



Engineering Technician/Civil Engineer I

GENERAL DESCRIPTION

Under general direction of the District Engineer performs paraprofessional engineering work in the engineering department including plan review, utility and infrastructure inspection, routine plan and specification development, mapping and standardized engineering studies.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the District Engineer.

EXAMPLES OF DUTIES

Duties may include, but are not limited to, the following:

- Participate in the planning, review and scheduling of construction projects within the District. Coordinate with the District Engineer and other engineering consultants involved in projects within the District.
- Perform on-site construction observation for water system installations within the District.
- Prepare detail drawings and construction plans as directed by the Engineer. Revise and update the Districts system maps on AutoCAD to reflect changes and additions to the water system. Maintain accurate maps showing the location of District lines, taps and boundaries. Organize and maintain record drawings for all new water system construction within the District. Maintain GIS system.
- Investigate analyze and report on the status of specific major construction projects; determine variations from completion schedule and budget and report variations to management.
- Respond to inquiries from developers, contractors and the general public regarding Left Hand requirements for the construction, alteration, and maintenance of water utility systems.
- Respond to routine public complaints and questions, coordinate with or refer to District Engineer and maintain related documentation.
- Coordinate office and field engineering tasks with Distribution and Treatment Departments, as well as outside agencies, on minor projects and assist in the coordination on major projects.
- Perform related duties as required.

KNOWLEDGE AND ABILITIES

Knowledge of:

- Mathematics including trigonometry, as applied to the computation of angles, areas, distances and traverses, and real property legal descriptions.
- Planning, engineering, and project administration; construction management theory, principles and practices and their application to a wide variety of activities.
- Methods, materials, and techniques used in the construction of water utility and related public works projects including the preparation of specifications, plans, and drawings as they relate to water distribution facilities.
- Computer operating methods and specialized software applications related to design, construction, planning, and mapping.
- AutoCAD drafting; GIS methods and principles.
- English usage, spelling, grammar and punctuation.

Ability to:

- Operate and care for engineering, drafting, CADD, survey, and inspection instruments and equipment.
- Analyze feasibility of design plans for construction of water system facilities.
- Develop, implement, and administer goals, objectives and procedures for providing effective and efficient services. Work independently under general supervision.
- Analyze problems, identify alternative solutions and project consequences of proposed actions and implement recommendations in support of goals.
- Communicate clearly and concisely, both orally and in writing, with all levels of employees and customers. Understand and carry out oral and written instructions.
- Establish and maintain cooperative working relationships with those contacted in the course of work including customers, District staff, government officials, and other agencies.
- Ability to read and interpret engineering and architectural plans and maps.

MINIMUM EXPERIENCE, EDUCATION, AND TRAINING REQUIREMENTS

Education & Experience:

- Education equivalent to the completion of the twelfth grade supplemented by the completion of college level courses in engineering field and at least two years of engineering work specifically related to civil engineering.
- Ability to use AutoCAD to update maps and as-builts.

REQUIRED LICENSES AND/OR CERTIFICATIONS

- A valid Colorado Driver's License with good driving record.

DESIRED QUALIFICATIONS

- Current registration in Colorado as an Engineering Intern.
- Bachelor of Science Degree in Engineering from an accredited university.
- Experience with hydraulic modelling software.
- Ability to coordinate several projects at once, to work under pressure, and to meet deadlines with minimal supervision.
- Experience implementing and updating GIS software such as ESRI ArcGIS, QGIS, GRASS GIS and Python
- Records and document management experience.

WORKING CONDITIONS

Work Environment & Physical Demands:

- Work is performed inside and outside both day and night, under varying and extreme weather conditions, confined space underground and frequent driving. Work may include working weekends. Work includes exposure to sun, noise, dust, fumes, smoke, gases, and oils, moving vehicles, lifting and carrying up to 50 pounds, bending, stooping, squatting, crawling, kneeling, pulling, pushing, reaching overhead and above shoulders, use of both fingers and hands, climbing stairs and ladders, walking, standing, and sitting for extended periods of time. Coordination of eyes, hands, legs, and body is needed. Must have correctable near and far vision, ability to hear, speak, and write. Must be able to compute a variety of engineering related calculations, check plans and verify their accuracy. Work also includes the ability to understand and follow oral and written instructions, and the ability to utilize communication equipment.