

## 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.



### **Drill Crew Engineering Technician**

Materials and Tests Division – Geotechnical Engineering Section

\$43,140 - \$53,628 annually

#### **Job Overview**

The Drill Crew Engineering Technician works in a team setting, providing support to the Geotechnical Engineering Section. This position will conduct geotechnical drilling operations for transportation infrastructure projects, assist in gathering subsurface data for engineering analysis, ensuring samples meet quality standards, and maintain drilling equipment. This role requires technical knowledge of geotechnical drilling operations and the ability to work effectively in field conditions, often under challenging circumstances. The Drill Crew Engineering Technician contributes to project success by performing accurate and reliable sampling, maintaining equipment, and assisting with safe and efficient drilling activities.

The Engineering Technician role supports the construction, maintenance, and inspection of Tennessee's transportation infrastructure by conducting tests, monitoring compliance, 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:**

Assist in the mobilization and demobilization of drilling rigs and associated equipment, ensuring efficient setup and teardown processes. Assist with geotechnical drilling activities, including collecting soil, rock, and other subsurface samples. Ensure samples are properly labeled, stored, and transported in compliance with TDOT guidelines. Record field observations, including drilling depths, soil conditions, and groundwater levels. Maintain organized records of fieldwork for use in geotechnical analysis and reporting.

Perform routine maintenance of drilling equipment, such as checking fluid levels, greasing service points, and maintaining tire pressure to ensure proper functioning.

Follow established safety procedures and assist in maintaining a safe work environment on drilling sites. Use personal protective equipment (PPE) and ensure proper handling of equipment and materials.

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

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:**

Perform more complex drilling operations and assist with advanced sampling techniques, such as undisturbed sampling or split-spoon sampling. Identify and address challenges encountered during drilling operations. Collect and interpret field data, including soil classifications and groundwater observations for preliminary engineering evaluations. Ensure data accuracy and assist with the preparation of technical reports.

Operate and maintain more advanced drilling equipment, ensuring adherence to manufacturer and TDOT standards. Conduct routine troubleshooting and minor repairs of equipment and software as needed.

Coordinate with team members to ensure field activities align with project requirements. Provide clear updates and recommendations based on field observations.

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

Perform drilling and sampling for highly complex geotechnical projects requiring advanced techniques and precision. Identify and implement solutions to operational challenges during drilling activities. Review and validate field data for accuracy, ensuring it meets project specifications. Compile detailed drilling logs and assist in preparing comprehensive geotechnical reports.

Oversee the condition and readiness of all drilling equipment, ensuring compliance with maintenance schedules. Provide input on the procurement of new equipment and software, or upgrades as needed.

Assist in the training of employees by providing on-the-job training and guidance as needed to facilitate learning and development.

Providing feedback to Headquarters Divisions and/or the Geotechnical Engineering Section and contributing to process improvements related geotechnical processes.

**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.

### **Necessary Special Qualifications**

- Possess and maintain a Class D driver's license valid to operate vehicles in the State of Tennessee.
- Possess and maintain, or obtain at their own expense and within 11 months of hire or promotion to this classification, a Class A Commercial Driver's License with an N endorsement without a Code O restriction (Code 52 restriction is allowable) that is valid in the State of Tennessee.

**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 Drill Crew 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.