



CLASS SPECIFICATION

Class Code: 60008134
Date Established: 02/1998
Last Reviewed: 09/2024
Last Revised: 09/2024
Last Title Change:
FLSA: non-exempt

BUILDING SYSTEM CONTROLS SPECIALIST

DEFINITION

Under general supervision, plans, implements, and maintains County energy management systems; and performs related work as required.

EXPERIENCE AND TRAINING REQUIREMENTS

Four years full-time experience in commercial HVAC systems maintenance, repairs, system controls calibration, network infrastructure implementation, and computerized energy management systems in a commercial, industrial, or institutional setting; OR an equivalent combination of technical education and experience.

LICENSE OR CERTIFICATES

A valid driver's license is required at the time of appointment and must be maintained for continuous employment in this classification.

Certification in Tridium Niagara N4 is required within six months of appointment.

SUPERVISION EXERCISED

May provide lead direction.

EXAMPLES OF DUTIES *(The following is used as a partial description and is not restrictive as to duties required.)*

Monitor, detect, and resolve complex network and hardware communication errors between controllers, direct digital controls, system alarms, building automation software, and instrumentation.

Integrate and test heating, ventilation, air conditioning, plumbing, lighting, building control equipment and building automation programming issues using standard test equipment and software tools.

Select, install, maintain, and repair building control system components such as sensors, thermostats, valve and damper linkages, variable air volume controls, variable frequency drives, motor starters and relays.

Perform routine and emergency maintenance on analog, electrical, electronic and direct digital control systems and County network-based devices used to collect, process, transmit, receive and record data, which regulates the operation of the controls on buildings.

Use computer system diagnostic tapes, computer control console switches, indicators, and logic analyzers to locate and replace defective circuit boards and modules in computers and computer peripherals and to repair digital interfaces.

Coordinate servicing, testing and evaluation of solar PV systems in order to maintain the highest possible efficiency and production.

Design, program, and implement building automation systems, system expansions and system modernization.

Develop computer programs related to energy management to compensate for new equipment and/or to increase efficiency; develop graphic computer displays that indicate real time status of mechanical systems.

Coordinate with and provide support to County Technology Services through integration and deployment of devices, software, county networks, virtual servers, network-based direct digital controllers and lighting systems.

Monitor managing and reducing energy consumption and associated expenses; develop and recommend policies for improved energy efficiencies in County building operations.

Conduct cost/benefit analysis of existing equipment to determine the economic feasibility of replacement; estimate material and labor requirements for replacing equipment to determine if the project can be most economically completed in-house or by an outside contractor.

Consult design teams and professional consultants involved in planning and designing new facilities and major remodeling of existing facilities by recommending designs and mechanical systems that will optimize energy efficiency.

Conduct inspections of new control installations to ensure compliance with design criteria and operational specifications.

Train building maintenance support staff on building systems control, operation, maintenance, and repair.

Maintain database backups for energy management systems to include field controllers, program drawings and server databases on network drives and physical portable media as required.

Perform job duties in a safe and responsible manner that does not expose the employee, co-workers or the public to unnecessary risk or danger.

JOB RELATED AND ESSENTIAL QUALIFICATIONS

Full Performance *(These may be acquired on the job and are needed to perform the work assigned.)*

Knowledge of:

Departmental and countywide policies, procedures and technology standards.

Specific network structure and Energy Management server systems within Washoe County.

Washoe County purchasing/bidding procedures.

Digital control concepts such as analog and digital inputs and outputs, sequences of operations, point addressable devices, closed loop and supervisory feedback systems, device programming, serial communications, and computer networking.

Building electrical codes and regulations pertaining to controls, installation and use of heating, ventilating and air conditioning systems.

AC power systems both single and three phase operations.

Ability to:

Assist in budget preparation and monitor expenditures.

Provide lead direction, work coordination, and training for assigned staff.

Evaluate operations, including work processes and procedures, to determine effectiveness and efficiency.

Entry Level *(Applicants will be screened for possession of these through written, oral, performance, or other evaluation methods.)*

Knowledge of:

Computerized energy management systems including related software.

Heating, ventilating and air conditioning systems as used in large commercial applications.

Principles and methods used in building systems control maintenance repair and calibration.

Electrical components related to heating, ventilating and air conditioning systems including motor starters, relays, actuators and variable frequency drives.

Ability to:

Operate and maintain a variety of calibration and test equipment for heating, ventilating, and air conditioning systems such as amp and voltmeters, temperature, pressure and voltage simulators and flow hoods.

Program computers relating to energy management systems.

Design and install graphic displays in energy management system computers.

Perform a wide range of skilled building controls work with considerable independence.

Operate hand and power tools.

Estimate material and labor requirements for projects.

Read and interpret technical manuals, schematic diagrams, plans, drawings, and specifications.

Perform mathematical calculations necessary to estimate material needs, calculate equipment capability requirements and recalibrate energy management systems.

Maintain a variety of records and reports.

Communicate effectively, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of work.

SPECIAL REQUIREMENTS

Essential duties require the following physical skills and work environment.

Ability to stand and walk for extended periods. Ability to frequently stoop, bend, and kneel. Ability to lift and move objects weighing up to 75 lbs. Ability to distinguish between colors. Exposure to dust, fumes, solvents, chemicals, and construction materials.

This class specification is used for classification, recruitment, and examination purposes. It is not to be considered a substitute for work performance standards.