

Chief Electrician – Water

Reports to: Superintendent of Mechanical Maintenance

Supervisory: Yes

FLSA Status: Non-exempt

Grade/Union: Lodge 1000

Department: Water Department

Summary: This is supervisory level work in the assigning, monitoring, and performing of complex electrical work performed at the journeyman level in the installation, maintenance, testing, and repair of electrical, electronic, and Supervisory control and data acquisition (SCADA) equipment associated with water treatment plant, lift stations, lighting, and facilities, as well as traffic signals, street and ornamental lighting and wiring, civil defense systems, and other municipal electrical systems and equipment.

Position includes the performance of skilled tasks on a variety of installations maintained by the city and also involves the direction and supervision of a small staff of electricians. Work is performed under the general supervision of the Superintendent of Mechanical Maintenance with considerable technical independence and is subject to incidental instructions on new work and installation assignments. Work is reviewed through discussions on specific problems, incidental inspections of completed work, work reports prepared, and the achievement of desired results.

Essential Functions:

Other duties may be assigned. (This list may not include all of the tasks and/or knowledge which may be expected of the employee, nor does it cover all of the specific duties which may be required).

Organizes, coordinates, assigns, and supervises personnel performing installation, maintenance, testing, and repair work; inspects jobs under way and upon completion; advises on work problems; inspects jobs upon completion; prepares basic work reports.

Performs duties or participates with the maintenance staff when project assignments require.

Installs, programs, maintains, troubleshoots, documents and repairs a wide variety of industrial instrumentation and equipment, which include computer systems, electronic monitoring, metering, controlling, signaling devices, PLC control systems, VFD control systems, SCADA system controls, fiber optic and Ethernet systems used in production, treatment and distribution of water, lift stations, lighting, drives, motors, facilities, etc.

Orders repairs, parts and tools; maintains a limited inventory of parts; maintains an equipment and parts catalog file.

Responsible for crew safety ensuring that proper on-the-job safety procedures are followed and safety equipment is consistently and properly used. Supervises and instructs on proper procedures, equipment and documentation of safety practices.

Prepares standard job reports; provides management with specific data for daily log reports; lists materials used, work performed, and man hours devoted to respective jobs.

Identify and resolve all regular and extraordinary maintenance and repairs required to ensure continuous and dependable water production and pumping for both regular and peak demand.

Coordinates water plant maintenance activities with plant mechanical maintenance staff to minimize disruption of plant production.

Use maintenance management software to assign work and keep records of maintenance activities and equipment.

Estimates cost and time for all aspects of maintenance, repair and construction work.

Researches and assists with the design of new control systems; automates old systems.

Performs manual labor tasks associated with maintenance and repair of the systems; installs equipment and components, pulls wires, removes and replaces parts, prepares the work site; and cleans up after work is completed.

Performs general electrical maintenance on traffic signals; installs, programs, and trouble-shoots micro-processor based control equipment and terminal facilities; repairs and relamps signal heads.

Performs general electrical maintenance on street and ornamental lighting systems; repairs underground cables, relamps units.

Maintains civil defense warning sirens; trouble shoots controls; makes periodic electrical checks on equipment.

Coordinates and maintains positive relationships with other City departments, other governmental entities, and private utilities in the course of performing assigned work.

Use electronic locating equipment to locate City-owned underground electric and fiber optic systems. Work with JULIE Coordinator to insure GIS records are current to protect underground utilities.

Performs general electrical maintenance on municipal water system controls; installs and trouble shoots electronic flow, level process control and communications equipment; wires motor controls; maintains and repairs pumps and motors for water pumping stations and sewer lift stations.

Performs related work as required.

Qualifications:

1) Education/Experience:

- a. Graduation from standard high school or vocational/technical school; completion of an approved apprenticeship in electrical trades work; considerable experience in electrical maintenance and repair work at the journeyman or contractor level related to the maintenance and repair of electrical, electronic, and Supervisory control and data acquisition (SCADA) equipment associated with water treatment plant, lift stations, lighting, and facilities; or any equivalent combination of training and experience to provide the outlined knowledge, abilities, and skills:

2) General Skill Levels:

Knowledge of:

- Municipal water system grid and its components.
- Standard practices, materials, tools, and equipment of the electrical trade.
- Standards and occupational hazards involved and the safety precautions necessary in the performance of assigned work.
- Computer and computer software system(s) including but not limited to the email, work order system, internet searches, GIS, and SCADA diagnostics and programing.
- Practices, methods, tools, and materials used in surface water treatment plants.
- Occupational hazards involved and the safety precautions necessary in water treatment plant maintenance and operations and in the electrical trade.
- Operation of electrical testing devices and instruments.
- Principles of electrical theory as applied to electrical circuits and wiring systems and the ability to apply this knowledge to wiring, equipment and controls.
- Operations of traffic signal equipment, wiring, and installation.
- Variable Frequency Drives and industrial controls.

- Various voltage and multi-phase environments (120v, 240v, 480v, 2300v, etc.)
- Digital and micro-processor based equipment, and PLC and SCADA programming.
- Aspects and principles of maintenance and repair of electrical, electronic and SCADA systems.

Skills:

- In the use, care, and demonstration of general and specialized tools, and the equipment used in required for installation, maintenance, testing, and repair work.
- Operating of a utility truck and related maintenance vehicles.
- Planning, organizing and directing a work crew within the responsibilities of this position.
- Transferring technical knowledge to operational activity to achieve desired results.
- Using tact, discretion, initiative and independent judgment within established guidelines.

Ability to:

- Plan and organize the completion of work with skilled and semi-skilled maintenance crews and individuals.
- Prepare standard work and operational reports.
- Deal with the public in general and difficult work situations.
- Supervise and instruct in electronic controls and electrical equipment, wiring, and operations.
- Perform work independently under limited supervision.
- Ensure that proper on-the-job safety procedures are followed and safety equipment is properly and consistently used.
- Read and understand technical information including plans and blueprints and apply guidelines and regulations to operational situations.
- Communicate orally and in writing with internal and external stakeholders professionally.
- Understand and follow general oral and written instructions.
- Work evenings, nights and weekends as required and respond to emergency situations.
- Correctly perform basic arithmetic.
- Correctly take, record and use measurements.
- Diagnose operating defects in complex electrical apparatus.
- Undertake responsibilities with initiative and judgment.
- Establish and maintain effective relationships with subordinate personnel, managers, and the public.
- Climb ladders and gain access to difficult and confined space areas around mechanical equipment, building systems, and roofs.

3) Certificate or Licenses:

a. Required

Possession and maintenance of a valid Illinois Class B Commercial Driver's License with airbrake endorsement.

b. Preferred: Illinois EPA Public Water Supply Class D Operators License is desirable; IMSA Level III Traffic Signal Technician is desirable.

4) Physical Requirements/Working Conditions:

Majority of work is performed in an outdoor or plant setting in all conditions including hot, cold, wet and dry weather. Work requires traveling to construction sites and the ability to traverse a variety of natural and altered ground surfaces which may be uneven, wet or slippery or sloped.