

## **ENGINEERING TECHNICIAN I/II**

Salary Ranges: 23/27 (Public Service Salary Schedule)

### **DEFINITION**

Under direct or general supervision, performs a variety of paraprofessional engineering field and office duties in support of professional engineering staff, involving surveying, design of public works facilities, construction inspection and drafting; researches engineering topics and prepares basic engineering calculations; provides technical advice to the public; coordinates plan submittals; issues permits; maintains plan files and engineering records; prepares reports; and performs related work as required.

### **DISTINGUISHING CHARACTERISTICS**

#### **Engineering Technician I**

This is the entry-level class in the engineering technical support series. Initially, incumbents learn a variety of duties including responding to inquiries and complaints, maintaining engineering records, performing basic engineering calculations, performing field observations and surveys, researching engineering topics and updating maps and drawings. This class is flexibly staffed with Engineering Technician II and incumbents may advance to the higher-level class after gaining the knowledge, skills and experience that meet the qualifications for and demonstrating the ability to perform the work of the higher-level class.

#### **Engineering Technician II**

This is the journey-level class in the engineering technical support series with responsibilities spanning the entire spectrum of paraprofessional engineering functions. Incumbents complete assignments in engineering, mapping, surveying, contract coordination, and preparation of specifications, plans and estimates. This class is distinguished from Senior Engineering Technician in that the latter is responsible for technical and functional direction of lower-level staff and is capable of performing the most complex paraprofessional engineering field and office duties.

### **SUPERVISION RECEIVED AND EXERCISED**

Incumbents receive direct or general supervision by the City Engineer or the Director of Public Services or his/her designee, and may exercise technical and functional direction over assigned staff.

### **ESSENTIAL DUTIES, KNOWLEDGE, AND ABILITIES**

Duties may include, but are not limited to the following:

- 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 and capital improvement projects.
- Performs basic design and drafting duties in connection with streets, storm drains, traffic facilities 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 logs, and reviews submitted engineering plans, maps, and related documents for plan check; checks calculations used in designs and estimates; routes documents to consultants or developers for plan review; tracks status of plan checks and original documents; advises parties of revisions; contacts inspectors following plan approval to initiate construction observation.
- Conducts plan checking on improvement plans and prepares them for the City Engineer's signature; reviews and finalizes lot line adjustments.
- Records, distributes, copies, and files grading and transportation permits; updates data for permits and records.
- Coordinates and distributes received bid documents and specifications for projects; records, orders, and sells duplicate copies of bid packages.
- Maintains engineering and traffic/transportation files, including plans, studies, inspections, surveys, maps and other data related to engineering and transportation projects.
- Receives and responds to information requests from the public, engineering firms, developers, title companies and staff for plans, reports, permits and files; retrieves such documents as necessary to comply with requests.
- Verifies and reviews cost estimates and fee calculations of projects in the plan check review process; answers basic questions regarding general fees and project review procedures at the public counter and by telephone.
- Completes permit and document search reports for inspectors; inputs, sorts and files data as requested by inspection staff.
- Maintains and updates department records, tracking lists, permit records, and files of engineering plans, including grading, encroachments, improvements, storm drain, landscaping and final maps.
- Prepares project specifications, job-cost estimates, bid sheets, purchase orders, project plans and contracts for small to medium engineering projects; inspects work on assigned projects.
- Utilizes Computer-Assisted Drafting software to create and modify engineering drawings, sketches, plot plans, site lay-outs, topographic maps, improvement plans and illustrative graphics.
- Creates, organizes and maintains computer databases and plan check and logging systems for various plans, reports, projects, jobs and related documents.
- Responds to inquiries and complaints from the public and resolves conflicts between owners, contractors, developers, utility companies, and others.
- Operates survey instruments in the performance of control, preliminary, and construction surveys, monument checks and related projects.
- Processes various City land development permits in coordination with other City departments and divisions.
- Conducts field review as necessary to assess all pertinent issues of the assigned project.
- Performs other duties as assigned.

**EMPLOYMENT STANDARDS****Knowledge of:**

- Drafting and surveying equipment, computers, principles, techniques and practices
- Construction practices and methods
- Technical report writing practices and procedures
- Records management principles and practices
- Business arithmetic and basic statistical techniques
- Modern office practices, methods and computer equipment
- Computer applications related to the work
- English usage, grammar, spelling, vocabulary, and punctuation
- Techniques for providing a high level of customer service to public and City staff, in person and over the telephone

**Engineering Technician II, in addition to the above:**

- Civil engineering principles, practices and methods applicable to office and field work involving the design, construction and maintenance of public works projects
- Basic design practices of basic public works infrastructure
- Principles and practices of technical civil engineering drafting and surveying support
- Engineering plan types, review practices, and permit filing and approval procedures
- Applicable Federal, State, and local laws, codes, and regulations, including administrative and department policies and procedures; State Subdivision Map Act
- Techniques for dealing effectively with the public, vendors, contractors and City staff, in person and over the telephone
- Techniques for effectively representing the City in contacts with governmental agencies, community groups and various business, professional, educational, regulatory and legislative organizations

**Ability to:**

- Perform responsible field and office work
- Interpret complex construction plans and specifications
- Modify engineering drawings, topographic maps, improvement plans and illustrative graphics using Computer-Assisted Drafting (CAD) software
- Use engineering, drafting and surveying instruments and equipment
- Apply technical research methodologies and write technical reports
- Make and record accurate field engineering observations.
- Respond to and effectively prioritize multiple phone calls, walk-up traffic, and other requests/interruptions
- Interpret, apply and explain policies and procedures
- Enter and retrieve data from a computer with sufficient speed and accuracy to perform assigned work
- Prepare accurate and precise technical reports
- Make accurate mathematic computations
- Maintain accurate records and files of work performed

- Understand and carry out oral and written instructions
- Organize work, set priorities, and meet multiple deadlines
- Operate modern office equipment including computer equipment and software 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 and maintain effective working relationships with those contacted in the course of the work
- Meet the physical requirements necessary to safely and effectively perform the assigned duties

Engineering Technician II, in addition to the above:

- Prepare accurate plans, specifications, cost estimates, and technical reports
- Perform responsible technical engineering support work with accuracy, speed, and minimal supervision
- Read and interpret engineering plans, technical drawings, specifications, and subdivision maps
- Prepare a variety of plans, specifications, maps, and graphic materials
- Perform standard engineering design under professional engineering supervision

**Minimum Qualifications**

*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 the completion of the twelfth (12<sup>th</sup>) grade supplemented by a minimum of fifteen (15) units of technical or college-level courses in civil engineering, drafting, surveying, mathematics, or a related field.

Engineering Technician I

One (1) year of experience in field or office engineering technical support or drafting is desirable.

Engineering Technician II

In addition to the above, two (2) years of experience in field or office engineering technical support or drafting which has provided familiarity with engineering drafting, surveying, map checking, construction inspection, materials testing, and basic engineering design equivalent to the Engineering Technician I at the City of Rocklin.

**GENERAL QUALIFICATIONS**

**License Requirements**

A valid California Class C driver license or higher with a satisfactory driving record is required at the time of appointment. Individuals who do not meet this requirement due to a disability will be reviewed on a case-by-case basis.

**Physical Requirements**

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; ability to work in the field in order to inspect various commercial and residential development sites, including traversing uneven terrain, climbing ladders, stairs and other temporary or construction access points; to attend meetings and to operate a motor vehicle; vision to read printed materials and a computer screen and make inspections; and hearing and speech to communicate in person and over the telephone; finger dexterity to access, enter and retrieve data using a computer keyboard or calculator and to operate standard office equipment; ability to occasionally bend, stoop, kneel, reach, climb, push and pull drawers open and closed to retrieve and file information; ability to occasionally lift, move, and carry objects that typically weigh up to 40 pounds.

**Working Conditions**

Employees work partially in an office environment with moderate noise levels and controlled temperature conditions, and partially in the field and are occasionally exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspace, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives, and contractors in interpreting and enforcing departmental policies and procedures.

*Adopted: July 2007*

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