

## 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.



### **Statewide Work Zone Transportation Engineer**

Traffic Design Division – Safety and Work Zone Section

Nashville, TN

\$118,500 annually

#### **Job Overview**

The Statewide Work Zone Engineer is a statewide transportation engineer position that will manage all aspects of TDOT's traffic design work zone processes and systems as part of a Project Team directly responsible for delivering projects for all phases of the Project Delivery Network (PDN) in accordance with the project's scope, budget, and risk, and the TDOT Strategic Plan. These projects will range in complexity and risk from simple to highly complex. The work zone role requires collaboration with multiple TDOT Divisions, project team members, contractors, consultants, and other external stakeholders. It 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.

The Statewide Work Zone Engineer ensures Department policies, technical guidance, procedures, software, and systems-related work zones are current and accurate for incorporation into the project delivery process. Assists in implementing the Quality Assurance Program as part of the State Traffic Design Division's activities to reduce errors, delays, and contractor claims. This position provides uniform work zone design practices for TDOT Design Teams, local agencies, and consultant personnel preparing traffic control plans. The Statewide Work Zone Engineer assists with monitoring and managing the scope, schedule, and budgets of all work zone projects and working with the Project Management Division to make the required adjustments as necessary to ensure that the work completed is in alignment with the Department's Asset Management and Strategic goals.

#### **Essential Job Responsibilities**

Serve on Project Teams as part of a matrix organization as the work zone Subject Matter Expert (SME) that supports transportation design elements; developing the project vision in alignment with department Asset Management objectives and funding allocation; defining critical work zone goals and intended outcomes for the scope, permitting, schedule, budget, and quality in coordination with the Project Manager; applying context-sensitive design strategies; implementing innovative concepts; proactively assessing risk factors; oversight and review of the Traffic Management Plans (TMP's); and, for Project Teams associated with Alternative Delivery Contracts, forecasting the cause and effect of implementing Alternative Technical Concepts related to Request for Proposals (RFPs), project cost, and construction timing. Optimize the Project Team's ability to mitigate risk and address unanticipated challenges while meeting the project's scope, schedule, and budget.

Participate in the development of work zone systems plan for Transportation Systems Management and Operations (TSMO) strategies including the application of emerging technologies.

Integrate Quality Management into all deliverables in compliance with Asset Management's business objectives, Manual on Uniform Traffic Control Devices (MUTCD), Standards, policies, procedures and alignment with the PDN with the purpose of reducing plan errors, right-of-way delays, construction delays, and contractor claims; assist Project Teams by providing reviews as part of TDOT's Quality Assurance Program.

Manage and take ownership of change, articulate your vision for TDOT's work zone activities, communicate effectively, remain transparent, and hold yourself accountable to develop, maintain, and grow TDOT's work zone estimating capabilities, data, software, and systems.

Routinely identify, document, and effectively collaborate with HQ and Asset Management on acquired knowledge that includes maximizing project successes, acknowledging national best practices, and avoiding past errors. Partner with industry, FHWA, and internal staff to lead a work zone process improvement team. This team will be responsible for improving the delivery and critical issues of concern needed to ensure safety for the public, workers, and staff. Assist in the development of program strategies and policy recommendations, resolve major field issues, and lead efforts that continually improve program procedures, guidance documents, specifications, standards, special provisions, project delivery mythologies, and techniques.

Assist in the development of Consultant Acquisition Plans (CAP) and oversight of external partners by serving on selection committees for professional engineering services as part of the Brooks Act. Provide support in the development of the Request for Proposal (RFP), attending project-specific marketing meetings, determining scoring criteria, participating in project information sessions, serving as a scorer as part of the consultant acquisition process, and attending de-briefs with consultants. Conduct independent reviews of the engineer's cost estimate at project milestones during pre-construction activities and provide the final cost estimate that encompasses relevant factors related to the scope of a project, the cost of resources, and national and global market trends.

Remain current on national best practices related to the placement of safety and work zones within TDOT's Traffic Design Division as it relates to safety improvements and design recommendations; assist with the development of legislation and regulations that seek to increase safety, inspire innovation, and improve mobility for TDOT employees, contractors, and the traveling public; and integrate safety considerations and statutory and regulatory requirements into TDOT's guidance documents, processes, and procedures. Participate in regional/national working groups and training opportunities related to work zones.

Provide exceptional customer service to internal and external customers, exercising effective listening skills, providing prompt responses, maintaining complete and accurate documentation, coordinating with other disciplines as part of a matrix organization, and communicating effectively.

Assist in the development and delivery of work zone training, mentoring, and technical guidance to TDOT and external stakeholders that addresses acquired knowledge, risk management, technical design elements, and emerging technologies related to work zones for the purpose of improving team performance, creating a stronger understanding of the transportation industry, inspiring new ideas, and developing skills. Administer and manage TDOT's estimating program and software.

Assist in ensuring the Safety and Work Zone Section is consistent, predictable, and repeatable to provide consistently high levels of achievement, mitigation of risk, and an established track record of success.

### **Qualifications**

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

### **Qualifications**

- Licensed Professional Engineer (PE)

### **Ideal Candidate**

The Statewide Work Zone Engineer is committed to safeguarding work zones and the safety of all road users. The Statewide Work Zone Engineer's collaborative nature shines through as they work seamlessly with diverse teams to ensure that work zones prioritize safety above all else. The Statewide Work Zone Engineer's quality decision-making ensures the well-being of both workers and commuters. They are a team player and are poised to make a lasting and positive impact on the statewide transportation infrastructure. They are passionate advocates for the vital role of transportation safety.

**General Work Conditions**

Yes / No

- Is this position generally performed in an office environment?
- Will work for this position be frequently performed in a field environment and may sometimes require working in inclement weather, working in a construction site, being exposed to heavy construction equipment, and doing extensive walking?
- Is this position a combination of office and field environment?
- Is an alternative work schedule including work from home eligible for this position? If yes, how many days will it be work from home and how many days in office?  
  - Days from home: up to 2 days
  - Days from office: up to 3 days
- Is this position required to work under exposure to inclement weather and environmental conditions?
- Will this position require travel including overnight?

Physical Requirements	<i>Select the frequency of each physical activity. The activity must be related to the position and consistent with business necessity.</i>			
Physical Activity Required	None	Occasional (less than 1/3)	Frequent (1/3 to 2/3)	Regular (more than 2/3)
Standing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bending	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reaching/stretching overhead	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crouching or stooping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Balancing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pushing or pulling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repetitive use of hands/arms	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Repetitive use of legs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grasping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Lifting – check the frequency for each weight range below. If the job doesn’t require any lifting activities, check “None” on each line below.</b>				
Up to 20 pounds	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21 - 50 pounds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51 – 75 pounds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Carrying - check the frequency for each weight range below. If the job doesn’t require any carrying activities, check “None” on each line below.</b>				
Up to 20 pounds	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21 - 50 pounds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51 - 75 pounds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eye/hand coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speaking	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>Hearing</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Seeing (with correction)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Close vision</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Distance vision</b> - ability to see objects clearly from a distance, usually from 20 feet or more.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Color vision/perception</b> - ability to distinguish colors.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Peripheral vision</b> - what is seen on the side by the eye when looking straight ahead.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Depth perception</b> - ability to judge the distance of objects and the spatial relationship of objects at different distances.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Position Description Team Members</b>	<i>Provide a list of SMEs who helped develop the position description. Include name and work area.</i>
Andy Barlow	TDOT – Director Traffic Design
Steve Cook	RIC
Mark Geib	RIC