

JOB DESCRIPTION

City of Patterson



Human Resources

Electrical & Instrumentation Manager

JOB SUMMARY

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

Under minimal direction from the Deputy Director of Public Works Operations, the Electrical and Instrumentation Manager oversees system functions and the staff of the Electrical/Instrumentation Division; has responsibility for the maintenance, repair, replacement, design and calibration of process, electronic, electrical and mechanical instrumentation and equipment employed in the operation of the City's water and wastewater treatment systems and pumping stations; creates new and modifies existing PLC programming; performs highly complex professional level work related to planning, evaluation, design, implementation and administration of major information systems within public works facilities; prioritizes and assigns work provides training, supervises and evaluates the work of assigned staff; provides technical direction and oversight to consultants and technical assistance to system users; and performs other related work as required and special projects as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives minimal direction from the Deputy Director of Public Works Operations and indirectly from the Director of Public Works.

Exercises direct supervision over assigned division staff; provides lead direction and oversight to other staff and consultants.

ESSENTIAL DUTIES

Typical essential duties may include, but are not limited to, the following:

Oversees system functions and staff of the water and wastewater treatment facilities including core services such as network, security, installations, and enterprise services (SCADA).

Plans, prioritizes, and assigns work to E&I division staff; provides training and guidance, supervises and evaluates the work of assigned division staff; provides technical direction and oversight to consultants and technical assistance to system users.

Assists with the long-range strategic planning of IT systems for use within the water and wastewater treatment facilities and serves as technical project lead in the design and installation of complex LANs, WANs, SCADA and/or database applications and the upgrade of hardware and software on existing networks. Provides general oversight in the resolution of complex hardware and software problems and participates in the development of IT systems, policies, and protocols.

Configures, maintains, and monitors the City's remote access server; updates system software; configures facility workstations for remote access services; monitors logs for unauthorized use.

Reads and interprets plans, specifications, schematics, and control strategies; evaluates systems performance, recommends action to be taken; and provides information for budget preparation.

Performs design modifications to instrument and SCADA systems to enhance equipment reliability and to meet operating needs; upgrades existing systems as new technology dictates; maintains accurate applicable records and drawings.

Performs trouble shooting and diagnostic work on a variety of instrumentation, electronic equipment, laboratory equipment, analyzers, and records; performs scheduled preventive maintenance as required; performs acceptance tests of new equipment and inspects the installation of equipment and systems for conformance with plans and specifications.

Ensures the observation of safe work methods in the performance of assigned duties; operates and maintain a wide variety of tools and equipment used in electronic and electrical instrument use, operation, maintenance, and repair.

Coordinates with end users and provides expertise in implementing changes to the SCADA system.

Performs related duties as required and special projects as assigned.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of: Principles and practices of leadership, supervision, training, performance evaluation and budgeting; methods, materials, tools and equipment used in water and wastewater treatment plant maintenance and repair work (including instrumentation systems, SCADA systems, programmable logic controllers (PLC), laboratory equipment, electronic systems); principles and practices of journey-level electrical work and advanced electronics; rigging principles and techniques; network and computer operating systems; work-related software applications and hardware standards; principles and practices of project management; principles of computer systems design, operation and control; data communications, including local and wide area networks; security systems and procedures; diagnostic hardware utilities and testing equipment, street lights, traffic signals and emergency generators; basic radio telemetry concepts; pertinent codes, ordinances and regulations pertaining; principles and practices of work safety.

Ability to: Direct, supervise, train and evaluate the work of others; implement complex IT projects and systems; establish and meet short and long term goals and objectives; troubleshoot network and computer hardware and software problems; install and configure computer hardware and software; make sound decisions in accordance with laws, ordinances, rules, regulations, policies and procedures; perform highly skilled and complex work in installing, diagnosing, repairing, and maintaining a wide variety of water treatment and storage systems, facilities and equipment; work on electrical circuits, electronic information and control systems and other specialized installations; coordinate with supervisors and provide input on prioritization of work plan for system repairs and improvements; read and interpret plans, specifications, schematics, and control strategies; estimate and secure required materials, tools, and equipment; communicate effectively orally and in writing; establish and maintain effective working relationships with those encountered in the course of the work; read, speak, write, and comprehend English at a level necessary to carry out the essential functions of the position; prepare accurate records of work performed; meet deadlines; exercise independent judgment and initiative without close supervision; provide excellent customer service; reason logically and make sound judgments; tolerate interruptions and work well under pressure; exemplify a, resourceful and effective customer service attitude with those contacted in the course of work; work effectively as part of a City-wide team; identify opportunities for

improving service, systems and procedures; keep abreast of current computer technology, practices and procedures; learn computer related tasks specific to the City of Patterson, oversee systems, functions and staff relating to preventative and repair services for emergency generators, street lights and traffic signals.

NECESSARY SPECIAL REQUIREMENTS

Must be 18 years of age or older.

Must successfully pass pre-employment examinations which may include various position related background, fingerprint, reference, medical, certificate or license verifications.

Must be able to provide proof of U.S. citizenship or legal right to work in the United States.

MINIMUM QUALIFICATIONS

Any combination of education and experience that provides the requisite knowledge and skills is qualifying. A typical way of gaining the required knowledge and abilities is:

Education: Current certification as a California Journey Electrician.

Experience: Five years (5) of journey-level experience in the maintenance of process instrumentation, computer systems/networking, electronic and/or electrical systems in a water or wastewater treatment plant or related facility.

Certificate: Possession of a valid Grade II Instrumentation Technology Certificate within one year of appointment is required.

Possession of valid Grade II Water Treatment Operator and Grade II Water Distribution Operator certificates are desirable.

License: Possession of a valid California Class B driver's license with appropriate endorsements that must be maintained as a condition of employment

MENTAL and PHYSICAL REQUIREMENTS

Mental Requirements: The mental demands described here are representative of those that are required to successfully perform the essential functions of this job. While performing the duties of this job, the employee is regularly required to know and understand all aspects of the job; prepare reports; know, understand, interpret, and explain department and program policies, procedures, rules, codes, laws and operational procedures; observe, analyze, evaluate and solve code enforcement problems/issues, taking appropriate course of action; remember various inspection rules and codes.

Physical Conditions: Position duties regularly require sitting, twisting, standing, walking, balancing, stooping, kneeling, climbing, crawling, and bending; performing simple grasping and fine manipulation; the ability to hear and talk to use the telephone and communicate technical information; writing or keyboarding to communicate; and lifting or carrying job related equipment weighing 50 pounds or less.

Environmental Conditions: Fieldwork is performed daily in an outdoor environment requiring travel to various locations within the City of Patterson; and is often performed in and around construction sites with exposure to inclement weather conditions, noise and dust. Other duties of the job are performed in a standard

office environment.

FLSA Status: Exempt-Management

Developed: August 2017

Revised: August 2022