



Code: 5611

Family: Technical Engineering

Service: Operation and Construction Service

Group: Engineering, Designing and Structural Group

Series: Civil Engineering

CLASS TITLE: MANAGING ENGINEER – WATER MANAGEMENT

CHARACTERISTICS OF THE CLASS

Under direction, functions as a senior level manager, reporting to the Deputy Commissioner of the Bureau of Engineering Services. Manages the Bureau's capital improvement plan, directing the planning, design and monitoring of construction projects for water or sewer main construction and restoration work, and performs related duties as required

ESSENTIAL DUTIES

- Functions as the Department of Water Management's lead planner for either sewer system or water main improvements, coordinating the work of engineers and other professional staff performing planning, design or construction management functions
- Directs staff of engineers engaged in the design, planning and preparation of specifications and other construction documents for water or sewer main new construction or restoration work projects
- Provides design review of projects, and approves project documents including project scope and design criteria, engineering specifications, cost estimates, and construction time lines
- Confers with management in selecting, scheduling and prioritizing capital improvement projects based on funding resources, critical infrastructure needs, existing conditions of mains and related factors
- Provides technical expertise and makes recommendations to incorporate and implement green infrastructure improvements to better manage stormwater
- Evaluates requests for street vacations and proposed subdivision developments to determine and assess impact on water distribution system including expansion of system
- Directs planning activities with hydrologic and hydraulic engineering staff and identifies sewer projects that can resolve or ease flooding issues in various areas of the City
- Represents the Department of Water Management with state and local agencies on developing best practices for green initiatives and storm water management
- Directs the work of engineering staff conducting field studies to determine overall hydraulic performance of the water distribution system and ensure proper system operations
- Reviews contract bids and proposals and participates in the selection of contractors for construction projects involving the replacement and rehabilitation of water or sewer main construction, replacement or rehabilitation
- Directs staff monitoring construction projects, inspecting and ensuring work complies with engineering specifications, installations meet departmental standards, and that projects are completed on schedule and within budget
- Maintains and uses department's water distribution system hydraulic model to provide analysis of system operation needs, recommend proper sizing of service area feeder main, and evaluate operational effects of main shutdowns
- Uses GIS software to manage utility coordination, ensuring efficient coordination between agencies working in the public way to avoid scheduling conflicts and minimize digging and restoration of the public way

NOTE: *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

MINIMUM QUALIFICATIONS

Education, Training, and Experience

Graduation from an accredited college or university with a Bachelor's degree in Civil Engineering, Mechanical Engineering, Structural Engineering or a directly related degree, plus four years of supervisory experience in the planning, design and construction management of engineering projects, or an equivalent combination of training and experience, provided the minimum degree requirement is met.

Licensure, Certification, or Other Qualifications

- Registration as a Professional Engineer (R.P.E.) is required. At the time of employment, positions must have obtained Registration as a Professional Engineer (R.P.E.) in the State of Illinois.
- A valid State of Illinois driver's license

WORKING CONDITIONS

- General office environment
- Exposure to outdoor weather conditions

EQUIPMENT

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer, scanner)
- Safety equipment

PHYSICAL REQUIREMENTS

- Ability to inspect construction sites

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge

Comprehensive knowledge of:

- *project management methods, practices, and procedures
- *engineering design, construction and maintenance principles and practices
- *principles of capital improvement program budgeting, cost estimation, and administration
- *advanced mathematical principles
- *modern construction methods, materials and equipment
- *infrastructure systems, project costing, monitoring and reporting techniques

Considerable knowledge of:

- *applicable computer software packages and applications
- *policy development and implementation methods, practices, and procedures
- *applicable local, state and federal regulations and requirements
- *supervisory methods, practices, and procedures

Knowledge of applicable City and department policies, procedures, rules, and regulations

Skills

- *ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making
- *ACTIVE LISTENING - Give full attention to what other people are saying, taking time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- *CRITICAL THINKING - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems
- *MONITORING - Monitor and assess performance of one's self, other individuals, or organizations to make improvements or take corrective action
- *MANAGEMENT OF MATERIAL RESOURCES - Obtain and see to the appropriate use of equipment, facilities, and materials needed to do certain work
- *MANAGEMENT OF PERSONNEL RESOURCES - Motivate, develop, and direct people as they work and identify the best people for the job
- *JUDGEMENT AND DECISION MAKING - Consider the relative costs and benefits of potential actions to choose the most appropriate one
- *SYSTEMS EVALUATION - Identify measures or indicators of system performance and the actions needed to improve or correct performance relative to the goals of the system

Abilities

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- WRITE - Communicate information and ideas in writing so others will understand
- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense
- MAKE SENSE OF INFORMATION - Quickly make sense of, combine, and organize information into meaningful patterns

Other Work Requirements

- PERSISTENCE - Persist in the face of obstacles on the job
- LEADERSHIP - Demonstrate willingness to lead, take charge, and offer opinions and direction
- ADAPTABILITY/FLEXIBILITY - Be open to change (positive or negative) and to considerable variety in the workplace
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- ATTENTION TO DETAIL - Pay careful attention to detail and thoroughness in completing work
- INNOVATION - Think creatively about alternatives to come up with new ideas for and answers to work-related problems

- **ANALYTICAL THINKING** - Analyze information and using logic to address work or job issues and problems
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All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

* May be required at entry.

City of Chicago
Department of Human Resources
March, 2012

Minimum Quals revised: April, 2013