



Section 7. Training Plan

7.1 Overview

Motorola Solutions' Worldwide Learning Services (WLS) organization dedicates itself exclusively to offering the most comprehensive training available for Motorola's advanced equipment to fully realize the equipment's potential. From sophisticated training needs analysis to ongoing training throughout the life cycle of your product or system, WLS can help ensure that your investment in training today is an investment for your future.

WLS's training methodology includes knowledgeable instructors, well-designed courseware, lab activities, and system hardware and software that closely parallels your operating environment and that is integrated with proper system documentation. This methodology is based upon several key criteria:

- ◆ Course design is driven by an analysis of learner needs and focuses on how-to rather than theory.
- ◆ Learning objectives are based upon what learners need to accomplish on the job and focus on specific applications.
- ◆ Hands-on lab opportunities using customer-specific job aids are incorporated into training to maximize the transfer of skills to the job and the retention/reuse of information.

Motorola offers both train-the-trainer and end-user training. Students can attend training at one of WLS's training centers or instructors can come to your site. In conjunction with or in addition to instructor-led training, WLS can provide self-study/e-learning programs in which students follow a computer-based training module on CD-ROM or other media.

7.2 Courses Proposed

In the process of assessing your training needs, Motorola has identified the following courses that are necessary to achieve your training goals.

While the standard courses are encouraged, the class outline may be tailored for your quotation. Thus, the outlines below may not exactly match your quoted class length and content.

7.2.1 System Administrator

Course	Target Audience	No. of Sessions	Duration (days)	Location	Date	No. of Attendees
ASTRO 25 IV&D 7.x Trunking with M Core System Overview Part 1 of 3 (Self-Paced Online) (Note: Customers trained at 7.4 level)	System Managers and Technicians	NA	6-8 Hours	Online	Prior to Part 2	Up to 12
Course Synopsis: The ASTRO 25 Integrated Voice and Data System Overview course is intended to provide an overview of the ASTRO 25 System in order to familiarize the various audiences with the overall system capabilities, components, features, and benefits.						
ASTRO 25 IV&D 7.x Introduction to Radio System Management Applications Part 2 of 3 (Self-Paced Online)	System Managers and Technicians	NA	6-8 Hours	Online	Prior to Part 3	Up to 12
Course Synopsis: This course provides an introduction to the Motorola Solutions Radio System Management Applications. This course is a Prerequisite to Radio System Administrator.						
Tailored ASTRO 25 IV&D 7.11 Radio System Administrator Workshop (Note: Customers trained at 7.4 and are upgrading to 7.11) Part 3 of 3 (Instructor Led)	System Managers	1	3	Yulee, FL	Post Upgrade and Prior to Managing	Up to 12
Course Synopsis: This workshop covers management functions for an ASTRO 25 Integrated Voice and Data (IV&D) System. Learning activities in this document-based training course focus on how to use the different ASTRO 25 IV&D System Management applications. Participants will be provided with an opportunity to discuss how to structure their organization and personnel for optimal ASTRO 25 IV&D system use..						

It is recommended that the students bring their laptop computers for all System Manager and Technician classes. Students will receive their manuals in CD-ROM format. Students will also receive hard copy participant guides.



7.2.2 Console End User Training

Course	Target Audience	No. of Sessions	Duration (days)	Location	Date	No. of Attendees
MCC 7500 Console ADMIN and Operator Upgrade Differences Train-the-Trainers (Instructor-led) 2 training consoles (1x1 Ratio)	System Administrators and Dispatch Supervisors	1 (6-8 Hour Session)	1	Yulee, FL	Prior to Cutover	4 (4 per Session)
Course Synopsis: This course provides participants with the knowledge and skills to manage and utilize the MCC 7500 console administrator functions. Through facilitation and hands-on activities, the participant learns how to customize the console screens. This session also includes the Operator course below.						
Course Synopsis: This course provides participants with an introduction to the dispatch console, its basic operation and tailored job aids which will be available for assistance in operation. Through facilitation and hands-on activities, the user learns how to perform common tasks associated with the console operation. It also provides the customer's identified training personnel with the knowledge of, and practice applying training techniques that they will need to enable them to successfully train their students. Trainers will use video, facilitation, and hands-on activities to facilitate learning events supported by tailored or customized training materials and job aids. They will become proficient at discussing the common tasks associated with operation of the customer's consoles.						



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Section 8. Statement of Work

8.1 Contract

8.1.1 Contract Award (Milestone)

- ◆ The Customer and Motorola execute the contract and both parties receive all the necessary documentation.

8.1.2 Contract Administration

Motorola Responsibilities:

- ◆ Assign a Project Manager, as the single point of contact with authority to make project decisions.
- ◆ Assign resources necessary for project implementation.
- ◆ Set up the project in the Motorola information system.
- ◆ Schedule the project kickoff meeting with the Customer.

Customer Responsibilities:

- ◆ Assign a Project Manager, as the single point of contact responsible for Customer-signed approvals.
- ◆ Assign other resources necessary to ensure completion of project tasks for which the Customer is responsible.

Completion Criteria:

- ◆ Motorola internal processes are set up for project management.
- ◆ Both Motorola and the Customer assign all required resources.
- ◆ Project kickoff meeting is scheduled.

8.1.3 Project Kickoff

Motorola Responsibilities:

- ◆ Conduct a project kickoff meeting during the Contract Design Review (CDR) phase of the project.
- ◆ Ensure key project team participants attend the meeting.
- ◆ Introduce all project participants attending the meeting.

- ◆ Review the roles of the project participants to identify communication flows and decision-making authority between project participants.
- ◆ Review the overall project scope and objectives with the Customer.
- ◆ Review the resource and scheduling requirements with the Customer.
- ◆ Review the Project Schedule with the Customer to address upcoming milestones and/or events.
- ◆ Review the teams' interactions (Motorola and the Customer), meetings, reports, milestone acceptance, and the Customer's participation in particular phases.

Customer Responsibilities:

- ◆ The Customer's key project team participants attend the meeting.
- ◆ Review Motorola and Customer responsibilities.

Completion Criteria:

- ◆ Project kickoff meeting completed.
- ◆ Meeting notes identify the next action items.

8.2 Contract Design Review

8.2.1 Review Contract Design

Motorola Responsibilities:

- ◆ Meet with the Customer project team.
- ◆ Review the operational requirements and the impact of those requirements on various equipment configurations.
- ◆ Establish a defined baseline for the system design and identify any special product requirements and their impact on system implementation.
- ◆ Review the System Design, Statement of Work, Project Schedule, and Acceptance Test Plans, and update the contract documents accordingly.
- ◆ Discuss the proposed Cutover Plan and methods to document a detailed procedure.
- ◆ Submit design documents to the Customer for approval. These documents form the basis of the system, which Motorola will manufacture, assemble, stage, and install.
- ◆ Prepare equipment layout plans for staging.

Restrictions:

- Motorola assumes no liability or responsibility for inadequate frequency availability or frequency licensing issues.
- Motorola is not responsible for issues outside of its immediate control. Such issues include, but are not restricted to, improper frequency coordination by others and non-compliant operation of other radios.



- Motorola is not responsible for co-channel interference due to errors in frequency coordination by APCO or any other unlisted frequencies, or the improper design, installation, or operation of systems installed or operated by others.
- If, for any reason, any of the proposed sites cannot be utilized due to reasons beyond Motorola's control, the costs associated with site changes or delays including, but not limited to, re-engineering, frequency re-licensing, site zoning, site permitting, schedule delays, site abnormalities, re-mobilization, etc., will be paid for by the Customer and documented through the change order process.

Customer Responsibilities:

- ◆ The Customer's key project team participants attend the meeting.
- ◆ Make timely decisions, according to the Project Schedule.
- ◆ Frequency Licensing and Interference:
 - As mandated by FCC, the Customer, as the licensee, has the ultimate responsibility for providing all required radio licensing or licensing modifications for the system prior to system staging. This responsibility includes paying for FCC licensing and frequency coordination fees.
 - Provide the FCC "call sign" station identifier for each site prior to system staging.

Completion Criteria:

- ◆ Complete Design Documentation, which may include updated System Description, Equipment List, system drawings, or other documents applicable to the project.
- ◆ Incorporate any deviations from the proposed system into the contract documents accordingly.
- ◆ The system design is "frozen" in preparation for subsequent project phases such as Order Processing and Manufacturing.
- ◆ A Change Order is executed in accordance with all material changes resulting from the Design Review to the contract.

8.2.2 Design Approval (Milestone)

- ◆ The Customer executes a Design Approval milestone document.



8.3 Order Processing

8.3.1 Process Equipment List

Motorola Responsibilities:

- ◆ Validate Equipment List by checking for valid model numbers, versions, compatible options to main equipment, and delivery data.
- ◆ Enter order into Motorola's Customer Order Fulfillment (COF) system.
- ◆ Create Ship Views, to confirm with the Customer the secure storage location(s) to which the equipment will ship. Ship Views are the mailing labels that carry complete equipment shipping information, which direct the timing, method of shipment, and ship path for ultimate destination receipt.
- ◆ Create equipment orders.
- ◆ Reconcile the equipment list(s) to the Contract.
- ◆ Procure third-party equipment if applicable.

Customer Responsibilities:

- ◆ Approve shipping location(s).
- ◆ Complete and provide Tax Certificate information verifying tax status of shipping location.

Completion Criteria:

- ◆ Verify that the Equipment List contains the correct model numbers, version, options, and delivery data.
- ◆ Trial validation completed.
- ◆ Bridge the equipment order to the manufacturing facility.

8.4 Manufacturing and Staging

8.4.1 Manufacture Motorola Fixed Network Equipment

Motorola Responsibilities:

- ◆ Manufacture the Fixed Network Equipment (FNE) necessary for the system based on equipment order.

Customer Responsibilities:

- ◆ None.

Completion Criteria:

- ◆ FNE shipped to either the field or the staging facility.



8.4.2 Manufacture Non-Motorola Equipment

Motorola Responsibilities:

- ◆ Manufacture (third-party equipment suppliers) non-Motorola equipment necessary for the system based on equipment order.

Customer Responsibilities:

- ◆ None.

Completion Criteria:

- ◆ Ship non-Motorola manufactured equipment to the field and/or the staging facility.

8.4.3 Ship to Staging (Milestone)

- ◆ Ship all equipment needed for staging to Motorola's factory staging facility in Schaumburg, Illinois [Customer Center for Solutions Integration (CCSi)].

8.4.4 Stage System

Motorola Responsibilities:

- ◆ Set up and rack the system equipment on a site-by-site basis, as it will be configured in the field at each of the transmitter/receiver sites.
- ◆ Cut and label cables according to the approved CDR documentation.
- ◆ Label the cables with to/from information to specify interconnection for field installation and future servicing needs.
- ◆ Complete the cabling/connecting of the subsystems to each other ("connectorization" of the subsystems).
- ◆ Assemble required subsystems to assure system functionality.
- ◆ Power up, program, and test all staged equipment.
- ◆ Confirm system configuration and software compatibility to the existing system.
- ◆ Load application parameters on all equipment according to input from Systems Engineering.
- ◆ Complete programming of the Fixed Network Equipment.
- ◆ Inventory the equipment with serial numbers and installation references.
- ◆ Complete system documentation.
- ◆ Third party subsystems may be staged at the manufacturer's facilities and integrated in the field.
- ◆ Provide a Factory Acceptance Test Plan.

Customer Responsibilities:

- ◆ Review and approve proposed Factory Acceptance Test Plan.

Completion Criteria:

- ◆ System staging completed and ready for testing.



8.4.5 Perform Staging Acceptance Test Procedures

Motorola Responsibilities:

- ◆ Test and validate system software and features.
- ◆ Functional testing of standard system features.
- ◆ Power-up site equipment and perform standardized functionality tests.

Customer Responsibilities:

- ◆ Attend Factory Acceptance Testing. (If required)
- ◆ Pay for travel, lodging, meals, and all incidental expenses for Customer personnel and representatives to witness the Factory Acceptance Testing.
- ◆ Approve Factory Acceptance Testing.

8.4.6 Ship Equipment to Field

Motorola Responsibilities:

- ◆ Pack system for shipment to final destination.
- ◆ Arrange for shipment to the field.

Customer Responsibilities:

- ◆ None.

Completion Criteria:

- ◆ Equipment ready for shipment to the field.

8.4.7 CCSi Ship Acceptance (Milestone)

- ◆ All equipment shipped to the field.

8.5 Civil Work for the Customer-Provided Facilities

Motorola Responsibilities:

- ◆ Provide electrical requirements for each equipment rack to be installed in the Customer-provided facilities.(If Required)
- ◆ Provide heat load for each equipment rack to be installed in the Customer-provided facilities. (If Required)



Customer Responsibilities:

- ◆ Provide adequate HVAC, grounding, lighting, cable routing, and surge protection (also, among existing and Motorola-provided equipment) based upon Motorola's Standards and Guidelines for Communication Sites (R56). Provide obstruction-free area for the cable run between the demarcation point and the communications equipment.
- ◆ Complete all customer deliverables in accordance within the approved project schedule.

Completion Criteria:

- ◆ All sites are ready for equipment installations in compliance with Motorola's R56 standards.

8.6 System Installation

8.6.1 Install Fixed Network Equipment

Motorola Responsibilities:

- ◆ Receive and inventory all equipment.
- ◆ Install system equipment as specified by the Equipment List, System Description, and system drawings.

Interference:

- Motorola is not responsible for interference caused or received by the Motorola provided equipment except for interference that is directly caused by the Motorola-provided transmitter(s) to the Motorola-provided receiver(s). Should Nassau County system experience interference, Motorola can be contracted to investigate the source and recommend solutions to mitigate the issue.
- ◆ Bond the supplied equipment to the site ground system in accordance with Motorola's R56 standards.
- ◆ Will remove existing equipment.
- ◆ Will not relocate existing equipment to a location designated by the Customer.
- ◆ Will not dispose of existing equipment.
- ◆ Customer understands system down time will be required for upgrade to be completed.

Master Site/Prime

- ◆ Install a new CCSI staged 7.11 M2 Master site rack
- ◆ Install 3 (Qty) GCM8000 comparators
- ◆ Install 4 HP2610 switches
- ◆ Install 1 (Qty) Nice IP recorder
 - Relocate or remove the following Master site equipment



- Remove PDG from Rack1
- Relocate elite server to Rack 1
- Remove the DMZ and LAN switch 3, PN, Border and GGSN from Rack 2
- Relocate SSC Routers to Rack 2
- Relocate Moscad RTU and PB to Rack1
- ◆ Replace the Master site Network Manager and the Remote Network Manager client with HPZ400s

Remote Sites

- ◆ Replace all HP2626 switches with HP2610 (Two per site)
- ◆ Install 1 GGM Router (One per site)

Customer Responsibilities:

- ◆ Provide secure storage for the Motorola-provided equipment, at a location central to the sites. Motorola coordinates the receipt of the equipment with the Customer's designated contact, and inventory all equipment.
- ◆ Provide access to the sites, as necessary.

Completion Criteria:

- ◆ Fixed Network Equipment installation completed and ready for optimization.

8.6.2 Fixed Network Equipment Installation Complete

- ◆ All fixed network equipment installed and accepted by the Customer.

8.6.3 Complete 7.11 Software Upgrades

Master/Prime Site:

- ◆ Upgrade GCP 8000 Controllers
- ◆ Upgrade SDM3000 and S6000s

Yulee Remote:

- ◆ Upgrade GTR6000s
- ◆ Upgrade SDM3000/RMUX

Callahan:

- ◆ Upgrade GTR6000s
- ◆ Upgrade SDM3000/RMUX

Bryceville:

- ◆ Upgrade GTR6000s
- ◆ Upgrade SDM3000/RMUX



Fernandina Beach:

- ◆ Upgrade GTR6000s
- ◆ SDM3000/RMUX

Hilliard:

- ◆ Upgrade GTR6000s
- ◆ SDM3000/RMUX

8.6.4 Console Installation

Motorola Responsibilities:

- ◆ Nassau County Sheriff's Office
 - Install 1 (Qty) Console equipment rack, includes 5 (Qty) CCGW
 - Install 6 (Qty) MC7500s
- ◆ Fernandina Beach Police Department
 - Install 1 (Qty) Console equipment rack, includes 5 (Qty) CCGW
 - Install 6 (Qty) MC7500s
- ◆ Connect the Customer-supplied, previously-identified circuits into the console to a demarcation point.
- ◆ Program talkgroups and conventional channels to be recorded by the NICE IP Recorder.
- ◆ Connect all existing conventional channels to the new Conventional Channel IP Gateways. Install a dedicated Local Area Network (LAN) at each dispatch center to connect the proposed console positions.
- ◆ Connect the appropriate equipment to the Customer-supplied ground system in accordance with Motorola's R56 Site Installation standards. (if Customer-provided)
- ◆ Perform the console programming, based on the console templates designed during the fleetmapping process.
- ◆ For consoles not located at the master site, additional network link resources will be required, as identified in the network diagram provided by Motorola.

Customer Responsibilities:

- ◆ Provide demarcation point for console interface.

Completion Criteria:

- ◆ Console installation is complete.

8.6.5 Console Installation Complete

- ◆ Console installation completed and accepted by the Customer.



8.6.6 System Installation Acceptance (Milestone)

- ◆ All equipment installations are completed and accepted by the Customer.

8.7 System Optimization

8.7.1 Optimize System FNE

Motorola Responsibilities:

- ◆ Verify that all equipment is operating properly and that all electrical and signal levels are set accurately.
- ◆ Verify that all audio and data levels are at factory settings.
- ◆ Check forward and reflected power for all radio equipment, after connection to the antenna systems, to verify that power is within tolerances.
- ◆ Motorola and its subcontractors optimize each subsystem.
- ◆ Check audio and data levels to verify factory settings.
- ◆ Verify communication interfaces between devices for proper operation.
- ◆ Test features and functionality are in accordance with manufacturers' specifications and that they comply with the final configuration established during the CDR/system staging.
- ◆ Test and optimize the system.
- ◆ Set up the consoles on the new radio system to perform the dispatching operation.

Customer Responsibilities:

- ◆ Provide access/escort to the sites.
- ◆ Provide required radio ID and alias information to enable alias database setup for interface to console.
- ◆ Define the logging recorder inputs by talkgroup and conventional channels.
(Logging Recorder - If Applicable)

Completion Criteria:

- ◆ System FNE optimization is complete.

8.7.2 Link Verification

Motorola Responsibilities:

- ◆ Perform test to verify site link performance, prior to the interconnection of the Motorola-supplied equipment to the link equipment.

Customer Responsibilities:

- ◆ Make available the required links which meet the specifications supplied by Motorola at the CDR.



Completion Criteria:

- ◆ Link verification successfully completed.

8.7.3 Optimization Complete

- ◆ System optimization is completed. Motorola and the Customer agree that the equipment is ready for acceptance testing.

8.8 Training

8.8.1 Perform Training

Motorola Responsibilities:

- ◆ Finalize training schedules purchased as part of this project with the Customer Project Manager.
- ◆ Conduct the training classes outlined in the Training Plan.

Customer Responsibilities:

- ◆ Attend training classes.
- ◆ Comply with the prerequisites in the Training Plan.

Completion Criteria:

- ◆ All training classes completed.

8.8.2 Training Complete

- ◆ All training classes completed.

8.9 Audit and Acceptance Testing

8.9.1 Perform Equipment Testing

Motorola Responsibilities:

- ◆ Test individual components of the system to verify compliance to the equipment specifications.
- ◆ Repeat any failed test(s) once Motorola (or the Customer) has completed the corrective action(s).
- ◆ Prepare documentation of component tests to be delivered as part of the final documentation package.

Customer Responsibilities:

- ◆ Witness tests if desired.



Completion Criteria:

- ◆ Successful completion of equipment testing.

8.9.2 Perform Functional Testing

Motorola Responsibilities:

- ◆ Verify the operational functionality and features of the individual subsystems and the system supplied by Motorola, as contracted.
- ◆ If any major task as contractually described fails, repeat that particular task after Motorola determines that corrective action has been taken.
- ◆ Document all issues that arise during the acceptance tests.
- ◆ Document the results of the acceptance tests and present to the Customer for review.
- ◆ Resolve any minor task failures before Final System Acceptance.

Customer Responsibilities:

- ◆ Witness the functional testing.

Completion Criteria:

- ◆ Successful completion of the functional testing.
- ◆ Customer approval of the functional testing.

8.9.3 System Acceptance Test Procedures (Milestone)

- ◆ Customer approves the completion of all the required tests.

8.10 Finalize

8.10.1 Cutover

Motorola Responsibilities:

- ◆ Motorola and the Customer develop a mutually agreed upon cutover plan specific to the existing simulcast system replacement to IP Simulcast based upon discussions held during the CDR as this is the most intrusive part of the cutover that will require a detailed plan.
- ◆ During cutover, follow the written plan and implement the defined contingencies, as required.
- ◆ Conduct cutover meeting(s) with user group representatives to address both how to mitigate technical and communication problem impact to the users during cutover and during the general operation of the system.



- ◆ Systems engineering will initiate a draft Staging Factory Acceptance Test and Field Acceptance Test which will be presented and discussed for approval at the Customer Design Review (CDR).
- ◆ The installation and cut-over will need to be discussed in detail at the CDR and mutually agreed upon between Motorola and the County.

Customer Responsibilities:

- ◆ Attend cutover meetings and approve the cutover plan.
- ◆ Notify the user group(s) affected by the cutover (date and time).
- ◆ Conduct a roll call of all users working during the cutover, in an organized and methodical manner.

Completion Criteria:

- ◆ Successful migration from the old system to the new system.

8.10.2 Resolve Punchlist

Motorola Responsibilities:

- ◆ Work with the Customer to resolve punchlist items, documented during the Acceptance Testing phase, in order to meet all the criteria for final system acceptance.

Customer Responsibilities:

- ◆ Assist Motorola with resolution of identified punchlist items by providing support, such as access to the sites, equipment and system, and approval of the resolved punchlist item(s).

Completion Criteria:

- ◆ All punchlist items resolved and approved by the Customer.

8.10.3 Transition to Service/Project Transition Certificate

Motorola Responsibilities:

- ◆ Review the items necessary for transitioning the project to warranty support and service.
- ◆ Provide a Customer Support Plan detailing the warranty and post-warranty support, if applicable, associated with the Contract equipment.
- ◆ Provide additional information regarding post-warranty support, included in the Warranty/Post-Warranty section of this document.

Customer Responsibilities:

- ◆ Participate in the Transition Service/Project Transition Certificate (PTC) process.
- ◆ Subscribe to SUA II for a minimum of two years.



Completion Criteria:

- ◆ All service information has been delivered and approved by the Customer.

8.10.4 Finalize Documentation

Motorola Responsibilities:

- ◆ Provide an electronic as-built system manual on a Compact Disk (CD). The documentation will include the following:
 - System-Level Diagram
 - Site Block Diagrams
 - Site Floor Plans
 - ATP Test Checklists
 - Functional Acceptance Test Plan Test Sheets and Results
 - Equipment Inventory List
 - Console Programming Template (where applicable)

Customer Responsibilities:

- ◆ Receive and approve all documentation provided by Motorola.

Completion Criteria:

- ◆ All required documentation is provided and approved by the Customer.

8.10.5 Final Acceptance (Milestone)

- ◆ All deliverables completed, as contractually required.
- ◆ Final System Acceptance received from the Customer.

8.11 Project Administration

8.11.1 Project Status Meetings

Motorola Responsibilities:

- ◆ Motorola Project Manager, or designee, will attend all project status meetings with the Customer, as determined during the CDR.
- ◆ Record the meeting minutes and supply the report.
- ◆ The agenda will include the following:
 - Overall project status compared to the Project Schedule.
 - Product or service related issues that may affect the Project Schedule.
 - Status of the action items and the responsibilities associated with them, in accordance with the Project Schedule.
 - Any miscellaneous concerns of either the Customer or Motorola.



Customer Responsibilities:

- ◆ Attend meetings.
- ◆ Respond to issues in a timely manner.

Completion Criteria:

- ◆ Completion of the meetings and submission of meeting minutes.

8.11.2 Preliminary Project Schedule

The project schedule details the projected timeline for completing the required tasks to successfully implement Nassau County's Upgrade. During the Contract Design Review meeting following contract award, Motorola's Project Manager will present a baseline project schedule to Nassau County based upon knowledge and timeline goals learned during the Kickoff Meeting with Nassau County.

Preliminary Project Schedule

Date	Milestone
Start	Contract Execution
Within 30 days	Contract Design Review (CDR)
Months 2	Equipment manufacturing
Months 3	Fixed Network Equipment installation
Month 4	Optimization and Testing
Month 5	Training Completed
Month 6	Cutover, Conditional Acceptance
Month 7	Final Acceptance

8.11.3 Progress Milestone Submittal

Motorola Responsibilities:

- ◆ Submit progress (non-payment) milestone completion certificate/documentation.

Customer Responsibilities:

- ◆ Approve milestone, which will signify confirmation of completion of the work associated with the scheduled task.

Completion Criteria:

- ◆ The Customer approval of the Milestone Completion document(s).



8.11.4 Change Order Process

- ◆ Either Party may request changes within the general scope of this Agreement. If a requested change causes an increase or decrease in the cost or time required to perform this Agreement, the Parties will agree to an equitable adjustment of the Contract Price, Performance Schedule, or both, and will reflect the adjustment in a change order. Neither Party is obligated to perform requested changes unless both Parties execute a written change order.





Proposal for
Nassau County, Florida

7.4 to 7.11 Upgrade

October 17, 2011

Data Restrictions

This proposal is considered Motorola confidential and restricted. The proposal is submitted with the restriction that it is to be used for evaluation purposes only, and is not to be disclosed publicly or in any manner to anyone other than those employed by Nassau County required to evaluate this proposal without the express permission of Motorola Solutions, Inc.

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Motorola Solutions, Inc.
1303 E. Algonquin Rd.
Schaumburg, IL 60196
USA

October 17, 2011

Mr. Guy Riner, Systems Administrator
Nassau County Board of County Commissioners
96135 Nassau Place
Yulee, FL 32097

Subject: Proposal for 7.4 to 7.11 Upgrade

Dear Guy:

Motorola Solutions, Inc. ("Motorola") is pleased to present Nassau County, Florida ("County") with this proposal for 7.4 to 7.11 System Upgrade. Since the implementation of Nassau County's ASTRO[®] 25 System in 2006, Motorola has released seven software updates. Be assured that Nassau's original investment in ASTRO 25 remains sound. However, as with other IT systems, which leverage products from multiple original equipment manufacturer (OEM) partners, over time, due to normal advancements in technology, individual components within the ASTRO 25 platform will require update and replacement. In order to maintain supportability with maximum access to spare parts and technical support, we strongly recommend Nassau County to consider a system upgrade from release 7.4 to 7.11.

This system upgrade will include version updates for both Motorola manufactured and third-party OEM software and include replacement of certain discontinued hardware (i.e. third-party OEM servers, clients, routers, and switches). Not only will this upgrade ensure continued operation of the ASTRO 25 system, it will provide performance and feature enhancements.

Our primary goal is to provide the County with a solution that improves the safety level of your employees and citizens. Simultaneously, we are committed to contributing to the County's increased productivity and organizational profitability, while always ensuring customer satisfaction.

Motorola's proposal is subject to the attached Communications System Agreement and its Exhibits or, in the alternative, a negotiated version thereof. The team at Motorola will negotiate in good faith to arrive at a contract that best serves the interests of all parties involved.

The information in this proposal is a final design and comprehensive firm pricing valid through and including December 31, 2011. We look forward to your positive review of our proposal, to subsequent discussions, and to helping Nassau County achieve its communications goals and objectives now and into the future. Questions or inquiries may be addressed to Michelle Poole at 904-814-9938.

Sincerely,

Motorola Solutions, Inc.

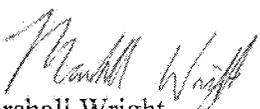

Marshall Wright
MSSSI Vice President & Director, Sales



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Section 1. Executive Summary

Introduction

Nassau County's ASTRO® 25 system is an integrated end-to-end solution designed for delivery of mission-critical land mobile radio services. The foundation of the ASTRO 25 platform is an information technology (IT)-based core that incorporates both Motorola Solutions and commercially developed software and hardware products. The embedded components of the ASTRO 25 system take advantage of the latest technology available through Motorola and its partners to provide an optimized standards-based solution that could not otherwise be developed in-house alone. Similar to other IT systems that leverage products from multiple original equipment manufacturer (OEM) partners, over time, due to normal advancements in technology, individual components within the ASTRO 25 platform will require update and replacement.

ASTRO 25 Lifecycle Planning

Lifecycle planning for the ASTRO 25 system is essential to ensure maximum availability and utility to the end users, and to protect the stakeholders' investment in the platform. As with IT computing platforms and other enterprise business systems, the pace of technology obsolescence is primarily driven by commercial OEM products that frequently change and transition into declining levels of support and availability. Consequently, systems without a plan for regular updates can become increasingly difficult and expensive to repair and may also become more vulnerable to security attacks. Additionally, non-current systems may not be able to take advantage of advancements in technology, which may provide enhanced features and performance, and may limit the ability to expand. Development of a lifecycle plan provides a roadmap for anticipating and implementing actions to address obsolescence and support limitations.

A well-developed lifecycle plan provides several benefits to the system owner and users of the system along 6 critical dimensions:

- A. **Operations sustainment** – Ability to maintain highest level of performance and functionality of the system operations.
- B. **Network security and information assurance** – Protection against system vulnerabilities that may compromise network security and confidential information. Compliance to mandated security requirements (NIST 800-53, NENA NG911, DHS 4300, DOD 8500.2, etc).

- C. **Support for growth and expansion** – Ability to add users, channel and features; expand system coverage and capabilities, and/or add-on new agencies.
- D. **Fiscal stability** – Planned fiscal approach for system maintenance mitigating risk of unplanned expenses. Inability to fund required maintenance services can result in degradation of operation.
- E. **Conformance to grant provisions** – Conformance with DHS Grant funding requirements (e.g. SAFECOM 111890) which dictate compliance to security, interoperability, and system maintenance provisions.
- F. **CapEx ROI** – Protection against premature deterioration and obsolescence, and extension of the system lifespan thereby reducing the total cost of ownership.

Motorola Solutions Commitment to ASTRO 25

Motorola is committed to supporting the ASTRO 25 platform for an extended period of time. Support coverage for the platform is aligned with the typical system lifespan customers' experience, which often spans across multiple decades. To sustain the platform lifespan, Motorola makes ongoing investments to regularly refresh the underlying components to address normal technology obsolescence and apply security safeguards. A primary goal of technology refresh is to maximize backwards compatibility thereby mitigating the need to replace the entire platform.

Motorola works closely with both customers and government to ensure that solutions offered meet stated requirements and regulations. The product development process for the ASTRO 25 platform is designed to coordinate with standards bodies, regulatory agencies, customer needs, and technology advancements. As a result, the ASTRO 25 platform is designed with Project 25 standards to ensure fully interoperable digital communications.

Motorola also works with its technology partners to incorporate new product versions into the ASTRO 25 platform through a system certification process, thus ensuring compatibility of new third-party products. As products are discontinued due to technology obsolescence, Motorola incorporates replacement versions thereby avoiding the need to replace the entire platform. The certification process also enables Motorola to continue support for discontinued third-party products, in some cases several years beyond the last general availability date from the OEM.





Section 2. System Description

The concept is that the current outdated 7.4 Master site that includes the server cabinet 1 and switch rack 3 along with the old PDG (on rack 1) will be replaced with a release 7.11 M2 Master site. Due to virtualization of various servers, the new M2 Master site will be all on a single rack.

Following are the high-level details of the changes that will be made.

7.11 M2 Master Site on a Single Rack Staged and Tested At CCSi:

- ◆ Load subscriber data base (~ 600 units) in the field
- ◆ New IV&D Packet Data Gateway (PDG)
- ◆ New MOSCAD GMC Virtual Server
- ◆ New MOSCAD GWS Remote Client (Manager's Office)
- ◆ New CORE LAN Switches
- ◆ New NM/Zone Controllers
- ◆ New Juniper Firewall

Software/Firmware Upgrades for the Following:

- ◆ Gold Elite:
 - CEB Firmware
 - Console Elite Application
 - XP OS – no change
- ◆ MGEG Firmware Refresh
- ◆ AEB Firmware Refresh
- ◆ Subsystem refresh:
 - GCP8000 SC Controllers
 - ATac9600 Comparators
 - GTR 8000 Base Radios
 - SDM3000 RTUs
 - S6000 & ST2500 routers
 - Replace all HP2626 switches with HP2610 (2626 no longer available)
 - Replace the local NM & Remote NM client (Manager's Office) CPUs with HP Z400s

The rack drawing in Figure 2-1 illustrates the current Master site rack elevations. Cabinet 1 and rack 3 will be replaced by a single M2 Master rack (Figure 2-2). Some things could be done in advance prior to the installation of the M2 rack. Some components have to be relocated out of cabinet 1 and rack 3. Since this is a “ruthless” upgrade where there will be some site trunking time, the final switch to the new M2 would be done during the least traffic hours (usually means Sunday morning work). For this reason, the following are some of the tasks to get a better understanding of what could be done in advance of the change:

- ◆ Remove the PDG in rack 1 from service (IV&D not being used at this time)
- ◆ Move the Elite Server to rack 1 (no change to XP OS just new CDM/ADM to be loaded)
- ◆ Remove the DMZ & LAN Switch 3, PN, Border & GGSN routers from rack 2 (not used at this time and are being replaced)
- ◆ Relocate the TRAK to the top of rack 2
- ◆ Relocate the SSC router to rack 2
- ◆ Relocate the MOTOBRIDGE RGU to rack 2
- ◆ Relocate MOSCAD RTU and PBs to rack 1 or 2 (MOSCAD gateway will not be used in the new M2 Master)

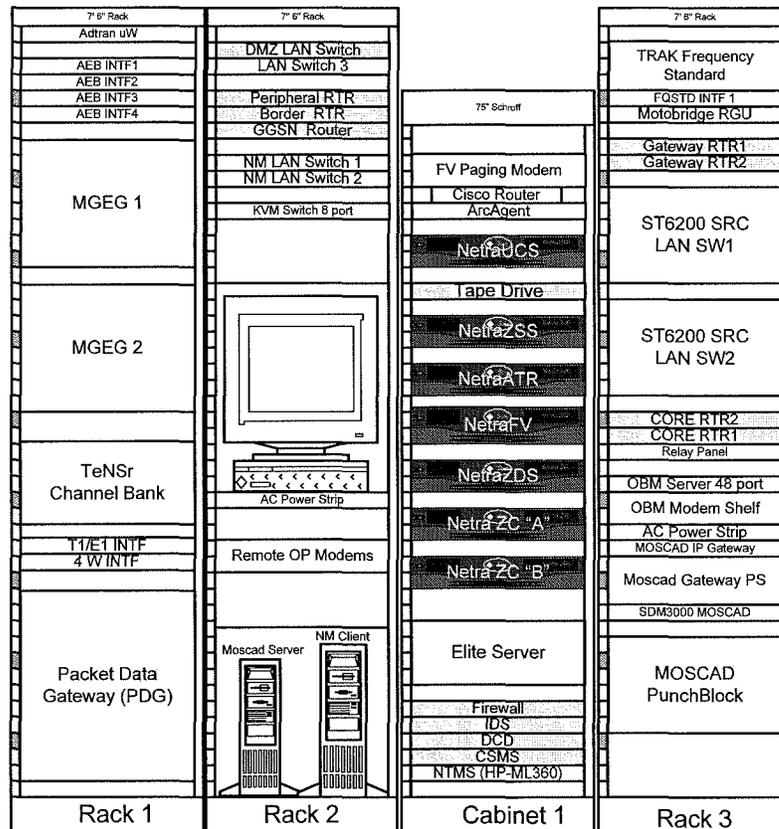


Figure 2-1: Current Master site rack elevations



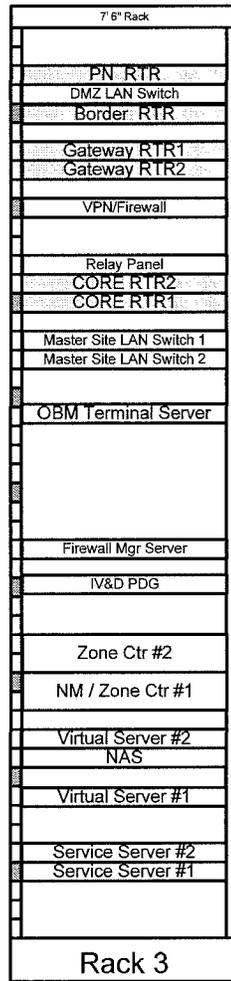


Figure 2-2: Single M2 Master rack



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Section 3. Statement of Work

3.1 Overview

Motorola Solutions (“Motorola”) proposes the installation and configuration of the equipment defined in the System Description and Equipment List. The document delineates the general responsibilities between Motorola and Nassau County (“Customer”) as agreed to by contract.

3.2 Motorola Responsibilities

Motorola’s general responsibilities include the following:

- ◆ Conduct project kickoff meeting with customer to review project design and finalize requirements.
- ◆ Perform the installation of the Motorola-supplied equipment described above.
- ◆ Coordinate the activities of all Motorola subcontractors under this contract.
- ◆ Administer safe work procedures for installation.
- ◆ Define electrical requirements for each equipment rack to be installed in the Customer-provided facilities.
- ◆ Define heat load for each equipment rack to be installed in the Customer-provided facilities.
- ◆ Optimize equipment and verify that all equipment is operating properly and that all electrical and signal levels are set accurately.
- ◆ Test features and functionality are in accordance with manufacturers’ specifications.
- ◆ Verify the operational functionality and features of the individual subsystems and the system supplied by Motorola, as contracted.
- ◆ If any major task as contractually described fails, repeat that particular task after Motorola determines that corrective action has been taken.
- ◆ Document all issues that arise during the acceptance tests.
- ◆ Document the results of the acceptance tests and present to the Customer for review.
- ◆ Resolve any punch list items before Final System Acceptance.

3.3 Nassau County Responsibilities

Nassau County will assume responsibility for the installation and performance of all other equipment and work necessary for completion of this project that is not provided by Motorola. Nassau County's general responsibilities include the following:

- ◆ Customer will provide a dedicated delivery point, such as a warehouse, for receipt, inventory, and storage of equipment prior to delivery to the site(s).
- ◆ Coordinate the activities of all Nassau County vendors or other contractors.
- ◆ Provide all buildings, equipment shelters, and towers required for system installation.
- ◆ Ensure communications sites meet space, grounding, power, and connectivity requirements for the installation of all equipment.
- ◆ Obtain all licensing, site access, or permitting required for project implementation.
- ◆ Obtain frequencies for project as required.
- ◆ Secure site lease/ownership, zoning, permits, regulatory approvals, easements, power, and Telco connections.
- ◆ Provide clear and stable access to the sites for transporting electronics and other materials. Sufficient site access must be available for trucks to deliver materials under their own power and for personnel to move materials to the facility without assistance from special equipment.
- ◆ Design and construct facilities for housing communications equipment such as shelters, towers, generators, fuel tanks, fenced compounds, etc.
- ◆ Supply adequately sized electrical service, backup power (UPS, generator, batteries, etc.) including the installation of conduit, circuit breakers, outlets, etc., at each equipment location. Provide AC power (dedicated 20 Amp AC outlets – simplex with ground) for each major piece of equipment within 6 feet of the location of the Motorola-supplied equipment, including the associated electrical service and wiring (conduit, circuit breakers, etc.).
- ◆ Provide adequate HVAC, grounding, lighting, cable routing, and surge protection (also, among existing and Motorola-provided equipment) based upon Motorola's "Standards and Guidelines for Communication Sites" Ceiling (minimum 9 feet) and cable tray heights (minimum 8 feet) in the equipment rooms in order to accommodate 7-foot, 6-inch equipment racks.
- ◆ Provide floor space and desk space (including desk furniture, as needed) for the System equipment at the Customer-provided facilities. Each rack shall be provided a minimum of 24-inch x 24-inch footprint with 36 inches clearance in the front and back.
- ◆ Relocate and/or removal of existing equipment, if needed, to provide required space for the installation of Motorola-supplied equipment.
- ◆ Bring grounding system up to Motorola's "Standards and Guidelines for Communication Sites" (R56) and supply a single point system ground, of 5 ohms or less, to be used on all FNE supplied under the Contract. Supply grounding tie point within 10 feet from the Motorola-supplied equipment.



- ◆ Provide all necessary wall or roof penetrations on existing buildings for antenna coax and microwave waveguide (if applicable) for main transmitter antennas, microwave radios, and control station Yagi antennas.
- ◆ Provide obstruction-free area for the cable run between the demarcation point and the communications equipment.
- ◆ Resolve any environmental issues including, but not limited to, asbestos, structural integrity (rooftop, water tank, tower, etc.) of the site, and any other building risks. (Resolve environmental or hazardous material issues).
- ◆ Arrange for space on the tower for installation of new antennas at the proposed heights.
- ◆ Perform structural analysis of existing tower and rooftops as required to confirm that the structure is capable of supporting proposed and future antenna loads.
- ◆ Supply all permits as contractually required.
- ◆ Supply interior building cable trays, raceways, conduits, and wire supports.
- ◆ Supply engineering and drafting as required for modifications to existing building drawings for site construction.
- ◆ Pay for usage costs of power and generator fueling, both during the construction and installation effort, and on an ongoing basis.
- ◆ Approved FCC licensing and modification provided by the Customer as needed.
- ◆ Any required system interconnections not specifically outlined here will be provided by the Customer, per Motorola specifications. Test results to confirm specification compliancy are required prior to equipment installation. Note: These may include dedicated phone circuits, microwave links, or other types of connectivity.
- ◆ No coverage guarantee is included in this proposal.
- ◆ Motorola is not responsible for interference caused or received by the Motorola-provided equipment except for interference that is directly caused by the Motorola-provided transmitter(s) to the Motorola-provided receiver(s). Should the Customer's system experience interference, Motorola can be contracted to investigate the source and recommend solutions to mitigate the issue.

