

POSITION DESCRIPTION

HVAC/Refrigeration Specialist – Advanced  
Facilities Management Group 2, Bureau of Building Management  
Division of State Facilities

Position No. 006842

January 2014

**Position Summary**

Under the general direction of the Buildings and Grounds Superintendent, Bureau of Building Management Group #2, this position is primarily responsible for the operation, inspection, repair, installation and preventive maintenance of mechanical, HVAC/Refrigeration systems and related electric, pneumatic, electronic and computerized direct digital temperature controls for the State Crime Lab Madison and other assigned facilities managed by Group #2.

This position will perform systems analysis, maintenance and repairs on HVAC/Refrigeration equipment including but not limited to air handlers, exhaust fans, humidification systems, boilers, chillers, circulating pumps, air and water filtration systems, pneumatic, electric and Direct Digital (DDC) temperature controls, temperature control air compressors and refrigerated air driers, air cooled or water cooled condensers and evaporative cooling towers.

This position will provide other maintenance or repairs on emergency generators, plumbing equipment and lighting control systems as well as collaborating with building occupants and Facility Managers with recommending, implementing and maintaining energy savings initiatives.

### **Goals and Worker Activities:**

- 60% (A) Provide required repair work, resulting from customer requests, facility managers requests, supervisors instructions or work noted during maintenance and inspection efforts on HVAC/Refrigeration and temperature control equipment, maintaining communications to designated building contacts.
- A-1. Repair, maintain, adjust or replace malfunctioning components in HVAC and refrigeration equipment, including temperature control air compressors and air driers and all temperature control systems.
  - A-2. Provide HVAC and refrigeration systems and controls diagnostic, calibration, and repair/replacement efforts for equipment malfunctions.
  - A-3. Read and interpret building construction plans as well as complex systems diagrams to perform analysis and repairs or to make adjustments.
  - A-4. Access and interpret Direct Digital Control (DDC) system performances and initiate adjustments and program changes in response to customer complaints and system malfunctions.
  - A-5. Identify and initiate appropriate actions to address seasonal needs for indoor air quality, freeze coil protection, cooling towers, heating and cooling system change over requirements.
  - A-6. Maintain and implement changes to building HVAC equipment lists, operational records, building construction plans, and respective temperature control plans as equipment changes or temperature control strategies are modified.
  - A-7. Provide lead role as the HVAC/Refrigeration and building support systems expert resource on assigned projects and repair/improvement efforts.
  - A-8. Serve as first point of contact on appropriate HVAC/Refrigeration and other building mechanical needs, including communicate, receive and prioritize service requests.
  - A-9. Assist Facilities Management staff and occupants in identifying any mechanical problem areas and incorporate findings into an immediate or planned repair or future project.
  - A-10. Upon request from Facility Manager and/or building occupant or notification from a central response authority, provide urgent HVAC/Refrigeration repair assistance, and/or contractor oversight during normal work hours and during non-work hours. Report event progress updates to the respective building contact and the Facility Manager as needed.
  - A-11. If HVAC or other building support systems are inoperable, immediately notify building contacts as well as the appropriate Facility Manager, informing them of the outage and expected system start-up. Coordinate arrangements for temporary services as needed.
  - A-12. Maintain log of chiller, cooling tower and boiler operations. Record critical temperature and pressure readings and advise supervisor when deemed necessary.

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- A-13. Respond to Indoor Air Quality complaints by investigating respective HVAC/Refrigeration equipment performance. Perform analysis and testing deemed necessary and make required repair and adjustments.
- A-14. Where required for new construction or existing HVAC/Refrigeration equipment, provide preliminary and final testing and balancing and supporting documentation.
- 30% (B) Perform scheduled maintenance and necessary repairs, on all HVAC/Refrigeration equipment, temperature controls and computerized direct digital control systems (DDC) in assigned buildings coordinating all work and systems outages with building occupants.
  - B-1. Assist in the development and documentation of routine rescheduled maintenance needs for all HVAC equipment and various types of temperature controls and temperature control pneumatic controls where applicable. Document routine planned maintenance as it occurs.
  - B-2. Update HVAC/Refrigeration equipment lists whenever new equipment replaces old equipment or whenever new equipment is installed. This includes larger project related improvements.
  - B-3. Provide schedule maintenance services for all respective HVAC/Refrigeration equipment and pneumatic, electric, electronic controls as well as DDC systems where applicable in assigned buildings.
  - B-4. Where required, disassemble and inspect malfunctioning temperature control valves, thermostats, controllers as well as other HVAC/Refrigeration equipment and calibrate/repair equipment to ensure reliable and efficient operation.
  - B-5. During HVAC maintenance work provide necessary troubleshooting for all unusual vibrations, noise, odors and take appropriate actions to repair immediately or schedule repair or further analysis as deemed necessary. Record those unsafe conditions and inform supervisor and perform repair ASAP to correct.
  - B-6. Periodically grease and oil bearings, replace HVAC/Refrigeration air and water filtration devices and drive belts, refrigerant compressor oil analysis, at regular intervals or as needed.
  - B-7. Perform inventory of material needs for upcoming scheduled maintenance and coordinate procurement of those materials with facilities unit purchasing agent as necessary.
  - B-8. Coordinate scheduled outages for all HVAC/Refrigeration equipment, temperature controls and DDC system for maintenance and repairs with building contact and occupants minimizing impact or loss of production and functions.
  - B-9. Interface with Direct Digital Control systems remotely and/or locally, monitoring and documenting system performance issues and/or initiate repairs, improvements or changes as required. Collaborate with respective Facility Manager on larger scale temperature control strategy repairs or improvements.

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- 10% (C) Support the Facilities Management Program assisting with tasks as requested by Facilities Management staff and building occupants.
- C-1. Assist in serving as one of the Bureau's knowledgeable Facility Management and HVAC expert at building construction meetings involving assigned architects, engineers, contractors and DOA/DSF project manager and in long term Capital Budget planning.
  - C-2. Practice excellent customer service by providing regularly scheduled communications with tenants regarding ongoing building and support system operations/performance issues and of your planned repairs or improvements or future projects.
  - C-3. Provide assistance to the Bureau of Facilities Management purchasing agent or contract officer in verifying contract compliance for building maintenance services performed such as janitorial, snow removal, lawn care, etc.
  - C-4. Periodically recharge water softeners and maintain salt brine tanks.
  - C-5. Inspect and replace light bulbs and ballasts as required and ensure appropriate storage and recycling procedures are accomplished.
  - C-6. Perform scheduled minor maintenance on emergency generators and fire extinguishers and other building systems and components as requested.
  - C-7. Provide maintenance and repair services to plumbing systems as requested.

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Required Knowledge, Skills and Abilities - HVAC Specialist:

1. Advanced knowledge of the operation and maintenance of various types of large and small HVAC/Refrigeration equipment typically provided in commercial office buildings, laboratories and data centers.
2. Advanced analytical skills necessary to diagnose and correct mechanical system failures in HVAC/Refrigeration equipment.
3. Ability to read and understand blue prints, operation and maintenance manuals and HVAC/Refrigeration equipment temperature control sequences and drawings.
4. Advanced experience, knowledge and ability to locally or remotely access various types/manufacturers of computerized direct digital control (DDC) systems as such that your level of understanding allows you to monitor, modify and troubleshoot various types of control systems.
5. Advanced knowledge and skills using various types of HVAC/Refrigeration testing equipment to enhance diagnostic analysis and the recording as well as documentation of performance data for various types forced air and fluid heat transfer systems.
6. Interpersonal skills necessary to interact effectively with the public, contractors, fellow employees and management.
7. Ability to climb stairs, ladders and scaffold and work at heights above 20 feet in order to reach HVAC/Refrigeration equipment.
8. Ability to perform duties within extreme temperature ranges for performing outdoor maintenance in the summer and the winter.
9. Ability to enter, exit and perform duties in confined spaces to address HVAC/Refrigeration equipment performance problems.
10. Ability to learn and perform all essential job functions accurately and safely with minimal supervision.
11. This job requires a valid driver's license with an excellent driver's record, which would permit Wisconsin certification in order to drive DOA owned vehicles.
12. Basic mathematical skills, including addition, subtraction, multiplication and basic algebra, necessary to complete HVAC/Refrigeration work.
13. Must have sufficient physical flexibility to stoop, crawl under or over HVAC equipment and other non-standard height spaces in order to perform repair and maintenance duties.

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14. Ability to orally communicate effectively with others using the English language, in person or over a telephone/cell phone with or without the use of aids in order to convey information.