

MEMORANDUM

October 22, 2010

TO: Public Safety Committee and Management and Fiscal Policy Committee

FROM: Dr. Costis Toregas, Council IT Adviser
Linda McMillan, Senior Legislative Analyst 

SUBJECT: **Worksession:** Amendment to the FY11-16 Capital Improvements Program and Supplemental Appropriation to the FY11 Capital Budget
Montgomery County Government
Department of Technology Services
Public Safety System Modernization
\$21,616,000 (Source of Funds: Short-Term Financing)

The joint Public Safety and Management and Fiscal Policy Committee held a worksession on this requested supplemental and CIP amendment on October 18th. At that session the joint Committee requested several follow-up items. For your reference, a comparison chart of the current Approved Public Safety System Modernization CIP project and the Executive's recommended amendment is attached at © 1-3.

Follow-up information from Executive Staff

At the October 18th session the joint Committee asked for several follow-up items:

- **A memo providing an overview of the strategic plan.** A summary is provided at ©4 and the Executive Summary of the July 2009 Communications Interoperability Plan is attached at ©5-10. Council staff notes that the Interoperability Plan includes in its immediate actions required, "replacing subscriber units (mobile and portable radios used by first responders) with units capable of operating on legacy Motorola trunking technology and P25 Phase I and II systems, supporting roaming technology, operable on the 700 MHz frequency band and compatible with conventional analog operation." (©10)

- **Information on the price and feature differences between the XTS5000 model radio and the APX7000 model radio.** A summary is provided at ©11 and detail (Exhibits A and E) is provided at ©18-25. Council staff notes that the prices shown are average prices and that the final prices will only be determined based on the specific optional features requested and the price negotiated with Motorola.
- **Information on re-banding effort in the National Capital Region.** This information is provided at ©11-14. It shows that several jurisdictions have completed the “first touch” process and that Montgomery County is lagging behind. DTS notes that this may create delays for the master schedule.
- **Information on the State of Maryland procurement decision.** The information on ©15 shows that action on a contract with Motorola was scheduled for October 20; however, a two-week deferment on this item was approved.
- **A review of the September 23rd testimony before the House Subcommittee on Technology and Innovation on progress of P25 standards.** Comments from DTS on this hearing testimony are provided at © 16.
- **Any insights as to whether a vendor might sell a P25 compliant system that has proprietary add options that would in effect make it a proprietary system and whether the purchase of so many Motorola radios would tie the county’s hand in terms of future procurement.** Responses are included at © 16-17. DTS says that there does need to be an onus on the implementers of P25 compliant systems to vet the manufacturers and vendors to make sure their systems are interoperable and support backward compatibility with other legacy systems.

Comments from FCC Representative

The Department of Technology Services has asked Mr. Michael Wilhelm, Deputy Chief of the Policy Division of the Public Safety and Homeland Security Bureau of the Federal Communication Commission to provide comments to the joint Committee regarding two issues (1) the overall re-banding effort for public safety agencies, and (2) the calendar year 2017 TDMA “very narrow banding” FCC mandate that has been referenced in previous worksessions.

Council Staff Comments/Recommendations

The Executive’s proposal has raised significant issues regarding the approved plan to purchase 5,875 XTS5000 model radios over FY11-FY15 and the re-banding loaner program which operationally requires vehicles and apparatus to be in the shop up to three times rather than just once as would occur if new APX7000 radios could be purchased and installed instead. That said, Montgomery County’s fiscal plan projects very few new dollars available in the next five years, and even fewer dollars available if assumed revenues from the ambulance reimbursement fee are not approved. **If money were not an issue (especially in the short-term),** Council staff would recommend approval of the Executive’s proposal as it provides an operationally superior way to implement the required re-

banding, provides public safety users with new radios that will have a longer operational life as they should meet FCC 2017 requirements, and allows some of the increased cost to be offset by a payment that has been negotiated with Sprint/Nextel.

Options for Committee Consideration

As noted in the October 18th packet, the adopted Fiscal Plan projects the total expected resources available to fund all agencies through FY16. The following table shows the amount of additional revenues/resources expected in each of these years. These projections include the debt service in the Approved CIP.

In millions	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Total additional resources available	\$81.400	\$19.000	\$140.600	\$190.000	\$172.400	NA	NA	NA
Debt Service included in the Fiscal Plan for short-term financing of PSSM radios	\$0.502	\$1.030	\$3.247	\$5.758	\$7.426	\$5.210	\$2.196	\$0

Option that Does Not Allow the County to receive \$3.3 million Payment from Sprint/Nextel

1) Achieve immediate re-banding through loaner program and purchase of 346 XTS5000 radios.

Under this option, the Council would agree that it cannot add to future debt service at this time and so must meet re-banding through the agreed to loaner program and purchase 346 radios in FY11 as these are also required in the loaner agreement. Because of the issues raised by the Executive branch regarding the long-term operational usefulness of the XTS5000 radios, the Council would not continue to approve funds for the purchase of XTS5000 radios in years FY12-FY15. **In the short-term this would reduce the required debt service.** However, new radios would have to be added to the cost estimate for the purchase of a new radio infrastructure. The PDF would have to be amended to delete the FY12-15 costs and revise the language regarding the new radio infrastructure. The FY11 expenditures and appropriation would not change.

In millions	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Approved Debt Service	\$0.502	\$1.030	\$3.247	\$5.758	\$7.426	\$5.210	\$2.196
Debt Service for 346 radios (5-year term)	\$0.210	\$0.421	\$0.421	\$0.421	\$0.421	\$0.210	Na
Increase/(decrease)	(\$0.292)	(\$0.609)	(\$2.826)	(\$5.337)	(\$7.005)	(\$5.000)	(\$2.196)

Options that Allow the County to receive \$3.3 million Payment from Sprint-Nextel

Sprint/Nextel has agreed to pay the county \$3.3 million if it purchases new radios that have the capacity for “zone doubling.” Installing these radios will obviate the need for Sprint/Nextel to provide loaner radios and perform the “second touch” when the county’s old radios are re-installed. The agreement is not tied to the county buying a particular brand or model of radio or spending a certain amount of county dollars. The only requirement is that 4,186 radios with zone re-doubling capacity are provided. The agreement calls for 4,186 because the county did not include costs associated with replacing Park Police radios. As previously noted, because the county’s current radio infrastructure is a proprietary Motorola system, the county must purchase Motorola radios at this time. Both the model XTS5000 and the APX7000 have the capacity for zone doubling and would meet Sprint/Nextel’s requirements for avoiding the “second touch.”

The following analysis shows the debt service impact for the purchase of radios in FY11 only. Under any circumstances, Council staff recommends that the monies in FY14 for additional radios not be approved at this time. The request for FY14 radios should be reconsidered after an inventory is completed and a decision is made on procuring a new radio infrastructure.

1) Purchase 4,186 XTS5000 Radios

	FY12	FY13	FY14	FY15	FY16	FY17
Option 1 - Purchase 4,186 XTS5000 radios - avg price of \$4000. FY11 purchase of \$16.744 million	1.920	3.840	3.840	3.840	3.840	1.920
Increase/(Decrease) to Debt Service	1.418	2.810	0.593	(1.918)	(3.586)	(3.290)
Apply \$3.3 Payment	1.418	1.882	0.000	0.000	0.000	0.000
Net Impact after applying payment	0.000	0.928	0.593	(1.918)	(3.586)	(3.290)

Council staff does not recommend this option. While it meet the criteria for re-banding and the Sprint/Nextel payment and reduces the fiscal impact in FY13 and 14 significantly from the Executive’s proposal, Council staff does not believe it is a wise use of dollars to purchase such a large number of XTS5000 radios. Council staff also believes that any option (other than the loaner plan) should include the Park Police in the overall number of radios.

2) Purchase 4,389 XTS5000 Radios

	FY12	FY13	FY14	FY15	FY16	FY17
Option 2 - Purchase 4,389 XTS5000 radios - avg price of \$4000. FY11 purchase of \$17.566 million	2.012	4.026	4.026	4.026	4.026	2.012
Increase/(Decrease) to Debt Service	1.510	2.996	0.779	(1.732)	(3.400)	(3.198)
Apply \$3.3 Payment	1.510	1.790	0.000	0.000	0.000	0.000
Net Impact after applying payment	0.000	1.206	0.779	(1.732)	(3.400)	(3.198)

Council staff does not recommend this option. Again, it meets the criteria for re-banding and the Sprint/Nextel payment and reduces the fiscal impact in FY13 and 14 significantly from the Executive’s proposal, but does unwisely purchase a large number of XTS5000 radios.

3) Provide \$20.9 million to purchase 4,389 APX7000 radios – assuming a 10% reduction in average price

	FY12	FY13	FY14	FY15	FY16	FY17
Option 3 - Purchase 4,389 APX7000 assuming a 10% price reduction from proposed average. FY11 purchase of \$20.936 million	2.041	4.801	4.801	4.801	4.801	2.401
Increase/(Decrease) to Debt Service	1.539	3.771	1.554	(0.957)	(2.625)	(2.809)
Apply \$3.3 Payment	1.539	1.761	0.000	0.000	0.000	0.000
Net Impact after applying payment	0.000	2.010	1.554	(0.957)	(2.625)	(2.809)

4) Provide \$22.1 million to purchase 4,389 APX7000 radios – assuming a 5% reduction in average price

	FY12	FY13	FY14	FY15	FY16	FY17
Option 4 - Purchase 4,389 APX7000 assuming a 5% price reduction from proposed average (this same amount could also purchase mix of 2,500 APX7000 and 1,889 XTS5000 at proposed average prices. FY11 purchase of \$22.099 million	2.534	5.068	5.068	5.068	5.068	2.534
Increase/(Decrease) to Debt Service	2.032	4.038	1.821	(0.690)	(2.358)	(2.676)
Apply \$3.3 Payment	2.032	1.268	0.000	0.000	0.000	0.000
Net Impact after applying payment	0.00	2.770	1.821	(0.690)	(2.358)	(2.676)

Council staff believes that given the large purchase of Motorola radios the county would be making in FY11 and given the fiscal constraints of the county, the Council should approve an appropriation that assumes either a 10% or 5% discount from the current estimated average cost. An average reduction of 10% would reduce the FY13 fiscal impact by about \$1 million or 1/3 in what is projected to be the county’s tightest year in terms of additional revenues. A 5% discount in the average price would lower the FY13 fiscal impact by \$309,000. While this may not seem substantial in some discussions, these dollars are a direct trade off to other operating dollar demands.

Under these recommendations, the Council would not specify the mix of radios or average price assumed, only that the Council is appropriating \$20.936 million or \$22.099 million for the purchase of at least 4,389 radios in order to implement short-term re-banding requirements. The Executive branch would work with Motorola to maximize the number of APX7000 models radios that can be funded.

5) Approve Executive’s recommendation for \$23.262 million to purchase 4,389 APX7000 radios

	FY12	FY13	FY14	FY15	FY16	FY17
Option 5 - Purchase 4,389 APX7000 at proposed avg price of \$5,300. FY11 purchase of \$23.262 million (Executive's proposal)	2.637	5.274	5.274	5.274	5.274	2.637
Increase/(Decrease) to Debt Service	2.135	4.244	2.027	(0.484)	(2.152)	(2.573)
Apply \$3.3 Payment	2.135	1.165	0.000	0.000	0.000	0.000
Net Impact after applying payment	0.000	3.079	2.027	(0.484)	(2.152)	(2.573)

Again, Council staff appreciates the Executive’s proposal which has highlighted many deficiencies in the approved CIP project and brings an additional \$3.3 million from Sprint/Nextel to the table. However, Council staff does believe that given the size of the non-competitive purchase the county will be making, there should be an opportunity to further reduce the overall cost.

Council staff recommends a joint Committee recommendation that is contingent on the outcome of the referendum on the ambulance reimbursement fee in order to give direction to the Executive branch by the requested November 5th deadline.

Any option to front load the purchase of radios substantially increases the dollars needed for debt service starting in FY13. If the Council is required to consider a FY11 savings plan and a revised Fiscal Plan because of the change in projected revenues, Council staff believes that this proposal must be judged against all others. Therefore at this time, Council staff, for fiscal reasons, cannot recommend approval of anything other than pursuing the loaner program and buying the 346 radios required in FY11.

If there is no change to revenue projections after the election, then the Council is being asked to make these dollars a priority over all other new initiatives that will require the use of new funds starting in FY13. This is also a very difficult choice to make given that these dollars also compete against every other operating and current revenue need. **Council staff does believe it is the best long-term use of money to purchase the APX7000 radio and recommends the Council appropriate \$20.936 million for this purpose.** This will result in a commitment of \$2 million of the projected \$19 million in FY13. Council staff is hopeful that if prices or assumed interest rates could be lowered that the debt service impact may be further reduced. Council staff notes that, given the fiscal situation, it is not certain that there will be funding for a new radio infrastructure in FY14 and notes that the APX7000 will both continue to work with the current infrastructure and meet 2017 requirements.

The Council staff recommendation means that the full Council would not take action on Tuesday, October 26th but instead would state its intent that if ambulance fee reimbursement revenues are approved, it would act on a \$20.936 million supplemental when it returns on November 23 and that if there is a need to write down revenues after November 2, the county would either continue with the loaner plan agreement or have to have the time to reconsider this request in the context of adjusted revenues.

In addition, Council Staff recommends the PDF language be amended to require:

- An inventory of all public safety and non-public safety radios after the FY11 purchase is assigned.
- New radio infrastructure will be planned to open up the competitive environment and will demonstrate the ability to accept other vendors. The future purchase of radios (other than to replace broken equipment) must be able to be supported by a P25 compliant infrastructure.
- The use of Maryland State infrastructure and purchase options will be aggressively pursued in order to minimize costs to Montgomery County.

In addition, the joint Committee should schedule quarterly updates to ensure effective oversight. Council staff should be asked to participate in NCR deliberations for regional deployment to assist in developing and coordinating funding options and technology interoperability for the long term.

The following table provides a comparison of the currently approved Public Safety System Modernization CIP program and the Executive's proposed supplemental and amendment which impacts the radio replacement portion of the program.

Project Issue/Item	APPROVED PSSM CIP PROJECT	CE PROPOSED PSSM Supplemental/Amendment
Planning for Radio Infrastructure Upgrade/New Public Radio System	<p>\$1.7 million in planning funds is programmed for years FY11-14. \$300,000 of the \$1.7 million was appropriated for FY11. Estimated cost of \$50 million is noted in the PDF language. Expenditure schedule does not include any funds for acquisition/implementation of new infrastructure.</p> <p>Current Status: task orders are being developed to bring on consultants for the planning phase.</p>	NO CHANGE
Computer Aided Dispatch (CAD) Modernization	<p>\$1.34 million in planning funds is programmed for years FY11-13. \$550,000 of the \$1.34 million was appropriated for FY11. \$22 million for CAD procurement/acquisition and implementation is included in the expenditure schedule for FY12 and FY13.</p> <p>Current Status: Planning has been delayed because staff has been working on Park Police/County Police Communications consolidation. Projects are underway to support existing CAD until it is replaced.</p>	NO CHANGE
Station Alerting	<p>\$225,000 in planning funds is programmed for years FY11-13. \$3.264 million in construction funds are programmed for years FY11-14. \$200,000 was appropriated for FY11 (\$75,000 for planning and \$125,000 for construction.)</p> <p>Current Status: Minimal discussions have taken place because several key resources left the county. Subject of upcoming PSSM committee discussions.</p>	NO CHANGE

Project Issue/Item	APPROVED PSSM CIP PROJECT	CE PROPOSED PSSM Supplemental/Amendment
Radio Replacement	<p>\$23.29 million is programmed in FY11-15 for P-25 compliant replacement radios. \$1.384 million was appropriated for FY11. Budget assumed P-25 compliant radio would be XTS5000 model at an average cost of about \$4,000 per radio. Mobile radios would also cost about \$4,000 per radio. Non-public safety radio average cost of about \$2,300.</p> <p>Replacement schedule: FY11: 346 PS portables/mobiles FY12: 364 PS portables/mobiles FY13: 1,526 PS portables/mobiles FY14: 2,075 PS portables/mobiles FY15: 1,469 PS portables/mobiles 75 NON-PS radios FY16: no radios programmed</p> <p>TOTALS for FY11-15: 5,875 PS radios \$23.290 million</p>	<p>\$26.33 million is programmed in FY11-15 for P-25 compliant replacement radios. FY11 appropriation for radios would be increased by \$21.616 million for a total of \$23 million. Proposal assumes APX7000 model radios will be purchased in FY11. Non-public safety users will be assigned model 3000 and 5000 radios as they become available after replacement. Average cost of APX7000 radio is \$5,300 (portable or mobile). Proposed CIP assumes FY14 radios are non-public safety with average cost of \$2,300.</p> <p>Replacement schedule: FY11: 4,389 PS portables/mobiles FY12: 0 PS portables/mobiles FY13: 0 PS portables/mobiles FY14: 1,486 NON-PS portables/mobiles FY15: 0 PS portables/mobiles</p> <p>FY16: no radios programmed</p> <p>TOTALS for FY11-15: 5,875 PS radios \$26.333 million</p> <p>Difference in cost of radio replacement \$3.043</p>
Assumption regarding re-banding	<p>Sprint Nextel is required to loan the county 4,186 radios until the re-banding is completed at which time the current county owned radios will be returned and re-installed. Sprint Nextel is responsible for all costs associated with the re-banding loaner program.</p>	<p>Sprint Nextel will provide the county with \$3.3million if the county purchases 4,186 APX7000 radios. These radios would only have to be installed once and would not be removed after the re-banding adjustments are made to county infrastructure. (Note: the Executive proposes purchases 4,389 radios in order to include Park Police.)</p>

20

<p>Assumption regarding short term financing</p>	<p>Short term financing term of 3 years is assumed in the Approved PDF.</p>	<p>Short term financing of 5 years is assumed in the new proposal. Net increase in financing costs for FY11-19 is \$1.485 million. Net increases in FY13 (\$3.08M), FY14 (\$2.03M), and FY19 (\$1.1M). There are net decreases in FY15 (\$0.1M), FY16 (\$1.4M), FY17 (\$1.8M), and FY18 (\$1.4M).</p>
<p>Useful Life of Radios being purchased</p>	<p>The useful life of a XTS5000 is 7 years. Motorola has indicated that they will not support this radio for more than another 4 years (however they can still be used by the county for non-public safety purposes.)</p> <p>County expects additional mandates from the FCC in 2017 regarding banding for public safety users which cannot be accommodated by the XTS5000 model.</p>	<p>Useful life of the APX7000 model is 7 years. Motorola will offer support for full life of the radio.</p> <p>APX7000 will work with the county's current radio infrastructure, will accommodate expected 2017 FCC requirements, and can be used with any vendor that provides the county with its next radio infrastructure (assuming it is a P-25 system).</p>
<p>Budget savings/reductions</p>		<p>In FY12, the DTS budget can be reduced by \$253,000 due to reduced warranty costs for radios.</p>
<p>Potential cost avoidance</p>		<p>County would not have to install new radios when a new infrastructure is procured in FY14. Estimated cost \$1,974,000 for installation and \$425,000 in accessories. These funds are not programmed in the Approved CIP and would have to be added to either the CIP or Operating Budget in FY14.</p>
<p>Other Issue (change to current plan)</p>	<p>If the current replacement program is stopped (because XTS5000 model is expected to be obsolete for public safety in 3 to 4 years) and re-banding loaner program is used, cost of the current project could be reduced in FY11-13. New radios would have to be purchased with the new radio infrastructure. Cannot estimate whether the cost would be lower or higher than the price being offered to the county by Motorola for the APX7000.</p>	

- A memo for the joint Committee/Council providing an overview of the strategic plan for public safety modernization.

Given the context of the recent discussions, this response is focused on the radio and radio infrastructure portion of the PSSM program.

As with most technologies, voice communications and the supporting radio infrastructure is subject to change. These changes have come in the form of technical innovation, pressures of privatization, and changes in regulation. Montgomery County's radio system is facing obsolescence because of many of these factors and a strategic plan was developed for long-term viability of this critical system. See EXHIBIT F – Montgomery County Communications Interoperability strategic (MCCIP) Plan for additional details.

The plan for the upgrading and modernization of Montgomery County's radio system infrastructure will provide for the deployment of the latest technology radio equipment. The plan will initially address the areas that are most needed and critical. Then it will focus on providing interoperability with those jurisdictions, which are the farthest ahead in their technology progress.

Our plan to modernize the County's radio communications infrastructure requires that the subscriber units (the mobile and the portable radios) be upgraded first. The subscriber units, which form the overwhelming bulk of the County's inventory, the Astro Spectra mobile radios and the XTS3000 family of portable radios, are of the generation, which predates the newer P25 technology standards. There will be incompatible with the planned radio infrastructure upgrade; therefore, the subscriber units must be upgraded prior to the system infrastructure modernization. The original proposed plan spread the purchase of the upgraded subscriber units (portable and mobile radios) over a period of time.

In FY13 of the planned program, the radio infrastructure modernization is proposed to start. This includes a new zone controller, network management controller, new simulcast and prime site controllers, new base stations and comparator equipment, and more. The cost of the radio infrastructure modernization will be about \$50 million, depending upon system design factors and deployment decisions. The implementation will span a two year period.

As a part of developing a long-term strategy, the project intends to acquire services and consultation experience from knowledgeable resources within the voice and radio industry. The expectation is this consultation would look at the trends across the nation related to radio system upgrades, lessons learned from other similar projects and insights on strategies that will maximize the useful life of the new technology solution.

Exhibit F Executive Summary

Montgomery County, Maryland



Communications Interoperability Plan

July 2009

I. Executive Overview

Strategic Situation

For over seven years the existing Motorola ASTRO SmartZone public safety trunked radio system has served Montgomery County ("the County") well, eliminating many deficiencies that existed in the previous conventional radio systems used by public safety agencies including the Department of Corrections and Rehabilitation (DOCR), Montgomery County Fire and Rescue Service (MCFRS), Montgomery County Police Department (MCPD), and the Montgomery County Sheriff's Office (MCSO). All County public safety agencies are now on a common radio platform, can and do communicate with one another on a routine basis, have better coverage than in the past, and have interoperability with most public safety agencies in the National Capitol Region (NCR) and beyond. That the County has benefitted from the existing system is beyond question, and its value has been demonstrated time and again when the public safety agencies have been on the front line of response to incidents as diverse as the Beltway sniper incidents, railway accidents, and a plethora of less publicized, but nonetheless urgent events.

Planning of the County's existing 800 MHz trunked radio system commenced in 1994, and a contract award for the network was signed with Motorola in December 1999. The trunked radio system was ready for operations in the spring of 2002, but owing to issues with the Computer Aided Dispatch (CAD) system and the Mobile Data Computer System (MDC), full operation was deferred until July, 20, 2003. At the time of implementation the system represented the current state of the art in public safety radio communications.

In the rapidly evolving telecommunications industry, generational changes in technology, standards, and electronic components tend to shorten the expected usable lifespan of network investments. Convergence between telecommunications and information technologies has rendered obsolete proprietary networking technologies and vestiges of circuit-switched telephony on which many mobile radio communications systems were based, including that of the County. Standards for digital public safety communications systems intended to improve interoperability and to stimulate competition among multiple suppliers have evolved since the County embarked on its system implementation. While beneficial in the long term, in the short term, these standards have introduced new incompatibilities that challenge the continuity of effective interoperability among public safety first responders and have hastened the obsolescence of existing systems, including that of the County. At present, the County radio communications system is nearing the end of the continuum of factory support, and little flexibility is provided for system infrastructure upgrade short of replacement.

Urbanization of segments of the County combined with increased noise levels in the 800 MHz radio frequency band has degraded the coverage performance of the existing radio system. Additional base station sites are needed in built-up areas to restore the level of coverage of the system to its original reliability. Obsolescence of the trunked radio system prohibits the needed increase in base station sites to upgrade performance of the system.

Other counties and cities in the National Capital Region with which the County public safety agencies interoperate on a routine basis have commenced system planning or implementation of radio system upgrades. To avoid incompatibilities that will affect public safety operations, it is necessary that interoperability partners make certain upgrades in, or nearly in, unison.

Montgomery County must commence planning and funding upgrades to its existing trunked radio system before factory support of the network deteriorates in the years beginning with 2012. Such upgrades will serve the dual role of maintaining the acclaimed interoperability that exists in the National Capital Region and correcting degradation of the reliability of the existing County system.

Goals and Objectives of the Montgomery County Communications Interoperability Plan

Goal

It is the goal of the Montgomery County Communications Interoperability Plan to ensure that the public safety first responders of Montgomery County can fulfill their missions safely and can respond promptly to the needs of the public in emergencies through the use of reliable, interoperable, and flexible voice and data radio communications to provide dispatch, coordination, and information in the mobile environment.

Objectives

Objectives of the Montgomery County Communications Interoperability Plan are to:

Provide reliable radio communications system performance in terms of coverage, network availability, and quality of service to public safety first responders.

Maintain and expand the highest level of interoperability between the County's public safety first responders and their mutual aid partners from within and outside of the National Capital Region to coordinate daily and emergency events by employing subscriber radios compatible with legacy and future digital technologies.

Provide access to and transmission/reception of data and video, and to permit access to dispatch, database, collaboration, and operational applications in the mobile environment with speed and reliability comparable to a wired office connection.

Ensure that system upgrades will meet the needs of the County for a decade and that the technology selected is in keeping with the overall trend of the telecommunications and information technology industry toward open architecture, data security, quality of service metrics, and interoperability.

Strategy

It is the strategy of the interoperability plan to continue the provision of a current technology trunked radio communications system that meets the current and future needs of the County public safety first responders while optimizing the utilization of current resources and through cooperation with interoperability partners. To the extent practical the County will employ resources made available by the Federal broadband initiative and other sources of interoperability funds.

Phased Implementation

A multi-phased implementation schedule is proposed over a minimum five year period. A three phase schedule permits expenses to be spread over multiple funding cycles and will allow certain industry standards and regulations to be that are in development to be finalized.

In the first phase, that spans three years, short term improvements will be made by upgrading portable and mobile radios assigned to public safety first responders to more capable software-defined radios. Such radios have the ability to operate in multiple modes, thereby bridging the generations of technology that will exist in the region without loss of interoperability. Such radios enable communications with new generation P25 Phase I and Phase II standard radio systems that are in deployment in the region and are also backward compatible with legacy systems.

Work on plans and specifications for the upgrade of the trunked radio communications system also must commence in the first phase. The objective of these plans is the development of goals and objectives for a system to meet the tactical voice radio communications needs of the first responders and to plan for the eventual use of broadband wireless network for data and video communications. Options for system sharing and/or participation in a network of networks will be explored in the planning process. A detailed implementation plan and budget for network infrastructure upgrades will be produced along with a procurement document for the upgraded voice radio system.

In the second, interim, phase beginning in the fourth year the procurement and installation of voice radio system infrastructure upgrades will commence. These upgrades will affect the radio system, its interconnecting network, and the public safety communications center console equipment. At the conclusion of the installation of the improved voice communications system, some legacy subscriber equipment will be passed on to non-public safety governmental radio system users. The second phase is estimated to take two years, with a projected completion date of 2014.

The third phase is a long term action plan for the implementation of wireless data and video applications on a broadband network. Such applications and the networks themselves are still only loosely defined and final regulations have not been promulgated. It is expected that clarity will emerge over the next two years from the extensive effort being expended by public safety and the private sector to jointly or singly develop a national broadband infrastructure for public safety. As presently defined, such a broadband network will reflect some of the convergence of voice, data, and video access to and from the mobile environment. An eventual progression to the provision of tactical push-to-talk voice communications over such networks may evolve over the next decade, but is not the primary driver of this technology.

Initiative	Short Term (Years 1-3)	Interim Phase (Years 3-5)	Long Term (> 5 Years)
Interoperability	Purchase subscriber units compatible with both legacy and next generation systems to maintain interoperability in NCR and to prepare for system replacement in Montgomery County	Transition subscriber units to next generation trunked system being installed by Montgomery County; cross programming or system of systems to provide interoperability with mutual aid partners	Continuing programming and networking to maintain interoperability with mutual aid partners.
Operability	Begin planning and specification of next generation trunked radio system for Montgomery County	Procurement and implementation of next generation trunked radio system	System in full operation and add subscriber units to reflect County growth
Data and video	Follow national	Definition of	Participate in

access and transmission	broadband initiative, FCC filings if necessary	advanced data and video applications to enhance public safety operations	shared national broadband network or buy services from operator
-------------------------	--	--	---

Funding

Phase I budget requirements are to fund portable radio upgrades for public safety first responders in years one through three and to commence preparation of detailed system plans and procurement documents for an upgraded network infrastructure, and to seek grants and other sources of funding for the upgrades.

Phase II budget requirements will be established in the first year of Phase I based on a detailed system design and that will be completed during the year. This design and budget will provide two years lead time to identify sources of funding before the procurement of the network upgrade commences.

Phase III funding requirements will be known by year five of the project. This phase of the project is dedicated to the provision of wireless broadband access by public safety agencies. It is likely that such service will be provided by some partnership between a wireless network operator and a regional or national public safety consortium. The form of such a consortium and the ratio of capital versus operating expenses will be determinable by year five.

Immediate Actions Required

Plans and specifications must be developed to ensure that any replacement system will meet the needs of the County for another decade and that the technology selected is in keeping with the overall trend of the telecommunications and information technology industry toward open architecture, data security, quality of service metrics, and interoperability. These plans will examine the network options available to the County, including a stand-alone system, a system that is a participant in a system of systems that permits resource sharing while avoiding the centralization of failures, and sharing of certain resources, such as antenna sites and backhaul networks with other governmental entities such as the State or adjoining counties and cities.

In the short term, the process of replacing subscriber units (mobile and portable radios used by first responders) with units capable of operating on legacy Motorola trunking technology and P25 Phase I and II systems, supporting roaming technology, operable on the 700 MHz frequency band and compatible with conventional analog operation.

- Information on the price difference between the model 5000 and model 7000 radios (it might be best to do this as a price range since Bob Johnson explained to me that the prices could be quite different depending on the features needed by the unit the radio is being assigned to).

For total cost estimates we have used an average cost per radio as follows:

The Model 5000 plus accessories \$4000 each
The Model 7000 plus accessories \$5240 each

See EXHIBIT A – For a brief cost comparison of typical Standard issued portable units for Fire and Police with associated accessories.

See EXHIBIT E – For a more detailed listing of other Radios plus accessories.

High Level - Model 5000 versus APX Analysis

Feature / Capability	APX Model	Model 5000
Project 25 (P25) Compatibility (FDMA)	Yes	Yes
Project 25 (P25) – Next Gen (TDMA)	Upgradeable	No
Multi-Band Capabilities	Yes	No
Maximum Channels	1250	1000
Speaker Output	1 Watt	.5 Watt
360 Degree Speaker and Microphone	Yes	No
Built-in Memory	64MB	8MB
Memory Expansion Capable	Yes	No
Color Display	Yes	No
Privacy Encryption	Standard	Optional
Integrated GPS	Yes	No
Submersible	Yes	No
Battery Life – Standard Issue Battery	11 hours	8 hours

- A summary memo on re-banding efforts in the region.

The most recent web conference held by the National Capital Region (Region 20) to discuss the rebanding Program and status of member jurisdictions was held on October 14, 2010. From the enclosed Exhibits, it is apparent that Montgomery County is lagging behind and may create a more significant delay to the master schedule and the overall program goals and objectives.

See below excerpts from the documents as presented by Fairfax County/NCR Regional Coordinator. Complete documents are available upon request:

See EXHIBIT B – NCR PROJECT STATUS
See EXHIBIT C – FIRST TOUCH PROGRAMMING STATUS
See EXHIBIT D –THE MASTER SCHEDULE

Exhibit B

NCR PROJECT STATUS

NATIONAL CAPITAL REGION	PRE-IMPLEMENTATION STATUS							IMPLEMENTATION STATUS					
LICENSEE	NEGOTIATION	CONTRACT EXECUTION						First Touch			Second Touch		
	LICENSEE & SPRINT NEXTEL	LICENSEE	Approved by TA	SPRINT NEXTEL	IA w/ Motorola	Actual / Targeted Completion Date	Kick-Off Meeting	Non-Interop Subs Program	Template Mod Work	Interop Subs Program	FNE Returns	Template Mod Work	All Subs Program
ALEXANDRIA, CITY of	✓	✓	✓	✓	✓	5/9/2008	8/13/2008	100%	100%	100%			
ARLINGTON COUNTY, VA	Signed FRA with Sprint for subscribers no implementation contract with Motorola.				Not Applicable			100%	N/A	100%		N/A	
CHARLES COUNTY, MD	✓	✓	✓	✓	✓	3/19/2010	9/1/2010	N/A	100%	0%			
DISTRICT OF COLUMBIA	✓	✓	✓	✓	✓	12/17/2008	1/28/2009	100%	100%	0%			
FAIRFAX COUNTY, VA - SAFETY	✓	✓	✓	✓	✓	6/6/2008	8/7/2009	N/A	100%	95%			
FAIRFAX COUNTY, VA - SERVICE	✓	✓	✓	✓	✓	6/6/2008	6/12/2008	98%	N/A	N/A		N/A	
FAUQUIER COUNTY, VA	✓	✓	✓	✓	✓	7/18/2008	8/19/2008	100%	100%	100%			
FREDERICK COUNTY, MD	✓	✓	✓	✓	✓	8/14/2009	10/8/2009	100%	100%	4%			
LOUDOUN COUNTY, VA	✓	✓	✓	✓	✓	10/10/2008	12/12/2008	N/A	100%	100%			
MANASSAS, CITY of	✓	✓	✓	✓	✓	1/26/2009	3/18/2009	84%	100%	91%			
MWAA	✓	✓	✓	✓	✓	5/21/2009	6/8/2009	100%	100%	35%			
MONTGOMERY COUNTY, MD - Data	✓	✓	✓	✓	✓	12/11/2008	TBD	N/A	N/A	N/A		N/A	
MONTGOMERY COUNTY, MD - First Step FRA for Template Work	✓	✓	✓	✓	N/A	12/8/2009	4/16/2010	N/A	52%	N/A	N/A	N/A	N/A
MONTGOMERY COUNTY, MD - Voice	✓	In Process			In Process	11/19/2010	TBD	N/A	N/A	N/A			
PRINCE GEORGES COUNTY, MD	FRA Executed Between Licensee and Sprint Nextel.				Not Applicable			N/A	N/A	N/A	N/A		
PRINCE WILLIAM COUNTY, VA	✓	✓	✓	✓	✓	8/8/2008	8/22/2008	100%	100%	99%			
UNIVERSITY OF MARYLAND, CP	✓	✓	✓	✓	✓	✓	✓	100%	N/A	N/A		N/A	
								98%	90%	50%			

Color Key: Completed In Process On Hold

10/14/2010

12

Exhibit C

First Touch Programming Status

NATIONAL CAPITAL REGION LICENSEE	PHASE IIA - FIRST TOUCH STATUS						First Touch Comments
				INTEROPERABLE SUBSCRIBERS			
				Total Subs	Subs Complete	% Complete	
ALEXANDRIA, CITY of	533	533	100%	1,134	1,134	100%	Rebanding completed as part of larger P25 Upgrade
ARLINGTON COUNTY, VA	914	914	100%	1,395	1,274	100%	Complete
CHARLES COUNTY, MD	N/A	N/A	N/A	2,354		0%	Plan to start on 10/25/10.
DISTRICT OF COLUMBIA	1,050	1,050	100%	1,961		0%	Need replacement radios.
FAIRFAX COUNTY, VA - SAFETY	N/A	N/A	N/A	7,153	6,780	95%	PD programming in process.
FAIRFAX COUNTY, VA - SERVICE	5,168	4,950	98%	N/A	N/A	N/A	Programming underway with completion planned for 10/10.
FAUQUIER COUNTY, VA	284	284	100%	1,116	1,116	100%	First Touch Completed
FREDERICK COUNTY, MD	1,000	1,000	100%	2,680	116	4%	MOSCAD units complete. Plan to begin once CMARC Region Overlay system is complete. Programming expected to be done by 6/11.
LOUDOUN COUNTY, VA	N/A	N/A	N/A	1,859	1,859	100%	COR required for approximately 75 additional units to be programmed.
MANASSAS, CITY of	175	147	84%	526	477	91%	Interoperable unit programming in process.
MWAA	1,518	1,518	100%	709	250	35%	LE unit programming is in process.
MONTGOMERY COUNTY, MD - Data	N/A	N/A	N/A	1,501		0%	Implementation TBD/Pending Impact of Voice System FRA/PILR
MONTGOMERY COUNTY, MD - Voice	N/A	N/A	N/A				FRA/PILR Agreement finalized. Awaiting subscriber acquisition decision.
PRINCE GEORGES COUNTY, MD	N/A	N/A	N/A			7%	Radios to be reprogrammed as part of Montgomery County FRA.
PRINCE WILLIAM COUNTY, VA	1,731	1,731	100%	2,671	2,646	99%	LE programming nearly completed, about 25 stragglers remain.
UNIVERSITY OF MARYLAND, CP	550	550	100%	N/A	N/A	N/A	Complete
	12,923	12,677	98%	31,372	15,652	50%	
				All Subscribers: 44,295	28,329	64%	

10/14/2010

Color Key: Completed In Process N/A

Exhibit D

Motorola 800 MHz Rebanding Project
Fairfax County / NCR Regional Coordinator

NCR MASTER SCHEDULE v3.2 - Adopted on September 7, 2010

ID	Task Name	%	Duration	Start	Finish	Critical	Predecessors
1	NCR Rebanding Program Master Implementation Schedule	58%	1061 days	Fri 4/3/09	Fri 6/14/13	Yes	
2	EXECUTE PHASE II AGREEMENT	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
5	Phase II Master Schedule Adoption Process	100%	362 days	Fri 4/3/09	Tue 9/7/10	No	
18	MISCELLANEOUS REGIONAL COORDINATION WORK	92%	592 days	Fri 4/3/09	Mon 8/8/11	No	
19	FRA & Implementation Agreements	90%	443 days	Fri 4/3/09	Wed 1/5/11	Yes	
20	ALEXANDRIA, CITY of	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
21	ARLINGTON COUNTY, VA	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
22	CHARLES COUNTY, MD	100%	359 days	Fri 4/3/09	Wed 9/1/10	No	
27	DISTRICT OF COLUMBIA	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
28	FAIRFAX COUNTY, VA - SERVICE	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
29	FAIRFAX COUNTY, VA - SAFETY	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
30	FREDERICK COUNTY, MD	100%	140 days	Fri 4/3/09	Tue 10/20/09	No	
35	FAUQUIER COUNTY, VA	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
36	LOUDOUN COUNTY, VA	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
37	MANASSAS, CITY of	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
38	MONTGOMERY COUNTY, MD - Data	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
39	MONTGOMERY COUNTY, MD	78%	443 days	Fri 4/3/09	Wed 1/5/11	Yes	
40	FRA Development	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
41	Interoperable Radio Template Support FRA	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	40
42	Agreement In Principle On A Partial PLIR	100%	0 days	Fri 5/7/10	Fri 5/7/10	No	
43	FRA For Existing Radios / FNE Retuning and PLIR for Replacements Radios	75%	240 days	Wed 12/9/09	Fri 11/19/10	Yes	41,45FF
44	Motorola Implementation Agreement For Existing Radios / FNE Retuning	75%	168 days	Thu 3/25/10	Fri 11/19/10	Yes	43FF
45	Motorola Contract for Replacement Radios	75%	137 days	Fri 5/7/10	Fri 11/19/10	Yes	42
46	Field team Mobilization	0%	30 days	Mon 11/22/10	Wed 1/5/11	Yes	44
47	MWAA	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
48	PRINCE WILLIAM COUNTY, VA	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
49	NCR Non Interoperable Rebanding Work (Early Work)	91%	592 days	Fri 4/3/09	Mon 8/8/11	No	
50	Subscribers	97%	399 days	Fri 4/3/09	Fri 10/29/10	No	
51	ALEXANDRIA, CITY of (533)	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	20
56	DISTRICT OF COLUMBIA (1050)	100%	85 days	Fri 4/3/09	Fri 7/31/09	No	27
58	FAIRFAX COUNTY, VA - SERVICE (5039)	95%	399 days	Fri 4/3/09	Fri 10/29/10	No	28
61	FAUQUIER COUNTY, VA (284)	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	35
62	MANASSAS, CITY of (175) Public Works	100%	90 days	Mon 7/13/09	Tue 11/17/09	No	37FS+70 days
63	MWAA Non-Interoperable Radios (1385)	100%	131 days	Tue 7/7/09	Thu 1/14/10	No	47FS+86 days
64	PRINCE WILLIAM COUNTY, VA (1500)	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	48
71	FREDERICK COUNTY, MD (1000)	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
72	UNIVERSITY OF MD, COLLEGE PARK (550)	100%	0 days	Fri 4/3/09	Fri 4/3/09	No	
73	Infrastructure	0%	115 days	Fri 2/25/11	Mon 8/8/11	No	
74	NCR PMARS System (FFX Repeater with 39 NCR CS)	0%	115 days	Fri 2/25/11	Mon 8/8/11	No	29
86	Northern Virginia Hospital Association	0%	13 days	Mon 7/18/11	Thu 8/4/11	No	
88	Conventional Channel Rebanding Solution	96%	443 days	Fri 4/3/09	Wed 1/5/11	No	

14

- Information from the State of Maryland on their procurement decision.

The State of Maryland had a scheduled hearing Thursday, October 20, 2010 to vote on the decision to go forward with Motorola, Inc. as the selected vendor for the Statewide Public Safety Wireless Communication System. Please see below excerpt for the highlighted agenda. However, the Comptroller requested and the Governor approved a two week deferment on the decision on Statewide radio system project by the Board of Public Works.

Item	Agency Institution	County	Vendor, Contractor, Grantee	Description
2-IT-MOD	HMH	Statewide	Medifax-EDI, LLC (a/k/a Emdeon)	Contract Modification - Office of Systems, Operation and Pharmacy (OSOP) Medicaid Services Eligibility Verification System (EVS) One year extension to allow time for a new procurement to be completed. Term: 11/1/10-10/31/11. Cost: \$247,000.
3-IT	CSPMD	Statewide	Definition 6 LLC	Information Technology Contract - Application Hosting and IT Consulting Services. Term: 10/20/10-10/19/11 with three two-year renewal options. Cost: \$159,600 (1 year)
4-IT SUP	DIT	Statewide	Motorola, Inc.	Information Technology Contract - Statewide Public Safety Wireless Communication system. Term: 10/21/10-10/20/18 with seven one-year renewal options. Cost: \$345,000,000.
Agenda: Department of Transportation				
1-C	DOT/MTA	Baltimore City	M. C. Dean, Inc.	Construction Contract - North Avenue Yard Switch Machine Installation. Term: 550 Calendar Days. Cost: \$3,459,260.
2-C	DOT/MdTA	Baltimore City	J&R Roofing Co., Inc.	Construction Contract - 2300 Broening Highway - Roof Replacement. Term: 120 Calendar Days. Cost: \$378,025.80.
3-AE	DOT/SHA	Statewide	Johnson, Mirmiran & Thompson, Inc	A/E Contract - Highway Noise Analysis and Sound Barrier Design Services. Term: Five years ending 10/1/15. Cost: \$2,000,000.
4-AE	DOT/SHA	Statewide	Greenhorne & O'Mara, Inc./Greenman-Pederson, Inc.	A/E Contract - Wetland Delineation and Permitting Services. Term: Five years ending 10/1/15. Cost: \$2,000,000.

- Review the September 23rd testimony to the House Subcommittee on Technology and Innovation on progress on P-25 standards.

The Sorley written testimony, “Progress on P25: Furthering Interoperability and Competition for Public Safety Radio Equipment” was well written, as it presents the many challenges facing the Public Safety communities across the country. The P25 standard is evolving and being deployed in a much slower pace than the underlying related technologies. A major challenge in the public safety (PS) community is a lack of or limited committed involvement in the developmental process and understanding of the multifaceted P25 Standards.

The idea of replacing PS radio equipment with cellular phones is ill advised and lacks over-all understanding; the reality is that cellular phones lack the compatibility, ruggedness and many other operational issues and concerns required for public safety communications especially in extreme weather or disaster related conditions.

It will serve the Public Safety community well to commit resources, get involved with education and training of PS personnel in the P25 development process and vendor vetting process. The report stated it best, “It will take a lot of work and many years to realize this network.”

- Any insights on the observation that a vendor might sell a P-25 compliant system but then add proprietary options that in effect make it a proprietary system that would be unable to use other P-25 complaint radios.

The main objective of the P25 Suite of Standards is to ensure interoperability and compatibility of all emergency communication systems and devices. A major challenge facing the Public Safety community is a lack of committed involvement, understanding and comprehensive knowledge of all the elements that make up the P25 Suites of Standards, which are still in the developmental stages. The onus is on the implementers of P25-compliant systems to vet the manufacturers/vendors to ensure that they have gone through the certification and accreditation process and their products meet standardized service and facilitates specifications to assure system interoperability, compatibility as well as support backward compatibility with other legacy systems.

- Address whether the purchase of so many Motorola Model 7000 radios ties the County’s hand in terms of competitively bidding future radio infrastructure or replacement radios/equipment.

Purchasing Motorola APX 7000 Model radios will not obligate the County to deploy a Motorola radio infrastructure platform, or force the County to implement Motorola only devices in the future. What is required is that the selected radio infrastructure platform must comply with the P25 Standards, which assures vendor-neutrality. This means that hand-held radios or mobile

devices can and should operate seamlessly across P25 compliant platforms without regards to the manufacturer of the individual device.

The functionality of the radios and the radio infrastructure will be driven by the functional requirements of the end-users. The program of requirements (POR) will be written to meet the end-user requirements and business needs.

Rebanding does not equate to a P25 compliant radio infrastructure. The APX 7000 model radios will be able to be fully operate in a P25 compliant radio infrastructure.

Exhibit A

MOTOROLA PRICE COMPARISON

PORTABLE RADIOS

Model II XTS 5000 vs. APX 7000 Model 3.5

XTS 5000 MODELS & FEATURES	FIRE STANDARD	POLICE STANDARD	POLICE SECURE RUGGED	APX7000 MODELS & FEATURES	FIRE NON-ENCRYPTED	POLICE NON-ENCRYPTED	POLICE ENCRYPTED RUGGED
MODEL II 3X2 KEYPAD DISPLAY 764-870MHZ	\$1,596.92	\$1,596.92	\$1,596.92	APX PORTABLE HARDWARE/RADIO	\$2,237.20	\$1,742.50	\$2,237.20
RF ANTENNA SWITCH (NTN8327)	7.40	7.40	7.40	ENHANCED LARGE COLOR DISPLAY W/ KEYPAD	425.00	0	425.00
ENHANCED PTT DISPLAY	55.50	0	0	DIGITAL CAI	437.75	437.75	437.75
SOFTWARE ASTRO DIGITAL	381.10	381.10	381.10	ASTRO 25 TRUNKING 9600 SW	255.00	255.00	255.00
SMARTZONE SYS SOFTWR	1,110.00	1,110.00	1,110.00	SMARTZONE OPERATION	1275.00	1275.00	1275.00
PROJECT 25 TRUNK SOFTW	222.00	222.00	222.00	SUBMERSIBLE (DELTA)	212.50	0	212.50
IMPRES NIMH FM RUGGED 1700MAH (NNTN4437)	34.78	0	34.78	PUBLIC SAFETY YELLOW	21.25	0	0
NIMH ULTRA HIGH CAPACITY 3000 MAH	0	50.32	0	PROGRAMMING OVER P25 (OTAP)	85.00	85.00	0
UCM HARDWARE ENCRYPTION	0	0	111.00	RADIO PACKET DATE	170.00	170.00	0
SUBMERSIBLE 6FT 2HRS	185.00	0	185.00	IMPRES LION 2900MAH SUBMERSIBLE (IP67) BATTERY	119.00	119.00	119.00
CHARGER IMPRES 110V US PLUG	122.10	122.10	122.10	IMPRES SINGLE UNIT CHGR	106.25	106.25	106.25
HOUSING YELLOW	18.50	0	0	LEATHER CARRY CASE W/ BELT LOOP	55.25	55.25	55.25
BATTERY IMPRES NIMH RUGGEDIZED	107.30	0	107.30	REMOTE SPEAKER MICROPHONE (NOISE CANCEL)	90.95	90.95	90.95
BATTERY 3000 MAH FM	0	111.00	0	AES/DES, DES-XL, DES-OFB	0	0	679.15
DES, DES-XL-DES-OFB ENCRYPTION	0	0	443.26	ASTRO P25 OTAR W/ MULTIKEY	0	0	629.00
TOTAL DISCOUNTED PRICE	\$3,840.60	\$3,600.84	\$4,320.86		\$5,490.15	\$4,336.70	\$6,522.05
TOTAL LIST PRICE	\$5,190.00	\$4,866.00	\$5,839.00		\$6,459.00	\$5,102.00	\$7,673.00

18

Exhibit E



Radio and Accessories Price Sheet

PREPARED BY: **Bobby Johnson**
Montgomery County DTS

Pricing per the Montgomery County Contract

<u>Qty.</u>	<u>Model</u>	<u>Description</u>	<u>List Price</u>	<u>Discount Price</u>
4	Model II XTS5000s	FIRE STANDARD		
5	H18UCF9PW6 N	PORTABLE XTS5000 MODEL II 3X2 KEYPAD DISPLAY 850 CHANNELS 764-870MHZ	\$2,158.00	\$1,596.92
6	Q44	ADD: RF ANTENNA SWITCH (NTN8327)	\$10.00	\$7.40
7	H14	ENH: ENHANCED PTT ID DISPLAY	\$75.00	\$55.50
6	Q806	ADD: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$381.10
9	H38	ADD: SMARTZONE SYSTEM SOFTWARE	\$1,500.00	\$1,110.00
10	Q361	ENH: PROJECT 25 9600 BAUD TRUNKING SOFTWARE	\$300.00	\$222.00
11	Q173	ENH: SMARTZONE OMNILINK MULTIZONE SYSTEM SOFTWARE	\$0.00	\$0.00
12	Q393RUGD	IMPRES NIMH FM RUGGED 1700MAH (NNTN4437)	\$47.00	\$34.78
13	H499	ALT: SUBMERSIBLE - 6 FT. 2 HOURS (RUGGED)	\$250.00	\$185.00
14	H64	ALT: HOUSING YELLOW	\$25.00	\$18.50
15	NTN1873	CHARGER, IMPRES RAPID RATE, 110V US PLUG	\$165.00	\$122.10
16	NNTN4437B	BATTERY IMPRES NIMH, 1700 MAH. INTRINSICALLY SAFE, RUGGEDIZED	\$145.00	\$107.30
			\$5,190.00	\$3,840.60
19	Model II XTS5000s	POLICE STANDARD		
20	H18UCF9PW6 N	PORTABLE XTS5000 MODEL II 3X2 KEYPAD DISPLAY 850 CHANNELS 764-870MHZ	\$2,158.00	\$1,596.92
21	Q44	ADD: RF ANTENNA SWITCH (NTN8327)	\$10.00	\$7.40
22	Q806	ADD: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$381.10
23	H38	ADD: SMARTZONE SYSTEM SOFTWARE	\$1,500.00	\$1,110.00
24	Q361	ENH: PROJECT 25 9600 BAUD TRUNKING SOFTWARE	\$300.00	\$222.00
25	Q173	ENH: SMARTZONE OMNILINK MULTIZONE SYSTEM SOFTWARE	\$0.00	\$0.00
26	Q42	FM NIMH ULTRA HIGH CAPACITY 3000 MAH (RNN4007)	\$68.00	\$50.32
27	NTN1873	CHARGER, IMPRES RAPID RATE, 110V US PLUG	\$165.00	\$122.10
28	RNN4007	BATTERY 3000 MAH FM NIMH	\$150.00	\$111.00
			\$4,866.00	\$3,600.84
31	Model II XTS5000s	POLICE SECURE RUGGED		
32	H18UCF9PW6 N	PORTABLE XTS5000 MODEL II 3X2 KEYPAD DISPLAY 850 CHANNELS 764-870MHZ	\$2,158.00	\$1,596.92
33	Q44	ADD: RF ANTENNA SWITCH (NTN8327)	\$10.00	\$7.40
34	Q806	ADD: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$381.10

19

35	H38	ADD: SMARTZONE SYSTEM SOFTWARE	\$1,500.00	\$1,110.00
36	Q361	ENH: PROJECT 25 9600 BAUD TRUNKING SOFTWARE	\$300.00	\$222.00
37	Q173	ENH: SMARTZONE OMNILINK MULTIZONE SYSTEM SOFTWARE	\$0.00	\$0.00
38	Q159	ADD: XTS5000 UCM HARDWARE ENCRYPTION	\$150.00	\$111.00
39	Q625	ADD: DES, DES-XL, DES-OFB ENCRYPTION	\$599.00	\$443.26
40	H869	ADD: MULTIKEY	\$0.00	\$0.00
41	Q393RUGD	IMPRES NIMH FM RUGGED 1700MAH (NNTN4437)	\$47.00	\$34.78
42	H499	ALT: SUBMERSIBLE - 6 FT. 2 HOURS (RUGGED)	\$250.00	\$185.00
43	NTN1873	CHARGER, IMPRES RAPID RATE, 110V US PLUG	\$165.00	\$122.10
44	NNTN4437B	BATTERY IMPRES NIMH, 1700 MAH. INTRINSICALLY SAFE, RUGGEDIZED	\$145.00	\$107.30
45			<hr/>	
46			\$5,839.00	\$4,320.86
47	05 Control Head Dash Mount XTL5000s CLEAR			
48	M20URS9PW1 N	XTL 5000 MOBILE 10-35 WATT, 764-870MHZ	\$1,497.00	\$1,152.69
49	G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$396.55
50	G51	ENH: SMARTZONE OPERATION	\$1,500.00	\$1,155.00
51	G361	ENH: PROJECT 25 9600 BAUD TRUNKING SOFTWARE	\$300.00	\$231.00
52	G442	ADD: XTL 5000 CONTROL HEAD	\$432.00	\$332.64
53	G444	ADD: ADD: CONTROL HEAD SOFTWARE	\$0.00	\$0.00
54	W22	ADD: PALM MICROPHONE	\$72.00	\$55.44
55	B18	ADD: AUXILARY SPEAKER 5 WATT	\$60.00	\$46.20
56	G66	ADD: DASH MOUNT	\$125.00	\$96.25
57	G174	ADD: ANTENNA 3DB LOW-PROFILE 764-870MHZ	\$43.00	\$33.11
58			<hr/>	
59			\$4,544.00	\$3,498.88
60				
61				
62				
63	05 Control Head Dash Mount XTL5000s ENCRYPTED			
64	M20URS9PW1 N	XTL 5000 MOBILE 10-35 WATT, 764-870MHZ	\$1,497.00	\$1,152.69
65	G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$396.55
66	G51	ENH: SMARTZONE OPERATION	\$1,500.00	\$1,155.00
67	G361	ENH: PROJECT 25 9600 BAUD TRUNKING SOFTWARE	\$300.00	\$231.00
68	G442	ADD: XTL 5000 CONTROL HEAD	\$432.00	\$332.64
69	G444	ADD: ADD: CONTROL HEAD SOFTWARE	\$0.00	\$0.00
70	G66	ADD: DASH MOUNT	\$125.00	\$96.25
71	G159	ADD: ENCRYPTION UCM HARDWARE	\$150.00	\$115.50
72	G625	ADD: DES/DES-XL/DES-OFB ENCRYPTION	\$599.00	\$461.23
73	W969	ADD: MULTIPLE KEY ENCRYPTION OPERATION	\$330.00	\$254.10
74	W22	ADD: PALM MICROPHONE	\$72.00	\$55.44
75	B18	ADD: AUXILARY SPEAKER 5 WATT	\$60.00	\$46.20
76	W484	ALT: ANTENNA 3DB GAIN 764-870MHZ	\$38.00	\$29.26
77			<hr/>	
78			\$5,618.00	\$4,325.86

20

79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120

05 Control Head Remote Mount XTL5000s CLEAR

M20URS9PW1 N	XTL 5000 MOBILE 10-35 WATT, 764-870MHZ	\$1,497.00	\$1,152.69
G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$396.55
G51	ENH: SMARTZONE OPERATION	\$1,500.00	\$1,155.00
G361	ENH: PROJECT 25 9600 BAUD TRUNKING SOFTWARE	\$300.00	\$231.00
G442	ADD: XTL 5000 CONTROL HEAD	\$432.00	\$332.64
G444	ADD: ADD: CONTROL HEAD SOFTWARE	\$0.00	\$0.00
G66	ADD: DASH MOUNT	\$125.00	\$96.25
W22	ADD: PALM MICROPHONE	\$72.00	\$55.44
B18	ADD: AUXILARY SPEAKER 5 WATT	\$60.00	\$46.20
G607	ADD: REMOTE MOUNT CABLE 23 METERS (75 FT)	\$45.00	\$34.65
W484	ALT: ANTENNA 3DB GAIN 764-870MHZ	\$38.00	\$29.26
		<hr/>	
		\$4,584.00	\$3,529.68

XTL5000s Console CLEAR

L20WRS9PW1	XTL 5000 CONSOLETTTE 896-940MHZ	\$3,180.00	\$2,448.60
G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$396.55
G51	ENH: SMARTZONE OPERATION	\$1,500.00	\$1,155.00
G114	ENH: ENHANCED DIGITAL ID DISPLAY	\$75.00	\$57.75
G361	ENH: PROJECT 25 9600 BAUD TRUNKING SOFTWARE	\$300.00	\$231.00
G81	ADD: W9 HW SETUP CONSOLETTTE	\$380.00	\$292.60
L791	ADD: AUDIO INTFC BD XTL5000	\$150.00	\$115.50
L73	DEL: MICROPHONE SPECTRA DESKTOP	-\$50.00	-\$38.50
TRN7466	MOUNTING BRACKET EIA 19 INCH	\$100.00	\$77.00
L3223	MC3000 DIGITAL DESKSET	\$876.00	\$674.52
L3239	DIGITAL JUNCTION BOX - CDM1550	\$682.00	\$525.14
		<hr/>	
		\$7,708.00	\$5,935.16

05 Control Head Motorcycle XTL5000 CLEAR

M20URS9PW1 N	XTL 5000 MOBILE 10-35 WATT, 764-870MHZ	\$1,497.00	\$1,152.69
G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$396.55
G51	ENH: SMARTZONE OPERATION	\$1,500.00	\$1,155.00
G361	ENH: PROJECT 25 9600 BAUD TRUNKING SOFTWARE	\$300.00	\$231.00
G442	ADD: XTL 5000 CONTROL HEAD	\$432.00	\$332.64
G444	ADD: ADD: CONTROL HEAD SOFTWARE	\$0.00	\$0.00
G138	ADD: XTL MOTORCYCLE CH SFWR	\$0.00	\$0.00
G67	ADD: REMOTE MOUNT	\$297.00	\$228.69

21

121	W22	ADD: MOTORCYCLE PALM MICROPHONE	\$72.00	\$55.44
122	B18	ADD: AUXILARY SPEAKER SPECTRA MOTORCYCLE	\$60.00	\$46.20
123	G174	ADD: ANTENNA 3DB LOW-PROFILE 764-870MHZ	\$43.00	\$33.11
124	G151	ADD: WHITE WEATHER RESISTANT MOTORCYCLE ENCLOSURE	\$900.00	\$693.00
125			\$5,616.00	\$4,324.32
126				
127				
128	05 Control Head Motorcycle XTL5000 ENCRYPTED			
129	M20URS9PW1 N	XTL 5000 MOBILE 10-35 WATT, 764-870MHZ	\$1,497.00	\$1,152.69
130	G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$396.55
131	G51	ENH: SMARTZONE OPERATION	\$1,500.00	\$1,155.00
132	G361	ENH: PROJECT 25 9600 BAUD TRUNKING SOFTWARE	\$300.00	\$231.00
133	G442	ADD: XTL 5000 CONTROL HEAD	\$432.00	\$332.64
134	G444	ADD: ADD: CONTROL HEAD SOFTWARE	\$0.00	\$0.00
135	G138	ADD: XTL MOTORCYCLE CH SFWR	\$0.00	\$0.00
136	G67MTCL	ADD: REMOTE MOUNT MOTORCYCLE	\$400.00	\$308.00
137	G159	ADD: ENCRYPTION UCM HARDWARE	\$150.00	\$115.50
138	G625	ADD: DES/DES-XL/DES-OFB ENCRYPTION	\$599.00	\$461.23
139	W969	ADD: MULTIPLE KEY ENCRYPTION OPERATION	\$330.00	\$254.10
140	W22	ADD: MOTORCYCLE PALM MICROPHONE	\$72.00	\$55.44
141	B18	ADD: AUXILARY SPEAKER SPECTRA MOTORCYCLE	\$60.00	\$46.20
142	G174	ADD: ANTENNA 3DB LOW-PROFILE 764-870MHZ	\$43.00	\$33.11
143	G151	ADD: WHITE WEATHER RESISTANT MOTORCYCLE ENCLOSURE	\$900.00	\$693.00
144			\$6,798.00	\$5,234.46

1 APX 7000 Model 3.5 - Non Encrypted FIRE Standard

2	Qty	Model Number	Description		
3		H97TGD9PW1_N	APX Portable Hardware	\$2,632.00	\$2,237.20
4		QA00569AA	ADD: 7/800MHZ PRIMARY BAND	\$0.00	\$0.00
5		QA00574AA	ADD: VHF SECONDARY BAND	\$0.00	\$0.00
6		QA00577	Enhanced Large Color Display w/full Key pad (Req for Model 3.5)	\$500.00	\$425.00
7		Q806	Digital CAI	\$515.00	\$437.75
8		Q361	ASTRO 25 TRUNKING 9600 SW	\$300.00	\$255.00
9		H38	SMARTZONE OPERATION	\$1,500.00	\$1,275.00
10		QA00580	TDMA/DUAL MODE SOFTWARE	\$400.00	\$340.00
11		H499	ENH: SUBMERSIBLE (DELTA T)	\$250.00	\$212.50
12		H64	ALT: PUBLIC SAFETY YELLOW	\$25.00	\$21.25
13		G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	\$85.00
14		Q947	ADD: RADIO PACKET DATA	\$200.00	\$170.00
15		NNTN7038	APX 7000 IMPRES LIION 2900MAH SUBMERSIBLE (IP67) BATTERY	\$140.00	\$119.00
16		NNTN7080A	IMPRES SINGLE UNIT CHARGER	\$125.00	\$106.25
17		PMLN5323	LEATHER CARRY CASE, SWIVEL BELT LOOP	\$65.00	\$55.25

22

18	PMMN4062	IMPRES REMOTE SPEAKER MICROPHONE, NOISE CANCEL	\$107.00	\$90.95
19			<u>\$6,459.00</u>	<u>\$6,490.15</u>

20

21 **APX 6000 Model 3.5 - Non Encrypted POLICE Standard**

22	Qty	Model Number	Description		
23		H96TGD9PW1 N	APX6000 DIGITAL PORTABLE RADIO	\$2,050.00	\$1,742.50
24		Q806	Digital CAI	\$515.00	\$437.75
25		Q361	ASTRO 25 TRUNKING 9600 SW	\$300.00	\$255.00
26		H38	SMARTZONE OPERATION	\$1,500.00	\$1,275.00
27		G996	ADD: PROGRAMMING OVER P25 (OTAP)	\$100.00	\$85.00
28		Q947	ADD: RADIO PACKET DATA	\$200.00	\$170.00
29		NNTN7038	APX 7000 IMPRES LIION 2900MAH SUBMERSIBLE (IP67) BATTERY	\$140.00	\$119.00
30		NNTN7080A	IMPRES SINGLE UNIT CHARGER	\$125.00	\$106.25
31		PMLN5323	LEATHER CARRY CASE, SWIVEL BELT LOOP	\$65.00	\$55.25
32		PMMN4062	IMPRES REMOTE SPEAKER MICROPHONE, NOISE CANCEL	\$107.00	\$90.95
33				<u>\$5,102.00</u>	<u>\$4,336.70</u>

34

35 **APX 7000 Model 3.5 -Encrypted POLICE Secure Rugged**

36	Qty	Model Number	Description		
37		H97TGD9PW1_N	APX Portable Hardware	\$2,632.00	\$2,237.20
38		QA00569AA	ADD: 7/800MHZ PRIMARY BAND	\$0.00	\$0.00
39		QA00574AA	ADD: VHF SECONDARY BAND	\$0.00	\$0.00
40		QA00577	Enhanced Large Color Display w/full Key pad (Req for Model 3.5)	\$500.00	\$425.00
41		Q806	Digital CAI	\$515.00	\$437.75
42		Q361	ASTRO 25 TRUNKING 9600 SW	\$300.00	\$255.00
43		H38	SMARTZONE OPERATION	\$1,500.00	\$1,275.00
44		QA00580	TDMA/DUAL-MODE SOFTWARE	\$400.00	\$340.00
45		H499	ENH: SUBMERSIBLE (DELTA T)	\$250.00	\$212.50
46		Q15	ENH: AES/DES,DES-XL,DES-OFB	\$799.00	\$679.15
47		Q498	ENH: ASTRO P25 OTAR W/ MULTIKEY	\$740.00	\$629.00
48		NNTN7038	APX 7000 IMPRES LIION 2900MAH SUBMERSIBLE (IP67) BATTERY	\$140.00	\$119.00
49		NNTN7080A	IMPRES SINGLE UNIT CHARGER	\$125.00	\$106.25
50		PMLN5323	LEATHER CARRY CASE, SWIVEL BELT LOOP	\$65.00	\$55.25
51		PMMN4062	IMPRES REMOTE SPEAKER MICROPHONE, NOISE CANCEL	\$107.00	\$90.95
52				<u>\$7,673.00</u>	<u>\$6,522.05</u>

53

54 **APX 6500 Mobile Clear Dash Mount**

55		MXXURM9PW1N	APX 6500 MOBILE 10-35 WATT, 764-870MHZ N	\$2,072.00	\$1,864.80
56		G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$463.50
57		G51	ENH: SOFTWARE SMARTZONE/SINGLE TONE	\$975.00	\$877.50
58		G361	ENH: ASTRO PROJECT 25 TRUNKING SOFTWARE	\$300.00	\$270.00
59		G442	O5 CONTROL HEAD	\$432.00	\$388.80
60		G444	ADD: CONTROL HEAD SOFTWARE	\$0.00	\$0.00
61		G66	ADD: DASH MOUNT	\$125.00	\$112.50

Q3

62	W484	ALT: ANTENNA 3DB GAIN 764-870MMZ	\$38.00	\$34.20
63	W72	ADD: Keypad MIC	\$180.00	\$162.00
64	G831	ADD: SPKR 13W WATER RESISTANT	\$60.00	\$54.00
65	G996	ENH: PROGRAMMING OVER P25	\$100.00	\$90.00
66	W947	ADD: RS232 & IV&D PACKET DATA INTERFACE	\$200.00	\$180.00
67				
68			\$4,997.00	\$4,497.30

APX 6500 Mobile Encrypted Dash Mount

69				
70	MXXURM9PW1N	APX 6500 MOBILE 10-35 WATT, 764-870MHZ N	\$2,072.00	\$1,864.80
71	G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$463.50
72	G51	ENH: SOFTWARE SMARTZONE/SINGLETONE	\$975.00	\$877.50
73	G361	ENH: ASTRO PROJECT 25 TRUNKING SOFTWARE	\$300.00	\$270.00
74	G442	O5 CONTROL HEAD	\$432.00	\$388.80
75	G444	ADD: CONTROL HEAD SOFTWARE	\$0.00	\$0.00
76	G66	ADD: DASH MOUNT	\$125.00	\$112.50
77	Q498	ENH: ASTRO P25 OTAR W/ MULTIKEY	\$740.00	\$666.00
78	Q629	ENH: AES ENCRYPTION	\$740.00	\$666.00
79	W484	ALT: ANTENNA 3DB GAIN 764-870MMZ	\$38.00	\$34.20
80	W72	ADD: Keypad MIC	\$180.00	\$162.00
81	G831	ADD: SPKR 13W WATER RESISTANT	\$60.00	\$54.00
82	G996	ENH: PROGRAMMING OVER P25	\$100.00	\$90.00
83	W947	ADD: RS232 & IV&D PACKET DATA INTERFACE	\$200.00	\$180.00
84			\$6,477.00	\$5,829.30
85				

APX 6500 Mobile Clear Remote Mount

86				
87	MXXURM9PW1N	APX 6500 MOBILE 10-35 WATT, 764-870MHZ N	\$2,072.00	\$1,864.80
88	G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$515.00	\$463.50
89	G51	ENH: SOFTWARE SMARTZONE/SINGLETONE	\$975.00	\$877.50
90	G361	ENH: ASTRO PROJECT 25 TRUNKING SOFTWARE	\$300.00	\$270.00
91	G442	O5 CONTROL HEAD	\$432.00	\$388.80
92	G444	ADD: CONTROL HEAD SOFTWARE	\$0.00	\$0.00
93	G67	ADD: REMOTE MOUNT	\$297.00	\$267.30
94	W484	ALT: ANTENNA 3DB GAIN 764-870MMZ	\$38.00	\$34.20
95	W71	ADD: Keypad MIC	\$180.00	\$162.00
96	G831	ADD: SPKR 13W WATER RESISTANT	\$60.00	\$54.00
97	G996	ENH: PROGRAMMING OVER P25	\$100.00	\$90.00
98	W947	ADD: RS232 & IV&D PACKET DATA INTERFACE	\$200.00	\$180.00
99			\$5,169.00	\$4,652.10
100				

APX 7500 Motorcycle Clear

101				
102	M30URS9PW1 N	7/800 SINGLE BAND APX7500	\$2,272.00	\$2,044.80
103	G806	ENH: IMBE ASTRO DIGITAL CAI OPERATION	\$515.00	\$463.50

84

104	G51	ENH: ENHANCED SMARTNET OP APX	\$1,500.00	\$1,350.00
105	G361	ADD: P25 TRUNKING SOFTWARE	\$300.00	\$270.00
106	GA00580	ADD: TDMA OPERATION	\$400.00	\$360.00
107	G442	ADD: APX7500 O5 CONTROL HEAD	\$432.00	\$388.80
108	G444	ADD: CONTROL HEAD SOFTWARE	\$0.00	\$0.00
109	G138	ADD: APX7500 MOTORCYCLE CH SFW	\$0.00	\$0.00
110	G67	ADD: REMOTE MOUNT MID POWER	\$297.00	\$267.30
111	G335	ADD: ANT 1/4 WAVE 762-870 MHZ	\$14.00	\$12.60
112	W22	ADD: MOTORCYCLE PALM MIC	\$72.00	\$64.80
113	B18	ADD: AUXILARY SPKR 7.5 WATT	\$71.50	\$64.35
114	W15	ADD: WEATHER PROOF HOUSING ENCLOSURE BLACK	\$900.00	\$810.00
			<u>\$6,773.50</u>	<u>\$6,096.15</u>

25

Prepared by Council Staff - Oct 21, 2010

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19+20
Total additional resources available from previous FY to fund all agencies (in millions - per approved fiscal plan)	81.400	19.000	140.600	190.000	172.400	NA	NA	NA
Debt Service based on Approved CIP program (loaner program and multi-year replacement of 5,875 radios) - in millions	0.502	1.030	3.247	5.758	7.426	5.210	2.196	NA
OPTIONS THAT MEET THE CRITERIA for PAYMENT of \$3.3m from Sprint/Nextel								
Option 1 - Purchase 4,186 XTS5000 radios - avg price of \$4000. FY11 purchase of \$16.744 million	1.920	3.840	3.840	3.840	3.840	1.920		
Increase/(Decrease) to Debt Service	1.418	2.810	0.593	(1.918)	(3.586)	(3.290)		
Apply \$3.3 Payment	1.418	1.882	0.000	0.000	0.000	0.000		
Net Impact after applying payment	0.000	0.928	0.593	(1.918)	(3.586)	(3.290)		
Option 2 - Purchase 4,389 XTS5000 radios - avg price of \$4000. FY11 purchase of \$17.566 million	2.012	4.026	4.026	4.026	4.026	2.012		
Increase/(Decrease) to Debt Service	1.510	2.996	0.779	(1.732)	(3.400)	(3.198)		
Apply \$3.3 Payment	1.510	1.790	0.000	0.000	0.000	0.000		
Net Impact after applying payment	0.000	1.206	0.779	(1.732)	(3.400)	(3.198)		
Option 3 - Purchase 4,389 APX7000 assuming a 10% price reduction from proposed average. FY11 purchase of \$20.936 million	2.041	4.801	4.801	4.801	4.801	2.401		
Increase/(Decrease) to Debt Service	1.539	3.771	1.554	(0.957)	(2.625)	(2.809)		
Apply \$3.3 Payment	1.539	1.761	0.000	0.000	0.000	0.000		
Net Impact after applying payment	0.000	2.010	1.554	(0.957)	(2.625)	(2.809)		

20

Prepared by Council Staff - Oct 21, 2010

	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19+20
Option4 - Purchase 4,389 APX7000 assuming a 5% price reduction from proposed average (this same amount could also purchase mix of 2,500 APX7000 and 1,889 XTS5000 at proposed average prices. FY11 purchase of \$22.099 million	2.534	5.068	5.068	5.068	5.068	2.534		
Increase/(Decrease) to Debt Service	2.032	4.038	1.821	(0.690)	(2.358)	(2.676)		
Apply \$3.3 Payment	2.032	1.268	0.000	0.000	0.000	0.000		
Net Impact after applying payment	0.00	2.770	1.821	(0.690)	(2.358)	(2.676)		
Option 5 - Purchase 4,389 APX7000 at proposed avg price of \$5,300 (Executive's proposal)	2.637	5.274	5.274	5.274	5.274	2.637		
Increase/(Decrease) to Debt Service	2.135	4.244	2.027	(0.484)	(2.152)	(2.573)		
Apply \$3.3 Payment	2.135	1.165	0.000	0.000	0.000	0.000		
Net Impact after applying payment	0.000	3.079	2.027	(0.484)	(2.152)	(2.573)		
Debt Service for 1,486 non-public safety radios in FY14 at avg of \$2,300. FY14 purchase of \$3.3 million (Executive's proposal)	0.000	0.000	0.000	0.378	0.757	0.757	0.757	1.135

27



OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Isiah Leggett
County Executive

MEMORANDUM

September 29, 2010

TO: Nancy Floreen, President, County Council

FROM: Isiah Leggett, County Executive *Isiah Leggett*

SUBJECT: Amendment to the FY11-16 Capital Improvements Program and Supplemental Appropriation #5-S11-CMCG-1 to the FY11 Capital Budget
Montgomery County Government
Department of Technology Services
Public Safety System Modernization (No. 340901), \$21,616,000.

2010 SEP 29 PM 3:30

RECEIVED
MONTGOMERY COUNTY
COUNCIL

I am recommending an amendment to the FY11-16 Capital Improvements Program and supplemental appropriation to the FY11 Capital Budget in the amount of \$21,616,000 for Public Safety System Modernization (No. 340901). Appropriation for this project will accelerate the purchase of new radios to support Public Safety communications interoperability Countywide as well as meet the Federal Communications Commission (FCC) mandated 800 MHz frequency rebanding requirements for nationwide public safety radio frequency interoperability. This supplemental appropriation (\$21.616M) and increased funding (\$3.043 M) is needed to take advantage of a "Partial Payment in Lieu of Re-Banding" (PILR) offer from Sprint/Nextel toward the financing of new, upgraded, P25-compliant public safety radios. The PILR response deadline is November 5, 2010.

The FCC has set timelines for moving all Public Safety radio operations to the alternative frequencies identified and licensed in the current 800 MHz band. This "re-banding", to ensure that there is no frequency overlap between commercial and Public Safety broadcasts, must be complete by the end of 2011. Sprint/Nextel, through its contracted Transition Administrator, and working with Motorola, its technical partner, created a plan which proposed "loaner" radios so that Montgomery County could re-program existing radios for use in the alternative frequencies. Further evaluation revealed that the loaner program presents significant operational challenges. The program would require the installation of loaner mobile radios in vehicles and subsequent re-installation of the original re-programmed radios after the frequency switch was made. Further, a third replacement would occur when the County acquired the new radios approved in the CIP.

As an alternative, the Transition Administrator and Sprint/Nextel offered the County a PILR option which would require accelerating the purchase of new public safety radios planned to be completed over the next four years, to FY11 and provide \$3.3M toward the County's radio replacement plan. The amount offered was derived from an analysis of the costs that the loaner program was to cost Sprint/Nextel.

28

Nancy Floreen, President, County Council
September 29, 2010
Page 2

Acceptance of the PILR plan will accelerate implementation of the radio project within the CIP, reduce post re-banding operational costs, and allow the County to take advantage of the \$3.3 million PILR funding from Sprint/Nextel. While an additional appropriation is required for this project, this is offset by the additional PILR funding of \$3.3 million noted above as well as a reduction in future operating costs of an estimated minimum of \$3 million in maintenance contracts and County labor costs to complete the original "loaner" program for total savings of over \$6.3 million.

This request supports a significant upgrade in the type of public safety radio to be purchased from the previously planned Model 5000 to Motorola's APX7000 model. The APX7000 models will have a longer useful life than the Model 5000, provide multi-band interoperability, comply with P-25 standards and offer up-to-date "next generation" options. It should also be noted that acquisition of the Model 5000 radio would have required replacement of these radios within 3-4 years at a cost of another approximately \$24 million.

The recommended amendment is consistent with the criteria for amending the CIP because it will leverage a significant non-County source of funds and offers a significant opportunity which will be lost if not taken at this time. In order to minimize the fiscal impact of accelerating the debt-financed radio purchases, I recommend that the PILR be used to offset increased debt service costs in FY12 and FY13.

I recommend that the County Council approve this supplemental appropriation and amendment to the FY11-16 Capital Improvements Program in the amount of \$21,616,000 and specify the source of funds as Short-Term Financing.

I appreciate your prompt consideration of this action.

IL: jdc

Attachment: Amendment to the FY11-16 Capital Improvements Program and
Supplemental Appropriation #5-S11-CMCG-1

c: Kathleen Boucher, Assistant Chief Administrative Office, Offices of the County Executive
Steven Emanuel, Director, Department of Technology Services
Joseph Beach, Director, Office of Management and Budget
Jacqueline Carter, CIP Coordinator, Office of Management and Budget
John Cuff, Management and Budget Specialist, Office of Management and Budget
Jennifer Barrett, Director, Department of Finance

Resolution No: _____
Introduced: _____
Adopted: _____

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

By: Council President at the Request of the County Executive

SUBJECT: Amendment to the FY11-16 Capital Improvements Program and
Supplemental Appropriation #5-S11-CMCG-1 to the FY11 Capital Budget
Montgomery County Government
Department of Technology Services
Public Safety System Modernization (No. 340901), \$21,616,000

Background

1. Section 307 of the Montgomery County Charter provides that any supplemental appropriation shall be recommended by the County Executive who shall specify the source of funds to finance it. The Council shall hold a public hearing on each proposed supplemental appropriation after at least one week's notice. A supplemental appropriation that would comply with, avail the County of, or put into effect a grant or a Federal, State or County law or regulation, or one that is approved after January 1 of any fiscal year, requires an affirmative vote of five Councilmembers. A supplemental appropriation for any other purpose that is approved before January 1 of any fiscal year requires an affirmative vote of six Councilmembers. The Council may, in a single action, approve more than one supplemental appropriation. The Executive may disapprove or reduce a supplemental appropriation, and the Council may reapprove the appropriation, as if it were an item in the annual budget.
2. Section 302 of the Montgomery County Charter provides that the Council may amend an approved capital improvements program at any time by an affirmative vote of no fewer than six members of the Council.
3. The County Executive recommends the following capital project appropriation increases:

<u>Project Name</u>	<u>Project Number</u>	<u>Cost Element</u>	<u>Amount</u>	<u>Source of Funds</u>
Public Safety System Modernization	340901	Other	\$21,616,000	Short-Term Financing
TOTAL			\$21,616,000	

Amendment to the FY11-16 Capital Improvements Program and Supplemental Appropriation
#5-S11-CMCG-1

Page Two

4. This increase is needed to take advantage of a "Partial Payment in Lieu of Re-Banding" (PILR) offer from Sprint/Nextel toward the financing of new, upgraded, P25-compliant public safety radios. As an alternative to the currently planned "loaner" radio program, the PILR option would require accelerating the purchase of new public safety radios planned to be completed over the next four years, to FY11 and provide \$3.3M toward the County's radio replacement plan. In order to minimize the fiscal impact of accelerating the debt-financed radio purchases, it is recommended that the PILR be used to offset increased debt service costs in FY12 and FY13.
5. Acceptance of the PILR plan will accelerate implementation of the radio project within the CIP, reduce post re-banding operational costs, and allow the County to take advantage of the \$3.3 million PILR funding from Sprint/Nextel. While an additional appropriation is required for this project, this is offset by the additional PILR funding of \$3.3 million noted above as well as a reduction in future operating costs of an estimated minimum of \$3 million in maintenance contracts and County labor costs to complete the original "loaner" program for total savings of over \$6.3 million.
6. This request supports a significant upgrade in the type of public safety radio to be purchased from the previously planned Model 5000 to Motorola's APX7000 model. The APX7000 models will have a longer useful life than the Model 5000, provide multi-band interoperability, comply with P-25 standards and offer up-to-date "next generation" options. It should also be noted that acquisition of the Model 5000 radio would have required replacement of these radios within 3-4 years at a cost of another approximately \$24 million.
7. The recommended amendment is consistent with the criteria for amending the CIP because it will leverage a significant non-County source of funds and offers a significant opportunity which will be lost if not taken at this time.
8. The County Executive recommends an amendment to the FY11-16 Capital Improvements Program and a supplemental appropriation in the amount of \$21,616,000 for Public Safety System Modernization (No. 340901), and specifies that the source of funds will be Short-Term Financing.
9. Notice of public hearing was given and a public hearing was held.

Action

The County Council for Montgomery County, Maryland, approves the following action:

1. The FY11-16 Capital Improvements Program of the Montgomery County Government is amended as reflected on the attached project description form and a supplemental appropriation is approved as follows:

<u>Project Name</u>	<u>Project Number</u>	<u>Cost Element</u>	<u>Amount</u>	<u>Source of Funds</u>
Public Safety System Modernization	340901	Other	\$21,616,000	Short-Term Financing
TOTAL			\$21,616,000	

Amendment to the FY11-16 Capital Improvements Program and Supplemental Appropriation
#5-S11-CMCG-1
Page Three

This is a correct copy of Council action.

Linda M. Lauer, Clerk of the Council

Public Safety System Modernization -- No. 340901

Category
Subcategory
Administering Agency
Planning Area

General Government
County Offices and Other Improvements
County Executive
Countywide

Date Last Modified
Required Adequate Public Facility
Relocation Impact
Status

September 28, 2010
No
None.
On-going

EXPENDITURE SCHEDULE (\$000)

Cost Element	Total	Thru FY09	Est. FY10	Total 6 Years	FY11	FY12	FY13	FY14	FY15	FY16	Beyond 6 Years
Planning, Design, and Supervision	3,266	0	0	3,266	925	945	895	501	0	0	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	0	0	0	0	0	0	0	0	0	0	0
Construction	3,264	0	0	3,264	125	725	1,345	1,069	0	0	0
Other	51,376	2,947	96	48,333	23,000	11,000	11,000	3,333	0	0	0
Total	57,906	2,947	96	54,863	24,050	12,670	13,240	4,903	0	0	0

FUNDING SCHEDULE (\$000)

	Total	FY09	FY10	Total 6 Years	FY11	FY12	FY13	FY14	FY15	FY16	Beyond 6 Years
Federal Aid	3,343	2,947	96	300	300	0	0	0	0	0	0
G.O. Bonds	3,840	0	0	3,840	200	800	1,420	1,420	0	0	0
Short-Term Financing	50,723	0	0	50,723	23,550	11,870	11,820	3,483	0	0	0
Total	57,906	2,947	96	54,863	24,050	12,670	13,240	4,903	0	0	0

OPERATING BUDGET IMPACT (\$000)

	Total	FY09	FY10	Total 6 Years	FY11	FY12	FY13	FY14	FY15	FY16	Beyond 6 Years
Maintenance				2,408	48	0	680	500	680	500	
Net Impact				2,408	48	0	680	500	680	500	

DESCRIPTION

This project will provide for phased upgrades and modernization of computer aided dispatch (CAD) and voice radio systems used primarily by the County's public safety first responder agencies including Police, Fire and Rescue, Sheriff, Corrections and Rehabilitation and Emergency Management and Homeland Security. The modernization will include replacement of the current CAD system, replacement of mobile and portable radios, and voice radio communications infrastructure. The initial phase includes the CAD replacement, station alerting system replacement and the acquisition of the P-25 standard radio devices. A subsequent phase would include the replacement of the radio infrastructure, estimated at approximately \$50M. The current project includes \$1.7M for planning and design of the radio infrastructure replacement.

The previously approved Fire Station Alerting System Upgrades project (#451000) was transferred to this project in order to coordinate the upgrades with the new CAD system. The alerting system upgrades will modernize the fire station alerting systems at 32 existing stations, maintaining the ability to notify fire and rescue stations of emergencies. The alerting system, including audible and data signals, is essential for the notification of an emergency and the dispatch of appropriate response units from the county.

As voice, data and video are beginning to converge to a single platform, this project will provide a pathway to a modern public safety support infrastructure that will enable the County to leverage technology advances and provides efficient and reliable systems for first responders. This project will follow the methodologies and strategies presented in the Public Safety Systems Modernization (PSSM) plan completed in July 2009.

COST CHANGE

Increase is due to upgrading from the type of Public Safety radios to be purchased from the previously planned Model 5000 to Motorola's APX 7000 Model. The APX7000 models will have longer useful lives than the Model 5000, provide multi-band interoperability, comply with P-25 standards and offer up-to-date "next generation" options. The implementation schedule for the purchase of new public safety radios planned to be completed over FY11-14 has been accelerated to FY11 in order to take advantage of a "Partial Payment in Lieu of Rebanding" proposal from Sprint/Nextel.

JUSTIFICATION

The Public Safety Systems require modernization. The CAD system is reaching the end of useful life and does not meet the County's current operational requirements, impacting the response time of first responders to 9-1-1 calls. The CAD Roadmap Study, completed in March 2009, recommended replacement of the system to address existing shortcomings and prepare for the next generation 9-1-1 systems. Manufacturer's support for the voice radio system has begun to be phased out December 31, 2009. Beyond that date the manufacturer will only continue to provide system support on an "as available" basis, but will not guarantee the availability of parts or technical resources.

The CAD modernization will initiate with a detailed planning phase that will include the use of industry experts to assist in both business process analysis and developing detailed business and technical requirements for the new CAD system. Utilizing external consultants for this process will allow the County to incorporate lessons learned and best practices from other jurisdictions.

As more of the County's regional partners migrate to newer voice technologies, it will affect interoperable voice communications. To ensure that the County

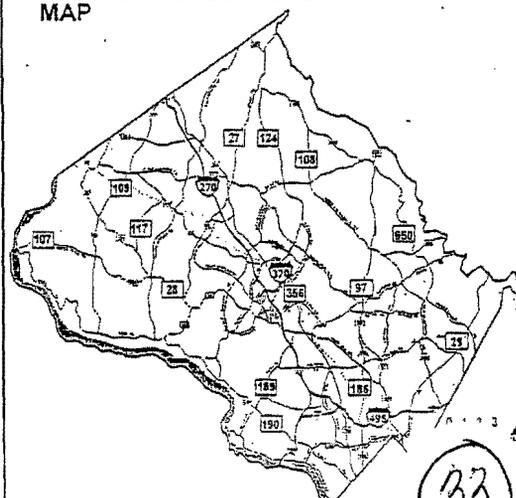
APPROPRIATION AND EXPENDITURE DATA

Date First Appropriation	FY09	(\$000)
First Cost Estimate	FY11	54,863
Current Scope		
Last FY's Cost Estimate		54,863
Appropriation Request	FY11	2,434
Appropriation Request Est.	FY12	12,670
Supplemental Appropriation Request		21,616
Transfer		0
Cumulative Appropriation		3,043
Expenditures / Encumbrances		2,947
Unencumbered Balance		96
Partial Closeout Thru	FY08	0
New Partial Closeout	FY09	0
Total Partial Closeout		0

COORDINATION

Public Safety Steering Group
Department of Technology Services
Department of Police
Montgomery County Fire and Rescue Service
Sheriff's Office
Department of Correction and Rehabilitation
Office of Emergency Management and Homeland Security
Department of Transportation
Department of Liquor Control
Montgomery County Public Schools (MCPS)
Maryland-National Park and Planning Commission (M-NCPPC) Park Police
Washington Metropolitan Area Transit Authority (WMATA)

MAP



Public Safety System Modernization -- No. 340901 (continued)

maintains reliable and effective Public Safety (voice radio) communications for the operations of its first responders and to sustain communications interoperability for seamless mutual aid among its regional partners, the County needs to commence planning and implementation of a program to upgrade and modernize its portable and mobile radio units and subsequently the communications infrastructure. Acceleration of the public safety radio purchases and increased funding is needed to take advantage of a "Partial Payment in Lieu of Re-Banding" offer from Sprint/Nextel toward the financing of new, upgraded, P-25 compliant public safety radios. Upgrading from the Model 5000 to the APX 7000 Model and accelerating the purchase of the public safety radios will support Public Safety communications interoperability Countywide as well as meet the Federal Communications Commission (FCC) mandated 800 MHz frequency rebanding requirements for nationwide public safety radio frequency interoperability. In addition, by accelerating the purchase of the public safety radios to FY11, the County will avoid the significant operational challenges of installing loaner radios and subsequent re-installation of the original re-programmed radios after the frequency modifications have been made. Further a third replacement would be required when the County acquired new radios.

The fire station alerting system upgrades were identified as a need under Section 5 of the MCFRS Master Plan (adopted by the County Council in October 2005) and detailed in the Station Alerting and Public Address (SA/PA) System for Fire/Rescue Stations, Rev 1, 2006. This project allows for the continuous and seamless functioning of the alerting systems within each fire station. A preliminary survey by DTS of existing conditions at all stations revealed system wide concerns, including inadequate spare parts inventory and lack of available maintenance support for alerting systems.

OTHER

CONDITIONS:

FY11 funds appropriated for this project must be used as follows: not more than:

- " \$300,000 for planning for public safety radio infrastructure replacement
- " \$550,000 for planning for CAD replacement
- " \$23,000 million for the purchase of P-25 compliant radios
- " \$75,000 for planning and \$125,000 for construction for station alerting

The CAD procurement request must reflect the County's interest in maintaining the station alerting functionality at the current level or better through the CAD system.

Funds appropriated for this project must not be used to purchase or implement the replacement CAD system or radio infrastructure until the Executive provides the Council with a detailed proposal and accurate cost estimates for the total project scope.

Funds for P-25 compliant radios in this project include funds to purchase a total of 203 radios to be used by the Park Police and 150 radios to be used by other M-NCPPC staff on a schedule agreed to by the County and M-NCPPC. Before the County may issue radios to Park Police or M-NCPPC staff, the County and M-NCPPC must sign a Memorandum of Understanding regarding the ownership, management, operation, and maintenance of the radios.

OTHER:

The RFP for the CAD replacement will include replacement of the following systems: CAD, mapping, and the existing Law Enforcement Records Management System (RMS), and Field Reporting Systems. In addition, replacement of the following systems will be considered for inclusion in the CAD replacement RFP: Fire Station Alerting, ProQA, False Alarm Reduction Section (FARS), Paging, and Fire House records management.

Coordination with participating departments/agencies and regional partners will continue throughout the project.

FISCAL NOTE

Funding in FY09 includes Urban Area Security Initiative (UASI) grant funding of \$2.055 million and Fire Act grant funding of \$988,000. Funding in FY11 includes Urban Area Security Initiative (UASI) grant funding of \$300,000. Estimated costs for the elements to be funded in the current phase of the project are: CAD replacement \$23.340M; purchase of interoperable radios \$29.376M; Station Alerting system \$3.489M; planning for radio infrastructure replacement \$1.701M.

Public Safety System Modernization -- No. 340901

Category
Subcategory
Administering Agency
Planning Area

General Government
County Offices and Other Improvements
County Executive
Countywide

Date Last Modified
Required Adequate Public Facility
Relocation Impact
Status

May 25, 2010
No
None.
On-going

EXPENDITURE SCHEDULE (\$000)

Cost Element	Total	Thru FY09	Est. FY10	Total 6 Years	FY11	FY12	FY13	FY14	FY15	FY16	Beyond 6 Years
Planning, Design, and Supervision	3,266	0	0	3,266	925	945	895	501	0	0	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	0	0	0	0	0	0	0	0	0	0	0
Construction	3,264	0	0	3,264	125	725	1,345	1,069	0	0	0
Other	48,333	2,947	96	45,290	1,384	12,454	17,104	8,301	6,047	0	0
Total	54,863	2,947	96	51,820	2,434	14,124	19,344	9,871	6,047	0	0

FUNDING SCHEDULE (\$000)

	Total	FY09	FY10	Total 6 Years	FY11	FY12	FY13	FY14	FY15	FY16	Beyond 6 Years
Federal Aid	3,343	2,947	96	300	300	0	0	0	0	0	0
G.O. Bonds	3,840	0	0	3,840	200	800	1,420	1,420	0	0	0
Short-Term Financing	47,680	0	0	47,680	1,934	13,324	17,924	8,451	6,047	0	0
Total	54,863	2,947	96	51,820	2,434	14,124	19,344	9,871	6,047	0	0

OPERATING BUDGET IMPACT (\$000)

	Total	FY09	FY10	Total 6 Years	FY11	FY12	FY13	FY14	FY15	FY16	Beyond 6 Years
Maintenance				2,408	48	0	680	500	680	500	
Net Impact				2,408	48	0	680	500	680	500	

DESCRIPTION

This project will provide for phased upgrades and modernization of computer aided dispatch (CAD) and voice radio systems used primarily by the County's public safety first responder agencies including Police, Fire and Rescue, Sheriff, Corrections and Rehabilitation and Emergency Management and Homeland Security. The modernization will include replacement of the current CAD system, replacement of mobile and portable radios, and voice radio communications infrastructure. The initial phase includes the CAD replacement, station alerting system replacement and the acquisition of the P-25 standard radio devices. A subsequent phase would include the replacement of the radio infrastructure, estimated at approximately \$50M. The current project includes \$1.7M for planning and design of the radio infrastructure replacement.

The previously approved Fire Station Alerting System Upgrades project (#451000) was transferred to this project in order to coordinate the upgrades with the new CAD system. The alerting system upgrades will modernize the fire station alerting systems at 32 existing stations, maintaining the ability to notify fire and rescue stations of emergencies. The alerting system, including audible and data signals, is essential for the notification of an emergency and the dispatch of appropriate response units from the county.

As voice, data and video are beginning to converge to a single platform, this project will provide a pathway to a modern public safety support infrastructure that will enable the County to leverage technology advances and provides efficient and reliable systems for first responders. This project will follow the methodologies and strategies presented in the Public Safety Systems Modernization (PSSM) plan completed in July 2009.

COST CHANGE

Increase due to inclusion of additional upgrades and modernization of computer aided dispatch (CAD), replacement of mobile and portable radios, planning for replacement of voice radio infrastructure, addition of Fire Station Alerting project, and the addition of expenditures and funding for M-NCPPC radios.

JUSTIFICATION

The Public Safety Systems require modernization. The CAD system is reaching the end of useful life and does not meet the County's current operational requirements, impacting the response time of first responders to 9-1-1 calls. The CAD Roadmap Study, completed in March 2009, recommended replacement of the system to address existing shortcomings and prepare for the next generation 9-1-1 systems. Manufacturer's support for the voice radio system has begun to be phased out December 31, 2009. Beyond that date the manufacturer will only continue to provide system support on an "as available" basis, but will not guarantee the availability of parts or technical resources.

The CAD modernization will initiate with a detailed planning phase that will include the use of industry experts to assist in both business process analysis and developing detailed business and technical requirements for the new CAD system. Utilizing external consultants for this process will allow the County to incorporate lessons learned and best practices from other jurisdictions.

The fire station alerting system upgrades were identified as a need under Section 5 of the MCFRS Master Plan (adopted by the County Council in October 2005) and detailed in the Station Alerting and Public Address (SA/PA) System for Fire/Rescue Stations, Rev 1, 2006. This project allows for the continuous and

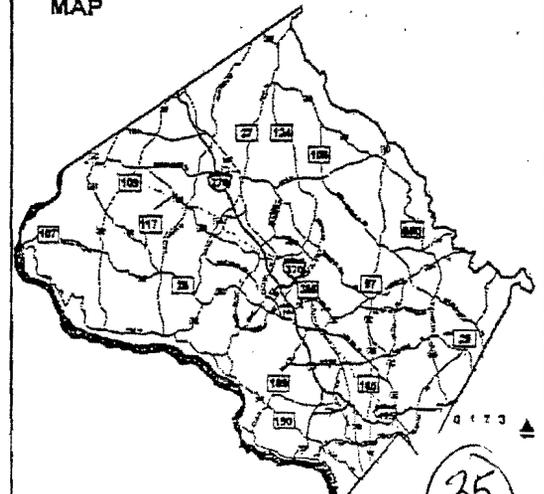
APPROPRIATION AND EXPENDITURE DATA

Date First Appropriation	FY09	(\$000)
First Cost Estimate	FY11	54,863
Current Scope		
Last FY's Cost Estimate		6,883
Appropriation Request	FY11	2,434
Appropriation Request Est.	FY12	14,124
Supplemental Appropriation Request		0
Transfer		0
Cumulative Appropriation		3,043
Expenditures / Encumbrances		2,947
Unencumbered Balance		96
Partial Closeout Thru	FY08	0
New Partial Closeout	FY09	0
Total Partial Closeout		0

COORDINATION

Public Safety Steering Group
Department of Technology Services
Department of Police
Montgomery County Fire and Rescue Service
Sheriff's Office
Department of Correction and Rehabilitation
Office of Emergency Management and Homeland Security
Department of Transportation
Department of Liquor Control
Montgomery County Public Schools (MCPS)
Maryland-National Park and Planning Commission (M-NCPPC) Park Police
Washington Metropolitan Area Transit Authority (WMATA)

MAP



Public Safety System Modernization -- No. 340901 (continued)

seamless functioning of the alerting systems within each fire station. A preliminary survey by DTS of existing conditions at all stations revealed system wide concerns, including inadequate spare parts inventory and lack of available maintenance support for alerting systems.

As more of the County's regional partners migrate to newer voice technologies, it will affect interoperable voice communications. To ensure that the County maintains reliable and effective Public Safety (voice radio) communications for the operations of its first responders and to sustain communications interoperability for seamless mutual aid among its regional partners, the County needs to commence planning and implementation of a program to upgrade and modernize its portable and mobile radio units and subsequently the communications infrastructure.

OTHER CONDITIONS:

FY11 funds appropriated for this project must be used as follows: not more than:

- * \$300,000 for planning for public safety radio infrastructure replacement
- * \$550,000 for planning for CAD replacement
- * \$1.384 million for the purchase of P-25 compliant radios
- * \$75,000 for planning and \$125,000 for construction for station alerting

The CAD procurement request must reflect the County's interest in maintaining the station alerting functionality at the current level or better through the CAD system.

Funds appropriated for this project must not be used to purchase or implement the replacement CAD system or radio infrastructure until the Executive provides the Council with a detailed proposal and accurate cost estimates for the total project scope.

Funds for P-25 compliant radios in this project include funds to purchase a total of 203 radios to be used by the Park Police and 150 radios to be used by other M-NCPPC staff on a schedule agreed to by the County and M-NCPPC. Before the County may issue radios to Park Police or M-NCPPC staff, the County and M-NCPPC must sign a Memorandum of Understanding regarding the ownership, management, operation, and maintenance of the radios.

OTHER:

The RFP for the CAD replacement will include replacement of the following systems: CAD, mapping, and the existing Law Enforcement Records Management System (RMS), and Field Reporting Systems. In addition, replacement of the following systems will be considered for inclusion in the CAD replacement RFP: Fire Station Alerting, ProQA, False Alarm Reduction Section (FARS), Paging, and Fire House records management.

Coordination with participating departments/agencies and regional partners will continue throughout the project.

FISCAL NOTE

Funding in FY09 includes Urban Area Security Initiative (UASI) grant funding of \$2.055 million and Fire Act grant funding of \$988,000. Funding in FY11 includes Urban Area Security Initiative (UASI) grant funding of \$300,000.

Estimated costs for the elements to be funded in the current phase of the project are: CAD replacement \$23.34M; purchase of interoperable radios \$26.3M; Station Alerting system \$3.489M; planning for radio infrastructure replacement \$1.7M.