

Job Description

Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties, or responsibilities that are required of the employee for this job.

Job title	Senior Engineering Technician
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GENERAL PURPOSE

Under direction, performs advanced technical and paraprofessional engineering-related work; areas of responsibility include, but are not limited to, office and field engineering, new business development, and water resources management; prepares drawings, specifications, and maps; conducts plan checks for development projects; performs hydraulic-modeling fire flow analysis, boundary conditions, and calculations; provides support to the department's specialized technology programs, toolboxes and databases in the development of documents; and performs related duties, as assigned.

DISTINGUISHING CHARACTERISTICS

This is the advanced-level classification in the Engineering Technician series responsible for performing the most complex work assigned to the series. Incumbents regularly work on tasks which are varied and complex, requiring considerable discretion and independent judgment. Positions in the classification rely on experience and judgment to perform assigned duties. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to complete assignments. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements.

This class is distinguished from the Principal Engineering Technician in that the latter performs a variety of routine and non-degreed civil engineering work in the research, design, and construction of water, sewer, and recycled-water capital improvement and construction projects.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from assigned supervisory or management personnel. Exercises no direct supervision over staff.

TYPICAL DUTIES AND RESPONSIBILITIES

The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this position.

- Prepares specifications, plans, sketches, layouts, graphic displays, exhibits, maps, and pertaining to the construction, maintenance, and operation of a variety of water, sewer, and recycled water facilities, using multiple software programs; serves as administrator/maintainer of server datasets.
- Performs hydraulic modeling, calculations, and boundary conditions including hydraulic-modeling fire flow analysis for commercial, industrial, schools, housing tracts, and single-family dwellings; performs hydraulic static calculations for DSR representatives and for other customers; updates model on a continuous basis.
- Confers with representatives from engineering firms, developers, property owners, other utilities, public works agencies, other governmental agencies, and contractors on technical matters to verify data, locate lines, coordinate various stages of work and/or explain the District's procedures and water commitment process.
- Reviews water, sewer, and recycled-water plans for new/current developments, services, subdivisions, main extensions, and laterals for conformance to District service rules, construction standards, and the District's Master Plan; researches water commitments and determines water requirements and sewage generation for various land parcels and proposed developments
- Reviews plans and subdivision maps to verify that all required corrections have been made before final approval by the District; confers with supervisors, engineers, consultants, and contractors regarding interpretation of documents; performs or directs the checking of existing utility plans for size of lines, location, and elevation to ensure proper connections and the slopes and elevations for conformance with District requirements.
- Conducts research and data gathering of technical datasets, historic information, current projects, and related information to provide technical support and fulfill reporting requirements in response to requests from internal staff and external parties.
- Provides support to the department's specialized technology programs, toolboxes and databases in the development of documents, drawings and related materials.
- Maintains and updates a diverse range of department manuals and documents including, but not limited to, Recycled Water Irrigation Guidelines, Standards and Specifications for Developer Projects, Standard Drawings, and Computer Aided Design and Drafting (CADD)/Geographic Information Systems (GIS) as-built conversion processes.
- Prepares notification documents related to Requests for Funding and Recycled Water Candidacy letters.
- Develops and maintains website; designs and creates pages and loads content.
- Coordinates and/or attends assigned meetings with internal and external project stakeholders.

- As assigned, assumes responsibility for safety-related activities; conducts regular safety meetings; ensures staff comply with safety training requirements; conducts safety audits on District facilities and equipment; ensures Materials Safety Data Sheets (MSDS) are current; plans for, and maintains, alternative communication system in the event of emergencies.
- Observes and complies with all District and mandated safety rules, regulations, and protocols.
- Performs related duties as assigned.

REQUIRED QUALIFICATIONS

Knowledge of:

- Technical procedures and standards involved in design and construction engineering and specification development.
- Engineering principles, practices, and methods applicable to office and field work involving the design, construction, and maintenance of District projects.
- Basic principles of water hydraulics design.
- Operational characteristics of databases and networked systems, and CADD and GIS element properties, layer development and program applications.
- Architectural and general drafting standards including manual drawing, ink, line work, and text lettering.
- Solar engineering standards, including heat-loading factors.
- Cathodic protection methods and standards.
- Principles and practices of technical civil engineering drafting and design.
- Survey practices.
- Engineering mathematical principles including trigonometry.
- Engineering plan types, review practices, and permit filing and approval procedures.
- District policies and procedures applicable to plan check and water/sewer plan approvals.
- District standards, fees, and calculations for development projects.
- Methods and techniques of performing fire flow analyses and updating hydraulic modeling databases.
- Business and administrative processes in assigned department.
- Federal, state, and local laws, codes, and regulations in assigned areas of responsibility.
- Principles and practices of record keeping.
- District and mandated safety rules, regulations, and protocols.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.

- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Ability to:

- Prepare a variety of documents and visual displays such as plans, specifications, maps, graphs, cost estimates, and technical engineering reports.
- Understand trends, approaches and problem solving techniques used in waterworks engineering, operations analysis and regulatory compliance.
- Modify engineering drawings, topographic maps, improvement plans, and illustrative graphics using multiple software programs.
- Perform responsible technical engineering support work with accuracy.
- Read and interpret engineering plans, technical drawings, specifications, and subdivision maps.
- Perform standard engineering design under professional engineering supervision.
- Make mathematical calculations and accurate engineering computations.
- Use engineering, drafting, and surveying instruments and equipment.
- Perform hydraulic modeling, fee calculations, and boundary conditions.
- Conduct research on a diverse range of topics.
- Prepare clear and concise reports, correspondence, policies, procedures, and other written materials.
- Understand and follow oral and written instructions.
- Maintain accurate files and records.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies, and procedures, and standards relevant to work performed.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Experience:

Any combination of experience and education that provides the required knowledge and abilities is qualifying, along with the specific licenses/certifications as outlined below:

- Six (6) years of progressively responsible sub-professional engineering, drafting and plan check experience.

Education:

- Equivalent to an associate degree with major coursework in civil engineering or a related field.

Licenses/Certifications:

- Certification in the use of GIS applications.
- Some positions may require a valid California driver's license and the ability to maintain insurability under the District's Vehicle Insurance Policy.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by employees to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; to operate a motor vehicle and visit various District sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone. This is primarily a sedentary office classification although standing in work areas and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects up to 25 pounds.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.

Eastern Municipal Water District
Job Title: Senior Engineering Technician
Last Update: March 2020

This job description has been reviewed and approved by all levels of management in cooperation with the union (if applicable):

Approved by:	<i>Board of Directors</i>
Date adopted:	<i>March 29, 2020</i>
Date modified:	
FLSA determination:	<i>Non-Exempt</i>

Job Description Acknowledgment

I have received, reviewed, and fully understand the job description for Senior Engineering Technician. I further understand that I am responsible for the satisfactory execution of the essential functions described therein, under any and all conditions as described.

Employee Name (print): _____ *Date:* _____

Employee Number: _____

Employee Signature: _____