

ENGINEERING TECHNICIAN I/II

DEFINITION

Under direct supervision, performs a variety of specialized paraprofessional engineering work and office duties in support of professional engineering staff and inspectors for the planning, design, and construction of Capital Improvement Projects (CIP); maintains plan files and engineering records; conducts field surveys, maintains the database, generates reports, and creates maps on the Geographic Information System (GIS); and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives direct supervision from assigned supervisory or management personnel. Exercises no direct supervision of staff. May exercise technical and functional direction over and provide training to lower-level staff.

CLASS CHARACTERISTICS

Engineering Technician I: This is the entry-level class in the paraprofessional engineering technician series. Initially under close supervision, incumbents with basic technical engineering experience perform work such as maintaining engineering records, performing basic engineering calculations, performing field observations and surveys, researching engineering topics, and updating maps and drawings, in addition to performing office and field work related to assigned engineering projects and programs. As experience is gained, assignments become more varied and are performed with greater independence. Positions at this level usually perform most of the duties required of the II level, but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise. Since this class is often used as a training class, employees may have only limited or no directly related work experience.

Engineering Technician II: This is the full journey-level class in the paraprofessional engineering technician series. Incumbents perform the full range of technical work in all of the following areas: field observations and surveys, researching engineering topics, and updating maps and drawings, in addition to performing office and field work related to assigned engineering projects and programs. Positions at this level are distinguished from the I level by the performance of the full range of duties as assigned, working independently, 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. This class is distinguished from the professional engineering series in that the latter is a professional level requiring completion of a four-year degree.

Positions in the Engineering Technician class series are flexibly staffed and positions at the II level are normally filled by advancement from the I level requiring two (2) additional years of experience and after gaining the knowledge, skill, experience, licenses, and certifications which meet the qualifications for and after demonstrating the ability to perform the work of the higher-level class. When filled from the outside,

the employee is required to have three (3) years of prior related experience that allows the employee to meet the qualification standards for the II level.

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.

- Prepares or assists in the preparation of and/or interprets specifications, plans, estimates, and reports pertaining to the construction, maintenance, and operation of a variety of engineering, land development, utility, and other capital improvement projects (CIP), including conducting a variety of surveys for the creation of sidewalks, utility lines, and topography maps.
- Maintains engineering and traffic/transportation files, including plans, studies, inspections, surveys, maps, and other data related to engineering and transportation projects; prepares, updates, reproduces, and distributes maps, drawings, blueprints, and other information recorded in the Geographic Information System (GIS).
- Performs right-of-way, creek, and roadway inspections; issues notices to abate obstructions as needed; prepares descriptions for easements and right-of-ways; reviews and evaluates legal descriptions submitted to the City; advises City staff on surveying matters.
- Utilizes GIS software to create and modify plot plans, topographic maps, improvement plans, and illustrative graphics, such as charts, illustrations, and graphs for reports, drawings for design manuals, and other projects.
- Performs basic design and drafting duties in connection with streets, storm drains, and other projects.
- Performs field, office, and computer-aided studies and prepares periodic and special reports based on findings from research, studies, and surveys; and makes recommendations on findings.
- Receives, tags and logs, and reviews submitted engineering plans, maps, and related documents for plan check; routes documents to consultants or developers for preceding and following plan review; tracks status of plan checks and original documents; advises parties of revisions.
- Receives and responds to information requests for base maps, parcel maps and improvement plan information, encroachment permits, benchmarks, and other geographical data, soils reports, as-builts, and street improvements; retrieves plans, reports, permits, and files as necessary to comply with requests; responds to complaints from the public and resolves conflicts between owners, contractors, developers, utility companies, and others.
- Maintains and updates department records, tracking lists, permit records, and files of engineering plans, including grading, encroachments, improvements, storm drain, landscaping, and final maps.
- May assist in the maintenance of the department's website as it relates to posting engineering records for public viewing.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Civil engineering principles, practices, and methods applicable to office and field work involving the design, construction, and maintenance of public works projects.
- Basic design and construction practices and methods of streets, underground facilities, and related public works infrastructure.
- Engineering plan types, review practices, and permit filing and approval procedures.
- Principles and practices of technical civil engineering drafting and surveying support.
- Drafting and surveying equipment, computers, principles, problems, techniques, and practices.

- Applicable Federal, State, and local laws, codes, and regulations, including administrative and department policies and procedures.
- Technical engineering mathematics.
- Modern office practices, methods, computer equipment and computer applications, including GIS concepts and applications.
- Technical report writing practices and procedures.
- Principles and procedures of record keeping.
- 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:

- Prepare a variety of plans, specifications, maps, graphic materials, cost estimates, and technical engineering reports.
- Modify engineering drawings, topographic maps, improvement plans, and illustrative graphics using GIS software.
- Perform responsible technical engineering support work with accuracy, speed, and minimal supervision.
- Read and interpret engineering plans, technical drawings, specifications, and subdivision maps.
- Perform standard engineering design under professional engineering supervision.
- Make mathematical calculations and accurate engineering computations and drawings.
- Make and record accurate field engineering observations.
- Use engineering, drafting, and surveying instruments and equipment.
- Prepare clear and concise reports, correspondence, policies, procedures, and other written materials.
- Understand and follow oral and written instructions.
- Organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment including computer equipment and specialized software applications programs.
- 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, which would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Engineering Technician I/II: Equivalent to completion of the twelfth (12th) grade supplemented by at least two (2) years of college-level coursework in civil engineering, drafting, surveying, mathematics, or related field.

Engineering Technician I: One (1) year of paraprofessional experience in civil engineering, drafting, surveying, or related field.

Engineering Technician II: Three (3) years of increasingly responsible paraprofessional experience in civil engineering, drafting, surveying, or related field, or two (2) years of experience equivalent to Engineering Technician I at the City of Lafayette.

Licenses and Certifications:

Engineering Technician I/II - Possession of, or ability to obtain, a valid California Driver's License by time of appointment.

Engineering Technician II: Possession of certification as an Engineer-In-Training (EIT) is desirable.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect City development sites, 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 partially a sedentary office classification, although the job involves field inspection work requiring frequent walking at inspection sites to monitor performance and to identify problems or hazards; standing in work areas and walking between work areas 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 and controlled temperature conditions; but may occasionally work in the field and 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.

WORKING CONDITIONS

May be required to work a varied schedule of hours, which may include evenings, and/or weekends.