

**Nassau County  
Office of the Comptroller  
Field Audit Bureau**



**Department of Information Technology  
Limited Review  
of the  
Technology Strategic Plan,  
Procurement Practices and  
Disaster Recovery Planning**

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## Executive Summary

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### **Background**

In November 2002, in recognition of the need to modernize the technology used by Nassau County government departments, the county legislature amended the county charter to establish the Department of Information Technology (the "department" or "DoIT")<sup>1</sup>. DoIT's powers and duties include "the planning, formulation and coordination of information technology and telecommunications policies;" "the development, purchase and maintenance of hardware and software to meet the needs of [county] departments;" and "disaster recovery planning and coordination."<sup>2</sup> Pursuant to the county charter, the department developed a comprehensive, strategic plan and established principles for technology decision-making. The county administration established an Information Technology Steering Committee (committee) that was to be "the primary administrative and organizational body designated to oversee and drive all technology decisions within Nassau County."<sup>3</sup> Among other duties, the committee was charged with overseeing projects approved for expenditure from the county's Technology Fund. Since October 2003, the County has set aside \$27 million for technology related expenditures<sup>4</sup>.

### **Audit Scope, Objective and Methodology**

The objective of the audit was to provide reasonable assurance that the resources of the department are being used effectively and that the county is receiving optimum value from those resources. We focused on the committee's oversight over technology decision-making; internal purchasing and contract procedure controls; project management; and disaster recovery planning.

This audit was conducted in accordance with generally accepted government auditing standards for the period 2002-2004. These standards require that the audit be planned and performed to obtain reasonable assurance that the audited information is free of material misstatements. An audit includes examining documents and other available evidence that would substantiate the accuracy of the information tested, including all relevant records and contracts. It includes testing for compliance with applicable laws and regulations, and other auditing procedures necessary to complete the examination. We believe that the audit provides a reasonable basis for the audit findings and recommendations.

### **Significant Findings**

DoIT did not use the resources of the Technology Steering Committee to provide the oversight envisioned by DoIT's Strategic Plan. In particular, the committee had little role in the oversight of technology expenditures, including expenditures from the newly established Technology Fund, which is funded from the prior year's operating surplus in order to enable the county to implement its strategic technology vision.

- After 2003, DoIT did not call committee meetings regularly; we found that only three meetings took place between June 2003 and November 2004. DoIT did not maintain records of committee agendas, meeting minutes or other documentation supporting strategic decisions. The committee did not act pursuant to any formal guidelines or project selection criteria.

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<sup>1</sup> Local Law 21-2002, amended by Local Law 12-2003.

<sup>2</sup> Nassau County Charter Section 2151.

<sup>3</sup> Department of Information Technology Strategic Plan 2004-2007 – Chapter 3, p.1

<sup>4</sup> This includes \$7.1 million set aside in October, 2003 and the \$19.9 million 2004 Technology Capital Fund.

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- A small management group within the department made spending decisions after June 2003, without consulting the committee.
- In response to our earlier 2002 audit of the department's Disaster Recovery Plan, DoIT indicated that the committee would be actively involved in updating and implementing a comprehensive countywide disaster recovery plan. The committee did not take on that role.

In addition to not including the Technology Steering Committee in technology project decisions, we found that DoIT's project management and procurement procedures were deficient. Examples of project management and procurement deficiencies found include:

- DoIT failed to seek additional funds for e-mail expansion and migration to Microsoft Outlook (the e-mail migration project), after concluding that additional work beyond that contemplated by the original contract scope was necessary to complete the project. Because DoIT did not obtain the additional contract funding, the department had to halt the e-mail migration project after the original \$1.5 million encumbrance was spent and when the county e-mail rollout was estimated at only 31% complete. DoIT now anticipates that another \$1.5 million will have to be spent to complete the project as originally envisioned, including the upgrading or replacement of older PCs.
- A computer consulting firm, Lincoln Computer Services, LLC (Lincoln), not operating pursuant to any written agreement with DoIT, provided the department "pro bono" services, including management of three key IT projects (e-mail migration, replacement of computer network routing equipment and installation of storage networking equipment). Lincoln also provided paid services to DoIT as a subcontractor on the e-mail migration project, and was selected to implement the replacement of computer network routing equipment. Therefore, the department allowed Lincoln to oversee its own work on two key projects.
- As part of its "pro bono" consulting services, Lincoln recommended that DoIT purchase Cisco Systems network routing equipment instead of Alcatel equipment. The department decided to purchase Cisco equipment, and documented its decision to use Cisco with information provided by Lincoln. At the time DoIT was deciding which vendor's equipment to use, it was also soliciting bids for both products from New York State Office of General Services (OGS) approved resellers (the vendors apparently do not sell their equipment directly, but through "resellers"). Lincoln was an approved Cisco, but not Alcatel, reseller. DoIT then selected Lincoln as a Cisco reseller, and issued Lincoln a purchase order for \$2.4 million of Cisco equipment through an OGS contract. Because Lincoln was providing advice to DoIT on which equipment to use at the same time that Lincoln was bidding on supplying the same equipment to the department, DoIT should have insured that there was not even the appearance of a conflict of interest. At a minimum, it should have independently documented its decision to use Cisco equipment, and documented why it was appropriate to consider Lincoln for selection as a Cisco reseller when Lincoln had recommended the use of Cisco equipment.
- DoIT justified the selection of Lincoln as a reseller of Cisco equipment, instead of various other OGS Cisco resellers, based on, among other reasons: the former commissioner's observation of Lincoln's performance as a pro bono provider of services and as a subcontractor on the e-mail migration project, and Lincoln's offering of "the lowest [Cisco equipment pricing] ever offered to a

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municipal government” (48% off the list price). Our auditors, however, could not determine the financial appropriateness of DoIT’s choice of Lincoln as a Cisco reseller because:

- DoIT circumvented State OGS and local procurement procedures. The *cost* of 3,200 hours of consulting work related to the Cisco equipment purchase was included in the \$2.4 million Cisco equipment purchase order, but *consulting deliverables* were not included in that purchase order (the original 48% discount offered on Cisco equipment was reduced to the standard State OGS contract discount of 32%, apparently to account for the provision of consulting services). Instead, Lincoln described the services to be provided to implement the Cisco network (“discovery/planning” and “installation/configuration”) as “at no additional costs” in a separate, unsigned, undated document.
- We found that approximately \$514,000 of the Lincoln purchase order for Cisco equipment was for the provision of 3,200 hours of consulting services. The department, therefore, paid an average of \$161 per hour for these services, higher than Lincoln's average billing rate of \$91. Lincoln may have needed to employ higher than average cost employees for the services provided. However, because the Lincoln purchase order did not contain provisions specifying the consulting services to be provided and the department did not maintain complete time records for Lincoln or otherwise validate the time spent by Lincoln, we found that DoIT cannot quantify the value of the consulting services it received. Moreover, because the purchase order was for equipment, the consulting services were paid for upon receipt of the equipment but before the services were provided. In addition, because a description of the consulting services was not set forth in the purchase order, DoIT may have used the order to finance the provision of some services unrelated to the purchase and installation of Cisco equipment.
- We found that the department purchased EMC Corporation (EMC) storage area network equipment for \$4.2 million, as recommended by Lincoln. The department had poor controls in place over the receipt of equipment and the approval of invoices for payment. We found a number of instances where invoices were prepaid, approved for payment without any apparent reconciliation to packing slips, processed for payment by individuals who were student interns and part-timers without sufficient training in the accounts payable function, and signed by employees using other employee's names on delivery logs.

In addition we found that the department:

- Does not have a "hot site" where equipment and software would be in a constant state of readiness to recover from a disaster. A written agreement with IBM, although informally extended, expired in 2002. The department is discussing the potential sharing of a site for disaster recovery services with local counties and private sector firms. At this time, however, the county is at risk because the department does not have any kind of offsite disaster recovery location and no opportunity to test its disaster recovery protocols.
- Does not have an enterprisewide Disaster Recovery Plan. The countywide Disaster Recovery Plan was last updated in 1993 and a Business Impact Analysis (intended to gather and analyze data on key functional areas of Nassau County government if a disaster were to occur), was last performed in 1997.

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Although a Disaster Recovery Plan had been prepared for DoIT in April 2002, key DoIT personnel were not aware of its existence.

### **Department's Response**

On May 31, 2005, we submitted a draft report to the department commissioner with a request for comments. The matters covered in this report have been discussed with officials of the department during the audit and in an exit conference on June 14, 2005. The department's comments, received in a memorandum from the Commissioner on June 14, 2005, and our response to those comments, are included as an addendum to this report (Appendix).

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## Findings and Recommendations

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### **Project Oversight and Management**

#### **Background**

In 2002, the county administration established a Technology Steering Committee to oversee technology decision-making. The DoIT's former commissioner was the committee's chair. He appointed committee members and included representatives of a cross section of county user groups (including a deputy comptroller), outside business experts and the DoIT experts. The department's *Strategic Plan 2004-2007*, issued in January 2004, confirms that the Technology Steering Committee was "charged with establishing the overall strategy and direction for technology, while providing much needed operational and fiscal controls." One of the primary responsibilities of the Steering Committee was the oversight of expenditures, particularly from the newly established Technology Fund, in order to enable the county to implement its strategic vision for technology. In 2003, \$7.1 million was appropriated through the general fund for technology purchases; in 2004, an additional \$19.9 million was appropriated for the Technology Capital Fund for a total of \$27 million. The department's proposed Capital Spending Plan anticipates spending \$125 million on technology through fiscal year 2007.

Project management was to provide additional oversight. DoIT's Strategic Plan defines project management as "involving in-depth planning and analysis, testing and risk mitigation, dedicated and committed staff resources, open and fair competitive procurement, vendor performance and accountability and monitoring and milestone reporting."<sup>5</sup>

#### **Audit Finding (1):**

After June 2003, DoIT called few meetings of the Technology Steering Committee and the committee apparently did not function as an oversight body. The department maintained no official records of agendas, minutes or other documentation of the committee's activities.

Several committee members advised us that the committee met regularly during the first half of 2003, but only three times from the period June 2003 to November 2004. The members provided evidence, through personal notes and interviews, that the committee discussed key initiatives such as e-government and the e-mail project, and that it was involved in selecting RCG Information Technology, Inc. (RCG) as the vendor for the e-mail migration project. No official documentation, however, is available as to how vendor selections were made or of the criteria used to evaluate various proposals. Most spending decisions were apparently made by DoIT, without consulting the committee, and were presented to the committee as decisions already made. We conclude, therefore, that DoIT made strategic decisions without seeking the oversight of the committee. DoIT could not provide us with documentation about decision-making methodologies it used to determine which projects were needed to meet the county's long-term goals. DoIT had provided the Nassau Interim Finance Authority (NIFA) a document entitled

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<sup>5</sup> 2004-2007 Strategic Plan – Major Initiatives

## Findings and Recommendations

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*Steering Committee Decision-Making Guidelines* and an overview of criteria to be used by the committee in selecting projects to be funded by the Technology Fund, but these guidelines were apparently not provided to Technology Steering Committee members.<sup>6</sup>

The committee had not adopted a formal conflict of interest policy for its external members. One member advised us, however, that the external members generally followed the county's Conflict of Interest policy.

The department's project management did not meet the criteria described in the 2004 Strategic Plan. It appears to have been inconsistent, depending on the staff assigned to manage a project. DoIT delegated project management in at least three key areas (E-mail Migration, network routing equipment purchase and installation, and storage network equipment purchase and installation) to a "pro bono" vendor, Lincoln Computer Services, with apparently limited oversight. Lincoln also provided the department paid consulting services as a subcontractor to RCG in the e-mail migration project and as the Cisco reseller for the network routing equipment purchase and installation. Lincoln's project management services were not provided pursuant to a written agreement. This practice created an area of significant risk for the county. There was no documentation available to review what project milestones the vendor or project manager accomplished. In May 2004, DoIT stopped work on all three projects when they were at various stages of completion. The department then needed to dedicate resources to assess the remaining work and the additional costs and time necessary to complete the projects. The specific issues associated with these projects are discussed in detail in other findings.

### **Audit Recommendations:**

1. DoIT should:
  - a. review the utility and role of the Technology Steering Committee. If DoIT reinstates the Committee, to establish DoIT priorities and ensure that proper controls are in place over the expenditure of technology funds, DoIT should establish a decision-making methodology and criteria for project evaluation and selection to be used by the Committee and should bind non-employee steering committee members to the terms of the county Conflict of Interest Policy. If DoIT determines that the Committee's role should be changed, it should amend its 2004-2007 Strategic Plan to reflect any such changes;
  - b. require documentation of project specifications and vendor selection criteria;
  - c. implement processes to monitor and measure the progress of projects selected for implementation; and

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<sup>6</sup> In a November 15, 2002 letter, NIFA found the guidelines "too general to provide a meaningful methodology for the steering committee members to evaluate, rank, and select qualifying projects." NIFA suggested that the criteria include methodology for conducting comparative analyses to properly weigh the merits of individual projects relative to each other, and to consider recurring operating and maintenance costs.

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- d. delegate project management to outside entities only when it has a contractual relationship permitting accountability.

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### **Cost Overruns on E-mail Project**

#### **Background**

In November 2003, the department contracted with RCG to establish Microsoft Exchange as the county's e-mail system and to migrate the county's users from *GroupWise* to *Outlook* (e-mail migration project). A November 17, 2003 memorandum from the former commissioner indicates that RCG's selection resulted from a formal RFP process; however, we did not see documentation of that process. In any event, the Technology Steering Committee evaluated four proposals and concluded that RCG's was the best value.

Phase I of the countywide e-mail project included the installation of kiosk personal computers to establish e-mail accounts for employees without access to any e-mail system. The initial encumbrance for Phase I was for a fixed price of \$450,000. According to the former commissioner, Phase I was successfully completed. The cost of Phase II, the migration of the county's e-mail system to Microsoft Outlook, was based on time and materials, and the county encumbered 1.5 million for the anticipated costs. A provision in RCG's contract, included because of legislative concern that a local firm participate in the project (RCG is located in New Jersey), required RCG to subcontract with a Long Island based vendor. The former commissioner recommended Lincoln, which is based in Nassau County, to RCG, and RCG entered into a \$100,000 subcontract with Lincoln to assist with developing and testing disk images for Phase II. Phase II commenced in December 2003. Changes in Phase II were to be managed by utilizing a Change Control procedure, whereby changes in project direction, schedule, and/or costs were to be approved before being implemented. The changes and their impacts were to be detailed on change orders, approved by both DoIT Management and the vendor, as the project evolved. Certain changes required the approval of a Deputy County Executive (DCE). This process was outlined in the Master Scope of Work, which was made part of the RCG contract.

#### **Audit Finding (2):**

We found changes were made to the scope of work for the Phase II e-mail project without proper approvals. It is our understanding from DoIT senior management that the former commissioner, working with Lincoln, assumed project management duties for Phase II, including the approval of change orders. The RCG contract, however, required that a change order which directly or indirectly involved a change in cost, or otherwise materially altered a party's rights and obligations, be approved by the DCE. We found that the department did not comply with this requirement.

Apparently, the department approved change orders without regard to their effect on the overall cost of the project or the need to encumber additional funds. By the time change order #11 (to migrate 4,000 e-mail users to Microsoft Exchange) was approved by DoIT on March 3, 2004, so many change orders had been approved previously that the collective cost of these changes would cause the project to cost \$2,111,585, or \$611,585

## Findings and Recommendations

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(41%) more than the \$1.5 million originally encumbered. RCG provided notice to the department that the cost of this change order would exceed available funds, yet the department apparently did not obtain a DCE's approval so that additional funds could be encumbered. As of April 2004, 19 change orders had been approved by DoIT in connection with this project. If these change orders had been implemented, an additional \$1 million would have to have been encumbered, bringing the total cost of the project to \$2.5 million. Because these funds were not encumbered, the project ran out of funds in June 2004, and RCG had to stop work. At that time, the components of the project were at varying stages of completion, and the county's goal of migrating all e-mail users to Microsoft Outlook was approximately 31% complete. As a result, at the time of our audit, county e-mail users continued to use different e-mail systems.

We found no evidence that DoIT monitored the hours spent by RCG on this project to ensure that the hours spent supported the required tasks.

We interviewed a number of county departments to ascertain the impact of the sudden halt of the e-mail consolidation project. The Department of Public Works advised us that approximately 20% of its 800 employees were upgraded to the Windows/XP platform/Microsoft Exchange e-mail. However, the upgrades were not done in any particular order; deputy commissioners and other senior staff have different platforms. Lower level staff have computer access and e-mail accounts on Exchange through kiosked Pentium IV computers (completed as part of the Phase I contract), while supervisory employees still use GroupWise, operating on Pentium II machines. As a result of the incompatibility of the GroupWise and Microsoft Exchange systems, e-mail is often not delivered.

- DoIT is now using the New York State OGS contract process to obtain "mini-bids" to complete the e-mail project<sup>7</sup>. DoIT anticipates that a contract will be awarded shortly, and that another \$1.5 million will have to be spent to complete the project as originally envisioned, including the upgrading or replacement of older PCs. Accordingly, the total expenditure to complete Phase II of the e-mail project would be \$3.0 million, \$1.5 million more than the original estimate of \$1.5 million.

### **Audit Recommendations:**

DoIT should establish a protocol, similar to the Department of Public Works' protocol, for approval of all material changes in a contract's scope or cost.

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<sup>7</sup> Pursuant to General Municipal Law Section 104, municipalities may contract with entities with which the New York State OGS has already contracted without conducting their own independent procurements.

The State recognizes that its contract price may not offer the best discount available on technology equipment and services. Therefore, the State requires that its user agencies develop a procurement record to ensure that the best possible discounts are provided through various pricing incentives offered by contract vendors in comparison to the standard New York State contract discounts. The agency is required to do a "mini-bid" process which is an abbreviated bid and selection process required by State OGS when purchasing goods and services through OGS for IT services contracts over \$50,000.

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The administration should take steps to ensure that encumbrances for time and materials contracts are not exceeded, and the required approvals for change orders and encumbrances are obtained.

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### **RCG's Subcontract with Lincoln Computer Services, Inc.**

#### **Audit Finding (3):**

The former commissioner recommended that RCG engage Lincoln as a subcontractor on the e-mail project to fulfill the local subcontractor requirement contained in its contract with the county. The December 30, 2003, e-mail project contract between RCG and Lincoln provided that RCG would pay Lincoln \$125 per hour to provide \$100,000 in ghosting and disk image testing services. The contract also provided that Lincoln would bill RCG every 30 days for work performed and would include a time record, signed by a Lincoln official, verifying the number of work hours.

Lincoln began work before its contract with RCG was signed. As of December 31, 2003, Lincoln's timesheets showed 305 hours worked on the e-mail project, not the 800 hours required for the \$100,000 payment. According to the weekly progress reports submitted by RCG, the ghosting and testing of disk images work was still ongoing in mid-January 2004. On December 23, 2003, six days prior to the execution of the subcontract between RCG and Lincoln, DoIT approved a \$100,000 payment to RCG for Lincoln's services, thereby approving and processing an invoice for payment not supported by adequate documentation attesting to work performed.

#### **Audit Recommendation:**

Payments to DoIT contractors and subcontractors should be based on valid and enforceable contracts. No payments to DoIT contractors or subcontractors should be made in advance of completion of the work assignment. In addition, payments to all contractors should be made in accordance with the terms and conditions of the contract agreement. The department should be maintaining records supporting the work for which payment is requested.

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### **Inadequate Monitoring of Consultants**

#### **Audit Finding (4):**

Lincoln worked as a consultant to the department on a variety of projects, both on a pro bono and paid basis. Lincoln's paid services included the Cisco equipment purchase and installation project (two purchase orders) and services provided as a subcontractor to RCG (see finding 3). Lincoln's and DoIT's time records, however, did not identify Lincoln's hours with specific projects.

In June 2004, Lincoln provided a summary of the dollar value of services provided to DoIT from October 2003 through June 2004. Lincoln claimed to have provided \$1.8 million of consulting services related to the Cisco equipment purchase and as a subcontractor to RCG on the E-Mail migration project. Although the amount of consulting services Lincoln claimed to have provided was in excess of the 3,200 hours promised under the Statement of Work - Cisco Networking Upgrade and the 800 hours under the RCG subcontract, we could not validate that all these consulting hours were provided.

DoIT did not require Lincoln to submit certified time records. Lincoln submitted uncertified time records showing 11,353 hours of work on the e-mail project from March through May 2004, when the bulk of the work was performed. Apparently, some of this work was done "pro bono"; other work was done pursuant to Lincoln's role as a subcontractor to RCG. Lincoln also performed consulting work pursuant to the Statement of Work for the Cisco project, in which it agreed to perform 3,200 hours of consulting work. However, the department maintained very limited time records for this time period, which are insufficient to corroborate Lincoln's claim. The department maintained vendor timesheets for only six of the 34 weeks for which Lincoln stated it provided services. Our examination of these limited time records showed significant discrepancies.

For example, although Lincoln claimed to have worked a total of 980 hours over a three week period, we found no evidence to support 347 or 35% of these hours valued by Lincoln at \$51,705. RCG's weekly status reports for this same time frame indicate that the rollout was "proceeding at a less than optimum rate due to delays by Lincoln/Nassau County in PC upgrades", with only 150 computers converted out of 232 that were planned to have been converted by March 29, 2004.<sup>8</sup> Subsequently, RCG reported that migrations and upgrades were limited due to computers not upgraded. As of May 28, 2004, when Lincoln stopped working for the county, only 648 out of 2,100 users were converted. RCG's weekly status report of May 30, 2004 states that Lincoln did not provide any software or data when it withdrew, necessitating an assessment by RCG of the unfinished work. As a result, when RCG removed its staff because the county had no more funds encumbered to pay RCG, the Exchange 2003 E-mail rollout was only 30% complete, according to the last status reports.

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<sup>8</sup> RCG status report of March 28, 2004 – progress on CCF 11

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In the absence of complete time documentation maintained by the department, we were unable to confirm that the county received approximately \$514,323 of services reportedly provided under its Cisco reseller agreement and the \$100,000 of services provided as a subcontractor pursuant to the RCG e-mail migration contract.

As a subcontractor, Lincoln was not directly accountable to the county for its performance on the RCG contract. Despite Lincoln's role as a subcontractor, based on our interviews, it appears that the former commissioner was overseeing Lincoln's work on the e-mail project. Because Lincoln did not leave any data for the department to review, part of the effort to restart the e-mail project in the fall of 2004 necessitated an assessment to determine how much work remained to be completed on the e-mail migration project.

### **Audit Recommendation:**

DoIT should maintain careful oversight of outside consultants, and maintain adequate controls to ensure that adequate time records and other records of work performed are maintained so that hours worked and tasks performed by contractors and subcontractors can be verified and charged to the appropriate contract.

DoIT should also ensure that work to be performed pursuant to those contracts is within the contract scope, is detailed in contractual relationships with any subcontractors, and that the contractor is responsible for overseeing subcontractor work.

## Findings and Recommendations

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### **Procurement Practices**

#### **Background**

Pursuant to General Municipal Law (GML) Section 104, municipalities may contract with entities with which the New York State Office of General Services has already contracted without conducting their own independent procurements.

The State recognizes that its contract price may not offer the best discount available on technology equipment and services. Therefore, OGS requires that its user agencies develop a procurement record to ensure that they receive the best possible price in comparison to the standard OGS contract discounts. The county complies with OGS contract terms and conditions that require user agencies purchasing IT goods and services over \$50,000 to conduct an abbreviated bid and selection process termed a “mini-bid” process. We examined a number of DoIT’s purchases where it used OGS contracts to ascertain whether procurement procedures were followed to ensure that the county received the best value for its expenditures.

#### **Audit Finding (5):**

In the fall of 2003, after evaluating whether to replace the county’s Alcatel computer networking equipment with new Alcatel equipment or equipment manufactured by Cisco Systems, DoIT decided to purchase Cisco equipment. Lincoln provided the department with the supporting documentation upon which this decision appeared to be based and developed the specifications for the Cisco purchase.<sup>9</sup> The State OGS Cisco contract offered pricing for Cisco equipment at 32% off list for equipment and 0% off list for maintenance. Because Cisco products cannot be purchased directly but must be purchased through a Value Added Reseller (VAR), the OGS contract states that bids are to be solicited from at least three resellers in the agency’s geographic area in order to ensure that the best value is obtained.

The department, apparently with help from Lincoln, obtained a quotation from Cisco, contingent upon the involvement of a Cisco authorized reseller, dated December 24, 2003, offering a 48% “strategic discount” off the list price on equipment and a 15% discount off the list price on maintenance. Cisco provided this significantly higher discount to the department in order for Cisco to “aggressively compete against Alcatel.”<sup>10</sup>

Because DoIT had to use the services of a reseller, it sought bids for its intended Cisco equipment purchase from three firms, Lincoln, Verizon and Custom Computer Specialists, Inc. (Custom), which were authorized as VARs under NYS OGS contracts.<sup>11</sup>

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<sup>9</sup> Some of the documents supplied by Lincoln were apparently reprinted information prepared by Gartner, Inc., which describes itself as an independent and objective provider of technology research. See [http://www.gartner.com/5\\_about/company\\_information/guiding\\_principles.jsp](http://www.gartner.com/5_about/company_information/guiding_principles.jsp).

<sup>10</sup> E-mail from Cisco to the Commissioner of DoIT dated February 9, 2004.

<sup>11</sup> Memorandum from Commissioner Craig W. Love to Hon. Peter J. Schmitt, dated June 15, 2004, titled “Lincoln Computer Services.”

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Cisco ranks Verizon as a “gold” partner; Lincoln and Custom are ranked as “premier” partners.<sup>12</sup> On December 30, 2003, the department issued a \$2.4 million purchase order to Lincoln for the Cisco networking equipment pursuant to the State OGS contract. Standard New York State contract pricing was used, offering a discount of 32% off list price on equipment and 0% off list price for maintenance.

Although the former commissioner stated that three bids were solicited prior to the issuance of the purchase order (Lincoln, Verizon and Custom), there is no evidence that the department maintained a procurement record of these vendors and prices solicited, as required by the state for its own agencies to confirm that best value is obtained. While the department did provide copies of several price quotations, we could not reconcile the items bid to the items subsequently purchased. The quotes were in the range of \$200,000-\$300,000 while the final purchase order was for \$2.4 million.

Lincoln, as part of its bid to obtain the county’s Cisco business, offered to provide consultant services to implement the Cisco system without adding a charge to the New York State contract discount price for Cisco equipment (32% off list for equipment; 0% off list for maintenance). Lincoln’s provision of consultant services in the Cisco equipment contract price brought the discount on Cisco equipment down from the 48% “strategic discount” pricing offered by Cisco to the State contract discount of 32%.<sup>13</sup> We estimate that the department’s use of the 32% discount state contract price resulted in a cost to DoIT of approximately \$429,874 for the consulting services. In addition, the failure to secure the multi-year and strategic price discount on the maintenance component resulted in an additional cost for consulting services of \$84,449, for a total additional charge for consulting of \$514,323.

In addition, although the consulting services were apparently included in the equipment purchase order price, the specific services to be received were nowhere to be found in the purchase order. Instead, they were described in Lincoln’s unsigned, undated statement of work.<sup>14</sup> According to the statement of work, Lincoln would provide 3,200 hours of consulting services “at no additional costs” to the county contingent upon full payment of the Cisco purchase orders.<sup>15</sup> Also, Lincoln submitted billing documentation to the department for hours worked from October 2003 through June 2004, which allocated a portion of the payments made on the Cisco equipment, equivalent to 16% of the list price, to consulting services.

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<sup>12</sup> Cisco Systems resellers have three levels of certification—“premier,” “gold” and “silver”. Cisco’s website states that many governments require Cisco gold certification as part of their requests for proposals. It defines “gold” partners as having the highest credibility and levels of support. Gold partners are recognized by Cisco as having greater expertise in needs assessment than the lower level “premier partners,” as well as being able to offer more competitive pricing. [www.cisco.com](http://www.cisco.com).

<sup>13</sup> The Cisco representative who prepared both the 48% and the 32 % quotations told our auditors there was a verbal agreement between Cisco, Lincoln and the department by which Lincoln was to use the 16% difference between the two quotations to provide consulting services to the department.

<sup>14</sup> Statement of Work, Cisco Networking Upgrade, Prepared for Nassau County, Lincoln Computer Services.

<sup>15</sup> Lincoln’s statement of work was contingent upon full payment of POIT03000278 and POIT04000018.

## Findings and Recommendations

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DoIT, by including the provision of consulting services for the implementation of the Cisco networking system in the *equipment* price in its purchase order with Lincoln, circumvented state and local procurement procedures. Lincoln's services were paid for by the 16% discount difference on the Cisco equipment purchase, not through a separate personal services contract or by the purchase of ancillary services through the equipment contract (OGS contracts allow services purchases of up to 20% of the equipment and maintenance amount).

Because we found that approximately \$514,000 of the Lincoln purchase order for Cisco *equipment* was for the provision of 3,200 hours of consulting services, we sought to examine the reasonableness of the cost of these services. We found that the department paid an average of \$161 per hour for consulting services, higher than Lincoln's average billing rate of \$91.<sup>16</sup> Lincoln may have needed to employ higher than average cost employees for the services provided. However, because the Lincoln purchase order did not contain provisions specifying the consulting services to be provided and the department did not maintain complete time records for Lincoln or otherwise validate the time spent by Lincoln, we found that DoIT cannot quantify the value of the consulting services it received. It is possible that the department could have saved as much as \$223,123, if it paid Lincoln pursuant to a consulting services contract at its average billing rate. Moreover, if the department had conducted a more thorough procurement process, greater savings might have been realized.

In addition, because the purchase order was for equipment, the consulting services were paid for upon receipt of the equipment but before the services were provided. Further, we also found that Lincoln's time records for time spent during the Cisco project reflect a significant portion of hours charged to the e-mail migration project, as well as other projects that were unrelated to the evaluation or installation of networking equipment. Therefore, because a description of the consulting services to be provided was not set forth in the purchase order, DoIT may have used the order to finance the provision of some services unrelated to the purchase and installation of Cisco equipment.

### **Audit Recommendations:**

1. DoIT should:
  - a. work with the Department of Purchasing to ensure that purchase requisitions issued pursuant to New York State OGS contracts follow all relevant state and county procurement procedures and guidelines (see section IX, Purchases from, with or through other Governments, pp.42-46, Nassau County Procurement Policy/Procedure, Countywide Policy # CE-01, dated September 20, 2004);

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<sup>16</sup> We estimated Lincoln's average billing rate as \$91 per hour by using the average cost of the hours the firm claimed in its summary of hours billed dated on June 7, 2004. 3,200 hours of consulting services at a cost of \$514,323 equates to a billing rate of \$160.73 per hour.

## Findings and Recommendations

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- b. ensure that when it uses OGS technology contracts, it is familiar with their terms and conditions, avails itself of strategic pricing discounts when they are available, and obtains competitive bids when required;
  - c. maintain adequate documentation of the justification for purchases of services and equipment, including those made under OGS contracts; and
  - d. evaluate whether it should require vendors providing services related to Cisco equipment to be “gold” certified.
2. Absent exceptional circumstances, the company that develops project specifications should not be permitted to bid on the project.
3. If the county works with a pro bono provider of services, there should be clearly defined parameters as to the services to be performed and the project milestones to be completed. In addition, the county should not provide special treatment to a pro bono provider in a subsequent procurement process and the provider of pro bono services must be made aware that the provision of those services will not result in any special treatment. Where legal issues arise concerning the use of pro bono service providers, the county attorney’s advice should be sought.

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### **Payment for Work Not Performed - Installation of Cisco Equipment**

#### **Audit Finding (6):**

We found that DoIT approved payments to Lincoln in advance of work being performed. In June 2004, based on the approval of the former Commissioner the previous March, DoIT processed a payment to Lincoln for \$114,366 against a second Lincoln purchase order (in the amount of \$195,028 for installation of Cisco equipment). DoIT also received invoices for the remaining \$80,662 of the second purchase order in March 2004; it approved \$65,310, but did not process this amount for payment.

We reviewed the department's records for evidence that the equipment had been installed as specified on the invoices. We found no project manager or other authorized signatures to confirm that the portion of installation for which payment was sought was completed, as is required prior to the approval of invoices for payment. We met with senior DoIT management in February 2005 to ascertain how much of the Cisco equipment had been deployed and installed. We were advised that in the summer of 2004, Lincoln completed installation and configuration of Cisco equipment at three of five sites. DoIT completed the Cisco equipment configuration and installation by utilizing a blanket purchase order with Contemporary Computer Services, Inc. (CCSI), a Cisco "gold partner". The department has reiterated, however, that Lincoln is responsible for the completion of Cisco equipment installation at any additional sites up to the full amount of the purchase order.

#### **Audit Recommendation:**

Payments for installation of equipment should be supported by adequate documentation, including an approval by the project manager attesting to the completion of the installation. Installation claims should also be supported by documentation from the department's inventory custodian to ensure that the equipment has been deployed for installation. The department should establish performance and payment benchmarks for completion of work on contracts and purchase orders that require installation or a deliverable other than equipment.

## Findings and Recommendations

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### **Delegation of Oversight Responsibilities to Vendor**

#### **Audit Finding (7):**

DoIT advised us that the former commissioner acted as the project manager for the purchase and installation of the Cisco equipment. Based on our interviews with DoIT management and senior staff, we conclude that the former commissioner relied on the expertise of the vendor (Lincoln) in managing this initiative. Lincoln managed its own work with no departmental oversight, and provided neither adequate time records nor a written plan for the configuration and installation of the equipment.

We also found that DoIT may have purchased some of this equipment prematurely. Because of a lack of a design configuration and implementation plan, a significant quantity of the \$1.886 million in Cisco routing and communications equipment received and paid for in 2004 remains in storage. The county is using CCSI to complete a design configuration and implementation plan for the remainder of the Cisco equipment. After this phase of work is completed, Lincoln will be recalled to complete its installation obligation.

#### **Audit Recommendations:**

DoIT should:

- a. vest project management responsibilities in a county employee and not an outside vendor unless there is a formal contract in place; and
- b. justify the timing of purchases and receive equipment, if possible, as needed to ensure that equipment does not remain in storage for extended periods.

## Findings and Recommendations

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### **Purchase of Storage Area Network Equipment**

#### **Background**

In January 2004, the department issued a purchase requisition for \$4.2 million of equipment from EMC, a manufacturer of computerized storage equipment. This was the largest single purchase order issued by the department in 2004, and represents approximately one-half of the total costs allocated to the new data center in Bethpage. The purchasing authority was a New York State contract. The department did obtain additional enterprise discounts from the vendor in addition to the state contract discount. Lincoln designed the project specifications and provided project management. Although these services were supposed to be provided pro bono, we found an unexplained payment from EMC to Lincoln for \$140,000.<sup>17</sup>

Based on our review of EMC's statement of work, the equipment was purchased for the development of a storage area network and for disaster recovery purposes. The project deliverables specifically mention that implementation and testing of a Disaster Recovery Site was to be completed by December 31, 2004. To date there is no identified disaster recovery site, therefore although the county has fully paid EMC on the contract, this deliverable was not provided.

#### **Audit Finding (8):**

We found poor controls in place over the receipt of equipment and payment of the 4.2 million dollar invoice. As a result, DoIT paid for equipment that was not listed on packing slips, and paid prematurely for services that had not been provided. In addition, due to lack of segregation of duties, the same individual who requisitioned the equipment also approved the invoice for payment.

The county paid EMC \$4.2 million dollars in a lump sum at the end of March 2004. DoIT did not conduct an internal review to ensure that items were received before it approved this payment. We found evidence of poor internal controls, including:

- When the equipment was delivered, the individual who signed for receipt of the equipment used the initials of another employee.
- The department's inventory control personnel apparently did not review the packing slips. Also, the packing slips were not reviewed simultaneously with receipt of the equipment.
- A then part-time, non-senior DoIT employee conducted the only review of the \$4.2 million invoice prior to its approval for payment by the department.

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<sup>17</sup> See "Run Report: from Lincoln to DoIT, attached to an e-mail from Lincoln to DoIT dated June 7, 2004. This report also notes a similarly unexplained \$40,000 payment from Microsoft to Lincoln.

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- In addition, at the time of payment authorization, DoIT did not appear to have reconciled the invoice to the packing slips. For example, we found \$502,000 of items on the invoice that were not listed on any of the packing slips reviewed at the time of payment authorization: only after the commencement of this audit were those packing slips found.
- A payment of \$852,870 was for maintenance, implementation services and training; not received at the time of payment.
- The department acknowledged the equipment had not been reviewed for inclusion on the Fixed Assets Inventory when it was received. DoIT only included it on the Fixed Assets Inventory after we brought the issue to DoIT's attention.

### **Audit Recommendations:**

DoIT should:

- a. require that decisions to purchase equipment be supported by adequate documentation justifying the cost and need for the particular request. The department recently established a procedure for new purchases which requires a documented reason for purchases and requires approval by a project manager, in addition to administrative approval;
- b. have protocols requiring Project Manager approval as part of purchasing, receipt of equipment and approval of invoices;
- c. establish clear deliverables for purchase orders that involve items such as implementation services, training and or maintenance, so that payment can be made based on agreed milestones for completion;
- d. establish an appropriate segregation of duties regarding the receiving and accounts payable process:
  - An employee, other than the employee who placed the order or the employee who approves the invoice for payment, should verify that items listed on the packing slip are in fact the items received in the shipment.
  - DoIT should implement a reconciliation process when invoices are approved for payment to ensure that all items listed on invoices have in fact been received (DoIT should check packing slips, invoices and items received against each other) and that the invoice reflects the items authorized for purchase on the purchase order; and
- e. review all purchases for potential inclusion in the Fixed Assets Accounting Control System (FAACS).

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### **Disaster Recovery Planning**

#### **Background**

In the wake of the September 11<sup>th</sup> terrorist attack, the comptroller's office investigated and reported on DoIT's "Disaster Recovery Preparedness". The Comptroller's report, issued in September 2002, found that the department and the county did not have "complete, comprehensive and up-to-date disaster recovery plans." The countywide disaster recovery plan was last updated in 1993 and a Business Impact Analysis (intended to gather and analyze data on key functional areas of Nassau County government if a disaster were to occur), was last performed in 1997. As part of this current audit, we discovered that in fact a Disaster Recovery Plan had been prepared for the department (if not for the county as a whole) in April 2002, but at the time we prepared our September 2002 report, DoIT personnel who were liaisons to our auditors were not aware of its existence, so it was not furnished to this office at that time.

While the Comptroller's review was ongoing in 2002, the department contracted with a consultant, Denver Solutions Group (DSG) to provide an assessment of the county's disaster recovery plans and to update the Business Impact Analysis. DSG's final report, dated October 11, 2002, indicates that "no integrated countywide IT disaster recovery plan exists," and that individual departments with substantial stand-alone IT operations also do not have any disaster recovery plans in place.<sup>18</sup> The report made a series of recommendations for necessary action in order to begin the process of effective disaster recovery planning. As part of our review, we interviewed members of the department to determine what action has been taken on DSG's recommendations.

#### **Audit Finding (9):**

The department's disaster recovery plan remains inadequate. We found the following deficiencies with the plan and the department's management of it:

- a. Key personnel, including the acting commissioner of the department, were not aware that an April 2002 disaster recovery plan had been prepared for DoIT;
- b. The plan only relates to DoIT's operations. The county must also have an integrated plan for all critical county agencies; and
- c. Although the April 2002 plan provides for semiannual updates, no updates have been performed since April 2002. The department has upgraded its computer environment, yet the plan does not include the current mainframes, servers and other related equipment.

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<sup>18</sup> Denver Solutions Group-Nassau County Continuity and Disaster Plan Assessment Report: page 4

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To the extent there were changes in key personnel involved in disaster recovery, those changes were not reflected in organizational charts including changes in names and telephone numbers. Therefore, in the case of a disaster county employees may be trying to reach individuals for assistance who are no longer employed by the county. It is our understanding that DoIT plans to issue a comprehensive Disaster Recovery Plan in December 2005.

As a result of protracted contract negotiations, the department currently does not have a written agreement in place with a vendor to provide *hot site* services should there be a disaster. A hot site location is a fully operational offsite data processing facility with both hardware and software that can be used in the event of a disaster. The department's *Hot Site Agreement* with IBM expired in August 2002. Although, there is a verbal agreement currently in place with IBM for use of its hot site, DoIT acknowledges that in the event of a large scale disaster, contract customers would receive priority, and the county could potentially be left without hot site services. In addition, absent a written agreement, the county's a disaster recovery plan cannot be tested at the IBM facility.

A key recommendation made by DSG in its assessment of the county's back up systems, was that DoIT needed to have an enterprisewide initiative to coordinate backup plans for all the stand alone systems scattered throughout the county. "An enterprise IT data back up system is almost always the first thing the continuity and disaster recovery experts look for in developing disaster recovery planning."<sup>19</sup> DSG commented that many county departments have become more self-reliant from an IT perspective therefore highlighting the need for better coordination. DSG recommended that "as an important and immediate first step to a Continuity and Disaster Recovery Plan, the County IT Steering Committee should approve a project to organize a single countywide back-up process."<sup>20</sup> There is no evidence that the Steering Committee has been involved in disaster recovery planning or that the county has an enterprisewide disaster recovery plan.

Recovery Pac is software used to generate a Disaster Recovery Plan. Users of the software need to update imputed information on a regular basis so that the Disaster Recovery Plan remains current. In response to our September 2002 report, in which we found that the information was not being updated on a regular basis, DoIT indicated that they would update the information entered into the Recovery Pac software on a quarterly basis and would choose a second location off-site to store back-up copies of Recovery Pac.

We found that as of November 2004 information needed to keep the Plan current was not consistently entered and that information needed for the software to work properly is inaccurate or missing key elements of information in a number of fields. For example, because organization charts have not been updated the contact personnel field contains outdated information. Because there is no enterprisewide plan the criticality levels have not been assigned to various county processes. To our knowledge, a second off-site location had not been secured.

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<sup>19</sup> Denver Solutions Group Nassau County 's Disaster Recovery Needs, July 8, 2002 : page 5

<sup>20</sup> Denver Solutions Group Report dated 7/8/2002, page 5

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### **Audit Recommendations:**

DoIT should:

- a. issue its Comprehensive Disaster Recovery Plan in December of 2005 as currently planned;
- b. develop an interim disaster recovery plan pending development of a comprehensive plan encompassing all county departments;
- c. make securing a recovery hot site a priority;
- d. develop a countywide back up process. This initiative should also involve the Office of Emergency Management to ensure that all emergency services are adequately prepared; and
- e. institute regular meetings of the Steering Committee, assuming its reinstatement, and ensure its involvement in the oversight of the development and implementation of a countywide Disaster Recovery Plan; and
- f. ensure that the plan encompasses the entire county, including systems that are not currently supported by IT.

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### Department's Response and Auditor's Follow-up

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THOMAS R. SUOZZI  
COUNTY EXECUTIVE

ROBERT J. CHECCA  
COMMISSIONER

**Department of Information Technology**  
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To: Manuel Mosquera  
Deputy Comptroller for Audits & Special Projects

From: Robert J. Checca

Date: 13 June 2005

Subject: Limited Review of the Department of Information Technology – Technology Strategic Plan, Procurement Practices and Disaster Recovery Planning.

The Department of Information Technology extends its appreciation to the Comptroller's Office for completing its procedural audit for the period prior to the third quarter of 2004.

Through many years of neglect, the Department of Information Technology (NCIT) inherited a crumbling infrastructure of technology and services that was not governed or guided by any published policies or procedures. Facing poor and inadequate technology, which included 20-year old computer systems and a data center dating back to the early 1970s, this newly created department was charged with quickly delivering vastly improved technology solutions to the County.

Since its creation as an agency, separating from the Parks Department in late 2002, NCIT has undergone considerable change and has accomplished several major initiatives. The department has pioneered and delivered major technology advancements to the benefit of the entire County and continues to rely on bettering our business practices to ensure ongoing success in delivering solutions and services.

As a result of these initiatives, over the last two years the Suozzi Administration has:

- Opened a new state-of-the-art data center allowing the County to consolidate resources and improve service quality;

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- Installed a fiber optic network connecting the key County campuses improving connectivity and service delivery;
- Initiated an eGovernment program, which allows for increased interaction between County government and the residents and businesses. The first on-line modules of this initiative have been great successes. (TPVA has generated \$300,000 in revenue back to the County);
- Upgraded the technology infrastructure allowing for better productivity and efficiencies.

In addition, we are positioning ourselves to be measured as a leader in the design, deployment and use of technology – a far cry from when the Maxwell School of Public Policy at Syracuse University graded technology in the County a D+.

Since the 3<sup>rd</sup> quarter of 2004, and under new leadership from the administration, NCIT has also been reviewing, and improving, our business practices. I have included comments to this effect in both the audit finding and the associated recommendations as necessary.

The audit points out deficiencies in past procedures. After having reviewed the available information and discussing several of these points with the NCIT team, I am confident that the County received the goods and services that were paid for, and the County has successfully used those goods and services to effect substantial improvements to its IT infrastructure.

I look forward to improving our business practices in conjunction with the administration's continued efforts to improve services to the constituents of the County.

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#### **Project Oversight and Recommendations:**

##### **Audit Finding (1):**

##### **Department Response:**

*Department's summary of Audit Finding (1):* A Steering Committee should be re-constituted to provide strategic direction, technology guidance, and program oversight to DoIT. This oversight will allow for better technology management of Nassau County initiatives.

##### **Response to Audit Findings and Recommendations (1):**

DoIT has been able to recruit information technology professionals since 2002, lessening the need for volunteers to lend expertise through a steering committee. The Department will continue to review its use of outside expert volunteers and use those resources as is appropriate. IT works closely with County employee users when particular programs are developed, but the mechanism of the steering committee was not helpful for general employee input. The Department will consider whether the Plan should be amended to eliminate reference to the steering committee.

1.a If DoIT decides to use a steering committee, it will make sure that committee members review the current decision making methodology of projects and initiatives and establish standards for this process.

1.b DoIT will develop/formalize a standard approach to project definition and requirements for IT projects.

1.c The department is currently reviewing project management tools and methodologies to enhance/improve our business practices and project oversight

1.d The Department does not delegate project management to consultants or vendors without a contractual relationship permitting accountability.

2.a DoIT has been able to recruit information technology professionals since 2002, lessening the need for volunteers to lend expertise through a steering committee. The Department will continue to review its use of outside expert volunteers and use those resources as is appropriate. IT works closely with County employee users when particular programs are developed, but the mechanism of the steering committee was not helpful for general employee input. The Department will consider whether the Plan should be amended to eliminate reference to the steering committee.

2.b If the IT Department continues to use volunteers to provide expertise, it will review the use of a Conflict of Interest policy with the County Attorney's office.

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#### **Auditor's Follow-up:**

*We reiterate that a strong steering committee could enhance the project and expenditure decision-making process, while supplying support and guidance, which could ultimately benefit the department. In addition, DoIT should maintain official documentation of the committee's activities, proposal evaluation, project criteria and vendor selection. Documentation should also be an integral part of contractual relationships with consultants and vendors. We otherwise concur with the corrective actions being taken by DoIT.*

#### **Cost Overruns on E-mail Project:**

#### **Audit Finding (2):**

#### **Department Response:**

In an effort to make employees more productive, the administration committed in early 2003 to expanding the deployment of e-mail to all employees. At the time, there were five different e-mail systems from different vendors throughout the County that required support and maintenance. These multiple and disparate e-mail platforms provided e-mail to only 51% of the County employees. Integrated e-mail is a critical component in improving communication between all departments and agencies of the county. An integrated mail and directory system provides the ability to share information rapidly and improve productivity and workflow of all employees and service processes. A study by *Ferris Research* shows an overall productivity gain of 15 to 20 percent per employee from County-wide e-mail.

The goal of this project was to identify the best long range strategy and technology direction for countywide e-mail, and then design and deploy that architecture to provide e-mail capability to all County employees.

The decision was made to adopt the Microsoft Exchange platform as the County's standard e-mail direction. The Police Department and Department of Social Services already used Microsoft e-mail. This decision leveraged the investment made by NCPD and DSS and was consistent with the direction taken by New York State and most other County governments. Pursuant to purchasing guidelines, detailed proposals were solicited from four different vendors.

Approximately 4,000 Outlook accounts were established during Phase I of this project. In addition, 500 personal computers were deployed as either desktop units or kiosks. These units were deployed to users who never had computers to perform their daily work. There were weekly status reports provided by the vendor that indicated the number of hours booked for that week and a total of project hours. Phase I of the project was delivered on time and on budget.

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The scope of Phase II was changed by the former commissioner as the vendor was tasked to upgrade to a selected system standard of hardware and software. These standards did not exist in the past. There were insufficient funds committed to this phase to complete it, and the work remained a departmental priority.

During the 4<sup>th</sup> quarter of 2004, DoIT solicited proposals for converting the balance of email users, 2,500, and replacing approximately 1,000 older personal computers. Through the State mini-bid process, DoIT received interest from over 20 potential vendors. The contract was awarded during the 2<sup>nd</sup> quarter of 2005 with a contract price of approximately \$550,000. This vendor will also assist in upgrading certain computers to be compatible to the County standard operating system.

This vendor will also assist the replacement and deployment of approximately 1050 new computers. Through the use of a State negotiated contract with Dell that was effective for a limited period (state contract PT55666), DoIT was able to lower the cost per unit of a computer by \$150.00

As a general note of reference, a replacement program ideally would be completed on a 3 year basis and funded accordingly. At a minimum, desktop computers should be replaced every five years – with an upgrade program at 30 to 36 months. Several of the County devices being replaced are older than this window and affect the users' productivity while increasing support and maintenance costs.

Through one-off replacements and maintenance, DoIT continued to migrate users during the balance of 2004 and the first half of 2005 as systems/computers failed. This would result in partially completed departments or agencies. As a general rule, email systems interface seamlessly.

#### **Auditor's Follow-up:**

*We do not dispute the necessity of an e-mail upgrade and a countywide e-mail platform. We note that the estimated cost to complete this project as originally envisioned, including upgrading or replacement of older PCs at a cost of \$1million, will be an additional approximately \$1.5 million. We commend the department for its continued efforts to complete the e-mail migration project. However, there should have been a process for the selection, implementation and subsequent changes to the overall project, with proper approvals in place. We note that, as stated in the department's response to our audit recommendation, corrective measures are being taken.*

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#### **Audit Recommendation:**

#### **Department Response:**

DoIT is developing a procedure to manage any material change to a contract or cost including coordination with the County Attorney's office as needed.

#### **Auditor's Follow-up:**

*We concur with the corrective actions being taken by DoIT. In addition, we recommend that contract amendments be put in place to increase encumbrances for time and materials contracts where additional work is necessary so that contract encumbrances are not exceeded.*

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#### **RCG's Subcontract with Lincoln Computer Services, Inc.**

##### **Audit Finding (3):**

##### **Department Response:**

While there appears to be inadequate documentation attesting to the work being performed by the vendors, the ghosting and disk imaging testing services were successfully completed. The end product of this task was a critical item required for the deployment of the desktop computers to the user community.

##### **Auditor's Follow-up:**

*Payments to contractors and subcontractors should have been based on valid and enforceable contracts, and no payments to contractors or subcontractors should have been made in advance of completion of the work assignment. The department should be maintaining records supporting the work for which payment is requested.*

##### **Audit Recommendation:**

##### **Department Response:**

It is DoIT's policy to make payments according to contract terms or deliverables. While there appears to have been inadequate documentation of monitoring of the contractor in the past, DoIT is confident that both vendors provided the contracted services.

##### **Auditor's Follow-up:**

*We concur with DoIT's policy to make payments according to contract terms or deliverables and further reiterate the need for department records supporting the work for which payment is requested.*

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### Department's Response and Auditor's Follow-up

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#### **Inadequate Monitoring of Consultants:**

##### **Audit Finding (4):**

##### **Department Response:**

The audit period covers a time when policies and procedures did not exist for this level of monitoring of consultants by the department. As the newly created department began to identify County needs and requirements, the use of consultants was considered to supplement technology voids in the County.

The audit team has not taken account of the documented 207 days (1,656.75 hours) of no-cost consulting provided to IT on various County departments with urgent IT development needs after and as a result of the Purchase Orders. In addition, these numbers do not include 1,728.95 hours of pro-bono services provided by Lincoln prior to the Purchase Orders (October-December 2003).

##### **Auditor's Follow-up:**

*The audit team had reviewed a summary from Lincoln of the dollar value of services provided to DoIT from October 2003 through June 2004, and included in this summary is all the hours claimed by Lincoln, including "no cost" or "pro bono" hours prior to and after the Purchase Orders. However, we could not validate that all these hours were actually provided. When department-specific policies and procedures do not exist, we recommend following county procedures (see Nassau County Office of the Comptroller Control Directive 2: Internal Financial Controls) for the monitoring of consultant hours.*

#### **Audit Recommendation:**

##### **Department Response:**

DoIT has implemented monitoring tools for on-site consultants and contractors. These include the use of time sheets and/or project based work orders. Since the 4<sup>th</sup> quarter of 2004, department personnel have coordinated with the Comptroller's office regarding the use of time sheets for vendors currently under contract.

While the majority of DoIT's software projects are fixed price, milestones and benchmarks are also being used to monitor the progress of development. These procedures are being formalized through written policies.

##### **Auditor's Follow-up:**

*We concur with the corrective actions being taken by DoIT.*

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#### **Procurement Practices:**

##### **Audit Finding (5):**

##### **Department Response:**

During this period, the network infrastructure of the County was crumbling. Network and service availability averaged well below any acceptable industry standard. The Alcatel gear was aged beyond upgrading. Over the last several years, Cisco has become an industry leader in the research and development of telecommunications equipment. The Department is satisfied the choice of Cisco networking equipment was in the County's interest. The County has continued to expand its network with Cisco equipment. The recent purchase of Cisco equipment for the Parks connectivity project was competitively bid and awarded to Verizon – which is a Cisco “gold” partner.

Today the County has written policies and guidelines, which did not exist during the period covered by the audit. Even with lack of established policies in place, the procurement of this Cisco equipment, with the associated services for planning and installation provided by Lincoln, has resulted in a state-of-the-art high speed fiber network.

The audit team has not correctly calculated the number of consultant hours provided. While Lincoln's Statement of Work allowed for 3,200 hours of services as part of the transaction, they did in fact perform 6,468 post-purchase hours of service support for several technology initiatives.

##### **Auditor's Follow-up:**

*Prior to the county's issuance in September 2004 of a formal procurement policy & procedure, the county was required to follow state procurement guidelines when making a purchase pursuant to a state contract.*

*We do not dispute the choice of Cisco as the county's network equipment provider. We questioned the use of a consultant to advise DoIT on that choice, where that consultant was thereafter selected as a re-seller of Cisco equipment. We recommend maintaining adequate documentation of the justification for the purchase of services and equipment, including those made under an OGS contract.*

*We recognize that Lincoln's time records during this time period reflect in excess of the 3,200 hours promised under the Cisco equipment purchase “Statement of Work.” However, these time records reflect a significant portion of hours charged to other projects unrelated to the Cisco project. In addition, these hours were not validated by DoIT.*

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#### **Audit Recommendation:**

#### **Department Response:**

1.a Since the close of the audit period, the County has issued a comprehensive Procurement Policy and Guidelines, which the department uses for purchases. In addition, due to the complex nature of the technology being purchased by DoIT, the department has assisted in providing quotes to Purchasing for review and consideration.

On several occasions, the department has reviewed upcoming purchases with both Purchasing and the Comptroller's office prior to the actual order.

1.b Since the 4<sup>th</sup> quarter of 2004, DoIT has actively referred to and uses the OGS schedules as applicable. To date, three contracts have been awarded through this process.

1.c IT purchases are made according to approved capital projects and funding source. Appropriate documentation is maintained for each purchase.

1.d While DoIT will consider vendor qualifications/certifications when evaluating potential service providers, a "preferred" vendor status should not be a critical point in the decision making process. Other considerations should include price, discount, pre and post implementation support, company market placement and overall performance.

2. Consideration must be given to companies that are system integrators. These vendors assist in requirements gathering and gap analysis and determine certain specifications working with DoIT. As an integrator, they can provide valuable services during the implementation phases of projects.

3. DoIT will avail itself to all resources and assistance, including Purchasing, the Controller's Office, and the County Attorney for any future use of "pro-bono" work.

#### **Auditor's Follow-up:**

*We concur with the corrective actions being taken by the DoIT.*

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#### **Payment for Work Not Performed – Installation of Cisco Equipment:**

##### **Audit Finding (6):**

##### **Department Response:**

Lincoln provided configuration and installation services of three of the County's four main nodes. These nodes/locations have been functioning as part of the County network since installation in the 3<sup>rd</sup> quarter of 2004. Non-performance of installation services would have prevented the County from implementing the main fiber network.

An independent vendor, CCSI, a Cisco gold partner, reviewed the configuration and assisted in the fourth installation.

A network infrastructure plan is being finalized by DoIT, which will provide documentation and guidance to the overall County network, including the deployment of all network devices.

##### **Auditor's Follow-up:**

*We commend DoIT for their continued progress in the installation and modernization of a countywide computer network and reiterate that payments should not have been approved to vendors in advance of work being performed and should have been supported by adequate documentation which includes performance and payment benchmarks. We note that, as stated in the department's response to our audit recommendation, corrective measures are being taken.*

##### **Audit Recommendation:**

##### **Department Response:**

DoIT is including project manager approval that equipment was ordered and installed as defined by project specifications. During 2005, the department issued and implemented equipment/asset management guidelines that are used for all department equipment purchases. These guidelines have been reviewed by the Comptroller's office during the 2<sup>nd</sup> quarter of 2005.

##### **Auditor's Follow-up:**

*We concur with the corrective action taken by DoIT.*

## Appendix

### Department's Response and Auditor's Follow-up

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#### **Delegation of Oversight Responsibilities to Vendor**

##### **Audit Finding (7):**

##### **Department Response:**

The introduction of new technology to meet the increasing needs of the County required the use of external resources. County employees had limited skills in evaluating and configuring Cisco products.

In DoIT's continuing effort to provide higher quality of service to the County users, the department has finalized a network plan that allows for support of services at different locations throughout the County.

In addition, DoIT coordinates with the Real Estate team to understand the continuing consolidation effort and how the program impacts network services and delivery.

##### **Audit Recommendation:**

##### **Department Response:**

1.a Since 4<sup>th</sup> quarter of 2004, DoIT delegates project management responsibilities to either County employees or a contracted vendor.

1.b All equipment purchases and implementations are made according to an approved project, network or service plan or an architectural standard.

##### **Auditor's Follow-up:**

*We concur with the corrective action now being taken by DoIT and reiterate the importance of the timing and receipt of purchases according to a project plan.*

## Appendix

### Department's Response and Auditor's Follow-up

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#### **Purchase of Storage Area Network Equipment**

##### **Audit Finding (8):**

##### **Department Response:**

The EMC Storage Area Network (SAN) was purchased to be used in the County's County-wide disaster recovery plan. The configuration and implementation of this design was tested when the data center was migrated during the 4<sup>th</sup> quarter of 2004. The EMC gear was divided between both locations and allowed DoIT to have dual processing and storage in a mirrored environment. With the seamless migration of the data center, the configuration and use of the EMC SAN was success.

##### **Auditor's Follow-up:**

*We commend the progress made by DoIT in the completion of the data center project as part of the countywide Disaster Recovery Plan.*

##### **Audit Recommendation:**

- 1.a DoIT has implemented new procedures that provide adequate justification for equipment purchases.
- 1.b Project managers will be responsible for the approval of equipment purchases and invoices. Receipt and accountability of equipment will follow departmental procedures that have been reviewed by the Comptroller's office.
- 1.c DoIT will continue to use the County's procurement policies and guidelines for purchases.
- 1.d Inventory custodians are responsible for the receiving and safe storage of equipment. Tasks and responsibilities are defined in the department's policy.
- 1.e Asset tracking and inventory management procedures have been implemented. The County's fixed assets team has reviewed procedures. Since the 4<sup>th</sup> quarter of 2004, DoIT has been coordinating with the Comptroller's office regarding FAACS entries and purchases.

##### **Auditor's Follow-up:**

*We concur with the corrective actions taken by DoIT.*

## Appendix

### Department's Response and Auditor's Follow-up

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#### **Disaster Recovery Planning**

##### **Audit Finding (9):**

##### **Department Response:**

In formulating comprehensive business continuity and disaster recovery plans for the County, DoIT has taken several proactive steps during the last six months. These include:

- The employment of a security manager that will assist in developing both plans and providing guidance on automation security matters;
- Refreshing the April 2002 disaster recovery plan as an interim solution;
- Evaluated business continuity planning tools;
- Solicited service and pricing information from potential sites (this has included discussions with public and private facilities.)

The April 2002 Disaster Recovery Plan had a limited distribution (12 copies), as stated in the opening section of the plan. Several of the key personnel identified in the plan continue as DoIT employees.

As a matter of security, any disaster recovery plan should be treated as confidential and should only be distributed to parties/departments that are key stakeholders.

Solely as an interim solution, DoIT is discussing a short term agreement with IBM for restoration at their Sterling Forest facility. This capability will allow the County to restore business operations to identified agencies from backup media stored off-site from the primary data center. This is similar to the previous contract the County had in place and had been extended through a verbal agreement.

DoIT is reviewing several tools to facilitate the planning and management of our business continuity and disaster recovery plans.

As a result of the functionality of the new data center, DoIT is working with County-wide agencies and departments to consolidate operations into this facility. This will allow critical agency data to be included in the County-wide disaster recovery plan.

Safe storage of data is currently being done by the Storage Area Network devices in the data center which protects the integrity of this information in the event of an equipment or hardware failure.

The 2005 capital plan includes approximately \$1.0M for DoIT to implement a disaster recovery site. These funds became available in April of 2005.

## Appendix

### Department's Response and Auditor's Follow-up

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#### **Auditor's Follow-up:**

*We commend DoIT for the progress made in the countywide disaster recovery planning.*

#### **Audit Recommendation:**

#### **Department Response:**

1.a. DoIT has targeted December 2005 for implementation of its disaster recovery site and plan. As indicated, substantial planning has been completed to date.

1.b. Only as an interim solution, the DR plan of 2002 is being refreshed to include an update. DoIT has initiated discussions with IBM for use of Sterling Forest for restoration services of key County applications. More comprehensive plans are being developed for both disaster recovery and business continuity that are beyond the scope of a "hot site" and insure proper protection to County assets.

1.c. During 2005 DoIT has initiated discussions with both public and private sector entities regarding disaster recovery sites. Included are Suffolk County, Sungard, Keyspan, and telecommunications housing providers.

1.d. DoIT initiated discussions with OEM during 4Q04 regarding disaster recovery and business continuity. In addition, other critical County departments, including the public safety agencies and the Comptroller's office, are being identified for continuity and restoration services.

#### **Auditor's Follow-up:**

*DoIT should reconsider the involvement of the Steering Committee in the continuing disaster recovery planning and implementation. We otherwise concur with the corrective actions taken by DoIT.*