

**STATEWIDE AGENCIES RADIO SYSTEM (STARS)
PROGRAM**

**A Report to the Governor, House Appropriations Committee,
And Senate Finance Committee**



October 2008

**Colonel W. Steven Flaherty
Superintendent**



Colonel W. S. (Steve) Flaherty
Superintendent

(804) 674-2000

COMMONWEALTH OF VIRGINIA

Lt. Colonel Robert B. Northern
Deputy Superintendent

DEPARTMENT OF STATE POLICE

P. O. Box 27472, Richmond, VA 23261-7472

October 1, 2008

TO: The Honorable Timothy M. Kaine, Governor of Virginia

The Honorable Charles J. Colgan
Chairman of the Senate Finance Committee

The Honorable Lacey E. Putney
Chairman of the House Appropriations Committee

Pursuant to Item 419 (D) of Chapter 879 of the 2008 Virginia Acts of Assembly, I am respectfully submitting herewith a *Report on the Statewide Agencies Radio System (STARS) Program*.

Respectfully,

A handwritten signature in black ink that reads "W. S. Flaherty".

Superintendent

WSF/CAV

Enclosure

A NATIONALLY ACCREDITED LAW ENFORCEMENT AGENCY
TDD 1-800-553-3144

Scope of the Statewide Agencies Radio System (STARS) Contract

Colonel W. Steven Flaherty, State Police Superintendent and Mr. Mark Moon, Vice President and General Manager of Motorola signed a \$329 million contract between Motorola and the Commonwealth of Virginia for the design, construction, and implementation of the Statewide Agencies Radio System (STARS) on July 13, 2004. A ceremonial contract signing was held on July 16, 2004, in conjunction with a press conference.

In summary, the major implementation milestones completed include the following:

- The Division I infrastructure System Acceptance was completed on December 21, 2006.
- Division V went live on June 12, 2007.
- The Zone 2 Master Site in Salem was completed September 15, 2008.
- The verbal Occupancy Permit approval was received September 16, 2008.

STARS provides multi-channel, trunked, digital voice and data wireless communications that are specifically designed for public safety requirements, based on APCO Project 25 technology. The existing State Police microwave radio network's technology and capacity are being upgraded and disaster recovery alternate paths are being added. The STARS contract provides for essential public safety grade communications that can operate seamlessly throughout the Commonwealth for the 21 state agencies and facilitate interoperability with local governments and federal agencies.

The STARS design is a culmination of partnering with the Commonwealth, the project's engineering consultant Hayes, Seay, Mattern & Mattern, Inc. (HSMM) / CTA Communications, and Motorola. Meeting needs, utilizing existing resources, and minimizing risk were heavily weighted design parameters in developing the STARS contract. Capitalizing on existing infrastructure and resources, whenever possible, benefited the Commonwealth in the ability to implement STARS in a cost effective manner. Finally, design risk is minimized through the use of Motorola, a proven system integrator and communications manufacturer, along with the use of a redundant, fault-tolerant, hierarchal design that allows for re-routing in case of a single point of failure. The wireless communications system for the Commonwealth of Virginia contains today's latest technology and will continue to provide updated technology at no additional cost throughout the STARS implementation. STARS allows the Commonwealth to retain a high level of service and security, plus flexibility to add more users when additional radio frequencies are available. In all applicable design components, STARS has addressed safeguards to system security, including controlled system access, and Advanced Encryption Standard (AES) encryption for law enforcement users. The system infrastructure will serve the Commonwealth for many years to come.

Projected Total Cost of System

Special Funds

Pursuant to the Code of Virginia, §2.2-2264, the General Assembly authorized the Virginia Public Building Authority to issue revenue bonds not to exceed \$159,300,000 for constructing, improving, furnishing, maintaining, acquiring and renovating buildings, facilities, improvements and land for the STARS project. Chapter 245 approved by the General Assembly on March 30, 2006, authorized additional funding via bonds issued by the Virginia Public Building Authority in the amount not to exceed \$201,900,000 to complete STARS.

The breakdown of projected total costs for the system is as follows:

Contract Cost for Core System, paid by Bond Funds

Land mobile radio equipment and upgrades	\$ 148,977,412
Microwave network equipment and upgrades	\$ 33,082,094
Mobile data (in-car computers)	\$ 33,908,049
Transmitter sites & towers	\$ 83,163,356
Network Operations Center Zone 2 Control Center equipment	\$ 16,056,940
Communications Centers renovation and equipment	\$ 10,440,190
Test equipment and spare parts	\$ 3,823,658
Performance bond	<u>\$ 222,000</u>

Total Motorola Contract Cost **\$ 329,673,699**

Revised Motorola Contract Cost to include 25 Contract Modifications as of July 24, 2008 **\$ 338,481,082**

Tasks Removed from the Contract that the Commonwealth will Complete at a Reduction in Costs, to be Paid by Bond Funds

Procurement and installation of control station poles	\$ 240,000
Computer-Aided Dispatch Interface software changes	\$ 300,000
Procurement of software for mobile data, asset management and help desk	\$ 4,310,000
Tower site acquisitions, grounding, environmental & emissions compliance and removal of unused towers	\$ 3,383,000
Renovations to warehouse to house the Network Operations Center and Construction of the Zone 2 Control Center	\$ 2,700,000
Renovation of the STARS office as a Training Center, travel and equipment for training	\$ 2,650,000
Independent verification and validation testing	\$ 300,000
Legal and licensing fees	\$ 450,000
Payment to Motorola for guaranteed clear and usable frequencies	<u>\$ 5,250,000</u>

Total Commonwealth Tasks Cost \$ 19,583,000

Revised Total STARS Construction Cost **\$ 358,064,082**

The STARS Program contract was signed on July 13, 2004. At that time, the cost to complete the project was \$349,256,699. Currently, the STARS Program has \$159,300,000 from bond funds allocated. The amount authorized during the 2006 legislative session for the final funding of the STARS Program is not to exceed \$201,900,000.

The revised Contract appropriation cost for STARS is \$361,200,000.

General Fund – Operational Expenses

The General Fund appropriation for both FY2007 and FY2008 is \$2,510,000, to be used for implementing STARS. The projected annual operating expenditures during the implementation phase for the General Fund consist, in part of the following:

Category	Amount
Personnel - STARS Staff	\$ 800,000
Contractual Services (includes CTA, HSMM and Attorneys)	\$ 1,185,000
Supplies & Materials	\$ 5,000
Insurances	\$ 20,000
Equipment	<u>\$ 500,000</u>
	\$ 2,510,000

Approved STARS Positions

Network Console Operators (six) were hired and are maintaining 24/7 coverage in the Network Operations Center. The Network Operators monitor performance diagnostics and network alarms. They also operate a systems repair help desk and are capable of dispatching, if required, for unusual events. One position is currently vacant and the rehiring approval process is in progress.

Additional Projected STARS Reoccurring Operating Costs in Future Fiscal Years

The following positions will be requested in future fiscal years as they become necessary:

Configuration Manager will manage the hardware, firmware, and software configurations in the STARS equipment and implement updates and revisions. The Configuration Manager will coordinate any change to as-built documentation. The Configuration Manager and the Asset Manager will work together to determine whether failures are a result of incompatibilities within the system.

Asset / Inventory Control Manager will maintain a database of all STARS assets and provide the required reports. This person will ensure that spare equipment is properly staged at the seven field division headquarters and at administrative headquarters. In addition, spares will be made available from these locations to

the 23 partnering contractor service shops located throughout the state. The manager will track the maintenance history of each subassembly throughout the entire system.

The total anticipated annual cost for the two positions, including salary and fringe benefits, is \$116,000.

Completed Network and Equipment Maintenance

When completed and no longer under warranty, STARS network infrastructure maintenance will be handled by current State Police Communications Division personnel. The warranty period is one year for equipment and the infrastructure and three years for the mobile radios, portable radios, and mobile data in-car computers. The State Police Communications Division will provide equipment maintenance for agencies it presently serves. Agencies not currently serviced by the Communications Division will need to handle equipment maintenance through a service agreement with Motorola or pay as needed when equipment is repaired.

Communications Technologies and System Capabilities

Systems Integration

The Motorola STARS project team implementation is based on a designed and detailed integration plan. The Motorola Program Director has brought together the people and resources for the STARS project, and manages them toward meeting every project milestone. This intensive planning, based on dozens of successful large-scale integrations, reduces risk to the Commonwealth. Important details, such as the execution of the Customer Design Review, the development of the talk group plan, and the development of a migration plan for each agency and end user, including the appropriate timing of end user training, are all crucial in the implementation of a successful integration strategy for STARS. A thorough Project Schedule is critical for planning, resources, costing, and risk mitigation. During the implementation phase of each division, detailed plans and pre-builds of the system are completed at the Motorola staging facility and/or the Customer Center for System Integration. This staging includes all third-party equipment also. The system is then tested, measured, and optimized to ensure it meets the design considerations. Commonwealth employees are an essential part of the testing and implementation processes.

Much of the work entails coordinating local vendors to secure antenna sites, and erect towers and buildings. Site development continues for Divisions II, III, IV, VI and VII. Divisions I and V are installed and live on STARS. The implementation process is broken down into individual tasks in a full project plan, which covers:

- Engineering and design
- Procurement
- Facility construction and upgrades
- Systems installation

- Optimization and testing by system and subsystem
- Agency migration and cutover
- Closeout and acceptance
- Frequency planning
- Talk group (fleet map) development

Once the system is working as designed in each division, the Department of State Police (VSP) will provide the expertise to manage, monitor, and service the system.

Motorola is performing the work and tasks required to design, manufacture, install, optimize, test, and integrate STARS; in addition to providing the documentation and training to support the operation of STARS. Motorola and the Commonwealth have provided a dedicated project leader to act as the single point of contact for all administrative, technical, and scheduling issues related to the project. An announcement by Motorola was made on September 9, 2008, informing the Commonwealth that the current STARS Program Director was being replaced. Mr. Mike Archbold will be leaving the project and the new replacement will be Mr. Wes Jones. Mr. Jones will be transitioning on the STARS Project during the week of September 22, 2008. The Motorola Program Manager has the overall responsibility for providing the Motorola deliverables required for the implementation of STARS and management of the STARS project schedule. The Commonwealth's Program Director, Captain Michael E. Bolton, has the overall responsibility for ensuring that all Commonwealth responsibilities and tasks are completed per the Contract Schedule.

Communications within the Tunnels

Motorola will install VHF and 800 MHz wireless communication coverage in six tunnels in the Commonwealth of Virginia (Big Walker Mountain, Hampton Roads, Elizabeth River Downtown, Elizabeth River Midtown, Monitor/Merrimac, and East River Mountain). Installation has been completed in three tunnels (Elizabeth River Midtown, Monitor/Merrimac, and Hampton). The design allows for effective mobile radio, portable radio, and computer data communications within the tunnels. In addition to being designed for STARS, the tunnel design accommodates the existing VSP communication channels that increase the effectiveness of the overall Commonwealth migration plan to STARS.

The Chesapeake Bay Bridge Tunnel (CBBT) was added to STARS by the Management Group with expenditures approved by the 2006 General Assembly. Installation began May 31, 2007. Numerous problems with the installation were encountered and the project was put on hold until acceptable resolutions were agreed upon. A tunnel site walk was held on June 27, 2008, and numerous meetings have been held to discuss and resolve the issues. A new Implementation Plan presented by Motorola has been discussed.

Transportable Communication Site

The transportable site is contained within a trailer that is easily moved to provide additional radio capacity, interoperability, and support for disaster-recovery operations for STARS. This site is designed to be moved and placed into service where needed by the Commonwealth during events such as floods, hurricanes, or during a major event such as the terrorist attack on the Pentagon, where additional radio system capacity and interoperability are required. This transportable site provides on-site ASTRO 25 digital trunked communication in the 800 MHz frequency band, as well interconnection with other agencies, regardless of their operating frequencies, via an ACU-1000 network interface. The entire site can typically be deployed within one hour of the arrival of the trailer at the site. The transportable site was utilized this year during the Charles City Prison escape, Nottoway Prison escape, and the Suffolk Tornado.

Voice and Data Coverage

STARS integrates voice and data over the same frequencies. As STARS is a public safety grade system designed to support life and death situations, the system is configured such that voice traffic is given the priority over data messages. The performance guarantees and test procedures will ensure the Commonwealth will experience clear communications as defined by the vigorous testing standards established in the Contract.

Microwave Network

The microwave network provides the Commonwealth with the digital transport required for interconnecting Land Mobile Radio, Mobile Data, Telephone, and Alarm and Control Networks. In addition, it will be used to replace leased data lines currently connecting State Police sites. It will also be highly reliable and capable of supporting government relocation, if required. For instance, the current State Police microwave network (that STARS is upgrading) was quickly reconfigured by the State Police Communications Division at the Columbia Pike Area Office to serve as a command center in response to the 9/11 terrorist attack on the Pentagon. In addition, there were no outages in the State Police microwave network because of Hurricane Isabel.

The network consists of digital microwave equipment of various frequencies and capacities. This microwave network, consisting of Synchronous Optical Network loops, allows rerouting of microwave traffic if required during a failure or emergency. The microwave spurs are protected by hot standby equipment.

Each State Police Division Headquarters and most area offices will be equipped with a microwave phone network that will allow on-site personnel to place and receive telephone calls over the microwave network. This circuit is connected to the Commonwealth's private phone system and the public service phone system.

Mobile Data Applications

The Premier Mobile Data Computers installed in patrol cars will provide the following to the Commonwealth:

- Law enforcement mobile data such as wanted checks and DMV records checks
- Intra-agency and inter-agency text messaging
- Interface with the VSP Computer-Aided Dispatch
- Global Positioning System support for Automated Vehicle Location

STARS is including an Automated Vehicle Location subsystem to identify the location of law enforcement patrol cars that are equipped with computers. Location data will be sent to a display at the closest State Police Division Headquarters during vehicle stops or from a dispatcher-initiated request. This feature is intended to support the commitment to maximizing officer safety.

Since signing the contract, the mobile data requirements for the Department of State Police and the STARS law enforcement agencies have changed. The Integrated Voice and Data (IV&D) Network provides a limited data capability that will not support sending DMV photographs, Amber Alert photographs, nor will it support an over the air Records Management System (RMS). STARS mobile data users will now have the option to use a Verizon Air Card to provide the required capacity to support sending photographs and RMS files over the air. The Verizon cards will provide the primary mobile data transport with the IV&D mobile data as secondary where Verizon coverage is unavailable, as may be the case during a significant disastrous event.

Alarm and Control

The STARS Network Fault Management subsystem manages transmitter site/equipment alarms and controls various site functions. The Network Fault Management subsystem collects data automatically, processes that data, and then displays it at the Network Operations Center. This management tool provides a single interface for monitoring equipment and systems alarms over Internet protocol. The data is used to operate the network, analyze the flow of site alarm and system control data, offer system solutions and handle pre-defined alarm situations automatically. The system provides reports to the engineers and the operators that will help in administering the network. The Network Operations Center at State Police Headquarters houses personnel on a 24/7 basis to identify, remotely correct alarm conditions or dispatch technicians.

Transmitter Sites

The 121 transmitter sites in STARS include 45 Land Mobile Radio (LMR) tower sites and 76 microwave tower sites. Our current totals have been modified to include three additional LMR sites (Burgess, Eastville, and Edgehill) for a total of 48 and we have deleted seven area offices located in Division I, leaving a total of 69 microwave sites. These sites support the land mobile radio voice, microwave

radio, and the mobile data subsystems. Each site's communications equipment is housed in a protective building, and is monitored for technical functions and protected with emergency power systems and sophisticated grounding systems to protect from lightning damage.

Each site will be implemented using the most efficient and cost effective process; a methodical approach will be followed which takes into consideration many facets such as microwave radio path surveys, necessary FAA submittals and approvals, architectural and engineering work, and site specific improvements. The major components necessary for the completion of a communication site include site preparation, radio towers, radio buildings, heating ventilation and air-conditioning, backup power systems, as well as fencing.

Master Sites and Dispatch Center Renovations

Motorola is providing the Commonwealth with design-build construction services to upgrade three of the seven State Police Communications Centers. They will be constructed as additions to existing State Police Division Headquarters buildings. Divisions I and V Communications Centers have been renovated and expanded; both now have eight new dispatcher consoles.

During contract negotiations, it was determined the Commonwealth will be able to manage and procure construction services for the STARS Network Operations Center and the Zone 2 Master Site facilities resulting in considerable cost savings. Motorola will install the equipment in both facilities. To meet the aggressive schedule, an existing State Police warehouse was refurbished for the Network Operations Center. The Network Operations Center became operational on February 13, 2006. A new building at Division VI (Salem) was recently completed and will support State Police dispatching and the Zone 2 Master Site equipment.

Voice and Data Subscribers

Motorola is providing the Commonwealth with vehicular radios, portable radios, mobile digital vehicular repeaters, and mobile computer terminals for users to operate on STARS. Different models are being supplied that will enable the Commonwealth agencies to employ the radio types appropriate for their particular operational needs.

Status of Site Acquisitions

Division I has 21 of the 22 transmitter sites operational. The construction for the remaining site (Edgehill) has been completed. We are awaiting electrical service connections from the power company to complete this site. All seven sites in Division V have been completed and are live as of March 12, 2008. In Division II, four of five are complete. The construction for the remaining site (Massanutten) has been completed. VSP is currently relocating the legacy antennas; removing the old generator, tower, underground fuel tank, and aluminum shelter; and removing the concrete for the old tower and shelter. Division III has six of eight

sites complete and Division VII has two of five. There are currently 15 sites scheduled for Division IV and 13 for Division VI. Transmitter site surveys are being completed and are ongoing in Divisions III, IV, VI, and VII.

Project Management Plan

Executive Order 28 (2002)

On June 26, 2002, Executive Order 28 (2002) was signed officially continuing the Statewide Agencies Radio System (STARS) Project. It also provided direction as to how the project would proceed, including participating agencies, and formulated the basis of the Project Management Plan.

Executive Order 101 (2005)

On November 1, 2005, Executive Order 101 (2005) was signed and continues the STARS Project through October 31, 2008.

The STARS membership is composed of the following 21 state agencies. Representatives from each agency make up the User Agencies Requirements Committee (UARC):

- Alcoholic Beverage Control
- Capitol Police
- Charitable Gaming
- Chesapeake Bay Bridge & Tunnel Police
- Conservation and Recreation
- Corrections
- Emergency Management
- Environmental Quality
- Fire Programs
- Forestry
- Game and Inland Fisheries
- Health
- Juvenile Justice
- Military Affairs
- Mines, Minerals, and Energy
- Motor Vehicles
- State Police
- Transportation
- Virginia Information Technologies Agency
- Virginia Marine Resources Commission
- Virginia Port Authority

STARS Program Oversight and Workgroups

The STARS Management Group is a Board established by Executive Order 28 (2002) and composed of the Secretaries of Agriculture and Forestry, Commerce and Trade, Finance, Health and Human Resources, Natural Resources, Public

Safety, Technology, and Transportation. The Secretary of Administration was deleted July 1, 2008, with the reassignment of Charitable Gaming under the Department of Agriculture. The Secretary of Public Safety serves as the Chairman. The STARS Management Group provides direction and overall governance for the development, implementation, and ongoing operation of STARS. In addition, they review all procurements and contracts, coordinate radio frequency licenses granted by the federal government to agencies of the Commonwealth, and promote interagency cooperation and coordination in the use of communications resources.

The User Agencies Requirements Committee (UARC) consists of two representatives (primary and alternate) from each member agency and institution. The Chairman of the UARC is selected by the STARS Management Group. The current Chairman is Mr. Jackie T. Davis with the Department of Mines, Minerals and Energy. The UARC meets as necessary, but at least quarterly. The specific duties of UARC are to advise on the needs of member agencies for the planning, design, establishment, and operation of STARS, provide advice on proposals for other federal, state, or local agencies to join STARS and on any proposals for third party use of any STARS infrastructure or component, and assist the STARS Management Team with the development of a comprehensive management plan and procedures for the operation of STARS.

The UARC will form various interoperability working groups to advise the STARS Program Management Team how to configure/program the networks. They will plan talk groups to communicate during various intra-agency events and potential emergency situations. Interagency planning is part of the Systems Integrator contract.

The Virginia Information Technologies Agency (VITA) will be consulted by the Secretary of Public Safety, or his designee, prior to implementing any significant data transport related network upgrade or modification. STARS continues to provide monthly updates on the VITA ProSight IT Investment Portfolio Tool.

The Intra/Inter-Agency Workgroup meets every other Monday and is chaired by the STARS Program Director. The group is comprised of State Police administrative and support divisions, the STARS Program Management Team, and representatives as needed from other agencies based upon their involvement as forecasted by the project schedule. Accomplishments and tasks that need to be started and completed are discussed.

The STARS/Motorola/CTA Project Workgroup is comprised of the STARS Program Management Team, the Systems Integrator, and the engineering consultant. The managers meet on a monthly basis in accordance with the contract and topic oriented work groups as needed. (Typically, multiple groups meet weekly.) The meetings have an agenda and minutes are recorded. The purpose of the meetings is to review the schedule, identify problems, provide solutions to problems, establish action items, and schedule any needed teleconferences. Advisors from the various agencies are included when their input is required.

STARS Program Management Team Responsibilities

The Program Director (Captain Michael E. Bolton) is responsible for the overall direction of the STARS Program and management of daily operations. Captain John E. Furlough, Communications Officer for the Communications Division, is responsible for providing engineering guidance and inspections from his staff for STARS. The STARS Program Director holds meetings with representatives from the Intra/Inter-Agency Work Group. Monthly meetings are held with the STARS/Motorola/CTA Project Group to outline progress and tasks. The Program Director will ensure the Integrator provides proper documentation and that all work is inspected and approved within the terms of the Contract.

The Program Director maintains a liaison with the Secretary of Public Safety, the User Agencies Requirements Committee (UARC) and the STARS Management Group to ensure they are kept abreast of progress and developments. Monthly status reports required by policy and law are being provided. The Program Director will provide reports and testimony to the General Assembly as required.

The Program Director is responsible for ensuring the Virginia Information Technologies Agency (VITA) is consulted and the Secretary of Public Safety is informed prior to implementing any significant data transport related network upgrade or modification.

The Program Manager (Mr. Randy Peeler) joined the STARS Team on September 8, 2008, as the new STARS Program Manager. He will maintain a close working relationship with the Motorola STARS Program Director and Resource Manager, consultants, and Commonwealth staff to ensure the project progress is monitored and issues are resolved in a timely manner as they arise.

Technical Lead Engineer (Mr. Thomas A. Struzzieri) is the technical lead and supervises the STARS engineering staff. He works closely with the Systems Integrator, and consultants through the STARS Program Manager to provide solutions to technical problems. He evaluates any new or improved technology that may be recommended by the Systems Integrator, consultants, and advisors.

Procurement and Contract Officer (Ms. Patricia T. Trent) develops and issues solicitations, and negotiates and administers the Contract. She prepares sole source justifications, monitors contractor performance, initiates contract resolutions and issues change orders. In addition, she maintains the overall Bond Program Budget. She is also the mediator between the agencies and contractors to resolve any contract issues, responses needed, or scheduling delays.

Computer Systems Engineer (Mr. Clark W. LaFlare) assists in the planning and technical aspects of the design, implementation, and maintenance of STARS. He serves as the data processing technical point of contact with the Systems Integrator, and consultants. He coordinates performance functions related to software, servers and the Department's Computer-Aided Dispatch network.

Telecommunications Engineers (Two) (Mr. Michael D. Deane and Mr. Noel Armstrong) assist with the engineering, design, installation and documentation for upgrade of the existing land mobile radio system, the microwave system, radio towers and subscriber equipment. They are also responsible for fleet mapping and talk group development to meet the requirements of the STARS system. They work closely with the Systems Integrator, consultants and member agencies to ensure all upgrades are made in a timely manner and meet the requirements of STARS.

Program Administrator (Ms. Teresa M. Hudgins) is responsible for maintaining the master program schedule, individual project schedules, work breakdown structures, and updating monthly project status via ProSight to VITA. Additionally, the Program Administrator is responsible for maintaining the General Fund Program budget and managing expenditure accounts during the implementation period.

Property and Logistics Executive Secretary (Ms. Anna Poole) is the liaison for STARS with all the member agencies.

Project Timelines for Implementation

<u>Pending Division I Categories</u>	<u>Projected Completion</u>	<u>Actual Completion</u>
4. Integrated Voice and Data Freq. Plan Development	11-29-04	Ongoing
15. Microwave Optimization and Testing	10-06-05	*Delayed
18. Division I – System Operational	08-01-06*	03-27-07
22. Construction at Edgehill	05-07	

*These dates have been revised. Two new sites have been added for Division I. The Microwave Optimization and Testing has been completed for all sites except Edgehill.

<u>Division V Categories (7 Sites)</u>	<u>Projected Completion</u>	<u>Actual Completion</u>
8. Documentation and Acceptance	09-07	3-26-08
9. System Acceptance of Division V (50%)	1-4-08	6-28-07

Motorola submitted their August 2008 STARS Master Schedule (081908) on August 26, 2008.

Subscriber Migration is reflected at 78 percent and is scheduled to be completed by April 3, 2009.

Control Station implementations (approximately 500 each) have been added to the Master Schedule, as requested by the Commonwealth; however, specific anticipated finish dates need to be discussed for inclusion.

Delaying factors have been noted by Motorola, to include site investigation, owner approvals and regulatory permitting. Transmitter Sites are the critical issues with reference to the Master Schedule. Motorola was notified in the monthly Schedule Review meeting that the Commonwealth wishes to re-baseline the Master Schedule as some factors/tasks were not appropriately addressed in the original schedule. It was stated that all tasks are to be identified with valid dates prior to the Commonwealth determining validity of re-baselining the Master Schedule / Contract Complete Date via a No Cost Contract Modification. Contract Modification #29 documents the revised baseline Master Schedule (052008). The new Final Project Acceptance date is April 28, 2010, which is 158 work days behind the original Final Project Acceptance date of September 2, 2009. As there are some transmitter sites that have not been locked down, the Final Project Acceptance date as of the 081908 Master Schedule is June 24, 2010. As each site is locked down, the potential exists to see the Final Project Acceptance date return to a date closer to the new baseline completion date of April 28, 2010.

The contract originally required a statewide frequency plan. Due to the accelerated schedule to implement Division I by December 2005, the focus of the frequency plan was changed to finish the Division I plan and then concentrate on the statewide plan. The Division I plan was completed on June 13, 2005. The first draft of the statewide plan has been submitted and reviewed. The second draft of the statewide plan was received on September 22, 2005. The third draft of the statewide plan was received on October 5, 2006. Several additional revisions have been received for Divisions II, III, V and VII as statewide implementation is being performed.

All member agencies will have their STARS equipment installed along with the State Police field divisions in which they have operations. The additional State Police field divisions will be operational on STARS by:

Culpeper (Division II)	03-09
Northern Virginia (Division VII)	09-09
Salem (Division VI)	03-10
Appomattox (Division III)	04-10
Wytheville (Division IV)	04-10

These date changes are based on the 081908 Motorola Master Schedule.

Other Information

COMLINC

The Motorola's Motobridge interoperability solution, renamed COMLINC (Commonwealth Link to Interoperable Communications) within Virginia, allows dispatchers at the counties and cities to establish up to eight patches. One of the eight paths will come back to the STARS network. The locality dispatcher may use the other seven patches to connect agencies within their jurisdiction or to

other localities. For example, a sheriff's office can patch to the fire department regardless of the frequencies used by each agency. Patches can also be made to phone networks and used to establish dispatcher conferences. By using COMLINC, the requirement to call by phone to establish a patch has been eliminated; dispatchers initiate the patch themselves at their console. COMLINC also provides instant recall of recorded audio. It enables the use of advanced calling features such as Emergency ID, and allows monitoring of the interoperability network activity and associated operations. For agencies requiring end-to-end encryption, COMLINC provides AES encryption over the network. COMLINC was implemented in 16 localities in Division I, and at VSP Division I and V Headquarters, along with the STARS Network Operations Center (NOC). The current COMLINC participants are the counties of: Caroline, Charles City, Chesterfield, Essex, Goochland, Hanover, Henrico, King George, Lancaster, New Kent, Northumberland, Powhatan, Richmond, Westmoreland, Amelia, Nottoway, and the Virginia Department of Transportation (VDOT). COMLINC will be expanded statewide if additional funding can be obtained.

VSP has received a grant in the amount of \$1,628,850 from the Public Safety Interoperable Communications (PSIC) to provide interoperability with 13 additional localities. Currently, the Agency Procurement Request (APR) is being reviewed by VITA for procurement approval.