CITY OF BELLINGHAM

JOB DESCRIPTION

JOB TITLE: **Senior GIS Analyst** **UNION:231**
SG:6
DEPARTMENT: **Information Technology** **CS:N**
FLSA:N
EEO4CODE:PR

JOB SUMMARY:

Performs a wide variety of advanced business process, analysis and coordination functions to implement and maintain the integration and functionality of an enterprise Geographic Information System (GIS). Provides technical consultation, application development and business solutions to departments and workgroups throughout the City. Develops and designs databases, scripts and applications.

Provides management, quality control, delivery and utilization of GIS information services. Performs a variety of advanced analytical and geo-processing functions to create, maintain, and retrieve data from the City's GIS. Develops and monitors GIS data quality control and update requirements to ensure proper data integration with other business systems. Develops and maintains data standards and procedures. Coordinates and reviews GIS data collection and mapping processes, and conducts training

Work is characterized by the incumbent's leading role in acquisition, implementation, and both technical and business-based support of GIS in a complex enterprise environment. Includes negotiation of contracts, coordination with business system vendors relying on GIS for implementation, integration and training, assisting users in developing systems and/or specifying changes, writing and/or specifying conversions.

SUPERVISORY RELATIONSHIPS:

Reports to the Information Technology Services Department GIS Manager. Works under general supervision and the guidance of City and Departmental policies, procedures, protocols, and technical standards. Provides technical leadership and direction to lower level GIS staff in all departments. May supervise GIS interns within the Information Technology Services Department.

ESSENTIAL FUNCTIONS OF THE JOB:

1. Designs, develops and administers the City's Intranet/Internet GIS mapping and data publishing applications (Esri Platform, Latitude Geographics/Geocortex platform, custom applications). Administers the cartographic design of and delivery of mapping feature services for ArcGIS Server and other integrated business systems according to industry best practices. Manages and streamlines update processes and administers business integration requirements for ArcServer based tools.

2. Provides high quality, detailed consultation, technical support and troubleshooting for key City GIS-related applications, including working with vendors. Evaluates current procedures, workflows, and problems, and recommends changes and improvements. Trains and supports City staff in the use and applications of GIS data viewing software and associated

information, including a wide range of technical and non-technical employees using the GIS to perform analysis, complete inventories, and compile reports and studies.

3. Designs and administers multiple GIS spatial databases (enterprise geodatabases) using ESRI/SDE, SQL Server, ArcGIS Server/Portal and other online data management tools. Designs, prepares and coordinates logical data models, definition structures, standards, procedures and documentation for the GIS and related/integrated systems or software applications. Coordinates, assists, and trains clients or subordinates in proper use and management of geospatial data, including maintenance of data quality assurance and quality control standards. Prepares and maintains the documentation of the GIS databases (including metadata), procedures and business data integration requirements.

4. Develops and updates data models, scripts, interfaces and programs in support of importing/exporting and manipulation of GIS data between various software systems and/or business applications. Writes scripts that automate daily or weekly processes to maintain the integrity of the GIS data. Receives feedback from users, tests, troubleshoots, and repairs scripts as necessary.

5. Designs and develops GIS and related application procedures and programs as required; tests procedures and programs to ensure that desired results are achieved; makes necessary changes to correct deficiencies. Researches and provides recommendations on application development software, add-ins and components. Uses scripting and markup languages as needed to automate tasks. Writes and modifies scripts to use occasionally or on a nightly basis. This includes Python, SQL, JavaScript, XML, HTML, CSS, JSON, C++, C#, Arcade.

6. Develops and maintains workflows and reports (example: Land Parcel Report), that automate/guide users through processes and generate reports that integrate data from GIS and City business systems, using ESRI, Geocortex, and SQL Server tools.

7. Administers GIS system updates and configurations settings to ensure optimum system performance and security. Administers the GIS software licensing to ensure proper and efficient deployment, accessibility and license utilization. Monitors system performance and logs to troubleshoot and proactively adjust configuration settings to maximize GIS system performance, availability, and security.

8. Acts as project lead for implementing business and analytical support to business system integration with the GIS systems. As project leader, chairs meetings and/or committees, prepares agendas, and coordinates project activities, including negotiation of contracts and coordination with business system vendors relying on GIS for implementation. Communicates project recommendations and/or status to City leaders at all levels of the organization. Identifies key business requirements, writes and produces GIS business functional specifications and work flow to meet the needs of the new business process or system. May provide explanation of research, determinations, analysis methods and deliverable materials in private and public meetings.

9. Coordinates and provides support for special mapping and data analysis projects and services for other City departments, outside agencies, the public, private developers, and consultants.

ADDITIONAL WORK PERFORMED:

1. May direct lower level GIS staff, interns, volunteers, extra labor or temporary employees including training, prioritizing, and reviewing work. May supervise GIS interns. Performs quality assurance review in GIS mapping performed by directed staff.

2. May participate in the development of GIS mapping, presentation and data collection standards as a technical and business resource to ensure uniformity and compatibility in the city GIS mapping system. May coordinate and perform research, data collection and data entry for the creation and maintenance of GIS data.

3. Performs other related work of a similar nature or level.

PERFORMANCE REQUIREMENTS (Knowledge, Skills, and Abilities):

INTERPERSONAL AND COMMUNICATION

Knowledge of:
- Working knowledge of the functions of City departments, office operations and interdepartmental working relationships.

Skill in:
- Excellent interpersonal skills for establishing and maintaining effective working relationships with clients, vendors and associates.
- Working both as a member of a team and as a project leader.
- Writing in clear, concise language to produce reports and other required documentation.
- Good oral communication skills, including good listening skills, to communicate with technical and non-technical internal clients.
- Good project management skills including communications coordination; time and task management with employees at all levels of the organization; budget preparation and tracking; and coordination with outside vendors.

TECHNICAL

Knowledge of:
- Strong knowledge of advanced GIS concepts, geoprocessing functions and techniques, and spatial database management procedures. Comprehensive working knowledge of database concepts.
- Strong knowledge of GIS process integration with other business systems including server processes utilizing database and/or cloud server-based processes
- Strong demonstrated knowledge of GIS programming and scripting languages including Python, SQL, JSON, HTML, CSS.
- Windows operating systems, products and concepts involved in the operation of desktop computers, including Microsoft Office and Adobe products.
- Microsoft SQL Server, Structured Query Language (SQL) and its applications with GIS analysis and data/system integration.
- The development, configuration and optimization of web mapping services (ArcGIS Server).
- Service desk type software to track bugs, tickets, and customer service issues.
- Version control software such as GIT or GITHUB.

Ability to:
- Understand, interpret, and apply regulatory standards and security standards to systems configurations, procedures, and training documents.
- Expand on technical skills quickly.
- Read and comprehend technical manuals and apply the contents to solving software and hardware problems.

PROBLEM SOLVING

Ability to:
- Demonstrated ability to combine knowledge of GIS databases and software with common sense and insight in solving problems and making decisions.
- Systematically identify and analyze the important dimensions of a problem, determining potential causes, obtaining relevant information, and specifying alternate solutions, then carrying out solutions or referring to the appropriate authority.

ORGANIZATION AND MANAGEMENT

Knowledge of:
- Working knowledge of principles and procedures of project coordination.

Skill in:
- Skilled at working independently under pressure and with minimal supervision to solve problems and meet deadlines.
- Planning, organizing, decision-making and time management, including the ability to appropriately prioritize assignments.

GENERAL

Ability to:
- Ability and willingness to demonstrate the Public Service Competencies of Service Orientation, Results Orientation, and Teamwork and Cooperation.
- Maintain the absolute confidentiality of sensitive files, data and materials accessed, discussed, or observed while working with City staff.
- Maintain security and confidentiality of systems and records while adhering to security policies and procedures.
- Maintain consistent and punctual attendance.
- Physical ability to perform essential functions of the job, including:
  - Ability to occasionally lift weights of up to 15 pounds;
  - Dexterity of hands and fingers to operate a computer keyboard;
  - Near distance visual acuity to assure proper operation of computers and software;
  - Ability to exchange verbal information in person and by telephone;
  - Ability to see/distinguish colors.

WORKING ENVIRONMENT:

Work is performed in an office environment at a computer workstation with long periods of sitting or standing and with frequent visits to customer work sites. Work environment includes a normal range of noise and other distractions with low everyday risks working around standard office equipment. Occasional overnight travel to conferences and training sessions may be required.

EXPERIENCE AND TRAINING REQUIREMENTS:

- Bachelor's degree with coursework in cartography, computer science, civil engineering, geography, GIS, or related field.
- Technical:
  - Four (4) years of progressively responsible GIS experience in a complex enterprise setting, with at least 2 years at the analyst level.
  - At least two (2) years of experience supporting GIS/business process integration in an enterprise setting or performing equivalent work.
  - At least two (2) years of experience installing, maintaining, and operating the Esri platform (cloud, server, and desktop) products.
  - Strong knowledge of industry-standard relational database products such as SQL Server.
- An equivalent combination of education and experience sufficient to provide the applicant with the knowledge, skills and ability to successfully perform the essential functions of the job will be considered.

NECESSARY SPECIAL REQUIREMENTS:

- Employment contingent upon passing a criminal convictions and local background check.
- Agreement to and signature of a Privileged Access Confidentiality Agreement may be required.
- Willingness and ability to work extra hours or change hours as needed to do systems work outside of normal business hours.
- Certification as a GIS Professional (GISP) preferred.

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