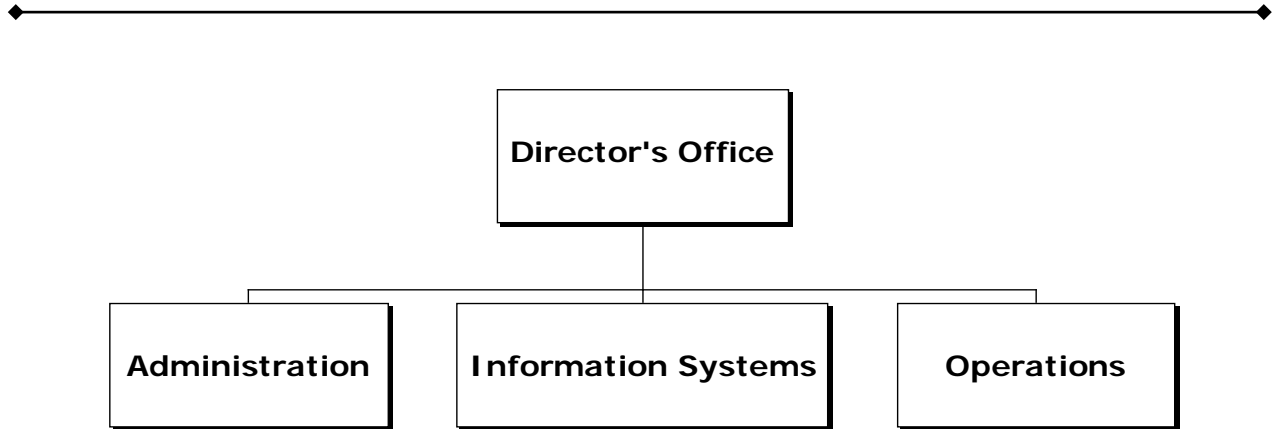


Fund 40090 E-911



Mission

To provide and maintain highly professional and responsive 9-1-1 emergency and non-emergency communication services to the citizens of Fairfax County, City of Fairfax, Town of Herndon, Town of Vienna, Fort Belvoir, citizens that work in and visit Fairfax County and to the Fairfax County Police, Fire and Rescue, and Sheriff departments in a collaborative and supportive work environment that utilizes highly trained and qualified staff. To deliver emergency and non-emergency communications utilizing state-of-the-art technology through a variety of systems integrated to provide 9-1-1 telephone, computer-aided dispatch, multi-channel trunked radio and wireless data networks in a cost-effective, sustainable, reliable and technologically innovative manner; and to utilize industry accepted best policies, practices and standards in an efficient and cost-effective manner.

AGENCY DASHBOARD			
Key Data	FY 2015	FY 2016	FY 2017
1. Emergency 9-1-1 Calls	538,783	516,928	429,729
2. Total Calls (combined 9-1-1, non-emergency and administrative)	984,518	961,005	1,019,770
3. Calls Requiring Language Line Interpretation	12,016	13,883	13,995
4. Police and Fire-Rescue Events Entered by DPSC Call takers/Dispatchers into CAD	490,247	489,939	559,408
5. Total Radio Transmissions Made to Police and Fire-Rescue Units	1,367,774	1,533,779	1,415,273
6. Number of CPR Calls That Required Lifesaving Instructions by Call Takers	1,616	1,727	1,925

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Focus

The activities and programs in Fund 40090, E-911, provide support to the operations of the Department of Public Safety Communications (DPSC) and various other public safety information technology projects. DPSC is designated as the primary 9-1-1 Public Safety Answering Point (PSAP) for all 9-1-1 calls originating within Fairfax County as well as the city and towns therein. The agency also provides Emergency Medical Dispatch (EMD)/Pre-Arrival Instruction (PAI), which is an emergency medical service (EMS) intervention program where DPSC call takers provide emergency medical instructions over the telephone until fire-rescue-EMS units arrive on the scene of an emergency incident. Due to the vital, mission-critical, and time-sensitive service provided by DPSC personnel, they are, for many reasons, recognized as the “*First of the First Responders.*” Additionally, DPSC receives all commercial and residential

The E-911 agency supports
the following County Vision Element:



Maintaining Safe and Caring Communities

security, fire and medical alarm requests for service calls from private alarm service providers. Non-emergency services provided include responding to police non-emergency calls received; reporting of towed vehicles and private vehicle impounds; calls for Animal Control Unit services, a subsidiary of the Fairfax County Police Department (FCPD); and responding to non-emergency calls for service for fire and rescue assistance and information. DPSC also provides National Crime Information Center (NCIC) and Virginia Criminal Information Network (VCIN) teletype operations related to property (e.g., stolen guns and vehicles), people (e.g., protective orders and missing persons), events (e.g., fatal accidents and security matters), and queries (e.g., wanted persons/warrant confirmation). These operations ensure criminal and investigative information is shared with the appropriate authorities within the County and on a regional, state, and federal level. Additionally, DPSC serves as the official custodian of approximately 8,700 hours of audio recordings of all telephone calls and radio traffic pertaining to public safety as required by law and approximately 88,000 hours of Computer-Aided Dispatch (CAD) records. DPSC receives and responds to court subpoenas and Freedom of Information Act (FOIA) requests for audio transmissions and data records. Audio and data recordings are also maintained per national standards for investigative, quality assurance and training purposes. The Department of Information Technology (DIT) supports the telephony, radio, CAD, and audio visual infrastructure and maintenance within Fund 40090.

Information Technology (IT) Projects

In FY 2019, IT Projects funding totals \$8.51 million, no change from FY 2018 Adopted Budget Plan level. Funding is provided for four specific projects in FY 2019. For detailed descriptions of each project, please see the project detail sheets which follow after the Fund 40090 Fund Statement.

Revenues

There are four main revenue categories in the E-911 Fund: Communications Sales and Use Tax (CSUT), State Wireless E-911 Reimbursement, Interest Income and Other Revenue (which reflects annual revenue from the City of Fairfax for dispatch services, FOIA fees, and reimbursement from Nextel to cover County expenses related to the Nextel 800 MHz re-banding initiative).

The CSUT is a statewide tax first implemented in January 2007, after the 2006 Virginia General Assembly session approved legislation that changed the way in which taxes are levied on communications

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services. Based on this legislation, local taxes on land line and wireless telephone services were replaced with a 5 percent statewide CSUT. In addition to the communications services previously taxed, the 5 percent CSUT applies to satellite television and radio services, internet calling and long-distance telephone charges. As part of this legislation, local E-911 fees were repealed and replaced with a statewide \$0.75 per line fee. All communications taxes are remitted to the state for distribution to localities based on the locality's share of total statewide FY 2006 collections of these taxes. Fairfax County's share is currently 18.89 percent.

Of the total amount of the CSUT, the Cable Franchise Fee portion is directed to Fund 40030, Cable Communications. As a result of increasing requirements in Fund 40090, E-911, starting in FY 2015, Fairfax County revised the methodology by which it applies the remaining revenues received through the CSUT.

Thus, a larger proportion of these revenues are now applied to Fund 40090, with a commensurate decrease reflected in the proportion of CSUT revenues applied directly to the General Fund. This eliminates the need for a General Fund Transfer to Fund 40090 and results in a projected FY 2019 CSUT revenue total for Fund 40090 of \$43.0 million. The prioritization of CSUT fees towards the E-911 fund reflects the increasing costs of this system based on staffing and technology requirements.

The Wireless E-911 Revenue category is derived from a monthly \$0.75 surcharge on all wireless/cellular telephones and is distributed to localities as part of the Wireless E-911 State Reimbursement. The reimbursements are currently based on the total number of all incoming 9-1-1 calls, wireless 9-1-1 calls, and personnel costs. On July 1, 2018, the PSAP funding percentages produced through the formula will be recalculated as required by the [Code of Virginia §56-484.17](#). In addition, based on the approval by the state's 9-1-1 Services Board in September 2017, the current formula will be adjusted and reimbursements will be based on 9-1-1 call load and population data beginning in FY 2019. The estimated fiscal impact is a decrease in revenue to the E-911 Fund of about \$1.2 million. This formula will be fixed for five years and recalculated in 2023 (impacting FY 2024 revenues). It should be noted the Commonwealth has transferred approximately \$8 million from the Wireless E-911 fund to support non-9-1-1 matters in other state agencies.

Budget and Staff Resources

Category	FY 2017 Actual	FY 2018 Adopted	FY 2018 Revised	FY 2019 Advertised
FUNDING				
Expenditures:				
Personnel Services	\$23,861,006	\$25,658,901	\$25,658,901	\$27,433,563
Operating Expenses	12,096,343	13,445,440	15,241,591	14,108,728
Capital Equipment	5,544	0	0	0
IT Projects	8,326,690	8,507,552	14,593,000	8,507,552
Total Expenditures	\$44,289,583	\$47,611,893	\$55,493,492	\$50,049,843
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	205 / 205	205 / 205	205 / 205	205 / 205

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FY 2019 Funding Adjustments

The following funding adjustments from the FY 2018 Adopted Budget Plan are necessary to support the FY 2019 program.

- ◆ **Employee Compensation** **\$1,774,662**

An increase of \$1,774,662 in Personnel Services includes \$551,263 for a 2.25 percent market rate adjustment (MRA) for all employees, \$37,396 for performance-based and longevity increases for non-uniformed merit employees, both effective July 2018, as well as \$620,059 for FY 2019 merit and longevity increases (including the full-year impact for FY 2018 increases) for uniformed employees awarded on the employees' anniversary dates, and \$565,944 for employee pay increases for specific job classes identified in the County's benchmark class survey of comparator jurisdictions.
- ◆ **9-1-1 Phone System Upgrade** **\$663,288**

An increase of \$663,288 has been included for the 9-1-1 phone system upgrade. This supports the transition from the legacy analog network to the NG9-1-1 ESInet platform in response to the growing requirements and advances in communications technology. NG9-1-1 has the ability to deliver calls to appropriate public safety answering point (PSAP) faster, transfer 9-1-1 calls and associated data anywhere needed, interconnect with other public safety systems and databases, and securely receive multimedia communications such as texts, photos and videos.
- ◆ **IT Projects** **\$8,507,552**

Funding of \$8,507,552 has been included for IT Projects. Of this total, \$3,531,352 supports the replacement of the existing fleet of mobile and portable subscriber radios in public safety agencies, \$1,616,200 is included to support mobile computer terminal (MCT) replacement, a program designed to replace one-fifth of the public safety fleet each year, \$2,180,000 is included to continue a multi-phase effort to transition core 9-1-1 services into a more robust and technologically up-to-date operating environment, and \$1,180,000 is included to continue an ongoing replacement cycle for all the equipment that supports the computer-aided dispatch (CAD) system.

Changes to FY 2018 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2018 Revised Budget Plan since passage of the FY 2018 Adopted Budget Plan. Included are all adjustments made as part of the FY 2017 Carryover Review, and all other approved changes through December 31, 2017.

- ◆ **Carryover Adjustments** **\$7,881,599**

As part of the FY 2017 Carryover Review, the Board of Supervisors approved an increase of \$7,881,599, including carryover of Information Technology (IT) projects and IT project encumbrances of \$6,085,448 and \$1,796,151 in encumbered carryover.

Fund 40090 E-911

Cost Centers

Department of Public Safety Communications¹

Category	FY 2017 Actual	FY 2018 Adopted	FY 2018 Revised	FY 2019 Advertised
EXPENDITURES				
Total Expenditures	\$35,962,893	\$39,104,341	\$40,900,492	\$41,542,291
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	205 / 205	205 / 205	205 / 205	205 / 205
1 Director	1	1 Programmer Analyst III	1	1 Info. Tech. Program Manager I
1 PSTOC General Manager	2	2 Business Analysts IV	1	1 Human Resources Generalist III
2 Assistant Directors	1	1 Management Analyst III	1	1 Human Resources Generalist I
5 PSC Squad Supervisors	2	2 Management Analysts II	1	1 Geog. Info. Spatial Analyst III
20 PSC Asst. Squad Supervisors	1	1 Financial Specialist III	1	1 Geog. Info. Spatial Analyst II
157 PSCs III	1	1 Financial Specialist II	1	1 Network/Telecomm Analyst II
1 PSC Records Analyst	1	1 Financial Specialist I	3	3 Administrative Assistants IV
TOTAL POSITIONS				
205 Positions / 205.0 FTE				
182 Uniformed / 23 Civilian				

¹ It should be noted that the Cost Center table does not include IT Projects-related funding. In FY 2019, this totals an amount of \$8,507,552.

Key Performance Measures

Indicator	Prior Year Actuals			Current Estimate	Future Estimate
	FY 2015 Actual	FY 2016 Actual	FY 2017 Estimate/Actual	FY 2018	FY 2019
Percent 9-1-1 calls arriving at DPSC answered within 20 seconds	94%	93%	95%/96%	95%	95%
Percent 9-1-1 calls arriving at DPSC answered within 10 seconds	91%	90%	90%/94%	90%	90%

A complete list of performance measures can be viewed at
<https://www.fairfaxcounty.gov/budget/fy-2019-advertised-performance-measures-pm>

Performance Measurement Results

In FY 2017, with a 94 percent rate, DPSC met the National Emergency Number Association (NENA) standard of 90 percent of 9-1-1 calls answered within 10 seconds. With a 96 percent rate, DPSC met the NENA standard of 95 percent of 9-1-1 calls answered within 20 seconds. While staff vacancies became less of a challenge in FY 2017, due to the long lead time of training newly hired public safety communicators, the agency was required to meet minimum operational staffing through the use of overtime expenditures. DPSC anticipates making additional progress in FY 2019 with retaining staff and training new public safety communicators in order to reduce its dependence on overtime and improve the cost efficiency of its operations.

Fund 40090 E-911

FUND STATEMENT

Fund 40090, E-911

	FY 2017 Actual	FY 2018 Adopted Budget Plan	FY 2018 Revised Budget Plan	FY 2019 Advertised Budget Plan
Beginning Balance	\$8,585,630	\$1,811,315	\$11,305,117	\$2,583,979
Revenue:				
Communications Sales and Use Tax	\$42,012,354	\$42,012,354	\$42,012,354	\$44,450,304
State Reimbursement (Wireless E-911) ¹	4,751,130	4,600,000	4,600,000	3,396,251
Other Revenue ²	220,714	150,000	150,000	150,000
Interest Income	24,872	10,000	10,000	10,000
Total Revenue	\$47,009,070	\$46,772,354	\$46,772,354	\$48,006,555
Total Available	\$55,594,700	\$48,583,669	\$58,077,471	\$50,590,534
Expenditures:				
Personnel Services	\$23,861,006	\$25,658,901	\$25,658,901	\$27,433,563
Operating Expenses	12,096,343	13,445,440	15,241,591	14,108,728
Capital Equipment	5,544	0	0	0
IT Projects ³	8,326,690	8,507,552	14,593,000	8,507,552
Total Expenditures	\$44,289,583	\$47,611,893	\$55,493,492	\$50,049,843
Total Disbursements	\$44,289,583	\$47,611,893	\$55,493,492	\$50,049,843
Ending Balance	\$11,305,117	\$971,776	\$2,583,979	\$540,691

¹ Localities receive wireless 9-1-1 funding based on annual true-up data (total number of all incoming 9-1-1- calls, wireless 9-1-1- calls and personnel costs). On July 1, 2018, the PSAP funding percentages produced through the formula will be recalculated as required by the [Code of Virginia §56-484.17](#). This formula will be fixed for five years and recalculated in 2023.

² This revenue category includes annual revenue from the City of Fairfax for dispatch services, FOIA fees, and reimbursement from Nextel to cover County expenses related to the Nextel 800 MHz rebanding initiative.

³ IT projects are budgeted based on the total project costs and most projects span multiple years. Therefore, funding for IT projects is carried forward each fiscal year, and ending balances fluctuate, reflecting the carryover of these funds.

Fund 40090 E-911

2G70-056-000, Public Safety Communications Wireless Radio

IT Priorities:

- Improved Service and Efficiency
- Enhanced County Security

FY 2017 Expenditures	FY 2018 Revised Budget Plan	FY 2019 Advertised Budget
\$3,533,345	\$3,697,815	\$3,531,352

Description: This project was established in FY 1995 (along with Project 2G70-059-000) to replace and upgrade the County’s critical Public Safety Communications Network (PSCN) and its various component systems. The network’s component systems are vital for ensuring immediate and systematic response to emergencies, and replacement and enhancement is necessary to maintain performance, availability, reliability, and capacity for growth due to increases in County population and demand for public safety services. The PSCN supports emergency communications for the DPSC, Police, Fire and Rescue, and Sheriff’s departments. This includes public safety call taking (E-911, Cellular E-911, non-emergency calls for service), dispatching, and all affiliated communications support for public safety agencies.

This specific project supports the replacement of the existing fleet of mobile and portable subscriber radios in public safety agencies. The FCC mandated public safety radios had to meet the 700 MHz narrowband requirement by the end of December 2016 (FY 2017). The purchase of the mobile and portable radio equipment for Fairfax County met this 700 MHz narrowbanding requirement and preserved regional interoperability.

FY 2019 funding of \$3.5 million reflects the sixth of eight payments on a lease purchase to replace the existing fleet of mobile and portable subscriber radios in public safety agencies. Replacement radios were purchased in mid FY 2014 and a funding schedule was developed using existing project balance in FY 2014 as the initial payment, and then splitting the remaining cost of \$24.7 million over seven years, starting in FY 2015.

Return on Investment (ROI): The return on investment for this project is realized by the performance, productivity, and effectiveness of public safety services in Fairfax County. Replaced and upgraded technology for these systems is critical to the safety of the public and the public safety personnel they support. Upgraded technology preserves the investments in technology that have been made and allows increased functionality, performance, and reliability to be achieved to facilitate responses to, and management of, emergencies. It mitigates the need for extraordinarily large additions of personnel that would be necessary to provide the same level of service and results without this technology. The increased access to important information, improvements to maintenance and reliability, increased capacity for growth, and enhanced functionality for users now and in the future builds upon past investments, responds to critical existing requirements, and sets the stage for the next generation of public safety communications technology.

Fund 40090 E-911

2G70-059-000, Mobile Computer Terminal Replacement

IT Priorities:

- Improved Service and Efficiency
- Enhanced County Security

FY 2017 Expenditures	FY 2018 Revised Budget Plan	FY 2019 Advertised Budget
\$1,222,417	\$2,522,267	\$1,616,200

Description: This project was established in FY 1995 (along with Project 2G70-056-000) to replace and upgrade the County’s critical Public Safety Communications Network (PSCN) and its various component systems, which are vital for ensuring immediate and systematic response to emergencies. Replacement and enhancement are necessary to maintain performance, availability, reliability, and capacity for growth due to increases in County population and demand for public safety services. This includes public safety call taking (E-911, Cellular E-911, non-emergency calls for service), dispatching, and all affiliated communications support for public safety agencies.

Funding of \$1,616,200 supports Mobile Computer Terminal (MCT) replacement, a program that has been in effect for over 14 years and is designed to replace one-fifth of the public safety fleet each year to keep technology up-to-date. This equipment supports field personnel by granting them access to the CAD system, Virginia Criminal Information Network, County Enterprise System, and a host of other remote databases required in their daily functions. This mandated functionality supports the DPSC, Police, Fire and Rescue, and the Sheriff’s Office. Current equipment will not support existing public safety access to available remote systems due to a lack of connectivity ports and devices in the vehicle. If ports and additional power to connect devices to these units are not provided, a risk of non-compliance to regulation and an inability to access criminal information systems could occur. Docking stations that support connectivity of MCT units to the CAD and other systems are purchased on an as needed basis, older units are breaking on a regular basis due to age, and are rapidly becoming obsolete. Funding (which includes \$16,200 software assurance costs for installed Microsoft products) will move towards accomplishing a complete replacement cycle with the updated technology needed to maintain a rapidly changing mobile fleet environment.

Return on Investment (ROI): The ROI for this project is realized by the performance, productivity, and effectiveness of public safety services in Fairfax County. Replacement and upgraded technology for these systems is critical to the safety of the public and the public safety personnel they support. Upgraded technology preserves the investments in technology that have been made and allows increased functionality, performance, and reliability to be achieved to facilitate responses to, and management of, emergencies. It mitigates the need for extraordinarily large additions of personnel that would be necessary to provide the same level of service and results without this technology. The increased access to important information, improvements to maintenance and reliability, increased capacity for growth, and enhanced functionality for users now and in the future builds upon past investments, responds to critical existing requirements, and sets the stage for the next generation of public safety communications technology.

Fund 40090 E-911

3G70-078-000, E-911 Telephony Platform Replacement

IT Priorities:

- Improved Service and Efficiency
- Enhanced County Security
- Maintaining a Current and Supportable Technology Infrastructure

FY 2017 Expenditures	FY 2018 Revised Budget Plan	FY 2019 Advertised Budget
\$2,276,034	\$4,567,135	\$2,180,000

Description: The Fairfax County Public Safety Answering Point (PSAP) 9-1-1 network is operating on an end-of-life technology platform under a contract services arrangement with Verizon that expired on January 1, 2017. Verizon is no longer continuing to dedicate its business resources (and by extension its subcontracted services and equipment with other vendors) on the existing technology. Fairfax County has begun a multi-phase effort to transition its core 9-1-1 services into a more robust and technologically up-to-date operating environment. Widespread adoption of rapidly advancing technologies like text, video, Voice over Internet Protocol (VoIP) and the saturation of high-speed broadband access has raised the expectations of 9-1-1 services for the citizens of Fairfax County. Improvements are needed to support new requirements and expectations. The upgrades will allow the County to migrate to NG9-1-1 as that technology matures. NG9-1-1 will provide the ability to accept multimedia data (e.g. text, video and photo) and improve interoperability, call routing, PSAP call overflow, and location accuracy. NG9-1-1 will strengthen system resiliency and reliability, as well as increases opportunities to potentially achieve fiscal and operational efficiency through cost-sharing arrangements.

An overview of 9-1-1 today with NG9-1-1 is shown below:

9-1-1 Today	Full NG9-1-1
Primarily voice calls via telephone handsets	Voice, text, or video information available from many different types of communication devices sent over IP networks
Most information transferred via voice	Advanced data sharing is automatically performed (e.g. telematics)
Callers to 9-1-1 routed through legacy selective routers, limited forwarding / backup ability	Enhanced backup capabilities provided as calls can be routed to different PSAP locations more dynamically (if required)
Routing is based on phone number / Master Street Address Guide (MSAG)	Ability to route "calls" more accurately (routing is based on GIS coordinates)

Funding of \$2.18 million is included in FY 2019 to continue this transition process. It is anticipated this level of funding will be required through at least FY 2020 and then depending on the available NG9-1-1 technology at that future time, additional funds will likely be required.

Fund 40090 E-911

Return on Investment (ROI): The ROI for this project is realized by the performance, productivity, and effectiveness of public safety services in Fairfax County. Replaced and upgraded technology for these systems is critical to the safety of the public and the public safety personnel they support. Upgraded technology preserves the investments in technology that have been made and allow increased functionality, performance, and reliability to be achieved to facilitate responses to, and management of, emergencies. It mitigates the need for extraordinarily large additions of personnel that would be necessary to provide the same level of service and results without this technology. The increased access to important information, improvements to maintenance and reliability, increased capacity for growth, and enhanced functionality for users now and in the future builds upon past investments, responds to critical existing requirements, and sets the stage for the next generation of public safety communications technology.

Fund 40090 E-911

3G70-079-000, Public Safety CAD System Replacement

IT Priorities:

- Improved Service and Efficiency
- Enhanced County Security
- Maintaining a Current and Supportable Technology Infrastructure

FY 2017 Expenditures	FY 2018 Revised Budget Plan	FY 2019 Advertised Budget
\$1,174,240	\$2,384,246	\$1,180,000

Description: Funding of \$1,180,000 is included for the fifth year of a five year recurring cycle to refresh and update the hardware/software environment that supports the CAD system. The CAD System supports all of Fairfax County Public Safety in their mission to keep Fairfax County and its citizens safe. The CAD System is the primary dispatch records system that is used 24/7/365 by DPSC call-takers to process all calls for service received on 9-1-1 and other emergency and non-emergency lines. With this system, they are able to efficiently process over 5,000 calls for service each day, and document each event with full details of the activities associated with the incident from the time the call is received to dispatch of the call and on through to unit arrival, clearing the call for service and then transfer of the information to the associated records management system where the responding unit(s) can retrieve data to complete an incident report.

Call information is downloaded to the CAD System, added comments are inserted and then the call for service is routed to the appropriate DPSC dispatcher(s) who then use the same CAD system to identify the closest appropriate field units for the event, and dispatch and track those units responding to the event and documenting services provided. Through the CAD System interfaces, users have instant access to records from a diverse collection of other systems like Virginia Criminal Information Network, National Crime Information Center, Geographic Information Systems (GIS), Virginia Hospital & Healthcare Association status tracking system, agency specific Record Management Systems, Sheriff's Information Management System, to name a few. The field units can also use the CADs in their vehicles to provide them directions to any location within and immediately surrounding the County.

Return on Investment (ROI): The ROI for this project is realized by the performance, productivity, and effectiveness of public safety services in Fairfax County. Replaced and upgraded technology for these systems is critical to the safety of the public and the public safety personnel they support. Upgraded technology preserves the investments in technology that have been made and allow increased functionality, performance, and reliability to be achieved to facilitate responses to, and management of, emergencies. It mitigates the need for extraordinarily large additions of personnel that would be necessary to provide the same level of service and results without this technology. The increased access to important information, improvements to maintenance and reliability, increased capacity for growth, and enhanced functionality for users now and in the future builds upon past investments, responds to critical existing requirements, and sets the stage for the next generation of public safety communications technology.