



Engineering Technician – Facilities Designer I/II

DEFINITION

Under general supervision, performs a variety of technical and paraprofessional engineering duties related to computer-aided drafting and design processes in the office and in the field; collects and computes data and prepares and modifies preliminary design and construction documents related to water facilities projects; provides technical support to professional engineering staff; and performs related work as required.

DISTINGUISHING CHARACTERISTICS

Facilities Designer I: This is the entry level classification in the Facilities Designer series. Incumbents perform routine drafting projects and other paraprofessional engineering tasks. As experience is gained, assignments become more varied, complex, and difficult. Positions at this level usually perform most of the duties required of the positions at the Facilities Designer II level, but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise.

Facilities Designer II: This is the fully qualified journey-level classification in the Facilities Designer series. Positions at this level are distinguished from the Facilities Designer I by the performance of the full range of duties as assigned, working independently, and exercising judgment and initiative. Positions at this level 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.

Positions in the Facilities Designer class series are flexibly staffed; positions at the Facilities Designer II level are normally filled by advancement from the Facilities Designer I; progression to the Facilities Designer II level is dependent on (i) management affirmation that the position is performing the full range of duties assigned to the classification; (ii) satisfactory work performance; (iii) the incumbent meeting the minimum qualifications for the classification including any licenses and certifications; (iv) the incumbent satisfactorily meeting the internal promotional criteria; and (v) management approval for progression to the Facilities Designer II level.

EXAMPLES OF DUTIES

Typical duties may include but are not limited to the following:

Positions at the Facilities Designer I level may perform some of these duties and responsibilities in a learning capacity.

- Assists engineers by preparing preliminary design and construction drawings for a variety of water facilities; researches and verifies data on location and condition of existing infrastructure in the office and in the field; and performs various post-project completion activities.
- Confers with project engineers throughout the design process to evaluation, and revises design criteria, identifies potential problems/conflicts, and maintains project scheduling.
- Operates a variety of surveying data collection and utility locating equipment; field locates and plots underground utilities (gas, telephone, electric, and cable) within the capabilities of the electronic locating equipment.
- Utilizes surveying software to reduce and plot collected survey data; prepares topographic base maps and drawings depicting existing conditions from field measurements and record drawings.
- Analyzes street and topographic maps, improvement plans, and survey data.
- Collects, computes, and compiles data on existing underground and above ground facilities.
- Conducts site investigations and reconnaissance, topographic surveys, field sketching, measurements, and photography.
- Designs, details, and drafts proposed improvements according to design criteria, District standards and specifications, and accepted construction practice/methods utilizing various computer-aided software.
- Assists District Surveyor with data collection for topographical and boundary surveys.
- Maintains permanent records to include digital and hard copy maps, engineering drawings, data files and system configuration files.
- Prepares, assembles and correlates plans.
- Observes and complies with District and mandated safety rules, regulations, and protocols.
- Performs related duties as assigned.

QUALIFICATIONS FOR EMPLOYMENT

Knowledge of:

- Design and construction drafting techniques, terminology and equipment, including AutoCAD.
- Methods, practices and procedures of mapping, drafting, specification development and other technical functions in support of professional engineers.
- Basic engineering symbols and terminology; engineering mathematics, including algebra, geometry, and trigonometry.
- Basic surveying principles, practices, and equipment.
- Principles and techniques for gathering information to maintain and update a variety of water supply and water distribution systems records, charts and maps.
- Property map descriptions and plotting.
- Construction practices and materials.
- Applicable Federal, State, and local laws, rules, regulations, ordinances, and organizational policies and procedures relevant to the work performed.
- Record keeping principles and procedures.

- District and mandated safety rules, regulations, and protocols.
- Correct English usage including punctuation, grammar, spelling and business letter writing.
- 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:

- Perform detailed, technical, and specialized engineering support work.
- Use computer-aided drafting and/or geographic information system software to prepare neat and accurate maps, drawings and layouts from notes and sketches.
- Operate field survey equipment.
- Read, interpret, and understand record drawings, parcel and subdivision maps, construction improvement plans and specifications.
- Prepare and update maps and engineering documents related to District infrastructure.
- Make accurate mathematical calculations.
- Prepare and maintain notes, records, reports, maps, specifications and descriptions.
- Understand and carry out written and oral instructions.
- Organize and prioritize tasks to meet deadlines.
- Interpret, apply, explain, and ensure compliance with applicable federal, state, and local laws, rules, regulations, policies, and procedures.
- Build and maintain positive working relationships with employees and the public by providing high levels of customer service.
- Effectively use computer systems, software applications, and modern business equipment to perform a variety of work tasks.
- Analyze situations accurately and adopt an effective course of action.
- Travel to off-site work locations depending on job assignments.
- Drive a vehicle.

Training and Experience: Any combination equivalent to experience and education that could likely provide the required knowledge and abilities would be qualifying. A typical way to obtain the knowledge and abilities would be:

Education:

- Facilities Designer I/II: Equivalent to completion of the twelfth grade, supplemented by college-level coursework in planning, drafting, engineering, construction management, or related field.

Experience:

- Facilities Designer I: One year of paraprofessional engineering experience.
- Facilities Designer II: Three years of increasingly responsible paraprofessional engineering, planning, drafting, or construction experience, including the use of survey equipment and GPS data collectors, or meeting the qualification requirements for the internal promotions criteria.

OTHER REQUIREMENTS

- Per California Government Code, Title 1, Division 4, Chapter 8, Section 3100 “all public employees are hereby declared to be disaster service workers subject to such disaster service activities as may be assigned to them by their superiors or by law.”

LICENSES AND/OR CERTIFICATIONS

- Possession of or the ability to obtain an appropriate California driver's license issued by the State Department of Motor Vehicles and satisfactory driving record.

INTERNAL PROMOTIONAL CRITERIA:

- For non-competitive internal promotional criteria, please refer to the Flex Criteria Matrix for the applicable classification series.

PHYSICAL DEMANDS AND WORKING CONDITIONS

During the course of performing job duties the employee will need the mobility to work in a standard office setting, operate equipment, which may include office and/or field equipment, or specialized instruments or tools requiring repetitive arm/hand movement and/or the coordinated movement of more than one limb simultaneously; enter and retrieve data from personal computers and terminals via keyboards which is often performed while sitting for extended periods of time. The employee frequently stands, walks, bends at neck and waists, twists at neck and waist, uses simple and power grasping with both hands, uses fine manipulation of both hands and fingers, and may require use of the arms above the shoulder, climb or balance; stoop, kneel or crouch. While working in the field the employee may walk on uneven or un-level ground surfaces such as hills, slopes, ditches or trenches, on or in tanks, and may work at heights up to ten to twelve feet climbing ladders or stairs. The employee is occasionally required to lift and carry short distances objects such as reams of copier paper, office supplies, files, books, printed materials and other packages or equipment weighing up to 50 pounds. This position requires that the employee demonstrate adequate hearing and speech to converse in person and over the telephone, and vision to read printed materials and use a computer screen.

The noise level in the work environment is quiet to moderate noise. The employee is exposed to outdoor temperature, humidity, wetness and dust. The position may require the ability to work overtime and weekends as needed.

Employees who drive on District business to carry out job-related duties must possess a California driver's license for the class of vehicle driven and meet automobile insurability requirements of the District including review of a recent DMV history. In order to drive, individuals must be physically capable of operating the vehicles and equipment safely.

To be successful in this job, an individual must be able to satisfactorily perform each of the listed duties. These duties are representative of the knowledge, skill and/or ability required for the position. Reasonable accommodations may be made to enable individuals with disabilities to

perform the duties and functions of the position. Requests for reasonable accommodation should be directed to the Human Resources Manager.

Established: May 1978
Revised: March 2024
Approved by: Human Resources Manager