

Senior HVAC Systems Technician Tompkins County

Department: Facilities

Classification: Competitive

Labor Grade: Blue Collar Grade 14

Approved: 11/2021

By: RP, Commissioner of Human Resources

PROMOTIONAL QUALIFICATIONS:

Employees who currently hold, and have continuously held, at least two years of permanent competitive class status in the title of HVAC Systems Technician or any other title as determined by the Commissioner of Human Resources, will be eligible to participate in a promotional examination to the Senior HVAC Systems Technician. Depending on the size of the agency, municipality or department, this may be a non-competitive promotion situation, in accordance with Section 52-7 of the New York State Civil Service law. Otherwise, the examination and resulting eligible list will be "Intergovernmental promotion with preference to the employee of the department or agency to which appointment is being made" in accordance with Section 52-4 of the law.

MINIMUM QUALIFICATIONS:

- a) Graduation from a regionally accredited or New York State registered two-year college or university, or technical school with an Associate's Degree or certificate in air-conditioning, heating, and refrigeration technology or a closely related field **AND** five (5) years of full-time paid experience in the installation, maintenance, repair, and operation of complex commercial, industrial, and/or institutional HVAC, plumbing, electrical, and controls systems, six (6) months of which must have been in a supervisory capacity; **OR**
- b) Graduation from high school or possession of a high school equivalency diploma plus completion of an apprentice program and possession of journeyman certification* **AND** seven (7) years of full-time paid experience in the installation, maintenance, repair, and operation of complex commercial, industrial, and/or institutional HVAC, plumbing, electrical, and controls systems, six (6) months of which must have been in a supervisory capacity; **OR**
- c) Any combination of training and experience equal to or greater than that described in (a) and (b) above as determined by the Commissioner of Human Resources .

SPECIAL REQUIREMENTS:

1. The applicant must possess a valid NYS Driver's License with a good driving record at the time of application and maintain such license for the duration of employment.
2. Candidate should possess a record of on-going training and a Universal EPA CFC certification at time of appointment.
3. Possession of Boiler Certificate within one year of appointment.

NOTE:

* Five years of hands-on experience in the HVAC field will be considered equivalent to the journey level of experience specified in (b) above. This means that an applicant who does not have Journey level certification must have at least twelve (12) years of experience in the field, with at least six (6) months of the experience being supervisory.

Tompkins County is committed to Equity and Inclusion. We encourage others with similar values to apply.

DISTINGUISHING FEATURES OF THE CLASS:

This is a senior level skilled position in which the incumbent performs supervision and training over HVAC Technicians and entry level HVAC Staff involving the operation and maintenance of heating, ventilating and air conditioning (HVAC) equipment at County facilities. This is a highly skilled technical service position in which the incumbent installs, repairs, maintains, and operates all HVAC, plumbing, controls, electrical, and related systems located in County-owned buildings to insure efficient and

reliable operation. Employees of this class work on minor or major repairs, installations and maintenance projects. The work is performed under the general supervision of the Deputy Director of Facilities with wide leeway allowed for independent judgment and decision making. Direct supervision is exercised over the work of HVAC Systems Technicians, maintenance personnel, cleaning personnel, laborers, contractors, or others in the accomplishment of mechanical, plumbing, and/or control systems projects. The incumbent will perform other maintenance-related work as required.

TYPICAL WORK ACTIVITIES:

- Supervises and trains HVAC Technicians and entry level HVAC staff;
- Works with design professionals on facility renovation and new building projects to insure constructability of design and compliance of HVAC systems with County standards;
- Installs, maintains, repairs, troubleshoots, and/or operates boilers, chillers, cooling towers, air conditioning systems, air handling systems, heat pumps, variable air volume systems, ventilation systems, ductwork, heat exchangers, air compressors, motors, pumps, control systems (pneumatic & direct digital control), computer hardware for control systems and all other associated HVAC equipment and components;
- Installs, maintains, repairs, troubleshoots plumbing systems including, but not limited to, storm water, sanitary drainage, water supply and natural gas piping systems, plumbing fixtures, automatic sprinkler systems, backflow prevention devices, and other associated systems;
- May install, maintain, repair, and troubleshoot a variety of electrical equipment including, but not limited to, generators, switchboards, panelboards, disconnects, signal equipment, storage battery systems, lighting circuits, lighting fixtures, and associated equipment;
- Repairs steam, water, glycol, and refrigerant leaks on piping, valves, fittings, coils, etc.;
- Evacuates and recharges refrigerant in HVAC equipment;
- Monitors Building Automation System (BAS) control stations, responds to alarms, and revises BAS controls points as needed;
- Updates and maintains computerized maintenance management system (CMMS) for all systems and equipment under the employee's charge;
- Commissions HVAC, plumbing, controls, and other building related systems prior to occupancy;
- Calibrates and adjusts pump controls, thermostats, sensors, damper motors, actuators, energy management panels, belts, and motors to adequately maintain building comfort levels throughout the heating and cooling seasons;
- Performs preventive maintenance to HVAC systems and auxiliary equipment by lubricating, changing oil, filters, belts, bearings, couplings, etc.;
- Responds to maintenance work requests and customer complaints and inquiries;
- Investigates and recommends new techniques for installations and repairs;
- Identifies, suggests, and implements energy conservation measures;
- Tests and treats water used in air conditioning and boiler systems in order to prevent growth of fungi and bacteria, and to control corrosion;
- Unclogs sinks, toilets, floor drains, roof vents, and piping using drain cleaning machines;
- Maintains appropriate records, reports, operating logs, and documents for all mechanical, plumbing, and controls equipment and systems under the employee's charge;
- Interprets mechanical and electrical schematics as needed;
- Takes the lead in planning and scheduling major preventive maintenance projects and repairs for building mechanical, plumbing, electrical, and control systems and equipment;
- Takes the lead in planning, coordinating, or supervising the work of maintenance or cleaning personnel, mechanical or plumbing contractors, or other trades when required in the completion of projects under the employee's charge;
- Assists in conducting, and/or oversees training activities concerning preventive maintenance, and HVAC, plumbing, and controls equipment operation & maintenance;
- Assists in conducting periodic inspections of the condition of building mechanical, plumbing, controls, and electrical systems to ascertain maintenance needs and to make recommendations for capital improvement projects and/or major repair, replacement, or renovation projects;
- Leads the preparation of work schedules and estimates of cost, material, equipment, and resources for minor and major installation, maintenance, and repair projects for approval by Deputy Director;
- Assists in providing information on maintenance work to be performed and may assist in the preparation of an annual budget for maintenance activities related to mechanical, plumbing, and control systems;
- Balances water and air systems;
- Acquires and maintains licenses or special knowledge to maintain specialized equipment as required;
- Performs on-call duties as needed, responding to system emergencies after hours and on weekends;
- Required to access crawl spaces, attics, mechanical rooms, tunnels, pits, sub basements, and confined and isolated areas;
- Maintains hand tools and other diagnostic equipment needed to perform job duties;
- Maintains shop, tools, and parts inventory and makes needs known to appropriate staff;

- May operate equipment for snow removal and grounds maintenance;
- Performs other duties and responsibilities as assigned;

KNOWLEDGE, SKILLS, ABILITIES, AND PERSONAL CHARACTERISTICS:

- Thorough knowledge of the installation, repair, maintenance, and operation of HVAC, plumbing, controls, and related systems;
- Thorough knowledge of the principles, practices, terminology, and safety precautions used in the operation and maintenance of large complex HVAC and plumbing systems, auxiliary equipment and controls;
- Good knowledge of the methods, materials, and diagnostic tools and equipment used in the operation, maintenance, and testing of large complex HVAC and plumbing systems, auxiliary equipment and controls;
- Good knowledge of refrigerant usage and safe storage practices;
- Good knowledge of the practices, tools, and terminology of the electrical, carpentry, and painting trades;
- Good knowledge of the use of computer programs including Johnson Control Metasys, JC Open Blue, MS Word and Excel;
- Working knowledge of code, life safety, and indoor air quality issues as it relates to HVAC and plumbing work;
- Working knowledge of CMMS, and BAS applications;
- Ability to plan, coordinate, and supervise the work of others and provide training as directed;
- Ability to analyze, diagnose, troubleshoot, and problem solve complex technical problems, and develop solutions to problems as they arise;
- Ability to effectively service multiple sites and projects concurrently;
- Ability to re-prioritize workload to accommodate schedules and other emergencies;
- Ability to understand and carry out oral and written directions;
- Ability to read and interpret technical manuals, wiring and piping schematics, mechanical and architectural plans, and specifications;
- Ability to work cooperatively and effectively with management and staff of the various county departments, service providers, vendors, and to deal with service requests courteously, tactfully, and professionally;
- Willingness to respond to emergencies;
- Ability to use video display terminals to manage and update building operating systems (i.e., BAS);
- Ability to develop and maintain cost, inventory, maintenance, equipment, and work order records using computer programs (i.e., Excel, Infor);
- Ability to work under adverse conditions - risk exposure to asbestos, toxic vapors, heat, cold, height, and accumulated dust;
- Dependability, initiative, resourcefulness, and good judgment are required;
- Physical condition commensurate with the demands of the position (i.e., ability to lift 70 lbs.);
- Ability to ascend and descend heights (i.e., climb stairs and ladders, personnel lifts, etc.) and have agility and freedom of movement;
- Ability to move easily in confined spaces. Must be able to wear a respirator;
- Ability to add, subtract, multiply, and divide as used in mathematical formulas;
- Possess strong customer service skills;
- Possess a working knowledge of computers;

PHYSICAL, MENTAL AND ENVIRONMENTAL DEMANDS:

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. While performing the duties of this job, the employee is frequently required to sit, use hands to keyboard, handle, or feel objects, manipulate tools, or controls, and reach with hands and arms. The employee is required to see, walk, talk and hear. The work requires considerable physical effort such as prolonged crouching or crawling in cramped spaces, digging or frequent lifting of heavy objects (like heavy equipment or materials). The employee must be able to lift and/or move up to 70 pounds. Due to extensive computer usage, the job requires considerable visual effort. Vision abilities required by this job include close vision and the ability to adjust focus to a mid-range. Machines, tools, instruments or equipment in use require high precision, manual dexterity and/or operating knowledge and skill. The employee's physical and mental condition shall be commensurate with demands of the position, either with or without reasonable accommodation. Psychological demands are moderate for this position. Considerable interpersonal skills are necessary in order to create connections, obtain buy-in, cooperation with community agencies, municipalities and throughout the organization. Internal contacts may include work with elected officials, department heads or deputies and will require professional collaboration on overlapping projects. External contacts are with professional associates, liaisons, community groups and involve the development of professional networks. The work involves considerable risk of moderate injury or illness or some risk of serious injury or illness. Work environment has considerable exposure to disagreeable conditions. The incumbent will perform all related duties as required.

Originally created 11/21

S173