WATER / WASTEWATER INSTRUMENTATION TECHNICIAN

DEFINITION

Installs, tests, maintains, calibrates, troubleshoots, upgrade and repair City-owned electrical, electronic and instrumentation

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the Electrical/Sign and Markings Supervisor or his/her designee. This is a journey level position and may include lead supervision of less experienced personnel/temporary workers.

EXAMPLES OF DUTIES

The following are typical of duties encompassed by the position, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Installs, inspect, maintain, repair, troubleshoot, calibrate, program, modify, upgrade and test a wide variety of electrical/electronic/instrumentation equipment and software related to pumping stations, water treatment plants, emergency back-up power, utility plants, and Supervisory Control and Data Acquisition (SCADA) systems; systems may include, transmitters, recorders, PID loop controllers, atmosphere testers, programmable logic controllers (PLC's), ultrasonic meters, network servers, related communication devices (radio's and antenna's), variable frequency drive systems and pneumatic and telemetry equipment; verify equipment compatibility with existing devices; proficiently reads and interprets circuit diagrams, such as, piping and instrumentation diagrams (P&ID's), ladder logic, construction drawings, and service and repair manuals; prepares plans and specifications for the procurement of parts and supplies on assigned projects. Ensures that proper safety precautions and safe work methods are followed; assists with the preparation of standard operating procedures; inspect contract construction projects and submittals; inspect and test equipment; develop punch lists for work to be completed or corrected during construction; and perform other duties as assigned. Regular, predictable, consistent and timely attendance is an essential function of the position, in that the failure of such attendance undermines the City's ability to provide critical public services impacting public health.

OTHER JOB FUNCTIONS

Prepares and maintains accurate maintenance and repair records; presents oral and written reports; performs electrical Inspections; uses and maintains a variety of tools and test equipment as required; answers emergency calls and performs emergency repairs; meet all standby program requirements; take standby duty, work any shift including weekends and holidays. Perform related duties as assigned.

QUALIFICATIONS:

Knowledge of:

In depth knowledge of electrical/electronic/instrumentation equipment as it relates to personal computers, SCADA systems, industrial controls, communication devices, telemetry, and their operational and maintenance software programs; methods, tools, and equipment used to maintain, repair, test, troubleshoot, calibrate and perform preventative maintenance on an electrical, electronic, instrumentation and SCADA systems; Safe work practices, applicable codes, laws and ordinances, circuit diagrams, and shop mathematics.

Skill to:

Use electrical and electronic tools and equipment skillfully and safely; read, interpret and follow electrical and process control plans and specifications; examine and diagnose causes of electrical and electronic failures; respond quickly in emergencies; interact effectively and courteously with the public; communicate clearly and concisely, orally and in writing; keep accurate records.

Ability to:

Work independently and exercise good judgment; diagnose malfunctions in a variety of electrical, electronic, SCADA and instrumentation systems; use and care for tools and test equipment used in maintaining and repairing electrical, electronic and instrumentation systems; ability to create new, and modify existing computer aided design (CAD) documents; make cost estimates of labor and materials, maintain detailed records; follow oral and written directions. read and interpret electrical and process control drawings, plans and specifications; Establish and maintain effective work relationships with those contacted in the performance of required duties; maintain effective audio-visual discrimination and perception needed for making observations, communication with others, and reading, writing, and operating assigned equipment; apply good judgment and practical knowledge to help resolve unusual or irregular problems in the area of work assigned.

Minimum Education and Experience:

Education:

High school diploma or equivalent is required. Associate degree in electronics, instrumentation, electrical technology, or closely related field is highly desirable.

Experience:

Four years of recent experience in Industrial Instrumentation and Control Technician. One year of completed college or technical institute coursework in a closely related field can be substituted for one year of experience, to a maximum of two of the required four years of experience.

License and Certificates:

Possession of a valid California Driver's License and a current California Water Environment Association (CWEA) Electrical/Instrumentation Technologist Level II certificate is required upon hire. Possession of a valid International Municipal Signal Association (IMSA) Work Zone Safety Level Certification is required prior to completing the probationary period as a condition of employment.

ADA COMPLIANCE

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

Very Heavy Work: Exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently, and/or in excess of 20 pounds of force constantly to move objects.

Other Requirements:

Sensory Requirements: Requires the ability to recognize and identify similarities and differences between shade, degree or value of colors, shapes, sounds, forms, textures or physical appearance associated with objects and people.

Environmental Factors: May be subjected to moving mechanical parts, electrical currents, vibrations, fumes, odors, dusts, gases, poor ventilation, chemicals, oils, extreme temperatures, work space restrictions, intense noises, and environmental dangers.