General Statement of Duties

Performs full performance skilled trades level work in the maintenance, repair, and installation of a variety of HVAC equipment requiring journey level certification in a skilled trades area such as heating and ventilating, air conditioning and refrigeration, stationary engineering, steam fitting, and/or steam and hot water.

Distinguishing Characteristics

This class is responsible for maintaining the heating and cooling systems for buildings, theaters, and sports arenas, etc. This class is distinguished from Facility Maintenance Technician. Positions in the Facility Maintenance Technician class do not require trades licenses or certifications. It is also distinguished from Heating, Ventilating and Air Conditioning Supervisor, which has full supervisory responsibilities and duties.

This class is distinguished from Electrician and Plumber. Positions in these classes require journey level certification in those trade specialty areas. It is also distinguished from Master Trades Worker, which performs full performance licensed skilled trades maintenance, repair, and/or installation work in at least two distinctly different skilled trades areas, requiring multiple journey licenses and/or certifications, or pulls permits for an agency or department.

Guidelines, Difficulty and Decision-Making Level

Guidelines are generally but not always clearly applicable, requiring the employee to exercise judgment in selecting the most pertinent guideline, interpret precedents, adapt standard practices to differing situations, and recommend alternative actions in situations without precedent.

Duties assigned are generally complex and may be of substantial intricacy. Work assignment is performed within an established framework under general instructions but requires simultaneous coordination of assigned functions or projects in various stages of completion.

Employee is responsible for determining time, place, and sequence of actions to be taken. Unusual problems or proposed deviations from guidelines, practices, or precedents may be discussed with the supervisor before being initiated.

Level of Supervision Received & Quality Review

Under general supervision, the employee receives assignments and is expected to carry them through to completion with substantial independence. Work is reviewed for adherence to instructions, accuracy, completeness, and conformance to standard practice or precedent. Recurring work clearly covered by guidelines may or may not be reviewed.

Interpersonal Communication & Purpose

Contacts with the public or employees where explanatory or interpretive information is exchanged, defended, and gathered and discretion and judgment are required within the parameters of the job function.

Level of Supervision Exercised

By position performs lead work.
Essential Duties

Inspects facilities and equipment to determine installation, alteration, maintenance, and repair needs as permitted by the appropriate HVAC certification.

Installs, maintains, and repairs equipment and machinery which may include some fabrication.

Operates, maintains, and repairs high/low pressure steam/hot water boilers, pumping units vacuum pumps, boiler feed pumps and auxiliary equipment.

Operates, maintains, replaces, and repairs commercial/industrial refrigeration and air conditioning systems, controls, and related equipment.

Installs, replaces, and repairs forced air heating and duct work.

Programs and updates automatic building system controls.

Prepares working sketches and works from blueprints.

Assists in the maintenance and repair work in a variety of other skilled trades areas.

Plans and coordinates installation, maintenance, and repair work with other trades areas.

Operates and maintains tools and equipment common to various skilled trades.

Performs general plant and building maintenance repair.

Maintains records and prepares reports; and, estimates materials, labor, and equipment costs.

Observes all common safety practices.

By position, participates in snow removal duties.

Performs other related duties as assigned or requested.

Any one position may not include all of the duties listed. However, the allocation of positions will be determined by the amount of time spent in performing the essential duties listed above.

Competencies

Mathematical Reasoning – Understanding of basic math that will be used on the job including counting, adding, subtracting, and multiplying.

Technical Competence – Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one’s job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Oral Communication - Expresses information to individuals or groups effectively; taking into account the audience and nature of the information; makes clear and convincing oral presentations; listens to others, attends to nonverbal cues and responds appropriately.

Reading – Understands and interprets written material, including technical materials, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.
Technical Problem Solving – Troubleshoots, diagnoses, analyzes, and identifies systems malfunctions to determine the source and cause of the problem.

Written Communication – Composes, reviews, edits, and issues written materials for diverse audiences and communicates purpose in a succinct and organized manner that is appropriate for context, time, and place.

**Knowledge & Skills**

Knowledge of engineering concepts, principles, and practices, and of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications.

Knowledge of principles and methods for operating industrial equipment.

Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings.

Knowledge of machines and tools, including their designs, installation, uses, repair, and maintenance.

Knowledge of developing, producing, understanding, and using plans, blueprints, models, and maps, including the use of tools and instruments to produce precision technical drawings.

Knowledge of electronic theory, circuits, components, and material properties (excluding computers).

Knowledge of safety hazards and necessary safety precautions sufficient to be able to establish a safe work environment for self and others.

**Education Requirement**

Graduation from high school or the possession of a GED, HiSET or TASC Certificate.

**Experience Requirement**

Completion of the length and type of work experience required for certification by the City and County of Denver as a Heating and Ventilating Journeyman, Refrigeration Journeyman or Stationary Engineer.

**Education & Experience Equivalency**

No substitution of experience for education is permitted.

**Licensure & Certification**

This job requires driving. Requires a valid Driver’s License at the time of application.

By position, requires a valid Commercial Driver's License (CDL "B") with appropriate endorsements by the end of probation.

Possession prior to the end of the probationary period of at least one of the following certificates issued by the City and County of Denver: Heating and Ventilating Journeyman, Refrigeration Journeyman or Stationary Engineer.

By position, may require more than one certification.

Licenses and certifications must be kept current as a condition of employment.

**Working Environment**

Exposure to extreme temperature changes.
Noise: sufficient noise to cause distraction or possible hearing loss
Exposure to hazardous conditions where there is danger to life, body, and/or health.
Exposure to a variety of electro-mechanical hazards.
Exposure to hazards from electro/mechanical/power equipment.
Subject to burns and cuts.
Exposed to hazards from electrical/mechanical/power equipment
Subject to varying and unpredictable situations.
Atmospheric Conditions: conditions that affect the skin, eyes or respiratory system
Exposed to dust.
Exposed to cold temperatures, cold enough to cause bodily discomfort
Exposed to heat temperatures, hot enough to cause bodily discomfort
Exposed to hazardous conditions where there is danger to life, body, and/or health
Exposed to hazards of steam and heat
Exposed to humid conditions with high moisture content to cause bodily reactions
Exposed to housekeeping/cleaning agents/chemicals
Exposed to temperature changes: variations in temperature from hot to cold
Exposed to toxic chemicals.
Exposure due to soil, plants, and insects
Handles emergency or crisis situations
Occasional pressure due to multiple calls and inquiries
Personal Safety: aware of surroundings, people, and events
Subject to burns and cuts
Subject to hazards of flammable or explosive gases
Subject to injury from moving parts of equipment or vehicles
Subject to long, irregular hours
Subject to pressure for multiple calls, inquiries, and interruptions
Works in confined, uncomfortable or awkward locations.
Subject to precarious or high locations
Subject to: vibrations and strain on the body to cause bodily harm if endured daily
Temperature Changes: Variations in temperature from hot to cold when works in the field.
Wet: frequent contact with water, liquid, chemicals, or sanitary sewage.

Level of Physical Demand

4-Heavy (50-100 lbs.)

Physical Demands

(Physical Demands are a general guide and specific positions will vary based on working conditions, locations, and agency/department needs.):

Standing: remaining on one's feet in an upright position.
Walking: moving about on foot on uneven surfaces
Sitting: remaining in the normal seated position.
Carrying: transporting an object, usually by hand, arm, or shoulder.
Pushing: exerting force upon an object so that the object is moving away from the person.
Pulling: exerting force upon an object so that the object is moving toward the person.
Balancing: maintaining body equilibrium to prevent falling over.
Stooping: bending the body by bending spine at the waist.
Fingering: picking, pinching, or otherwise working with the fingers.
Talking: expressing or exchanging ideas by means of spoken words.
Hearing: perceiving the nature of sounds by the ear.
Repetitive Motions: making frequent movements with a part of the body.
Eye/Hand/Foot Coordination: performing work through the use of two or more.
Vision Far acuity: ability to see clearly at 20 feet or more
Vision Near acuity: ability to see clearly at 20 inches or less.
Depth Perception: ability to judge distance and space relationships.
Field of Vision: ability to see peripherally.
Field of Vision: ability to adjust vision to bring objects into focus
Color Vision: ability to distinguish and identify different colors.
Lifting: raising or lowering objects weighing no more than 100 pounds, from one level to another.
Depth Perception: ability to judge distances and space relationships
Mental Demands: mathematical reasoning, memorization, oral comprehension, spatial orientation, and written comprehension
Neck Flexion: Moving neck upward/downward
Physical Strength: exerts maximum muscle force to lift, push, pull, or carry objects and performs moderately laboring work.
Agility: bends, stretches, twists, or reaches out with the body, arms, or legs.

**Background Check Requirement**

Criminal Check
Employment Verification
By position, Motor Vehicle Record

**Assessment Requirement**

None

**Probation Period**

Six (6) months.

**Class Detail**

Pay Grade: J-619
FLSA Code: N
Management Level: 10
Established Date: 9/21/2018
Established By: Lori Schumann
Revised Date: 1/23/19
Revised By: Blair Malloy
Class History:

01/23/19 - Revised license and certification section.