

CITY OF CHATTANOOGA

Classification Specification Title: Industrial Electrician 2 (Wastewater)

Department: Wastewater

Pay Grade: WWFG.08N

Supervision Received From: Engineering Coordinator

FLSA Status: Non-Exempt

Supervisory Responsibility For: None

Established: 1/6/15

Revision Dates: 4/2/25;

12/11/23; 10/20/23; 9/30/22

CLASSIFICATION SUMMARY:

Incumbents in this classification apply electronic theory, principles of electrical circuits, electrical testing procedures, engineering mathematics, physics, and related knowledge to layout, build, test, troubleshoot, and repair of various equipment associated with the wastewater industry. Required to document and prepare reports as necessary.

Performs complex programming of programmable logic controllers and provides instructions and assistance to users. Performs troubleshooting and repairs to electrical equipment, performing preventative maintenance, designing and building control systems and interfaces, building and troubleshooting telemetry and radio systems, fabricating and maintaining a variety of electrical systems and providing guidance to contractors, and reviewing blueprints. Work requires limited supervision.

SERIES LEVEL: This is the third level of a three-level Industrial Electrician series.

ESSENTIAL FUNCTIONS:

(The following duties ARE NOT intended to serve as a comprehensive list of all duties performed by all employees in this classification, only a representative summary of the primary duties and responsibilities. Incumbent(s) may not be required to perform all duties listed and may be required to perform additional, position-specific duties.)

May serve as a lead to Industrial Electrician staff to include assigning and monitoring work, training staff on work methods and procedures, discuss performance issues and improvement ideas and providing direction.

Observes functions of installed equipment to detect hazards, problems, and the need for service, repair and/or replacement of electrical, electronic and mechanical components.

Reads and understands electronic and electrical schematics; draws sketches to clarify design details and functional criteria of electronic units.

Recommends changes in the circuitry of installation specifications to simplify assembly and maintenance.

Maintain backups of programs from all electrical devices.

Troubleshoot and repair solid-state motor drives, solid-state temperature controllers, and computer-based controllers.

Analyzes and interprets data from solid-state motor drives and controllers scope meters and other troubleshooting equipment.

Adjusts, calibrates and aligns circuitry and components and records effects on unit performance.

Evaluate system performance under actual operating conditions of newly installed equipment.

Designs, builds, installs, troubleshoots, repairs, calibrates and cleans a wide variety of instrumentation and electrical equipment which includes Programmable Logic Controller (PLC)s, variable frequency drives, AC/DC motor starters and controls, variable speed drives, high/low voltage switch gears, circuit breakers, transformers, power supplies, interior/exterior lighting, sump pumps, level control systems, filter presses, timers and timing relays, flow meters and controllers, chart recorders and indicators, gas sensors, dissolved oxygen meters, suspended solids meters, pH meters, ampere meters, voltage meters, RPM meters and/or other related meters, instrumentation and equipment.

Troubleshoots and repairs a wide variety of electrical equipment, utilizing a wide variety of tools and equipment including conduit benders, knock-out punches, crimping tools, high voltage sticks/gloves, band saws, drill presses, sandblasters, pipe threading equipment, welders, torches, gauges, calibration equipment, electrical metering equipment and applicable diagnostic equipment.

Additional Functions Performs general cleaning and maintenance on vehicles, equipment, and tools in order to maintain proper working condition which includes inspecting the equipment, checking fluid levels, replacing fluids, greasing equipment, replacing parts, and washing and cleaning equipment and shop areas.

Prepares and maintains a variety of forms, correspondence, reports, work orders, requisitions, diagrams, measurement statements and/or other applicable documentation.

Shall be required to be on call, carry and answer a cell phone.

Must meet regular attendance requirements.

Must be able to maintain good interpersonal relationships with staff, co-workers, managers and citizens.

Must accomplish the essential functions of the job, with or without reasonable accommodations, in a timely manner.

Performs other duties as assigned.

This position is deemed essential during inclement weather situations, and must report to or remain at work, even when administrative closings are announced, as determined by the Department Head.

DEPARTMENT SPECIFIC DUTIES (if any):

MINIMUM QUALIFICATIONS: High School Diploma or GED and a minimum of three (3) years of electrical experience repairing or installing electronic equipment and related systems; or any combination of education, experience, and training sufficient to successfully perform the essential duties of the job listed above. An Associate's Degree in Electronics Technology, and/or completion of an accredited apprenticeship or equivalent certification preferred.

LICENSING AND CERTIFICATIONS: City of Chattanooga Board of Electrical Examiners
Electrical License or Master Plant Electrician License
TN Driver's License - Class D

SUPPLEMENTAL INFORMATION:

Knowledge of electrical circuits; applicable tools and equipment of the trade; industrial safety practices and procedures; high voltage electrical systems; electrical programming, programmable logic controllers programming and control theory; low and high voltage test equipment; plant UPS and DC systems; electro-pneumatic, electro-hydraulic and electro-mechanical systems; motor theory, maintenance, and alignment practices; electrical theory; basic mechanical systems; underground utilities; and work zone safety principles.

Skill in using a computer and related software applications; programming programmable logic controllers; installing, maintaining, wiring, replacing, troubleshooting, and repairing electrical equipment; installing, maintaining, and repairing electrical conduit, wiring, and controls; reading technical blueprints, schematics, drawings, and manuals; utilizing applicable tools and equipment of the trade; and, communication and interpersonal skills as applied to interaction with coworkers, supervisor, and the general public, sufficient to exchange or convey information and to receive work direction.

PHYSICAL DEMANDS: Positions in this class typically require: climbing, balancing, stooping, kneeling, crouching, crawling, reaching, standing, walking, pushing, pulling, lifting, fingering, grasping, feeling, talking, hearing, seeing and repetitive motions.

WORK ENVIRONMENT: Medium Work: Exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects. Incumbents may be subjected to moving mechanical parts, electrical currents, vibrations, fumes, odors, dusts, gasses, poor ventilation, chemicals, oils, extreme temperatures, inadequate lighting, work space restrictions, intense noises and travel.

SPECIAL REQUIREMENTS:

Safety Sensitive: Y

Department of Transportation - CDL: N

Child Sensitive: N

The City of Chattanooga, Tennessee is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, the City will provide reasonable accommodations to qualified individuals with disabilities and encourage both prospective and current employees to discuss potential accommodations with the employer.