

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. TDOT Aeronautics is located near the John C. Tune Airport in Nashville, TN.



Geotechnical Transportation Engineer Materials & Test Division – Geotechnical Engineering Section \$99,348 annually

Job Overview

The Geotechnical Engineer is a transportation engineer position that will support their assigned team. The work will range in complexity and risk from simple to highly complex. The Geotechnical Engineer role requires collaboration with multiple TDOT divisions, project team members, Federal Highway Administration (FHWA), contractors, and other external stakeholders. This position requires critical thinking and engineering judgment to problem-solve and make well-informed decisions that increase the safety, performance, sustainability, and efficient delivery of TDOT's transportation system. This position provides engineering support and guidance across the spectrum of geotechnical materials and conditions used and encountered in the delivery of the State's construction program.

The Geotechnical Engineer ensures the appropriate Department policies, technical guidance, and procedures related to geotechnical materials and conditions are incorporated into the State's project delivery process. This position assists in implementing the Quality Assurance Program as part of the Construction Division's activities. This position must effectively articulate technical engineering concepts through training, mentoring, and collaborating as part of a matrix organization. The Geotechnical Engineer will assist with ensuring all applicable geotechnical related documentation and data is collected, stored, and reported to assist with timely and accurate invoicing and project close-outs.

Essential Job Responsibilities

Coordinate resources and assist Project Managers by managing external partners together with the Professional Services Division on geotechnical related issues. This includes testing and evaluation of subsurface conditions, characterizing ground capabilities to support structural loads, evaluating foundation systems, assessing the constructability of geotechnical project elements, providing geotechnical design criteria, and providing support for geohazard emergencies. Assist with the negotiation of contracts, review of consultant invoicing, development of scopes, management of contract tasks, compliance monitoring, and completion of consultant grading. Integrate Quality Management into all geotechnical related deliverables.

Perform and review internal and consultant geotechnical evaluations. Conduct reviews and analyses, and make dispute resolution recommendations when sub-standard geotechnical materials, conditions or structures are identified during construction. Assist in the determination of scopes for geotechnical remediation requirements. Conduct field reviews to ensure all construction site geotechnical conditions meet specification, design, and contractual requirements. Conduct field reviews to assess possible geohazard conditions and mitigation strategies.

Assist in the development and delivery of pavements-related training and mentoring to internal and external engineering staff. Assist in the development of training and technical guidance that addresses acquired knowledge, risk management, technical design elements, and emerging technologies and innovations related to pavements for the purpose of improving team performance, creating a stronger understanding of the transportation industry, inspiring new ideas, and developing skills. Assist the Operations Support Section in ensuring TDOT transportation infrastructure project data is complete and accurate.

Manage and take ownership of change, clarify your vision of the State's geotechnical program, communicate effectively, remain transparent, and hold yourself accountable.

Serve on Project Teams as part of a matrix organization by providing geotechnical expertise and reviews, assisting in developing proposal contract documents for project lettings, and contributing to bid reviews and bid analysis for alternative delivery projects. Ensure alignment and compliance with Division and Section metrics and performance goals.

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. Remain current on geotechnical-related industry trends and national best practices by participating in AASHTO, industry associations, and other appropriate committees as assigned.

Routinely collaborate with appropriate TDOT staff and external stakeholders to identify and document knowledge on industry best practices to avoid past errors and ensure TDOT project successes.

Assist in ensuring the State is in compliance with all geotechnical designs and specifications. Assist in ensuring geotechnical related evaluations and other deliverables are accurate, consistent, predictable, and repeatable to provide consistently high levels of achievement, mitigation of risk, and an established track record of success. Assist the Team Lead and State Geotechnical Engineer as needed on various reviews and tasks within the unit. Assist with modifications to all applicable policies, procedures, standards, specifications, and special provisions.

Qualifications

- Bachelor's degree in engineering
- Licensed Professional Engineer (PE)
- 4 years of demonstrated competency in Geotechnical Engineering/Testing and a Highway Construction related field

Ideal Candidate

The Geotechnical Transportation Engineer possesses a variety of skills, from their curious and analytical mindset to their ability to provide excellent customer service. Their exceptional analytical abilities allow them to analyze complex data, leading to well-informed decisions regarding the suitability of the ground for construction projects, ultimately resulting in successful project completion. Their attention to detail is impeccable, ensuring precision in every aspect of the job, from initial assessments to implementation. Furthermore, their cooperative and helpful demeanor with other professionals and team members fosters a collaborative environment, contributing to the overall success and safety of the project.