



CITY OF MARTINEZ

**CITY COUNCIL AGENDA
March 21, 2012**

TO: Mayor and City Council

FROM: Gary D. Peterson, Chief of Police

SUBJECT: Resolution Authorizing Expenditure Appropriations to Purchase Radio Equipment and Facilitate Infrastructure R56 Grounding Work

DATE: March 12, 2012

RECOMMENDATION:

Adopt a resolution authorizing 1) a budget adjustment to the 2011/2012 budget so radio equipment scheduled to be purchased on July 1, 2012, can be purchased prior to March 30th at a discounted price and 2) expend funds for R56 grounding work in the police dispatch center and equipment room.

BACKGROUND:

In the wake of Hurricane Katrina, federal legislation was passed requiring interoperability between public safety agencies, including police and fire agencies. As part of this effort, the FCC mandated local police agencies change the frequency they operate on by January 1, 2013.

The federal government allocated grant funds to replace the radios used in dispatch centers, but the expense for radios used by officers in the field, including vehicle and portable radios, is borne by local jurisdictions. Contra Costa County and Alameda County's FCC compliant system is organized under a joint powers agreement as the East Bay Regional Communications System Authority (EBRCSA). On September 15, 2011, the City Council adopted a Resolution approving an operating agreement with the EBRCSA, which authorized the City's participation in the project.

The City Council also approved the following fiscal impacts:

1. (a) Allocate \$128,235 to buyout the debt service resulting from the execution; and, (b) implement the operational agreement. Funding to come from undesignated fund balance of \$49,635 and \$78,600 from designated emergency capital fund.
2. Authorize the transfer of \$450,000 from undesignated fund balance to designated for the purchase of the P25 portable and mobile radios before January 1, 2013.

The expenditure of \$128,235 to buyout the debt service resulting from the execution and implementation of the operational agreement was subsequently reduced to \$116,200 because additional agencies joined the authority. That expenditure occurred on February 17, 2011.

Currently, the Martinez Police Department maintains eighty-three (83) mobile and portable radios. Department radios are not P25 compliant, and they will not work on the EBRCSA system and do not meet 2013 FCC requirements. In fact, current police radios, purchased more than fifteen years ago, have reached the end of their service life.

Staff reviewed the Office of the Sheriff, Contra Costa County's field study of the different radio manufacturers. The study recommended the Motorola products. Staff field-tested the Motorola APX7500 and APX6000 portables and concurred with the CCCSO's assessment. While all manufacturers provided competitive bids to all impacted law enforcement agencies through the Office of the Sheriff, Contra Costa County. Motorola was selected by our staff on the basis of performance and cost.

The department is in the process of acquiring eighteen Motorola APX7500 Dual Band Interoperable portable radios through another funding stream.

The project requires the purchase of sixty-five (65) additional radios; thirty-three (33) Motorola APX6000 I 700/800 MHz Interoperable single band portable radios; and thirty-one (31) Motorola APX6500 700/800 MHz Interoperable single band mobile (vehicle) radios and associated accessories such as bank chargers, extra batteries and shoulder microphones.

The \$450,000 from the undesignated fund balance to be utilized for this project is budgeted in the 2012/2013 budget. Hence, all radios and accessories are scheduled to be purchased on or after July 1, 2012. However, Motorola is providing a promotional and a trade-in incentive that will reduce the amount of funds needed for the purchase of the radios by \$44,700.

Table A illustrates the EBRCSA promotion for the APX6000 radio valid through March 30, 2012. Each portable radio is discounted \$450. Additionally, a one to one trade-in will provide another \$200 discount per unit. Therefore, the purchase of portable units before March 30, 2012, will decrease the cost of the project \$21,450.

Table B illustrates the EBRCSA promotion for the APX6500 radio, which is valid through March 30, 2012. Each mobile radio is discounted \$550. Additionally, a one to one trade-in will provide another \$200 discount per unit. Purchasing mobile units before March 30, 2012, will decrease the cost of the project \$23,250.00.

R56 Grounding

Communication network downtime significantly impacts daily operations and much of the potential downtime can be the result of non-compliance to minimum communication site standards. If the communications equipment isn't properly grounded and incorporates surge suppression, it can significantly jeopardize the network, and it also puts those who maintain the site at significant risk. Originally developed by Motorola in 1987 to provide internal guidelines and requirements for the installation of communication equipment, infrastructure and facilities, the "Standards and Guidelines for Communication Sites" (R56) forms the minimum standards required to provide expected system performance, reliability and equipment longevity. The Motorola guidelines have since become the recognized standard in the industry and serve as the most complete and rigorous specification for the protection of communication system equipment installed at public safety and commercial wireless communication sites.

On February 7, 2012, in anticipation of the need to install two (2) EBRCSA project dispatch consoles, representatives from Contra Costa County IT, Motorola and the City of Martinez conducted an R56 grounding study on the City of Martinez dispatch site and equipment/radio/computer room.

On February 28, 2012, we received a written report outlining the work that needed to be completed to meet the R56 standard. See Attachment A.

On March 12, 2012 we received an initial estimate of \$11,720.97 from our radio service provider to complete the needed grounding work for the project.

FISCAL IMPACT:

Funding for this project is allocated in the 2012/2013 budget. The total cost to purchase radios without the discounts discussed herein totals \$295,417.32. By purchasing radios for this project before March 30, 2012, three months in advance of the next fiscal year, we will expend \$250,717.32, which is net savings of \$44,700 to the project. Staff is requesting a transfer of \$300,000 to ensure that the radios can be purchased at the discounted price and the R56 grounding work can be completed in a timely manner.

ACTION:

Approve resolution authorizing a budget transfer from the already allocated funds from the FY2012/2013 budget in the amount of \$300,000 to the FY2011/2012 budget so funds can be expended to advance the EBRCSA project.

Attachments:
Attachment A
Resolution

APPROVED BY:


City Manager

**Table
1**

| COST AND EQUIPMENT REQUIREMENTS <i>P25 Interoperable Portable - 700/800 MHz</i> | | | |
|---|---|-------------------|---------------------|
| <i>QTY</i> | <i>DESCRIPTION</i> | <i>PRICE</i> | <i>PRICE</i> |
| 33 | APX6000 I 700/800 MHz 3 watt P25 Trunked Portable Radio | \$3,809.00 | \$125,697.00 |
| 33 | Service Advantage - Motorola Depot 4 YR (1YR standard) | \$162.00 | \$5,346.00 |
| 33 | EBRCSA Promotion APX6500 (Valid through 3/30/12) | \$(450.00) | \$(14,850.00) |
| 33 | Trade-In Incentive (One for one radio, valid through 3/30/12) | \$(200.00) | \$(6,600.00) |
| 33 | Equipment: | \$3,321.00 | \$109,593.00 |
| 33 | 800 MHz programming done by Contra Costa County | * | * |
| | Installation | | |
| 33 | 8.25% Sales Tax: | \$274.00 | \$9,042.00 |
| 33 | System Total: | \$3,595.00 | \$118,635.00 |

**Table
2**

| COST AND EQUIPMENT REQUIREMENTS <i>Single Band P25 Interoperable Mobile - 700/800 MHz</i> | | | |
|---|---|-------------------|---------------------|
| <i>QTY</i> | <i>DESCRIPTION</i> | <i>PRICE</i> | <i>PRICE</i> |
| 31 | APX6500 700/800 MHz 35 watt Mobile P25 Radio | \$4,440.00 | \$137,640.00 |
| 31 | Service Advantage - Motorola Depot 4 YR (1YR standard) | \$246.00 | \$7,626.00 |
| 31 | EBRCSA Promotion APX6500 (Valid through 3/30/12) | \$(550.00) | \$(17,050.00) |
| 31 | Trade-In Incentive (One for one radio, valid through 3/30/12) | \$(200.00) | \$(6,200.00) |
| 31 | Equipment: | \$3,936.00 | \$122,016.00 |
| | 800 MHz programming done by Contra Costa County | * | * |
| | Installation | | |
| 31 | 8.25% Sales Tax: | \$324.72 | \$10,066.32 |
| 31 | System Total: | \$4,260.72 | \$132,082.32 |

RESOLUTION NO. -12

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MARTINEZ
AUTHORIZING AN ADJUSTMENT TO THE 2011/2012 BUDGET BY
TRANSFERRING \$300,000 FROM THE 2012/2013 BUDGET TO THE
2011/2012 BUDGET TO ADVANCE THE EBRCSA PROJECT

WHEREAS, the City Council of the City of Martinez authorized the police department's participation in the East Bay Regional Communications System Authority (EBRCSA); and

WHEREAS, the City can reduce the project costs by \$44,700 for portable and mobile radios through vendor discounts; and

WHEREAS, the discount described herein expires on March 30th and the City Council recognizes the need to adjust the budget to purchase the radios and accessories in advance of the original July 1, 2012, purchase date to realize \$44,700 savings; and

WHEREAS, the R56 grounding work needs to be completed before project dispatch consoles can be installed.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Martinez hereby authorizes the Finance Manager to adjust the 2011/2012 budget by moving the already allocated \$300,000 from the 2012/2013 budget to the 2011/2012 budget for the purpose stated herein.

* * * * *

I HEREBY CERTIFY that the foregoing is a true and correct copy of a resolution duly adopted by the City Council of the City of Martinez, at a Regular Meeting of said Council held on the 21st day of March, 2012, by the following vote:

AYES:

NOES:

ABSENT:

RICHARD G. HERNANDEZ, CITY CLERK
CITY OF MARTINEZ

Martinez Dispatch

525 Henrietta St. Martinez, Ca

February 7, 2012



Equipment Room

Equipment room is located on 1st floor, the Dispatch is located on the 2nd floor. Suggest relocation of existing CEB; this would put the soon to be obsolete equipment in a spot for easy removal in the future, and allowing the new long term EBRCSA rack to be placed in a location that will be best served for the next 2-3 decades.

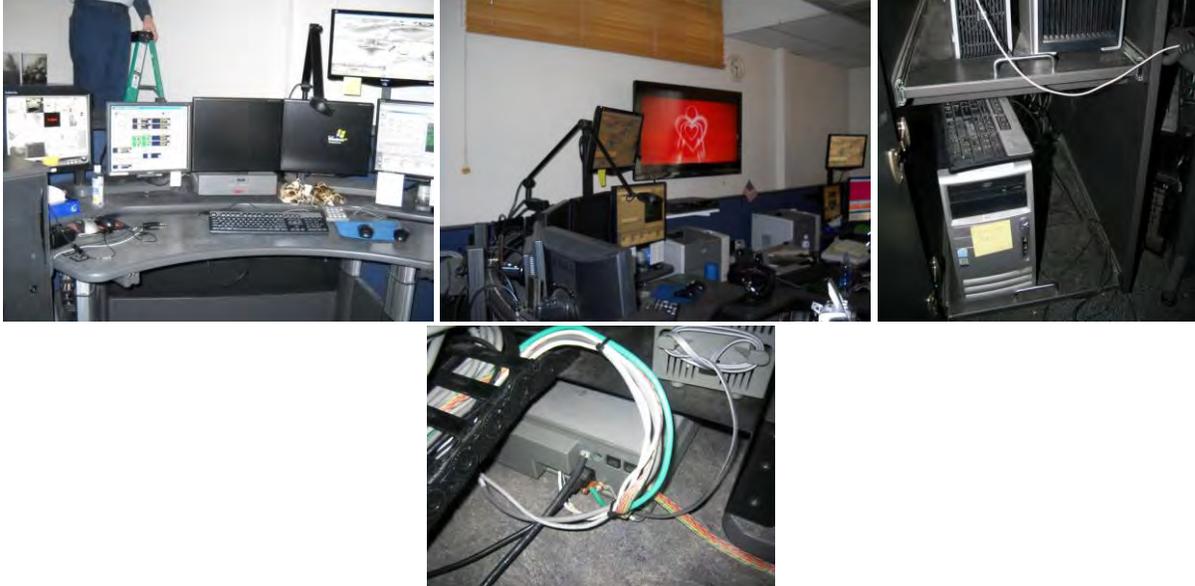


The existing ground system to be upgraded, see Grounding section below for details.

First Aid Kit required



Console Positions



Upgrade to console grounding, see grounding section below for more details

Two types of fire suppression extinguisher required in Dispatch ABC and BC

Switched powers strips to be replaced with non switched surge protected strips

CIE Grounds to be upgraded to irreversible compression lugs

Grounding

An existing ground buss in the equipment room will need to be upgraded to accommodate two hole lugs. Existing ground terminations, and bonds will require upgrade to irreversible compression crimp two hole lugs. An unused conduit will be used to run the new #2 Thhn ground into the dispatch area. A new Master ground bar (MGB) will be installed in the equipment room.

From new MGB a single #2, thhn cable run (approx 125') from the equipment room MGB to a new Sub System buss ground (SSGB), to be installed in the dispatch center. This bar should be no smaller than 2" height, with a thickness no less than 1/4" and length variable based on quantity of bonded components. From this SSGB a single #2 Thhn will be run to a Ground Buss Bar at each of the 6 console positions, where a SSGB smaller ground buss is installed. From this point #6 thhn conductors will be bonded to all components requiring a bond to ground.

Cable tray grounding will need upgrade to meet compliance. Cable tray requires bond back to MGB, and each section bonded with ground jumpers

Cable Routing



Cables exit equipment room via conduit in the floor, transition into wall vertically to second floor above the false ceiling. The cables drop into existing channels and distribute out to the positions. Interface and ground cables are currently routed in this conduit

Issues

- Future back-up control stations for two main dispatch channels
- Confirm UPS power circuit availability, and termination of power in duplex box at rack location.
- 13 year old generator is not 100% reliable, does not start on occasions.- Not in EBRCSA scope, an issue identified during audit