



## Junior Engineer

### **DEFINITION**

Under general supervision, performs the less complex professional and technical office and field work in the location, design, construction and maintenance of water system structures and facilities; and performs related work as required.

### **DISTINGUISHING CHARACTERISTICS**

This is the entry level class in the professional engineering series. Individuals are assigned the more routine tasks under minimal supervision; tasks of greater difficulty are assigned for training purposes, and may include responsibility for inspection and administration of construction contracts, or assisting on a larger project.

Positions in the Engineer class series are flexibly staffed; positions at the Assistant Engineer level are normally filled by advancement from the Junior Engineer level; progression to the Assistant Engineer level is dependent on (i) management affirmation that the position is performing the full range of duties assigned to the classification; (ii) satisfactory work performance; (iii) the incumbent meeting the minimum qualifications for the classification including any licenses and certifications; (iv) the incumbent satisfactorily meeting the internal promotional criteria; and (v) management approval for progression to the Assistant Engineer level.

### **EXAMPLES OF DUTIES**

Typical duties may include but are not limited to the following:

- Assists in professional engineering work related to the preparation of plans and specifications for pipelines, pump stations, tanks, water treatment, and other water system facilities under a responsible in charge engineer;
- prepares economic and engineering studies;
- assists in the long range planning of pipelines, pump stations, tanks, water treatment, and other water system facilities;
- may serve as project engineer on construction projects;
- may analyze and work with developers on pipeline extension requirements;
- gathers, compiles and analyzes engineering and statistical data;
- may prepare operational manuals and recommend procedures;
- may develop or assist in developing scopes of work for engineering services;
- may inspect contract construction for compliance with approved plans and specifications;
- interprets and applies safety rules and regulations to work assignments; and
- works in conjunction with operations and maintenance personnel on the preventative maintenance program.

### **QUALIFICATIONS FOR EMPLOYMENT**

Knowledge of:

- Engineering principles, practices and methods applicable to the planning, design and construction of a variety of water system projects;
- design principles, strengths of materials, mechanical systems, and stress analysis required in planning District construction projects;
- engineering office procedures;
- specification and technical report writing and estimate preparations;
- proper spelling, grammar, punctuation and writing practices; and
- construction practices and materials.

Ability to:

- Prepare accurate plans, specifications, cost estimates and engineering reports;
- make accurate engineering computations and drawings;
- maintain neat and organized records of work performed;
- use a computer to perform various tasks such as spreadsheets, word processing, data base applications;
- establish and maintain effective working relationships with those contacted in the course of work;
- understand and carry out written and oral instructions;
- depending upon job assignment, drive a vehicle; and
- travel to alternative work locations and offsite meetings.

Training and Experience: Any combination equivalent to experience and education that could likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

- A Bachelor's degree in an engineering curriculum which is accredited by the Engineers' Council for Professional Development.

**INTERNAL PROMOTIONAL CRITERIA:**

- For non-competitive internal promotional criteria, please refer to the Flex Criteria Matrix for the applicable classification series.

**OTHER REQUIREMENTS**

- Per California Government Code, Title 1, Division 4, Chapter 8, Section 3100 "all public employees are hereby declared to be disaster service workers subject to such disaster service activities as may be assigned to them by their superiors or by law."

**LICENSES AND/OR CERTIFICATIONS**

- Depending on job assignment, possession of or the ability to obtain an appropriate California driver's license issued by the State Department of Motor Vehicles and satisfactory driving record.
- Possession of a valid California Engineer-in-Training Certificate is desirable but not required.

**PHYSICAL DEMANDS AND WORKING CONDITIONS**

During the course of performing job duties the employee will need the mobility to work in a standard office setting, operate equipment, which may include office and/or field equipment, or specialized instruments or

tools requiring repetitive arm/hand movement and/or the coordinated movement of more than one limb simultaneously; enter and retrieve data from personal computers and terminals via keyboards which is often performed while sitting for extended periods of time. The employee frequently stands, walks, bends at neck and waists, twists at neck and waist, uses simple and power grasping with both hands, uses fine manipulation of both hands and fingers, and may require use of the arms above the shoulder, climb or balance; stoop, kneel or crouch. While working in the field the employee may walk on uneven or un-level ground surfaces such as hills, slopes, ditches or trenches, on or in tanks, and may work at heights up to ten to twelve feet climbing ladders or stairs. The employee is occasionally required to lift and carry short distances objects such as reams of copier paper, office supplies, files, books, printed materials and other packages or equipment weighing up to 10 to 25 pounds. This position requires that the employee demonstrate adequate hearing and speech to converse in person and over the telephone, and vision to read printed materials and use a computer screen.

In order to drive, individuals must be physically capable of operating the vehicles and equipment safely.

The noise level in the work environment is quiet to moderate noise. The employee is exposed to outdoor temperature, humidity, wetness and dust. The position may require the ability to work overtime and weekends as needed.

*To be successful in this job, an individual must be able to satisfactorily perform each of the listed duties. These duties are representative of the knowledge, skill and/or ability required for the position. Reasonable accommodations may be made to enable individuals with disabilities to perform the duties and functions of the position. Requests for reasonable accommodation should be directed to the Human Resources Manager.*

Established: January 1990  
Revised: October 2008, November 2021  
Approved by: Human Resources Manager