Control Systems Technician

Position Details
Class Code: 7200
Job Family: Skilled Trades/Technicians
Classification: Support Staff
Terms of Employment: Pay Grade 55 on the Support Staff Salary Schedule
FLSA STATUS: NON-EXEMPT

Position Summary
Under general supervision, installs, repairs, overhauls, and maintains control system commercial heating, ventilation, air conditioning, and refrigeration (HVACR) equipment.

Essential Duties and Responsibilities
The list of Essential Duties and Responsibilities is not exhaustive and may be supplemented.

1. Troubleshoots and determines repairs needed on control systems.
2. Tests components by using electrical, mechanical, pneumatic and electronic field-testing equipment, laptop, and database computers.
3. Installs, repairs, and services commercial HVACR equipment and systems controls varying from direct expansion (DX), multi zone, variable air volume (VAV), and packaged units.
4. Installs, repairs, and services chillers ranging from 50 tons and up, hydronic systems, electrical, and electronic controlled systems, variable frequency drives, air handlers, pumps and cooling tower fans and pump alignments.
5. Aligns and adjusts control systems to specifications.
6. Provides outlines and schematics for field installations of HVACR equipment.
7. Inspects new equipment installations performed by contractors and reports status of work performed to supervisor and/or project manager.
8. Assists the crane operator with rigging and placement of equipment.
9. Reviews, programs, and reprograms software applications for HVAC control systems.
10. Demonstrates and/or instructs maintenance/operations staff assigned to facilities on the operation, minor repair, and safety standards of HVAC equipment.
11. Initiates work orders and requests for equipment and shop supplies.
12. Performs preventive maintenance on all equipment listed above.
13. Provides outlines and diagrams for the installation of control systems for HVACR equipment.
14. Responsible for the safe handling and disposal of hazardous waste materials as they relate to refrigerants and refrigerant oils.
15. Conforms to safety standards, as prescribed.
16. Performs other tasks related to the position, as assigned.

**Distinguishing Characteristics**

Involves technical work in the installation, service, and repair of electrical, electronic, and pneumatic control systems and commercial heating, ventilation, air conditioning and refrigeration equipment operating at low and high voltage and pressure.

**Knowledge, Skills, and Abilities (Position Expectations)**

1. Knowledge of variable frequency drives (VFDs) and VAV HVACR systems (i.e., hydronic chillers and air handlers).
2. Knowledge of practices and procedures of the Environmental Protection Agency (EPA) Clean Air Act.
3. Knowledge of practices and procedures in the HVACR trade.
4. Knowledge of practices and procedures in the repair and service of control systems; pneumatic, electric, electronic, direct digital, and computerized.
5. Knowledge of building construction in relation to the installation of HVACR equipment.
6. Knowledge of Occupational Safety and Health Administration (OSHA) procedural guidelines for electrical/mechanical lockout-tag out.
7. Ability to upgrade new HVACR equipment, computer control devices, and control systems.
8. Ability to troubleshoot electronic and pneumatic controls without a schematic.
9. Ability to perform Eddy current tube analysis.
10. Ability to use air balance equipment.
11. Ability to recognize, understand, interpret, and apply all local, state, and national codes and regulations including, but not limited to: Uniform Building Code (UBC), Uniform Mechanical Code (UMC), Uniform Plumbing Code (UPC), National Electrical Code (NEC), EPA, etc.

12. Ability to learn to use various computers operating systems (i.e., disk operating system (DOS), OS2, etc.), software applications and HVACR sequence of operations.

13. Ability to meet predetermined deadlines.

14. Ability to read and interpret written and/or oral instructions.

15. Ability to plan and organize work.

16. Ability to read, interpret, and update building and electrical/pneumatic prints, drawings, and schematics.

17. Ability to operate hand and power tools and equipment.

18. Ability to safely move and relocate heavy objects.

19. Ability to perform heavy, strenuous, physical work.

20. Ability to work flexible hours and shifts.

21. Ability to work in confined areas.

22. Ability to withstand heights and perform work safely.

23. Ability to work cooperatively with employees and the public.

24. Ability to recognize and report hazards and apply safe work methods.

25. Possess physical and mental stamina commensurate with the responsibilities of the position.

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**Position Requirements**

**Education, Training, and Experience**

1. High school graduation or other equivalent (i.e., General Educational Development (GED), foreign equivalency, etc.).

2. A combination of HVACR technician training and experience with HVACR control systems and related equipment (minimum of three (3) years experience) equivalent to five (5) years will be accepted in lieu of the five (5) years experience; **or**.

   Five (5) years experience with HVACR control systems and related equipment; **or**.

   Completion of apprenticeship or journeyman certification as an HVACR technician, plus one (1) additional year of experience with HVACR control systems; **or**.
Associate’s degree from an accredited college or university in electronics, computer technology, mechanical systems or a related field, plus one (1) year experience with HVACR control systems; or, Bachelor’s degree from an accredited college or university in engineering, electrical engineering, HVACR technology, mechanical engineering, or a related field.

**Licenses and Certifications**

1. A valid driver’s license that allows the applicant/employee to legally operate a motor vehicle in Nevada. License must be maintained for the duration of the assignment.
2. Copy of current driving history issued by the Department of Motor Vehicles (dated within six (6) months) at time of application or Qualified Selection Pool (QSP) placement and at time of interview prior to final selection.
3. Forklift certification from the Clark County School District. If certificate is not in possession at time of application or QSP request, it must be obtained within five (5) months of hire into position. Certification must be maintained for the duration of the assignment.

**Preferred Qualifications**

Certification as a Universal Refrigerant Handler in accordance with EPA Federal Regulation 40 Code of Federal Regulation (CFR) part 82, subpart F.

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**Document(s) Required at Time of Application**

1. High school transcript or other equivalent (i.e., GED, foreign equivalency, etc.).
2. Apprenticeship and/or journeyman certificate/license, if applicable.
3. College transcript(s), if applicable.
4. A valid driver’s license that allows the applicant/employee to legally operate a motor vehicle in Nevada.
5. Copy of current driving history issued by the Department of Motor Vehicles (dated within six (6) months).
6. District-issued forklift certification, if applicable.
7. Specific documented evidence of training and experience to satisfy qualifications.

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**Examples of Assigned Work Areas**

Clark County School District facilities - schools (classrooms, cafeterias, etc.), offices, boiler rooms, facility rooftops, construction sites, etc.
Work Environment

Strength
Strength: Medium/Heavy - exert force 50-100 lbs., occasionally; 25-50 lbs., frequently; or 10-20 lbs., constantly.

Physical Demand
Frequent sitting, standing, walking, pushing, pulling, carrying, crawling, stooping, kneeling, crouching, reaching, handling, repetitive fine motor activities, climbing, and balancing. Mobility to work in a typical office setting and use standard office equipment. Stamina to remain seated and maintain concentration for an extended period of time. Hearing and speech to communicate in person, via video conference and computers, or over the telephone. Vision: Frequent near and far acuity, and color vision. Vision to read printed and online materials, a Video Display Terminal (VDT) screen, or other monitoring devices.

Environmental Conditions
Exposure to outside weather conditions with temperatures ranging from mild/moderate to extreme cold/heat. Exposure to noise levels ranging from moderate to loud and occasional to frequent time periods.

Hazards
Furniture, playground/office equipment, communicable diseases, chemicals and fumes (as related to specific assignment), and power/hand-operated equipment and machinery (as related to specific assignment).

Examples of Equipment/Supplies Used to Perform Tasks
District-issued vehicles, various ladders, analog and digital temperature analyzers, eye and hearing protection equipment, electronic refrigerant leak detectors, pressure/vacuum pumps, oxyacetylene welding/cutting equipment, megohm meters, analog and digital volt ohm/amp meters, pneumatic calibration gauge kits, motorized fork lifts, chain hoists, refrigerant reclamation equipment, mobile hand held radios, hand and power tools, etc.
AA/EOE Statement
This employer does not knowingly discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, or national origin.

Job Revision Information
- Revised: 10/29/18
- Created: 12/01/87