



# Memorandum

**TO:** HONORABLE MAYOR  
AND CITY COUNCIL

**FROM:** Julia H. Cooper

**SUBJECT:** SEE BELOW

**DATE:** November 1, 2021

Approved

Date

11/5/2021

**SUBJECT: PURCHASE ORDERS FOR RADIO COMMUNICATION SYSTEM UPGRADES AT THE AIRPORT AND THE REGIONAL WASTEWATER FACILITY**

## RECOMMENDATION

Adopt a resolution authorizing the City Manager to:

- (a) Amend the open purchase order with Motorola Solutions, Inc. (“Motorola”) (Chicago, IL) under the Agreement between Motorola and the Silicon Valley Regional Interoperability Authority dated June 26, 2020, for radio communications system upgrade and related equipment and services for the Regional Wastewater Facility (RWF), to retroactively continue and extend the term of the purchase order from September 9, 2021 through March 30, 2023 and to increase compensation by a cumulative not-to-exceed amount of \$41,434, for a revised maximum compensation not to exceed \$1,603,375.
- (b) Execute a purchase order with Motorola Solutions, Inc. (“Motorola”) (Chicago, IL) under the Agreement between Motorola and the Silicon Valley Regional Interoperability Authority dated June 26, 2020, for radio communications system upgrade and related equipment and services for the Airport in the amount not to exceed \$936,889 through March 30, 2023.
- (c) Amend purchase orders as required for unanticipated changes in requirements, quantities and sales tax for a contingency amount not-to-exceed \$254,028, subject to the appropriation of funds.

## OUTCOME

Authorizing the City Manager to take these actions will allow the City to upgrade the obsolete, unsupported radio equipment systems with new, supported radio communication systems improving efficiencies and reliability in providing City services.

## **BACKGROUND**

The Department of Public Works Radio Shop division manages the Citywide radio communications program on behalf of various City departments. The Motorola brand and associated equipment and system is the City standard for radio communications, not only to support public safety departments (Police and Fire), but also for all other Citywide departments that use radio communication system equipment, including the following departments -- Parks, Recreation and Neighborhood Services, Transportation, Public Works, Environmental Services and Airport. Environmental Services and Airport use these radio communication systems to efficiently maintain their extensive daily operations in their respective locales.

Radio communication systems run on specialized and proprietary software and hardware. The City standardized its radio communication system (including mobile, portable, and base-station radios and related equipment, hardware and software) to Motorola in 1984. In 2017, a brand name/sole-source determination was approved under the Director of Finance authority due to interoperability and cost savings considerations pursuant to San José Municipal Code Sections 4.12.240.B.2 (interoperability) and 4.12.240.B.5 (cost savings). Interoperability of the radio communications system is critical to maintaining reliable operations, particularly for emergency communication. Based on this assessment, it was determined the ongoing purchase and maintenance of the Motorola equipment was necessary to ensure interoperability of the system as it would be cost prohibitive to replace all existing hardware and software with another brand.

### *Background on Contracts and Prior Council Authority*

The City historically leverages cooperative agreements to purchase Motorola radio equipment and ongoing technical support services in accordance with San José Municipal Code Section 4.12.225.B.3. By leveraging these cooperative agreements, the City expedites purchases and takes advantage of volume discounts. The City is a participating agency in Silicon Valley Regional Interoperability Authority's ("SVRIA") through a Joint Powers Agreement executed on April 21, 2010<sup>1</sup> and restated on November 3, 2016<sup>2</sup>. SVRIA consists of nineteen (19) member agencies, including the City of San José, whose mission is to identify, coordinate and implement communication interoperability solutions to its member agencies by integrating voice and data communications between law enforcement, fire and rescue services, emergency medical services, and emergency management for routine operations, critical incidents, and disaster response and recovery.

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<sup>1</sup> 2010 Council Memo: [www3.sanjoseca.gov/clerk/Agenda/20100330/20100330\\_0302.pdf](http://www3.sanjoseca.gov/clerk/Agenda/20100330/20100330_0302.pdf)  
April 2010 Agreement: <https://records.sanjoseca.gov/Contracts/CON6364660.PDF>

<sup>2</sup> 2016 Council Memo: [http://sanjose.granicus.com/Viewer.php?view\\_id=51&event\\_id=2151&meta\\_id=588728](http://sanjose.granicus.com/Viewer.php?view_id=51&event_id=2151&meta_id=588728)  
November 2016 Restated Agreement: <https://records.sanjoseca.gov/Contracts/CON6364661.PDF>

In December 2014<sup>3</sup>, City Council authorized the purchase of radio communications equipment and services with Motorola under the terms and conditions of a cooperative agreement dated September 25, 2012 between the County of Santa Clara and Motorola Solutions, with the County acting as lead agency for SVRIA. The Council authorization included the purchase of additional future equipment and services, subject to the appropriation of funds. City staff subsequently learned Santa Clara County would no longer be the lead agency for SVRIA's relationship with Motorola, and that a new agreement between the City and Motorola would be negotiated directly with SVRIA. The new agreement was executed on June 26, 2020, and contract pricing is based on a Request for Proposal conducted by the Houston-Galveston Area Council in 2018.

### *Regional Wastewater Facility*

The Environmental Services Regional Wastewater Facility (RWF) Wastewater Management division operates a radio communications system that serves as a critical means of communication between the RWF main computer room and operations and maintenance staff in the field, which includes the core operations area with various buildings, basements, tunnels and residual solids management area. The existing radio communications system at RWF is under the Motorola brand and has been in place at least since 1990. The existing system has experienced numerous breakdowns over the years and have subsequently been repaired; however, parts are becoming obsolete and no longer supported by the original manufacturer. The fixed equipment – transmitters and receivers – were upgraded to newer models in 2004, but these radios have reached end-of-life and are now unsupported. Upgrading the current radio system will support reliability of a critical system for the RWF, lower maintenance and repair costs of the current radio communications system and increase coverage in some of the core operations area.

In 2019, Public Works and Environmental Services initiated conversations with Motorola to commence an upgrade of the radio communications system at RWF. Citing the prior December 2014 Council authorization, in November 2020, the Finance Department issued a purchase order to Motorola on behalf of RWF in the amount of \$1,561,941, subject to the pricing of the Houston-Galveston agreement. The Regional Wastewater Facility and the Public Works department now require a change order in the amount of \$41,434 to add new equipment for the Co-Generation Building. Approval of the recommendation in this memorandum would retroactively approve the November 2020 purchase and allow staff to complete the upgrade with the associated change order.

### *Airport*

Similarly, the existing radio communications system at the Airport is under the Motorola brand and has been in place since at least 1990. The Airport Department has a simultaneous broadcasting (simulcast) radio system that consists of a controller, base station transceivers, multiple voting receivers, and digital voting equipment<sup>4</sup>. The last Airport Radio Infrastructure

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<sup>3</sup> Item 2.18 of December 16, 2014 Council Synopsis: <https://www.sanjoseca.gov/Home/ShowDocument?id=46894>

<sup>4</sup> Voting receivers located throughout the Airport send received audio back to the voting equipment, which selects the best signal and sends it to the consoles and transceivers.

upgrade with Motorola equipment was performed by the City of San José Radio Shop in 2009/2010 when Terminal B was completing construction. This system supports the two Federal Communications Commission (FCC) regulated Airport frequencies.

The current network of electronic components are over 10 years old. A large majority of the components are at end-of-life or discontinued by the manufacturer. If parts fail, City staff may be unable to obtain replacement parts or restore services. If the Airport had a major failure on the network, the Airport would not only lose its own operational coverage, but possibly negatively impact public safety as well. To ensure operability, an upgrade to the existing system is required.

### **ANALYSIS**

As referenced above, the City currently leveraged the Request for Proposal conducted by the Houston-Galveston Area Council (HGAC) in 2018 through the SVRIA's Agreement with Motorola executed on June 26, 2020. This agreement provides participating members a discount off list price for equipment and set rates for labor services. Additional discounts for equipment and hardware may be further negotiated by agencies.

***Regional Wastewater Facility:*** The radio communications upgrade replaces existing fixed transceivers with redundant current-model transceivers, replaces old fixed receivers with a distributed antenna system for improved coverage in the tunnels, replaces handheld radios with current, fully supported radios, and includes implementation and some on-site training services. The pricing in the Houston-Galveston agreement provided up to a 15% discount for equipment, hardware and software required for the RWF's system upgrade. Separately, Motorola extended an additional 37% discount on the overall system in 2020.

The change order RWF requires for this project is for additional equipment and services needed at the new Co-Generation Building, for a total cost of \$41,434, inclusive of a 10% discount.

***Airport:*** This radio communications upgrade will replace existing unsupported fixed transceivers and voting equipment with current-model, fully supported fixed transceivers, voting receivers and associated equipment in a two-channel, three-site simulcast configuration. The upgrade will also add a new BDA/DAS system (Bi-Directional Amplifier/Distributed Antenna System) in the basement areas of Terminals A and B to provide Silicon Valley Regional Communication System (SVRCS) coverage for Police and Fire where it is currently inadequate.

Motorola Solutions will provide ordering/manufacturing, staging, shipping, inventorying, optimization and testing of the proposed equipment. The City's Radio Shop will provide installation services, with the exception of the BDA/DAS installation that Motorola Solutions will complete.

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A training plan will be furnished to the Airport comprised of targeted coursework developed and delivered by expert instructors. This plan will effectively provide the City's personnel with a comprehensive understanding of the proposed system and user equipment.

The pricing in the Houston-Galveston agreement provides up to a 10% discount for the equipment, hardware and software required for the Airport's system upgrade<sup>5</sup>. Motorola is extending a 36% additional system discount if a purchase order is issued by November 17, 2021.

**Warranty & Support:** Both systems include a 12-month warranty period after system acceptance. The Public Works Radio Shop is expected to support and maintain both systems after this period.

**Office of Equality Assurance:** City of San José Prevailing Wage is applicable under these purchase orders.

## **CONCLUSION**

Approval of this recommendation will allow the City to upgrade the obsolete, unsupported radio equipment systems with new, supported radio communications systems improving efficiencies and reliability in providing City services.

## **EVALUATION AND FOLLOW-UP**

This memorandum will not require any follow-up from staff.

## **CLIMATE SMART SAN JOSE**

The recommendation in this memo has no effect on Climate Smart San José energy, water, or mobility goals.

## **PUBLIC OUTREACH**

This memorandum will be posted on the City's Council Agenda website for the November 16, 2021 Council Meeting.

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<sup>5</sup> The HGAC discount extended to the RWF project is higher than that extended to the Airport because of the differences in equipment purchased. The RWF project requires portable handheld radios which has a higher discount rate under HGAC.

**COORDINATION**

This memorandum has been coordinated with City Attorney’s Office, City Manager’s Budget Office and the Departments of Airport, Environmental Services, and Public Works.

**COMMISSION RECOMMENDATION/INPUT**

This item is scheduled to be heard at the November 18, 2021 Treatment Plant Advisory Committee Meeting (TPAC) for their recommendation and input.

**FISCAL/POLICY ALIGNMENT**

This action is consistent with the City Council-approved budget strategy to effectively manage the City’s technological resources to enable and enhance the delivery of City services and projects.

**COST SUMMARY/IMPLICATIONS**

1. AMOUNT OF RECOMMENDATION/COST OF PROJECT: \$2,540,264

2. COST ELEMENTS OF AGREEMENT/CONTRACT:

**Regional Wastewater Facility**

Radio Frequency (RF), Distributed Antenna System (DAS) and Subscriber Equipment, Hardware and Software	\$ 1,395,394
Equipment SVRIA/HGAC Discount	(213,044)
System Discount	(515,967)
Implementation Services (including project management and training)	833,917
Estimated Sales Tax 9.25% (on equipment)	61,641
Subtotal	<hr/> 1,561,941
Change Order for Co-Generation Building (Equipment, Implementation, Sales Tax)	41,434
Total (RWF)	<hr/> <b>\$1,603,375</b>
Contingency (10% of project cost)	160,338
Total Not-To-Exceed (RWF)	<hr/> <b>\$1,763,713</b>

**Airport**

Conventional Radio Equipment, Distributed Antenna System (DAS) Equipment	527,811
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Equipment SVRIA/HGAC Discount	(50,920)
System Incentive for PO issued by November 17, 2021	(190,789)
Implementation Services (including project management and training)	613,898
Estimated Sales Tax 9.375% (on Equipment Only)	36,889
Total (Airport)	<b>\$936,889</b>
Contingency (10% of project cost)	93,690
Total Not-To-Exceed (Airport)	<b>\$1,030,579</b>

3. SOURCE OF FUNDING: This project will be funded from the Airport Renewal and Replacement Fund (527) and San José-Santa Clara Treatment Plant Operating Fund (513).
  
4. FISCAL IMPACT: For the Airport, it is anticipated that the operating and maintenance costs to maintain the Distributed Antenna System (DAS) will be approximately \$12,000 annually. The maintenance funding will be requested through the 2022-2023 budget process. In addition, approximately \$80,000 in one-time costs for cabling equipment and installation services required for the Airport radio communication system upgrade project will be issued against a City open purchase order with ProTec, which was established through a competitive Request for Proposal Process conducted in Fiscal Year 2017-2018. For RWF, there are sufficient funds available in the current operating budget to maintain this radio system. No additional budget actions are necessary.

**BUDGET REFERENCE**

Fund #	Appn. #	Appn. Name	Total Appn.	Amount for Contract	2021-2022 Proposed Operating Budget Page*	Last Budget Action (Date, Ord. No.)
513	0762	NP/EQUIP-ENVIRONMENTAL SVCS	\$34,343,701	\$1,603,375	X - 90	6/22/2021, Ord. No. 30621

\* The 2021-2022 Adopted Operating Budget was approved on June 15, 2021 and adopted on June 22, 2021 by the City Council.

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Fund #	Appn #	Appn Name	Current Total Appn	Amount for Contract	2021-2022 Adopted Capital Budget Page	Last Budget Action (Date, Ord. No.)
527	6004	Airport Technology Services	\$1,534,000	\$936,889	796	06/22/2021, Ord. No. 30621

**CEQA**

Determination of Consistency with the Norman Y. Mineta San José International Airport Master Plan Update Project Environmental Impact Report and Addenda thereto (Resolution Nos. 67380 and 71451), and the San José-Santa Clara Water Pollution Control Plan Master Plan Project Environmental Impact Report and Addenda thereto (Resolution No. 76858), File No. ER21-275.

/s/  
JULIA H. COOPER  
Director of Finance

For questions about the radio communications program, please contact Walter Lin, Deputy Director of Public Works at [walter.lin@sanjoseca.gov](mailto:walter.lin@sanjoseca.gov). For questions about the agreements, please contact Jennifer Cheng, Deputy Director of Finance, at [jennifer.cheng@sanjoseca.gov](mailto:jennifer.cheng@sanjoseca.gov).