Job Title: Geographic Information Systems Analyst I/II

SUMMARY

Under general supervision, to perform professional-level work related to the development and implementation of systems, databases and macros to create, maintain, display and upgrade a City-wide geographic information system (GIS) for use in City planning functions and with applications for other departments, governmental agencies, private firms and the public; to utilize this system for the analysis of spatial and tabular data and for the production of electronic and hard-copy maps; and to perform related work as assigned.

EMPLOYMENT STANDARDS

Geographic Information Systems Analyst I is the entry level in this specialized professional class series. Initially under close supervision, incumbents learn geographic and land systems and database creation techniques and the capabilities of computer hardware and software. This class is alternately staffed with Geographic Information Systems Analyst II and incumbents may advance to the higher lever after gaining experience and demonstrating proficiency which meet the qualifications for the higher level class.

Geographic Information Systems Analyst II is the journey level in this class series. Incumbents are fully competent to perform a variety of GIS applications development, conversion and database creation and manipulation work. It is further distinguished from other drafting staff and from information services staff by the specific emphasis upon the development, implementation and increasing usage of a broad-based geographic information system by multiple City departments.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.
- Plans, develops, coordinates and modifies systems to create and maintain a comprehensive geographic and land information program.
- Confers with and acts as liaison with other departmental and City staff to define needs, coordinate system integration and define required output and user documentation.
- Recommends hardware and software purchase and upgrades; tests and installs new software and upgrades.
- Diagnoses hardware or software problems and corrects, if possible, or notifies appropriate contractors.
- Researches, assembles, evaluates and digitizes information into the appropriate GIS database.
- Performs complex network modeling activities to ensure appropriate program development, system coordination and application utility.

- Develops systems, networks and applications documentation, user-training materials and quality control procedures.
- Trains and assists other staff in the use of GIS software and databases.
- Performs a variety of analytical studies related to the development and implementation of the GIS; evaluates alternatives, makes recommendations and prepares technical reports.
- Prepares a variety of correspondence, manuals, procedures and other written materials.
- Monitors developments in the field of geographic system usage, determines their potential effect upon the City system; recommends procedural and equipment changes to ensure system updating.
- Attends training sessions and staff meetings.
- Performs computer backup and recovery procedures.
- Uses standard office equipment in the course of the work; may drive a personal or City vehicle to attend meetings at various departments and agencies.

KNOWLEDGE OF

- Principles and practices of the development and implementation of geographic information systems, including the production of digitized and hard-copy maps and statistical data.
- Geographic systems hardware, software and applications as utilized by the City.
- Techniques of synthesis and analysis of natural and cultural phenomena using GIS software.
- Principles and practices of systems analysis and development.
- Applicable laws, codes and regulations.
- Record keeping principles and practices.
- System documentation principles and practices.
- Techniques for the selection, installation and troubleshooting of computer hardware and software.
- Use and care of drafting equipment and standard office equipment.
- Techniques for explaining technical concepts to non-technical users.

SKILL IN

- Independently planning, coordinating and implementing effective GIS applications projects for City departments and varied public and private organizations.
- Effectively using the application program languages and system hardware and software utilized by the City GIS.
- Estimating hardware and software requirements and time and cost requirements for specific projects.
- Interpreting aerial photographs.
- Installing and troubleshooting hardware and software.
- Preparing clear and concise program documentation, user procedures and technical reports.
- Maintaining accurate records and files.
- Organizing own work, setting priorities and meeting critical deadlines.

- Using initiative and independent judgment within established procedural guidelines.
- Instructing non-technical users in system use and procedures.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.

EDUCATION AND/OR EXPERIENCE

Any combination of education and experience that would provide the knowledge and skills listed.

Geographic Information Systems Analyst I
Typically, graduation from a four-year college or university with major course work in planning, engineering, computer science or geographic studies or a field related to the work. Experience in digitizing data or working with geographic information system data, in map drafting or in the planning function may be substituted for the education on a year-for-year basis to a maximum of two years.

Geographic Information Systems Analyst II
In addition to the above, two years of professional-level experience in working with digital orthophotography and/or automated geographic information databases and systems at a level equivalent to that of the City's class of GIS Analyst I.

NOTE: The level of knowledge and skills required will vary with the level of the class series to which assigned, as described in the Class Characteristics.

PHYSICAL DEMANDS

Mobility to work in a standard office setting and to use specialized computer and drafting equipment in addition to standard office equipment; vision to read printed materials, maps and a computer screen; and hearing and speech to communicate in person and over the telephone.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee regularly works in indoor conditions and regularly works near video display. The employee is occasionally exposed to outside weather conditions. The noise level in the work environment is usually very quiet.

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