



MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Memorandum

To: Montgomery County Planning Board

From: Karl Moritz, Research and Technology Chief

Re: **FY08 Supplemental Appropriation to Planning Department Operating Budget** - Grant Application to County's Technology Investment Fund:
Funding of Phase II of Interagency GIS Strategic Plan Staff Recommendation:
Approval

Date: December 17, 2007

Recommendation

The Montgomery County Planning Department recommends that the Planning Board forward this special appropriation to the Montgomery County Council. The appropriation request is for funding of Phase II of an interagency Geographic Information Systems Strategic Plan. The total amount of funds requested is \$75,000. The Source of the funds is the County's Technology Investment Fund.

Background

The Montgomery County Council directed the Planning Department to lead an interagency GIS strategic planning effort in FY08. The original scope of work was estimated to require \$150,000 in consultant funds; the Council funded Phase I in the Department's FY08 budget.

Over the past year, and at the direction of the County Council, the County's Interagency Technology Policy Coordinating Committee¹ has been working to reinvigorate use of the County's Technology Investment Fund (TIF). This fund was created approximately a decade ago to fund special technology projects that are necessary

¹ The ITPCC's membership consists of the County's Chief Administrative Officer, the Superintendent of Montgomery County Public Schools, the President of Montgomery College, the Chairman of the Housing Opportunities Commission, the General Manager of the Washington Suburban Sanitary Commission, and the Chairman of the Montgomery County Planning Board. It is supported by a staff committee that consists of the chief information officers of each agency.

but may have difficulty competing with other projects in the normal budget process. An early emphasis of the fund was on cost savings, and agencies were expected to reimburse the fund with proceeds from the savings that resulted from the technology investments.

This requirement, along with a lengthy and complicated application and reporting process, meant that the fund was little used. Currently the fund contains more than \$2 million.

The ITPCC has developed recommendations for streamlining the TIF process, and these recommendations (formally adopted by the ITPCC at their December 11, 2007 meeting) have been transmitted to the County Council.

In addition, the ITPCC has approved recommendations for the first of a new wave of TIF grants. Among these: funding of Phase II of the GIS Strategic Plan. The proposal, which is attached, has been reviewed by both the CIO subcommittee of the ITPCC as well as the principals themselves.

Phase I of the GIS Strategic Plan is on schedule. An RFP has been released and we have received several proposals. Consultant selection is underway.

GIS Strategic Plan Phase II

| EXPENDITURE SCHEDULE (\$000) | | | | | | | | | | | |
|---------------------------------------|--------------|------------------|------------------|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------|
| Project Phase | Total | Thru FY07 | Est. FY08 | 6-Year Total | FY09 | FY10 | FY11 | FY12 | FY13 | FY14 | > 6 Years |
| Initiation & Concept | 0 | | | 0 | | | | | | | |
| Planning/Req. Analysis | 75000 | | 75000 | 0 | | | | | | | |
| Design/ Development/ Integration/Test | 0 | | | 0 | | | | | | | |
| Implementation | 0 | | | 0 | | | | | | | |
| Closeout | 0 | | | 0 | | | | | | | |
| Total | 75000 | 0 | 75000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FUNDING SCHEDULE (\$000) | | | | | | | | | | | |
| Curr. Rev. Record Tax | 0 | | | 0 | | | | | | | |
| Curr. Rev. General | 0 | | | 0 | | | | | | | |
| G.O. Bonds | 0 | | | 0 | | | | | | | |
| State Aid | 0 | | | 0 | | | | | | | |
| Other | 0 | | | 0 | | | | | | | |
| Other | 0 | | | 0 | | | | | | | |
| Other | 0 | | | 0 | | | | | | | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oper. Bud. Impact-(\$000) | 0 | | | 0 | | | | | | | |
| Oper. Bud. Impact--WYs | 0 | | | 0 | | | | | | | |

DESCRIPTION

This project requests funding for Phase II of an update to the 1996 interagency GIS Strategic Plan. Phase I of the plan was funded by the Montgomery County Council in FY08 and will focus on how the GIS program is managed and funded. Phase II will develop a plan for expanding use of GIS by ITPCC agency staff and the general public to increase access to information and to improve public decision making.

JUSTIFICATION

The most recent interagency GIS Strategic Plan was completed in 1996. At that point, GIS was still a maturing technology and many of the issues addressed by the 1996 Plan are no longer valid. In the intervening decade, there have been some good examples of public agency staff using GIS to communicate information and conduct analysis, but there is consensus that public agencies are not using GIS resources fully, that there are public programs that would benefit from the use of GIS technology, and that the general public has information needs that could be better served with a more extensive deployment of GIS. Recent versions of GIS software have made it easier to develop web-based applications.

STATUS

The Scope of Work for the Phase I RFP is prepared. The RFP is expected to be released in the next few weeks. The RFP will be structured to allow the winning consultant to continue work on Phase II, so the project team will be able to implement the project quickly. The project is scheduled for completion in FY08.

OTHER

The GIS Strategic Plan is intended to provide benefits to all ITPCC agencies.

GIS Strategic Plan Phase II

FISCAL NOTES

Phase I of this project was funded with \$75,000 with a total cost estimate of \$150,000. The 1996 plan cost more than \$200,000.

COORDINATION

This project will be coordinated through the Interagency Technology Policy Coordinating Committee. The ITPCC CIO subcommittee will approve the scope of work for the consultant, coordinate information gathering, evaluate options and opportunities, and review consultant findings.

GIS STRATEGIC PLAN PHASE I

Scope of Services

Introduction

The Montgomery County Planning Department of the Maryland-National Capital Park and Planning Commission (M-NCPPC) is soliciting professional consultant services to perform specific tasks in conjunction with the preparation of a strategic plan for Geographic Information Services for Montgomery County. This strategic plan will provide guidance for the five agencies that comprise the Montgomery County Interagency Technology Policy Coordinating Committee (ITPCC): Montgomery County Government, The Maryland-National Capital Park and Planning Commission, Montgomery County Public Schools, Montgomery College, the Washington Suburban Sanitary Commission, and the Montgomery County Housing Opportunities Commission. The project is being administered by the Maryland-National Capital Park and Planning Commission. The GIS Strategic Plan will be completed in multiple phases. This Scope of Services covers specific tasks in Phase I of the Plan.

Background

Montgomery County, Maryland began its Geographic Information System (GIS) effort in the mid 1980's as part of bi-county effort with Prince George's County to establish an integrated GIS program. A common database design was created and development of the geographic databases began in 1991. With the conversion deadline of July 1997 in sight, there was a need to develop a plan of where, what and who was necessary to maximize the benefit of the County's GIS. This need led to the development of the 1996 GIS Strategic Plan.

The 1996 plan encompassed the various aspects of the program (applications, database development, system design, and staffing). It also set priorities and responsibilities for the development and maintenance of the geographic data. Over the years, changes in priorities, user needs, new technologies, and work programs have occurred and changed the demands for geographic related data, and its requirements/capabilities. This has placed new demands on resources and new uses for existing data.

Overall Scope of Phase I

The Montgomery County Council tasked MNCPPC to complete Phase I of a new GIS Strategic Plan, and allocated \$75,000 for consultant funds for this purpose. Consultant resources will be supplemented by staff. This section gives an overview of Phase I.

Phase I of the Strategic Plan will examine the following issues that need to be resolved regarding the current GIS program: maintaining and strengthening core data, applications and business processes. These issues include coordination among ITPCC agencies and developing an approach to fund updates. Some work will be done in Phase I to prepare

for the second phase, which will focus on expanding the capabilities of staff and the public to make use of our GIS investment.

Phase I program is to contain the following elements:

- 1) **Current Status:** Review status of GIS program in Montgomery County, including layers, databases, applications, software, hardware, backup and recovery systems, and applications. Review agency roles, responsibilities, data needs, and data customers. Request “performance evaluations” from primary user groups, including agency staff.
- 2) **Business Processes/Interagency Coordination Strategy:** Review and develop recommendations for the ongoing coordination of the County’s GIS program. This includes how information is shared, and the appropriate formats for shared data to ensure maximum compatibility and to minimize individual agencies’ reprocessing data for their own use. It includes identifying feedback loops so that corrections/updated information is shared with all users, and identifying opportunities for increased usable feedback from GIS data users that can improve data integrity. Review the current coordination structures and recommend ways to implement new and improved communication methods (i.e. blog, message boards, web sites) and better organized meetings to facilitate the communication of policy and technical information between agencies.
- 3) **Maintenance strategy:** What data/layers should Montgomery County be maintaining and what is the best maintenance strategy? This section will look at the current status of the base map updating process, including frequency, cost, use of consultants, opportunities for interagency funding, budget and make recommendations for improvements to meet County needs, using industry standards for counties similar to Montgomery as a yardstick. This will include a short survey of comparable jurisdictions re: GIS program life cycle; database update schedule; funding, revenue and budget; and uses of newer data and technology (3D, LiDAR). Look for best practices on how data is created and maintained, agency responsible, and timetables to provide data on data consumers needs.
- 4) **Funding:** Develop recommendations for funding of the GIS database updates that does not rely on data sales (at this time, only data sales fund the Planimetric update, and sales have not been sufficient to adequately fund the planned update schedule). Prepare sample budget request, probably using the current Capital Improvements Program Project Description Form, per ITPCC guidelines for IT projects.
- 5) **Prepare for Phase II:** Phase II will focus on how the GIS program should expand, particularly in creating agency applications that support public decision-making and creating applications that improve public access to GIS capabilities. It is likely that the information gathering tasks of Phase I generate information about

jurisdictions that are leading the way with innovative and effective applications of GIS; County agencies, departments, and programs that have spatial data and that could be analyzed better/more easily using GIS; opportunities to merge agency datasets to pursue new avenues of research (such as exploring the relationship between neighborhood design and health, crime, and demographic characteristics). This information will be saved for Phase II.

Scope of Services to Be Performed by the Consultant

- 1) **Task 1: Current Status:** Consultant will propose for MNCPPC review survey questions for use in eliciting current status information from member agencies and from GIS users or “customers.” MNCPPC will circulate survey and collect responses. Consultant will review and provide a general evaluation of the responses based on industry standards, averages or norms for large county GIS programs in the following areas:
 - a. Aspects of the County’s GIS program that are working well, or *exceed* industry standards, averages or norms for: hardware, software and backup systems; layers and data maintained; applications developed for government and public use; and extent of use of GIS in operations and decision-making.
 - b. Aspects of the County’s GIS program that are not working well, or *lag* industry standards, averages, or norms for: hardware, software and backup systems; layers and data maintained; applications developed for government and public use; and extent of use of GIS in operations and decision-making.
 - c. Of the aspects that are not working well or lag industry norms, recommendations for aspects that can be improved most easily or for which there are modest investments that could yield substantial improvements in operations or service.
- 2) **Task 2: Business Processes/Interagency Coordination Strategy:** Using information gathered in Task 1, Consultant will recommend procedures for improving the sharing of GIS information among ITPCC member agencies, including the method of sharing information, the appropriate formats for shared data to ensure maximum compatibility and to minimize individual agencies’ reprocessing data for their own use. It includes identifying feedback loops so that corrections/updated information is shared with all users, and identifying opportunities for increased usable feedback from GIS data users that can improve data integrity. The Consultant will recommend ways to implement new and improved communication methods (i.e. blog, message boards, web sites) and better organized meetings to facilitate the communication of policy and technical information between agencies.
- 3) **Task 3: Maintenance Strategy:** Using information gathered in Task 1, Consultant will conduct a business process review of Montgomery County’s base map updating and maintenance procedures, including frequency, cost, use of

consultants, opportunities for interagency funding, budget and make recommendations for improvements to meet County needs, using industry standards for counties similar to Montgomery as a yardstick. Consultant will propose counties for comparison purposes, and on approval, will compare Montgomery County to those jurisdictions re: GIS program life cycle; database update schedule; funding amount and sources, revenue and budget; and uses of newer data and technology (3D, LiDAR, web-based applications). Consultant will provide generally recognized best practices on how data is created and maintained, agency responsibilities, and timetables to provide data on data consumers needs. To meet County agency budget schedules, the Consultant will be asked to provide general information on best practices and costs within 60 days of contract ratification.

Qualifications

The successful consultant shall possess and demonstrate expertise in the following areas:

- Demonstrated understanding of current Geographic Information Systems technologies and practices, as well as industry standards, averages and norms.
- Demonstrated understanding of GIS as developed and applied by local government jurisdictions, including how common applications are developed and maintained.
- Extensive knowledge of various best practices and techniques in use by local government jurisdictions and other organizations throughout the country. This knowledge should include but not be limited to hardware, software, and backup/recovery procedures; layer and data development, quality control, updating and maintenance; and use of LiDAR, 3D, and web-based applications.
- Knowledge and experience of specific local government uses of GIS, including land use planning and public safety applications.
- Demonstrated ability to analyze and make recommendations regarding the business processes underlying GIS programs.

Cost

There is a total of \$75,000 available for this contract. Proposals will be evaluated on the extent to which the consultant meets the evaluation criteria below, and not on cost.

Evaluation Criteria

The following criteria have been established for the evaluation of the proposals received:

- 1) **Qualifications/Experience.** Successful consultant will have experience in (in order of preference) a) preparation of GIS Strategic Plans for local government or similar organizations; b) preparation of business process analyses for local government or similar organizations and demonstrated understanding of GIS technology; and/or c) preparation of reports analyzing the effectiveness of GIS programs in organizations of any kind and making recommendations for

improvements to those programs. Consultant will submit copies (digital or paper) of reports to be used for consideration in this category. Note: If sub-consultants are used, the prime firm will be evaluated at 45 points and the sub-consultants at 15 points. (0-50 points)

- 2) **Proposed Methodology and Procedures** to perform the work. The largest number of points will be awarded to the consultant that proposes the most extensive work program aimed at understanding, describing, and making recommendations related to the Montgomery County Maryland GIS program. Although some “canned” or general reports will helpful for understanding industry standards, County-specific recommendations are highly valued. (0-30 points)
- 3) **Demonstrated Ability to Meet Deadlines.** Consultant must demonstrate record of delivery of contracted materials within contracted deadlines. Consultants with previous contracts with MNCPPC where materials were delivered past deadline will not receive points in this category. (0-10 points)
- 4) **MFD** (0-10 points)

Deadlines

For better coordination with agency budget schedules, Task 3 has an earlier deadline than Task 2. In all cases, consultant is responsible for delivering an acceptable deliverable by the deadline. This will likely require the submission of draft deliverables prior to each deadline to allow for agency review and comment. The acceptability of the deliverable is decided by MNCPPC.

- 1) **Task1a: Delivery/acceptance of recommended survey questions.** Deadline is 30 days from ratification of contract. MNCPPC expects a 2-week turnaround for County agency review of survey questions.
- 2) **Task 1b: Delivery/acceptance of general evaluation of survey responses.** Deadline is 30 days after receipt of survey responses.
- 3) **Task 2: Delivery/acceptance of Business Processes/Interagency Coordination Strategy:** Deadline for draft of report outline is 30 days from ratification of contract; deadline for draft of report is 150 days from ratification of contract; deadline for final report is 180 days from ratification of contract.
- 4) **Task 3a: Delivery/acceptance of Maintenance Strategy: Generally recognized best practices and costs.** Deadline is 60 days from contract ratification.
- 5) **Task 3b: Maintenance Strategy: detailed comparison of Montgomery County to similar jurisdictions’ programs and detailed recommendations for a maintenance strategy.** Deadline for report outline is 30 days after receipt of survey responses; deadline for draft of report is 150 days from delivery of report; deadline for final report is 180 days from ratification of contract.