



Human Resources

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DATE: September 6, 2022
TO: Civil Service Board
FROM: Chris Kohel
Human Resources Generalist
SUBJECT: Revised Job Classification of HVAC&R Inspector

RECOMMENDATION: APPROVAL OF THE REVISED JOB DESCRIPTION FOR THE CLASSIFICATION OF HVAC&R INSPECTOR.

Background Information/Summary of Job

As you are aware, the City is undertaking a job description review on all job descriptions last revised over 10 years ago. During this project, the job descriptions are being reviewed by both the supervisor of the position, as well as the incumbent(s). The intent of this process is to ensure that the description reflects the current duties of the position, as well as the education, experience, knowledge, skills, and abilities (KSAs) required to perform those duties.

In addition to the revision of the classification specific duties and KSAs, the Human Resources team has created standardized language that is included in all job descriptions and varies slightly based on their level of responsibility. You will see those language additions throughout the revised descriptions, including two new sections regarding supervision received and supervision given.

The HVAC&R Inspector was last revised in October 2012. The purpose of this position is to protect the community, property, and first responders from hazard, injury, and destruction by ensuring that mechanical systems are designed and installed in accordance with the Minnesota Building Code and other regulations. Under the authority of the Minnesota State Building Code and the building official, oversee the work of HVAC equipment installers, sheet metal workers, and homeowners in the city of Duluth through inspection of all HVAC&R installations. Review permit applications and plans. Verify contractors are licensed in accordance with Minnesota licensing and bonding regulations. Provide mechanical-code-related technical expertise to the Construction Services & Inspections team, contractors, engineers, and others. The major/primary changes to the job description are very minimal.

The job classification was discussed with the Basic Union and incumbents, and all are agreeable to the proposed job description.

Recommendation

Based on the above information, and in accordance with Section 13-7 of the Civil Service Code, I recommend that the Civil Service Board approve the revised job description for HVAC&R Inspector.

HVAC&R Inspector

SUMMARY/PURPOSE

To protect the community, property, and first responders from hazard, injury, and destruction by ensuring that mechanical systems are designed and installed in accordance with the Minnesota Building Code and other regulations. Under the authority of the Minnesota State Building Code and the Building Official, oversee the work of HVAC equipment installers, sheet metal workers, and homeowners in the City of Duluth through inspection of all HVAC&R installations. Review permit applications and plans. Verify contractors are licensed in accordance with Minnesota licensing and bonding regulations. Provide mechanical-code-related technical expertise to the Construction Services & Inspections team, contractors, engineers, and others.

SUPERVISION RECEIVED

For both one-of-a-kind and repetitive tasks, the supervisor makes specific assignments that are accompanied by clear, detailed, and specific instructions. Incumbents work as instructed and consult with the supervisor.

SUPERVISION GIVEN

Does not supervise.

ESSENTIAL DUTIES AND RESPONSIBILITIES

1. Inspect HVAC&R systems, installations, alterations, and repairs for compliance with all applicable codes, regulations, and safety standards.
2. Review plans, specifications, and other construction documents prepared by architects, mechanical engineers, and others to ensure that they meet established codes, regulations, and safety standards.
3. Assist property owners in maintaining or bringing their properties into full compliance with all applicable codes, regulations, and safety standards.
4. Determine conformance problems, issue notices regarding correction of defective work, and perform re-inspection as necessary.
5. Issue citations or orders to stop work as necessary.
6. Approve final inspections as appropriate.
7. Maintain computerized records of inspections made and actions taken and write and prepare forms and reports.
8. Consult with the designated municipal Building Official, other division staff, and external regulatory agencies when necessary.
9. Serve as a technical expert, conduct presentations, and provide information to other City divisions, contractors, engineers, architects and the public regarding codes, ordinances, and proper methods governing HVAC&R work.
10. Coordinate with the City Fire Marshal for inspection and testing of commercial kitchen hood fire suppression systems.
11. Coordinate with construction project managers and supervisors, design professionals, owners, and developers to coordinate inspections, required documentation, and project schedules.
12. Coordinate with inspectors from other disciplines and well as with plans examiners to ensure, timely, efficient, thorough inspections, and documentation through the construction process.
13. Use plan review software and permitting technology to review plans, document work, and research permit history.
14. Attend and participate in division meetings, and serve as a member of the Construction Services and Inspections team.
15. Attend training sessions, some involving overnight travel, and review technical and professional literature to upgrade knowledge necessary for effective job performance and to keep abreast of new developments and requirements.
16. Coordinate work with inspectors from other trades and personnel from other City departments.
17. Be an effective team member by exhibiting self-motivation, supporting other employees in handling tasks, interacting effectively and respectfully with others, showing a desire to contribute

to the team effort, accepting assignments willingly, and completing tasks within agreed upon timelines.

18. Other duties may be assigned.

JOB REQUIREMENTS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed are representative of the knowledge, skills, and abilities required.

1. Education & Experience Requirements
 - A. A minimum of six (6) years of experience in HVAC&R construction; OR equivalent training and experience; and
 - B. Accumulation of the minimum required points for application as a Minnesota State Certified Building Official-Limited (see MR 1301.0300) within one (1) year of employment.
 - C. Preferred – Completion of HVAC apprenticeship, building inspection technology courses, national model building code certification, or post-secondary coursework in building design, construction, or management.
2. License Requirements
 - A. Possess and maintain a valid Minnesota Class D driver's license or privilege.
3. Knowledge Requirements
 - A. Expert knowledge of Minnesota Building Code, especially the Mechanical and Energy Codes, and other related codes, ordinances, laws, regulations, and manuals governing HVAC&R work.
 - B. Knowledge of construction documents for reviewing HVAC plans.
 - C. Knowledge of communication methods and technology for reviewing plans and writing clear plan review comments.
 - D. Extensive knowledge of safe and proper methods of HVAC&R systems installation and repair.
 - E. Knowledge of proper inspection methods and procedures.
 - F. Knowledge of legal procedures involved in the enforcement of HVAC&R systems codes and ordinances.
 - G. Knowledge of math for the purpose of measuring and computing construction costs.
 - H. Knowledge of traffic rules and regulations.
 - I. Knowledge of precautionary, safety, and fire prevention methods involved in HVAC&R systems.
 - J. Knowledge of the fundamentals of heating, ventilation, and electricity as they relate to HVAC&R systems.
 - K. Knowledge of simple algebra, geometry, physics, and chemistry as applied to HVAC&R systems.
 - L. Knowledge of code requirements and inspection methods in other trade areas.
 - M. Knowledge of problem-solving and conflict-resolution techniques.
 - N. Knowledge of applicable safety requirements.
 - O. Knowledge of, or the ability to learn, City policies and procedures.
4. Skill Requirements
 - A. Skill in inspecting HVAC&R systems for adherence to regulations, requirements, ordinances, and procedures.
 - B. Skill in reading and interpreting construction documents and technical codes and ordinances.
 - C. Skill in reviewing plans and communicating deficiencies in mechanical system design and installation.
 - D. Skill in assisting the architects and mechanical engineers in understanding required design and installation requirements.
 - E. Skill in coordinating with other inspection and construction disciplines and trades.

- F. Skill in estimating construction costs, including materials and labor, and completion schedules.
 - G. Skill in the operation of office equipment including, but not limited to, general computer systems, job required software applications, the internet, and modern office equipment.
 - H. Skill in managing one's own time.
 - I. Skill in completing assignments accurately and with attention to detail.
5. Ability Requirements
- A. Ability to establish and maintain effective working relationships with contractors and the general public.
 - B. Ability to read and write reports regarding inspections and permits.
 - C. Ability to maintain accurate and complete records.
 - D. Ability to effectively communicate with individuals and groups, both verbally and in writing.
 - E. Ability to transport oneself to, from, and around various worksites.
 - F. Ability to participate in training to update HVAC&R knowledge and expertise.
 - G. Ability to interpret safety rules and apply them to various hazardous situations.
 - H. Ability to review mechanical plans.
 - I. Ability to read, understand, and discuss building codes and other regulations.
 - J. Ability to apply complex technical regulations to details of construction to determine compliance.
 - K. Ability to observe construction work and conditions in buildings and exterior sites.
 - L. Ability to understand building, energy, and mechanical code requirements.
 - M. Ability to use technology for reviews, documentation, and research.
 - N. Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work practices, and developing trusting work relationships.
 - O. Ability to communicate and interact effectively with members of the public.
 - P. Ability to communicate effectively both orally and in writing.
 - Q. Ability to understand and follow instructions.
 - R. Ability to problem-solve a variety of situations.
 - S. Ability to set priorities and complete assignments on time.
 - T. Ability to attend work as scheduled and/or required.

Physical Demands

The work requires some physical exertion such as long periods of standing; walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; recurring lifting of moderately heavy items such as record boxes. The work may require specific, but common, physical characteristics and abilities such as above.

Work Environment

The work environment involves moderate risks or discomforts requiring special safety precautions (e.g., working around moving parts, carts, or machines, or with contagious diseases or irritant chemicals). Employees may be required to use protective clothing or gear such as masks, gowns, coats, boots, goggles, gloves, or shields.

HR: CK	Union: Basic	EEOC: Technicians	CSB:	Class No: 5103
WC: 9410	Pay:	EEOF: Housing	CC:	Resolution:

HEATING, VENTILATION, AIR CONDITIONING & REFRIGERATION (HVAC&R) INSPECTOR

Summary/Purpose:

Conduct inspections, review permits before approval, and provide technical assistance for commercial, industrial, and residential construction, remodeling, and building projects.

This position is the primary customer contact for technical and safety issues with existing or planned HVAC&R systems.

HVAC&R Inspector

SUMMARY/PURPOSE

To protect the community, property, and first responders from hazard, injury, and destruction by ensuring that mechanical systems are designed and installed in accordance with the Minnesota Building Code and other regulations. Under the authority of the Minnesota State Building Code and the Building Official, oversee the work of HVAC equipment installers, sheet metal workers, and homeowners in the City of Duluth through inspection of all HVAC&R installations. Review permit applications and plans. Verify contractors are licensed in accordance with Minnesota licensing and bonding regulations. Provide mechanical-code-related technical expertise to the Construction Services & Inspections team, contractors, engineers, and others.

SUPERVISION RECEIVED

For both one-of-a-kind and repetitive tasks, the supervisor makes specific assignments that are accompanied by clear, detailed, and specific instructions. Incumbents work as instructed and consult with the supervisor.

SUPERVISION GIVEN

Does not supervise.

ESSENTIAL DUTIES AND RESPONSIBILITIES (other duties may be assigned):

- ~~1. Review diagrams, prepared plans, and specifications to ensure that they meet established codes, regulations, and safety standards.~~
1. 2-Inspect HVAC&R systems, installations, alterations, and repair/repairs for compliance with all applicable codes, regulations, and safety standards.
2. 3-Review plans, specifications, and other construction documents prepared by architects, mechanical engineers, and others to ensure that they meet established codes, regulations, and safety standards.
3. Assist property owners in maintaining or bringing their properties into full compliance with all applicable codes, regulations, and safety standards.
4. 4-Determine conformance problems, issue notices regarding correction of defective work, and perform re-inspection as necessary.
5. 5-Issue citations or orders to stop work as necessary.
6. 6-Approve final inspection/inspections as appropriate.
7. 7-Maintain computerized records of inspections made and actions taken and write and prepare forms and reports.
8. 8-Consult with the designated municipal Building Official, other division staff, and external regulatory agencies when necessary.
9. 9-Serve as a technical expert, conduct presentations, and provide information to other City divisions, contractors, engineers, architects and the public regarding codes, ordinances, and proper methods governing HVAC&R work.
10. Coordinate with the City Fire Marshal for inspection and testing of commercial kitchen hood fire suppression systems.

11. Coordinate with construction project managers and supervisors, design professionals, owners, and developers to coordinate inspections, required documentation, and project schedules.
12. Coordinate with inspectors from other disciplines and well as with plans examiners to ensure, timely, efficient, thorough inspections, and documentation through the construction process.
13. Use plan review software and permitting technology to review plans, document work, and research permit history.
14. Attend and participate in division meetings, and serve as a member of the Construction Services and Inspections team.
15. Attend training sessions, some involving overnight travel, and review technical and professional literature to upgrade knowledge necessary for effective job performance and to keep abreast of new developments and requirements.
16. Coordinate work with inspectors from other trades and personnel from other City departments.
17. Be an effective team member by exhibiting self-motivation, supporting other employees in handling tasks, interacting effectively and respectfully with others, showing a desire to contribute to the team effort, accepting assignments willingly, and completing tasks within agreed upon timelines.
18. Other duties may be assigned.

JOB REQUIREMENTS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skills, and abilities required.

1. 4. Education and Experience Requirements:

- A. ~~Five (5)~~ A minimum of six (6) years verifiable full-time of experience working within HVAC&R system installation and repair; or
- B. ~~A degree in Mechanical Engineering or related field plus two (2) years verifiable full-time experience working with HVAC&R system installation and repair; or~~
- C. ~~A combination of education and experience considered construction; OR equivalent by Human Resources training and experience; and~~
- B. 2. Accumulation of the minimum required points for application as a Minnesota State Certified Building Official-Limited (see MR 1301.0300) within one (1) year of employment.
- C. Preferred – Completion of HVAC apprenticeship, building inspection technology courses, national model building code certification, or post-secondary coursework in building design, construction, or management.

2. License Requirement: Requirements

- A. ~~A. Possession of Possess and maintain a valid Minnesota driver's Class D driver's license or equivalent privilege.~~

3. 3. Knowledge Requirements:

- A. ~~A. Extensive Expert knowledge of Minnesota Building Code, especially the Mechanical and Energy Codes, and other related codes, ordinances, laws, regulations, and manuals governing HVAC&R work.~~
- B. ~~B. Knowledge of construction documents for reviewing HVAC plans.~~
- C. Knowledge of communication methods and technology for reviewing plans and writing clear plan review comments.
- D. Extensive knowledge of safe and proper methods of HVAC&R systems installation, and repair.
- E. ~~C. Knowledge of proper inspection methods and procedures.~~
- F. ~~D. Knowledge of legal procedures involved in the enforcement of HVAC&R systems codes and ordinances.~~

- G. — E. — Knowledge of math for the purpose of measuring and computing construction costs.
 - H. — F. — Knowledge of traffic rules and regulations.
 - I. — G. — Knowledge of precautionary, safety, and fire prevention methods involved in HVAC&R systems.
 - J. — H. — Knowledge of the fundamentals of heating, ventilation, and electricity as they relate to HVAC&R systems.
 - K. — I. — Knowledge of simple algebra, geometry, physics, and chemistry as applied to HVAC&R systems.
 - L. — J. — Knowledge of code requirements and inspection methods in other trade areas.
- M. 4. — Knowledge of problem-solving and conflict-resolution techniques.
- N. Knowledge of applicable safety requirements.
- O. Knowledge of, or the ability to learn, City policies and procedures.

4. Skill Requirements:

- A. — A. — Skill in inspecting HVAC&R systems for adherence to regulations, requirements, ordinances, and procedures.
- B. — B. — Skill in reading and interpreting HVAC&R plans, specifications, blue prints, diagrams, construction documents and technical codes and ordinances.
- C. — C. — Skill in reviewing plans and communicating deficiencies in mechanical system design and installation.
- D. Skill in assisting the architects and mechanical engineers in understanding required design and installation requirements.
- E. Skill in coordinating with other inspection and construction disciplines and trades.
- F. Skill in estimating construction costs, including materials and labor, and completion schedules.
- G. 5. — Skill in the operation of office equipment including, but not limited to, general computer systems, job required software applications, the internet, and modern office equipment.
- H. Skill in managing one's own time.
- I. Skill in completing assignments accurately and with attention to detail.

5. Ability Requirements:

- A. — A. — Ability to establish and maintain effective working relationships with contractors, workers, supervisors, peers, and the general public.
- B. — B. — Ability to read and write reports regarding inspections and permits.
- C. — C. — Ability to maintain accurate and complete records.
- D. — D. — Ability to effectively communicate with individuals and groups, both verbally and in writing.
- E. — E. — Ability to transport oneself to, from, and around various work sites/worksites.
- F. — F. — Ability to participate in training to update HVAC&R knowledge and expertise.
- G. — G. — Ability to interpret safety rules and apply them to various hazardous situations.
- H. — Ability to use a computer to maintain inspection records and write reports.

6. Physical Ability Requirements:

- A. — Ability to frequently walk and climb and occasionally stoop, kneel, crouch, crawl, and reach overhead in order to conduct inspections inside and outside of buildings.
- B. — Ability to occasionally lift and carry up to 40 pounds such as ladders for conducting overhead inspections.
- H. — C. — Ability to review mechanical plans.
- I. Ability to read, understand, and discuss building codes and other regulations.

- J. Ability to apply complex technical regulations to details of construction to determine compliance.
- K. Ability to observe construction work and conditions in buildings and exterior sites.
- L. Ability to understand building, energy, and mechanical code requirements.
- M. Ability to use technology for reviews, documentation, and research.
- N. Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work outside in inclement weather practices, and developing trusting work relationships.
- O. — D. — Ability to communicate and interact effectively with members of the public.
- P. Ability to communicate effectively both orally and in writing.
- Q. Ability to understand and follow instructions.
- R. Ability to problem-solve a variety of situations.
- S. Ability to set priorities and complete assignments on time.
- T. Ability to attend work on a regular basis as scheduled and/or required.

Physical Demands

The work requires some physical exertion such as long periods of standing; walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; recurring lifting of moderately heavy items such as record boxes. The work may require specific, but common, physical characteristics and abilities such as above.

Work Environment

The work environment involves moderate risks or discomforts requiring special safety precautions (e.g., working around moving parts, carts, or machines, or with contagious diseases or irritant chemicals). Employees may be required to use protective clothing or gear such as masks, gowns, coats, boots, goggles, gloves, or shields.

HR: <u>CTCK</u>	Union: Basic	EEOC: Technicians	CSB: <u>20121002</u>	Class No: 5103
WC: 9410	Pay: <u>34</u>	EEOF: Housing	CC: <u>20121008</u>	Resolution: <u>42-0516R</u>