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.

Projects Transportation Engineering Specialist 3 and 4
Traffic Design – Safety & Work Zone Section
$80,784 - $88,860 annually

Job Overview

The Projects Transportation Engineering Specialist 3 and 4 supports Project Teams, Technical Divisions, and Region Operations through the application of Department specifications, policies, technical guidance, and procedures into the design of safety & work zone-related assets. This position collaborates with technical disciplines and Project Teams to prioritize safety & work zone cohesiveness for project elements in support of TDOT's project delivery process.

The Projects Transportation Engineering Specialist 3 and 4 assists and supports in the planning, design, development, and deployment of safety & work zone programs across Tennessee. This role supports the integration of advanced safety & work zone traffic technologies to improve safety, mobility, and operational efficiency on statewide transportation projects. This position works collaboratively with internal teams, consultants, contractors, and local partners to identify, coordinate, and implement safety & work zone solutions that meet both federal and state standards. Responsibilities include providing technical guidance during design and implementation, ensuring quality control, and maintaining proficiency in emerging safety & work zone technologies and best practices.

The Projects Transportation Engineering Specialist 3 and 4 plays a strategic role in optimizing TDOT's infrastructure by implementing proactive and predictive traffic management strategies that enhance corridor safety and performance. This position collaborates closely with divisions such as Traffic Operations, Asset Management, Region Traffic Operations, and Transportation Management Centers to ensure integration of safety and work zone considerations across all project initiatives and deliverables. It also supports coordination with TDOT Region stakeholders to identify, plan, design, deploy, and maintain effective safety and work zone strategies that align with program planning needs. Within a matrix organization, this role contributes to mentoring and training efforts while transforming project control activities into high-quality deliverables that reflect asset management goals. Additionally, the position advances technical guidance, procedures, and manuals aligned with the Safety and Work Zone Section's strategic vision, the Strategic Highway Safety Plan, and risk management objectives. This position continuously evaluates performance indicators to implement acquired knowledge into safety & work zone elements, mitigating the Department's risk and increasing performance as part of fulfilling TDOT's strategic vision and objectives.

Essential Job Responsibilities of Transportation Engineering Specialist 3 and 4 include:

Serve as a technical resource to Project Teams by applying TDOT's Project Delivery Network (PDN) to guide the scope and integration of safety & work zone elements across all project stages. Collaborate with Roadway Design, Traffic Operations, Region Traffic Offices, Asset Management, and Construction teams to embed safety and asset sustainability strategies into project development. Coordinate with Transportation Management Centers (TMCs) and Region stakeholders to align solutions with real-time operational needs, and interface with consultants and contractors during project scoping, design, and implementation. Coordinate with regional teams to manage project schedules, align safety objectives, implement work zone strategies, advance mobility initiatives, and represent TDOT at public meetings.

Assist in developing and reviewing safety & work zone plans and deliverables; conduct traffic and safety studies to analyze crash patterns and congestion issues; and support targeted corridor safety improvements. Collaborate with cross-disciplinary teams to proactively address risks such as utility conflicts, ROW constraints, and work zone limitations, recommending context-sensitive alternatives to enhance safety, mobility, and operational efficiency. Oversee lane closures, detour routing, and temporary traffic control plans in alignment with TDOT's Work Zone Safety & Mobility Manual and provide technical guidance to ensure work zone configurations minimize risks to workers and the traveling public. Support data-driven decision-making by implementing and managing performance dashboards, analytics, and incident tracking systems, while applying asset management principles to establish and monitor key performance indicators (KPIs) related to safety effectiveness, delay, and compliance to extend the lifecycle and optimize the performance of safety and work zone infrastructure assets.

Integrate Quality Management into all deliverables to proactively address plan errors, prevent ROW delays, and reduce contractor claims while resolving comments from Quality Control reviews and ensuring compliance with Quality Management Guidelines for Traffic Design and Operations. This includes safeguarding network performance, identifying operational and maintenance concerns post-deployment, and mitigating construction-related risks. Ensure that QA/QC initiatives for safety & work zone elements align with established standards, including the Strategic Highway Safety Plan, MUTCD, and TDOT guidelines. Assist with developing and reviewing accurate safety & work zone cost estimates to maintain budget alignment and minimize scope changes.

Stay current on national best practices and assist in evaluating and recommending emerging work zone safety technologies, such as automated flagging devices, intrusion alert systems, and vehicle-to-infrastructure communication tools. Champion innovative approaches in predictive safety analysis, project staging, and accelerated construction phasing that improve safety outcomes and minimize public risk. Support the implementation of complex work zone scenarios by addressing legislative requirements and local operational safety concerns, while collaborating with Traffic Operations to incorporate context-sensitive safety features and traffic control strategies. Promote continuous improvement by tracking performance metrics that drive the evolution of TDOT's traffic design program, software, and systems to meet modern safety and operational needs. Contribute to the planning and deployment of advanced safety and mobility technologies such as dynamic signage, queue warning systems, and intelligent work zones ensuring alignment with TDOT standards and enabling the integration of emerging innovations like connected vehicles, AI, drones, and real-time vehicle probe data analytics across TDOT's transportation network.

Provide exceptional customer service to both internal and external customers by mentoring and providing technical guidance related to traffic 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 with evolving design codes, standards, and federal regulations such as FHWA 23 CFR 630 Subpart K and MUTCD revisions, while actively supporting the implementation of policies and procedures that enhance safety and work zone traffic design across TDOT's network. Research national best practices and participate in peer exchanges to identify innovative technologies and methodologies that improve traffic throughput, reliability, and safety. Assist with the preparation of technical memoranda, review reports, and design decision documentation, and coordinate with Communications Offices, Region staff, and public stakeholders to communicate work zone impacts

for high-profile projects. Contribute to the maintaining TDOT's Work Zone Design Manual and standards to ensure TDOT remains responsive to innovative emerging trends and regulatory updates.

Coordinate and mitigate potential areas of risk with Project Teams, Asset Management, Region Construction, Region Maintenance, and Traffic Operations throughout the project delivery process. Assist in ensuring safety & work zone deliverables are consistent, predictable, and repeatable to maintain consistently high levels of achievement, mitigate risk, and establish a track record of success by assisting and supporting the implementation of statewide policy, data collection, specifications, and direction. Utilize best practices and TDOT policy for the incorporation of maintenance and operation of work zone elements, including access to acquired knowledge across the Regions. Monitor the effectiveness of implemented risk mitigation strategies and provide additional recommendations as needed.

Additional Job Responsibilities for the Transportation Engineering Specialist 4 include:

Coordinate with the TDOT Technical Training Director and assist in the development and presentation of training that addresses safety & work zone elements, including acquired knowledge, risk management, TDOT performance metrics, governing rules and processes, reporting procedures, and emerging technologies related to safety & work zone design. These efforts improve team performance, creating a stronger understanding of the safety & work zone elements, inspiring new ideas, mentoring staff, and developing skills.

Assist Project Teams by evaluating complex safety & work zone studies, planning, and designs to determine potential incompatibility with other technical discipline requirements. Break down complex issues, including the identification of causes and their cause-and-effect relationships.

Assist and support with developing Scope of Services documents for consultant safety & work zone studies and design services. Assist and support in the development of a Consultant Acquisition Plan (CAP) for Region Traffic Operations services 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.

Verify compliance with the Quality Management Guidelines for safety & work zone elements by ensuring the performance of the transportation network is safeguarded, operational and maintenance concerns are addressed, and construction delays and contractor claims are mitigated. Assist the Quality Teams by conducting reviews in alignment with the PDN and TDOT's Quality Assurance Guidelines while identifying potential constructability and maintenance concerns in proposed designs. Perform quality control reviews of safety & work zone design elements, proactively addressing plan errors and constructability issues. Provide recommendations to mitigate risks and ensure that designs align with Asset Management goals, the Scope of Work, TDOT standards, and federal and state policies, ensuring all project-specific requirements are met.

Qualifications

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

Transportation Engineering Specialist 3:

- Bachelor's Degree in Engineering
- 2 Years of demonstrated competency in developing and/or designing transportation projects

OR

- Master's Degree in Engineering

- 1 year of demonstrated competency in developing and/or designing transportation projects

Transportation Engineering Specialist 4:

- Bachelor's Degree in Engineering
- 3 years of demonstrated competency in developing and/or designing transportation projects

OR

- Master's Degree in Engineering
- 2 years of demonstrated competency in developing and/or designing transportation projects

Ideal Candidate

The Projects Transportation Engineering Specialist 3 and 4 has a proven track record in traffic engineering safety and work zone experience, fostering collaboration and ensuring the successful execution of both simple and complex projects. Committed to public safety, they serve as strong communicators who bridge the gap between technical experts and stakeholders while mentoring and supporting team members in their growth and development. As a mobility leader, they are passionate about improving safety, reducing congestion, and enhancing travel reliability. Detail-oriented and adept at balancing multiple priorities, they apply problem-solving skills and industry best practices to assess challenges and implement solutions that improve project outcomes. Through effective communication, training, and mentorship, they make complex concepts understandable, working collaboratively with internal and external stakeholders to drive TDOT's mission forward.