

Title: *Maintenance III/Control System Specialist*

Reports To: *Public Works Director*

Salary Range: 33

Job Objective:

This position is responsible for design, development, implementation, troubleshooting, and maintenance of Supervisory Control and Data Acquisition (SCADA) and the Instrumentation and Control (I&C) systems using and programming through programmable logic controllers (PLCs) for the water treatment plant, wastewater treatment plant, water pump stations, sewer vacuum stations, and sewer pump stations. . Job requires considerable knowledge of equipment, facilities and operations with special emphasis on electronic control systems including computers. Individuals in this classification must become proficient in the operation of drinking water and wastewater facilities.

Individuals assigned to this classification are expected to be competent in all of their skill areas and to perform independently all assignments of both a routine and non-routine nature. Individuals are expected to be capable of operating most City equipment, may have particular expertise on specific types of equipment but must have a high level of expertise in the programming, running and operating of electronic alarm telemetry and reporting equipment. Individuals are expected to apply considerable practical knowledge of the skill field to resolve unusual or irregular problems that may occur, and to contribute suggestions for improvements in operations and procedures. Requires interpretation and reasoning, especially in non-routine, new or particularly troublesome aspects.

Job Location and Equipment Utilized:

Work is performed both indoors and out. Outdoor work is typically performed under dirty, uncomfortable, noisy and hazardous traffic conditions in all types of weather. Indoor work is performed involving electronic equipment under near clean room conditions. Equipment utilized includes a variety of hand and power operated tools.

Essential Job Functions:

- ◆ Primary duties are performing analysis, design, and programming for new and existing process control / network administration on SCADA HMI, PLC's and various communication systems.
- ◆ Develop and maintain HMI programs using software associated with SCADA and plant process and data collection.
- ◆ Responsibilities also include development and integration of ladder logic programs using RS-Logix 500 and RS-Logix 5000 software for programmable logic controllers associated with automation, process control and SCADA systems.
- ◆ Designs, implements, and maintains SCADA telemetry communication systems.
- ◆ Determines the nature of complex communication / interface connectivity problems, providing corrections as necessary to maintain system operability.
- ◆ Programs and calibrates devices such as Variable Frequency Drives (VFD), chart recorders, pH probes, flow meters, and other control related devices.

- ◆ Troubleshoot and repair power systems up to 480 volts AC and emergency generators at treatment plants, wastewater stations, and water distribution facilities.
- ◆ Installation of hardware and wiring related to instrumentation, controls, and SCADA systems including installation and maintenance of panels.
- ◆ Interpret and apply the National Electrical Code to new and existing installations.
- ◆ Respond to emergency situations independently in absence of higher classified employees. Take action as necessary to mitigate emergency situation. May involve instructing and directing other employees during such emergencies including coordination with Fire and Police personnel.
- ◆ Perform work in accordance with sound safety practices.
- ◆ Respond to all public inquiries in a courteous manner; provide information within scope of knowledge or refer to supervisor or other appropriate City employees.
- ◆ Install, test, maintain and service electronic telemetry equipment and computers for the water and wastewater departments.
- ◆ Works with contractors, vendors, engineers, consultants, and Water and Sewer staff to ensure process and control systems work properly to meet process requirements.

Associated Job Functions:

- ◆ Perform work in other departments as required.

Required Knowledge, Skills and Abilities:

- ◆ Requires knowledge of the field of assignment and physical ability sufficient to perform thoroughly and accurately the full scope of responsibility as illustrated by example in the above job description.
- ◆ Requires knowledge and ability to use hand and power tools and equipment used in construction.
- ◆ Requires ability to read and interpret written instructions, City ordinances and regulations regarding standards and safety requirements.
- ◆ Requires ability to proficiently operate a variety of vehicles and equipment.
- ◆ Requires working knowledge of RSVIEW 32 HMI software that allows for operator interface, automation, modifications, alarm setup, data logging, control, and indication.
- ◆ Requires knowledge of radio configuration software that allows for configuration and troubleshooting of licensed frequency radios used to transmit data.
- ◆ Must have working knowledge of Allen Bradley PLCs, VFDs, SMC flex soft starters, along with flow meters, DO, PH, and ORP probes, pressure transmitters, ultrasonic level transmitters, electric actuators.
- ◆ Must have working knowledge reviewing and modifying P&ID drawings, and using network protocols commonly used in industrial automation such as Ethernet, DeviceNet, fiber optics, DH-Plus, and DH-485.
- ◆ Must have working knowledge of process control theory and process instrumentation and experience with SLC based control systems, client /server programming, and data communication.
- ◆ Requires ability to work cooperatively with co-workers and the general public.
- ◆ Requires ability to respond to emergency calls during off-duty hours.
- ◆ Requires ability to direct the work activities of other employees in the skill area, as assigned.
- ◆ Requires ability to maintain a daily log and to write reports.
- ◆ Requires ability to operate a mobile radio.

Required Physical Traits:

- ◆ Requires ability and stamina to perform heavy manual physical labor.
- ◆ Requires ability to work out of doors in all types of weather conditions.
- ◆ Requires ability to crawl, climb, bend, twist, stoop, kneel and perform repetitive lifting and to maintain such activities throughout a work shift.
- ◆ Requires ability to lift 60 pounds.
- ◆ Requires ability to operate a variety of vehicles and to utilize all tools and equipment necessary to accomplish the work.

Qualifications:

- ◆ Requires high school graduation or equivalent supplemented with five years of experience in the operation and programming of real-time process control systems OR any combination of education and experience which demonstrates competency.
- ◆ Requires demonstrated experience writing and reading ladder logic and programming networked HMI applications.
- ◆ Previous background in the water / wastewater industry and mechanical and electrical experience desired.

Other Requirements:

- ◆ Requires a valid Washington State Driver's License and a driving record acceptable to the City's insurance carrier.
- ◆ Requires a State of Washington Flagging Certificate.
- ◆ Requires First Aid/CPR certification.
- ◆ Certification as a plant operator in the State of Washington is desirable.
- ◆ Certification as a distribution manager in the State of Washington is desirable.
- ◆ Valid Washington State electrician certificate is desirable.

Job description approved for use in accordance with Section 6.9 of the existing Collective Bargaining Agreement.



Nicholas D. Bird
Public Works Director

May 22, 2017

Date