CLASS TITLE: ASSISTANT ENGINEER OF WATER PUMPING

CHARACTERISTICS OF THE CLASS

Under direction, assists in managing the personnel and operations of the City's pumping stations supplying water to the City of Chicago and various municipalities, and performs related duties as required

ESSENTIAL DUTIES

- Assists in directing unit supervisors in overseeing professional and skilled trades personnel in operating, maintaining, and repairing water pumping equipment and facilities
- Inspects station operations and makes staffing, equipment, and procedural changes to ensure operational efficiency and effectiveness
- Assists in developing work standards and evaluating supervisory performance
- Coordinates the inspection of water pumping equipment malfunctions and approves repairs
- Assists in developing specifications for the acquisition and installation of new water pumping equipment
- Assists in coordinating the contracting, purchase, installation, and testing of new and refurbished pumping equipment
- Assists in reviewing design drawings for new pumping station equipment or the refurbishment of existing equipment
- Supervises the review of contract documents and engineering calculations prepared by contractors to ensure compliance with project specifications and sound engineering principles
- Assists in determining and prioritizing facility and equipment repair, replacement, and maintenance schedules
- Schedules and coordinates construction, installation, repair, and maintenance work to minimize interruption of normal operations
- Supervises or personally analyzes and resolves complex equipment engineering problems
- Coordinates and monitors projects assigned to staff and/or consultant engineers to ensure compliance with project specifications, schedules, and budgets
- Approves final payments to consultants and contractors for completed work
- Coordinates and participates in the development and implementation of safety programs and training for plant personnel
- Responds to emergencies involving water pumping operations
- Assists in directing the maintenance of detailed records on equipment and power failures and the preparation of operational reports
- Assists in preparing and administering the annual budget for pumping operations
- Consults with other departments and agencies to coordinate work affecting pumping operations
- Researches new mechanical equipment and processes to improve water pumping operations
- Conducts tours of water pumping facilities for visiting engineers and dignitaries
- Provides technical information on water pumping operations at regulatory proceedings
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 Electrical or Mechanical Engineering or a directly related field of engineering, plus six years of professional engineering work experience, of which four years is in a supervisory role requiring experience in the design, operation, and maintenance of water pumping stations; or an equivalent combination of education, training and experience provided that 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.

WORKING CONDITIONS
- General office environment
- Exposure to loud noise
- Exposure to hazardous conditions (e.g., heavy machinery)

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)
- Personal protective equipment (e.g., hard hat, shoes, glasses, gloves)
- Scientific calculators

PHYSICAL REQUIREMENTS
- Ability to climb staircases, ladders, and/or step stools

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge
Considerable knowledge of:
- *applicable mechanical engineering theories, principles, methods, and procedures
- *mechanical system installation and maintenance methods
- *use of mechanical, electrical and hydraulic equipment for water pumping station operations
- *procedures and methods for monitoring and maintaining equipment and instruments

Moderate knowledge of:
- *management and supervisory methods, practices, and procedures

Some knowledge of:
- budgetary preparation and planning
• contract administration procedures
• project costing, monitoring and reporting methods, practices, and procedures
• procurement processes (e.g., purchase of equipment, supplies, materials)
• water treatment and purification operations
• *safety principles, methods, practices, and procedures
• applicable electrical engineering methods, theories, principles, and procedures
• applicable federal, state, and local laws, regulations, and guidelines

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

Skills
• *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
• *MATHEMATICS - Use mathematics to solve problems
• *MONITORING - Monitor and assess performance of one’s self, other individuals, or organizations to make improvements or take corrective action
• *COMPLEX PROBLEM SOLVING - Identify complex problems and review related information to develop and evaluate options and implement solutions
• *MANAGEMENT OF FINANCIAL RESOURCES - Determine how money will be spent to get the work done and account for these expenditures
• *JUDGEMENT AND DECISION MAKING - Consider the relative costs and benefits of potential actions to choose the most appropriate one
• *SYSTEMS ANALYSIS - Determine how a system should work and how changes in conditions, operations, and the environment will affect outcomes
• *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
• *EQUIPMENT MAINTENANCE - Perform routine maintenance on equipment and determine when and what kind of maintenance is needed
• *TROUBLESHOOTING - Determine causes of operating errors and decide what to do about it

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
• REASON MATHEMATICALLY - Choose the right mathematical methods or formulas to solve a problem
• MAKE SENSE OF INFORMATION - Quickly make sense of, combine, and organize information into meaningful patterns
• REACH CONCLUSIONS - Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events)

**Other Work Requirements**

• INITIATIVE - Demonstrate willingness to take on job challenges
• LEADERSHIP - Demonstrate willingness to lead, take charge, and offer opinions and direction
• COOPERATION - Be pleasant with others on the job and display a good-natured, cooperative attitude
• 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 tasks
• ANALYTICAL THINKING - Analyze information and using logic to address work or job issues and problems

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
May, 2016