

## **CITY OF ST. LOUIS CLASSIFICATION SPECIFICATION**

### **CLASSIFICATION**

**TITLE:** Mechanical Engineer (Senior)

**CLASS CODE:** 4272

### **GENERAL DESCRIPTION OF DUTIES:**

Incumbents in this classification serve as the chief mechanical design engineer of HVAC systems for the City of St. Louis. Incumbents administer contracts with consultants on mechanical and electrical projects.

### **DISTINGUISHING CHARACTERISTICS:**

This is a journey/advanced-level technical classification in the General Engineering Series – Mechanical Engineering Group job family within the City of St. Louis. Incumbents within this classification perform complex duties with a variety of related tasks. The distinguishing characteristics of this classification within the series include serving as chief mechanical design engineer for HVAC systems.

Incumbents work under general direction. They are generally in charge of an organizational unit, plan and carry out assignments with considerable independence, and have some latitude in developing procedures and methods. Supervision is given by occasional conferences.

### **EXAMPLES OF WORK (Illustrative Only):**

***(The list of duties is intended to be representative of the duties performed in positions within this classification. It does not include all the duties that may be assigned to a position and is not necessarily descriptive of any one position in this class.)***

Designs HVAC systems; documents HVAC design procedures; performs AutoCAD drafting.

Administers contracts of mechanical and electrical consultants; approves or returns consultant's specifications; monitors project completion and quality.

Confers with clients prior to and during project and documents such meetings; performs a visual inspection at client's site to assess current conditions and equipment.

Selects equipment; monitors cost timeliness and quality of projects.

Responds to technical questions from other city departments.

Types memos and specifications.

Performs other duties as assigned.

## **KNOWLEDGE, SKILLS AND ABILITIES:**

### **Data Utilization:**

Requires the ability to perform mid to upper-level data analysis including the ability to coordinate, strategize, systemize and correlate, using discretion in determining time, place and/or sequence of operations within an organizational framework. Requires the ability to implement decisions based on such data, and overseeing the execution of these decisions.

### **Human Interaction:**

Requires the ability to provide guidance, assistance and/or interpretation to others, such as co-workers and the public, on how to apply policies, procedures and standards to specific situations.

### **Equipment, Machinery, Tools and Materials Use:**

Requires the ability to operate, calibrate, tune and synchronize, and perform complex rapid adjustment on equipment, machinery and tools such as a motor vehicle, personal computer, CAD, and/or related materials used in performing essential functions.

### **Verbal Aptitude:**

Requires the ability to utilize a variety of reference, descriptive and advisory data and information such as specifications, building plans, pay estimates, ordinances, and non-routine correspondence.

### **Mathematical Aptitude:**

Requires the ability to apply advanced algebra, geometry and trigonometry concepts; requires the ability to apply integral and differential calculus techniques including linear programming; requires the ability to apply advanced statistical inference and interpret descriptive statistics.

### **Functional Reasoning:**

Requires the ability to apply principles of logical or synthesis functions involving planning and directing of interrelated activities or multiple departments. Ability to deal with several concrete and abstract variables in working out approaches to major problems.

### **Situational Reasoning:**

Requires the ability to exercise the judgment, decisiveness and creativity required in situations involving the evaluation of information against sensory, judgmental and/or subjective criteria, as opposed to criteria that are clearly measurable or verifiable.

### **Environmental Factors:**

Tasks may risk exposure to adverse environmental conditions, such as dirt, dust, odors, humidity, fumes, temperature and noise extremes, machinery, vibrations, electric currents, traffic hazards, toxic agents, or pathogenic substances.

**Physical Requirements:**

Requires the ability to lift, carry, push, and pull moderately heavy objects and materials, twenty to fifty pounds; and may occasionally involve objects and materials up to 100 pounds, such as moving furniture and equipment to expose existing equipment.

Tasks involve the ability to exert regular and sustained heavy physical effort with an emphasis on climbing and balancing which also involves stooping, kneeling, crouching and crawling to inspect existing equipment.

**Sensory Requirements:**

Requires the ability to recognize and identify degrees of similarities or differences between characteristics of colors, shapes, sounds, tastes, odors and textures associated with job-related objects, materials and tasks, such as assessing water or checking ventilation.

The City of St. Louis is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, the City of St. Louis will provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the City.