



Engineering Associate

General Class Purpose

The Engineering Associate does entry-level to intermediate engineering work in support of a variety of public works projects. Employees work in an office or field setting. Employees apply engineering theory to solve design, maintenance, or construction problems affecting the City's infrastructure and private development. They manage small projects from inception to completion or contribute to portions of a large project.

Distinguishing Features

This is the entry-level classification in the professional engineering series. Employees work within a framework of established standards and procedures. The supervisor assigns duties to broaden the employee's breadth of knowledge and prepare her or him for advancement to the next higher classification level. Upon gaining the required knowledge and experience, employees may be assigned to the Engineer 1 classification.

Supervision Received and Exercised

The Engineering Associate works under the general supervision of a higher-level engineer or engineering manager. The employee uses judgment to interpret and adapt guidelines such as City policies or engineering standards to specific cases or problems. The employee analyzes results and recommends changes.

Employees may give project direction to technical staff.

Examples of Essential Duties and Responsibilities

The listed examples are illustrative of the classification level and not intended to list all duties typically assigned to this classification. Employees in this classification may do all or some of the listed duties, or other related duties

1. Design infrastructure projects under the supervision of professional engineers whom routinely review work in progress or upon completion for accuracy and quality.
2. Develop project concepts using information gathered through research and investigation; perform computations; analyze the cost and benefits of projects; recommend design criteria; produce preliminary and final designs; modify designs after review from professional engineer.

3. Assist in review of engineering plans by applying engineering knowledge to verify components meet code requirement and engineering standards.
4. Assist in managing construction projects by preparing cost estimates, maintaining project schedules, coordinating actions between the City and the contractor, monitoring the progress of work, maintaining project records, recording changes and compiling reports.
5. Inspect projects, equipment installations and construction work to verify compliance with contractual stipulations and codes and statutes.
6. Review development and construction proposals for conformance with City ordinances, codes, plans and regulations; recommend changes to proposals and plans.
7. Assist in public meetings to reach consensus on solutions to neighborhood problems that impact the City's infrastructure or other public improvement projects.
8. Prepare technical reports, project specifications and correspondence.

Minimum Qualifications Upon Entry

Basic Knowledge of:

- Theories, principles, practices and methodologies of civil engineering
- Design techniques, principles, tools and instruments involved in the production and use of engineering plans, drawings and specifications
- Materials, methods and the appropriate tools to construct structures
- Structure and content of the English language including the meaning and spelling of words, rules and composition of grammar

Skill to:

- Use advanced mathematics to solve engineering problems
- Compile data and statistics and apply engineering computations to design projects
- Prepare clear and concise written reports suited to the needs of the audience
- Operate computer software typical to the engineering profession

Ability to:

- Weigh the relative costs and benefits of a potential action
- Organize, analyze, interpret and evaluate engineering problems and design solutions
- Read, understand and apply specific instructions found in technical manuals, specifications, contract plans and other guidelines
- Establish and maintain effective working relationships with coworkers and supervisory personnel
- Communicate verbally and in writing to a variety of people; answer questions; and explain technical information, regulations and decisions in an understandable manner

Experience and Education

A typical way to obtain the required knowledge, skills and abilities would be:

Education:

A Bachelor's degree from an accredited college or university with major coursework in civil engineering or a related field and;

License or Certificate:

Possession of, or ability to obtain within six months of employment a Fundamentals of Engineer Certificate (FE)*

*Note: the Department Director depending on examination schedules may grant an exception to the six-month FE requirement.

Physical and Mental Demands

The listed physical and mental demands are representative of those that must be met by an employee to successfully do the essential duties of this classification. Persons with disabilities may be able to carry out the duties with reasonable accommodation. Reasonable accommodation will be evaluated on an individual basis.

The Engineering Associate does light work requiring occasional lifting up to 20 pounds, walking for extended periods while in the field or sitting for extended periods while operating a computer. Employees occasionally reach for or handle objects and use their fingers to operate equipment such as computer keyboards. Employees regularly talk to express or exchange ideas and use their hearing to receive information through oral communication. Employees must occasionally have clear vision at 20 feet or more, and frequently must see at distances 20 inches or less. They also need the ability to judge distance and space relationships, distinguish colors and focus on objects for detail such as printed or drafted information.

Employees in this class apply principles of logical or scientific thinking to define problems, collect data, establish facts and draw valid conclusions. They must interpret an extensive variety of technical instructions in mathematical or diagrammatic form and mentally process abstract and concrete variables. Employees occasionally must work with unpleasant people in strained situations.

Work Environment

Employees work in field and office settings. Office settings involve interruptions and have controlled environmental conditions. Work in the field may involve exposure to weather, around construction activities involving noise, dust, moisture, uneven surfaces, heights and subterranean locations, and exposure to fumes or chemicals with proper safety precautions.



Approved by Human Resource Director
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