

City of Alexandria, Virginia

MEMORANDUM

DATE: FEBRUARY 25, 2008

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: JAMES K. HARTMANN, CITY MANAGER 

SUBJECT: BUDGET MEMO # 6: PUBLIC SAFETY EMERGENCY
COMMUNICATIONS EQUIPMENT IN THE FY 2009-2014 CIP

The new police headquarters facility is scheduled for completion in mid-Calendar Year 2011 - three years from now. This new facility will allow for the consolidation of Police Department staff and operations currently located in three separate locations including, two leased facilities and the Public Safety Center on Mill Road. In addition, Police and Fire Emergency Communications will also be consolidated and co-located in one communications center in the new facility.

Three years from now, much of the technology and equipment used by the Police Department will either be obsolete or in need of replacement or upgrading. This includes not only the equipment in Police and Fire communications, but also the City-wide radio system, computers, telephones and software for the Computer-Aided Dispatch (CAD) and E-911 systems.

Staff has been planning and budgeting for the replacement of this equipment for a number years as part of the Information Technology Plan (IT Plan) planning process and the equipment replacement would have occurred regardless of the planned construction of a new Police facility. As technology improves and changes or is no longer supported, the City is faced with major equipment replacement expenditures by 2011.

To recognize this, a total of \$16.1 million has been proposed in the FY 2009 - FY 2014 Capital Improvement Program (CIP) to provide for the required replacement of public safety emergency communications equipment. In the context of the FY 2009 budget process, these monies have been moved from the IT Plan to the New APD Facility project. The majority of these expenditures are to occur in FY 2011.

Of the \$16.1 million, \$8.8 million is budgeted for the planned, life cycle replacement of the public safety communications equipment that will have reached or exceeded its useful life by 2011, including public safety radio subscriber units, including all portable and mobile radios and other public safety radio related equipment such as infrastructure and software for the Computer-Aided Dispatch and Records Management System (CAD/RMS) and Field Reporting. These critical public safety support systems provide for all radio communications for City staff, including Police, Fire, Transportation and

Environmental Services (T&ES) and Schools, as well as mutual aid for Arlington and Fairfax Counties and the Metropolitan Washington Airports Authority. These systems include all public safety emergency (911) and non-emergency call-answering and dispatch services; the immediate routing, tracking and recording of these calls; and capturing incident information that must be documented and retrieved.

The \$8.8 million required to replace these systems and equipment will be incurred regardless of whether or not the City constructs a new Police facility. However, the timing of the necessary replacements and the complexity of the emergency systems are such that we believe the replacement of the equipment should occur when the City outfits and occupies the new APD Facility in 2011.

The balance of the \$16.1 million, or \$7.3 million is required due to the relocation of the public safety communications center from the Public Safety Center to the New APD Facility, as well as the co-location of both Fire and Police Communications at the new APD Facility. These monies are required to purchase equipment that cannot be relocated from the Public Safety Center to the new APD Facility, including E-911 and the primary radio system. By 2011, the E-911 system will have to be replaced due to age whether the New APD Facility is constructed or not. In addition, these monies will also provide \$1.8 million for new radio consoles that will no longer be supported by the manufacturer by 2011.

The City's consultant, L. Robert Kimball and Associates, has reviewed our list of emergency communications equipment required by 2011 and also has reviewed the City's requirements for the new combined Communications Center. Kimball based their review on their recent experience with new communications centers in Arlington and Fairfax Counties and the District of Columbia.

EQUIPMENT SUMMARY: The total \$16.1 million requested for Public Safety Emergency Communications Equipment is summarized as follows:

- \$10.3 million for a new Radio Communications System, including replacement of the infrastructure and all subscriber units (portable and mobile radios) and related equipment. Of this amount, \$4.0 million is already included in the CIP.
- \$3.9 million for a new Emergency 911 (E-911) Telephone System and related dispatch systems; and
- \$1.9 million to replace other critical systems that will provide for the integration and support of the emergency communication systems.

Radio Communications System (\$10.3 million): The majority of the \$10.3 million cost for the City radio system is \$7.0 million to purchase new portable (handheld) and mobile (installed in vehicles) radios, or subscriber units. There are 1,700 such units in the City today, used primarily by public safety departments, and also issued to City employees in the streets, transportation, Schools, General Services, and emergency planning occupations. To maintain interoperability with our neighboring jurisdictions, it will be essential to buy radios that operate with higher frequency baud rates that interpret digital radio signals. This capability will supplement the analog communications capacity we now have. The current City stock of subscriber units have met or exceeded their normal 10-year replacement life, and will be 13 to 15 years old by 2011.

The remaining \$3.3 million would replace aging infrastructure that will need replacement by the 2011-2013 timeframe. We propose to install a dual-mode system that will add digital communication while maintaining analog communication, and that will interface with National Mutual Aid channels. Arlington, Fairfax, Stafford, and Prince George's Counties are currently installing digital radio systems. Prince William and Loudoun Counties are planning to incorporate digital radio communications technology. Alexandria, therefore must incorporate digital capacity in our radio system to maintain regional interoperability and comply with national interoperability standards.

Motorola, our radio manufacturer, periodically discontinues the supply and support of older generations of radio equipment as new technology is developed and brought to market. Several of the infrastructure or hardware components of the City radio system were placed in use in 1996 to 1998, and have reached their 10-year age for normal replacement. Motorola has advised the City Radio Manager that they will discontinue support for our radio consoles by 2011, which is a major factor driving the need to replace radio infrastructure.

Emergency-911 Telephone System (\$3.9 million): Construction of the new Police Facility will require the Police Communications Center at 2003 Mill Road to be re-located to the new building. In addition, we will be moving the Fire Communication Center (now at Fire Station 204) into the new Police building, to co-locate City public safety E-911 operations in one location.

The Police Communications Center houses the City's primary service answering point for all 911 and public safety service calls. By 2011, the E-911 system will be five years old and due for replacement based on evolving technology and system obsolescence. It is virtually impossible to move and integrate a critical system of this nature from one location to another while ensuring no breaks in service. Therefore, we recommend that a new E-911 telephone system be installed in the new Police Facility, at a cost of approximately \$1.8 million. The remaining \$2.1 million will provide for radio console equipment, back-up radios at the console positions and related workstations and space configuration to accommodate the co-location of Police and Fire communications operations if approved. Motorola has advised the City Radio Manager that they will discontinue support for our radio consoles by 2011, which is a major factor driving the need to replace radio infrastructure.

Other Critical Systems (\$1.9 million): Several other systems provide integration and support to emergency communications systems in the City, including telecom infrastructure, uninterrupted power source (UPS), generator, Emergency Notification System, VCIN equipment, fire station alerting, etc.

Proposed Changes to Information Technology (IT) Plan: The current (FY 2008 to FY 2013) IT Plan and the proposed (FY 2009 to FY 2014) IT plan reflected the need to replace some of the public safety radio system units at a cost of \$3.65 million (pg. 7-36 of the CIP). The cost of replacing these radios was also counted within the \$16.1 million Information Technology element of the New Police Facility costs (pg. 6-62). This means that the \$3.65 million (funded in FY 2010) can be removed from the IT Plan. However, subsequent to preparation of the IT Plan, City staff was told by the company who

provided the Computer Aided Dispatch (CAD) system that due to age and technological obsolescence, the computer would no longer support the CAD system as of 2011. As a result CAD replacement funding of \$2.5 million will be needed in FY 2010. This combined with the \$3.65 reduction in the IT Plan radio replacement costs means that the proposed IT Plan element of the CIP can be reduced by \$1.15 million in FY 2010.

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