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CITY ADMINISTRATOR'S OFFICE MEMO

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To: Mayor Bennett and City Council

From: City Administrator, Kim Downs

Date: April 11, 2017

RE: GIS Technician-Fulltime Position Request FY-18

During our FY-18 Budget we discussed two positions. One was to fill the Fire Department's Deputy Chief-EMS position which has been vacant since 2015. The other was somewhat of a new position a-Geographical Information Systems (GIS) position. Today we utilize a GIS intern. The intern position hours today consist of 16-24 hours during the school year and 40 hours a week during the summer break. This intern will be graduating this summer and sadly Kirkwood Community College is no longer offering a GIS program as part of their curriculum.

The GIS technician supports the ongoing maintenance and dissemination of data and applications in the GIS environment. Reporting primarily to the Water Superintendent. The GIS technician will work with various municipal departments to ensure their needs for GIS information are met on a day to day basis. The City of Hiawatha over a period of 4 years has invested $105,000 in a GIS system program and equipment. GIS as a tool simulates and dissects our environment; what makes up our city - streets, parks, sidewalks, trees, buildings, water mains, valves...the list goes on and on. With GIS, we map these features as individual "systems", allowing us to analyze, simulate and understand problems or situations with detail. This makes GIS a very powerful tool for our local government – providing information as efficiently and precisely as possible.

As I mentioned during our FY-18 budget discussions several of our department heads utilize the expertise of this position daily over the past year and half and have strongly expressed their desire to keep the GIS positon viable. The Water Department has agreed to fund 50% ($24,000) of the GIS technician position with 20% ($9,600) general fund and 30% ($15,000) split between road use, sanitary sewer, and storm water. These percentages are based on passed utilization. Benefits would be split accordingly. The fulltime GIS technician position consistently fits within our Employee Wage and Policy Plan Group C with a salary range of $43,925-$48,096. We would maintain the intern positon through FY-17 (FY-17 Current General Fund budget $4,500) with the fulltime position to start July 1, 2017 beginning the new fiscal year.

I would ask council to approve the Full-Time GIS Technician position and job description with a pay range based on the criteria provided within the job description $43,925-$48,096 with benefits effective July 1, 2017.

If the decision is not to approve a fulltime position it would be my recommendation to contract with an engineering firm to keep the GIS system sustainable. If we go this route the hourly rate would range between $65-$103 per hour based on availability and expertise to manage and input the GIS data to ensure our GIS system is accurate for making informed decisions.

Thank you for your consideration.

Hiawatha! CITY OF HIAWATHA, IOWA

Geographic Information System (GIS) Technician

DATE: Adopted 04/19

CLASSIFICATION:
Non-Exempt

SALARY GROUP/GRADE:
C1-3 - C1-5

DEPARTMENT:
Water

JOB DESCRIPTION:

Summary/Objective
The GIS Technician will support the ongoing maintenance and dissemination of data and applications in the GIS environment. Reporting primarily to the Water Superintendent, the GIS Technician will work with various municipal departments to ensure that their needs for GIS Information are met on a day to day basis.

DISTINGUISHING CHARACTERISTICS:

The GIS Technician-generates maps and customized geographic information systems (GIS) applications and manipulates data to serve a variety of purposes. The GIS technician reads and interprets maps, manipulates and understands digital land data, and manages data entered into a GIS database. The Incumbents of this classification work within a framework of established procedures and are expected to perform all the duties assigned to the position with only occasional instruction or assistance. GIS software has the capacity to relate different types of data such as socioeconomic, demographic, administrative or political boundaries, land use, land cover, environmental, infrastructure, and transportation networks. The GIS technician will report to the Water Superintendent and in their absence, the City Engineer or City Administrator.

ESSENTIAL FUNCTIONS:

Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

1. Responsible for the on-going spatial data maintenance and dissemination, end-user support and the generation of maps and other GIS reports and information product.
2. Provide technical expertise related specifically to asset management.
3. Responsible for the creation of as-built municipal drawings using AutoCAD.
4. Responsible for compiling and organizing GIS data from maps, databases and other sources.
5. Responsible for the collection of data in the field using Global Positioning System (GPS) units.
6. Responsible for the daily input and editing of municipal infrastructure.
7. Conduct programmatic and manual analysis and create reports and thematic maps on the data within the GIS.
8. Ensure that quality assurance on new or revised data conforms to standards laid out in the Geodatabase, or any other applicable standard or policy.

- Responsible for the conversion, and import and export data in and out of the GIS system.
- Direct the preparation of regular status reports, and highlighting GIS issues requiring attention.
- Create and document procedures and metadata definitions.
- Create maps and graphs using GIS software and related equipment.
- Meet with users to define data needs, project requirements, required outputs, or to develop applications.
- Conduct Research to locate and obtain existing databases.

- Gather, analyze, and integrate spatial data from staff and determine how best the information can be displayed using GIS.
- Compile geographic data from a variety of sources including censuses, field observation, satellite imagery, aerial photographs, and existing maps.
- Analyze spatial data for geographic statistics to incorporate into documents and reports.
- Design and update database, applying additional knowledge of spatial feature representations.
- Enter new map data through use of a digitizer or by direct input of coordinate information using the principles of cartography including coordinate systems, longitude, latitude, elevation, topography, and map scales.
- Analyze geographic relationships among varying types of data.
- Operate and maintain GIS system hardware, software, plotter, digitizer, color printer, and video camera.
- Move, copy, delete, and add files, drawings, and maps to output reports in hard copy or electronic transfer.
- Present information to users and answer questions.
- Retrieve stored maps.
- Assist other City departments and perform other duties as directed.
- Follow all safety rules and the use of safety equipment.

QUALIFICATIONS (POSITION REQUIREMENTS AT ENTRY):

Through the knowledge of the principles and practices of geographical information related software and programs GIS possess proficiency to manage administrative tasks associated with each project; ability to establish effective working relationships with City officials, employees, contractors and the general public; competency to communicate complete ideas effectively, orally and in writing.

SKILLS AND ABILITIES (POSITION REQUIREMENTS AT ENTRY):

Knowledge of:

- Geography - Knowledge of various methods for describing the location and distribution of land, sea, and air masses including their physical locations, relationships, and characteristics.
- Communication, Written, Oral, and Cartographic - The ability to convey GIS/spatial information to non-GIS/technical people.
- Analytical Skills - The ability to solve problems using the GIS suite of tools.
- Mathematics - Using mathematics to solve problems.
- Information Gathering - Knowing how to find information and identify essential information, and validate the information.
- Information Ordering - The ability to correctly follow a given rule or set of rules in order to arrange things or actions in a certain order.
- Computer Science - Using and developing computer programs to solve problems.
- Systems Evaluation - Looking at many indicators of system performance, taking into account their accuracy.
- Safety issues related to work activities.
- Ability to make independent decisions and coordinate with the water department, public works department, and engineering and others as needed to expedite progress on projects and developments.
- Ability to write neatly and concisely in order to fill out forms and written reports.
- Attention to detail in order to maintain and enter data in a GIS database.
- Ability to interpret and comprehend work instructions from oral and written English communications and drawings.
- Ability to effectively utilize the English language for verbal and written communications.
- Ability to establish and maintain effective working relationships with co-workers, supervisors, and vendors contacted in the performance of work.

- Ability to display orderly and professional manner and conduct at all times.
- Ability to work independently.
- Ability to plan and coordinate work projects.
- Physical ability to transverse variable terrain conditions not accessible by vehicle including but not limited to steep slopes, unleveled grades and heavily vegetated areas for purposes of site review and surveying.
- Physical ability to sit for extended periods of time at a computer work station.
- Ability to understand and conform to City, State and Federal laws.
- Use of computers and related software applications.

TRAINING AND EXPERIENCE (POSITION REQUIREMENTS AT ENTRY):

High School diploma or GED Certificate. A minimum two (2) year degree in relevant field and 2-years of experience or Bachelor of Science emphasizing GIS or any equivalent combination of education, experience and training. Ability to keep up with new technology and practices in the field through extension courses and professional association seminars.

LICENSING REQUIREMENTS (POSITION REQUIREMENTS AT ENTRY):

Valid Iowa Driver's License and insurable driving record as needed to operate a city vehicle to travel to various work sites.

ESSENTIAL PHYSICAL ABILITIES:

Job Classification: Light. See Appendix 1 for physical demand characteristics.

Requires the following with or without reasonable accommodation:

- Clarity of speech and hearing which permits the employee to communicate effectively.
- Sufficient vision which permits the employee to review a wide variety of written correspondence, reports and related material both in electronic and hard copy form.
- Sufficient manual dexterity which permits the employee to operate a keyboard and produces handwritten material and notations.
- Ability to traverse variable terrain conditions not accessible by vehicle including but not limited to, checking ceilings and roofs on steep slopes, and heavily vegetated areas.
- May be subjected to dirt/dust, fumes/ odors, moving machinery, noise, vibration, visual strain, wetness/humidity, working on uneven ground, mechanical hazards, chemical hazards, electrical hazards, fire hazards, and bodily injury. May be exposed to extreme temperatures.

SUPERVISORY RESPONSIBILITY:

This position has no supervisory responsibilities.

POSITION TYPE AND EXPECTED HOURS OF WORK:

This is a full-time position, and hours of work and days are Monday through Friday 8:00 a.m. to 5:00 p.m. Occasional evening and weekend work may be required as job duties demand.

CITY OF HIAWATHA, IOWA
CLASS TITLE: GIS Technician
APPENDIX 1 Physical Demand Characteristics

ACTIVITY	0% Never	>0-10% Rare >0-10 min/hour (1 - 10 /shift)	11% - 33% Occasional 11-20 min/hour (11 - 100/shift)	34% - 66% Frequent 21-40 min/hour 101 - 300/shift	67% - 100% Constant 41-60 min/hour 301+/shift
1. SIT			X		
2. WALK				X	
3. STAND (stationary)				X	
4. CLIMB Ladder		X			
CLIMB Stairs			X		
5. BALANCE		X			
6. FORWARD BEND		X			
7. KNEEL		X			
8. CROUCH		X			
9. SQUAT		X			
10. CRAWL		X			
11. TWIST		X			
12. REACH Forward					X
REACH Overhead				X	
13. SIMPLE GRASP					X
14. FIRM GRASP			X		
15. PINCH			X		
16. DEXTERITY			X		
17. COMPUTER WORK					X
18. WRIST MOTION				X	
19. BOTH HAND USE				X	
20. BOTH LEG USE				X	

ACTIVITY	Never	>0-10% Rare (1x/hour)	11% - 33% Occasional (1x/15 minutes)	34% - 66% Frequent (1x/5 minutes)	67% - 100% Constant (1x/30 seconds)
21. HEARING					X
22. VISION					X
DEPTH/COLOR					X
23. INSIDE WORK				X	
24. OUTSIDE WORK				X	
25. HEAT EXPOSURE				X	
26. COLD EXPOSURE				X	
27. VIBRATION EXP.				X	
28. OPERATE MV					X
29. OTHER EQUIPMENT		X			
EQUIPMENT: DOT trucks					

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LIFT/CARRY PUSH/PULL					
Up to 10 lbs.				X	
11 - 15 lbs.			X		
16 - 25 lbs.		X			
26 - 35 lbs.	X				
36 – 50 lbs.	X				
51 – 75 lbs.	X				
76 – 100 lbs.	X				
Over 100 lbs.	X				

OTHER DUTIES:

Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties or responsibilities that are required of the employee for this job. Duties, responsibilities and activities may change at any time with or without notice.

SIGNATURES:

This job description has been approved by all levels of management:

Manager_____

HR_____

Employee signature below constitutes employee's understanding of the requirements, essential functions and duties of the position.

Employee_____ Date_____

DRAFT

RESOLUTION NO. 17-
City Council

RESOLUTION APPROVING A NEW FULL-TIME GIS TECHNICIAN POSITION

BE IT RESOLVED by the City Council of the City of Hiawatha, Iowa, approving the hire of one (1) new full-time GIS Technician position and position job description, as a shared employee between the Water Department and City, with an starting salary range of Group C 1-3 to C 1-7, $21.12 to $23.12 (hourly), $43,925.00 to $48,096.00 (annually) and full benefits; effective July 1, 2017.

AYES:
NAYS:
ABSENT:

PASSED AND APPROVED this 19th day of April, 2017.

_____
Bill Bennett, Mayor

ATTEST:

_____
Kelly Kornegor, City Clerk