## 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.

**Laboratory Operations Engineering Technician**
Materials and Tests Division – Laboratory Operations Section, Laboratory Services
$43,140 - $53,628 annually

**Job Overview**

The Laboratory Operations Engineering Technician works in a team setting, providing support to the Materials and Tests Division. This position will perform laboratory testing, assist with data analysis, and report on materials used in the construction and maintenance of Tennessee's transportation infrastructure projects. They will also assist with the calibration and maintenance of laboratory equipment. This role requires technical knowledge of laboratory operations, equipment calibration, materials testing operations, and the Laboratory Quality Management System Manual (QMSM). The Laboratory Operations Engineering Technician will comply with federal, state, and TDOT specifications, contributing to the successful delivery of TDOT's Work Program.

The Engineering Technician role supports the construction, maintenance, and inspection of Tennessee's transportation infrastructure by conducting tests on materials and maintaining accurate records. They operate and maintain equipment, apply safety standards and technical specifications, and collaborate with stakeholders to ensure efficient project delivery. They assist in implementing the Quality Management Program as part of the Materials and Tests' Division activities. As they advance, engineering technicians take on more complex tasks, contributing to quality assurance, training, and process improvements, enhancing TDOT's commitment to safety and sustainability.

**Essential Job Responsibilities of Engineering Technician 1, 2, and 3 include:**

Perform laboratory testing and evaluations of construction materials, such as asphalt, concrete, aggregates, and soils, in accordance with TDOT, American Association of State Highway and Transportation Officials (AASHTO), American Society for Testing and Materials (ASTM), and the Quality Management Systems Manual (QMSM). Accurately record test results and prepare basic reports for use in materials certification and compliance documentation. Assist with data entry and reporting using systems such as SiteManager and AASHTOWare Project (AWP). Ensure all data is organized and accessible for materials certification and reporting purposes.

Follow safety protocols and maintain a clean and organized laboratory environment. Perform routine maintenance and equipment checks and report any issues to supervisors.

Participate in TDOT's Materials and Tests Engineering Technician Proficiency Program (ProPath) to develop skills and improve knowledge and performance in laboratory operations.

Provide exceptional customer service to both internal and external customers by exercising effective listening skills, providing prompt responses, maintaining complete and accurate documentation, and communicating effectively.

**Additional Job Responsibilities of Engineering Technician 2 and 3 include:**

Conduct more advanced laboratory testing and analysis of materials to verify compliance with project specifications. Identify and resolve issues in testing processes, ensuring accurate and reliable results. Assist in preparing detailed reports summarizing test outcomes for use in project certifications.

Perform calibration, maintenance, and troubleshooting of laboratory equipment to ensure accuracy, reliability, and readiness for testing tasks.

**Additional Job Responsibilities of Engineering Technician 3 include:**

Perform complex testing and analysis of materials for high-risk or specialized projects, to confirm compliance with project standards. Address challenging materials-related problems by applying technical knowledge and experience. Maintain detailed records of testing activities and equipment calibrations for quality assurance audits.

Review and validate laboratory results to ensure compliance with AASHTO Accreditation standards.

Assist in developing more efficient testing procedures, improving data entry and reporting practices and participating in research initiatives to evaluate innovative materials and adopt new techniques and technologies for laboratory operations.

Work closely with project stakeholders to resolve materials-related issues and ensure testing requirements are met. Assist in communicating testing outcomes and related information to stakeholders in a clear and accessible manner.

**Qualifications**

**TDOT Engineering Technician 1:**

- High School Education or equivalent

**TDOT Engineering Technician 2:**

- High School Education or equivalent
- Completion of the Proficiency Requirements for the Engineering Technician 1 level.

**TDOT Engineering Technician 3:**

- High School Education or equivalent

- Completion of the Proficiency Requirements for the Engineering Technician 1 and 2 levels.

***The Tennessee Department of Transportation reserves the sole right in determining the level of position based on the applicant's work experience, education, skill level, and all other appropriate factors, and based on business need. Within 6 months of hire, employees must demonstrate successful mastery of corresponding work competencies and skill blocks of the Technician Proficiency Program for the level of technician to which they were hired. If skills and competencies are not met during that period, the employee can be demoted to the level of technician for which he/she is qualified.***

**Ideal Candidate**

The Laboratory Operations Engineering Technician 1, 2, or 3 demonstrates technical expertise coupled with a commitment to safety and quality. They are eager to learn, capable of adapting to evolving needs, offering process improvements, sharing knowledge to support team development. The Engineering Technician possesses a collaborative mindset, problem-solving abilities, and dedication to excellence, making them a vital contributor to the success of TDOT's infrastructure initiatives.