Missouri Department of Transportation Job Description

Job Title: Structural Development and Support Engineer

Title Code: R05831

Salary Grade: 13

Exemption Status: Exempt

Supervisory Responsibilities: Full Supervision

District/Division: Central Office – Bridge

Effective Date: 10-16-2025

Replaces (Effective Date): 01-16-2025

General Summary

The structural development and support engineer is responsible for developing and updating the department's Bridge Design Manual, structural standard plans, and computer software to conform to current American Association of State Highway and Transportation Officials (AASHTO) guidelines. Responsibilities are performed under general supervision.

Minimum/Required Qualifications

- Bachelor's degree in civil or structural engineering from an ABET-accredited college or university curriculum.
- Licensed as a Professional Engineer in the State of Missouri.
- Nine years of experience in civil engineering with a proficiency in structural design and/or engineering applications programming. An advanced degree in civil engineering with an emphasis in structures or engineering applications programming may be substituted for a maximum of two years of experience.

Special Working Conditions/Job Characteristics

- Job requires occasional, statewide and/or national, overnight travel.
- This title requires advanced accreditation or licensure which is only available to holders of specific postsecondary degrees.

Examples of Work

1. Implements the Federally mandated American Association of State Highway and Transportation Officials' (AASHTO) Load and Resistance Factor Design (LRFD) code by developing examples, spreadsheets and flowcharts and posting information to the LRFD website for in-house use.

2. Researches, develops, recommends and maintains new design and detailing procedures for the department's bridge design manuals, drawings and computer software; writes and maintains the department's Bridge LRFD manual.

3. Develops and maintains the Standard Library, Structural Cell Library and Standard Plans.

4. Disseminates current structural design policy information within and outside the department by providing hard copies internally and posting via computer and the internet for external use.

5. Maintains and develops computer program manuals; researches, develops and analyzes LRFD-compatible software.

6. Recommends code revisions, reviews annual AASHTO agenda items and advises department management regarding recommended voting for AASHTO code revisions.

7. Implements AASHTO highway signs, luminaries and traffic signal code and reviews design of all structures under revised code.

8. Assists the Traffic Division in review of vendor submittals for pre-qualified listings for sign and light poles; reviews submittals and oversees and maintains files for the pre-qualification of new Mechanically Stabilized Earth (MSE) walls; manages the department's pre-qualified listing for MSE walls and manages posting the listing on the internet.

9. Reviews Signs and Structures that exceed limits shown on Standard Plans.

10. Performs supervisory responsibilities.

11. Performs other responsibilities as required or assigned.