



# WESTMINSTER

## Staff Report

TO: The Mayor and Members of the City Council  
DATE: January 9, 2013  
SUBJECT: Briefing and Post-City Council Briefing Agenda for January 14, 2013  
PREPARED BY: J. Brent McFall, City Manager

*Please Note: Study Sessions and Post City Council briefings are open to the public, and individuals are welcome to attend and observe. However, these briefings are not intended to be interactive with the audience, as this time is set aside for City Council to receive information, make inquiries, and provide Staff with policy direction.*

Looking ahead to Monday night's Briefing and Post-City Council meeting briefing, the following schedule has been prepared:

Dinner	6:00 P.M.
Council Briefing ( <i>The public is welcome to attend.</i> )	6:30 P.M.
POST BRIEFING ( <i>The public is welcome to attend.</i> )	

### PRESENTATIONS

None at this time.

### CITY COUNCIL REPORTS

1. Proposed Citywide Radio P25 Digital Radio Communications Backbone System and Related Subscriber Equipment

### EXECUTIVE SESSION

None at this time.

### WESTMINSTER ECONOMIC DEVELOPMENT AUTHORITY

### INFORMATION ONLY

None at this time.

Items may come up between now and Monday night. City Council will be apprised of any changes to the post-briefing schedule.

Respectfully submitted,

J. Brent McFall  
City Manager



**Staff Report**

City Council Post Meeting  
January 14, 2013



**SUBJECT:** Proposed Citywide Radio P25 Digital Radio Communications Backbone System and Related Subscriber Equipment

**Prepared By:** Lee Birk, Chief of Police  
Russ Bowers, Public Safety Communications Administrator

**Recommended City Council Action**

Direct Staff to pursue the purchase and installation of infrastructure to support a citywide radio system associated with the Citywide Radio System Replacement Project as outlined in this Staff Report.

**Summary Statement**

- The City of Westminster currently operates a Harris Radio Communications system that is 20 years old. The system is antiquated, has reached an end of life status, and many components are manufacturer discontinued. The system is jointly owned by the cities of Westminster and Arvada and its operation is governed by an IGA adopted in 1992 and amended in 1994.
- This system provides emergency and non-emergency radio service to the Police and Fire Departments and is also utilized by other City Departments, including Parks, Recreation and Libraries and Public Works and Utilities. The radio system serves Arvada in a very similar capacity, except that the Arvada Fire Department (AFD) is a Special District and is not a partner or part owner of the system. Instead, they are a user of the system and their participation is governed by a User Agreement executed in 2007.
- City Council has identified replacement and upgrade of the radio system as a high priority item on the Strategic Plan’s 2012-2013 Management Agenda and started appropriating funds into a capital project account in 2011 as part of a multi-year effort to accumulate funds to accomplish this objective.
- In April of 2012, both cities jointly issued and received a Request for Information (RFI) from prospective radio vendors. Staff has closely reviewed the responses and engaged in follow-up discussions and negotiations with a specific vendor, Cassidian Communications (Cassidian). Westminster Staff believes that for technology, economic and business model reasons, Cassidian is the vendor of choice and Staff recommends pursuing a contract for this project with Cassidian. Cassidian has also extended a limited time special pricing offer.
- Arvada notified us on December 14, 2012 that they have elected to discontinue our radio system partnership and move in an independent direction. Westminster Staff feels strongly that purchasing the Cassidian radio system is still the best course of action for Westminster.

**Expenditure Required:** \$2,383,975 Cassidian P25 System Infrastructure, Consoles, Tower Site Development and Contingency

**Source of Funds:** General Capital Improvement Fund (Public Safety Tax), General Capital Outlay Replacement Fund (GCORF – Public Safety Tax)

## **Policy Issue**

Should City Council direct Staff to proceed with the purchase and installation of the Cassidian P25 digital interoperable simulcast radio system and related subscriber equipment?

## **Alternatives**

1. City Council could choose to delay the replacement of this radio system until some future date. Staff does not recommend this alternative because timely system replacement is critical for both Public Safety and other City operations. In addition, the purchase costs are very competitive for a limited time and will increase significantly beyond the limited time offer.
2. City Council could direct Staff to prepare an RFP to solicit other proposals and choose to select a different vendor. Staff believes that the recommended vendor offers unique system design that meets or exceeds the demands of the City's infrastructure to include an open architecture design that guarantees compatibility with many other radios and interfaces. This approach provides the City with significant cost savings, along with operational flexibility and choice. Cassidian has also expressed an interest in designating this installation as a model show place site for their equipment and technology. Cassidian has also expressed their desire to use Westminster as a Beta test site and to also be a participant on their Research and Development Board.

## **Background Information**

The City's radio system functions as the City's main communication backbone to Police, Fire, Public Works and Utilities, and Parks, Recreation and Libraries, and other departments and facilities located throughout Westminster and beyond the City limits when mutual aid events occur. This basic system has been in continuous operation 24 hours per day, seven days a week, for 20 years. The City's communications equipment provides the critical link for public safety employees and other city employees to the Public Safety Dispatch Center and between each other in the field.

The City's current radio system was manufacturer discontinued in 2010, which means that there is very limited technical support and a marked scarcity of parts. The original design of this aging system is essentially a one of a kind hybrid, making it a custom system. This has resulted in challenging and expensive service issues. Additional shortcomings of the existing system are insufficient radio coverage in certain areas of the City as well as potential single points of failure.

In 2011, City Council started appropriating funds into a capital project account as part of a multi-year effort to accumulate funds for replacement of this system. The intent of the replacement project is to provide a P25 digital interoperable simulcast radio system with state of the art technology that will provide for enhanced radio coverage and reliable and dependable service. P25 is an industry standard that ensures that radios from various manufacturers can communicate with each other. The recommended replacement will provide enhanced, digital based communications, as well as state of the art monitoring and control to the transmission sites and subscriber equipment.

Our current radio system is jointly owned by both the cities of Westminster and Arvada and the costs of the system are shared equally. Ownership and operational issues are governed by an original Intergovernmental Agreement (IGA) issued in 1992 and amended in 1994. Both cities have recognized the need to replace the current radio system and to upgrade to a P25 system. Both cities collaborated to jointly issue a Request for Information (RFI) to prospective radio vendors in April of 2012. Prior to the RFI, Arvada and Westminster jointly funded an independent radio engineering firm to study the topography and related radio frequency coverage compatibility from a number of pre-determined potential radio transmission sites. The pre-validated sites were identified in the RFI.

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Five responses were received to the RFI. Four of those responses were from firms with the experience and technology to meet the City's needs. Those respondents were Cassidian, Harris, Motorola and Tait. Due to the nature of this project, each proposal varied in some aspects of design, number of proposed transmit and receive sites, equipment options and other requirements, making strict comparisons difficult. The proposals ranged from three to five radio transmission sites and the price range was from \$4.9 million to \$7 million for a combined system serving both cities. Cassidian was the lowest initial proposal at \$4.9 million for the combined two city system.

As Westminster Staff closely reviewed the proposals, Cassidian stood out for a number of reasons besides the initial costs. In Staff's opinion, their system design offers more redundancy and fail safe features. It is a purely digital system and the open design of the system allows for non-proprietary purchase options, which would save the City significant financial resources. Unlike the other respondents to the RFI, Cassidian does not manufacture radios for United States' customer use, so there is no incentive to push or restrict radio purchases to the Cassidian brand and they guarantee compatibility with a number of radios of different manufacturers. This would allow the City to pursue less costly radio options that still meet operational needs for different departments. Replacement switches, servers and other key components can be purchased from other vendors through competitive bidding and are not restricted to only Cassidian manufacture. Servers and switches can be extremely expensive components and this arrangement with Cassidian would result in substantive dollar savings. Staff believes the Cassidian proposal offers the lowest on-going maintenance and long term cost of ownership option.

Cassidian is also offering a 10 year, non-obsolescence technology guarantee for both hardware and software components of their system, and radio coverage guarantees of 95% for open areas and 90% for buildings. The annual system ownership and equipment maintenance is estimated to cost \$175,000 in the first year, with annual escalators tied to the Consumer Price Index for the Denver-Boulder metropolitan area capped at a maximum of 5% increase in any given year. One benefit of this new radio system is the elimination of the Eldorado Mountain transmitter site, which includes the elimination of the City's share of \$30,000 per year lease payment (total cost is \$60,000 per year and is shared 50/50 with Arvada). This lease payment, and other funds previously allocated for the current radio system maintenance cost, will be reallocated to cover this annual maintenance contract cost by the Police and Fire Departments. It is anticipated that this new annual maintenance contract will be cost neutral for 2013 and 2014 based on the adopted budget.

Staff also became aware that Cassidian, who does not currently have a public safety radio system installation in Colorado, was looking for a site in Colorado to serve as a showcase and model site for their product. While they do not have a public safety radio installation in Colorado, Cassidian is well known to Staff as they are the City's current provider for the E911 phone system. Numerous agencies throughout Colorado utilize their E911 phone system. Cassidian is among the largest radio system manufacturers in the world, number two behind Motorola, and a leader outside of North America, and they are now aggressively marketing in North America. Staff began discussions and price negotiations with Cassidian and, as a result, was able to negotiate a reduced price of \$3.5 million from their original \$4.9 million proposal for a combined three site radio system serving both Westminster and Arvada. Cassidian also presented an option for a two site system that would serve only Westminster should Westminster choose to go first or alone. This pricing discount was offered through December 18, 2012. To secure this pricing discount the City Manager has signed a non-binding letter of intent with Cassidian subject to City Council authorization during the month of January.

The City of Arvada undertook an independent review of the proposals and a review of their options, including dissolving the current partnership and securing a radio system independently or with different Jefferson County agency partners. On December 14, 2012, the City of Arvada notified Staff of their decision to dissolve the current partnership and of their intent to secure radio services independently of Westminster.

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In light of Arvada's decision, a Westminster-only radio system would require only two transmission sites versus three. The overall cost of the project would drop from approximately \$3.5 to \$2.4 million. However, Westminster would absorb 100% of the acquisition costs versus a 50-50% cost split if the two cities had pursued the combined two city, three site option. The costs being reflected include acquisition of the Cassidian Radio System Infrastructure, required P25 consoles, tower site development and contingency funds. All the RFI responses would require new consoles. The Cassidian option provides the opportunity to purchase consoles competitively outside of the Cassidian package. Staff has determined that the overall cost of purchase and on-going maintenance of the Avtec P25 consoles is more cost effective by purchasing the consoles directly from Avtec, rather than part of the Cassidian package. Consequently, Staff will be utilizing GSA pricing in dealing directly with Avtec regarding the proposed console purchases. Staff will also pursue possible console funding through the E911 Authority Board, which potentially could reduce or eliminate the City's console costs.

\$1,900,380	Cassidian P25 System Infrastructure
\$ 383,595	Avtec P25 Consoles (GSA pricing direct with Avtec)
\$ 80,000	Tower/Site Development
\$ 20,000	Tower site Contingency
<b>\$ 2,383,975</b>	<b>Total Radio System Infrastructure</b>
\$ 996,200	P25 Portable/Mobile Radios *
<b>\$ 3,380,175</b>	<b>Total Expenditure</b>

\* (Staff would return for City Council's consideration of a radio replacement purchase at a later date)

A total of \$642,423 has been accumulated to date for this radio replacement. An additional \$263,000 is included within the Adopted 2013 Budget and another \$294,000 is included in the 2014 Budget. However, if this project proceeds in 2013, the 2014 funds would be available for other uses to be evaluated during the mid-year budget review during the summer of 2013. As discussed during the Capital Improvement Program (CIP) budget development process in August, Staff recommends utilizing \$1,000,000 from the General Capital Outlay Replacement Fund-Public Safety Tax (GCORF-PST) balance, which currently has approximately \$1.96 million available. Staff is recommending a slightly higher amount (an additional \$78,552) to fully fund this project. In addition, Staff recommends reallocating \$400,000 from the Firefighting Simulator/Burn Building project, which has a balance of \$522,000. The Fire Department has identified other fire simulator options that are more cost effective than constructing a separate facility and recommends utilizing part of these funds for the radio replacement system and will return with a proposed use for the remaining funds.

The total funding for the radio system replacement project is proposed as follows:

\$ 642,423	Previous funded authorized in the CIP
\$ 263,000	Adopted 2013 Budget
\$ 1,078,552	GCORF-PST balance
\$ 400,000	Firefighting Simulator/Burn Building CIP project
<b>\$ 2,383,975</b>	<b>Total Project Cost (including contingency)</b>

It is important to note that regardless of what vendor or manufacturer is chosen for a P25 Radio system, it will be necessary to purchase all new hand held portable radios and mobile vehicle installed radios to meet the P25 standard. There are currently 760 handheld, mobile or fixed radios in utilization citywide from the golf courses, water treatment facilities, parks and utilities crews to police and fire personnel and vehicles. The cost to replace all of these radios is estimated at \$996,200. These radio purchases would be pursued competitively and would not be required until the new radio system is scheduled to go live. Staff would return for City Council's consideration of a radio replacement purchase at a later date. Also, radio

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selection and pricing can be selective and vary by operation, as not all City radios will need to meet the specifications and requirements demanded of public safety radios.

Staff is also currently pursuing, with previous City Council authorization, two grants to purchase radios. One grant is with the Department of Homeland Security Regional Grant for \$276,500 for the purchase of 200 portable radios for the Police Department. The second grant is with the Federal Emergency Management Agency (FEMA) Assistance to Firefighter Grant for \$144,604 towards the purchase of 22 mobile and 54 portable radios. Staff expects to be notified in early 2013 if the City has been successful with these grant applications. Should the City be awarded the total of \$421,104 in grant funds, this will significantly reduce the costs in acquiring new radios. The funds for the total radio replacement purchases (i.e., the \$996,200) have not been completely accumulated and Staff is identifying options to fully fund this replacement in 2013 should the Cassidian radio system replacement proceed.

Should City Council direct Staff to proceed with an independent purchase of the radio system, Staff from both Westminster and Arvada are committed to working cooperatively through the transition to ensure that both cities maintain effective public safety radio systems through the process of transitioning to independent systems. Staff is also in the process of commencing discussions with other jurisdictions in the area about their potential interest in partnering with the City of Westminster as a radio system user with the objective being shared costs. If the City moves forward with the Cassidian replacement project now, that will not preclude one or multiple partners from joining Westminster to expand the system to serve multiple communities. Staff recognizes the cost savings and benefits that could be achieved through a cooperative venture such as this, while maintaining the City's best interests.

This project achieves the City Council's Strategic Plan goals of a Financially Sustainable City Government and a Safe and Secure Community through well-maintained infrastructure and providing efficient, cost-effective internal and external services.

Respectfully submitted,

J. Brent McFall  
City Manager