

CITY OF SCOTTS VALLEY CLASS SPECIFICATION

ENGINEERING TECHNICIAN

JOB PURPOSE

Under general supervision, to perform a variety of moderate to complex office and field technical engineering tasks related to drafting, construction plan review, surveying, development processing, inspecting, office research and assisting the public. Incumbents perform more routine tasks independently and receive some supervision when assisting in more complex engineering tasks; and to do other work as required.

EXAMPLES OF DUTIES

Essential Duties:

- Set up, adjust, and operate theodolite and related engineering equipment and instruments;
- Compute and establish elevations, points, lines, and distances for topographic, property and construction surveys;
- Check or set monumentation for subdivision and right-of-way boundaries;
- Calculate grades, alignments and construction quantities and draw plans and profiles;
- Take field notes, maintain office records of maps, plans, boundary descriptions, road and address data and related documents;
- Lay out, draw, trace, check and maintain a variety of special district, property, topographic, reference, address, road and other maps;
- Research property, utility location, and title company records;
- Prepare, process or check legal descriptions, right-of-way maps, encroachments, records of survey maps, parcel maps, subdivision maps, improvement plans, specifications, and other engineering documents for conformance with City standards, design criteria, conditions of approval, and state laws;
- Inspect construction work of contractors to ensure conformance with engineering plans and specifications, including roads, subdivisions, sewer and water facilities and other public works projects;
- Approve minor construction changes in the field;
- Process progress payments to contractors;
- Complete federal, state and local reports required for construction projects;
- Obtain samples and conducts tests of construction materials, such as concrete, asphalt, sand and base rock, to ensure that they meet required specifications;
- Conduct soil compaction tests;
- Prepare or obtain material testing reports;
- Design projects using state and City standardized design methodology and design criteria;
- Prepare less complex construction plans and specifications, and prepare construction cost estimates and make complex calculations;
- Obtain permits and approvals required from other agencies;
- Assist the public by providing survey records, maps, improvement requirements, interpreting data and resolve complaints;
- Review right-of-way acquisitions and write legal descriptions;

- May supervise subordinate personnel;
- Prepare as-built drawings, reports, and correspondence;
- Input, access, and analyze data and generate reports using a computer terminal;
- Organize and maintain computerized and manual files and records;
- Process building permits by determining if subdivision map conditions are met;
- Coordinate with applicant's engineer/architect, checking improvement plans for construction or bond projects, processing deferred improvement agreements, determining right-of-way, easement and deed requirements;
- Check storm drain plans and calculations, check grading and erosion control plans, calculate water usage and sewer allocation.

Marginal Duties:

- Performs related duties as required.

EMPLOYMENT STANDARDS

Education, Experience and Licenses: Any combination of education and experience that provides the knowledge, ability and licenses shown is qualifying. A typical way to obtain these requirements would be: High school graduation or tested equivalent and three (3) years of experience in engineering drafting or other technical civil engineering work or similar related experience. Possess a valid motor vehicle operator's license.

Ability to: Read and interpret blueprints, maps, change orders, improvement plans and construction specifications. Use and adjust precision surveying equipment. Perform drafting work and assist in the preparation of designs, plans and reports. Make accurate engineering calculations. Collect and analyze field data and prepare accurate and detailed reports and records. Establish and maintain effective working relationships with others. Learn to input, access and analyze data using a computer terminal. Inspect construction projects and enforce compliance with plans, specifications, and laws. Meet and consult with engineers, contractors and others on difficult construction matters. Make field engineering estimates, collect samples, measure or test quantities and materials and make complex calculations. Prepare and compile complex written technical reports.

Knowledge of: Principles and practices of algebra, geometry, trigonometry, general science and scales of weight and measurements as applied to engineering computations and construction; survey procedures, techniques and equipment; physical properties of construction materials; principles and techniques of drafting; principles and practices used in the construction and repair of roads, drainage and sewer facilities, and other public works projects. The principles and techniques used in the inspection of construction of public works projects; principles and techniques of testing construction materials and soils. Some positions may require a working knowledge of computer assisted applications in order to produce automated record keeping, report preparation, service charge schedules or computer aided design. Some knowledge of contract administration.

CITY COUNCIL APPROVAL: November 2, 1994