



City Council Staff Report

From: City Manager

Report Type: CONSENT CALENDAR

Lead Department: Public Works

Meeting Date: June 19, 2023

Report #:2302-0978

TITLE

Approval of a Purchase Order with Aviat Networks in the Amount of \$438,907 for Radio Communication Systems for the New Public Safety Building Capital Project (PE-15001), including \$399,007 for Basic Services and \$39,900 for Additional Services; CEQA: Environmental Impact Report for the PSB and New California Avenue Area Parking Garage (Resolution No. 9772)

RECOMMENDATION

Staff recommends that Council approve and authorize the City Manager or their designee to execute the attached purchase order with Aviat Networks (Attachment A) for radio communication systems for the New Public Safety Building Capital project (PE-15001) in an amount not to exceed \$438,907, including \$399,007 for basic services and \$39,900 for additional services.

EXECUTIVE SUMMARY

The City of Palo Alto participates in a regional public safety radio system that operates as a large “ring” of microwave communications links between key emergency and essential service nodes such as police stations, Sheriff’s offices, city halls, hospitals, fire stations, and other sites. In addition to the ring that provides redundancy, some locations are spurs with only one connection. Approval of the recommended purchase order will allow the new Public Safety Building (PSB) to become a node on the ring, like the Palo Alto Civic Center is currently, as included in the PSB’s design and project budget. The PSB will also become a spur when the node is completed, enhancing resiliency. Attachment B shows the current and proposed topology of the ring.

The microwave ring is also critical to the Tri-Cities Consortium of Palo Alto, Mountain View, and Los Altos to increase redundancy and cooperation between the emergency dispatch operations of the three cities.

BACKGROUND

In 2010, Council approved an agreement to form the Silicon Valley Regional Interoperability Authority (SVRIA), a Joint Powers Authority (JPA) in partnership with other Santa Clara County municipalities and agencies to enhance and coordinate regional public safety data and radio

communications systems. SVRIA services the Santa Clara Operation Area, which includes the County of Santa Clara, its fifteen cities and towns, and all special districts. Council approved a subsequent Memorandum of Understanding (MOU) on June 22, 2015 to participate in a multi-year project with other SVRIA members to fund and construct the Silicon Valley Radio Communications (SVRCS) System.¹

The SVRCS is a NAPCO Project 25 (P25) compliant trunked digital communications system using the 700 MHz frequency spectrum currently in use in Santa Clara County. Radio sites and dispatch centers are connected through the SVRIA E-COMM digital microwave system (ECOMM) that provides connectivity to remote government radio sites. ECOMM is a dedicated microwave network connecting all Public Safety Answering Points (9-1-1 centers), selected key public safety facilities, and numerous radio sites throughout Santa Clara County. ECOMM provides secure data and voice communications to public safety agencies and other cooperating agencies for mission critical applications.

The City Managers of Palo Alto, Mountain View, and Los Altos (Tri-Cities Consortium) agreed to a broad initiative of sharing public safety technology as a method to conserve resources, improve response times, increase the resiliency and redundancy of these critical systems, as well as to enhance interoperable communications between the three cities' first responders. This initiative was part of a Council Study Session on May 2, 2011² that presented the "virtual consolidation" concept and the framework to share public safety technology and communication systems.

ANALYSIS

In March 2019, Aviat Networks (Aviat) conducted a Microwave Path Survey Report to verify site locations and to determine antenna sizes and centerlines to establish a microwave communications system for the Public Safety Building (PSB), to make the PSB a new site on the SVRIA ECOMM system. Aviat is the exclusive maintenance contractor for the ECOMM system as authorized by SVRIA³.

The microwave path survey included the following services:

- Identifying geographical location of sites and antenna, waveguide length, and tower requirements.
- Verifying path clearance objectives for each of the paths from existing or new tower locations.

¹ City Council, June 22, 2015; Agenda Item #6, SR #5811, <https://www.cityofpaloalto.org/files/assets/public/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2015/id-5811.pdf>

² City Council, May 2, 2011; Agenda Item #2, SR #1587, <https://www.cityofpaloalto.org/files/assets/public/from-archive/agendas-minutes-reports/reports/city-manager-reports-cmrs/2011/1587-tri-cities-virtual-cad.pdf>

³SVRIA, May 11, 2023; Agenda Item #8a, <https://svria.org/wp-content/uploads/2023/05/SVRIA-Board-of-Directors-Agenda-05-11-2023-REVISED-05-08-2023.pdf>

- Documenting obstruction, critical points, and reflection points in each of the paths.
- Verifying tower coordinates and site elevations.
- Establishing coordinates and height requirements for new towers, as needed for governmental agency registration and licenses filed by SVRIA.
- Confirming antenna centerlines and waveguide length requirements.
- Cataloging antennas on the existing structures noting any space limitations in the survey report.

Adding the PSB as an independent site on the ECOMM ring enables the PSB to maintain access to the ECOMM network in the event a large-scale critical event disrupts connectivity to the Palo Alto Civic Center. Ringed networks can be built up to provide scalability and redundancy in the network. The radio sites are independent from each other. As a result, a fault or failure at one site will not affect another site.

When reviewing interoperability in terms of voice radio system issues, the interoperability of data is of equal importance. Public safety agencies have become more reliant on various systems that capture and store information. Systems such as Computer Aided Dispatch (CAD), Records Management Systems (RMS), and intelligence databases all contain information that is of value to multiple agencies.

The Tri-Cities Consortium developed the virtually consolidated public safety network using the ECOMM digital microwave system as the primary connection between the cities. Due to the critical applications being accessed over the ECOMM network, it was determined to have the new PSB connected to the ECOMM network as an independent site as part of the SVRCS network.

Aviat is part of the National Association of State Procurement Officials (NASPO) ValuePoint cooperative purchasing program which facilitates public procurement solicitations and agreements. Cooperative purchasing programs allow government organizations to use a single solicitation with the best value and favorable terms and conditions. Per Palo Alto Municipal code 2.30.360(j), the City is able to take advantage of the Aviat contract since it was competitively solicited and publicly awarded through NASPO ValuePoint.

Project Timeline

While the project is progressing well toward completion, it should be noted that construction contract substantial completion dates often change during construction as change orders can authorize additional time for various issues that affect the critical path. Staff and the construction manager believe that the PSB is on track for substantial completion in October.

Following substantial completion, the “move-in” phase of the project will continue for several months for the installation and testing of several highly-technical and critical Public Safety, IT, Security, and Communications systems that will be housed at the new PSB. Activities that will be performed during the move-in phase, include:

- Completion of punchlist items – minor issues identified during inspections to be corrected prior to final completion of the construction contract, but that do not necessarily impact substantial completion
- Furniture Delivery and Installation
- Installation, Testing and Commissioning of City / Police IT systems
- Commissioning of 9-1-1 telephone and dispatch systems
- Commissioning of Radio Systems and Equipment
- Phased relocation of Dispatch Operations
- Integration of the new facility with neighboring agencies, including Silicon Valley Regional Interoperability Authority (SVRIA)
- Phased re-location of Police, Fire Department Administration and Office of Emergency Services staff from the existing facility to the new PSB site

Some move-in items will occur during construction. The move-in phase is expected to continue for 3-4 months after substantial construction completion, with the new facility projected to become fully-operational in early 2024.

FISCAL/RESOURCE IMPACT

Adding the PSB in the ECOMM loop between the Palo Alto Civic Center to Mountain View will cost \$399,007 including a one-time management discount and freight charges. A contingency amount of \$39,900 will be included in the contract for unforeseen conditions during installation, for a total contract amount of \$438,907. Funding for this purchase order is available in the Fiscal Year 2023 budget for the New Public Safety Building Capital Project (PE-15001) and is included in the overall PSB budget approved by Council when the construction contract was approved in early 2021.

STAKEHOLDER ENGAGEMENT

City staff coordinated with the Tri-Cities Consortium and SVRIA in development of the network changes and specifications.

ENVIRONMENTAL REVIEW

An Environmental Impact Report for the PSB and the New California Avenue Area Parking Garage was prepared and was certified by Council on June 11, 2018, by adoption of Resolution No. 9772⁴.

ATTACHMENTS

Attachment A: Aviat Purchase Order

Attachment B: ECCOM Topology

APPROVED BY:

Brad Eggleston, Director Public Works/City Engineer

⁴ Resolution 9772, 2018:

<https://www.cityofpaloalto.org/files/assets/public/city-clerk/resolutions/reso-9772.pdf?t=40475.53>