



City of Phoenix

Instrumentation & Control Specialist

Job Code:	51130	Job Function:	Utility Services
Salary Plan:	004	Grade:	255
FLSA:	Nonexempt	Labor Assign:	Unit 2 AFSCME 2384
Benefit Cat:	002	EEO-4:	Technicians
SOC:	49-2094.00	Last Revision:	March 2025

This description shall not be held to exclude other duties not specifically mentioned that are of similar kind or level of difficulty as the examples of typical functions of the classification. They are intended to describe the general nature and level of work being performed by individuals assigned to positions in this classification.

DEFINITION:

The fundamental reason this classification exists is to perform skilled work in the installation, maintenance, calibration, and repair of all electronic instruments and automatic process control equipment in a water or wastewater treatment plant or distribution remote facilities. Incumbents also install, calibrate, and repair various types of flow and measuring equipment. Instrumentation and Control Specialists may work with an electrician or mechanic assigned to assist with a specific project.

SUPERVISION RECEIVED/GIVEN:

Wide latitude exists for independent action and employees in this class must be able to work with minimal direct supervision. Work assignments are made by site supervisors through written or oral instructions. Work is reviewed for results in meeting the operating requirements of the system.

ESSENTIAL FUNCTIONS:

- Installs, calibrates, maintains, and repairs various flow and measuring equipment such as ultrasonic magnetic flow meters, temperatures, pH, chlorine, dissolved oxygen, and air pressure flow meters
- Installs, maintains, and analyzes malfunctions of computerized control devices, control and instrument loops, instruments for activated sludge systems, water treatment and the Supervisory Control and Data Acquisition (SCADA) system and makes needed repairs
- Updates computerized maintenance management system (CMMS) with information regarding the status of assigned work orders
- Acts as a "standby" specialist for responding to emergency calls after normal working hours

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Knowledge of:

- Analog and digital control systems and devices
- Analog and digital electronic theory, terminology, and application



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- Hazards and safety practices of the trade, such as chlorine gas, hydrogen sulfide, raw sewage, pressurized equipment, and high voltage

Skill in:

- Use and care of tools and equipment, including calibration test equipment, common hand tools, volt and amp meters

Ability to:

- Work cooperatively with other City employees
- Understand and carry out written and oral instructions in the English language
- Work safely without presenting a direct threat to self or others
- Read and interpret drawing, specification, and blueprints and interpolate from incomplete information
- Communicate orally with co-workers in face-to-face one-to-one settings in order to troubleshoot equipment problems
- Observe or monitor moving objects or data to determine compliance with prescribed operating or safety standards
- Make precise arm-hand positioning movements and maintain static arm-hand position to use a drill or other hand tool
- Make fine, highly controlled muscular movements to adjust the position of levers to repair equipment
- Coordinate the movement of more than one limb simultaneously to repair equipment.
- Bend or stoop repeatedly or continually over time to repair equipment
- Lift arms above shoulder level to repair equipment
- Move objects between 20-50 pounds, such as flow meters, short distances (20 feet or less)
- Work in a variety of weather conditions with exposure to the elements to maintain treatment plant equipment
- Climb ladders or steps to access equipment in confined spaces
- Comprehend and make inferences from written materials such as operations manuals or Material Data Safety Sheets (MSDS)
- Work in small cramped areas to repair equipment
- Travel across rough, uneven or rocky surfaces at a treatment plant to access equipment

Additional Requirements:

- This classification requires the use of personal or City vehicles on City business. Individuals must be physically capable of operating the vehicles safely, possess a valid driver's license and have an acceptable driving record. In addition, individuals are required to pass an Arizona Department of Transportation physical exam and possess the appropriate commercial driver's license. Pre-employment drug testing is required, and employees will be subject to unannounced alcohol and drug testing as a condition of continued employment. Use of a personal vehicle for City business will be prohibited if the employee does not have personal insurance coverage
- Some positions will require the performance of other essential and marginal functions depending upon work location, assignment, or shift



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ACCEPTABLE EXPERIENCE AND TRAINING:

Three years of experience in the maintenance and repair of analog and digital industrial control equipment, industrial electronics and test equipment or computer and peripheral equipment. An associate's degree in electronics may substitute for a maximum of one year of experience. Other combinations of experience and education that meet the minimum requirements may be substituted.