

911 SYSTEMS SPECIALIST

MAJOR FUNCTION

This is a master technical position responsible for developing the procedural and equipment requirements for the newest, state-of-the-art, 9-1-1 system technologies. These system requirements come from industry and government technology advancements and inevitably require the end user (Marion County), to develop and establish ways to use the information or comply with the new regulation. Responsible for administrating the Confidential In-House Database, the MapManager system; the MapStar Display system, and the wireless location accuracy testing system. Also responsible for future Special Projects which include computerized addressing for Marion County as well as 9-1-1 call handling techniques for 9-1-1 calls from Mobile Satellite Services (MSS), Telematics Services, Multi-Line Telephone Systems (including VoIP), Automated Maritime Telecommunications Systems (AMTS), and all other emerging services and devices. The person in this position is able to exhibit all the skills of the 9-1-1 Addressing Specialist I, II, III and Systems Specialist positions with a high degree of professionalism and expertise.

ESSENTIAL FUNCTIONS

The following statements describe the principal functions of this job and its scope of responsibility, but should not be considered an all-inclusive listing of work requirements. Individuals may perform other duties as assigned, including working in other functional areas to cover absences or relief, to equalize peak work periods or otherwise to balance the work load.

- Performs all the duties of a 9-1-1 Addressing Specialist I, II, and III when necessary.
- Responsible for wireless 9-1-1 Phase II accuracy within Marion County. Establishes a quality control schedule for testing all the wireless telephony towers (over 300) within the county. Uses phones particular to the wireless company (Verizon, Cingular, etc.), travels to an area and places test calls. Uses a portable Global Positioning System (GPS) receiver to calculate the latitude and longitude from the identical position as the test call.
- Using the two sets of data, one from the wireless company's latitude and longitude and the other from the portable GPS unit, makes comparisons and tabulates the results. Applies statistical analysis techniques to the tabulated results to determine if the wireless carrier's accuracy is within the standards set by the Federal Communications Commission (FCC) in Report and Order 94-102.
- As In-House Database Administrator responsible for all aspects of the computers which house the database, the software that runs it, and the 9-1-1 data that resides in it. Locates remote emergency standby computers at the PSAPs. Responsible for training PSAP personnel to use this database for emergency Automatic Location Identification (ALI) data lookup. Responsible for training department personnel to look up addresses, names and other parameters in order to solve 9-1-1 problems or research addressing situations.
- Once each month, receives the TN Extract compact disc (CD) from Sprint and processes it into the Database. If there is customer fallout in the error file, solves why these records did not process and corrects them. Updates and verifies that the Master Street Address Guide (MSAG) information in the Database is correct. Writes the corrected data to another CD and transports to the PSAPs. Loads the new data into the PSAP's In-House Database computer which is stationed at the PSAP for emergency standby service.
- As MapManager Administrator, responsible for all aspects of this GIS system extension of

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ArcView. Constructs an accurate map of Marion County including all five municipalities and any surrounding outside-the-county roads necessary for emergency response to any citizen living in the county.

- Researches, prepares and enters all mapping information (spatial and tabular) into the County map which is known as the "streets layer". Develops, implements, and manages GIS Data and its organizational structure. Analyzes and interprets spatial data used in production of maps, reports, and other products. Develops and implements methodologies for creation and use of spatial data. Uses mapping software to add roadways and ranges to overall map.
- Once a month, provides this updated "street layer" to the Marion County GIS Department, which distributes it to all interested parties including the Cities of Ocala, Belleview, Dunnellon, Reddick and McIntosh, all Marion County government departments and, on the county website, to all county citizens. Coordinates 9-1-1 mapping activities between the county and outside agencies.
- Uses the GIS map and MapManager to construct a spatial MSAG. Compares this spatial MSAG with the tabular MSAG used by the ALI Database provider. This comparison yields roads contained in the tabular MSAG not in the spatial MSAG and vice versa. Researches and corrects data associated with each road to ensure greatest accuracy of both MSAGs.
- When doing field investigations, uses a GPS Receiver and associated laptop computer to determine location of roadways, structures, landmarks, wireless towers, and all other mapping attributes which could help emergency responders find a 9-1-1 caller. Enters all such information from the GPS laptop computer into the MapManager map.
- Geocodes the In-House 9-1-1 ALI Database TN Extract for comparison to the Marion County "streets layer" map. Runs this comparison on a monthly basis (when each new Extract is received) for quality control verification of the map as well as the customer 9-1-1 records. Corrects all data fallout.
- Responsible for providing accurate maps (both computer and paper) for the public safety emergency responders. Makes any and all changes to the 9-1-1 System Support's emergency response and addressing maps. Maintains accurate computerized and paper mapbooks for Department, PSAPs and other interested parties, administrating the data conversion, design, development, training and quality assurance.
- As MapStar Administrator, responsible for all road data and all ancillary maps that comprise the system, which is displayed and used by all Primary PSAP personnel in Marion County. Responsible for ensuring that all 9-1-1 calls "hit" on the screen showing the location of landline callers as well as wireless Phase I and wireless Phase II 9-1-1 callers.
- Periodically, when the MapStar systems in the PSAPs need to be updated, extracts all the GIS mapping data from MapManager, processes it with the MapStar software and prints it to a compact disc (CD). Performs quality control checks on the CD's data to verify accuracy and completeness of the data.
- Transports the new MapStar map information CD to the PSAPs and, using the MapStar server computer and MapDataSync software, deletes the old maps and inserts the new ones. Responsible for keeping the PSAP's maps up-to-date. MapDataSync allows all the operator positions to be updated with the new map information when log-off/log-on occurs. Performs

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quality control checks at the operator consoles to ensure conversion to the new maps was accurate and complete at every operator console.

- Performs quality assurance checks on the overall MapStar system by making test calls to ensure that all three types of 9-1-1 calls "hit" accurately on the MapStar screen. Collects feedback data from the 9-1-1 call takers and dispatchers for error control. Corrects data on overall map to ensure as high a 9-1-1 call hit rate as possible.
- As the 9-1-1 PSAP Management Information System (MIS) Administrator, responsible for collecting all statistics about the 9-1-1 calls received at all primary and secondary PSAPs in the county. This MIS (MagIC) is maintained on the mapping computer and resides in the 9-1-1 System Support Office.
- A minimum of once a month, travels to each PSAP and extracts the 9-1-1 data from the PSAP's MagIC system and prints it to a CD. When all data has been collected, transports the CDs to the 9-1-1 Office where it is inserted into the Department's MagIC system..
- Screens the data against many different parameters to determine overall quality and fitness of the Marion County 9-1-1 System. Checks for total number of landline calls, wireless Phase I calls and wireless Phase II calls. Determines how many No Record Found (NRF) calls occurred since these do not display ALI data. Determines any cause or trend for the NRF calls and solves the problems.
- Examines the line loading for the 9-1-1 trunks for any chance of call blocking Examines repeat callers for any chance of a false 9-1-1 call problem. Compiles reports for the Director and recommends actions based on the data.
- Reviews CD Plus Permitting System for addressing errors and corrects. Monthly, examines all the parcel and addressing data to determine if there is false or misleading information.
- Runs quality control reports for addresses attached to multiple parcels or attached to inactive parcels, determines proper parcel and corrects in the county's permitting system.
- If mobile home parks or apartment complexes are involved, checks for one address used multiple times with different ARNs. Sorts the data and assigns the proper lot or apartment number. A good deal of the permit information is unavailable, so much of the data needs to be checked for MSAG validity and Property Appraiser parcel splits which leave missing or incorrect data. Ensures all parcels have a valid ARN attached which aids Engineering projects that sort by ARN.
- When assigned to a Special Project, reports directly to the 9-1-1 Specialist Supervisor and Director. These projects may involve definite tasks, such as constructing a complete GIS county map, or may be abstract, such as how to handle a Phase II wireless call when such calls have not been received before. Required to develop and test procedures and parameters to handle these projects.
- Frequently discusses project progress with the 9-1-1 Specialist Supervisor and Director and elicits feedback from them. Communicates daily with other team members so that team bonding is strong.
- Required to work on Computerized Addressing, a high profile Special Project. Determines

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procedures and specifications needed for software and hardware. Lists and reports data to 9-1-1 Specialist Supervisor and Director.

- Required to develop the procedures and equipment needed to handle 9-1-1 calls from any wireless and wired environment, including Mobile Satellite Service (MSS), Telematics Services, Multi-Line Telephone Systems, Internet Telephony (including VoIP), Automated Maritime Telecommunications Systems (AMTS), as well as other emerging services and devices.
- May be designated computer system security coordinator for department when 9-1-1 Systems Supervisor is unavailable.
- Holds formal classes about 9-1-1, mapping, or the Marion County Quadrant System to youth groups, Citizen's Academies, PSAP personnel, or groups of adults in classroom settings, expositions, or Homeowner Association Meetings.
- Required to report to work at the appointed hour, as scheduled, and to work the entire assigned schedule.

SECONDARY FUNCTIONS

- Drives a county car and on occasion a four-wheel drive.
- Assigned projects or processes and is held responsible for results. Completes special mapping projects as requested by Director.
- Analyzes and provides solutions for wireless problems dealing with 9-1-1. Acts as a liaison between the wireless service providers, telephone company, and the PSAP.
- Plan, design, write, edit, and produce informational publications on the Marion County 9-1-1 System for the PSAPs and interested parties.
- Assists other staff, internal to department and external, with any mapping problems.
- Assists the public with any problems related to county mapping, addressing, or public safety mapping matters.
- Solves customer relations problems.
- Attends Development Review Committee meetings as needed. Attends meetings and seminars as directed.
- May contribute to development of in-house plans, policies, specifications and programs.
- Fill in for other employees during lunch and absences.
- Performs other duties as assigned.

CUSTOMER SERVICE

This is a front-line position for providing excellent customer service to members of the general public

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and other County employees. Personal contact occurs with other employees of the unit, employees of other departments in the County, citizens, and customers of the department. Service is provided in person or by phone contact.

SUPERVISION

This position has no supervisory responsibility.

EDUCATION, EXPERIENCE, LICENSES, AND CERTIFICATIONS

Education and Experience

Bachelor's Degree or equivalent from four-year college or technical school; with a minimum of four years experience in the 9-1-1 System Support Department with ability to show proficiency at 9-1-1 Addressing Specialist I, II, III, and Systems Specialist tasks; or an equivalent combination of training and experience.

Licenses

Possession of a valid Florida Driver License.

Certifications

Certified in-house as a 9-1-1 Addressing Specialist I, II, III and Systems Specialist. Must be certified in ArcView or 12 months prior experience or equivalent.

JOB SKILLS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements are representative of the required knowledge, skills, and abilities.

Language Skills

- Ability to read, analyze, and interpret the most complex technical documents and legislation.
- Ability to respond to common inquiries or complains from customers, regulatory agencies, or members of the business community.
- Ability to speak clear and concise English.
- Ability to make effective and persuasive speeches or presentations on controversial or complex topics to top management, public groups and/or boards.
- Ability to teach a class to a group of 1- 30.
- Ability to write technical reports or articles for publication, business correspondence and concise monthly reports.

Mathematical Skills

- Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry.

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- Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

Problem Solving Abilities

- Ability to define problems, collect data, establish facts, and draw valid conclusions.
- Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.
- Ability to apply principles of logical, innovative or scientific thinking to a wide range of intellectual and practical problems.
- Consistently functions independently as an expert in matters of specialized code, rules, policy, or complex scientific or technical systems.

Specialized Skills and Abilities

- Ability to work independently, productively, and with minimal supervision in an environment of regular interruption.
- Thorough knowledge of the principles, practices, and techniques of a 9-1-1 System.
- Ability to use all mapping and drafting tools, and the ability to research complicated legal descriptions.
- Experience with database, spreadsheet, and word processing software applications.
- Ability to operate GIS software for data entry to street layer for each and every road segment in Marion County to facilitate new programs for more efficient emergency responses.
- Ability to communicate tactfully and courteously with coworkers and members of the public.
- Ability to work cooperatively with staff members on all aspects of 9-1-1 Addressing, the 9-1-1 System and the building permit process.
- Knowledge of state and local regulations regarding the E9-1-1 System and its operation and subsidizing.
- Ability to interact with members of the public in a tactful courteous manner.
- Ability to process work with a high degree of accuracy. Ability to write legibly.
- Ability to adapt to new assignments and procedures.
- Operational knowledge of instant recall recorders, logging recorders, Telephone Devices for the Deaf (TDD), Vesta Telephony equipment, Uninterruptible Power Supplies (UPS) and headsets, and 9-1-1 test call procedures. Working knowledge of Enhanced 9-1-1 Systems.

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- Ability to read, interpret, decipher and map legal descriptions, deeds, aerial, property survey maps, and various property maps and to communicate that information to the public in layman's terms in oral and written form.
- Ability to remain calm in stressful situations.
- Ability to take a teamwork approach to the job by cooperating with others, offering to help others when needed, and considering larger organization or team goals rather than individual concerns. Includes the ability to build a constructive team spirit where team members are committed to the goals and objectives of the team.

Machines and Equipment

This employee will be required to operate a computer, related office support software and hardware, calculator, telephone, fax machine, mobile telephone, laptop PC, map scale, rulers, scales and other basic architectural tools, copy machine, plotter, Vesta 9-1-1 operator console, Telephone Device for the Deaf (TDD), architectural tools and other general office equipment in the completion of the tasks of the position, as well as drive a County vehicle, possibly a 4WD.

PHYSICAL DEMANDS

While performing the duties of this job, the employee will occasionally be required to stand, climb or balance; will regularly be required to walk, stoop, kneel, crouch, crawl, and to lift up to 50 pounds; and frequently to sit; and will frequently be required to use hands to finger, handle or feel, reach with hands and arms and talk or hear, and listen. Special vision requirements are close and distance, color, and peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. The employee will occasionally be exposed outdoor weather conditions. The noise level for this work environment is moderate.

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Category: 3

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