Responsibilities

Assist as a resource for TDOT Operations and Project Teams in the Region as part of a matrix organization by applying the Project Delivery Network to develop asphalt and concrete pavement design standards for generating an initial pavement design; assist in the efforts to ensure all pay items and associated costs are accurately accounted for in the project estimate with respect to pavement requirements; assist with assessing current pavement conditions, developing alternative design options, pavement treatment forecasts, and preliminary cost estimates associated with each option; assist with mitigating risk by identifying and mitigating potential conflicts during construction; assist with meeting the timelines established by the project schedule, and providing Materials and Pavements Standard Operating Procedure (SOP) guidance and recommendations for material-related concerns for all aspects of a pavement's lifecycle from initial design to end-of-service preservation methods.

Integrate Quality Management into all deliverables, including contributions to the development and maintenance of pavement specifications, pavement designs, technical documents, policies, procedures, and manuals for the purpose of reducing errors and extending the life of existing pavements.

Assist in determining project-specific overlays, pavement preservation and rehabilitation options based on existing pavement type, pavement structure,

pavement condition, and available budget. Contribute to recommendations based on engineering judgment to determine technical feasibility and engineering requirements for each recommended pavement treatment to assist in the development of the Pavement Program Resurfacing and Preservation list for Region projects.

Assist with asphalt and concrete pavement smoothness evaluations by conducting pavement smoothness testing as required. Apply smoothness specifications to assist in the creation of grinding plans for concrete projects, and processing data in ProVal using resulting outputs to make recommendations. Assist with pavement crack evaluation assessments by collecting, processing, and reporting on Laser Crack Measuring System data.

Participate in the coordination with Asset Management, Maintenance and M&T Senior Engineers in tracking pavement data to predict and prevent future concerns. Assist in identifying and mitigating potential risk areas with Project Teams by determining pavement management strategies tailored to the project's complexity. Assist in establishing minimum requirements for hot mix asphalt mixes and component materials.

Assist Project Teams and the Materials and Pavements Section with pavements related construction contract and dispute resolution issues with contractors, producers, and/or suppliers.

Assist in ensuring Pavements deliverables are consistent, predictable, and repeatable to provide consistently high levels of achievement, mitigation of risk, and an established track record of success. Assist in analyzing and tracking all relevant data sets to ensure conformance to maximum error limits. Monitor, maintain and track physical assets and inventory, as required.

Assist with pavement research to optimize designs, methodologies, and preservation techniques. Assist with adopting new technologies and best practices that drive TDOT's transportation projects forward. Assist with maintaining and monitoring training schedules and generating reports on training activity and progress.

Provide exceptional customer service to project stakeholders by facilitating the sharing of acquired knowledge with Project Teams, providing prompt assistance for pavement concerns, exercising effective listening skills, and communicating effectively. Serve as a TDOT liaison in teaming with industry for pavements.

Qualifications

- High school diploma or equivalent
- 4 years of demonstrated competency in pavements or a related Materials & Tests field
- Completion of the Engineering Technician Proficiency Program levels I through III.

OR

- High school diploma or equivalent
- 4 years of demonstrated competency in pavements or a related Materials & Tests field, including at least one (1) year of experience with guiding field crews or teams on project sites and/or training employees, including effective communication through active listening, and providing verbal and written instructions.

OR

- Associate degree
- 2 years of demonstrated competency in pavements or a related Materials & Tests field, including at least one (1) year of experience with guiding crews or teams on project sites and/or training employees, including effective communication through active listening, and providing verbal and written instructions.

Ideal Candidate

The Pavements Engineering Technician 4 is proficient in all matters related to pavement materials, mix designs, construction techniques and in-place evaluation methods. They assist with creating an open environment that encourages communication and collaboration with their team and are a role model on achieving accountability. The Pavements Engineering Technician 4 is collaborative and works closely with a broad array of internal and external partners to ensure TDOT's pavements are of the highest quality. They are passionate advocates for the importance of outstanding pavements within TDOT.