

ENGINEERING TECHNICIAN IIDefinition:

Under general supervision, performs routine and complex technical engineering related work for water system projects and programs. Assists an engineer in application of principles, methods, and techniques of civil engineering technology.

Distinguishing Characteristics:

This position is distinguished from the Engineering Technician I and Engineer classes by the requirement for experience and expertise in engineering design work at the paraprofessional level, but not requiring a four year engineering degree. Work is performed mostly in office settings. Some outdoor work is required in the inspection of construction sites, or water system facilities. Hand-eye coordination is necessary to operate drafting instruments, computers and various pieces of office equipment. Employees are frequently required to stand; walk; use hands to feel or operate objects, tools, or controls; reach with hands and arms; sit for extended periods; occasionally climb or balance; stoop, kneel, crouch, or crawl; frequently talk and hear in a normal office environment. The employee must occasionally lift and/or move up to fifty (50) pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus.

Examples of Duties:

- prepares plans for water system projects from written or oral instructions, sketches or drawings;
- prepares specifications for complex water system projects;
- perform calculations for earth quantity takeoffs;
- prepare CEQA documentation for construction projects;
- assists in project management during construction;
- coordinates project design with other utilities and governmental agencies regarding codes, regulations and standards;
- prepares cost estimates from plans and specifications;
- researches records, maps and other data to obtain typical engineering data such as location of water mains, hydrants, etc.;
- drafts detailed dimensional drawings needed for water, canal, drainage, and other utility plans, system and projects;
- calculates dimensions, profile specifications, and quantities of materials such as pipe, concrete, and asphalt;
- understands and performs drafting and design work using AutoCAD, inspects construction site to determine conformance of site to design specifications;
- coordinates required advertising for bids, reviews bids and makes necessary recommendations based on lowest and best bids, competency of vendors and

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- consultants, and the selection criteria;
- assists in the preparation of water system maps, data bases, and comprehensive plans;
- assists in the maintenance of engineering and infrastructure records;
- prepares and drafts as-built plans;
- performs a variety of office related functions including preparing correspondence, maps, presentation materials, brochures, field notes, printing materials, answering phones and responding to inquiries from contractors, developers, property owners, staff, and the general public.

Qualifications:

Knowledge of:

- civil engineering principles, practices and methods as applicable to a water system setting;
- applicable State laws and regulations affecting water utility activities;
- computer operation, Geographical Information Systems (GIS), and Computer Assisted Design (CAD) system operations and capabilities;
- engineering design work;
- cost estimates on complex projects;
- drafting, surveying, and flagging.

Ability to:

- prepare, organize and maintain engineering field and office data, reports and systems;
- effectively communicate complex technical information, orally and in writing to contractors, developers, property owners, employees, consultants, other governmental agency representatives and the general public.

Education/Experience:

Sufficient education, training and experience to demonstrate the knowledge, skills and abilities listed above. These would normally be acquired by completion of an Associate degree in engineering technology, civil engineering or a related field, and five (5) years of engineering support duties including survey and design work and Computer Assisted Design experience, or an equivalent combination of education, training and experience. Previous experience with AutoCAD and GIS is preferred.

License/Certificates:

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Must possess and maintain a valid California driver's license with an acceptable driving record.