

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.



Safety & Work Zone Projects Transportation Engineer

Traffic Design Division – Safety & Work Zone Section

Nashville, TN

\$102,300 annually

Job Overview

The Safety & Work Zone Projects Transportation Engineer provides traffic safety and work zone design technical expertise to Project Teams. This position collaborates with Project Teams by identifying potential safety design challenges and implementing statewide acquired knowledge that focuses on ensuring quality deliverables, minimizing variability, and increasing the safety performance of the Department's transportation system. The Safety & Work Zone Projects Transportation Engineer position requires a professional engineering license and is expected to sign and seal applicable construction plans.

The Safety & Work Zone Projects Transportation Engineer ensures Department policies, technical guidance, and procedures are incorporated into Traffic Safety Design deliverables and assists in implementing the Quality Assurance Program as part of the Traffic Design activities. This position must effectively articulate technical engineering concepts through training, mentoring, and collaborating as part of a matrix organization. The Transportation Engineer provides design recommendations as part of the Highway Safety Improvement Program, Manual on Uniform Traffic Control Devices (MUTCD), work zones, and Pedestrian Road Safety Initiatives projects.

Essential Job Responsibilities

Enhance the capabilities of the Traffic Design teams by providing specialized technical expertise and support in addressing complex or unique traffic safety design or work zone challenges. This includes areas such as signals, pavement marking, signing, traffic data, lighting, work zones, rumble strips, guardrail, delineators, asset management, construction and maintenance, and multi-modal concept.

Ensure the successful implementation of traffic safety and travel reliability initiatives, safeguarding motorists, pedestrians, bicyclists, individuals with disabilities, and TDOT construction and contractor staff. Prioritize safe traffic mobility for highly complex construction projects, while empowering the team to effectively and efficiently manage unforeseen challenges. Additional responsibilities may be assigned by the Team Lead and/or Manager.

Verify compliance with the Quality Management policy with respect to traffic safety or work zone design elements with the purpose of reducing plan errors and re-work, right-of-way delays, construction delays, and contractor claims. Assist the Quality Teams by providing reviews in alignment with the Project Delivery Network (PDN) and TDOT's Quality Assurance Program, identifying potential constructability concerns in

proposed designs and making recommendations for proactive safety or work zone solutions with other technical disciplines to ensure the needs of the project are met.

Routinely collaborate with the Regions and Asset Management to identify and document knowledge on industry best practices to avoid past errors and ensure TDOT project successes. Assist with modifications to all applicable policies, procedures, design standards, specifications, and special provisions.

Serve on Project Teams as part of a matrix organization by providing traffic safety & work zone design expertise, defining expectations for how the Project Team manages risk, and assisting in developing the project vision in alignment with Asset Management. Assist in defining critical goals and intended outcomes for the scope, schedule, budget, and quality in coordination with the Project Manager related to traffic safety & work zone design elements; participate in Risk Management Assessments; provide input at all applicable project milestones per the PDN.

Provide support of Project Management staff with respect to the Traffic Design Scope of Work in collaboration with TDOT Environment, TDOT Maintenance, and TDOT Construction; applying context-sensitive traffic safety and work zone design methodologies; attending public meetings as a Department representative to assist with addressing stakeholder concerns; effectively coordinating with other technical disciplines within TDOT to address all potential traffic safety or work zone elements as part of the Functional Design Plans development per the PDN; providing approvals on traffic safety and work zone design-related products and deliverables; when applicable, proactively assessing risk factors related to legal aspects, public relations and safety for traffic service design projects.

Provide exceptional customer service to both internal and external customers, including mentoring and technical guidance related to traffic safety and work zone design, coordinating with other disciplines as part of a matrix organization, exercising effective listening skills, providing prompt responses, maintaining complete and accurate documentation, and communicating effectively.

Remain current and engaged on revisions to design codes, standards, and guidelines related to traffic safety and work zone design elements, adapt new technologies and best practices that drive the Department's transportation projects forward, implement innovative safety trends including advancements with connected and automated vehicles; Safety, Mobility, Automated, Real-time Traffic Management (SMART) Corridors mobility-as-a-service (MaaS), mobility-on-demand (MOD), artificial intelligence, and drone technology as potential applications for traffic safety or work zone deployments; assist in implementing policies and procedures related to traffic safety or work zone design. Collaborate on innovative strategies used as best practices for statewide quality assurance needs.

Collaborate with the TDOT Technical Training Director and assist in the development of training that addresses acquired knowledge, including technical elements and emerging technologies related to traffic safety or work zone design for the purpose of improving team performance, creating a stronger understanding of traffic safety and work zone elements as they relate to the transportation industry, inspiring new ideas, and developing skills.

Assist in the development of a Consultant Acquisition Plan (CAP) for traffic safety and work zone design and assist in the oversight of external partners by serving on technical review committees, including assisting with RFP development, attending project-specific marketing meetings, assisting with determining scoring criteria, assisting with project information sessions when applicable, serving as a scorer as part of the consultant acquisition process, and attending de-briefs for consultants where usable feedback must be provided.

Assist in ensuring traffic safety and work zone design deliverables are consistent, predictable, and repeatable to maintain consistently high levels of achievement, mitigate risk, and establish a track record of success by implementing statewide policy, data collection, processing standards, specifications, and direction. Utilize best practices and TDOT policy for the incorporation of traffic safety and work zone design elements, including access to acquired knowledge across the state.

Qualifications

- Bachelor's degree in civil engineering
- 4 years of demonstrated competency in developing and/or designing transportation projects

Necessary Special Qualifications

- Licensed Professional Engineer (PE)

Ideal Candidate

The Safety & Work Zone Transportation Engineer has advanced knowledge in aspects of traffic safety and work zone design. They possess strong attention to detail and are committed to improving safety and performance. With a wealth of technical expertise, they offer unique solutions to traffic safety or work zone design challenges. The Safety & Work Zone Transportation Engineer's analytical skills allow them to predict and prevent issues before they become problematic, ensuring efficient and reliable transportation designs. They possess excellent communication and collaboration skills, which enable them to effectively communicate complex technical information with stakeholders at all levels. Their strong problem-solving skills allow them to navigate complex safety challenges, ensuring the protection of both workers and the public. They are dedicated team players and thrive in collaborative work environments to ensure everyone is safe.