City of Bellingham
Classification Specification

CLASS TITLE	**GIS Technician/Senior GIS Technician**
DEPARTMENT	**Public Works-Operations**
UNION:	**1937**
SG:	**110/113**
CS:	**Yes**
FLSA:	**Y**
EE04CODE|SOC:	**TE|17-3031**

NATURE OF WORK:

Performs a variety of technical office 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 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.

DISTINGUISHING CHARACTERISTICS:

This classification is distinguished from the Engineering Technician classification by performance of highly skilled technical work in the GIS functional area. Assignments require incumbents to independently plan and execute a complete project and portions of non-routine large projects with diverse components and substantial complexity.

The Senior GIS Technician is distinguished from the GIS Technician by the greater experience, responsibility, and independent decision making required to evaluate and interpret data; to apply and adapt a wide variety of established methods under a variety of circumstances; to assist in the design, creation, maintenance and documentation of GIS data networks; and, to assist in the development of standards and procedures.

Incumbents in the GIS Technician position will move to the Senior GIS Technician in a non-competitive promotion upon completing two years' experience of GIS Technician at the City of Bellingham.

SUPERVISORY RELATIONSHIP:

Reports to the assigned departmental supervisor or manager. May receive work assignments from other departmental staff members. May receive technical guidance and direction from higher classified staff.

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. The Senior GIS Technician 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 Map infrastructure by interpreting 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. May respond to customer inquiries regarding billing.

3. 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.

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 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.

Senior GIS Technician

1. Some positions may provide accurate and timely updates to the City's stormwater utility billing system. Uses GIS and other information sources to calculate impervious surface area and determine stormwater utility fees. Analyzes data and coordinates with other City departments to ensure accuracy and integrity of stormwater utility billing. Ensures that rate changes are correctly integrated into billing databases.

2. Assists in the development of GIS and data collection standards to ensure uniformity and compatibility between the utility management systems and the GIS.

3. Utilizes the GIS, CADD and a variety of database applications to analyze data to provide custom mapping solutions to meet multi-departmental needs.

4. Some positions may provide day to day direction, implements projects, and maintains data related to stormwater utility billing, stormwater facilities and stormwater inspections.

5. The Senior GIS Technician performs all work of the GIS Technician classified positions.

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.

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

PERFORMANCE REQUIREMENTS (Knowledge, Skills, and Abilities):

Knowledge of:

- Mathematics, algebra, trigonometry, and geometry.
- Civil engineering, mapping and surveying principles, terms, concepts, techniques and procedures.
- Public works and engineering data and records management systems and practices.
- GIS and cartographic principles, terms, concepts, procedures, and geoprocessing functions and techniques.

Skill in:

- Operating GIS hardware, software and related peripheral equipment.
- Operating database and reporting applications.
- Analytical and problem-solving skills.

Ability to:

- Prioritize workload, solve problems, and meet deadlines with a minimum of supervision.
- Understand technical manuals and follow established procedures.
- Maintain records and prepare necessary technical reports.
- Work independently and as part of a team.
- Demonstrated communication skills, problem solving, and ability to learn to work independently with a minimum of supervision.
- Read, understand, and translate engineering drawings, maps and legal descriptions.
- Produce and maintain computer generated maps and other graphic presentations.
- Establish and maintain effective working relationships with diverse groups of people such as contractors, engineers, developers, public officials and the general public.
- Maintain consistent and punctual attendance.
  Ability and willingness to demonstrate the Public Service Competencies of Service Orientation, Results Orientation, and Teamwork and Cooperation.
- Physical ability to perform the essential functions of the job including:
  - Operate a motor vehicle;
  - Frequently operate a computer and other office machinery such as a keyboard, mouse, phone, and fax machine;
  - Occasionally transport weight up to 15 lbs.

WORKING ENVIRONMENT:

Work is primarily performed in an office setting at a computer workstation for extended periods of time. Identified positions may also perform field work outdoors on uneven terrain, exposing the employee to inclement weather, noise, fumes, construction environment, and traffic hazards. General safety precautions are taken into consideration for the majority of these hazards. Employees are required to use appropriate safety equipment and follow established standard safety policies and practices.

EXPERIENCE AND TRAINING REQUIREMENTS:

GIS Technician

- An Associate's Degree in engineering, GIS technology or two years of relevant coursework in surveying cartography and GIS theory and applications required.
- Two years of GIS or CADD mapping work experience in a relevant field required.
- Two years of experience reading, interpreting and/or drafting CADD or GIS plans preferred.

Senior GIS Technician

- Two years' experience as a GIS Technician with the City of Bellingham

  OR

- An Associate's Degree in engineering, GIS technology or two years of relevant coursework in surveying cartography and GIS theory and applications required.
- Four years of GIS or CADD mapping work experience in a relevant field required.
- Two years of experience reading, interpreting and/or drafting CADD or GIS plans required.

NECESSARY SPECIAL REQUIREMENT:

- Employment contingent upon passing a criminal background check.
- Valid Washington State driver's license and good driving record. Candidates must submit a three-year driving abstract prior to hire.

PREPARED BY: D. Burdick
L. Klemanski
5/09
C. Barber
J. Honga
10/24

REVIEWED BY:
Mike Olinger, Interim Director
Public Works

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