

STATE OF MONTANA

JOB DESCRIPTION

Montana state government is an equal opportunity employer. The State shall, upon request, provide reasonable accommodations to otherwise qualified individuals with disabilities.

Job Title: Structural Asset Specialist

Position Number: 50072

Location: Helena, MT

Department: Transportation

Operations Area and Program: Asset Strategy, Operations & Maintenance / Asset Strategy Program

Section: Asset Strategy

Job Overview:

The Structural Asset Specialist position resides within the Asset Strategy Program at the Montana Department of Transportation and is responsible for advancing the department's management of bridge and culvert assets through data-driven decision-making and performance-based planning. This role serves as a central technical and coordination resource between the Bridge Bureau, Hydraulics Section, Districts, Maintenance, Fiscal, other project planning areas within MDT and external agencies, leading the development and improvement of data management strategies for MDT's bridge and culvert inventory, and leveraging the Bridge Management System and other asset tools to analyze condition, risk, and lifecycle costs. The specialist will coordinate cross-functional teams, external bridge owners (local public agencies) and work groups to resolve data and operational challenges, facilitate transparent project prioritization, support long-term system preservation, identify opportunities for process automation and technology enhancements, provide training and guidance to staff, and ensure compliance with federal and state asset management policies and performance targets. The position reports to the Asset Strategy Section Supervisor and does not directly supervise others.

Essential Functions (Major Duties or Responsibilities):

Project Oversight, Data Coordination & Technical Lead - 35%

- Develop, implement, and continuously improve data collection, management, and analytical strategies for Montana's bridge and culvert inventory in alignment with department priorities.
- Collaborate with bridge engineers, District program managers, maintenance, fiscal, planning staff, and external agencies to recommend resource allocation and project selection for structure preservation, rehabilitation, and replacement.

- Serve as a key liaison among various areas within MDT and external agencies to support project research, nomination, prioritization, and implementation, coordinating and communicating research needs, data issues, and analytical findings across agencies and external partners.
- Convene and facilitate work groups to resolve data, operational, and strategic issues affecting bridge and culvert assets, ensuring active collaboration and information exchange with stakeholders engaged in related research, data collection, or evaluation activities.
- Lead or support cross-functional teams to advance performance-based management of structures, integrating condition assessments, risk, and lifecycle cost analyses into programming decisions, and coordinating research and statistics related components with various MDT programs and external partners.
- Support the integration of bridge and culvert data into the agency's enterprise asset management strategies and plans by collaborating with Bridge Bureau staff and other stakeholders to ensure alignment with statewide performance and preservation objectives, assist in informing strategic investment decisions, and help maintain compliance with federal Transportation Asset Management Plan (TAMP) requirements.
- Perform analysis of bridge and culvert condition data, deterioration trends, and structural performance indicators to support planning, prioritization, and lifecycle management decisions.
- Become a subject matter expert in MDT's Bridge Management System, including data structure, parameters, and analytical tools, and generate and interpret reports, dashboards, and analytics to inform decision-making and reporting.
- Review relevant information to verify data completeness, consistency, and alignment with established standards integrating findings from research activities to produce comprehensive and defensible analytical recommendations.
- Assist Bridge Bureau engineers and project teams in evaluating conceptual preservation, rehabilitation, and replacement strategies by compiling cost information, summarizing feasibility considerations, and supporting development of lifecycle cost evaluations.
- Collaborate with Bridge Bureau engineering staff to validate structural data, and reconcile discrepancies in inspection and load rating information.
- Interpret materials testing results, environmental constraints, and site conditions as documented by engineering staff and field crews to ensure asset data accurately reflects factors affecting structural performance and project delivery.
- Support the review of project proposals, planned work scopes, and structure management actions for consistency with established standards, MDT guidance, and federally required structure management practices.

Data Management, Analysis, and Reporting - 25%

- Analyze asset datasets from multiple research or data collection efforts to identify priorities and share clear, actionable insights and produce well supported recommendations to agency leadership, the Bridge Bureau, and other stakeholders.
- Collaborate with Bridge Bureau engineering staff to validate structural data, and reconcile discrepancies in inspection and load rating information.
- Design and update asset data collection processes, statistical models, data management-related computations and scenario analyses, such as deterioration modeling,

service-life projections, and risk-based prioritization to support bridge and culvert lifecycle planning.

Process Improvement & Technology - 20%

- Identify opportunities for process automation, data integration, and technology upgrades to enhance bridge and culvert asset management.
- Work with IT and bridge system vendors to troubleshoot, test, and implement workflow and tool improvements, including developing or validating data collection configurations, analytic models, and automated routines that improve the accuracy and defensibility of structural asset analyses.
- Develop and deliver training and guidance materials to staff on data requirements, and asset management practices.
- Research and evaluate new technologies and practices, and represent MDT on technical research committees, advisory panels, collaborative projects, and interagency workgroups to promote uniform standards and share best practices.

Compliance & Best Practices - 5%

- Monitor and help ensure compliance with federal and MDT asset management policies, including reporting and performance targets for structures.
- Stay current on national best practices and regulatory requirements related to bridge and culvert asset management and integrate them into MDT's processes and strategies.

Other Duties - 15%

- Performs technical, administrative and other work on a variety of projects including integrating results of concurrent research or data collection projects to support comprehensive reporting and recommendations as assigned.

Supervision

The number of employees supervised is: 0

The position number for each supervised employee is: N/A

Physical and Environmental Demands:

- This position functions in a typical office environment.

Knowledge, Skills and Abilities (Behaviors):

- Establish productive, collaborative working relationships with co-workers, management, and customers.
- Align behavior with the needs and goals of the department.
- Visible, positive role model for others.
- Proactively engage in training and discussions to expand awareness of how the position supports the department's mission.
- Exercise sound judgment and request guidance from senior planners and supervisor.
- Understand and adhere to policies, procedures, rules, and laws that govern daily work

activities.

- Self-accountability for activities, decisions, successes, and failures.
- Creative and forward-thinking problem solver.
- Able to coordinate several activities at once.

Minimum Qualifications (Education and Experience):

BA/BS in Structural/Civil/Construction Engineering, Transportation Planning, Mathematics, Statistics, Computer Technology, Data Science or a related field, and two (2) years of related work experience.

Alternative qualifications include: Any combination of related work experience and education equivalent to the minimum qualifications.

Special Requirements:

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Fingerprint check

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Valid driver's license

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Background check

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Other; Describe

MFPE Union Code 035

☐

Safety Responsibilities

The specific statements shown in each section of this description are not intended to be all inclusive. They represent typical elements and criteria considered necessary to perform the job successfully.

Signatures

My signature below indicates the statements in the job description are accurate and complete.

Immediate Supervisor	Title	Date
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Administrative Review	Title	Date
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My signature below indicates that I have read this job description.

Employee	Title	Date
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Human Resources Review**Job Code Title: Research Analyst 3****Job Code Number: C23013**

My signature below indicates that Human Resources has reviewed this job description for completeness and has made the following determinations:

☐ FLSA Exempt☒ FLSA Non-Exempt☐ Telework Available☒ Telework Not Available☐ Classification Complete☐ Organizational Chart attached**Human Resources:**

Signature**Title****Date**