Missouri Department of Transportation Job Description

Job Title: Senior Geographic Information System Specialist

Title Code: R04078

Salary Grade: 9

Exemption Status: Non-Exempt

Supervisory Responsibilities: None

District/Division: Central Office – Transportation Planning, Design

Effective Date: 12-16-2024

Replaces (Effective Date): 12-01-2024

General Summary

The senior geographic information system specialist performs varied and complex activities in the design, implementation, and support of geographic information systems (GIS) applications and databases. Responsibilities are performed under general supervision.

Minimum/Required Qualifications

- Bachelor's Degree: Geography, Computer Science, Surveying, Geographic Information Systems, or related field, **AND** four years of experience working with geographic information systems, surveying, or computer aided design and drafting, **OR**

- Eight years of experience working with geographic information systems, surveying or computer aided design and drafting.

Special Working Conditions/Job Characteristics

- Job requires occasional, statewide, overnight travel.

Examples of Work

1. Creates or integrates updates and edits of the state master roads dataset, including route marking changes, construction changes, and error corrections using a variety of data sources including design plans, intersection log book, aerial photography and other existing maps; edits dataset by manipulating the spatial coordinates and relationships of geographic features (points, lines, and polygons) and associated attributes.

2. Provides technical assistance to department personnel in the capabilities and implementation of GIS and transportation management systems (TMS); provides technical support for external end users.

3. Writes computer programs to meet specific GIS and TMS needs, improve the data entry process for end users, and improve the efficiency of GIS software; runs programs to ensure edits to GIS data are accurate.

4. Provides customer service and responds to special requests, including troubleshooting and assisting users with global positioning system and program problems, research and data collection for special requests, and presentations as necessary.

5. Develops, tests, manages, and integrates GIS applications designed for specific purposes or tasks.

6. Extracts graphical data from the map library and processes the data for GIS applications.

7. Conducts high-resolution global positioning systems data collection of multiple features utilizing speech enabled technology.

8. Maintains statewide digital roadway networks.

9. Create, edit, and update files used to develop state highway maps, district maps, county maps, and a variety of other maps used both internally and externally.

10. Operates and maintains the department's statewide real-time global navigation satellite system (GNSS) network, repairs and replaces equipment.

11. Administers contracts for GNSS network users.

12. Manages the Design Division's geospatial data, including Light Detection and Ranging (LiDAR), aerial photography and survey, using ESRI Image Server and Bentley ProjectWide.

13. Performs the planning and development of aerial acquisition projects. Develops contract documents and provides quality assurance for contract deliverables including aerial photography, control surveys and design grade LiDAR.

14. Provides training and technical support to end users.

15. Performs other responsibilities as required or assigned.