

Missouri Department of Transportation

Code: R05834

Title: Structural Designer

Exemption Status: Non-Exempt

Grade: 7

Job Description

Effective Date	06-01-2025
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Replaces (Effective Date)	08-01-2024
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General Summary

The structural designer is responsible for making structural design computations, analysis, drawings, and sketches for the design of transportation related structures, such as routine bridges, retaining walls, and box culverts. Responsibilities are performed under moderate supervision.

Minimum/Required Qualifications

Bachelor's degree in civil or structural engineering from an ABET-accredited college or university curriculum.

Supervisory Responsibilities

None

Location

Central Office - Bridge

Special Working Conditions / Job Characteristics

A postsecondary degree is the best measure to ensure candidates possess required engineering knowledge, including in applied physics and mathematics, drafting, engineering processes and procedures, project management, industry ethical standards, and analyzing and modeling data.

Examples of Work

- (1) Performs structural design computations and analysis and sketches of routine bridges, retaining walls, and box culverts.
- (2) Performs structural evaluations for special permit or construction loadings.
- (3) Performs supporting calculations, reviews history files and updates manuals to keep engineering library updated.
- (4) Creates sketches by hand or using computer aided drafting and design applications to illustrate the structure design.
- (5) Rates bridges for load capacities and the federal bridge inventory as required by state statutes and national standards.

- (6) Attends project meetings and consults/advises all parties involved including department personnel, city, county, state, federal personnel and private consultants.
- (7) Evaluates and utilizes engineering software and develops comprehensive spreadsheets.
- (8) Performs other responsibilities as required or assigned.