



Job Description

Job Code: 169

Range: 34

CIVIL ENGINEERING DESIGNER/DRAFTER

DEFINITION: This position will utilize computer aided design drafting software together with civil engineering design skills in planning, designing, and drafting plans for municipal roadways, drainages, water, sewer, and wastewater utilities/infrastructure under the direct supervision of the City of Cottonwood Utilities Engineer. The Civil Engineering Designer/Drafter will interact with other employees at all levels, including engineers, surveyors, supervisors, managers, and skilled trade workers. This Designer/Drafter with adequate experience may later instruct and supervise other workers.

CLASSIFICATION: This is a non-exempt, full-time, classified position with full benefits.

ESSENTIAL FUNCTIONS: Essential functions, as defined under the Americans with Disabilities Act, may include the following tasks, knowledge, skills and other characteristics. This list is ILLUSTRATIVE ONLY, and is **not** a comprehensive listing of all functions and tasks performed by incumbents of this classification.

TASKS:

- Prepares civil engineering drawings using Microstation, Watercad, Autodesk and Autocad software for water, sewer, paving, grading & drainage, and wastewater or water treatment systems.
- Calculates dimensions, square footage, slopes, profile elevations, and quantities for use in project plans and estimates.
- Aids in performing topographic surveys as required that are related to civil engineering design and construction.
- Develops topographic survey data into survey mapping to be utilized in plan design, compiles detailed construction drawings utilizing municipal specifications and design criteria, and corrects redlined plans.
- Drafts as-built drawings utilizing original construction drawing files and survey data; prepares final drawings for printing and submittal.
- Responsible for keeping record drawings properly organized and filed or archived.
- Responsible for maintaining a current Watercad model for the City of Cottonwood water system.

KNOWLEDGE, SKILLS, AND OTHER CHARACTERISTICS:

- Knowledge of materials, specifications, and methods, involved in the construction or repair of municipal water and sewer systems, highways, roads, and drainage projects.
- Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of civil engineering project plans and specifications.

- Knowledge of math, algebra, geometry, statistics, and their applications. Must have good oral and written communication skills including proficiency with Microsoft Office.
- Knowledge in the use of Microstation, Watercad, Autodesk and Autocad software.
- Must have adequate technical skill to produce precise technical plans, blueprints, drawings, and models. Must have skill in reading and understanding maps and plans relating to water and wastewater systems.
- Skills must include rudimentary experience with surveying for topographic survey related to civil engineering design and construction and drafting maps and plans.
- Skill in drafting concise, clear, and understandable construction notes and plans.
- Skill and knowledge in manual drafting principles.
- Skill in completing required logs and reports.
- Knowledge of current Maricopa Area Government (MAG) standards.

PHYSICAL REQUIREMENTS: This classification is in an office environment requiring mostly sedentary activities for the majority of the workday. May occasionally work outdoors at construction or survey sites, or indoors in offices and/or in testing labs. Working outdoors may expose to varying types of weather. Some work may be at or near busy highways and construction sites. Designers/Drafters can offset most hazards with safety precautions and appropriate dress. This classification involves work that requires the ability to traverse uneven terrain while performing tasks, climb ladders, perform repairs on equipment, and lifting heavy objects up to 60 pounds.

MINIMUM QUALIFICATIONS: The equivalent of a high school diploma or GED and an Arizona Driver's license. Applicants must have a minimum of one year's experience in the use of Microstation, Watercad, Autodesk, and Autocad software doing civil engineering drafting (three years experience preferred). Applicants must have a minimum of two years work experience in a field related to civil engineering including roadway, drainage, water and wastewater design and drafting, similar project construction and/or operations. Applicants who possess an associate's degree in civil engineering design/drafting preferred.

Prepared by: Troy Odell 10/28/2011

Reviewed by: Dan Lueder / Iris Dobler 11/16/11

Employee's Signature: _____ Date: _____