

CADD ANALYST

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Under general supervision, uses computer-aided design (CADD) equipment, software and traditional drafting techniques to prepare engineering plans and drawings; and performs a variety of tasks relative to assigned area of responsibility.

DISTINGUISHING CHARACTERISTICS

Incumbents are experienced and perform programming tasks in CADD system, update, maintain and administer CADD database. Perform basic engineering, planning and administrative duties relating to long-range planning. The position also provides technical and administrative support for District projects and programs. The CADD Analyst also has skills beyond drafting and designing, including graphics design and photo editing. The position will require knowledge and efficient use of common graphics design and photo editing software.

SUPERVISION RECEIVED AND EXERCISED

Direct supervision is received from the Associate Engineer and/or Engineering Manager (Capital & Development).

ESSENTIAL AND MARGINAL FUNCTION STATEMENTS

Essential and other important responsibilities and duties may include, but are not limited to, the following:

Essential Functions:

1. Utilizes AutoCAD design and mapping software to prepare construction plans and drawings for water and sewer line installation and relocation, pumping stations, wells, reservoirs, plant piping and site improvements.
2. Assists in maintaining and updating an AutoCAD database of water/wastewater facilities from construction drawings and "as-built" information; obtains information from engineering project files and/or measurements from field visits to verify accuracy.
3. Creates and maintains District atlas maps, drawings and master plans; researches reference information for staff and the public; makes any needed corrections on a variety of maps, plans, tracings and related records.
4. Reviews CADD files of construction drawings submitted by consultants and developers to ensure they meet District standards and policies.
5. Uses traditional engineering drafting techniques, equipment and tools to produce engineering drawings and records.
6. Formats data records and/or facilitates transfer of electronic files into Geographic Information System (GIS) files; works with GIS Analysts to improve database interface.

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Essential Functions (continued):

7. Provides assistance to professional engineering staff regarding engineering capital projects or other special assignments as needed.
8. Regular attendance at the work site.

Marginal Functions:

1. In the absence of the GIS Analyst, enters data into the District's GIS databases.
2. Performs related duties and responsibilities as required.

KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of:

Basic civil engineering and drafting principles and practices GIS.
Methods and techniques used for the design and construction of public water and sewer facilities.
AutoCAD equipment and software.
Principles of drafting and engineering specification preparation.
Standard engineering terminology, symbols, mathematics and record keeping.
Modern office practices, procedures, and equipment.
Operational characteristics of a geographic information system.

Skill in:

Operating a personal computer including AutoCAD design and mapping software.
Utilizing basic engineering field surveying and measurement equipment.

Ability to:

Ability to perform a wide variety of responsible computer-aided-drafting and sub-professional engineering work in support of District activities under general supervision.
Prepare engineering plans and drawings using AutoCAD.
Understand engineering design principles.
Read and interpret engineering maps and records.
Maintain and update a database for the collection of District water and sewer information.
Read and understand blueprints, maps, and civil engineering plans and specifications.
Perform various design and drafting duties utilizing graphical skills.
Format and/or enter data into a GIS system database.
Understand and carry out oral and written instructions.
Communicate clearly and concisely, both orally and in writing.
Establish and maintain cooperative working relationships with those contacted in the course of work.
Maintain physical condition appropriate to the performance of assigned duties and responsibilities.
Maintain mental capacity which allows the capability of making sound decisions and demonstrating intellectual capabilities.
Maintain effective audio-visual discrimination and perception needed for making observations, communicating with others, reading, writing and operating assigned equipment.

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REQUIRED QUALIFICATIONS

Experience and Training Guidelines

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

Experience:

Minimum Five (5) years of experience using CADD equipment, experience in civil engineering drafting and design at a professional level using computer aided design and other drafting software: or, an equivalent combination of education and experience sufficient to successfully perform the essential duties of the job.

Training/Education:

Equivalent to the completion of the twelfth grade, which included some engineering or advanced drafting courses.

Certificate:

Possession of a Certificate of completion of a formal course of instruction in the use of AutoCAD equipment and software at a recognized college or university or an accredited trade or vocational school.

License:

Possession of a valid Class C California driver's license and a satisfactory driving record.

PHYSICAL DEMANDS AND WORKING CONDITIONS

The physical and mental 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 job functions.

Environmental Conditions:

Incumbent usually works under typical office conditions where the noise level is generally quiet; may regularly be required to work in special no light or low-light area.

Mental Demands:

While performing the duties of this class, incumbents is regularly required to use oral communications, skills, read and interpret information and documents; analyze and solve problems; observe and interpret situations; use math/mathematical reasoning; learn and apply new information and skills; and perform highly detailed work on multiple, concurrent tasks.

Physical Conditions:

Incumbent is regularly required to walk, stand and sit; talk and hear both in person and by telephone; use hands to finger, handle, feel or operate standard office equipment; and reach with hands and arms. The incumbent is regularly required to lift objects weighing up to 10 pounds and occasionally up to 50 pounds.

Vision:

Specific vision abilities required by this job include close vision, color vision, and ability to adjust focus.

Hearing:

Hear in normal audio range with or without correction.

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JOB STATUS: Non-Exempt
DATE ADOPTED: November 2001
DATE MODIFIED: July 2021

Safety Sensitive Position