

**COUNTY OF SOLANO**  
**ENGINEERING TECHNICIAN**

**DEFINITION**

Performs technical engineering duties in the office and in the field related to construction, drafting, office research and/or surveying; provides assistance to the assigned Engineering staff; assists in preparing plans and specifications for projects; performs inspection activities.

**CLASS CHARACTERISTICS**

This is the journey level class in the Engineering Technician series. Incumbents serve as a generalist in support of engineering services or may be assigned special project responsibilities in support of other Public Works activities. This class is distinguished from the Senior Engineering Technician in that the latter works in a lead capacity or performs more specialized duties.

**SUPERVISION RECEIVED AND EXERCISED**

Receives supervision from the assigned Engineer and the Chief of Surveys, may receive technical guidance from a Senior Engineering Technician.

Exercises no supervision.

**EXAMPLES OF DUTIES** *-Duties may include but are not limited to the following:*

Prepares plans, contract specifications, and engineer's estimates for projects, including but not limited to, roads, bridges, water and drainage structures; attends pre-construction meetings; incorporates environmental project requirements on design plans and specifications.

Assists and participates as part of a survey crew; measures distances with chain or with electronic distance measuring devices; sets up and turns angles while making and recording readings of angles; interprets survey data for design purposes.

Drafts records of surveys for filing with the County Recorder; assists engineers with design drafting and computations as well as draft maps with private roads and city limits; drafts plans, cover sheets, maps, and miscellaneous items.

Calculates preliminary flow rates for the design of culverts, bridges, and drainage structures.

Explains requirements for permits issued by Public Works and other departments; instructs applicants on procedures for properly completing permit applications; determines conditions

to be placed on permits; inspects work to ensure compliance with conditions of permits; maintains accurate records of permits issued.

Defines preliminary limits of right-of-way purchases.  
Responds and investigates flooding complaints on County roads.

Assists in performing soil and aggregate testing; assists in conducting traffic studies and analyzing data obtained;

### **JOB RELATED AND ESSENTIAL QUALIFICATIONS**

#### **Knowledge of:**

Basic principles of algebra and trigonometry.

Drafting.

Surveying procedures and equipment.

Basic legal descriptions, their interpretation and application.

Material testing procedures.

Common engineering construction methods.

Land surveying, principles and practices.

Generally accepted format for preparing specifications and construction estimates.

#### **Skills to:**

Utilize basic office equipment, computer aided drawing programs, and engineering tools and equipment.

Drive a motor vehicle.

#### **Ability to:**

Draft plans and maps.

Prepare accurate bid specifications and construction project estimates.

Interpret engineering records and maps.

Make decisions and independent judgments.

Collect and analyze data to establish/identify needs.

Maintain accurate records and document actions taken.

Research regulations, procedures and/or technical reference materials.

### **Experience and Education/Training**

#### **Experience:**

Eighteen months of engineering technician experience which includes technical engineering field or office work such as surveying, drafting, and/or construction inspection.

#### **Education/Training:**

Completion of 15 semester units or equivalent from an accredited college or university in mathematics, engineering design, construction inspection, traffic engineering, surveying or other related fields.

### **SPECIAL REQUIREMENTS**

Possession of or ability to obtain a valid Class C California driver's license is required.

Incumbents may be required to work outdoors in all types of weather conditions.

### **SUPPLEMENTAL INFORMATION**

No supplemental information.

### **ADA COMPLIANCE**

**Physical Ability:** Tasks require the ability to exert moderate, though not constant physical effort, typically involving some combination of climbing and balancing, stooping, kneeling, crouching, and crawling, and which may involve occasional lifting, carrying, pushing and/or pulling of objects and materials of heavy weight (20 - 60 pounds).

**Sensory Requirements:** Requires the ability to recognize and identify similarities and differences between shade, degree or value of colors, shapes, sounds, forms, textures or physical appearance associated with job-related objects, materials, tasks or people; some tasks require ability to speak in a clear and audible manner.

**Environmental Factors:** Performance of essential functions may require occasional exposure to adverse environmental conditions including dirt, dust, wetness, rain, heat, cold, noise, machinery or traffic hazards.



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Director of Human Resources

**Established Date:** October, 1986

**Revised Date:** November 2002

**Revised Date:** May 2003

**BOS Date:** June 30, 2003

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