

City of San José
CLASS SPECIFICATION

Title: Senior Geographic Information Systems Specialist (1385)

DEPARTMENT	ACCOUNTABLE TO	FLSA STATUS
Varies	Varies	Non-Exempt

CLASS SUMMARY

Under direction, supervises and performs the most complex specialized technical work in the utilization of geographic information systems (GIS) programs. Plans, assigns, directs, and evaluates the work of staff assigned to support GIS related infrastructure management systems. Manages the development of custom mapping applications for multiple City departments and work groups. Performs related work as required.

DISTINGUISHING CHARACTERISTICS

This is the advanced journey-level class in the Geographic Information Systems Specialist classification series responsible for providing a high level of technical support to an assigned GIS program area, and for leading, directing and training assigned staff. Incumbents regularly work on tasks that are varied and complex, requiring considerable discretion and independent judgment. Positions in this classification rely on experience and judgment to ensure the efficient and effective functioning of the assigned GIS program area. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to deliver services and work products. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements. This class is distinguished from the lower level Geographic Information Systems Specialist II in that the later performs technical system support for GIS operations and programs and is not assigned lead functions.

QUALIFICATIONS

(These qualifications are typically required. An equivalent combination of education and experience sufficient to satisfactorily perform the duties of the job may be substituted.)

Minimum Qualifications

Education and Experience

A Bachelor's Degree from an accredited college or university in Geographic Information Systems, Engineering, Computer Science, Management Information Systems, Mathematics, Physical Science, Geography, Geology, Urban Planning or closely related field AND two (2) years of increasingly responsible experience in computer programming, geographic information systems or transportation planning, including one (1) year in special and/or asset database management. A GIS or GISP certificate from a certifying body acceptable to the City of San José is highly desirable.

Acceptable Substitution

Possession of a valid GIS or GISP certificate from a certifying body acceptable to the City of San José may be substituted for one (1) year of experience in computer programming, geographic information systems or transportation planning.

Other Qualifications

(Incumbents may be required to have different combinations of the listed qualifications, or more specific job-related qualifications depending on the position.)

Basic Competencies

(Needed at entry into the job in order to perform the essential duties.)

- Job Expertise - Demonstrates knowledge of and experience with applicable professional/technical principles and practices; knowledge of GIS applications, programming, and relational database model; knowledge of design techniques and tools to produce maps, graphics, and models; ability

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to perform computer programming, data analysis, or software development for GIS applications; Citywide and departmental procedures/policies and federal and state rules and regulations.

- Communication Skills - Effectively conveys information and expresses thoughts and facts clearly, orally and in writing; demonstrates effective use of listening skills and displays openness to other people's ideas and thoughts.
- Computer Skills - Experienced with common business computer applications including but not limited to: MS Outlook, MS Word, MS PowerPoint, MS Access, and MS Excel.
- Teamwork & Interpersonal Skills - Develops effective relationships with co-workers and supervisors by helping others accomplish tasks and using collaboration and conflict resolution skills.
- Analytical Thinking – Approaching a problem or situation by using a logical, systematic, sequential approach.
- Flexibility – Makes effective decisions and achieves desired results in the midst of major changes in responsibilities, work processes, timeframes, performance expectations, organizational culture, or work environment.
- Initiative - Exhibits resourceful behaviors toward meeting job objectives; anticipates problems, is proactive, and avoids difficulties by planning ahead; displays willingness to assume extra responsibility and challenges; pursues continuing education opportunities that promotes job performance.
- Problem Solving – Approaches a situation or problem by defining the problem or issue; determines the significance of problem; collects information; uses logic and intuition to arrive at decisions or solutions to problems that achieve the desired outcome.
- Supervision - Sets effective long and short-term goals based on a good understanding of management practices; establishes realistic priorities within available resources; provides motivational support; empowers others; assigns decision-making and work functions to others in an appropriate manner to maximize organizational and individual effectiveness.
- Technology Use/Management – Uses efficient and cost-effective approaches to integrate technology into the workplace and improve program effectiveness.

DUTY NO.	<u>TYPICAL CLASS ESSENTIAL DUTIES:</u> (These duties and estimated frequency are a representative sample; position assignments may vary depending on the business needs of the department.) Duties may include, but are not limited to, the following:	FREQUENCY*
1.	Plans, assigns, directs and evaluates the work of assigned staff in connection with the development, implementation, and use of geographic information systems (GIS) to support infrastructure management systems; supervises the work of multiple employees; trains staff in the conduct of GIS analytical procedures; performs quality assurance/quality control tasks on niche and complex workflows.	Daily/Several Times

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2.	Manages the development of custom mapping applications for multiple City departments and work groups; ensures the quality and timely production of deliverables that include customized web maps, mobile applications, and hard/soft copy maps, tables, graphs/charts, and reports.	Daily/Several Times
3.	Operates, maintains and troubleshoots various types of GIS programs across multiple platforms and servers, using a variety of technologies, including, but not limited to computers, peripheral equipment, data collection devices, mobile and web-based applications, and GIS supported applications.	Daily/Several Times
4.	Develops, maintains and modifies existing GIS spatial and non-spatial databases implementing quality assurance and quality control measures.	Daily
5.	Participates in the development, operation and maintenance of a comprehensive City-wide GIS program; ensures integration of GIS with the Computerized Maintenance Management System (CMMS) for physical asset and records management in the planning, operating and maintenance of the City's civil and structural infrastructure, and associated components including, but not limited to, the Regional Wastewater Facility, Airport, buildings, parks, and other infrastructure elements.	Weekly
6.	Participates in the development of procedures and computer software for data sharing or data transfer between the City's systems and those of other agencies or consultants and for improving the analysis of geographic data.	Weekly
7.	Participates in the development of GIS related technology to ensure that customers have access to latest technology; sets project goals and objectives; plans, budgets, and oversees the implementing of GIS projects and applications; coordinates GIS-related activities with other departments or agencies; recommends training methods and supervises/participates in the training of users to implement new technology.	Weekly
8.	Develops and implements policies and procedures for use by staff in the development and maintenance of GIS programs and data; documents and coordinates plan management for GIS data digitizing and integrity; develops reports and manages the generation of reports used to track systems backlog and deliverables.	Weekly
9.	Participates in the Request for Proposal process for GIS related hardware and software procurements; drafts technical specifications; participates in the vendor selection process; oversees and administers contracts.	Weekly
10.	Uses GIS technology modeling tools to conduct advanced data analysis on public safety operational performance to assist departmental monitoring and situational awareness; builds data layers to facilitate emergency vehicle routing; identifies land uses and district information for incidents; develops data reporting tools.	Weekly
11.	Performs database administration including replication, server related maintenance, update and connectivity monitoring, data modeling/mapping and schema development; coordinates database development activities with database administrators, and departmental and central information technology staff.	Weekly

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12.	Identifies, analyzes, and defines changes to GIS applications software and related systems and subsystems that will maximize efficiencies for better services to users; develops plans to implement changes.	Weekly
13.	Evaluates and makes recommendations regarding technological advancements for improving the efficient use of the City's geographic information systems.	Intermittent
14.	Performs other related duties as assigned.	As Required

*Frequency defined as Daily/Several Times, Daily, Weekly, Intermittent, or As Required

PHYSICAL/ENVIRONMENTAL ELEMENTS

The following is a general statement for the classification. Individual positions may have additional or different physical/environmental elements.

In an office environment, possess ability to:

- Operate, access, enter, and retrieve data using standard office equipment, including but not limited to a computer or tablet;
- Read printed materials and a computer screen;
- Communicate in person and over the telephone;
- Lift, carry, push, and pull materials and objects up to 25 pounds, or heavier weights, in all cases with the use of proper equipment;
- Move between/within work areas, including but not limited to sitting, walking, and standing on various surfaces, turning, bending, grasping, and making repetitive hand movements;
- Be exposed to moderate noise levels and controlled temperature conditions;
- Maintain professional demeanor during interactions with staff, customers, and the public.

CLASSIFICATION HISTORY *Created 5/91, Rev. 08/17; s000*