

**REPORT OF THE
SECRETARY OF PUBLIC SAFETY**

**Statewide Agencies Radio System
(STARS)**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



HOUSE DOCUMENT NO. 24

**COMMONWEALTH OF VIRGINIA
RICHMOND
2004**



COMMONWEALTH of VIRGINIA

Office of the Governor

John W. Marshall
Secretary of Public Safety

Robert P. Crouch, Jr.
Chief Deputy Secretary of Public Safety

Barry R. Green
Deputy Secretary of Public Safety

October 1, 2004

The Honorable Mark R. Warner
Governor of Virginia
The State Capitol
Richmond, Virginia 23218

The Honorable John H. Chichester
Chairman, Senate Finance Committee
General Assembly Building
Richmond, Virginia 23219

The Honorable Vincent F. Callahan, Jr.
Chairman, House Appropriations Committee
General Assembly Building
Richmond, Virginia 23219

Dear Governor and Mr. Chairmen:

I am pleased to provide you with a report on the Statewide Agencies Radio System (STARS). This report is required in Item 507 of the Appropriation Act and includes information on the contract, projected costs, capabilities, timelines, and status of the project implementation plan.

Should you have any questions or require any additional information, please feel free to contact me. I look forward to providing you with updates as development and implementation proceed.

Sincerely,

A handwritten signature in cursive script that reads "John W. Marshall".

John W. Marshall

Attachment

Scope of the 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 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. The implementation phase of STARS is now underway.

STARS will provide multi-channel trunked digital voice and data wireless communications that is specifically designed for public safety requirements, based on APCO Project 25 technology. The existing state police microwave radio network's technology and capacity will be upgraded and disaster recovery alternate paths will be added. The STARS contract will provide essential public safety grade communications that can operate seamlessly throughout the Commonwealth for the 20 state agencies and facilitate interoperability with local governments and federal agencies. The interoperability solutions within STARS will allow each locality, at the county and city level, to communicate with other STARS users through a patch activated by a STARS dispatcher. The patch will be able to interface with any radio system, regardless of the operating frequency. This interoperability solution will be implemented at no cost to the localities. Direct interoperability can also be employed with the STARS portable radios which will operate on 800 MHz frequencies that will allow STARS users to operate on other agencies 800 MHz networks.

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 additional 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 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 the constructing, improving, furnishing, maintaining, acquiring and renovating buildings, facilities, improvements and land for the STARS project. This special funding will be appropriated for fiscal years 2005-06.

The breakdown of projected total costs for the system are 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 and 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

Tasks Removed from the Contract that the Commonwealth will Complete at a reduction in costs, to be paid by Bond Funds

Procure and install 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 old EOC 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
Total STARS construction cost	\$349,256,699

Projected STARS Project Staff Operational Costs

The current general fund appropriations for FY 2005 are \$2,510,000 and for FY 2006 the appropriation is \$2,260,000 for implementing STARS. The annual STARS staff operations expenditures for FY 2005 are projected as follows:

Personnel Costs – STARS staff	\$775,688
Consultant Services	\$1,405,035
Training	\$283,057
Supplies and Materials	\$9,220
Insurances	\$12,000
Equipment	<u>\$25,000</u>
Total Operational Costs	\$2,510,000

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 spares are properly staged at the seven field division headquarters and at administrative headquarters. In addition, spares will be made available to from these locations to the 23 partnering contractor service shops located throughout the state. The manager will tack the maintenance history of each subassembly throughout the entire system.

Network Console Operators (7) will be dispatchers who will maintain 24/7 coverage in the Network Operations Center. The Network Operators will monitor performance diagnostics and network alarms. They will also operate a systems repair help desk and will be capable of dispatching, if required, for unusual events. They will need to be trained and in-place by November 2005.

Total anticipated annual cost: \$480,000

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 data in-car computers. The State Police Communications Division will provide equipment maintenance for agencies they presently serve. 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.

The current annual operating costs for the State Police Communications Division will need to be continued for this purpose.

FY 2005 and FY 2006 appropriation: \$13,772,182

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 will bring together the people and resources for the STARS project, and then manage 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, development of the talkgroup plan, 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 preparation of a successful integration strategy for STARS. A thorough Project Schedule is critical for planning, resources, costing, and risk mitigation. The next step takes the detailed plans and pre-builds the system at the Motorola staging facility, the Customer Center for System Integration, including third-party equipment. The system is then tested, measured, and optimized to ensure it meets the design considerations. Commonwealth employees will be 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. The site development phase will be underway while the equipment

is being manufactured and staged. 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

An essential component in the transition process is the Project Cutover in each Division. After acceptance testing and cutover planning is complete, Motorola will coordinate dispatch and subscriber training, distribute the subscriber equipment, and prepare the end-users for a smooth transition. STARS will be put through a rigorous quality assurance process to make sure all components are configured properly and operating up to specifications. Once the system is working, as designed, the Department of State Police (VSP) will provide the expertise to manage, monitor, and service the system.

Motorola will perform the work and tasks required to design, manufacture, install, optimize, test, and integrate STARS. Motorola will provide the documentation and training to support the operation of STARS to the Commonwealth. 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. The Motorola Program Manager, Mr. Mike Archbold, 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 is providing VHF and 800 MHz wireless communication coverage for six tunnels in the Commonwealth of Virginia (Big Walker Mountain, Hampton Roads, Elizabeth River Downtown, Elizabeth River Midtown, Monitor/Merrimack, and East River Mountain). 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 State Police communication channels that will increase the effectiveness of the overall Commonwealth migration plan to STARS.

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 like what occurred at the Pentagon on September 11, 2001 where additional radio system capacity and interoperability is required. This Transportable Site provides on-site ASTRO 25 digital trunked communication in either the 700 or 800 MHz frequency band, as well interconnection with other agencies, regardless of the frequencies they operate on 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.

Voice and Data Coverage

STARS will integrate 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 will provide 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, statewide there were no outages in the State Police microwave network because of Hurricane Isabel.

The network will consist of Digital Microwave equipment of various frequencies and capacities. This microwave network, consisting of Synchronous Optical Networks 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
- E-mail access to a Microsoft Exchange Server
- 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 directly intended to support the commitment to maximizing a STARS subscriber users' safety.

Alarm and Control

A STARS Network Fault Management subsystem will be provided for managing transmitter site/equipment alarms and controlling 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 will be 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 will house personnel on a 24/7 basis to identify, remotely correct alarm conditions or dispatch technicians.

Transmitter Sites

The transmitter sites in STARS will consist of 45 Land Mobile Radio towers sites and 121 microwave tower sites. These sites will 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 is 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 conscience 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 will provide 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.

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. Motorola will install the equipment in both facilities. To meet the aggressive schedule, an existing State Police warehouse will be refurbished for the Network Operations Center. A new building at Division Six (Salem) will be constructed to support State Police dispatching and the Zone 2 Master Site equipment.

Voice and Data Subscribers

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

Status of Transmitter Sites for Phase One

Site Type	Site Name	Tasks Completed	Next Action Items
New	BRUNSWICK CC	<ul style="list-style-type: none"> • Site Walk Completed • Survey Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch • Commonwealth to Pursue Agreement with Correctional Facility
New	LEIGH MTN LOOKOUT TWR	<ul style="list-style-type: none"> • Walk Completed • Survey Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch • A lease has been signed
New	RUMFORD VDOT	<ul style="list-style-type: none"> • Site Walk Completed • Survey Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch
New	BOWLING GREEN Area Office	<ul style="list-style-type: none"> • Site Cancelled 	<ul style="list-style-type: none"> • Identify Alternative M/W Path Design
New	CALEDON STATE PARK	<ul style="list-style-type: none"> • Commonwealth Put Site on Hold 	<ul style="list-style-type: none"> • Commonwealth to get Approval from Parks for Use
New	FORT PICKETT EOC	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch
New	ASHLAND Area Office	<ul style="list-style-type: none"> • Site Walk Complete 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch
New	GLOUCESTER Area Office	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch • Commonwealth to Pursue Agreement with Dominion Power
New	RICHMOND Area Office	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch
New	POWHATAN Area Office	<ul style="list-style-type: none"> • Site Walk Completed • Commonwealth Determined that Microwave Use May Not be Practical (Space for Tower & Adjacent Property Owners) 	<ul style="list-style-type: none"> • Commonwealth to Determine if Motorola Proceeds
Existing	STATE POLICE HQ	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Tower Reuse Evaluation
Existing	1ST. DIVISION HQ	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Develop & Submit site Sketch

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Site Type	Site Name	Tasks Completed	Next Action Items
Existing	PETERSBURG Area Office	<ul style="list-style-type: none"> • Site Walk Completed • Site Sketch Completed & Submitted • Commonwealth Review Complete and Comments Returned • Site Sketch Revised and Submitted (9/10/04) 	<ul style="list-style-type: none"> • Commonwealth Approval of Site Sketch • Tower Reuse Evaluation
Existing	WEST POINT Area Office	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch
Existing	WARSAW Area Office	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Tower Reuse Evaluation • Develop & Submit Site Sketch
Existing	LOUISA Area Office	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Tower Reuse Evaluation • Develop & Submit Site Sketch
Existing	POWHATAN REPEATER	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Tower Reuse Evaluation • Develop & Submit Site Sketch
Existing	BURGESS REPEATER	<ul style="list-style-type: none"> • Site Walk Completed • Site Sketch Completed & Submitted • Commonwealth Review Complete and Comments Returned • Site Sketch Revised and Submitted (9/10/04) 	<ul style="list-style-type: none"> • Commonwealth Approval of Site Sketch • Tower Reuse Evaluation
Existing	RICHMOND DISTRICT SHOP	<ul style="list-style-type: none"> • Site Walk Completed • Commonwealth Put Site on Hold 	<ul style="list-style-type: none"> • Commonwealth to Determine if Motorola Proceeds. Microwave spur only.
Existing	FULTON DEPOT VDOT	<ul style="list-style-type: none"> • Site Walk Completed • Commonwealth Put Site on Hold 	<ul style="list-style-type: none"> • Commonwealth to Determine if Motorola Proceeds. Microwave spur only.

Statewide Agencies Radio System (STARS) Project

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Site Type	Site Name	Task Completed	Next Action Items
Existing	CENTRAL OFFICE VDOT	<ul style="list-style-type: none"> • Site Walk Completed • Commonwealth Put Site on Hold 	<ul style="list-style-type: none"> • Commonwealth to Determine if Motorola Proceeds. Microwave spur only.
Existing	FREDERICKSBURG Area Office	<ul style="list-style-type: none"> • Site Walk Completed • Determined Required Tower for LMR Use Not practical 	<ul style="list-style-type: none"> • Conduct Site Search for Alternative LMR Sites • Determine New Requirements for Fredericksburg Site
Existing	GORDONSVILLE REPEATER	<ul style="list-style-type: none"> • Site Walk Completed • Site Sketch Completed & Submitted • Commonwealth Review Complete and Comments Returned • Site Sketch Revised and Submitted (9/10/04) 	<ul style="list-style-type: none"> • Commonwealth Approval • Tower Reuse Evaluation
Existing	FORK MOUNTAIN REP	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch • Commonwealth to Pursue Site Acquisition
Existing	FALMOUTH VDOT	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch
Existing	CUMBERLAND REP	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch
Existing	WILLIAMSBURG REPEATER	<ul style="list-style-type: none"> • Site Walk Completed • Site Sketch Completed & Submitted • Commonwealth Review Complete and Comments Returned 	<ul style="list-style-type: none"> • Site Sketch Revised and Submitted • Tower Reuse Evaluation
Existing	WAVERLY REPEATER	<ul style="list-style-type: none"> • Site Walk Completed 	<ul style="list-style-type: none"> • Develop & Submit Site Sketch • Tower Reuse Evaluation

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 this Project Management Plan.

The STARS membership is composed of the following 20 state agencies. Representatives from each agency make up the User Agencies Requirements Committee (UARC):

Department of Alcoholic Beverage Control,
Department of Aviation,
Division of Capitol Police,
Department of Conservation and Recreation,
Department of Corrections,
Department of Emergency Management,
Department of Environmental Quality,
Department of Fire Programs,
Department of Forestry,
Department of Game and Inland Fisheries,
Department of Health,
Department of Juvenile Justice,
Department of Military Affairs,
Department of Mines, Minerals, and Energy,
Department of Motor Vehicles,
Department of Professional and Occupational Regulation,
Department of State Police,
Department of Transportation,
The Virginia Marine Resources Commission, and
Virginia Information Technologies Agency

Note: Due to the increased threat of terrorism to Virginia ports the Virginia Port Authority Police is currently undergoing a communications needs assessment and may be added to the STARS network as a participating agency.

STARS Program Oversight and Workgroups

The STARS Management Group is a board established by Executive Order 28 (2002) and composed of the Secretaries of Public Safety (Chairman), Technology, Transportation, Natural Resources, Commerce and Trade, Finance, and Health and Human Resources. They will provide direction and overall governance for the development, implementation,

and ongoing operation of STARS. In addition, they will 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 Colonel Steve Bowman with the Virginia Marine Resources Commission. The UARC will meet as necessary, but at least quarterly. The specific duties of UARC are to advise of 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 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 Project Management Team how to configure/program the networks. They will plan talkgroups 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 will also continue to provide monthly updates on the VITA Dashboard. Lead Engineer, Thomas Struzzieri, and the Program Administrator, Teresa Hudgins, have begun the IT project training established by the Chief Information Officer of the Commonwealth. It is anticipated that Mr. Struzzieri will complete the certification process by October 27, 2004.

The Intra/Inter-agency Workgroup will meet each Monday and will be chaired by the STARS Program Director. The group will be comprised of State Police Administrative and Support Divisions, the STARS Project Management Team, and representatives as-needed from other agencies based upon their involvement as forecasted by project schedule. Accomplishments and tasks that need to be started and completed will be discussed.

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

STARS Program Management Team Responsibilities

The Program Director (Captain Michael E. Bolton) will be responsible for the overall direction of the STARS Program and management of daily operations. The STARS Program Director will hold weekly meetings with representatives from the Intra/Inter-agency Work Group. Bi-monthly meetings will also be 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 will maintain 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 will be provided. The Program Director will provide reports and testimony to the General Assembly as required.

The Program Director will be 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.

Lead Engineer (Mr. Thomas A. Struzzieri) will be the technical lead and will supervise the STARS engineering staff. In addition, the lead engineer will work closely with the Integrator and consultants to provide solutions to technical problems. He will also evaluate any new or improved technology that may be recommended by the Integrator, consultants, and advisors. The lead engineer will organize and utilize the User Agencies Requirements Committee to ensure individual agency requirements have been met.

Procurement and Contracting Officer (Ms. Patricia T. Trent) will develop and issue solicitations, negotiate and administer contracts, prepare sole source justifications, monitor contractor performance, initiate contract resolution and issue change orders.

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

Telecommunications Engineers (2) (Mr. Michael D. Deane & Mr. Noel Armstrong) will assist with the engineering, design, installation and documentation for upgrade of the existing land mobile radio system, the microwave system, radio towers, subscriber equipment, fleet mapping, and talk group development to meet the requirements of the STARS system. They will work closely with the 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) will be responsible for maintaining the master program schedule, individual project schedules, work breakdown structures, and performing overall program risk management. Additionally, the Program Administrator will be responsible for updating program risk assessments on a monthly basis, maintaining the master program budget, and managing expenditure accounts during the implementation period.

Program Support Technician (Ms. Cynthia L. Sandy) will maintain the STARS Program documentation. This employee will provide administrative support to the staff; provide scheduling, and desktop publishing.

Project Implementation Timelines

Division One - Richmond Completion	Scheduled
Contract Design Review (CDR)	10-01-04
Review and Pre-approval of NOC Bldg. Permit Process	10-21-04
Review and Pre-approval of Comm. Center Bldg. Permit Process	10-21-04
Integrated Voice and Data Freq. Plan Development	11-01-04
Conduct NEPA & SHPO for Transmitter Sites	11-11-04
VSP Comm Center Construction Design Documents	11-11-04
VSP Comm Center Final Design Submittal and Approval	12-16-04
FCC License Requests Submitted and Approved	01-21-05
Mobile Data Application Development	02-04-05
Microwave Path Surveys	02-01-05
Microwave Frequency Coordination and FCC Approvals	02-01-05
Transmitter Site 100% Design Review and Approvals	02-01-05
Approval of final fleet map	03-07-05
NOC Certificate of Occupancy	06-15-05
Factory staging of Division 1 Microwave	06-27-05
Construction of 14 sites	09-15-05
Completion of Comm. Center Renovation	09-15-05
Microwave Optimization and Testing	10-06-05
In tunnel Installation and Optimization	10-06-05
Construction of 13 sites	11-15-05
Division 1 – System Acceptance and operational	12-16-05

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:

Tidewater (Division 5)	05-16-08
Culpeper (Division 2)	07-15-08
Northern Virginia (Division 7)	10-15-08
Salem (Division 6)	04-15-09
Appomattox (Division 3)	05-16-09
Wytheville (Division 4)	09-01-09