

CITY OF SOLANA BEACH
SENIOR ENGINEERING TECHNICIAN

DEFINITION

Under general supervision, performs complex sub-professional engineering work in the inspection, design, and construction of engineering projects in the field or office; assists other engineering staff in the performance of office and field engineering work; performs other duties as required.

CLASS CHARACTERISTICS

Positions in this class are characterized by their ability to perform varied complex technical and sub-professional engineering duties and projects in the office or field. Incumbents exercise independent judgment, possess the advanced level of knowledge required to perform difficult engineering support work and perform duties without constant supervision.

ESSENTIAL FUNCTIONS

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

- ◆ Performs technical plan-checks of plans, designs, subdivision plats and improvement drawings, annexations and related work, ensuring compliance with City-imposed development conditions and municipal code provisions.
- ◆ Prepares and researches right-of-ways and easements; conducts traffic engineering counts, prepares drawings for placement of traffic control devices and other tasks related to traffic engineering studies; prepares complex designs and plans for public improvements, including grading, plot, profiles and cross sections.
- ◆ Reads and interprets topographic surveys, benchmarks and related information; operates standard survey instruments; reviews and interprets legal descriptions; prepares, updates and retrieves official City maps and record files; performs title searches.
- ◆ Responds to inquires from developers, contractors, architects and the general public regarding City requirements relative to the construction, alteration and maintenance of civil engineering projects; advises inspectors regarding new, difficult or unique situations;
- ◆ Calculates permit fees; issues public works permits; processes payments; compiles payment authorizations to contractors; maintains engineering files.

- ◆ Prepares, reviews and evaluates request for proposals; verifies the accuracy of cost estimates and assessments; prepares general and technical written reports; prepares Council agenda items and resolutions.
- ◆ May perform inspection of public works and private land development projects.
- ◆ Uses a computer for engineering programs and record-keeping purposes.
- ◆ Operates a motor vehicle, and performs other related work as required.
- ◆ Provides vacation and temporary relief as required.

QUALIFICATIONS GUIDELINES

Education, Experience and Training

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

Experience:

- ◆ A minimum of two years technical engineering experience to include design, field survey, public works inspection, computer aided drafting, or traffic engineering assignments.

Education:

- ◆ Graduation from high school or equivalent supplemented by two years of college level coursework in drafting, trigonometry, engineering, surveying, computer science/CADD, or a related field.

Knowledge and Abilities

Knowledge of:

- ◆ Principles, practices and terminology used in civil engineering, surveying, drafting, mapping, design, and construction
- ◆ Arithmetic, geometry, trigonometry and basic statistics.
- ◆ Principles and practices of civil engineering.
- ◆ Thorough knowledge of the materials, methods and equipment used in construction of public works structures and facilities.

- ◆ Methods and practices of public works inspection.
- ◆ Considerable knowledge of traffic engineering.
- ◆ Modern surveying and instruments, methods and techniques.
- ◆ Thorough knowledge of construction surveying and inspection; securing compliance with plans and specifications.
- ◆ Computers and computer aided drafting and design systems.
- ◆ Work area traffic control and standard safety requirements, procedures and precautions; legal and defensive driving practices.

Ability to:

- ◆ Analyze and interpret complex plans, specifications, ordinances, survey notes, and a variety of statistics and graphs; review estimates.
- ◆ Conduct studies; prepare clear and accurate general and technical reports.
- ◆ Read, interpret and carry out written instructions.
- ◆ Maintain complete and accurate engineering records and files.
- ◆ Plan, organize and carry out research; prepare accurate drawings from field notes; make engineering calculations and accurate computations.
- ◆ Operate and utilize computers; type and input data into computer terminal utilizing programs for word processing, data base management, spreadsheets, graphics and GIS applications.
- ◆ Operate a vehicle observing legal and defensive driving practices.
- ◆ Communicate clearly and concisely, both orally and in writing; understand and carry out oral and written instructions.
- ◆ Establish and maintain cooperative working relationships with City employees and others contacted in the course of work.

Physical Requirement

- ◆ The incumbent shall possess the physical, mental and emotional ability to perform the essential duties of the position without the threat of hazard to self or others. Hand-eye coordination is necessary to operate drafting instruments, survey equipment, computers, and various office equipment. Employees must be able to stand, sit, walk, climb or balance, stoop, kneel, crouch, crawl, talk,

and hear. Must be able to use hands to fingers, handle, feel or operate objects, tools, or controls, and reach with hands and arms. Must be able to lift and/or move objects up to 50 pounds. Vision abilities include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus. Ability to be exposed to inclement weather and conditions including cold, heat, noise, outdoors, vibration, chemicals, and mechanical and electrical hazards; travel to different sites and locations; availability for overtime.

Special Requirement

- ◆ Possession of or ability to obtain a Class "C" California driver's license and a satisfactory driving record.

Date Adopted: 05-01-01

[City of Solana Beach](#)

[Associated Benefits](#)

[General \(MISC\) Unit MOU](#)