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.

Laboratory Process Control Engineering Specialist 3 & 4
Materials and Tests Division – Laboratory Operations Section
$80,784 - $88,860 annually

Job Overview

The Laboratory Process Control Engineering Specialist 3 & 4 supports Materials and Tests Lab Operations Teams, Field Services Teams, Regional Operations, and Project Teams by providing guidance and recommendations on all aspects of material and product testing required for successful project delivery. This position serves as a liaison between TDOT laboratories and Project Teams and also TDOT laboratories and Materials Controls Teams. This position employs Department specifications, policies, technical guidance, and procedures related to construction materials to support the project delivery process.

The Laboratory Process Control Engineering Specialist 3 & 4 is responsible for ensuring the TDOT Materials and Tests Central Laboratory maintains its accredited status as per 23 CFR 637.209. This position will apply acquired knowledge to improve TDOT specifications, policies, and procedures that mitigate the Department's risk and increase performance as part of fulfilling TDOT's strategic vision. This position must effectively articulate materials and engineering concepts through training, mentoring, and collaborating as part of a matrix organization.

Essential Job Responsibilities for the TDOT Transportation Engineering Specialist 3 & 4 include:

Serve as a resource for TDOT Operations, Materials and Pavements Teams, and Project Teams as part of a matrix organization by utilizing the Sitemanager/AASHTOware Project to coordinate and produce materials and testing information that satisfies required project sampling and testing requirements and is within the project's scope, schedule, and budget; minimize risk by identifying and mitigating potential materials related project issues throughout the project development and delivery processes; provide guidance and recommendations for materials' testing concerns for all aspects of the project's delivery process.

Integrate Quality Management into all deliverables, including project material testing and analysis plans and the development and maintenance of material specifications, technical documents, policies, procedures, and manuals for the purpose of reducing errors and extending the life of existing pavements.

Assist in reviewing laboratory practices and processes to ensure HQ Laboratory maintains AASHTO (American Association of State Highway and Transportation Officials) accreditations and Region Laboratories maintain appropriate certifications.

Assist in conducting Field Services Laboratory reviews to ensure compliance with specifications.

Participate in AASHTO committees and the AASHTO Product Evaluation and Audit Solutions Program as assigned.

Assist in developing and delivering training associated with materials testing and laboratory operations to both internal and external stakeholders. Assist with the administration of the Material Testing Proficiency Program.

Assist with the development and implementation of a Consultant Acquisition Plan for laboratory operations; assist with the management and direction of consultants performing laboratory operations; assist with conducting consultant evaluations for laboratory operations; serve on selection committees for professional engineering services; serve as a scorer as part of the consultant acquisition process.

Assist Project Teams and Materials & Pavements with materials testing and laboratory related contract and dispute resolution issues with contractors, producers, and/or suppliers.

Remain current and engaged on laboratory operations best practices and trends. Conduct research to optimize material sampling, testing, analysis, and laboratory techniques. Adapt new technologies and best practices that drive TDOT's projects forward.

Provide exceptional customer service by facilitating the sharing of acquired knowledge with Project Teams, contractors, suppliers, and other project stakeholders. Support project partners by exercising effective listening skills and communicating effectively.

Additional Job Duties for the Transportation Engineering Specialist 4 include:

Serve as a mentor and resource to less experienced staff by assisting in the development and presentation of training that addresses laboratory operations, materials sampling and testing, and including governing rules and processes, lessons learned, and emerging technologies.

Assist Teams by providing data-driven, engineering judgment for complex issues, anticipating and acting on potential issues, and meeting associated deadlines and timelines.

Provide innovative recommendations and root cause analysis for laboratory and materials testing issues.

Perform quality assurance reviews of TDOT laboratories.

Assist in the development, implementation, and maintenance of all materials specifications and applicable standard guidance that relates to laboratory operations.

Qualifications

The Transportation Engineering Specialist 1 and 2 are part of the Graduate Transportation Engineer (GTE) Program.

Transportation Engineering Specialist 3:

- Bachelor's Degree
- 2 years of demonstrated competency in construction engineering and inspection, or related technical discipline.

OR

- Master's Degree
- 1 year of demonstrated competency in construction engineering and inspection, or related technical discipline.

Transportation Engineering Specialist 4:

- Bachelor's Degree
- 3 years of demonstrated competency in construction engineering and inspection, or related technical discipline.

OR

- Master's Degree
- 2 years of demonstrated competency in construction engineering and inspection, or related technical discipline.

Ideal Candidate

This position is a part of the career path series at TDOT. The Laboratory Process Control Engineering Specialist 3 & 4 possess exceptional problem-solving and communication skills, which enable them to effectively articulate materials testing and laboratory operations concepts to stakeholders. They have an analytical mindset and great attention to detail, which helps them identify inefficiencies and opportunities for improvement that contribute to the success of materials testing statewide. The Laboratory Process Control Engineering Specialist 3 & 4 understands that the best results are achieved through collective effort and effective communication.