



## **SURVEYOR III**

Title Code: 1718SM

### **DEFINITION**

Under general direction, acts as supervisor over a survey unit performing complex surveying work; supervises the activities of a field survey party; prepares and reviews survey party notes; maintains controls and prepares survey records; and does other work as required.

The Surveyor occupational series includes the following:

Surveyor I (1716GE)  
Surveyor II (1717GE)  
Surveyor III (1718SM)  
Senior Land Surveyor (1719SM)

### **CLASS CHARACTERISTICS**

Surveyor III is the advance journey level in the series, and the position may act as full supervisor of a unit depending upon assignment. Positions are distinguished from office positions in the Surveyor II class by leading office teams and performing the most complex specialized assignments. Positions assigned to the field supervise the land survey field crews that define land boundary areas by measuring and recording elevation levels and distances, as well as making and reviewing survey calculations.

### **EXAMPLES OF DUTIES**

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in this classification. Specifications are not intended to reflect all duties performed within the job.*

#### **Field Survey**

1. Supervises the setting up, adjusting, and operating all types of survey instruments; recording of field notes; establishing property lines and alignment points; and calculating of elevations, angles, distances, and grades from notes.
2. Plans, manages, and assigns tasks of survey party members and supervises their work; instructs and trains or supervises the training of survey party members in the proper procedures and techniques of surveying.
3. Evaluates performance of subordinates and provides performance evaluation of each member of survey crew; reviews for completeness and accuracy of all work performed.
4. Develops and implements methods and standards to be followed in surveys; determines existing horizontal and vertical controls from maps, survey notes, and field inspection.
5. Maintains records of field data; controls and compiles data for the preparation of survey reports.

6. May supervise or perform office work connected with surveying or various sub-professional surveying or engineering activities.
7. May instruct personnel in various phases of field surveying, mapping and current laws, rules, and regulations.
8. May serve as a subject matter expert on behalf of the Senior Land Surveyor with identifying the County's interest in real property; may attend various field survey and office meetings with various stakeholders including County agencies, private engineering/surveying firms, contractors, project managers, and members of the public.
9. Plans and assists with mentoring, guidance, and training of lower level staff in regards to proper survey practices and duties.
10. Reviews plans and specifications of all assigned projects.

### **Office**

1. Provides guidance in the preparation of maps, map revisions, and legal descriptions of property; researches, analyzes, and/or computes cadastral and geodetic surveys, and the origination of record of survey maps to comply with Land Surveyor's Act.
2. Identifies and resolves problems with boundary closures where overlaps and gaps occur due to errors; analyzes discrepancies between boundaries depicted or described, and data source documents.
3. Performs land survey and boundary analysis involving knowledge of applicable laws, land surveying principles, and historical precedents.
4. May instruct personnel in various phases of office surveying and mapping in accordance with current laws, rules, and regulations of the surveying profession.
5. May serve as a subject matter expert on behalf of the Senior Land Surveyor in identifying the County's interest in real property, which may include attending meetings related to rights of way, real estate, acquisition, and disposition projects.
6. As a lead or supervisor, reviews the work of subordinates, checks for accuracy, and compliance with technical and legal procedures.
7. Plans and assists with the mentoring, guidance, and training to lower level staff in regards to proper survey practices and duties.

### **MINIMUM QUALIFICATIONS**

#### **Thorough Knowledge of**

- Principles and practices of land surveying including boundary determination, legal descriptions, construction, and mapping
- Principles of algebra, geometry, and trigonometry as used in office and field survey analysis
- Field surveying practices and techniques
- Uses and capabilities of survey instruments and data collectors
- Civil engineering plans, maps, and specifications related to surveying

#### **General Knowledge of**

- Laws, rules, and regulations regarding subdivisions of land, boundary locations, mapping, and surveying practices
- Computer program preparation and use; including but not limited to, Autodesk Computer-Aided Design and Drafting (CADD) software
- Technical report writing and correspondence preparation

## **Some Knowledge of**

- Principles of supervision
- Field surveying practices and techniques

## **Ability to**

- Assign, train, review, and evaluate the performance of employees
- Develop, present, and evaluate training programs
- Perform difficult mathematical calculations and precise engineering measurements
- Review and adjust survey data and perform difficult survey analysis
- Read and interpret civil engineering drawings, maps, specifications, legal descriptions, survey field data, and survey records
- Prepare complex technical reports and correspondence
- Write concise and accurate legal descriptions and technical reports
- Operate and maintain complex precision instruments used in land surveying
- Collect, calculate, and adjust mathematical computations such as distances, traverses, and elevations
- Read, check, evaluate, interpret, and correct survey data
- Prepare useful computer programs to facilitate compilation of complex calculations (Engineering Computer Programming)
- Establish and maintain cooperative working relationships with engineers, developers, contractors, and the general public
- Use a County-approved means of transportation to travel to and from field locations

## ***Education and Experience***

Two (2) years as a Surveyor II for the County of Orange.

### ***Or***

Five (5) years of sub-professional surveying or civil engineering experience, including at least three (3) years in a field or office survey assignment.

Education or training that can be directly related to the required knowledge and abilities may be substituted for up to one year of the required experience at the rate of three college semester units for one month of experience.

## ***License/Certification***

Possession of a valid certificate as a Land Surveyor in Training or Engineer in Training issued by the California State Board of Registration for Professional Engineers within one year of appointment.

Possession of a valid California Driver's License may be required for some assignments.

## **PHYSICAL, MENTAL, ENVIRONMENTAL AND WORKING CONDITIONS**

### ***Physical and Mental Requirements***

Positions in this class typically require: body mobility to stand, sit, walk, stoop, twist, bend, climb, crawl, balance, kneel, crouch, reach overhead, lift and carry up to 50 pounds, and perform other strenuous work.

Incumbents must possess vision sufficient to read standard size text, distinguish colors, and at distances over 20 feet. Requires the ability to speak and hear well enough to communicate clearly and understandably in person to individuals and groups; possess manual dexterity sufficient to use hands, arms, and shoulders repetitively and without limitation to range and motion to operate a keyboard, tools, and specialized equipment. Performs complex tasks, analyzes data and makes recommendations, and performs complex calculations.

***Environmental and Working Conditions***

Positions are assigned to both office environment and outdoor settings. Work is typically performed in construction zones and road traffic, and incumbents may be exposed to molds and allergens; toxic chemicals and other contagious environments; chemicals, oils, and pesticides; and animals and wildlife. Incumbents may be subjected to moving objects or vehicles, fumes and gases, and intense noise levels. May be required to work under various weather conditions, including rainstorms and windy conditions, and walk in uneven, slippery, and sometimes dangerous terrains. Requires the use and wear of safety equipment, including safety glasses and rubber footwear with shanks, protective clothing and gloves, sun and hearing protection, knee pads and safety vests, snake chaps and wader, and hard hats. Depending on assignment, incumbents may be required to interact and communicate with members of the public and business partners.

**CLASS HISTORY**

Revised: 06/29/1982  
Revised: 09/10/1980  
Established: 12/04/1979