CITY OF BELLINGHAM

JOB DESCRIPTION

JOB TITLE:	**Public Works GIS Senior Technician**	**UNION:1937**
		SG:113
CLASS TITLE:	**GIS Technician, Senior**	**CS:Y**
		FLSA:Y
DEPARTMENT:	**Public Works/Operations**	**EEO4CODE:TE**

JOB SUMMARY:

Performs a variety of technical office and field duties updating, maintaining and analyzing the Department's Geographic Information System (GIS) and utility infrastructure data using GIS, database and information management applications. Coordinates and performs research and field data collection of infrastructure location, structural and condition information. Provides queries and analysis on infrastructure, maintenance, condition, replacement and management data and develops reports, maps and presentations for use by internal and external customers. Performs technical updates and contributes content to the City's web pages and city-wide GIS internet and intranet pages. Assists in developing and defining GIS and data collection standards; data quality and cartographic standards; and work unit procedures and schedules. Assists in the design, creation and maintenance of GIS data networks.

SUPERVISORY RELATIONSHIPS:

Reports to the GIS/Technical Services Manager. May receive technical direction from the GIS Specialists, GIS Analysts or Senior GIS Analysts. Work is assigned by the Data Services Supervisor or GIS/Technical Services Manager and reviewed by the Data Services Supervisor, GIS Specialists, GIS Analysts and/or Senior GIS Analysts.

Works under general supervision and the guidance of established procedures, standards and practices, applicable City regulations, policies and guidelines; and, appropriate technical mapping and data collection standards. May provide training to temporary and regular City employees regarding data collection and GIS utilization.

ESSENTIAL FUNCTIONS:

1. Performs accurate and timely updates to the Department's and/or City's GIS files and data management records related to streets, sewer, water and storm systems, asset inventory, plats, parcels, right-of-ways, easements, latecomers, city property and data layers. Map infrastructure by interpreting engineering plans, legal descriptions, aerial photos, and record drawings. Assists in developing procedures and schedules to attain mapping and data management goals.

2. Performs quality control on GIS data sets by developing, running and reviewing quality control reports on spatial integrity and attribute consistency. Performs quality control checks between GIS datasets and other Department business systems such as maintenance management, utility modeling, utility billing, customer service, project tracking and infrastructure inspection systems to ensure integrated system data consistency.

3. Assists in the development of GIS and data collection standards to ensure uniformity and compatibility between the utility management systems and the GIS. May perform field collection of infrastructure location, structure and condition information. Records information into database systems and GIS mapping layers.

4. Researches and evaluates infrastructure and utility information and provides technical information and assistance to City personnel and the public. Initiates contact with City personnel, private utilities, engineering firms and the public to verify infrastructure and utility information, resolve problems, and exchanges information to ensure accuracy of GIS mapping and infrastructure data. Utilizes the GIS, AutoCAD and a variety of database applications to analyze data to provide custom mapping solutions to meet multi-departmental needs.

5. Performs analysis procedures for spatial and non-spatial data to generate statistical, condition and maintenance reports, and technical maps for departments City-wide. Determines nature of information to be queried, analysis methods and reporting format.

6. Prepares effective presentation of information using appropriate cartographic elements and media output. Creates output such as presentation maps, map books, graphs and publications using GIS and presentation software and related equipment. Presents and explains information to City staff and the public.

7. Trains and supports City staff in the use and applications of GIS information, data viewing software, departmental database management and associated information.

8. Develop and maintain data quality, cartographic standards, and best practices for GIS utility layers. Assists in defining GIS standards as related to base mapping layers, database structures and City-wide cartography and mapping standards.

9. Performs technical updates and contributes content to the City's web pages and city-wide GIS internet and intranet pages.

10. Assists in the design, creation and maintenance of GIS data networks.

11. Assists in the documentation of the GIS databases (metadata), procedures and business data interfaces.

ADDITIONAL WORK PERFORMED:

1. Assists other City departments with GIS mapping and analysis as needed.

2. Trains and provides input and feedback on the work of new and temporary staff members.

KNOWLEDGE AND SKILLS:

- Knowledge of GIS and cartographic principles, terms, concepts, procedures, and geoprocessing functions and techniques.
- Knowledge and ability to operate and use GIS hardware, software and related peripheral equipment.
- Ability to prioritize workload, solve problems, and meet deadlines with a minimum of supervision.

- Knowledge of mathematics, algebra, trigonometry, and geometry.
- Knowledge of civil engineering, mapping and surveying principles, terms, concepts, techniques and procedures.
- Knowledge of public works and engineering data and records management systems and practices.
- Knowledge and ability to operate database and reporting applications.
- Analytical and problem solving skills.
- Ability to understand technical manuals and follow established procedures.
- Ability to maintain records and prepare necessary technical reports.
- Ability to work independently and as part of a team.
- Ability and willingness to demonstrate the Public Service Competencies of Service Orientation, Results Orientation, and Teamwork and Cooperation.
- Good skills in oral and written communication, problem solving, and ability to learn to work independently with a minimum of supervision.
- Ability to read, understand and translate engineering drawings, maps and legal descriptions.
- Ability to produce and maintain computer generated maps and other graphic presentations.
- Ability to establish and maintain effective working relationships with diverse groups of people such as contractors, engineers, developers, public officials and the general public.
- Physical ability to perform essential functions of the job:
    - Adequate hearing, correctable vision, and manual dexterity.
    - Ability to occasionally lift light weight (10-15 lbs.).
    - Ability to perform extensive walking tasks (average of 2-6 miles per day), drive, and accurately perform condition rating tasks in all weather conditions for extended periods of time throughout the service area.

WORKING ENVIRONMENT:

Work is primarily performed in an office setting, and requires sitting and working for extended periods in front of a computer terminal. Some positions may also perform field work outdoors on uneven terrain, exposing employee to inclement weather, noise, fumes, construction environment, and traffic hazards. Employees are required to use appropriate safety equipment and follow standard safety practices.

EXPERIENCE AND TRAINING REQUIREMENTS:

- An AA degree in engineering or GIS technology including coursework in surveying, cartography, and civil engineering mapping; AND
- Four years of GIS or CAD mapping experience in a public works environment
- Two years of experience reading, interpreting and/or drafting engineering plans.
- A combination of education and experience, which provides the applicant with the required knowledge, skills and abilities, will be considered.

NECESSARY SPECIAL REQUIREMENT:

Valid Washington State driver's license and good driving record. A three-year driving abstract must be submitted at the time of hire.

PREPARED BY: D. Burdick
L. Klemanski
5/09

REVIEWED BY: _____
Thomas L. Rosenberg, Director
Public Works

COMMISSION ALLOCATION: May 13, 2009