



To: Bay Area UASI Approval Authority
From: Jeff Blau, Interoperability Program Manager
Date: February 13, 2014
Re: Item 7: P25 Systems Update

Staff Recommendation:

Information only

Action or Discussion Item:

A report on regional progress towards first responder interoperability, followed by a question and answer period.

Background:

The BayRICS P25 System of Systems currently has eight P25 Trunked Radio Systems in various stages of completion:

- East Bay RCS (EBRCS)
- San Mateo IRC (SMIRC)
- City of Oakland
- BART Underground
- Silicon Valley RCS (SVRCS)
- City & County of San Francisco
- Marin Emergency Radio Authority (MERA)
- Monterey County

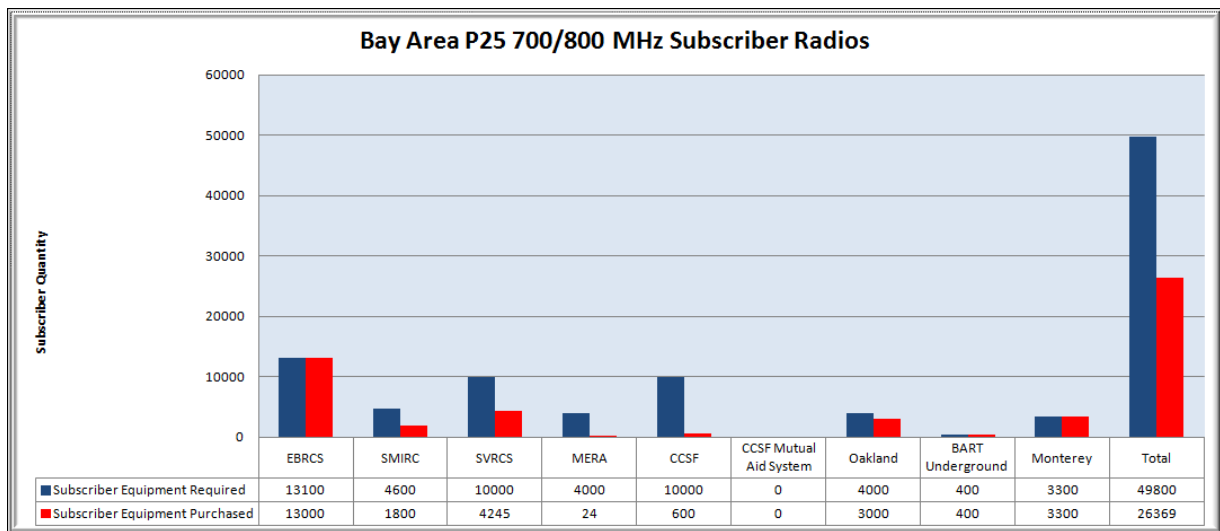
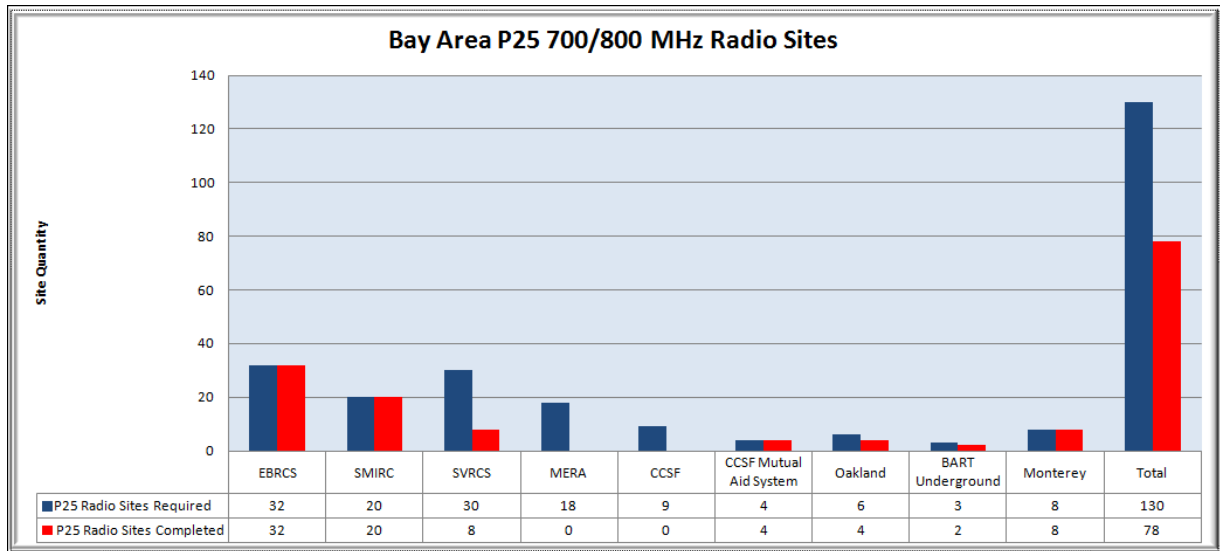
When these systems are completed, seven counties, serving a population of nearly seven million (82% of the twelve county UASI foot print), will have P25 Trunked Radio Interoperability. Seven of the systems will use either 800 MHz frequencies, 700 MHz frequencies or a combination of both. Only Monterey County will use a combination of VHF and 700 MHz frequencies.

Regional Progress:

The region's BayRICS P25 Interoperability Project has funded 78 of 130 radio sites (60%) and purchased 26,369 of 49,800 mobiles or portable radios (subscriber units). The region has invested over \$155 million in P25 Trunked infrastructure and \$102 million in P25 Subscriber units for a total investment of approximately \$258 million. Since 2006, the Bay Area UASI has allocated over \$76 million or 29.5%. Funding sources include: UASI grant years 2006-2014 (\$50,382,661), Public Safety Interoperable communications (PSIC) 2007 (\$18,083,713) and Community Oriented Public Safety Technology (COPS

Tech) 2007 (\$7,645,313). The PSIC and COPS Tech grants included a required match which was met by jurisdictions receiving funding.

Additional funding is still needed to complete the eight systems. It is estimated that \$122 million for Infrastructure (52 sites) and \$90 million for Subscriber units (23,300) for an estimated total of \$212 million will be required before the project is completed.



Sub-Systems Update:

The **East Bay Radio Communication System (EBRCS)** currently has 6 cells with a total of 32 radio sites and over 13,000 Subscriber units. By 2018, the EBRCSA plans to upgrade the system from P25 Phase 1 to P25 Phase 2, which will more than double the system’s capacity. Before that upgrade can take place, the remaining 40 Gold Elite dispatch consoles in Alameda County need to be upgraded to accommodate the many interfaces and the migration to P25 Phase 2. Each console costs approximately \$50,000.

The **San Mateo County** P25 Infrastructure, consisting of 20 radio sites, is complete. Any additional sites added to the system will be determined by which agencies join. It is estimated that an additional \$3.3 million is required to purchase dispatch consoles and an estimated 3 radio sites. Six hundred of the eighteen hundred radios purchased are currently active on the system. The active user agencies include: Sheriff's Office, EMS, Public Health, Animal Control, Parks Probation, Public Works and the County Coroner. The remaining twelve hundred user radios will be operational by the end of June, 2014. It is estimated that the total number of users could reach 4,600.

The **City of Oakland** hired RCC Inc., a radio communications consultant in 2013 to perform a side-by-side analysis of the Oakland and East Bay Regional Communications System (EBRCS) P25 radio systems. As a result of the IT staff recommendations, the Oakland City Council directed staff to enter into negotiations with EBRCS and return in 90-120 days with proposed terms including funding and transition plans to either join EBRCS or make the necessary repairs and equipment additions to the existing system.

The **BART Underground** P25 800 MHz Trunked Communication System, designed solely for mutual aid interoperability, consists of two radio sites that feed into the antenna system throughout BART's underground facilities. BART has plans to connect both the Oakland and the San Francisco P25 Trunked Radio Systems to BART's P25 Trunked Underground system using Inter RF Subsystem Interface (ISSI) before the end of 2014. BART has 400 Portable radios with the capability of operating on the BART P25 Trunked Underground system.

The **Silicon Valley Radio Communications System (SVRCS)** Stages one and two, consisting of five radio sites, is scheduled to be completed 2nd quarter 2014. When complete the cities of Sunnyvale (455 Subscribers) and Santa Clara (915 Subscribers) will be fully operational on the new P25 Phase 2 system. Stage three is in process and will add 3 more radio sites to the system by end of 2014. When the system is completed it is estimated that there will be 30 radios sites and approximately 10,000 subscribers.

Currently the **City & County of San Francisco** operates two systems, a proprietary 800 MHz trunked radio system purchased in 1995 and a low capacity P25 700 MHz system designed for mutual aid interoperability. The City has approved \$1.8M in General Funds for planning a full system replacement. The first step is the hiring of a communications consultant to do an inventory and needs assessment. During the next 12 months the City and the selected consultant will refine the project plan, system design and project budget. San Francisco intends to seek general funds, capital funds and grant funds to complete the project upgrade by 2018.

Marin County is waiting for the outcome of a November 2014 Ballot Measure. If successful, during the first quarter 2015, a RFP for the MERA (Marin Emergency Radio Authority) Next Gen P25 System will be released. If the Ballot Measure is successful, Marin County would then plan to complete the system by 2018. Marin County is actively pursuing grant opportunities in accordance with the Feasibility Study to fund portions of the system. To date Marin County has upgraded their Master Site and installed a few dispatch consoles. BayLoop is being used with other County Microwave paths to provide backhaul services for their current system and will be used for the new system in the future. Marin also built a low capacity 700 MHz Conventional Mutual Aid System, the first of its kind in California.

Monterey County has gone to bid, awarded a contract, equipment has been delivered, and the vendor has begun installation at selected locations. Final Site selection and FCC licensing is ongoing. The system will be a combination of 700 MHz and VHF. Five sites will be VHF only and three sites will have both 700 MHz and VHF. The installation and implementation of the 8 sites will be accomplished in three stages with final completion in August 2015. The system will provide interoperability to over 40 agencies and a total 3,300 Subscribers already procured.