

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.



Road Characteristics and Inventory Engineering Technician 4

Planning Division – Roadway Data Section

\$57,912 annually

Job Overview

The Road Characteristics and Inventory (RCI) Engineering Technician 4 is responsible for supporting the collection, processing, quality assurance, and maintenance of roadway inventory data across Tennessee. Operating under general supervision, the RCI Engineering Technician 4 supports the implementation of the statewide Linear Referencing System (LRS), ensuring data quality compliance with Model Inventory of Roadway Elements (MIRE) and supporting the submittal of Highway Performance Monitoring System (HPMS) to FHWA standards. This role supports planning activities, photolog data collection, GIS-based route inventory mapping, and inter-agency coordination to maintain an accurate and accessible roadway database.

This position combines technical GIS expertise, field data collection, systems integration, and interdepartmental collaboration to support both day-to-day operations and long-term planning objectives. The RCI Engineering Technician 4 works with internal and external stakeholders, local governments, and consultants to ensure accurate road inventory documentation aligned with state and federal requirements.

Essential Job Responsibilities

Assist with statewide updates to the Linear Referencing System (LRS), including field verification and GIS editing. Collect and validate data for roadway features (e.g., surface type, number of lanes, shoulder type) in alignment with federal and state requirements. Perform updates to the LRS in support of HPMS submittals, Functional Classification and State Aid changes. Maintain proper records of field activities, data discrepancies, and corrective measures. Support annual updates to functional classification maps and road network metadata.

Utilize GIS software and TDOT systems (e.g., "E-TRIMS RH", TN-TIMES) for data processing and inventory analysis. Assist in the photolog data collection process by utilizing the LRS to extract the roadway network needed for data capture. Conduct field inspections and measurements to validate existing road data and support "ground-truthing" efforts. Edit LRS centerlines using geo-processing tools based on field reviews or stakeholder updates.

Input and manage data into the TDOT geospatial platform and confirm data quality in "E-TRIMS RH". Perform quality checks on roadway inventory updates to ensure data accuracy and completeness. Contribute to Quality Assurance/Quality Control processes and internal review cycles for data integrity.

Respond and coordinate data requests from local governments and agencies, federal agencies, and other stakeholders. Support consultants with data needs and ensure proper field protocols during contracted tasks.

Submit routine updates and progress reports to the RCI Team Lead. Maintain inventory of equipment and ensure readiness for field deployments. Participate in peer exchanges or technical trainings related to road data systems and methods.

Mentor junior technicians and interns in data collection and processing techniques. Implement and maintain safety protocols in compliance with the Manual on Uniform Traffic Control Devices (MUTCD) and TDOT standards during field operations.

Qualifications

- High school diploma or equivalent
- 4 years of demonstrated competency in roadway engineering or a related transportation field
- Completion of the Engineering Technician Proficiency Program levels I through III.

OR

- High school diploma or equivalent
- 4 years of demonstrated competency in roadway engineering or a related transportation field
- Including at least one (1) year of experience with leading crews or teams on assignments 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 roadway engineering or a related transportation field
- Including at least one (1) year of experience with leading crews or teams on assignments and/or training employees, including effective communication through active listening, and providing verbal and written instructions.

Ideal Candidate

The RCI Engineering Technician 4 is a proactive and knowledgeable professional with a strong background in geospatial technology, roadway characteristics, regulatory compliance, and project delivery. They excel at managing complex projects from planning through closeout while focusing on safety, quality, and schedule. This candidate is a collaborative leader and clear communicator, adept at working across multidisciplinary teams, engaging stakeholders, and mentoring staff. They are forward-thinking, using emerging technologies and national best practices gained through active participation in professional organizations, to drive continuous improvements in the effectiveness, consistency, and resilience of Tennessee's road network.