



**JULY 2016**  
**FLSA: NON-EXEMPT**

## **JUNIOR ENGINEER**

### **DEFINITION**

Under direct supervision, performs various professional field and office engineering work related to the planning, design, construction, and maintenance of the City's Capital Improvement Program (CIP), utilities, land development, public works and/or transportation infrastructure, and daily departmental operations; assists in the administration of professional services and construction contracts; assists in administering Federal and State grant funds associated with construction projects; and performs related work as required.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives direct supervision from assigned supervisory or management staff. Exercises no direct supervision over staff.

### **CLASS CHARACTERISTICS**

This is the entry-level class in the professional engineering series. Incumbents perform the less difficult and complex professional and technical engineering tasks in the following areas: the City's CIP, utilities, land development, public works and/or transportation infrastructure, and daily departmental operations, in addition to assisting with managing small to medium projects. As experience and proficiency are gained, assignments become more diverse and difficult, and incumbents exercise increased independence. Positions at this level are not expected to perform with the same independence of direction and judgment as the Assistant Engineer and Associate Engineer. This class is distinguished from the Assistant Engineer in that the latter may serve as project manager for small to medium projects, works independently, and is capable of performing the full range of professional and technical engineering work for the City.

### **EXAMPLES OF TYPICAL JOB FUNCTIONS (ILLUSTRATIVE ONLY)**

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Reviews construction and transportation reports, plans, and specifications to verify compliance with City sidewalk, transportation, public utility, and improvement requirements; checks plans for conformance with regulations regarding line, grade, size, elevation, and location of structures; reviews engineering calculations of other engineers or engineering technicians; participates in pre-design, construction, and utility coordination meetings and issues construction permits.
- Assists and participates in studies relating to the planning, design, and/or inspection of public works construction and/or transportation projects; assists in securing adequate funding from Federal and State grant programs and other funding sources; performs historical document research and review; prepares or assists in preparing plans, specifications, and cost estimates; performs or assists in performing research, map, and field studies and surveys.
- Participates in various transportation and traffic engineering studies, including compiling traffic statistics and preparing traffic diagrams; assists in engineering studies to resolve traffic problems.
- Assists with construction administration and inspection of public works projects, including coordinating work with other divisions and City departments, reviewing and inspecting work to ensure

conformance with plans and specifications, tracking and maintaining project accounting, coordinating schedules, and providing public notices of projects.

- Responds to citizen inquiries and complaints; provides information to the public at the front counter in person, via telephone, or other means of communication regarding grading, encroachment permits, right-of-way and property line information, utility information, transportation and traffic information, slope stability and groundwater issues, improvement plan check, and payment processes.
- Prepares or assists in preparing various reports and presentations, including staff reports, technical reports, and requests for proposals.
- Reviews tract and parcel maps, lot line adjustments, and other subdivision documents.
- Attends meetings, conferences, workshops, and training sessions and reviews publications and materials to become and remain current on principles, practices, and new developments in assigned work areas.
- Performs other duties as assigned.

## **QUALIFICATIONS**

### **Knowledge of**

- Basic civil and/or transportation engineering principles, techniques, policies, and procedures as applied to the planning, design, and construction of buildings, streets, parks, drainage systems, utilities, traffic signals, and other public works infrastructure.
- Basic methods, materials, and techniques used in the construction, design, extension, and maintenance of public works and transportation projects.
- Basic principles, practices, procedures, and standards related to City public works, transportation, engineering infrastructure development and maintenance, and surveying.
- Basic subdivision engineering, plan review, mapping, and construction practices.
- Engineering plan types, review practices, and permit filing and approval procedures.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Modern office practices and technology, including software programs relevant to the work performed.
- Modern developments, current literature, and sources of information regarding engineering.
- Principles of advanced mathematics and their application to engineering work.
- Practices of researching engineering and design issues and evaluating alternatives.
- Methods and techniques of effective technical report preparation and presentation.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and City staff.

### **Ability to**

- Assist and/or participate in basic civil engineering and/or transportation research projects, analyze complex problems, evaluate alternatives, make sound recommendations, and prepare effective technical reports.
- Prepare, understand, and interpret engineering construction plans and specifications.
- Interpret and apply federal, state, and local policies, procedures, laws, and regulations, technical written material, and City engineering policies and procedures.
- Read and understand technical drawings and specifications.
- Perform mathematical and engineering computations with precision.

- Make engineering design computations and check, design, and prepare engineering plans and studies.
- Maintain a variety of filing, record-keeping, and tracking systems.
- Operate modern office equipment including computer equipment and software programs relevant to the work performed.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

### **EDUCATION AND EXPERIENCE**

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be

- Equivalent to graduation from an accredited four-year college or university with major coursework in civil engineering, transportation engineering, urban planning, or a related engineering field.

### **LICENSES AND CERTIFICATIONS**

Possession of, or ability to obtain, a valid California driver's license by time of appointment.

### **PHYSICAL DEMANDS**

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect City development and traffic sites, including the possibility of traversing uneven terrain, climbing ladders, stairs, and other temporary or construction access points, to operate a motor vehicle, and to visit various City and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification although standing and walking between work areas and to conduct inspections may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

### **ENVIRONMENTAL ELEMENTS**

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may work in the field and occasionally be exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.