TITLE: CAD/GIS Supervisor
SECTION: DRAFTING

DEPARTMENT: ENGINEERING
SRN: S-23

REPORTING RELATIONSHIP:

Reports to: Engineering Services Manager

Supervises the following positions: Engineering Aides and Engineering Technicians

DEFINITION: Under direction, to plan, organize, schedule, and supervise the work of the Drafting Division, and to provide technical guidance for the development, maintenance and continued update of CAD and GIS drawings, associated databases, and use of GIS applications.

ESSENTIAL FUNCTIONS:

1. Develops, maintains, and updates Computer Aided Drafting (CAD) and Geographic Information System (GIS) drawings and databases;
2. Supervise CAD of existing and proposed assets including land, easements, wells, water treatment facilities, water storage facilities, water pipelines, lift stations, sewers, water reclamation facilities, irrigation canals and facilities, irrigation pipelines, drainage pipelines and stormwater channels and facilities;
3. Operate a CAD workstation using AutoCAD version 14 running under Windows NT.
4. Supervises preparation of high quality special maps, database queries and analysis, and digitizing data for conversion to GIS usable formats;
5. Ensures that service requests for as-built facility plans, archived info such as drawings, photos, maps, and other records are met and provided on schedule;
6. Provide technical support to translate staff requirements and specifications into functional GIS solutions and guidance on the use of GIS applications;
7. Automates the data update process to support the Engineering Departments hydraulic modeling and Master Planning efforts.
8. Coordinates and conducts CAD and GIS training sessions for Division staff and end users with application needs;
9. Provides GIS technical services and expertise to interdepartmental task force referred to as COMET for development of the District’s enterprise GIS; and coordinates the Engineering Departments use of the GIS enterprise database;
10. Coordinates with the Information Systems Department to develop, maintain and update the District’s GIS and Asset Management databases, including the input, quality control, maintenance and analysis of spatial data layers in a GIS.
11. Coordinates data acquisition and exchange internally and with outside entities;
12. Implement quality control/quality assurance programs for the Division;
13. Coordinates and prepares budget estimates for purchase of Division software, hardware, and other related equipment by researching item specifications, cost and delivery requirements;
14. Evaluates departmental RFP and other contracts requiring CAD/GIS support to ensure consistency with Engineering Department policy and quality of contracted CAD/GIS products;
15. Assess staff workloads and schedules, assigns tasks, and evaluates Drafting Division staff.
16. Communicates and works effectively with others.
17. Ensures high quality customer service is provided by the Division staff;
18. Performs related duties as assigned.

**MINIMUM QUALIFICATIONS:**

**License or Certificates:** Valid California Operators license issued by the State Department of Motor Vehicles. Department of Motor Vehicles driving record may influence employment or classification.

**Experience:** A minimum seven (7) years of combined experience to include: 1) Three (3) years of computer aided drafting (CAD) in Civil Engineering design or similar work; 2) Four (4) years of full-time experience administering and operating a Geographical Information Systems (GIS) in a large organization, using ESRI GIS software or similar type software to develop GIS data, digital maps, or other digital displays used for spatial analysis; and 3) Two (2) years in supervision of CAD/GIS staff. Or training and technical experience which would likely provide the required knowledge and abilities that proves qualifying.

**Knowledge of:**

- Geographic Information System (GIS) concepts, principles, practices and techniques, including computer mapping and attribute data conversion, manipulation and analysis.
- GIS database administration principles, methods and techniques, including quality control and assurance methods and practices.
- GIS software, ESRI or similar software such as ArcInfo, tools, commands and utilities.
- Principles, practices and techniques of the District’s automated drafting and mapping applications; drafting procedures, nomenclature and symbology.
- Microsoft Office suite software (Word, Excel, PowerPoint, and Outlook), and Adobe;
- Principles of algebra, geometry and trigonometry as applied to the computation of angles, areas, distances and traverses.
- Basic civil engineering, cartography, surveying and drafting.
- Modern office methods, procedures and computer equipment and software.
• Principles and practices of sound business communication;
• English usage, including spelling, grammar and punctuation.
• Appropriate safety precautions, procedures, practices and regulations.
• Principles, practices and methods of Supervision.

Abilities:
• Plan, organize, and supervise the work of subordinate Drafting Division staff.
• Understand, interpret, follow, explain and apply detailed technical oral and written instructions and documentation.
• Collect, interpret and integrate relevant geographic and facilities data from multiple sources.
• Utilize a variety of GIS software, computer-aided drafting, graphics and other applications to carry out assigned responsibilities.
• Stay updated on new software and adapt to new software technologies.
• Perform basic engineering computations and computer analyses.
• Understand, use and apply relational database management systems, tools and techniques.
• Oversee the input of facilities data accurately and rapidly.
• Ensure CAD/GIS assignments are completed using initiative and creativity while meeting tight deadlines.
• Interpret maps, graphs, satellite and aerial images and geologic conditions; recognize and resolve discrepancies in attribute data; perform spatial analyses.
• Communicate effectively orally and in writing.
• Prepare clear, concise and accurate documentation, procedures and reports.
• Operate general office equipment.
• Perform work in accordance with safety regulations, guidelines and practices.
• Work in a team environment and be flexible to handle other duties as assigned, including fieldwork.
• Establish and maintain cooperative working relationships with all levels of employees.
Education: Bachelor’s degree from an accredited college or university with a technical major in Geographical Information Systems (GIS), Computer Aided Drafting (CAD), computer science, Engineering, etc.

**PHYSICAL REQUIREMENTS:**

Driving: Light

See Human Resources for physical assessment form.