



July 2022
FLSA: Exempt

ASSOCIATE ENGINEER

DEFINITION

Under direction, performs a variety of professional-level civil engineering work in the research, design, and construction of water, sewer, and recycled water capital infrastructure improvement, maintenance, and construction projects; prepares a diverse range of engineering plans, specifications, calculations, studies, reports, and related documents; conducts site visits to monitor construction project progress; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from assigned supervisory or management personnel. Exercises direct supervision over technical staff.

CLASS CHARACTERISTICS

This journey level non-registered classification is responsible for independently performing professional duties in support of the Engineering Department. Positions at this level exercise judgment and initiative in their assigned tasks, receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations where appropriate so qualified employees can perform the essential functions of the job.

- Performs a variety of professional-level engineering work in the research, design, and construction of water, sewer, and recycled water capital infrastructure improvement, maintenance, and construction projects; prepares correspondence, including board letters and related documents.
- Completes a variety of civil engineering designs and calculations including, but not limited to, pipeline capacities, structural capacities, hydraulic pressure, pipe and open channel flows, groundwater flows, and related topics in support of projects and technical studies.
- Conducts a review of project alternatives considering financial, operational, maintenance, property/right of way, and constructability factors; conducts computer analysis and modeling and evaluates results to determine project-specific facility requirements and parameters.
- Participates in the completion of technical plans and documents for District projects; documents include, but are not limited to, feasibility studies, preliminary and final design, environmental conditions, hydrogeology/soil conditions, water supply assessment, strategic and master plans, and related materials; coordinates the review and approval of documentation with District stakeholders.
- Monitors and provides engineering support for construction work in progress, including field investigations, to ensure compliance with approved plans, specifications, and standards; maintains records of project activities including change orders and approvals.
- Reviews construction submittals by contractors including shop drawings and change orders; reviews and researches alternative approaches in resolving change orders; ensures quality and conformance to project intent.

- Reviews project-related studies and documentation required by regulatory agencies; coordinates permit applications and submits required documentation.
- Participates in the Request for Proposals (RFP) process for assigned projects; prepares supporting documentation and engineer's estimates; coordinates pre-bid meetings; ensures clear communication on projects among bidders and the District; assists in establishing selection criteria; reviews proposals based on technical merit and cost and provides recommendations; assists in contract negotiations; reviews contract documents and agreements and provides feedback/comments; prepares a variety of documentation such as purchase orders and tasks orders; reviews invoices and recommends action.
- Prepares technical communications for review and coordination with District management and staff including presentations, reports, and memoranda and other information necessary to coordinate project activities with internal and external stakeholders.
- Performs research and data gathering of technical datasets, historic information, and current projects to provide technical support and fulfill reporting requirements in response to requests from internal and external groups.
- Provides technical support in answering design questions for walk-in customers, phone calls, emails, and other District departments and staff.
- Ensures staff observes and complies with all District and mandated safety rules, regulations, and protocols.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Principles and practices of employee supervision, including work planning, assignment review and evaluation, discipline, and the training of staff in work procedures
- Principles and practices of leadership.
- Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.
- Theory, principles, and practices of civil engineering design and construction.
- Principles, modern techniques, and equipment used in the design, construction, and maintenance of water and wastewater utilities projects.
- Hydraulic system analysis applicable to civil engineering.
- Land use and development concepts.
- Land surveying principles.
- Plan review and conditioning functions of proposed residential, industrial, and commercial developments related to water and sewer service.
- Construction management principles and practices.
- Public utility governance, oversight, regulations, and land development and zoning requirements.
- Concepts of physics as they relate to civil engineering.
- Advanced mathematic principles.
- Principles and practices of project management.
- Federal, state, and local laws, codes, and regulations in assigned areas of responsibility.
- Principles and practices of technical report and business correspondence preparation.
- Research principles and practices.
- 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:

- Select and supervise staff, provide training and development opportunities, ensure work is performed effectively, and evaluate performance in an objective and positive manner.
- Review and prepare routine to difficult engineering plans, specifications, and legal contracts.
- Prepare and evaluate project engineering studies.
- Interpret, apply, and communicate design criteria, policies, ordinances, and procedures.
- Perform technical research and analyze engineering and mathematical problems, evaluate alternatives, and recommend and adopt effective courses of action.
- Perform accurate engineering calculations and cost estimates.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies, and procedures, and standards relevant to work performed.
- Prepare clear, concise, and accurate reports, drawings, maps, notes, correspondence, and other written materials.
- Coordinate and participate in meetings with governmental agencies, community groups, and various business, professional, and regulatory organizations.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- 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.

Education and Experience:

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

Education:

- Bachelor's degree from an accredited college or university with major coursework in civil engineering or a related engineering field

Experience:

- Three (3) years of increasingly responsible professional civil engineering experience.

Licenses and Certifications:

- Possession of a valid California Driver's License, to be maintained throughout employment.

PHYSICAL DEMANDS

When assigned to an office environment, 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; ability to stand and walk 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.

When assigned to field inspection, must possess mobility to work in changing site conditions; possess the strength, stamina, and mobility to perform light to medium physical work; to sit, stand, and walk on level, uneven, or slippery surfaces; to reach, twist, turn, kneel, and bend; and to operate a motor vehicle and visit various District sites; vision to inspect site conditions and work in progress. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards, with exposure to hazardous materials in some site locations. Employees must possess the ability to lift, carry, push, and pull materials and objects averaging a weight of 40 pounds or heavier weights, in all cases with the use of proper equipment and/or assistance from other staff.

ENVIRONMENTAL CONDITIONS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees also work in the field and are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.