



# Junior/Assistant/Associate Civil Engineer

---

## Class Specification

Revised 9/23

Class ID: 750

Unit: MGMT

Probation: 12 Months

FLSA: Exempt

### DEFINITION

Under supervision, performs civil engineering work in the design, construction, inspection, and coordination of a variety of public works projects; reviews subdivision, land division, transportation, and other plans for conformance with City and State standards and current engineering practice; and performs related duties as assigned.

### SUPERVISION RECEIVED AND EXERCISED

Receives supervision from the Senior Civil Engineer, Principal Civil Engineer, or City Engineer. Exercises no direct supervision over staff. The Associate Engineer may provide functional direction over lower-level engineering or administrative staff, including day-to-day oversight and work review, and training of assigned staff.

### DISTINGUISHING CHARACTERISTICS

**Junior Engineer** - This is the entry-level class in the professional engineering series. Incumbents receive close supervision on engineering assignments of low to moderate complexity. Assignments are performed within a framework of established procedures and guidelines.

**Assistant Engineer** - This is the journey level class in the professional engineering series. Under general supervision, incumbents perform moderately difficult professional engineering assignments and are expected to increase their knowledge and experience by performing increasingly complex and more responsible work with more independence. If an incumbent in this class is a licensed Professional Civil Engineer, the title of Assistant Civil Engineer may be used.

**Associate Civil Engineer** - This is the advanced journey level class in the professional engineering series. Incumbents perform complex engineering duties and assignments which require use of judgement and initiative in developing solutions to problems, interpreting general policies, and which also may include providing functional supervision to lower-level professional and technical staff. Positions at this level are distinguished from other classes within the series by the level of responsibility assumed, complexity of duties assigned, independence of action taken, the amount of time spent performing the duties, and the nature of public contact made.

Positions in the Engineer class series are flexibly staffed and positions at the Assistant level are normally filled by advancement from the Junior level, and positions filled at the Associate level are normally filled by advancement from the Assistant level after gaining the knowledge, skill, and experience which meet the qualifications for and after demonstrating the ability to perform the work of the higher-level classes.

### EXAMPLES OF JOB FUNCTIONS (Illustrative Only)

Review private development and public improvement plans and subdivision maps for compliance with state and local codes, regulations and standards, and compliance with the requirements of project approval.

Review encroachment permit and other permit applications, and hydrology and hydraulic calculations.

Coordinate projects and activities with other City departments, divisions, developers, contractors, consultants, outside agencies, and property owners.

Design and prepare engineering plans, specifications, and cost estimates for projects, solicit and review bids, and make recommendations for project award and acceptance.

Provide project management for public works construction and maintenance projects.

Perform or oversee project administration and inspection.

Plan and perform surveying and construction inspection work.

Conduct basic traffic engineering studies and investigations; assist in traffic signal and pavement marking design and evaluate transportation and traffic impacts of development proposals.

Prepare or direct the preparation of grant applications, reports on construction, maintenance, transportation, and general public works issues.

Administer special projects and programs involving storm water quality, public utilities, pavement management system, or other activities that affect public works.

Prepare, forecast, develop and monitor division and capital improvement project budgets; identify potential funding alternatives and recommend program planning criteria and priorities for inclusion in the budget planning process.

Respond to public and other inquiries orally and in writing; attend and represent the City in public meetings, and make presentations to City Council, Planning Commission, and other legislative and advisory bodies.

Build and maintain positive working relationships with co-workers, other City employees, and the public using principles of good customer service.

Perform related duties as assigned.

## **QUALIFICATIONS**

### ***Junior Engineer***

#### **Knowledge of:**

- Principles and practices of civil engineering as applied to public works, utilities, building renovation, transportation, or land development.
- Basic principles and practices of current methods and techniques in the design, construction, and maintenance of public works engineering activities.
- Basic Subdivision law and processing of subdivision maps and other legal land development actions including special assessment districts.
- Applicable laws and regulatory codes relevant to assigned area of responsibility.
- Methods, materials, tools and equipment used in engineering construction.
- Principles of algebra, geometry and trigonometry and their application to engineering.
- Modern office practices and technology, including software programs relevant to the work performed.
- Methods and techniques of effective technical report preparation and presentation.

**Skill or Ability to:**

- Accurately perform engineering computations which may include, but not limited to surveying, open channel flow, pressure pipe, flexible pavement design, traffic design, and building seismic improvements, depending upon assignment.
- Prepare accurate plans and specifications, cost estimates, and engineering reports.
- Prepare clear and concise reports, correspondence, policies, procedures and other written materials.
- Assist in basic civil engineering research projects, analyze problems, identify alternative solutions, project consequences of proposed actions and implement recommendations in support of goals.
- Communicate effectively, both orally and in writing; make presentations to a variety of groups.
- Use engineering computer programs and technology equipment required in professional engineering and office work.
- Perform technical research work and provide accurate information in response to engineering problems.
- Learn, retain, and apply various laws and regulatory codes relevant to assigned area of responsibility.
- Respectfully and effectively collaborate with a variety of people of varying backgrounds and roles. Demonstrate tact, professionalism, and diplomacy.

**Assistant Engineer** - In addition to the qualifications for the Junior Engineer:

**Knowledge of:**

- Principles and practices of civil engineering as applied to public works, utilities, building renovation, transportation, or land development.
- Subdivision law and processing of subdivision maps and other legal land development actions including special assessment districts.
- Full command of applicable laws and regulatory codes relevant to assigned area of responsibility, including interpreting, applying and explaining laws, codes, regulations and ordinances.

**Skill or Ability to:**

- Keep a project moving to completion and meet project deadlines.
- Collect, organize and interpret a variety of project-related information.
- Conduct basic civil engineering research projects, analyze complex problems, evaluate alternatives, make sound recommendations, and prepare effective technical staff reports.
- Assist in and develop and administer contracts for professional services and construction in a public agency setting.
- Design engineering public works projects.

**Associate Civil Engineer** - In addition to the qualifications for the Assistant Engineer and Junior Engineer:

**Knowledge of:**

- Full command of civil engineering principles and practices as applied to municipal civil engineering.
- Principles and practices of capital improvement program budgeting, cost estimation, funding, project management, and contract administration
- Principles of functional supervision and leadership.
- Techniques for effectively representing the City in contacts with governmental agencies, community groups, various business, professional and regulatory organizations and with property owners and the public.

**Skill or Ability to:**

- Work independently, bringing projects to completion within established time guidelines.
- On a continuous basis, know and understand all aspects of the job; analyze work papers, reports and special projects; identify and interpret technical and numerical information.
- Make complex engineering computations and to check, design, and supervise the construction of a variety of public works projects.
- Prepare and interpret plans, specifications, and other documents; administer contracts and inspect quality of work relative to public and private improvements.
- Make effective public oral presentations.
- Review difficult and/or complex engineering related issues; prepare related cost estimates and recommend the most effective and efficient course of action.
- Coordinate, train, and oversee the work of professional and technical staff.

**Education and Experience:**

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

**Junior Engineer:**

- Education: Equivalent to a Bachelor's degree from accredited college or university with major course work in civil engineering or a related field.
- Experience: No experience is required; civil engineering experience is desirable.

**Assistant Engineer:**

- Education: Equivalent to a Bachelor's degree from accredited college or university with major course work in civil engineering or a related field.
- Experience: Two (2) years of civil engineering experience.

**Associate Civil Engineer:**

- Education: Equivalent to a Bachelor's degree from accredited college or university with major course work in civil engineering or a related field.
- Experience: Three (3) years of civil engineering experience, including one year of lead responsibility.

**License and Certificate:****Junior Engineer**

- Possession of a valid driver license and a satisfactory driving record throughout employment.

**Assistant Engineer:**

- Possession of a valid driver license and a satisfactory driving record throughout employment.
- Possession of an Engineer-in-Training Certificate.

**Associate Civil Engineer:**

- Possession of a valid driver license and a satisfactory driving record throughout employment.
- Registered as a licensed Professional Civil Engineer in the State of California.

**PHYSICAL DEMANDS**

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect City sites, including traversing uneven terrain, climbing ladders, stairs, and other

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 or more with appropriate equipment or staff assistance. Employees must be available to attend day and evening meetings, at various sites within and outside the City.

### **ENVIRONMENTAL CONDITIONS**

Employees predominately 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 chemical substances and fumes. Employees may interact with members of the public or with staff under emotionally stressful conditions while interpreting and enforcing departmental policies and procedures.