

SENIOR CIVIL ENGINEER

FUNCTION OF THE JOB

Under direction, to perform advanced level professional engineering work in the development, planning, design, construction, and maintenance of transportation or soil and water conservation facilities; to function as a project manager for these projects, performs other duties as required.

CHARACTERISTIC DUTIES AND RESPONSIBILITIES

1. Performs advanced engineering work in one of the following engineering specialties: civil, transportation, traffic, or environmental.
2. Acts as a project manager by coordinating and supervising large and complex traffic, transportation, soil, and water conservation design, construction, and maintenance projects.
3. Develops specifications, cost estimates, RFPs, and bid documents for large and complex civil engineering design and construction projects; participates in the evaluation and selection of consultants and contractors.
4. Prepares and administers contracts including ensuring that all specifications are met, resolving disputes, managing consultant field personnel, inspecting and approving work, and approving payments and change orders.
5. Prepares and reviews various comprehensive technical engineering reports, plans, impact statements, plats, and surveys.
6. Performs complex engineering computations and usage of office automation systems including: computer assisted surveying, drafting and design systems (CADD), computer mapping geographic information systems (GIS) and other automated engineering applications.
7. Administers the Countywide bridge inspection, construction site erosion ordinance, or stormwater related practices including state issued municipal separate storm sewer system permit requirements; conducts site inspections; reviews proposed project designs; makes recommendations regarding maintenance and repair.
8. Manages and reviews traffic engineering and safety studies; gathers and analyzes a variety of traffic data; identifies traffic safety problems; serves on County Safety Commission; recommends solutions to reduce the number and severity of accidents on county roads; prepares annual highway system Performance Benchmarking Report.
9. Determines in accordance with federal, state, and MUTCD standards appropriate sign placement and signal design; supervises field crews for the installation of roadway signs, maintenance of traffic signals and placement of pavement markings.
10. Acts as a project manager for the real estate acquisition and relocation program including hiring and managing of consultants; resolves appraisals, negotiations, design, and other property management issues; ensures proper legal documentation and compliance with the appropriate statutes.
11. Determines, directs, and evaluates appropriate inventory surveys and makes recommendations for any maintenance or repair of civil engineering facilities.
12. Manages assigned elements of the department's computerized highway asset management system.
13. Conducts public information meetings and hearings, and responds to and resolves agency, public and media concerns regarding County transportation, environmental plans and projects, or traffic or safety related issues.
14. Provides technical assistance and discusses proposed projects with municipal personnel, other County departments, and outside agencies to identify and resolve concerns regarding proposed projects.
15. Supervises the work of technical engineering staff on design and construction projects.
16. Keeps accurate records and prepares complex detailed documents, reports, and ordinances.
17. Prepares cost estimates and concept definition reports for projects included in the capital plan.
18. Establishes and maintains effective public and working relationships with consultants, contractors,

- staff, municipal and State agencies, other County departments, and the public.
19. Maintains prompt, predictable, and regular attendance.
 20. Performs other duties as required.

QUALIFICATIONS

Essential Knowledge and Abilities

1. Comprehensive knowledge of engineering theories, principles, and practices applied in the design, construction, maintenance, and repair of highways, bridges, and other transportation structures including Wisconsin DOT and AASHTO standards, traffic engineering or biological principles and practices relating to watershed protection, stormwater management, soil erosion control, nonmetallic mining restoration, flood control, farm runoff management, non-point source water, pollution abatement, and management of natural resources.
2. Comprehensive knowledge of federal, state, and local statutes and regulations governing highway design and construction, access, traffic engineering, land drainage, water resources, subdivision platting, and land acquisition.
3. Comprehensive knowledge of environmental issues including erosion control, hazardous waste, wetland mitigation, and flood plain, wildlife, and agricultural impacts.
4. Considerable knowledge of right-of-way plat preparation and the land acquisition process.
5. Considerable knowledge of project management including project scoping, scheduling, cost estimating, contract negotiations, contract law, and project budgeting.
6. Working knowledge of computerized engineering software, and database, internet access, spreadsheet, and word processing programs.
7. Ability to utilize word processing, database, and spreadsheet programs.
8. Ability to manage and coordinate multiple, large complex sized projects.
9. Ability to plan, assign, review, and supervise operations, and direct the work of others.
10. Ability to research, analyze, and resolve engineering, scheduling, project, and contract issues.
11. Ability to research, analyze, and evaluate comprehensive data, plans, reports and designs; and to make appropriate recommendations.
12. Ability to make complex mathematical computations, and to use surveying, drafting, and design technology.
13. Ability to keep accurate and detailed records and field notes and to prepare and present detailed written and verbal reports and presentations.
14. Ability to establish and maintain effective public and working relationships with consultants, contractors, staff, municipal and State agencies, other County departments, and the public.
15. Ability to effectively interact with sensitivity with persons from diverse cultural, socioeconomic, educational, racial, ethnic, and professional backgrounds, and persons of all ages and lifestyles.

Training and Experience

1. Graduation from a recognized college or university with a bachelor's degree in civil or environmental engineering or a closely related field.
2. Four (4) years of responsible, professional civil engineering work experience including the planning, design, and construction of highways and other transportation or soil and water conservation facilities, or a closely related field.
3. Registration as a Professional Engineer in the State of Wisconsin.