

PSAP Grant Program Grant Ranker

View Application--206--NEW KENT ENTERPRISE GIS PHASE 2

Grant Period: 2010

Tier: Strengthen current equipment and service delivery capability by upgrading existing wireless E-911 related equipment or services (**STRENGTHEN**)

Grant Program: Enhancement **Grant Type:** Individual PSAP

Priority: GIS: high priority (refer to GIS-related Grant Request Prioritization Matrix for a description of GIS projects that would have a high funding priority) (**GIS HIGH PRIORITY**)

Primary PSAP Applicants: New Kent County

Jurisdictions Served: New Kent, County of

Project Director:

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Project Description:

Total Project Cost \$150,000.00

Amount Requested: \$150,000.00

Statement of Need:

The New Kent County Public Answering Point (PSAP) is located within and is operated and managed by the New Kent County Sheriff's Office. The PSAP site/communications center is an integral part of the Sheriff's office. This center serves as the PSAP for the County of New Kent to include more than forty-two miles of interstate highway, I-64, which bi-sects the county, two interstate rest areas, primary State Routes 30, 33, 60, 155, 249 and 273, with an approximate total of 518 miles of centerlines and nearly 9000 addresses. New Kent County is one of the fastest growing counties in the Commonwealth of Virginia and is experiencing a residential housing development explosion. Currently there are several large-scale subdivisions under construction, many including 100-350 homes. The county planning department predicts an additional 8,000 homes to be built over the next five years. In addition to the residential growth there has been an upswing in commercial and retail construction growth as well. New Kent County is located approximately eighteen miles east of the City of Richmond and sixteen miles west of the City of Williamsburg. Henrico, Hanover, Charles City, King William and James City Counties and the Town of West Point border the county. The communications center primarily serves all of the county emergency service agencies, to include the following: The New Kent County Sheriff's Office The New Kent Fire and EMS Department The Providence Forge Volunteer Fire and EMS Department -Co. #1 The Quinton Volunteer Fire and EMS Department -Co. #2 The Weir Creek Volunteer Fire and EMS Department -Co. #3 and The

Providence Forge Volunteer Rescue Squad The PSAP also serves as a backup PSAP resource for surrounding jurisdictions, such as West Point, King William and Charles City. The communications center currently uses MSAG's Eagle 911 GIS mapping system to assist dispatchers in locating addresses during an emergency call. This system was implemented in 2004 and is currently maintained by the County's GIS Coordinator. Several countywide GIS layers are maintained for this system, including address points and centerlines. An Enterprise GIS system will facilitate interoperability across county departments by leveraging existing 911 data as well as other critical county data, enabling processes that currently are not possible with the present system, to gather, maintain, and analyze that data, thus greatly increasing accuracy, efficiency and scalability of that data. Due to the limited resources of a one person GIS department and increasing need for GIS services throughout the county, it is critical that the County's GIS system be as efficient and streamlined as possible. An Enterprise GIS is the industry standard to meet that goal. New Kent County was awarded funds to meet this goal from the 2008/2009 PSAP grant and has successfully purchased much of the software and hardware needed for this project. However, the cost for the software and implementation was far greater than anticipated in the original Enterprise Grant request. This increase in cost was due to the decision to purchase ESRI's Enterprise License Agreement (ELA) which was determined to be the most comprehensive and cost effective vehicle to obtain the Enterprise GIS software. Though the initial cost was higher, the ELA enabled us to shift the bulk of the software costs to the current year so that software maintenance costs for the next 2 years will be far less. Due to projected budget constraints for the next few years this was a critical factor in our decision making and deemed absolutely necessary; however, this decision did use up critical funds for integration and implementation of the Enterprise GIS system. As well, due to the extremely technical and comprehensive nature of the Enterprise GIS it was also deemed necessary to develop a thorough outside sourced Strategic Plan and Implementation review which has also increased the cost substantially. New Kent County feels this is essential in implementing a successful Enterprise GIS system and will make the transition to an Enterprise GIS much more effective and successful long term. The ELA and Strategic plan will allow for additional functionality and expansion of the Enterprise GIS that will further enhance and improve the quality and processes of the 911 data and services thus improving the safety of Newkent county's citizens. The cost of the ELA and the Strategic plan was \$75,000 and \$40,000 respectively for a total of \$115,000. The grant dollars New Kent county was awarded for the Enterprise GIS project was ~\$103,000 using up all of the funds awarded from the 2008/2009 grant; additional funds are now needed to successfully implement and integrate the GIS Enterprise wide. The consequence of not receiving funding for Phase 2 of an Enterprise GIS system is that the system will not be implemented to anywhere near its full capacity and any implementation that is achieved will take much longer to accomplish. Safety for county residents could be impeded due to inferior data that is not updated as frequently. Less time would be available for 911 data and mapping needs due to increasing pressures on the current GIS system that an Enterprise system would alleviate. What impact does this project have on operational services? The project will improve safety for county residents by enabling checks and balances and increased efficiencies in the 911 data maintenance and update process that are not possible with the current system. The project will also enable similar benefits in the county's daily business practices involving other GIS data.

Comprehensive Project Description:

With the goal to increase the safety of its citizens, New Kent County seeks to implement Phase 2 of an Enterprise GIS System to improve the quality and management of the New Kent County's 911 dispatch mapping system data including Addresses, Centerlines and Parcels. Phase 2 of the Enterprise GIS system will integrate geospatial data and services throughout the county per recommendations brought by the Strategic implementation plan developed in Phase 1 of the project. This will include: integrating the 911 data, existing GIS data, CAMA data, Permitting data, and REVERSE 911 data, creating a single data store eliminating address duplication and addressing errors inherent in multiple data sources. This project will greatly enhance the New Kent County's E-911 systems as well as other public information the GIS system manages by streamlining data management and operations which will position New Kent County to be able to deploy state of the art 911 services for its citizens. This project will employ work flows and processes as recommended by the Strategic implementation plan to maintain all GIS data and services in the most efficient and cost effective manner which is crucial for a small locality such as New Kent with a GIS staff of one. Goals and Objectives: 1. Improve public safety by ensuring that the PSAP has more accurate and up to date data on addresses and other essential data for responder use. 2. Increase efficiency of PSAP operations by eliminating redundant data sets requiring maintenance and synchronization. 3. Improve public safety by minimizing the possibility of data errors leading to response delays. 4. Improve public safety by

permitting the sharing to New Kent County data with other jurisdictions / agencies in a near real time environment as operational conditions demand. 5. Improve public safety by providing the ability to back up essential data and services which was heretofore cumbersome. 6. Reduce workload on PSAP and GIS staff (enabling them to focus on core functions) by permitting stakeholders to maintain their own datasets as required. 7. Improve public safety by increasing the pool of County staff conversant with GIS data and technology. 1. Commit and allocate adequate resources to maintain GIS infrastructure from both a system (network, application, and data) and strategic perspective through the establishment of a GIS steering committee 2. Use GIS technologies to continuously improve efficiency and increase productivity, thereby enhancing public service 3. Provide leadership to design, develop, and support an Enterprise-Wide GIS by streamlining the implementation process through prioritization of functionality for each department 4. Continuously Provide Management Support to Foster the Diffusion of GIS to an Array of End-Users, thereby Increasing Responsiveness to Citizens 5. Provide timely, accurate, and meaningful GIS Data to the entire enterprise 6. Enable all County Departments to effectively use GIS Technology for improved services and response to citizen request 7. Convert and integrate all available data into a standard format in a centralized data store accessible to all relevant departments 8. Expand accessibility to GIS by implementing integrated web-based solutions through the County's intranet and internet connectivity 9. Create and maintain complete and accurate metadata for all GIS data layers 10. Provide training and education materials for all levels of GIS users 11. Coordinate

How will the equipment purchased will support future technologies for PSAP readiness?:

An Enterprise GIS system will integrate with the future CAD system and is scalable and flexible for additional needs and functionality.

Budget and Budget Narrative:

FULL ENTERPRISE GEODATABASE DESIGN- \$24,000.00 Migration from Personal to Enterprise Geodatabase, with Topologies and Relationships. This will become the sole data source for 911 addresses and all GIS data in the county. INTERGRATION & SUPPORT- \$57,500 Integration of GIS, CAD system, CAMA data, REVERSE911 and Permitting Software. This will ensure realtime data sharing and consistency of data between county departments/applications cutting down on errors and miscommunications. USER ESRI TRAINING- \$45,000.00 15 users @ \$3000 ESRI Training courses. Skilled GIS users will enable cross training and ease the burden placed on the GIS staff. INTRANET DEVELOPMENT- \$6,000.00 Development of a highly functional county Intranet to ease burden on the GIS Staff. PUBLIC WEBSITE- \$10,000.00 Development of a highly functional county Internet mapping site to ease burden of the GIS staff. PUBLIC MAPPING STATION W/ PRINTER- \$5,000.00 Purchase and set up of a public mapping station for the public to print of GIS maps and info to ease burden of the GIS staff. ESRI SURVEY ANALYST EXTENSION- \$2500.00 ESRI Extension to improve the Parcel data maintenance tasks. Less time needed to maintain parcels means more time available for the management of critical 911 data and applications.

Evaluation:

The following measures will be used to determine outcomes from the project: 1. Increased safety for county residents We will measure the average response times from receipt of incident reports to arrival of responders on the scene, adjusted for variables beyond our control (fallen trees etc.). 2. Reduction of duplication of effort We will identify staff resources used to maintain the master address list under the current workflow compared to the resources required after the Enterprise GIS is fully operational. 3. Increased productivity Same as #2. 4. Improved quality in GIS data We will track the number of reported errors in the address database on an ongoing basis. 5. Increased access to GIS information We will track the number of data editors and internal users over time. 6. Increased functionality of GIS We will track the number of applications dependent on GIS that are functioning in the County government.

Attachments