CITY OF FOLSOM

SENIOR ENGINEERING TECHNICIAN

DEFINITION

Under direction, perform technical office or field engineering work including surveying, drafting, designing public works facilities and performing traffic investigations, computations, and data collection and analysis. Senior Engineering Technicians oversee, monitor, and/or direct the work of lower level personnel, or serve in a specialist capacity such as City Surveyor.

DISTINGUISHING CHARACTERISTICS

The Senior Engineering Technician is the lead or specialist level class in the series, although some positions may provide direct supervision for a small portion of the time. The Senior Engineering Technician is distinguished from those in the lower classification of Engineering Technician I/II in that the former has greater responsibility, autonomy, and discretion in planning and completing a wide variety of engineering technician duties. Incumbents in this class have a day-to-day oversight and responsibility for assigned work and may delegate or authorize assigned work to lower level classifications.

SUPERVISION EXERCISED

This class provides direct and indirect supervision to lower level personnel for preponderance of the time, or acts as a specialist in a unique capacity such as the designated City Surveyor.

EXAMPLES OF ESSENTIAL DUTIES

NOTE: The following are the duties performed by employees in this classification. However, employees may perform other related duties at an equivalent level. Each individual in the classification does not necessarily perform all the duties listed.

- Assist in conducting preliminary studies of engineering projects, including assisting in the program plans for public improvement projects, such as streets, storm drains, sewers, water works, and other related work.
- Prepare drawings of various public works projects; tabulate field data, design improvement plans and specifications, and check calculations used in designs and estimates.
- Coordinate paraprofessional engineering work in the design and construction of streets, sidewalks, water and sewage facilities, drainage structures, and other public works projects.
- Calculate construction quantities and cost estimates.
- Review and process plans, maps, specifications, and cost estimates for accuracy, presentation, and compliance with standard engineering practices for private development projects and determine the impact on city streets, sewer, drains, and related public works facilities.

- Measure distances to be used in the determination of locations of boundaries, easements, improvements, structures, and topographic features; maintain written record of measurements.
- Perform algebraic and trigonometric engineering calculations to determine distances, areas, volumes, grades, hydraulic flows, etc.
- Verify location of utilities, easements, property lines, etc., on city engineering plans.
- Research and compile data from field verifications or office engineering records for inclusion in engineering reports and studies, or in response to public inquiries.
- Investigate traffic complaints and requests for traffic controls.
- Conduct traffic studies and surveys such as turning movement counts, speed and delay, and radar speed surveys.
- Recommend corrective traffic control to mitigate traffic problems.
- Issue and prepare permits such as driveway, revocable, encroachment, excavation, and street-lane closures.
- Maintain and update miscellaneous engineering records, files, maps, and logs.
- Generate engineering reports.
- Prepare written reports and correspondence.
- Respond to public inquiries regarding engineering activities.
- Perform related duties as assigned.

EMPLOYMENT STANDARDS

NOTE: The level and scope of the knowledge and abilities listed below are related to job duties as defined under "Distinguishing Characteristics."

Knowledge of:

- Design detailing practices and common drafting standards.
- Material specifications, symbols, and standard representations.
- Basic engineering principles.
- Basic engineering record keeping and filing techniques.
- Trigonometry as applied to the computation of angles, areas, distances, and traverses.
- Modern office equipment and computers.
- Common word processing, spreadsheet, and database software; Computer Assisted Drafting software.

Ability to:

- Exercise sound judgment in choosing scales, sheet size, views, sections required, and arrangement of views to provide clarity and proper emphasis in planning and execution drawings.
- Perform engineering calculations with speed and accuracy.
- Perform drafting and computational work from general instructions.
- Research, interpret, and apply data from field verifications or office engineering records.

- Operate Computer Assisted Drafting software to create and modify engineering drawings, topographic maps, improvement plans, and illustrative graphics.
- Use computer spreadsheet, database, and word processing software to generate engineering reports.
- Prepare statistical and narrative reports.
- Understand and follow oral and written instructions.
- Effectively communicate verbally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of work.

Minimum Qualifications:

Education:
Six (6) semester units in college-level mathematics, which includes at least three (3) semester units in trigonometry or above. Successful completion of either the Engineer-in-Training or the Licensed Surveyor-in-Training examinations may substitute for the trigonometry requirement. Survey field experience is not considered qualifying unless supplemented with six (6) semester units in college-level drafting or engineering graphics.

Experience:
Five (5) years of full-time experience in related paraprofessional engineering work and/or drafting.

OR

Education:
Certificate of completion from an accredited technical vocational school or community college in drafting or engineering, or a minimum of 20 semester units in college-level drafting and engineering related courses. Coursework is to include a minimum of six (6) semester units in college-level mathematics, which includes at least three (3) semester units in trigonometry or above. Successful completion of either the Engineer-in-Training or the Licensed Surveyor-in-Training examinations may substitute for the trigonometry requirement.

Experience:
Four (4) years of full-time experience in related paraprofessional engineering work and/or drafting.

OR

Experience:
One (1) year of full-time experience as an Engineering Technician II with the City of Folsom.

License, Certificate, Registration Requirements:
Possession of, or ability to obtain and retain, a California Class C driver license by the time of appointment. Individuals who do not meet this requirement due to a disability will be reviewed on a case-by-case basis.

City Surveyor position requires a Professional Land Surveyor License.

Physical Requirements:
Work is performed in a typical office environment or outdoor environment on a year-round basis. (1) Mobility: frequent use of keyboard; frequent sitting for long periods of time; frequent bending or squatting. (2) Lifting: frequently up to 10 pounds; occasionally up to 25 pounds. (3) Vision: constant use of overall vision; frequent reading and close-up work; occasional color and depth vision. (4) Dexterity: frequent repetitive motion; frequent writing; frequent grasping, holding, and reaching. (5) Hearing/ Talking: frequent hearing and talking, in person and on the phone. (6) Emotional/ Psychological: frequent decision-making and concentration; frequent public and/or coworker contact; occasional working alone. (7) Environmental: frequent exposure to noise.

Other Requirements:
Must be willing to work weekends and holidays.

Information Block

Class Code:
FLSA Status:
Established:
Revised:
Retitled:
Workers Compensation Code
Bargaining Unit: