



Engineering Technician I/II

Purpose of the role:

Under general supervision, performs moderately difficult paraprofessional work involving the technical functions of a civil engineering office; prepares plans, cost estimates and work orders for installation, changes or improvements on various public works projects; provides information and assistance to the public regarding routine engineering and construction projects; and performs related duties as assigned.

Distinguishing Characteristics:

Engineering Technician I: This is the entry level class in the Engineering Technician series. This class is distinguished from the Engineering Technician II by the performance of the more routine tasks and duties assigned to positions within the series including the processing of permits, calculation of fees and responding to inquiries from the general public. Since this class is typically used as a training or entry level class, employees may have only limited or no directly related work experience. Advancement to the "II" level is based on demonstrated proficiency in performing the full range of assigned duties, and is at the discretion of higher level supervisory or management staff.

Engineering Technician II: This is the full journey level class in the Engineering Technician series performing a variety of technical engineering, plan checking and design work with only occasional instruction or assistance. Positions at this level are distinguished from the Engineering Technician I level by the performance of the full range of duties as assigned, working independently, applying well developed engineering knowledge, and exercising judgment and initiative. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit. Work is normally reviewed only on completion and for overall results. Positions in this class series are alternately staffed and are normally filled by advancement from the Engineering Technician I level, or when filled from the outside, requires two years of paraprofessional engineering or field survey experience at a level comparable to an Engineering Technician I with the City. The II level is distinguished from an Engineering Technician Supervisor in that the latter is a full supervisory class, while the II level provides some work direction to and participates in the training of lower-level classes.

Essential Duties and Responsibilities:

The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.

- Performs technical plan checks of public works and utility projects to ensure compliance with City-imposed development conditions and municipal code provisions.
- Inks, traces and letters charts, graphs, maps, plans and other

drawings; prepares miscellaneous illustrative materials such as charts and graphs; participates in the filing and retrieval of a variety of engineering maps, documents and records.

- Lays out, calculates and verifies quantities and cost estimates for public works construction projects.
- Prepares plans and specifications and calculates cost estimate for the construction of public works projects; researches project design requirements; performs paraprofessional calculations and prepares estimates of time and material costs.
- Reviews drawings for easements, line-of-sight issues, elevations and/or setbacks relating to building permit applications for residential, commercial and/or industrial projects; approves and/or coordinates approval for building permits.
- Prepares, calculates and collects a variety of public works-related fees and charges; issues permits; may review calculations of fees prepared by less experienced technicians.
- Prepares work orders for changes and improvements as required; coordinates work with City field crew; and participates in the inspection of completed work.
- Responds to inquiries from developers, contractors and the public regarding City engineering requirements relative to the construction, alteration and maintenance of facilities; provides detailed research, information or copies of engineering maps, plans and drawings.
- Collects, tabulates and analyzes traffic information and initiates corrective action; develops striping, signing and detour plans; responds to and resolves a variety of traffic-related requests for service; prepares plans, specifications and estimates for traffic signal installation.
- Uses computer equipment to analyze, manipulate and store a variety of land development-, utility- and traffic-related data; operates blue print and other copying machines.
- Performs field survey work for design purposes; and field inspection services for engineering projects.
- Coordinates office and field engineering tasks with other City departments and outside agencies.
- Prepares, presents and interprets a variety of special engineering-related reports and studies.
- Performs related duties as required.

The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.

Knowledge of:

- Methods, practices and procedures of mapping, drafting, specification development and other technical functions in support of a civil engineering or traffic engineering duties.
- Methods and techniques of plan checking for public works construction projects.
- Sources and techniques of researching engineering research information.
- Engineering symbols and terminology.
- Computer-aided drafting equipment and techniques.
- Principles and applications of engineering mathematics, including trigonometry.
- Principles, modern techniques and equipment used in design, construction and maintenance of various projects.
- Principles of business letter writing and basic report preparation.
- Office procedures, methods, and equipment including computers and applicable software applications such as word processing, spreadsheets, and databases.
- Pertinent federal, state, and local laws, codes, and regulations.

***Desired
Minimum
Qualifications:*****Ability to:**

- Perform detailed, accurate work in a wide variety of paraprofessional technical engineering applications.
- Read, interpret, understand and prepare engineering information, records, notes, reports, maps, specifications, documents and descriptions using standard office and computer equipment.
- Utilize computer engineering graphics programs to create engineering plans and maps.
- Understand and apply engineering mathematics including trigonometry.
- Conduct research and ensure compliance with City-imposed development conditions and municipal code provisions.
- Analyze and solve problems.
- Prepare clear, concise, and comprehensive reports.
- Utilize standard office equipment including computers and related software applications.
- Work under steady pressure with frequent interruptions and a high degree of public contact by phone or in person.
- Plan and organize work to meet changing priorities and deadlines.
- Understand and carry out oral and written directions.
- Communicate clearly and concisely, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of work.
- Respond and perform assigned duties in the event of a City-declared emergency.

Competencies:

- Strategic Thinker
- Results Oriented
- Customer- Focused
- Problem Solver and Decision Maker
- Technically Knowledgeable

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

Engineering Technician I

Education/Training:

Equivalent to the completion of the twelfth grade supplemented by college level course work in civil engineering, drafting, engineering mathematics or a related field.

Experience:

One year of paraprofessional engineering or field survey experience.

Education and Experience Guidelines:

Engineering Technician II

Education/Training:

Equivalent to the completion of the twelfth grade supplemented by college level course work in civil engineering, drafting, engineering mathematics or a related field.

Experience:

Two years of paraprofessional engineering or field survey experience at a level comparable to an Engineering Technician I with the City.

Licenses; Certificates; Special Requirements:

A valid class C California driver's license.

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

Physical and Environmental Conditions:

Physical: Sufficient physical ability to work in an office setting; sit, stand, walk, reach, twist, turn, kneel, bend, squat, and/or stoop for prolonged periods of time; perform duties requiring grasping, repetitive hand movement, and fine coordination; operate office equipment; lift, carry and push tools, equipment and supplies weighing 25 pounds or more. **Vision:** See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents and to operate office equipment. **Hearing:** Hear in the normal audio range with or without correction.

Environment: Standard office setting; may be required to work outside, with exposure to inclement weather conditions, elevated noise levels, or heavy vehicle traffic conditions; regular interaction with City employees and the general public.

*Class specifications are only intended to present a descriptive summary of the range of duties and responsibilities associated with specified positions. Therefore, specifications **may not include all** duties performed by individuals within a classification. In addition, specifications are intended to outline the **minimum** qualifications necessary for entry into the class and do not necessarily convey the final qualifications of incumbents within the position.*

Pursuant to California Government Code Section 3100, all public employees are required to serve as disaster service workers subject to such disaster service activities as may be assigned to them by their supervisor or by law.

Date Adopted: 7/5/03
Date Revised: