

El Dorado Irrigation District

Class Specification

CLASS TITLE: Engineering Technician I/Engineering Technician II

DEFINITION

Under supervision performs technical field and office duties involving surveying, drafting, mapping, real property interests, and related activities.

DISTINGUISHING CHARACTERISTICS

Engineering Technician I - This is the entry level class in the Engineering Technician series. Positions in this class typically have little or no directly related work experience. The Engineering Technician I class is distinguished from the II level by the performance of less than the full range of duties assigned to the II level. Incumbents work under immediate supervision while learning job tasks, progressing to general supervision as procedures and processes of assigned area of responsibility are learned.

Engineering Technician II - This is the journey level class in the Engineering Technician series and is distinguished from the I level by the assignment of the full range of duties. Employees at this level receive only occasional instruction or assistance as new, unusual or unique situations arise and are fully aware of the operating procedures and policies within the work unit. Positions in this class are flexibly staffed and are normally filled by advancement from the I level.

SUPERVISION RECEIVED AND EXERCISED

Engineering Technician I

Receives supervision from the Engineering Manager and technical and functional direction from the GIS Analyst.

Engineering Technician II

Receives supervision from the Engineering Manager and technical and functional direction from the GIS Analyst.

EXAMPLES OF ESSENTIAL DUTIES: *the duties specified below are representative of the range of duties assigned to this class and are not intended to be an inclusive list.*

Prepares, updates and revises engineering maps and drawings related to a variety of capital improvement projects; performs preliminary engineering design work and calculations including the preparation of plans, specifications, and construction drawings.

Performs field work including surveying and staking of projects using a variety of technical survey equipment; reduces field survey notes; reads survey data and calculates easements.

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Produces a variety of District maps using CAD and GIS; updates CAD drawings of utility schematics from as-built drawings; maintains CAD and GIS software; trains District staff on the use of CAD, GIS and related systems.

Updates and maintains the District's GIS database according to established policies and procedures.

Corrects data and creates additional data-sets integrated into GIS.

Utilizes GIS software programs, commands and compilation methods to generate and utilize spatial overlays

Update digital data layers and create corresponding maps. Prepares graphic presentations for inclusion in reports or visual displays.

Files and retrieves engineering and related plans, maps, exhibits and various documents; updates files and maintains document reference and retrieval system.

Utilizes engineering technology to compute and design vertical and horizontal alignments, curves, grades, slopes, traverses for pipe slopes and capacities, pump and generator size, and other related computations.

Provides assistance to District staff with the design, mounting, printing and collating of large graphic files.

Performs utilities research by reviewing legal descriptions of parcels, street location, property ownership, and easements.

Researches public records to determine real property ownership or rights; analyzing documents and making recommendations regarding property ownership and transactions involving the acquisition and relinquishment of District real property.

Verification of the accuracy of legal descriptions contained in easements and property acquisition documents, researching public records to verify real property ownership, assessments, liens, encumbrances, and applicable land use regulations and plans.

Assists Legal in researching and responding to questions from District departments, the public, land developers, real estate professionals, and outside agencies regarding District property transactions.

Builds and maintains positive working relationships with co-workers, other District employees and the public using principles of good customer service.

Performs related duties as assigned.

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QUALIFICATIONS

Engineering Technician I

Knowledge of:

Terminology, methods, practices and techniques used in technical engineering work, including drafting, mapping, and surveying. Principles of algebra, geometry, and trigonometry. Applicable equipment and instruments used in drafting, mapping and surveying. Modern office procedures, methods, and computer equipment. Principles of customer service.

Skill/Ability to:

Perform a variety of technical office and field engineering work involving drafting, mapping and surveying. Learn to reduce, interpret and apply field notes in the performance of survey and drafting work. Learn to use CAD, GIS and other applicable computer applications related to the performance of technical engineering work. Learn to compile and analyze technical information and prepare technical documents and reports. Perform mathematical calculations with speed and accuracy. Establish and maintain effective working relationships with those contacted in the course of work. Communicate clearly and concisely, both orally and in writing. On a continuous basis, know and understand all aspects of the job; intermittently analyze work papers, reports and special projects; identify and interpret technical and numerical information; observe and problem solve operational situations, technical policies and procedures; understand, interpret and explain policies and procedures to staff and other agencies and the public. On a continuous basis, sit at drafting table or computer station; intermittently stand at counter for long periods of time; twist and reach office equipment; write and use keyboard to communicate through written means; use keyboard to operate design and mapping computer software; visually differentiate between colors on land use maps; and regularly lift weight of 10 pounds or less.

Experience and Education:

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

Experience:

No experience is required.

Education:

Equivalent to completion of an Associate's degree with course work in mathematics, drafting, CAD, GIS, engineering or related field.

SPECIAL QUALIFICATIONS

License and Certificate:

El Dorado Irrigation District

Class Specification

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Possession of, or ability to obtain, a valid California driver's license at the time of appointment. Individuals who do not meet this requirement due to physical disability will be reviewed on a case-by-case basis.

Engineering Technician II

In addition to the qualifications for the Engineering Technician I:

Knowledge of:

Principles and practices of researching public records regarding real property interests. Common descriptions of real property, including an understanding of maps and plans. Principles and practices of algebra, geometry and trigonometry as applied to the computation of angles, areas, distances and traverses. Policies and regulations related to construction, extension and maintenance of utility systems and facilities. Principles and practices of technical report writing and data presentation. Survey techniques and practices. Use of applicable instruments and equipment. Construction methods and materials. Utility industry including water, sewer, and hydroelectric power generation. Principles of graphic design. Principles and applications of GIS software and GPS.

Skill/Ability to:

Research and examine land title and tax data. Independently perform technical engineering duties including mapping, surveying and drafting. Effectively use CAD, GIS and other applicable computer applications. Compile and analyze technical information. Problem-solve technical engineering issues and identify alternatives and make related recommendations. Perform engineering and mathematical calculations with speed and accuracy. Use and care for instruments, tools, equipment and software related to assignment. Use GIS software to analyze spatial and tabular data to produce informational maps and exhibits. Maintain input, code and correct shared file (GIS) data for the geodatabase.

Experience and Education:

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

Experience:

Two years of responsible experience similar to Engineering Technician I with the El Dorado Irrigation District.

Education:

Equivalent to completion of an Associate's degree with course work in mathematics, drafting, CAD, GIS, engineering or related field.

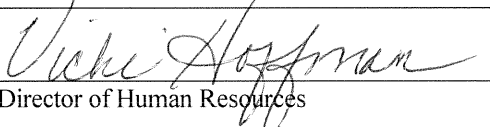
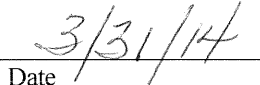
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 Director of Human Resources	 Date
Established: 8/18/2009 Revised: 03/31/2014 FLSA: Non-Exempt Unit: Non-Safety	