



JOB DESCRIPTION

TITLE: SCADA System Lead
STATUS: Union/Non-exempt
GRADE: 17

JOB SUMMARY:

Responsible for leading, scheduling, training, assigning and performing the work of SCADA Technicians and the SCADA System Specialist; reviews SCADA system design drawings and coordinates the maintenance, monitoring, and updating of the District's telemetry systems, as well as applicable computers, instrumentation, controls, communications, security and power distribution systems.

REPORTING RELATIONSHIPS:

This position reports to the SCADA/Electrical Manager; may provide guidance and direction to SCADA Technicians and the SCADA System Specialist. This position does not supervise other positions.

ESSENTIAL DUTIES

Include the following:

- Leads, directs, and assigns work to District SCADA Technicians/Specialist classification employees, ensuring the safe and efficient completion of all work related to security and maintenance of the SCADA system; assists staff with determining the appropriate approach to complete work; may direct activities of staff and train them in proper methods and techniques;
- Inspects the work of staff for adherence to District standards and provides instructions when needed; provides guidance and input to supervisors regarding probationary periods and performance appraisals;
- Maintains, troubleshoots and modifies the SCADA system software and its components;
- Coordinates and manages a preventative maintenance schedule for District SCADA systems and related instrumentation and controls equipment;
- Engineers, integrates, develops, and programs computer systems & network devices related to the secure operation and maintenance of the SCADA system;
- Prioritizes emergency repairs related to equipment failure to eliminate process downtime;
- Updates drawings, technical documentation and software program documentation;
- Determines appropriate inventory of spare parts for critical instrumentation and control equipment; orders parts as necessary or needed;
- Coordinates maintenance efforts by reviewing work orders, blueprints, design and shop drawings;
- Provides guidance in the design and construction of instrumentation and control systems;
- Designs, develops, implements, maintains, and improves the SCADA Systems, Human Machine Interfaces (HMIs) software and historical software components;
- Works with District staff and suppliers to explain the functioning of processes and procedures needed for the operation of new equipment;
- Prepares and maintains a variety of records and reports;
- Represents the District at project design and construction meetings as needed;

- Conducts and documents onsite safety meetings when necessary, fills out incident/accident reports, and completes work orders and logs daily activities within District CMMS system;
- Performs advanced Operational Technology/Informational Technology (OT/IT) maintenance & development of SCADA System computer systems
- Develops and maintains technology replacement and improvement activities in accordance with District SCADA standards;
- Performs all duties of the District SCADA Technicians/Specialist classifications;
- Performs and documents all assigned work tasks and assists in the training of other District personnel on SCADA systems;
- Communicates and enforces District SCADA & IT Cyber Security policies and procedures;
- Assists SCADA Technicians, electricians, mechanics, and Wastewater Treatment facility staff as needed;
- Completes work orders and logs daily activities within District CMMS system;
- Responds to duty calls after normally scheduled work hours including nights and weekends for emergencies as needed;
- Performs other duties as required or assigned.

MINIMUM QUALIFICATIONS:

Knowledge of:

- Principles and practices of leadership;
- Current operations technology methods for SCADA systems including security best practices, systems topology, and modern industrial networking in Industrial Control Systems (ICS);
- Telemetry technology used in communication between Remote Telemetry Units (RTUs), Programmable Logic Controllers (PLCs,) and SCADA gateway both in software & hardware;
- Technical knowledge of industrial automation protocols such as Profinet, Common Industrial Protocol (CIP), Building Automation and Control Networks (BACNets), or ModBus TCP;
- IT system components including: servers, host, storage, resource pools, network switches, network routing, security appliances, Windows Server Operating System, and any other computerized component utilized into the SCADA System;
- Advanced knowledge of PLC, Operator Interface Terminal (OIT), and Human Machine Interface (HMI) programming and development;
- National Electrical Code (NEC) and National Fire Protection Association (NFPA) 70E;
- Mathematics, algebra through calculus (proportional, integral, derivative calculations); and
- Applicable electrical safety regulations, electrical code, safety policies, UL 508B NFPA 70e, and NFPA 70b standards;

Skill in:

- Providing leadership, direction, coaching, guidance and training to employees;
- Configuring hardware, software, and network components as utilized in the District's SCADA system.
- Maintenance, integration, and improvement of the SCADA system software platform;
- Development, integration, and programming of SCADA System HMI graphics;
- Monitoring and maintaining network and Telemetry communications and SCADA systems security & cyber security tools;
- Maintaining, cataloging, integrating, and improving the Control System PLC Programming and Control System OIT graphics;
- Troubleshooting with electronic or process test equipment and computer based tools for SCADA system components

- Safe operation of power tools, test equipment and hand tools;
- Enforcing codes and guidelines in the design, installation and maintenance of all District instrumentation & control and SCADA system;
- Adhering to all safety guidelines with regards to electrical, mechanical and environmental hazards;
- Designing or modifying technical publications including instrument, electrical and network drawings;
- Soldering techniques;
- Communication and interpersonal skills as applied to interaction with coworkers, supervisors, the general public, etc. sufficient to exchange or convey information and to receive work direction.

Experience/Education:

Any equivalent combination of education and experience that provides the applicant with the knowledge, skills and abilities required to perform the job. A typical way to obtain the knowledge and abilities would be seven years with programming and coordinating SCADA software packages, PLC platforms, Microsoft Operating systems, OPC, SQL, and OLE clients and servers and two years of higher education in Instrumentation and Industrial Automation or a related field.

Licensing Requirements:

Possess and maintain a Valid Washington State Driver’s License with acceptable driving record, and a CPR/First Aid Card. An (06) Limited Energy Systems electrical license or higher electrical licensing level is desirable. Ability to earn certification in networking and/or security within two years of appointment is required. Examples of the required certification are Cisco Certified Network Associate (CCNA) or Cisco Certified Network Professional (CCNP), and Computing Technology Industry Association (CompTIA) or Certified Information Systems Security Professional (CISSP). Another certification may be substituted with District approval.

WORKING CONDITIONS:

Duties are performed in an office environment sitting at a desk or computer terminal. Duties are also performed in the field with exposure to varying weather conditions and temperatures, high voltages, electrical currents, heights, exhaust fumes, intense noise, confined spaces, mechanical parts, fumes, odors, grease and chemicals, inadequate lighting, and intense noise. Work requires travel to work sites throughout the District.

PHYSICAL REQUIREMENTS:

Ability to operate a computer, telephone and other standard office equipment. Ability to communicate with employees, contractors, vendors and external rate-payers. Ability to traverse uneven ground at work sites and other District sites. Ability to ascend/descend stairs and ladders at District facilities and work sites. Frequently works outdoors in all weather conditions. Frequently works outdoors in all weather conditions.

Heavy Work: Exerting in excess of 75 pounds of force occasionally, and/or up to 50 pounds of force frequently, and/or up to 20 pounds of force constantly to move objects.

This job description does not constitute an employment agreement and may be changed or amended at any time to meet the needs of the District.

Approved: August 9, 2016
 Revised: October 18, 2018

Revised June 13, 2019