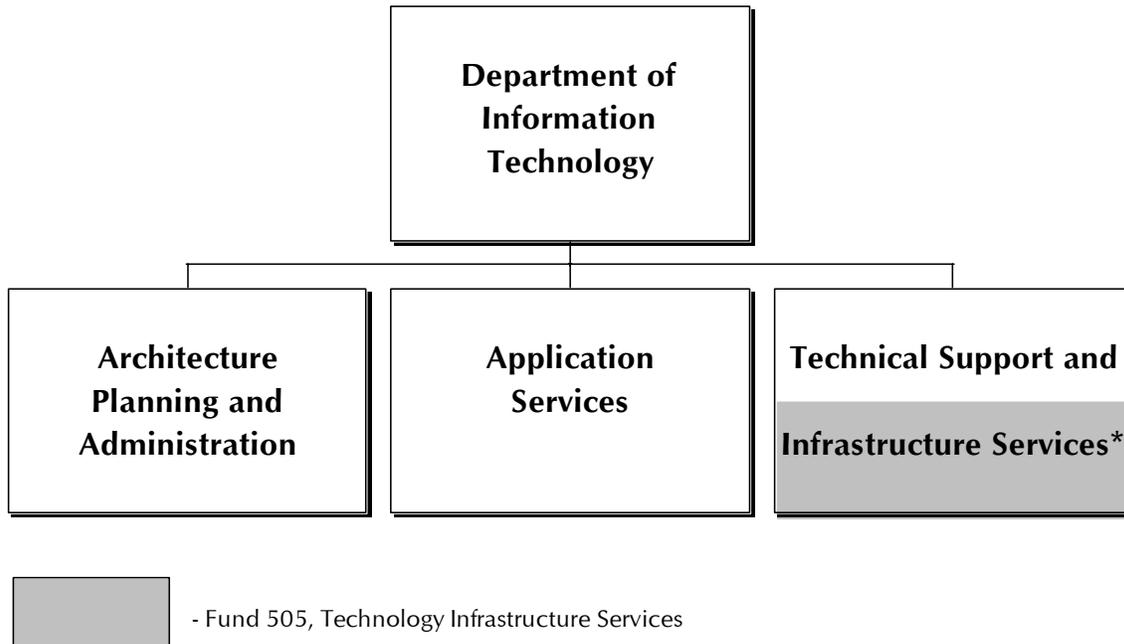


Fund 505

Technology Infrastructure Services



* All staffing and operating support for Infrastructure Services is found in Volume 2, Fund 505.

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. One of the major infrastructure improvements for the County is the fiber Institutional Network (I-Net), which has recently been implemented for video and data networks. The DIT staff is in the process of migrating the County's data and video functions to the I-Net, and have responsibility to plan for, authorize and manage the expenditures and implementation of this program. The equipment associated with this initiative is directly supported from the I-Net program funds within Fund 105, Cable Communications Fund.

Fund 505 Technology Infrastructure Services

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. A General Fund Transfer is provided to maintain reserves for the replacement and upgrade of enterprise computer equipment.

THINKING STRATEGICALLY

Strategic issues for the department include:

- Maintaining communication interoperability within the County and with other government entities; and
- 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. The FY 2009 budget recommends continuing a four year replacement cycle, further review various service options for deploying equipment, a status quo in the number of PCs in the program, and study of 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. The annual amount collected per PC for FY 2009 remains \$500/year, so that the 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 now include interoperability management to ensure 24/7 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.

Fund 505 Technology Infrastructure Services

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

 Maintaining Safe and Caring Communities	Recent Success	FY 2009 Initiative
Ongoing implementation of radio system infrastructure and radio refresh, as well as 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 (re-banding), and contingency and redundancy testing consistent with emergency management plans.	☑	☑
 Connecting People and Places	Recent Success	FY 2009 Initiative
Continue to 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.	☑	☑
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 for supporting the expansion of telework.	☑	☑
 Exercising Corporate Stewardship	Recent Success	FY 2009 Initiative
Continue the implementation of a new enterprise-wide security architecture that: <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 an advanced authentication process to comply with security and privacy concerns supporting e-government programs; and ▪ provides improved monitoring, intrusion detection, and auditing capability. 	☑	☑
Continue to implement a multi-phase Network Security Perimeter that uses a multiple firewall strategy to safeguard corporate data, facilitating expansion of e-government transactions and fulfilling the Electronic Protected Health Information (ePHI) requirements of the Health Insurance Portability and Accountability Act (HIPAA).	☑	☑
Improved network security through implementation of Network Address Translation (NAT), which "hides" internal IP addresses from display to outside sources, and employ Open Standards.	☑	

Fund 505 Technology Infrastructure Services

 Exercising Corporate Stewardship	Recent Success	FY 2009 Initiative
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.	☑	☑
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.	☑	☑
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.	☑	☑
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 on the County network to ensure software licensing obligation and ability to implement enhancements without having to purchase individual software upgrades.	☑	☑
Continue to improve utility and efficiency of corporate and agency specific business applications through the County's Enterprise Application Integrator (EAI) tool 'Webmethods', a middleware product that creates a seamless process between disparate applications.	☑	☑
Implemented 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.	☑	☑

Fund 505

Technology Infrastructure Services

Budget and Staff Resources

Agency Summary				
Category	FY 2007 Actual	FY 2008 Adopted Budget Plan	FY 2008 Revised Budget Plan	FY 2009 Advertised Budget Plan
Authorized Positions/Staff Years				
Regular	67/ 67	67/ 67	67/ 67	67/ 67
Expenditures:				
Personnel Services	\$6,018,642	\$6,614,660	\$6,614,660	\$6,697,657
Operating Expenses	20,196,736	21,297,841	20,939,112	21,103,741
Capital Equipment	3,173,392	1,400,000	4,434,624	1,450,000
Total Expenditures	\$29,388,770	\$29,312,501	\$31,988,396	\$29,251,398

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 III	1 Network/Telecom Analyst IV
1 Info. Tech. Program Manager I	3 Info. Tech. Program Managers II	3 Network/Telecom Analysts III
2 Network/Telecom Analysts IV	4 Systems Programmers III	2 Network/Telecom Analysts II
12 Network/Telecom Analysts III	5 Systems Programmers II	1 Communications Engineer
4 Network/Telecom Analysts II	2 Systems Programmers I	2 Communications Technicians
1 Network/Telecom Analyst I	2 Programmer Analysts III	1 Administrative Assistant III
1 Management Analyst I	1 Programmer Analyst II	
	1 Programmer Analyst I	
	5 IT Technicians III	
	8 IT Technicians II	
	1 IT Technician I	
	1 Business Analyst I	
	1 Database Administrator II	
TOTAL POSITIONS		
67 Positions / 67.0 Staff Years		

FY 2009 Funding Adjustments

The following funding adjustments from the FY 2008 Revised Budget Plan are necessary to support the FY 2009 program:

- \$221,030**

◆ **Employee Compensation**
An increase of \$221,030 associated with salary adjustments necessary to support the County's compensation program. As a result of budget constraints, compensation adjustments for County employees have been reduced. For FY 2009, employee increases as part of the pay for performance system have been discounted by 50 percent and the impact of the lower pay for performance funding is reflected above.
- (\$138,033)**

◆ **Personnel Services Reduction**
A decrease of \$138,033 in Personnel Services as part of an across-the-board reduction to meet budget limitations based on available revenues as a result of a continued softening of the residential real estate market.
- \$1,459,000**

◆ **Infrastructure Services**
A net increase of \$1,459,000 to fund \$350,000 in staff augmentation for network support; \$359,000 in additional software and hardware maintenance and equipment for Network Services; \$450,000 for data switch replacement; and \$300,000 for increased software and hardware maintenance expenses for the Data Center.

Fund 505 Technology Infrastructure Services

- ◆ **Computer Equipment Replacement Program**
\$496,900

A net increase of \$496,900, including a \$698,687 increase in the PC Replacement Program based on the number of PCs scheduled to be replaced in FY 2009, according to the four-year replacement cycle. This amount is partially offset by a \$200,000 decrease in server replacement.

- ◆ **Infrastructure Equipment**
(\$2,100,000)

A net decrease of \$2,100,000, based on the postponing of several disaster recovery infrastructure initiatives currently supported by Fund 505.

- ◆ **Carryover Adjustments**
(\$2,675,895)

A decrease of \$2,675,895 as a result of one-time funding at the *FY 2007 Carryover Review*.

Changes to FY 2008 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2008 Revised Budget Plan since passage of the FY 2008 Adopted Budget Plan. Included are all adjustments made as part of the FY 2007 Carryover Review and all other approved changes through December 31, 2007:

- ◆ **Carryover Adjustments**
\$2,675,895

As part of the *FY 2007 Carryover Review*, FY 2008 expenditures increased \$2,675,895 due to encumbered carryover of \$2,279,895 and unencumbered carryover of \$396,000.

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 maintain the percentage of LAN/PC workstation calls to Technical Support Services closed within 72 hours by at 75 percent.
- ◆ To maintain the resolution rate for the average first-call problem for the Technical Support Center (TSC), DIT Help Desk at 80 percent.

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2005 Actual	FY 2006 Actual	FY 2007 Estimate/Actual	FY 2008	FY 2009
Output:					
Responses to calls for repairs on voice devices	4,139	4,351	4,500 / 1,487	4,500	1,500
Moves, adds or changes (voice and data)	2,858	2,919	2,300 / 8,614	2,300	8,600
Calls resolved	22,557	24,610	24,800 / 23,964	24,800	24,800
Customer requests for service fulfilled by Technical Support Center (TSC)	66,538	75,649	79,431 / 65,367	79,431	79,431

Fund 505 Technology Infrastructure Services

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2005 Actual	FY 2006 Actual	FY 2007 Estimate/Actual	FY 2008	FY 2009
Efficiency:					
Cost per call	\$92	\$98	\$105 / \$109	\$105	\$109
Average number of hours annually spent per staff member to resolve calls	1,042	1,034	1,042 / 1,042	1,042	1,078
Customer requests for service per TSC staff member	5,545	6,304	6,619 / 5,447	6,619	6,619
Service Quality:					
Customer satisfaction with telecommunication services	90.0%	93.5%	95.0% / 95.0%	95.0%	95.0%
Percent of customers reporting satisfaction with resolution of LAN/PC workstation calls	75%	79%	82% / 80%	82%	80%
Percent satisfaction of County employees with support from Technical Support Center	85%	85%	89% / 81%	89%	89%
Outcome:					
Business days to fulfill service requests from initial call to completion of request for non-critical requests	4	4	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	1	1	1 / 1	1	1
Percent of calls closed within 72 hours	85%	95%	92% / 75%	75%	75%
Percent of first-contact problem resolution	63%	76%	80% / 75%	80%	80%

Performance Measurement Results

This cost center provides critical infrastructure services, including integrated communication service to all County agencies and other government customers; response to service requested through the help desk; and maintenance of the County data communication networks. The performance measures for this cost center 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; 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 many customized desk-top configurations in agencies. DIT expects that customer requests for service will remain constant from FY 2008 to FY 2009. Recent changes in TSC help desk software have contributed to streamlined call-processing and call-escalation workflows. These improvements have been combined with improved system monitoring and greater reliance on remote interventions to resolve service problems.

Fund 505

Technology Infrastructure Services

FUND STATEMENT

Fund Type G50, Internal Service Funds

Fund 505, Technology Infrastructure Services

	FY 2007 Actual	FY 2008 Adopted Budget Plan	FY 2008 Revised Budget Plan	FY 2009 Advertised Budget Plan
Beginning Balance	\$7,646,278	\$3,388,046	\$6,348,600	\$2,958,691
Revenue:				
Radio Services Charges	\$631,253	\$621,490	\$621,490	\$631,000
PC Replacement Charges	5,582,000	6,180,000	6,180,000	6,180,000
DIT Infrastructure Charges				
County Agencies and Funds	18,596,110	18,463,158	18,463,158	18,463,158
Fairfax County Public Schools	1,357,438	1,411,736	1,411,736	1,468,205
Outside Customers	108,000	108,000	108,000	85,401
Subtotal DIT Infrastructure Charges	<u>\$20,061,548</u>	<u>\$19,982,894</u>	<u>\$19,982,894</u>	<u>\$20,016,764</u>
Total Revenue	\$26,274,801	\$26,784,384	\$26,784,384	\$26,827,764
Transfer In:				
General Fund (001) ¹	\$1,816,291	\$1,814,103	\$1,814,103	\$1,814,103
Total Transfer In	<u>\$1,816,291</u>	<u>\$1,814,103</u>	<u>\$1,814,103</u>	<u>\$1,814,103</u>
Total Available	\$35,737,370	\$31,986,533	\$34,947,087	\$31,600,558
Expenditures:				
Infrastructure Services	\$20,298,220	\$19,085,441	\$22,571,568	\$20,615,345
Radio Center Services	963,585	935,593	944,449	945,899
Computer Equipment Replacement Program	5,407,519	6,391,467	6,271,927	6,890,154
Upgrade/Replacement of Technology				
Infrastructure Equipment	2,719,446	2,900,000	2,200,452	800,000
Total Expenditures	<u>\$29,388,770</u>	<u>\$29,312,501</u>	<u>\$31,988,396</u>	<u>\$29,251,398</u>
Total Disbursements	\$29,388,770	\$29,312,501	\$31,988,396	\$29,251,398
Ending Balance²	\$6,348,600	\$2,674,032	\$2,958,691	\$2,349,160
Infrastructure Replacement Reserve (CERF) ³	\$3,399,789	\$208,914	\$101,807	\$202,430
PC Replacement Reserve ⁴	2,948,811	2,465,118	2,856,884	2,146,730
Unreserved Balance	\$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, as well as to maintain funding for the replacement and upgrade of enterprise computer equipment.

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 This reserve is designed to assist in the 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.