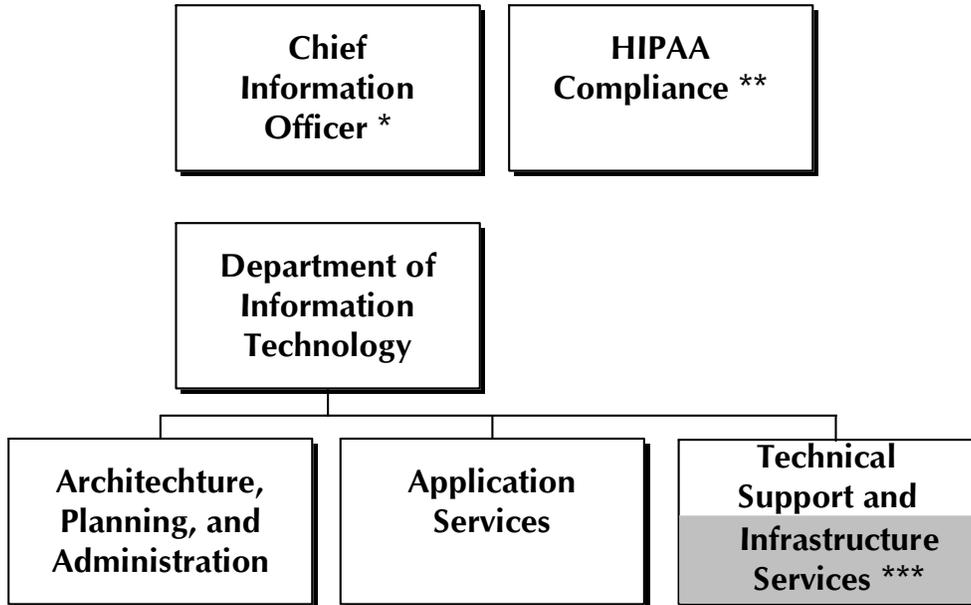


Fund 505 Technology Infrastructure Services



- Fund 505, Technology Infrastructure Services

- * The Chief Information Officer (CIO) has responsibility for strategic direction and oversight of this agency; and, for budget purposes, that position and associated funding are also reflected here within the Department of Information Technology within the General Fund.
- ** As mandated by federal regulation, Fairfax County has a HIPAA Compliance function, which reports directly to the CIO.
- *** All staffing and operating support for Infrastructure Services is found in Volume II, Fund 505, Technology Infrastructure Services.

Fund 505

Technology Infrastructure Services

Mission

To provide a reliable and secure technology infrastructure foundation required to support County business processes and systems that strengthen the public service commitment of Fairfax County.

Focus

The infrastructure activity in the Department of Information Technology (DIT) provides the underlying technology foundation supporting information systems and communications for County government. DIT coordinates all aspects of information technology for the County and plays an enabling role in advancing the strategic value of technology to transform work processes and provide quality services to customers. Funding for DIT activities is included in the General Fund, two Funds that DIT manages (Funds 505 and 104), and in Fund 120, E-911 which supports public safety information technology projects. Fund 505, Technology Infrastructure Services, includes technology activities performed for County agencies such as replacement of County desktop computers and servers, operation of the County computer center (Enterprise Technology Operation Center, or ETOC), monitoring and maintenance of the enterprise data communications network, and Radio Center services. Fund 104, Information Technology, funds major information technology projects, including those with countywide strategic importance, such as infrastructure and application system modernization initiatives. Fund 120, E-911 funds DIT activities that support the County's emergency communications and emergency dispatch systems. These activities are reviewed by the Public Safety Policy Governance Board, established in FY 2005, to ensure the integration of public safety initiatives.

Support for Fund 505 is derived from its customers (County agencies and other entities such as the Fairfax County Public Schools) and a General Fund Transfer, which helps support the new Public Service Radio System; expenditures are primarily driven by customer requests for information technology services (i.e., public safety radio system maintenance, enhanced telecommunications services, use of the data center infrastructure utility-like system for data processing and data storage requirements, and required software maintenance and licenses, etc.).

DIT'S Technology Infrastructure Division provides intra-governmental services including the operation and maintenance of the County computer center and server platforms 24 hours a day, seven days per week; the safeguarding of County software license obligations, data repositories and information assets; the maintenance of County data and radio communication networks; and the provision of integrated communication service to all County agencies and other government customers. The County's enterprise network provides bandwidth securely connecting over 200 facilities to the vast array of business applications available on the County mainframe or server platforms. Consistent with past years, a surcharge of five percent will be added in FY 2006 to Infrastructure Charges to maintain reserves for the future replacement and upgrade of enterprise computer equipment (i.e., mainframe and other platforms).

THINKING STRATEGICALLY

Strategic issues for the Department include:

- o Maintaining communication interoperability within the County and with other government entities; and
- o Providing adequate storage, backup and security for County data.

DIT also manages a PC replacement fund in Fund 505, ensuring funding is available for scheduled desktop device technology refresh to remain consistent with advancements in technology required for services. A comprehensive review conducted in FY 2004 resulted in recommendations that continued a four year replacement cycle, options for restructuring the end-user training, further review of various service options for deploying equipment, increase the number of PCs in the program to account for additional purchases by agencies in prior years, and broadening the types of PCs that are provided for replacement to better match needs of users to types of available desktop technology. In addition, increasing demands on security at the desktop level and client software licensing are included in the cost to deploy PCs. This optimizes both allocation of IT assets and provides more efficient and predictable desktop maintenance and support. In FY 2004 the annual amount collected per PC was reduced from \$600 to \$400 primarily to reflect the decreasing cost of hardware. However, consistent with recommendations from the FY 2004 review and operational requirements, the annual amount collected per PC for FY 2006 will be \$500/year, so that the

Fund 505 Technology Infrastructure Services

future year cash flow will be sufficient to support the hardware and software components of this essential program.

DIT is also responsible for coordinating radio repair and engineering support to County agencies and the Fairfax County Public School system. Operational maintenance of the radio network is of primary importance to the County public safety agencies, public works agencies, Fairfax County Public Schools (FCPS), and other County agencies. With the deployment of both the new public safety and public service radio systems, the operations of the Radio Center are planned to be modified to include interoperability management to ensure 24 hours a day/7 days a week communication with other jurisdictions. To support the operational and maintenance requirements of the systems, costs will be recovered from user entities such as the FCPS and Fairfax Water, and with a General Fund Transfer.

New Initiatives and Recent Accomplishments in Support of the Fairfax County Vision

 Maintaining Safe and Caring Communities	Recent Success	FY 2006 Initiative	Cost Center
Implemented voice and data communications infrastructure to support the Alternate Emergency Operations Center (AEOC) to meet the needs of the County's Emergency Response Teams.	<input checked="" type="checkbox"/>		Infrastructure Services
Restructure support for the public safety and public service radio systems, ensuring network monitoring, system performance, database management, inter-jurisdictional compatibility coordination and interoperability, identity tracking, radio reprogramming, compliance with FCC band modifications, and contingency and redundancy testing consistent with emergency management plans.		<input checked="" type="checkbox"/>	Infrastructure Services
 Connecting People and Places	Recent Success	FY 2006 Initiative	Cost Center
Implement the equipment required for 'lighting up' the County's fiber optic Institutional Network (I-Net), which will, over the next several years, replace most of the commercial carrier provided wide area network and provide the transport layer for the County and Schools voice, data and video traffic.		<input checked="" type="checkbox"/>	Infrastructure Services
 Maintaining Healthy Economies	Recent Success	FY 2006 Initiative	Cost Center
Continue to expand the use of remote access technology for providing secure, less bandwidth-intensive access to County systems for the County's workforce at small remote sites, and supporting expansion of telework.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Infrastructure Services

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 Exercising Corporate Stewardship	Recent Success	FY 2006 Initiative	Cost Center
<p>Continue the implementation of a new enterprise-wide security architecture that:</p> <ul style="list-style-type: none"> ◆ uses a multi-pronged approach to providing internal government, business partners and public access to appropriate electronic transactions and services; ◆ provides for advanced authentication process to comply with security and privacy concerns supporting e-government programs; and ◆ provides improved monitoring, intrusion detection, and auditing capability. 	☑	☑	Infrastructure Services
<p>Continue to implement a multi-phase Network Security Perimeter that uses a multiple firewall strategy to safeguard corporate data, thereby addressing security and privacy concerns and fulfilling the requirements of the Health Insurance Portability and Accountability Act (HIPAA).</p>	☑	☑	Infrastructure Services
<p>Completed the second phase of the redesign of the County's data network to improve redundancy, capacity, security, and flexibility to meet the needs of new applications.</p>	☑		Infrastructure Services
<p>Improve network security through implementation of Network Address Translation (NAT), which will "hide" internal IP addresses from display to outside sources, and employ Open Standards.</p>		☑	Infrastructure Services
<p>Continue server consolidation initiative to optimize allocation of server processing resources, reduce server footprint, operating and software licensing costs, and balance server resources across applications providing increased effectiveness and efficiency of the management and utility of the County's server farm.</p>	☑	☑	Infrastructure Services
<p>Implemented a full network monitoring and management upgrade for applications and infrastructure that resulted in more timely and more complete systemic information on the status of network connected systems and provided enhanced capabilities to respond to system problems before they affect system users. In accordance with the County's Business Continuity Requirements, the upgrade also provides greater systems redundancy.</p>	☑		Infrastructure Services
<p>Continue to provide additional storage capacities in the County's Storage Area Networks (SAN) that support the increasing portfolio of systems and data. Also provide local "Hot Site" backup capabilities for critical systems data. This initiative will strengthen the County's disaster recovery posture and provide recovery capabilities locally.</p>	☑	☑	Infrastructure Services

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 Exercising Corporate Stewardship	Recent Success	FY 2006 Initiative	Cost Center
Continue on-going improvements to the County's critical enterprise technology operations center (ETOC) as part of a multi-year facility modernization initiative to ensure that the ETOC remains a highly reliable and secure resource supporting the technology systems critical to County business operations, thus improving operational effectiveness within an optimized fail-safe environment.	☑	☑	Infrastructure Services
Continue to refresh desktop and laptop computers under the PC Replacement Program, thereby replacing obsolete equipment. PCs in the program are replaced at the end of a four-year cycle. Incorporate 'software assurance' coverage for all PCs in the program to ensure software licensing obligation and ability to implement enhancements without having to purchase individual software upgrades.	☑	☑	Infrastructure Services
Continue to improve utility and efficiency of corporate and agency specific business applications through the County's EIA tool 'Webmethods', a middleware product that creates a seamless process between disparate applications.	☑	☑	Infrastructure Services
Added a secondary Internet Service Provider (ISP) connection to provide back-up, accommodate peak time load, and provide a level of redundancy which allows business continuity during unforeseen commercial ISP outages.	☑		Infrastructure Services
Upgraded the mainframe server and operating system with advanced architecture and features that provides improved throughput and more efficient allocation of processing power. Updated communications controller technology and tape sub-system equipment reduce annual maintenance costs.	☑		Infrastructure Services
Implement automated tools within the mainframe processing environment to reduce manual intervention of systems processing, automate first tier problem notification, automated restarts, and escalation processes. The long-term goal is to move toward a "lights out" operation environment that would streamline processes and reduce the dependence of personnel resources for operations and redirect the focus to the growing area of server and network monitoring.		☑	Infrastructure Services

Fund 505

Technology Infrastructure Services

Budget and Staff Resources

Agency Summary					
Category	FY 2004 Actual	FY 2005 Adopted Budget Plan	FY 2005 Revised Budget Plan	FY 2006 Advertised Budget Plan	FY 2006 Adopted Budget Plan
Authorized Positions/Staff Years					
Regular	69/ 69	69/ 69	67/ 67	68/ 68	67/ 67
Expenditures:					
Personnel Services	\$5,333,166	\$5,510,490	\$5,510,490	\$5,822,235	\$5,822,235
Operating Expenses	13,780,231	18,121,305	19,982,866	18,525,772	18,525,772
Capital Equipment	1,010,850	1,437,280	2,152,002	1,420,000	1,420,000
Total Expenditures	\$20,124,247	\$25,069,075	\$27,645,358	\$25,768,007	\$25,768,007

Position Summary		
<u>Network/Data Communication Services</u>	<u>Data Center Services</u>	<u>Radio Center Services</u>
1 Info. Tech. Program Director I	1 Info. Tech. Program Director II	1 Network/Telecom Analyst IV
1 Info. Tech. Program Manager I	2 Info. Tech. Program Managers II	2 Network/Telecom Analysts III
2 Network/Telecom Analysts IV	4 Systems Programmers III	1 Communications Engineer
11 Network/Telecom Analysts III	5 Systems Programmers II	2 Communications Technicians
4 Network/Telecom Analysts II	3 Systems Programmers I	2 Electronic Equipment Technicians II
1 Network/Telecom Analyst I	2 Programmer Analysts III	1 Interoperability Manager
1 Management Analyst I	1 Programmer Analyst II	1 Administrative Assistant III
	1 Programmer Analyst I	
	6 IT Technicians III	
	9 IT Technicians II	
	2 IT Technicians I	
TOTAL POSITIONS		
67 Positions / 67.0 Staff Years		

FY 2006 Funding Adjustments

The following funding adjustments from the FY 2005 Revised Budget Plan are necessary to support the FY 2006 program:

- Employee Compensation** **\$311,745**
 An increase of \$311,745 associated with salary adjustments necessary to support the County's compensation program and existing staff.
- Data Center** **\$1,073,707**
 A net increase of \$1,073,707 to purchase software license renewals; support telecommunication increases; expand the storage available for mainframe data; augment security measures for daily application operations and incident investigation required to further protect the County from unauthorized entry into County systems, attacks, viruses, data destruction and other cyber threats; and support the next year of the County's Wide Area Network renewal plan.
- PC Replacement Program** **(\$686,520)**
 A decrease of \$686,520 in the PC Replacement Program based on the number of PCs scheduled to be replaced in FY 2006, according to the four year replacement cycle.
- Carryover Adjustments** **(\$2,576,283)**
 A decrease of \$2,576,283 as a result of one time funding at the FY 2004 Carryover Review.

Fund 505

Technology Infrastructure Services

Board of Supervisors' Adjustments

The following funding adjustments reflect all changes to the FY 2006 Advertised Budget Plan, as approved by the Board of Supervisors on April 25, 2005:

- ◆ The Board of Supervisors made no adjustments to this fund.

Changes to FY 2005 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2005 Revised Budget Plan since passage of the FY 2005 Adopted Budget Plan. Included are all adjustments made as part of the FY 2004 Carryover Review and all other approved changes through December 31, 2004:

- ◆ **Carryover Adjustments** **\$2,576,283**
As part of the FY 2004 Carryover Review, the Board of Supervisors approved encumbered carryover of \$2,576,283.
- ◆ **Position Adjustments** **\$0**
As part of position redirections approved by the County Executive, 1/1.0 SYE vacant position has been redirected to information technology security efforts. No funding adjustment was required.

The following funding adjustments reflect all approved changes to the FY 2005 Revised Budget Plan from January 1, 2005 through April 18, 2005. Included are all adjustments made as part of the FY 2005 Third Quarter Review:

- ◆ **Position Adjustments** **\$0**
As part of position redirections approved by the County Executive, 1/1.0 SYE vacant position has been redirected to countywide imaging and workflow efforts. No funding adjustment was required.

Key Performance Measures

Objectives

- ◆ To maintain the number of business days to fulfill Telecommunications service requests for a) non-critical requests at a standard of 4 days; b) critical requests at a standard of next business day; and c) emergency requests at a standard of the same day.
- ◆ To improve the percentage of LAN/PC workstation calls to Technical Support Services that are closed within 72 hours by three percentage points from 85 percent to 88 percent.
- ◆ To improve the resolution rate for the average first-call problem for the Technical Support Center (TSC), DIT Help Desk by three percentage points, from 85 percent to 88 percent.

Fund 505 Technology Infrastructure Services

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2002 Actual	FY 2003 Actual	FY 2004 Estimate/Actual	FY 2005	FY 2006
Output:					
Responses to calls for repairs on voice devices	5,356	4,204	4,750 / 4,836	4,800	4,600
Moves, adds or changes (voice and data)	8,435	2,271	2,400 / 2,498	2,400	2,500
Calls resolved	21,769	18,223	25,000 / 29,117	26,250	32,100
Help desk calls with data questions	3,136	2,682	2,375 / 2,726	2,400	2,500
Customer requests for service fulfilled by Technical Support Center (TSC) (1)	54,259	54,058	76,000 / 74,872	75,000	75,000
Efficiency:					
Cost per call	\$125	\$110	\$105 / \$102	\$105	\$105
Average number of hours annually spent per staff member to resolve calls	1,407	844	992 / 1,407	1,042	1,407
Customer requests for service per TSC staff member	4,933	4,505	6,333 / 6,239	6,250	6,250
Service Quality:					
Customer satisfaction with telecommunication services	88.0%	95.0%	95.0% / 90.0%	95.0%	95.0%
Percent of customers reporting satisfaction with resolution of LAN/PC workstation calls (2)	80%	77%	80% / 80%	80%	78%
Percent satisfaction of County employees with support from Technical Support Center	88%	86%	88% / 86%	89%	89%
Outcome:					
Business days to fulfill service requests from initial call to completion of request for non-critical requests	4	3	4 / 4	4	4
Business days to fulfill service requests from initial call to completion of request for critical calls	2	2	2 / 2	2	2
Business days to fulfill Telecommunications service requests for emergencies	3	2	1 / 2	1	1
Percent of calls closed within 72 hours	68%	80%	85% / 78%	85%	88%
Percent of first-contact problem resolution	89%	77%	85% / 80%	85%	88%

(1) The FY 2004 merger of the Human Services IT help desk with DIT increased customer requests for TSC service.

(2) A decrease in customer satisfaction with the resolution of LAN/PC workstation calls in FY 2003 was due to a scheduled Architecture Refresh program which resulted in increased support requirements.

Fund 505

Technology Infrastructure Services

Performance Measurement Results

This fund provides critical infrastructure services including integrated communication service to all County agencies and other government customers, the County's critical enterprise technology operations center (ETOC), and maintaining the County data communication networks. The performance measures for this fund focus on delivering and securing a stable IT environment.

Overall, many factors continue to affect agency performance, including more calls seeking assistance with complex technology and new agency-specific applications that the Technical Support Center had not been trained to help with; increased use of remote access for telework, older generation PCs on the network; and a growing number of customized desk-top configurations in agencies. Since July 2003, the support provided by DIT and Human Services Information Technology help desks has been combined, which is reflected in the high volume of calls received at the help desk.

Fund 505

Technology Infrastructure Services

FUND STATEMENT

Fund Type G50, Internal Service Funds

Fund 505, Technology Infrastructure Services

	FY 2004 Actual	FY 2005 Adopted Budget Plan	FY 2005 Revised Budget Plan	FY 2006 Advertised Budget Plan	FY 2006 Adopted Budget Plan
Beginning Balance	\$9,944,196	\$6,248,925	\$8,988,336	\$2,822,102	\$2,822,102
Revenue:					
Radio Services Charges	\$562,226	\$670,772	\$670,772	\$583,547	\$583,547
PC Replacement Charges	3,636,066	3,641,200	3,641,200	5,180,000	5,180,000
Other	39,609	0	0	0	0
DIT Infrastructure Charges					
County Agencies and Funds	13,545,146	14,883,941	14,883,941	17,062,819	17,062,819
Fairfax County Public Schools	1,206,758	1,810,600	1,810,600	1,305,229	1,305,229
Outside Customers	178,582	8,771	8,771	108,000	108,000
Subtotal DIT Infrastructure Charges	\$14,930,486	\$16,703,312	\$16,703,312	\$18,476,048	\$18,476,048
Total Revenue	\$19,168,387	\$21,015,284	\$21,015,284	\$24,239,595	\$24,239,595
Transfer In:					
General Fund (001) ¹	\$0	\$463,840	\$463,840	\$316,291	\$316,291
Total Transfer In	\$0	\$463,840	\$463,840	\$316,291	\$316,291
Total Available	\$29,112,583	\$27,728,049	\$30,467,460	\$27,377,988	\$27,377,988
Expenditures:					
Infrastructure Services	\$14,061,095	\$16,190,250	\$17,410,482	\$17,972,547	\$17,972,547
Radio Center Services	768,589	861,675	880,769	899,838	899,838
Computer Equipment Replacement Expenditures	4,817,749	6,829,870	7,773,080	6,155,622	6,155,622
Capacity Upgrade to Mainframe Computer	476,814	1,187,280	1,581,027	740,000	740,000
Total Expenditures	\$20,124,247	\$25,069,075	\$27,645,358	\$25,768,007	\$25,768,007
Total Disbursements	\$20,124,247	\$25,069,075	\$27,645,358	\$25,768,007	\$25,768,007
Ending Balance²	\$8,988,336	\$2,658,974	\$2,822,102	\$1,609,981	\$1,609,981
Infrastructure Replacement Reserve (CERF) ³	\$1,863,723	\$77,632	\$1,068,694	\$832,191	\$832,191
PC Replacement Reserve ⁴	7,124,613	2,581,342	1,753,408	777,790	777,790
Unreserved Balance	\$0	\$0	\$0	\$0	\$0

¹ A General Fund Transfer will support the system wide charges of the new Public Safety and Public Service radio program for General Fund and General Fund Supported agencies.

² The fluctuation in ending balance is primarily due to the operation of the PC Replacement and Computer Equipment Reserve Programs. The programs collect funding each year, hold it in reserve until needed, and then expend the funds for replacement equipment. The time period for this action varies based on the needs of the programs.

³ A surcharge of 5 percent is applied to Infrastructure Charges to build long-term reserves for scheduled replacement of mainframe computer and network assets. The funds are held in this Computer Equipment Replacement Fund (CERF).

⁴ The balance in the PC Replacement Reserve fluctuates annually based on scheduled PC replacements which are on a four-year replacement cycle.