

**AGREEMENT  
BETWEEN THE LATHROP MANTECA FIRE DISTRICT, HOST AGENCY  
AND THE CITY OF STOCKTON FOR THE PURCHASE, INSTALLATION  
AND USE OF COMMUNICATIONS EQUIPMENT**

THIS AGREEMENT is made and entered into on \_\_\_\_\_, by and between the LATHROP-MANTECA FIRE DISTRICT, San Joaquin County, a political subdivision of the State of California (hereinafter the "District") and CITY OF STOCKTON, a municipal corporation (hereinafter designated as "CITY"):

**RECITALS:**

**WHEREAS**, IDLH (Immediately Dangerous to Life or Health) Operations is one of the most hazardous aspects of a firefighters job and according to statistics accounts for up to 50% of firefighter injuries and deaths annually; and

**WHEREAS**, it is in the best interests that all cities including City of Stockton, fire districts, and other agencies in the San Joaquin County (hereinafter collectively the "Agencies") continue to work together to provide applicable firefighter training and equipment to the county, cities and districts, and persons served; and

**WHEREAS**, the DISTRICT, in conjunction and consultation with all participating agencies, hosted an Assistance to Firefighters Grant Proposal to the United States Department of Homeland Security; and

**WHEREAS**, Department of Homeland Security Preparedness Directorate's Office of Grants and Training awarded the grant proposal for a Federal share amount of \$1,899,293; and

**WHEREAS**, the DISTRICT has hired Shamrock Consulting to facilitate this grant and provide assistance in governance of the grant; and

**WHEREAS**, the DISTRICT has an existing Communications System Agreement with Motorola Solutions, Inc. (Vendor) for communications equipment and services dated December 2, 2014; and

**WHEREAS**, the DISTRICT and CITY desire to enter into a transaction to procure and install (i) two dispatch consoles with Federal grant funds; and (ii) four dispatch consoles and support equipment for the Stockton Fire Department Emergency Communications Division;

**NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:**

**1. DISTRICT'S OBLIGATION**

- A. The DISTRICT shall coordinate, plan, and purchase six (6) MCC7500 Dispatch Consoles and support equipment from the Vendor in accordance with appropriate federal, state, and local laws, rules, and regulations.
- B. The DISTRICT shall coordinate with the grant program manager and the Vendor to secure the equipment in accordance with local procurement procedures and Federal purchasing guidelines.
- C. Any unexpended dollar amounts contributed by the CITY will be returned to the CITY within three months after the notice of completion for this project has been filed by the District, or the project is declared abandoned by the District, whichever is earlier.

**2. CITY'S OBLIGATION**

- A. The CITY may assist in governing the design and specifications of the dispatch consoles and support equipment.
- B. The CITY may provide technical input and requirements necessary to create an effective dispatch console and support equipment specification to meet its individual and collective needs.
- C. The CITY shall provide funding and resources necessary to complete the purchase of the specified dispatch consoles and support equipment pursuant to the grant agreement documents with regards to local matching funds and contractual services.

**3. COST SHARING PLAN**

In consideration of the foregoing, CITY shall pay the DISTRICT:

- A. 10% share of purchase and installation costs of two dispatch consoles purchased with Federal Funds per Exhibit A attached to this Agreement.
- B. An additional 1.5% of purchase and installation costs of two dispatch consoles purchased with Federal Funds for CITY's share of grant management costs per Exhibit A attached to this Agreement.
- C. 100% of purchase and installation costs of four dispatch consoles and support equipment per Exhibit B attached to this Agreement.

**4. PAYMENT PROVISIONS**

CITY agrees to remit full payment of all invoices received from DISTRICT within 30 days of receipt. CITY agrees that the DISTRICT may issue invoice prior to delivery and installation of dispatch console equipment, but not prior to actual award of contract for purchase and/or issuance of a Purchase Order to the Vendor. DISTRICT may invoice CITY for any portion, or the entire amount, of their respective costs.

Any additional amounts due as a result of costs exceeding the original project cost estimate shall be paid to the DISTRICT within ninety (90) days of the acceptance of the purchased equipment, or cancellation of the project.

CITY's failure to make timely payments shall be subject to late payment penalties that shall accrue at the rate of one percent (1%) of the outstanding unpaid balance per month.

**5. TERM OF THE AGREEMENT**

This Agreement shall become effective as of December 1, 2014; provided, however, the parties may agree to change either commencement or expiration date. This agreement shall remain in effect for a period of six (6) months after notice of completion of this project has been recorded by the Preparedness Directorate's Office of Grant and Training.

**6. SEVERABILITY**

If any part, term or provision of this agreement shall be held void, illegal, unenforceable, or in conflict with any law of a Federal, State or Local Government having jurisdiction over this Agreement, the validity of the remaining portions or provisions shall not be affected thereby.

**7. INDEMNIFICATION**

CITY shall indemnify, defend, and hold harmless the DISTRICT, its officers, agents, and employees, from and against any and all claims, liabilities, and losses whatsoever (including damages to property and injuries to or death of persons, court costs, and reasonable attorneys' fees) occurring or resulting to any and all persons, firms or corporations furnishing or supplying work, services, materials, or supplies in connection with the performance of this Agreement, and from any and all claims, liabilities, and losses occurring or resulting to any person, firm, or corporation for damage, injury, or death arising out of or connected with that CITY's performance of this Agreement, unless such claims, liabilities, or losses arise out of the sole negligence or willful misconduct of the District. "DISTRICT's performance" includes DISTRICT's action or inaction and the action or inaction of DISTRICT officers, employees, agents and subcontractors.

The DISTRICT shall indemnify, defend, and hold harmless the CITY, its officers, agents, and employees, from and against any and all claims, liabilities, and losses whatsoever (including damages to property and injuries to or death of persons, court costs, and reasonable attorneys' fees) occurring or resulting to any and all persons, firms or corporations furnishing or supplying work, services, materials, or supplies in connection with the performance of this Agreement, and from any and all claims, liabilities, and losses occurring or resulting to any person, firm, or corporation for damage, injury, or death arising out of or connected with the CITY's performance of this Agreement, unless such claims, liabilities, or losses arise out of the sole negligence or willful misconduct of the CITY. "CITY's performance" includes CITY's action or inaction and the action or inaction of CITY's officers, employees, agents and subcontractors.

**8. INSURANCE**

- A. Without limiting CITY's or DISTRICT's duty to indemnify, CITY and the DISTRICT shall maintain in force at all times during the performance of this Agreement, program of insurance with the following minimum limits of liability:
  - 1. Comprehensive general liability, including but not limited to premises, and operations, including coverage for Bodily Injury and Property Damage, Personal Injury, Contractual Liability, Independent Contractors, Products, and Completed Operations, with a combined single limit for Bodily Injury and Property Damage of not less than \$1,000,000 per occurrence.
  - 2. Comprehensive automobile liability insurance, covering all motor vehicles, including owned, leased, non-owned, and hired vehicles, used in providing services under this Agreement, with a combined single limit for Bodily Injury and Property Damage of not less than \$1,000,000 per occurrence.
  - 3. Worker's Compensation in accordance with California Labor Code section 3700 and with Employer's Liability limits not less than \$1,000,000 each person, \$1,000,000 each accident, and \$1,000,000 each disease.
- B. In the event any party is lawfully self-insured in any or all of the aforementioned insurance areas, a letter certifying those areas of coverage, and in the minimum amounts as set forth in this contract, shall be furnished upon request to the other parties prior to execution of this Agreement.

## 9. GENERAL PROVISIONS

- A. Project Governance. The DISTRICT, in partnership with Shamrock Consulting, shall govern this project to specify and purchase the dispatch consoles and support equipment. By a majority vote at a meeting at which a quorum of the represented voting agencies are present the project may be terminated and/or reconstituted as directed by the approved motion.
- B. Amendment. This Agreement may be amended or modified only by an instrument in writing signed by all the parties hereto.
- C. Waiver. Any waiver of any terms and conditions hereof must be in writing and signed by the parties hereto. A waiver of any of the terms and conditions hereof shall not be construed as a waiver of any other terms or conditions in this Agreement.
- D. Successors and Assigns. This Agreement and the rights, privileges, duties, and obligations of the parties hereunder, to the extent assignable or delegable, shall be binding upon and inure to the benefit of the parties and their respective successors, permitted assigns, and heirs.
- E. Compliance with Applicable Law. The parties shall comply with all applicable federal, state, and local laws, rules, and regulations in performing this Agreement.
- F. Heading. The section and paragraph headings are for convenience only and shall not be used to interpret the terms of this Agreement.
- G. Time is of the Essence. Time is of the essence in each and all of the provisions of this Agreement.
- H. Governing Law. This Agreement shall be governed by and interpreted under the laws of the State of California. The venue for such actions shall be the County of San Joaquin, California.
- I. Construction of Agreement. The parties agree that each party has fully participated in the review and revision of this Agreement and that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in the interpretation of this Agreement or any amendment hereto.
- J. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement. Participation of all Agencies noted is expected but, in the event that an agency elects not to participate, the Agreement will remain valid for those agencies which execute the Agreement.
- K. Authority. Any individual executing this Agreement on behalf of an entity represents and warrants hereby that he or she has the requisite authority to enter into this Agreement on behalf of such entity and bind the entity to the terms and conditions of the same.
- L. Integration. This Agreement, including the exhibits hereto, shall represent the entire Agreement between the parties with respect to the subject matter hereof and shall

supersede all prior negotiations, representations, or agreements, either written or oral, between the parties as of the effective date hereof.

- M. Notices. Notices required under this Agreement shall be delivered personally or by first-class, postage pre-paid mail as indicated below with the signatures to the location at which this Agreement is executed:

IN WITNESS WHEREOF, the DISTRICT and CITY have caused this Agreement to be executed by their duly-authorized representative as of the day and year written above.

Lathrop Manteca Fire District:

City of Stockton:

\_\_\_\_\_  
Fire Chief

\_\_\_\_\_  
City Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

APPROVED AS TO FORM:

\_\_\_\_\_  
Assistant City Attorney

\_\_\_\_\_  
Date

ATTEST:

\_\_\_\_\_  
BY: **BONNIE PAIGE**, City Clerk

**EXHIBIT A - Cost Distribution by Agency**

2013 Assistance to Firefighters Grant

Lathrop-Manteca Fire District - Host Agency

Trunking System Project Equipment Purchase

	<b>Equipment Cost</b>	<b>Labor Cost</b>	<b>Early Purchase 15% Discount</b>	<b>Total Cost</b>	<b>8.50% Sales Tax</b>	<b>10% Agency Share</b>	<b>0.50% Grant Mgt */ (Sales Tax )</b>	<b>1.00% Grant Mgt</b>	<b>Total Share Cost</b>
	<b>a</b>	<b>b</b>	<b>c = (a + b) x 15%</b>	<b>d = (a + b) - c</b>	<b>e = (a - c) x 8.5%</b>	<b>f = (d + e) x 10%</b>	<b>g = (a - c) x .5%</b>	<b>h = (d + e) x 1%</b>	<b>Total = f + g + h</b>
JRUG	\$209,987	\$145,378	\$53,305	\$302,060	\$13,318	\$31,538	\$783	\$3,154	\$35,475
SJ Co	\$314,980	\$218,066	\$79,957	\$453,089	\$19,977	\$47,307	\$1,175	\$4,731	\$53,212
STO <sup>1</sup>	\$104,993	\$72,689	\$26,652	\$151,030	\$6,659	\$15,769	\$392	\$1,577	\$17,737
<b>Totals</b>	\$629,960	\$436,133	\$159,914	\$906,179	\$39,954	\$94,613	\$2,350	\$9,461	\$106,425

<sup>1</sup> STO - City of Stockton share of dispatch console and support equipment purchase cost

\* .05% sales tax was missed in the grant request and will need to be paid by each agency based on the number of consoles

# 4 POSITION MCC7500 DISPATCH CONSOLES

## FOR STOCKTON FD DISPATCH



The design, technical, and cost information furnished with this proposal is proprietary information of Motorola Solutions, Inc. (Motorola). Such information is submitted with the restriction that it is to be used only for the evaluation of the proposal, and is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the proposal, without the express written permission of Motorola Solutions, Inc.

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7 February 2015

Chief Gene Neely  
Lathrop-Manteca FPD  
800 East J Street  
Lathrop, CA 95330

Subject: 4 Position MCC7500 Dispatch Consoles & Backroom Equipment

Dear Chief Neely,

Motorola Solutions, Inc. ("Motorola") is pleased to have the opportunity to provide Lathrop-Manteca FPD with quality communications equipment and services, and at your request we have prepared a special proposal to add 4 dispatch consoles to your trunking system project. The Motorola project team has taken great care to propose a solution that will meet your needs and provide unsurpassed value.

To best meet the functional and operational specifications of this solicitation, Motorola's solution includes a combination of hardware, software, and services. Specifically, this solution is for the Stockton Fire Dispatch Center and provides:

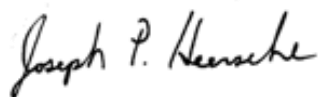
- 4 MCC7500 dispatch consoles;
- Backroom equipment including: alias manager, auxiliary input/outputs for device controls, and conventional channel gateways;
- One local site controller; and
- One control station for backup dispatch capability.

This proposal consists of this cover letter and references the signed Communications System Agreement (CSA) from 12-2-2014, together with its Exhibits. Time is of the essence due to the project timelines underway for the trunking system deployment, therefore Motorola can hold this pricing valid through August 28, 2015. Significant labor savings have been accounted for and passed through as additional discounts, provided that this project is accepted as Change Order #3 to the existing trunking project. Lathrop-Manteca FPD may accept the proposal by executing a change order with Motorola. Alternatively, Motorola would be pleased to address any concerns you may have regarding the proposal. Any questions can be directed to your Motorola Account Executive, Tammie Massirer, our Senior Account Manager, at 916-626-0493.

We thank you for the opportunity to furnish Lathrop-Manteca FPD with "best in class" solutions and we hope to strengthen our relationship by implementing this project. Our goal is to provide you with the best products and services available in the communications industry.

Sincerely,

Motorola Solutions, Inc.



Joe Heersche  
Area Sales Manager



# STATEMENT OF WORK

Motorola is proposing to Lathrop-Manteca FPD the installation and configuration of the following equipment at the specified locations. This proposal assumes that this 4 position Console Upgrade is a 2<sup>nd</sup> Change Order to the existing 3 Site 4 Channel UHF Trunking System that is currently underway and will follow the current project schedule to utilize maximum labor efficiencies and financial savings. Motorola reserves the right to re-quote this project if the scope is reduced or changed.

Site Name	Major Equipment
Stockton FD Dispatch	4 Positions MCC7500 Dispatch Consoles, Alias Manager, Site Controller and Backroom equipment

The document delineates the general responsibilities between Motorola and Lathrop-Manteca FPD as agreed to by contract.

## 1.1 MOTOROLA INTEGRATION SERVICES

To ensure a smooth system installation and deployment, our solution for the Lathrop-Manteca FPD includes the following services:

- System staging at our Customer Center for Solutions Integration (CCSi).
- Project Management.
- Field Engineering.
- System installation and optimization.
- System training based upon customer requirements for on-site training (limited to two sessions, with a maximum of twelve (12) students per session).

This solution will be installed, optimized, tested, and cutover by our dedicated Project Implementation Team.

## 1.2 MOTOROLA RESPONSIBILITIES

Motorola's general responsibilities include the following:

- Perform the installation of the Motorola supplied equipment described above.
- Schedule the implementation in agreement with Lathrop-Manteca FPD.
- Coordinate the activities of all Motorola subcontractors under this contract.
- Administer safe work procedures for installation.
- Provide Lathrop-Manteca FD with the appropriate system interconnect specifications.

## 1.3 LATHROP-MANTECA FPD RESPONSIBILITIES

Lathrop-Manteca FPD 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. Lathrop-Manteca FPD's general responsibilities include the following:

- Provide all buildings, equipment shelters, and towers required for system installation.

- Insure 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.
- Provide required system interconnections.
- 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 Lathrop-Manteca FPD vendors or other contractors.

Motorola has made several assumptions in preparing this proposal, which are noted below. In order to provide a firm quote, Motorola will need to verify all assumptions or seek alternate solutions in the case of invalid assumptions.

- All existing sites or equipment locations will have sufficient space available for the system described as required/specified by R56.
- All existing sites or equipment locations will have adequate electrical power in the proper phase and voltage and site grounding to support the requirements of the system described.
- All existing towers will have adequate space and size to support the antenna network requirements of the system described.
- Any site/location upgrades or modifications are the responsibility of the customer.
- Any tower stress analysis or tower upgrade requirements are the responsibility of the customer.
- Approved FCC licensing provided by the customer.
- Approved local, State or Federal permits as may be required for the installation and operation of the proposed equipment are the responsibility of the customer.
- Any required system interconnections not specifically outlined here will be provided by the Customer. These may include dedicated phone circuits, microwave and Ethernet 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.



# SYSTEM DESCRIPTION

## 2.1 CONSOLE ADD-ON

In response to Lathrop-Manteca FPD request to add an ASTRO 25 MCC7500-based Dispatch Site to the existing Motorola ASTRO 25 system, Motorola has prepared this document. This estimate includes the necessary hardware, software, and services to implement a single MCC7500 dispatch site. Motorola has included its design assumptions to aid in planning your site construction/modification.

The MCC7500 is Motorola's flagship mission-critical, IP-based dispatch solution. It provides a highly scalable solution that can support dispatch centers ranging in size from a single dispatch console up to fifty (50) dispatch consoles. The MCC7500 platform leverages Ethernet/IP technology to provide increased backhaul efficiency to the ASTRO 25 core compared to earlier technologies (e.g. Gold Elite), as well as increased deployment flexibility and interface support.

The MCC7500 Operator Position (pictured) is based on the same user-friendly Graphical User Interface (GUI) as our previous Gold Elite platform. For users that are migrating, this reduces the necessary dispatcher training as most of the features and functions operate the same between the two platforms.

The MCC7500 supports a wide range of devices and interfaces including, but not limited to:

- P25 Phase 1 Channels.
- P25 Phase 2 Talk-Paths.
- SmartZone Channels (Via SmartX Hardware).
- Analog Conventional Channels.
- Digital Conventional Channels.
- Auxillary Functions (Relay/Alarms, etc.).
- Audio Logging.
- Integrated Paging Support.

The MCC 7500's flexible IP architecture enables interfaces and components to be distributed where they are needed. Conventional channel gateways "CCGW's" can be located at conventional-only radio sites, trunking Radio sites, the master site, or at console sites if that is where the conventional stations will reside. Aux I/O Servers are placed anywhere in the zone, closest to where they are needed.



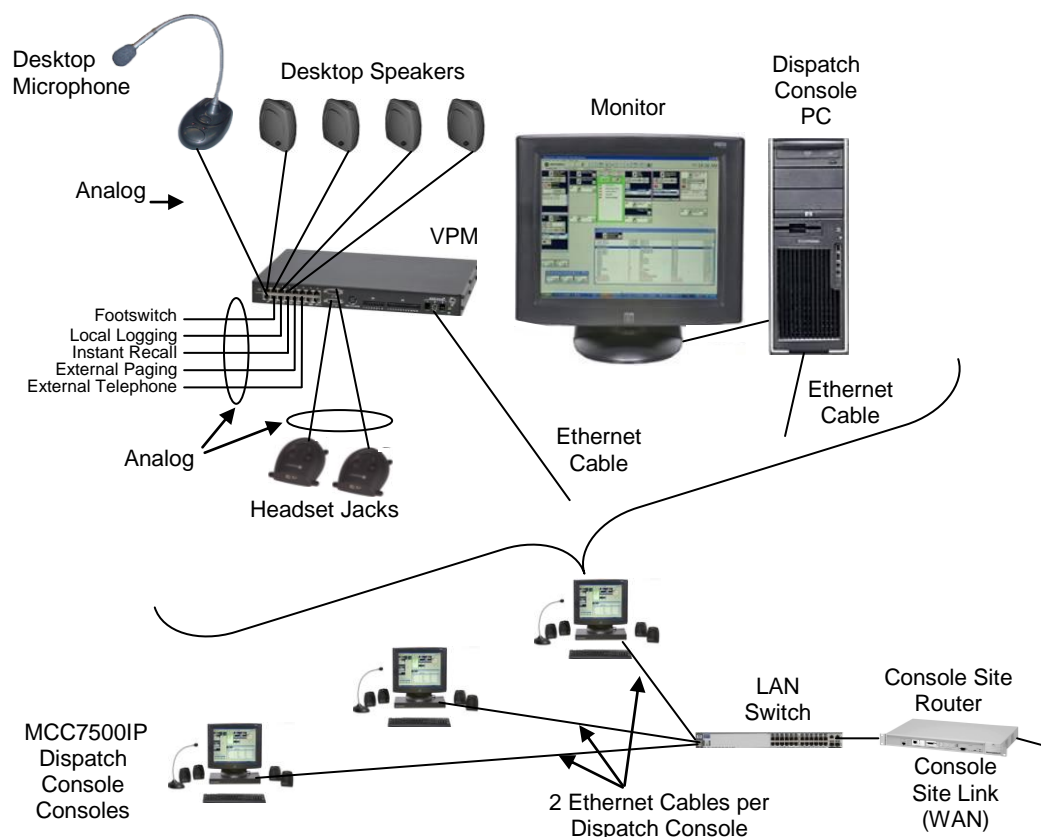
The voice processing module “VPM” connects to the console site LAN switch and communicates with the dispatch console PC via Ethernet. Each dispatch position has its own PC and its own VPM. The VPM is designed to be located at the Dispatch position.

The VPM provides all the audio processing services and encryption/decryption services for the VPM-based radio console. It is capable of supporting audio level adjustments, summing and filtering. It is also capable of supporting multiple simultaneous streams of audio. The VPM can support multiple simultaneous encryption/decryption sessions using multiple algorithms and multiple secure keys.

The VPM provides the connections for the following items:

- Gooseneck Microphone.
- Headset Jacks.
- Desktop Speakers.
- Local Logging Recorder.
- 911 Telephone Headset.
- Instant Recall Recorder for Radio.

Figure 2-1 shows the hardware architecture of the VPM-based version of the MCC7500 IP Dispatch Console.



**Figure 2-1: Motorola MCC7500IP Dispatch Console Hardware Architecture (with VPM)**

## Conventional Channel Gateway (CCGW)

The portion of the router hardware and software that support the conventional stations is called the Conventional Channel Gateway (CCGW). Conventional channels are highly integrated into the trunking systems, improved upon from previous radio – console configurations. The zone controller manages conventional channels in a manner similar to how it manages trunked talkgroups. The physical interface to the analog conventional stations also changes from previous radio systems. Radio site routers are fitted with four-wire interface cards, which are connected to the analog stations or backup control stations.

This integration provides two key benefits:

1. It allows the conventional audio to use the same transport network as the trunked audio.
2. It reduces the number of individual interface devices in the radio system.

Each CCGW has four (4) ports for connectivity to conventional channels or control stations. San Joaquin County is responsible for Backup control stations and conventional radios to connect to the for the CCGW interface.

## Conventional Site Controller (CSC)

The CSC is a very important to dispatch continuity, because it allows dispatch console users to continue to access and control local conventional channels if connectivity to the radio system's controller is lost. This mode of operation is often called "fallback operation" or "site conventional operation". All dispatch consoles, archiving interface servers and CCGWs continuously monitor their connections to the radio system's controller. If they detect that the connections have failed, they check their configuration data to see if a CSC is present in their console site. If a CSC does exist, they will automatically switch over to it. Any archiving interface servers located at the console site with the CSC will also continue to record calls on local conventional channels.

## Auxiliary Inputs/Outputs

Hardware is required to house contact closures for Auxiliary Inputs and Outputs. The basic hardware consists of an SDM 3000 RTU with simplified software. The RTU, called the Aux I/O server, can be placed anywhere in the system zone, closest to the item needed to be monitored or controlled. An AUX I/O unit is proposed that will be used to control inputs and outputs on the system, such as electric locks on doors in the dispatch center or radio site. The AUX I/O unit will interface directly to the console operator positions where the opening of the doors can be controlled by a window on the dispatch Console GUI interface of the MCC7500console. This unit provides up to 48 inputs and 16 outputs.

## MKM 7000 Console Alias Manager System Design

The Motorola MKM 7000 Console Alias Manager (CAM) is required to manage the radio unit ID aliases that are displayed on MCC7500 and MCC 7100 consoles. It enables agencies that are sharing a radio system to make changes to the aliases that are displayed on their dispatch positions and logging recorders without affecting the aliases displayed on the dispatch positions and logging recorders of other agencies on the system.

## 2.1.1 Additional MCC7500Console Dispatch System Features

The MCC7500 is a feature-rich, modular platform that has been configured to maximize the utility of the system to your unique needs. The following sections provide discussion of the key MCC7500IP Dispatch Console features.



## **Integrated with the ASTRO 25 Network**

The MCC7500IP Dispatch Console is seamlessly integrated into the ASTRO 25 Mission Critical Trunking Network. The console connects directly to the Master Site via an IP backbone. This IP approach eliminates the need for space-consuming backroom electronics. All dispatch activity is performed over IP. The physical space needed to accommodate the MCC7500console position is no more than required for a personal computer.

Both trunked talkgroups and conventional radio channels can be accessed and controlled from one MCC7500IP Dispatch Console over the same network, thus reducing overall transport costs. All conventional resources become shared resources within the ASTRO 25 network, reducing the need for duplicate fixed network equipment.

Inherent integration with the ASTRO 25 network means:

- Emergency alarms are prioritized to get through no matter how busy the network.
- Voice quality is optimized, eliminating the potential for audio degradation.
- Quality of service is maintained, regardless of the size of the system.
- IP network redundancy ensures call traffic delivery.
- Rapid call set up times that remain constant, regardless of the size of the system.
- Improved bandwidth efficiencies reduce transport costs.
- Flexibility in usage of the operator configuration – any operator can do their job from any position in the network.
- True end-to-end encryption from ASTRO 25 subscriber to the console operator position, enhancing operational security.
- Inherent access to all system resources within the network by eliminating equipment and coverage constraints, providing dispatch priority to reach any user when needed.

## **Proven Graphical User Interface**

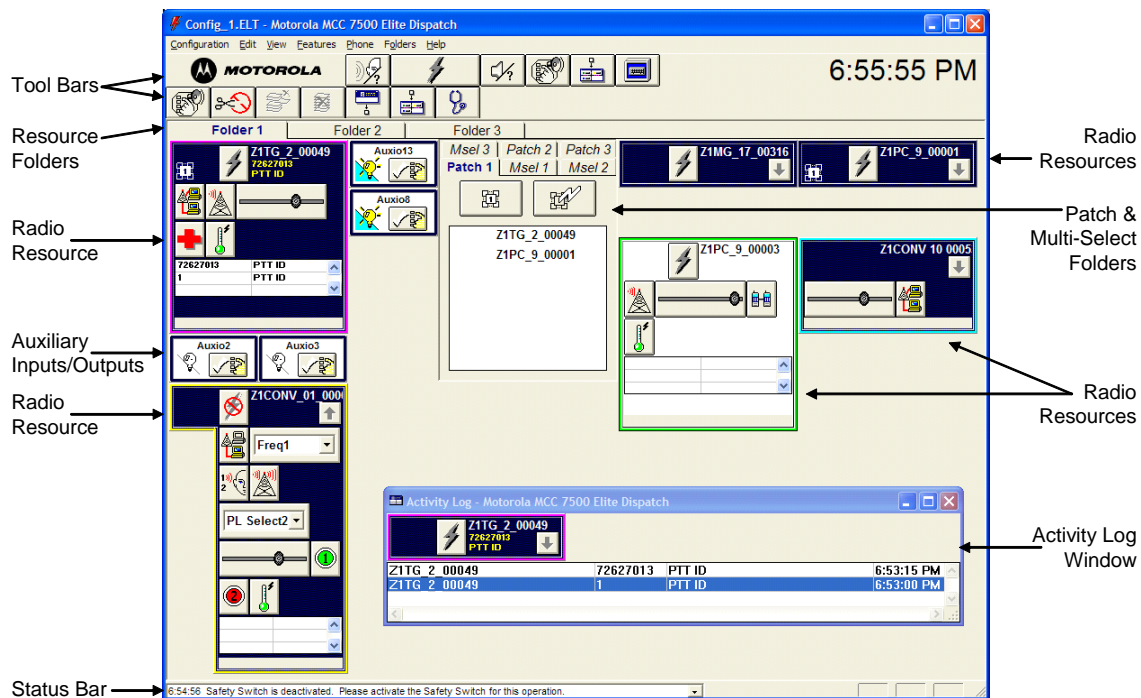
The MCC 7500's intuitive graphical user interface (GUI) optimizes user efficiency. The MCC7500 user interface is an enhanced version of Motorola's proven radio dispatch GUI. For new users, the graphical icons and unsurpassed flexibility make the MCC7500console GUI easy to learn and operate.

The MCC7500 GUI is highly configurable and customizable by agency or user to meet dynamic needs and requirements. The MCC7500 GUI makes the most use of monitor space, maximizing the number of resources a supervisor is able to easily view and control. Features include:

- Six (6) screen configurations (folders) for added resource capacity, for shift changes, or for differing radio dispatch scenarios and/or responsibilities.
- Sixteen different radio patch configurations per MCC7500IP Dispatch Console.
- Call history log for up to 1000 calls.







**Figure 2-2: Radio Dispatch GUI**

The radio console computer and software are the user interface to the ASTRO 25 IP network. Above is a screenshot of the MCC7500IP Dispatch Console's Graphical User Interface (GUI).

## Centralized Network Configuration and Fault Management

Centralized configuration is a unique MCC7500IP Dispatch Console feature that speeds console set up, enhancement, or expansion efforts and makes the most efficient use of resources.

- Configuration of the MCC7500IP Dispatch Console positions is accomplished via the User Configuration Manager (UCM).
- There is no need to separately maintain or manage configuration databases solely for the radio dispatch equipment.
- Redundancy and potential errors from entering radio IDs and other data at multiple locations are eliminated.
- Console configuration changes are immediately and automatically distributed to radio dispatch positions.
- Call traffic and performance reports for each console can be generated from the Network Manager.
- Historical reports can assist in making informed decisions regarding radio console changes for optimal effectiveness and efficiency.
- Centralized fault management allows reduced service times, and quicker resolution of issues.

The MCC7500IP Dispatch Console is designed to continuously monitor its application software and important hardware elements (PC, voice card, and secure card, VPM) to make sure it is operating efficiently at all times. Network connections and control paths between the consoles and various elements are also monitored to make sure they are operating efficiently.

## Mission Critical Audio and Tones

The MCC7500IP Dispatch Console is designed:

- To minimize the impact of any momentary glitches in IP audio packet delivery.

- With Robust error mitigation methods in place so call audio is not degraded even when the system is heavily loaded in a crisis. This improves dispatcher accuracy to minimize communication errors and repeated transmissions.
- To optimize the quality of tones sent to the radio users to improve the accuracy of their interpretation and response. Special protocols are used in the MCC7500IP software to enhance the quality of Alert Tones and Channel Marker tones used in trunking, which can be subject to distortion from the Project 25 IMBE vocoder.

### Reliability and Availability

The MCC7500IP Dispatch Console and services are optimized for real-time audio, essential for mission critical operations. The MCC7500 is designed to prioritize emergency calls over other traffic. Queuing of voice is kept to a minimum and calls are transmitted in 450 milliseconds or less.

For added assurance of reliable communications, MCC7500IP Dispatch Console sites support:

- Redundant WAN links to the trunking system master site.
- A Conventional Site Controller is used to ensure conventional channels remain operational.

## 2.1.2 Proposed System

Our proposed P25 MCC7500 Console Solution for the Lathrop-Manteca FPD includes the following summary of equipment:

- One (1) Motorola MCC7500-based dispatch site:
  - Supporting four (4) Dispatch Positions composed of the following hardware:
    - ◆ 19" Non-Touch Monitor.
    - ◆ MCC7500 Operator PC.
    - ◆ MCC7500 Voice Processor Module (VPM).
    - ◆ One (1) Headset.
    - ◆ Two (2) Headset jacks.
    - ◆ Two (2) Speaker
    - ◆ One (1) Dual-footswitch.
    - ◆ IRR
    - ◆ Licensing:
      - DES OFP Algorithm.
      - Advance conventional.
      - Trunking licensing.
- Two (2) Motorola Site Gateways.
- Two (2) Site Ethernet Switches.
- Two (2) AUXI/O Server:
  - Supporting Ninety six (96) Relay sensors (inputs).
  - Supporting Thirty two (32) Relay outputs (closures).
  - All relays are Form A.
- Three (3) Conventional Channel Gateways:
  - Each supporting up to eight (8) analog conventional interfaces.
- Each supporting Tone-Remote Control of Type II E&M interfaces.
- One conventional site controller.
- One MKM (alias manger).
- One control station with antenna and line.

# ACCEPTANCE TEST PLAN



## 3.1 MCC 7100/7500 CONVENTIONAL RESOURCES

### 3.1.1 Transmission on IP-based Analog Conventional Voice Channel - Tone Remote Control (TRC)

#### 1. DESCRIPTION

The IP-based analog conventional feature provides radio users /dispatchers capability to communicate with other radio users /dispatchers listening to the channel. The MCC 7100/7500 dispatcher can communicate to other radios and dispatchers who are listening to the channel. An operational Conventional Channel GateWay (CCGW) with an analog conventional channel (CONVENTIONAL CHANNEL 1) is configured to use TRC to key the station. The attached repeater/BS is also configured to work with TRC.

#### SETUP

RADIO-1 - CONVENTIONAL CHANNEL 1  
RADIO-2 - CONVENTIONAL CHANNEL 1  
CONSOLE-1 - CONVENTIONAL CHANNEL 1  
CONSOLE-2 - CONVENTIONAL CHANNEL 1

**VERSION #1.010**

#### 2. TEST

- Step 1. Initiate an analog conventional transmission from CONSOLE-1 on CONVENTIONAL CHANNEL 1.
- Step 2. Observe RADIO-1, RADIO-2, and CONSOLE-2 hear CONSOLE-1.
- Step 3. Observe CONSOLE-2 indicates the presence of transmission on the channel (transmit busy indication).
- Step 4. Using RADIO-1 respond to the CONVENTIONAL CHANNEL 1 call from CONSOLE-1 and observe RADIO-2, CONSOLE-1 and CONSOLE-2 hear the audio.

Pass\_\_\_\_ Fail\_\_\_\_



### 3.1.2 Multi-Select Operation

#### 1. DESCRIPTION

Multi-Select (Msel) allows the console operator to group a number of channels/talkgroups together such that when the general transmit bar is depressed, all of the multi-selected channels/talkgroups will transmit at the same time with the same information. Multi-Select is one way communication call. If a radio user responds to a Multi-Select call the talkgroup the user is affiliated to will be the only one to hear the call. There is no super-group formed, so radio communication is still at the single channel level. Multi-Select is utilized to send an APB to several channels/talkgroups. A Multi-Select has a limit of twenty (20) trunking/conventional resources

#### SETUP

RADIO-1 - CONVENTIONAL CHANNEL 1  
RADIO-2 - CONVENTIONAL CHANNEL 2

CONSOLE-1 - CONVENTIONAL CHANNEL 1,  
CONVENTIONAL CHANNEL 2

#### VERSION #1.030

#### 2. TEST

- Step 1. From CONSOLE-1, create an Msel group with CONVENTIONAL CHANNEL 1 and CONVENTIONAL CHANNEL 2.
- Step 2. Transmit on the Msel using the Msel instant transmit button.
- Step 3. Verify that RADIO-1 and RADIO-2 hear the call.
- Step 4. Initiate a call with RADIO-1.
- Step 5. Verify the call is heard on CONSOLE-1 but not on RADIO-2.
- Step 6. Initiate a call with RADIO-2.
- Step 7. Verify the call is heard on CONSOLE-1 but not on RADIO-1.
- Step 8. On CONSOLE-1 dissolve the Msel.

Pass\_\_\_\_\_ Fail\_\_\_\_\_

## MCC 7100/7500 Conventional Resources

### 3.1.3 Patch Operation - Conventional

#### 1. DESCRIPTION

The Patch feature allows more than one Radio Resource to be grouped simultaneously. This can be used for temporarily merging two or more channels/frequencies together to act as one larger group. Telephones and radio resources can be patched together. In a patch group, the members can receive messages from the console and they can transmit to all other members of the patch group.

#### SETUP

RADIO-1 - CONVENTIONAL CHANNEL 1  
RADIO-2 - CONVENTIONAL CHANNEL 2  
CONSOLE-1 - CONVENTIONAL CHANNEL 1 and  
CONVENTIONAL CHANNEL 2

#### VERSION #1.020

#### 2. TEST

- Step 1. Select the tab for patch 1, 2 or 3. Verify that the patch edit button and patch transmit button appear.
- Step 2. Select the "Patch Edit" icon. The selected patch will turn blue.
- Step 3. Select the CONVENTIONAL CHANNEL 1 and CONVENTIONAL CHANNEL 2 Radio Resource by moving the cursor over the Radio Resources' names and selecting them.
- Step 4. Verify that the selected Radio Resources display a "Patch Edit" icon.
- Step 5. Press and hold the "Patch Transmit" icon to initiate the patch transmission.
- Step 6. Verify that the RADIO-1 and RADIO-2 monitor the console outbound audio.
- Step 7. Verify that RADIO-1 can communicate with RADIO-2 even though they are on separate channels.
- Step 8. To knock down the patch, select the Radio Resources by moving the mouse cursor over the resource window and clicking over the patch icon. Repeat this process until all the resources have been removed from the Patch window.
- Step 9. Select the Patch Edit icon and idle the current patch.

Pass\_\_\_\_ Fail\_\_\_\_



## 3.2 MCC 7100/7500 TRUNKED RESOURCES

### 3.2.1 Talkgroup Selection and Call

#### 1. DESCRIPTION

The Talkgroup Call is the primary level of organization for communications on a trunked radio system. Dispatchers with Talkgroup Call capability will be able to communicate with other members of the same talkgroup. This provides the effect of an assigned channel down to the talkgroup level. When a Talkgroup Call is initiated from a subscriber unit, the call is indicated on each dispatch operator position that has a channel control resource associated with the unit's channel/talkgroup.

#### SETUP

RADIO-1 - TALKGROUP 1  
RADIO-2 - TALKGROUP 2  
RADIO-3 - TALKGROUP 1  
RADIO-4 - TALKGROUP 2  
CONSOLE-1 - TALKGROUP 1  
CONSOLE-2 - TALKGROUP 2

**VERSION #1.010**

#### 2. TEST

- Step 1. Initiate a wide area call from CONSOLE-1 on TALKGROUP 1.
- Step 2. Observe that RADIO-1 and RADIO-3 will be able to monitor the call. Dekey the console and have either radio respond to the call.
- Step 3. Observe that all consoles with TALKGROUP 1 can monitor both sides of the conversation.
- Step 4. Initiate a wide area call from CONSOLE-2 on TALKGROUP 2.
- Step 5. Observe that RADIO-2 and RADIO-4 will be able to monitor the call. Dekey the console and have either radio respond to the call.
- Step 6. Observe that all consoles with TALKGROUP 2 can monitor both sides of the conversation.

**Pass\_\_\_\_\_ Fail\_\_\_\_\_**



## MCC 7100/7500 Trunked Resources

### 3.2.2 PTT Unit ID/Alias Display

#### 1. DESCRIPTION

Console operator positions contain various resources such as talkgroup, multigroup, Private Call which enables the dispatcher to communicate with the subscriber units. If activity occurs on one of these operator position resources, the unit ID or associated alias of the initiating radio appears at the console resource.

#### SETUP

RADIO-1 - TALKGROUP 1  
RADIO-2 - TALKGROUP 1  
CONSOLE-1 - TALKGROUP 1  
CONSOLE-2 - TALKGROUP 1

#### VERSION #1.010

#### 2. TEST

- Step 1. Select the resource for TALKGROUP 1 on CONSOLE-1.
- Step 2. Initiate a call on TALKGROUP 1 from RADIO-2 and observe that the alias is seen at CONSOLE-1 in the resource window as well as in the Activity Log window.
- Step 3. Initiate a call from RADIO-1 and observe that the alias of RADIO-1 is seen at CONSOLE-1 in the resource window as well as in the Activity Log window.
- Step 4. Modify RADIO-2's alias. Make sure to give enough time for the alias change to propagate to the Zone Controller.
- Step 5. Initiate a call from RADIO-2 and observe the new alias of RADIO-2 is seen at CONSOLE-1 in the list in the resource window as well as in the Activity Log window.
- Step 6. Return RADIO-2's alias to its original state.

Pass\_\_\_\_ Fail\_\_\_\_





### 3.2.3 Emergency Alarm and Call Display Description

#### 1. DESCRIPTION

Users in life threatening situations can use the emergency button on the radio to send an audible alarm and a visual alarm signal to a console operator in order to request immediate system access to a voice channel for an emergency call. An emergency alarm begins after the radio user presses the radio's emergency button. Pressing the emergency button places the radio in "emergency mode". To begin an emergency call, the radio user must press the radio's PTT button while in "emergency mode." The assigned voice channel will be dedicated to the emergency caller's talkgroup for an extended period of time, equal to the Message Hang Time plus the Emergency Hang Time. As with other call types, emergency calls can operate across sites as well as within the same site.

#### SETUP

RADIO-1 - TALKGROUP 1  
CONSOLE-1 - TALKGROUP 1  
CONSOLE-2 - TALKGROUP 1

#### VERSION #1.010

#### 2. TEST

- Step 1. Initiate an Emergency Alarm from RADIO-1.
- Step 2. Observe the Emergency from RADIO-1 is received at CONSOLE-1 for TALKGROUP 1.
- Step 3. Acknowledge the Emergency at the operator position. Verify CONSOLE-2 receives notification that the call has been acknowledged.
- Step 4. Initiate a call with RADIO-1 to initiate an Emergency call.
- Step 5. Observe CONSOLE-1 and CONSOLE-2 can monitor RADIO-1
- Step 6. Clear the Emergency from CONSOLE-1 on TALKGROUP 1.
- Step 7. End the Emergency Alarm from RADIO-1.

Pass\_\_\_\_ Fail\_\_\_\_

## MCC 7100/7500 Trunked Resources

### 3.2.4 Multigroup Call

#### 1. DESCRIPTION

This trunking feature allows an equipped console operator position to transmit an announcement to several different talkgroups simultaneously. As with Talkgroup Calls, multigroup calls operate across sites as well as within the same site.

#### SETUP

RADIO-1 - TALKGROUP 1  
RADIO-2 - TALKGROUP 2  
RADIO-3 - RANDOM  
CONSOLE-1 - ATG 1

Note: TALKGROUP 1 and TALKGROUP 2 are members of ATG 1. RANDOM is any talkgroup not a member of ATG 1.

#### VERSION #1.010

#### 2. TEST

- Step 1. Using CONSOLE-1, select the ATG 1 resource.
- Step 2. Initiate the Multigroup Call from CONSOLE-1.
- Step 3. Observe that RADIO-1 and RADIO-2 receive the Multigroup Call.
- Step 4. Verify that RADIO-3 does not receive the Multigroup Call because it is not a member of ATG 1.
- Step 5. Answer the Multigroup Call using RADIO-1 and observe CONSOLE-1 receives the response.
- Step 6. Verify that if the call is answered within the repeater hang time, the console will receive the call on the ATG 1 resource tile, otherwise the console will receive the call on the TALKGROUP 1 tile.
- Step 7. Verify that if the call is answered within the repeater hang time, RADIO-2 will monitor the call.

Pass\_\_\_\_\_ Fail\_\_\_\_\_



## MCC 7100/7500 Trunked Resources

### 3.2.5 Talkgroup Patch

#### 1. DESCRIPTION

Talkgroup Patch allows a dispatcher to merge several talkgroups together on one voice channel to participate in a single conversation. This can be used for situations involving two or more talkgroups that need to communicate with each other. Using the Patch feature, the console operator can talk and listen to all of the selected talkgroups grouped; in addition, the members of the individual talkgroups can also talk or listen to members of other talkgroups. Patched talkgroups can communicate with the console dispatcher and other members of different talkgroups because of the "supergroup" nature of the Patch feature.

NOTE : If "secure" and "clear" resources are patched together, one repeater for each mode may be assigned per site.

#### SETUP

RADIO-1 - TALKGROUP 1  
RADIO-2 - TALKGROUP 2  
RADIO-3 - TALKGROUP 1  
RADIO-4 - TALKGROUP 2  
CONSOLE-1 - TALKGROUP 1 and TALKGROUP 2

Note: All 4 Radios must have the same home zone.

#### VERSION #1.010

#### 2. TEST

- Step 1. Using CONSOLE-1 create a patch between TALKGROUP 1 and TALKGROUP 2.
- Step 2. Initiate a patch call from CONSOLE-1.
- Step 3. Verify RADIO-1, RADIO-2, RADIO-3, and RADIO-4 can monitor the call.
- Step 4. Initiate several calls between the radios and verify successful communication.
- Step 5. Dissolve the patch created in step 1.

Pass\_\_\_\_ Fail\_\_\_\_



### 3.2.6 Talkgroup Patch with Conventional

#### 1. DESCRIPTION

Talkgroup Patch allows a dispatcher to merge several talkgroups together on one voice channel to participate in a single conversation. This can be used for situations involving two or more channels or talkgroups that need to communicate with each other.

Using the Patch feature, the console operator can talk and listen to all of the selected talkgroups grouped; in addition, the members of the individual channels/talkgroups can also talk or listen to members of other channels/talkgroups. Patched resources can communicate with the console dispatcher and other members of different channels/talkgroups because of the "supergroup" nature of the Patch feature.

NOTE : If "secure" and "clear" resources are patched together, one repeater for each mode may be assigned per site.

#### SETUP

RADIO-1 - TALKGROUP 1  
RADIO-2 - CONVENTIONAL CHANNEL 1  
RADIO-3 - TALKGROUP 1  
RADIO-4 - CONVENTIONAL CHANNEL 1  
CONSOLE-1 - TALKGROUP 1 and  
CONVENTIONAL CHANNEL 1

#### VERSION #1.010

#### 2. TEST

- Step 1. Using CONSOLE-1 create a patch between TALKGROUP 1 and CONVENTIONAL CHANNEL 1.
- Step 2. Initiate a patch call from CONSOLE-1.
- Step 3. Verify RADIO-1, RADIO-2, RADIO-3, and RADIO-4 can monitor the call
- Step 4. Initiate several calls between the radios and verify successful communication
- Step 5. Dissolve the patch created in step 1.

Pass\_\_\_\_ Fail\_\_\_\_

## MCC 7100/7500 Trunked Resources

### 3.2.7 Call Alert

#### 1. DESCRIPTION

Call Alert Page allows a subscriber/dispatcher to selectively alert another radio unit. The initiating subscriber/console will receive notification as to whether or not the call alert was received. Units receiving a Call Alert will sound an alert tone and show a visual alert indication. The display will also show the individual ID of the initiating subscriber/console unit.

#### SETUP

RADIO-1 - TALKGROUP 1  
CONSOLE-1 - TALKGROUP 1

#### VERSION #1.030

#### 2. TEST

- Step 1. Using CONSOLE-1, select the call alert button in the "Private Call" resource window.
- Step 2. Enter the ID of RADIO-1 and send the call alert to RADIO-1.
- Step 3. Verify that RADIO-1 receives the alert and that the ID or alias of the console is shown.
- Step 4. Turn off RADIO-1.
- Step 5. Using CONSOLE-1, send the call alert to RADIO-1 again.
- Step 6. Verify that after trying to page RADIO-1, the console displays "Can not send call alert - target not found" in the summary/status list.

Pass\_\_\_\_\_ Fail\_\_\_\_\_



## 3.3 SITE TRUNKING - FDMA ONLY SITES

### 3.3.1 Site Trunking Indication

#### 1. DESCRIPTION

When a remote site loses its link or does not have a link to the Zone Controller, the affected site will enter "Site Trunking" mode of operation. Radios locked onto this site will be serviced locally within this site's coverage area.

NOTE: If the subscriber does not have the Display option, the "Site Trunking" indication will not be displayed.

#### SETUP

RADIO-1 - TALKGROUP 1

RADIO-1 - SITE - SITE 1

RADIO-2 - TALKGROUP 2

RADIO-2 - SITE - SITE 1

Lock the subscribers to SITE 1 if more than one site exists on the system.

#### VERSION #1.010

#### 2. TEST

- Step 1. Place SITE 1 into the Site Trunking mode.
- Step 2. Verify that RADIO-1 and RADIO-2 are displaying the "Site Trunking" indication.
- Step 3. Return the site to Wide Area Trunking unless the next test requires Site Trunking.

Pass\_\_\_\_ Fail\_\_\_\_



## Site Trunking - FDMA Only Sites

### 3.3.2 Busy Queuing and Callback

#### 1. DESCRIPTION

If no voice channel resources are available, radios requesting channels for new conversations are placed in the busy queue. Users of the same priority will move through the queue in a FIFO (first in, first out) sequence. When a voice channel becomes available, the radio at the top of the busy queue gets a channel assignment and generates a callback tone. The callback alerts the user that a channel assignment was made and transmitting is now possible on the selected talkgroup.

#### SETUP

RADIO-1 - TALKGROUP 1  
RADIO-1 - SITE - SITE 1  
RADIO-2 - TALKGROUP 2  
RADIO-2 - SITE - SITE 1  
RADIO-3 - TALKGROUP 3  
RADIO-3 - SITE - SITE 1  
RADIO-4 - TALKGROUP 1  
RADIO-4 - SITE - SITE 1

Note: All radios are "Site Locked."

#### VERSION #1.030

#### 2. TEST

- Step 1. Simulate a busy system by disabling all channels at SITE 1 with the exception of the control channel and one voice channel.
- Step 2. Initiate a Talkgroup Call with RADIO-1 and observe that RADIO-4 receives the call. Keep this call in progress until instructed to end the call.
- Step 3. Key RADIO-2 and observe that the radio receives a busy.
- Step 4. Key RADIO-3 and observe that the radio receives a busy.
- Step 5. End the Talkgroup Call established in Step 2.
- Step 6. Observe that RADIO-2 receives a callback prior to RADIO-3 receiving a callback.
- Step 7. Return the site to Wide Area Trunking unless the next test requires Site Trunking

Pass\_\_\_\_ Fail\_\_\_\_



## Site Trunking - FDMA Only Sites

### 3.3.3 Emergency Call and Alarm

#### 1. DESCRIPTION

Emergency Alarms and Calls can be initiated by subscribers when the registered site is in Site Trunking. With all subscribers registered on a Site Trunking site, a subscriber will initiate an Emergency Alarm by pressing the Emergency button. By pressing the PTT, an Emergency Call will be issued and the ID of the initiator will be displayed with an Emergency indication by the other subscribers on the same talkgroup.

Note that for site trunking, Emergency Call operation is always Top of Queue.

#### SETUP

RADIO-1 - TALKGROUP 1  
RADIO-1 - SITE - SITE 1  
RADIO-2 - TALKGROUP 1  
RADIO-2 - SITE - SITE 1  
RADIO-3 - TALKGROUP 2  
RADIO-3 - SITE - SITE 1  
RADIO-4 - TALKGROUP 3  
RADIO-4 - SITE - SITE 1

Note: All Radios should be "Site Locked"

#### VERSION #1.010

#### 2. TEST

- Step 1. Place SITE 1 into the Site Trunking mode.
- Step 2. Simulate a busy system by disabling all channels at SITE 1 with the exception of the control channel and one voice channel.
- Step 3. Press the PTT on RADIO-3 and hold the PTT switch until instructed to release.
- Step 4. Key RADIO-4 and observe that the radio receives a busy.
- Step 5. Using RADIO-1, initiate an emergency alarm followed by an emergency call.
- Step 6. Observe that RADIO-1 cannot transmit due to the voice channel being busy.
- Step 7. Release the PTT switch on RADIO-3.
- Step 8. Observe that RADIO-1 can now proceed with the call and RADIO-2 receives the call. Also observe that the display on RADIO-2 denotes an emergency and the ID or Alias of the unit sending the emergency.
- Step 9. End the emergency call and verify that RADIO-4 gets a callback.
- Step 10. Restore all channels to service and return the site to Wide Area Trunking unless the next test requires Site Trunking.

Pass\_\_\_\_ Fail\_\_\_\_





## 3.4 SIGNOFF CERTIFICATE

By their signatures below, the following witnesses certify they have observed the system Acceptance Test Procedures.

### Signatures

WITNESS:

\_\_\_\_\_  
Date: \_\_\_\_\_

Please Print Name: \_\_\_\_\_

\_\_\_\_\_  
Initials:

Please Print Title: \_\_\_\_\_

WITNESS:

\_\_\_\_\_  
Date: \_\_\_\_\_

Please Print Name: \_\_\_\_\_

\_\_\_\_\_  
Initials:

Please Print Title: \_\_\_\_\_

WITNESS:

\_\_\_\_\_  
Date: \_\_\_\_\_

Please Print Name: \_\_\_\_\_

\_\_\_\_\_  
Initials:

Please Print Title: \_\_\_\_\_



# MAINTENANCE

Motorola has over 75 years of experience supporting mission critical communications for public safety and public service agencies. Motorola’s technical and service professionals use a structured approach to life cycle service delivery and provide comprehensive maintenance and support throughout the life of the system. The value of support is measured by system availability, which is optimized through the use of proactive processes, such as preventive maintenance, fault monitoring and active response management. System availability is a function of having in place a support plan delivered by highly skilled support professionals, backed by proven processes, tools, and continuous training.

## 4.1 THE MOTOROLA SERVICE DELIVERY TEAM

### 4.1.1 Account Services Manager

Your Motorola Account Services Manager provides coordination of support resources to enhance the quality of service delivery and to ensure your satisfaction. The Account Services Manager (ASM) is responsible to oversee the execution of the Warranty and Service Agreement and ensure that Motorola meets its response and restoration cycle time commitments. The ASM will supervise and manage the Motorola Authorized Servicer’s functions.

### 4.1.2 Motorola System Technologists

The Motorola System Technologists (ST) are available to assist Motorola’s Authorized Servicers when needed for network health and operations.

### 4.1.3 Motorola System Support Center

Located in Schaumburg, Illinois, the System Support Center (SSC) is a key component to the overall management and system maintenance. As detailed in this Customer Support Plan, the following services are provided by the System Support Center:

- Dispatch Service.
- Infrastructure Repair with Advanced Replacement.
- Technical Support.

Motorola has proven experience to deliver mission critical network support
<ul style="list-style-type: none"><li>▪ Extensive Experience—Motorola has over 75 years of experience supporting mission critical communications and the Public Safety community.</li><li>▪ Capacity to Respond—Motorola’s network of local service centers, repair depots, system support center and parts support enable Motorola to provide quick and effective service delivery.</li><li>▪ Flexibility and Scalability—Motorola’s Support Plans are customized to meet individual Customer needs.</li><li>▪ Skills and Process—Motorola uses a well-established, structured, and disciplined approach to provide service delivery. Motorola’s team of well-trained and committed people understands the communications technology business.</li></ul>



#### 4.1.4 Motorola Local Service Provider

Motorola's authorized service centers are staffed with trained and qualified technicians. They provide rapid response, repair, restoration, installations, removals, programming, and scheduled preventive maintenance tasks for site standards compliance and RF operability. Motorola's authorized service centers are assessed annually for technical and administrative competency.

Motorola places great emphasis on ensuring that communications systems, such as the one proposed for Lathrop-Manteca FPD, meet high standards for design, manufacture, and performance. To enhance the value of the communications system being acquired, Motorola offers customized warranty and post-warranty services as outlined in this section.

### 4.2 WARRANTY SERVICES

Motorola will provide warranty services per our standard warranty terms and conditions as outlined within the Communication Systems Agreement within this proposal. In addition to the Standard Commercial Warranty, the service products that comprise the Custom Warranty package mirror those delivered to Lathrop-Manteca FPD and are listed below along with a brief description.

#### 4.2.1 Dispatch Service

Motorola's Dispatch Service ensures that trained and qualified technicians are dispatched to diagnose and restore your communications network. Following proven response and restoration processes, the local authorized service center in your area is contacted and a qualified technician is sent to your site. An automated escalation and case management process is followed to ensure that technician site arrival and system restoration comply with contracted response and restore times. Once the issue has been resolved, the System Support Center verifies resolution and with your approval, closes the case. Activity records are also available to provide a comprehensive history of site performance, issues, and resolution.

#### 4.2.2 On-Site Infrastructure Response

Motorola On-Site Infrastructure Response provides local, trained and qualified technicians who arrive at your location to diagnose and restore your communications network. Following proven response and restore processes, Motorola Dispatch contacts the local authorized service center in your area and dispatches a qualified technician to your site. An automated escalation and case management process ensures that technician site arrival and system restoration comply with contracted response times. The field technician restores the system by performing first level troubleshooting on site. If the technician is unable to resolve the issue, the case is escalated to the System Support Center or product engineering teams as needed.

#### 4.2.3 Network Preventative Maintenance

Network Preventative Maintenance provides an operational test and alignment on your infrastructure or fixed network equipment to ensure that it meets original manufacturer's specifications. Trained technicians:

- Physically inspect equipment.
- Remove dust and foreign substances.
- Clean filters.
- Measure, record, align and adjust equipment to meet original manufacturer's specifications.

This service is performed based on a schedule agreed upon between you and Motorola. Network Preventative Maintenance proactively detects issues that may result in system malfunctions and operational interruptions.

#### **4.2.4 Infrastructure Repair**

Infrastructure Repair service provides for the repair of all Motorola-manufactured equipment, as well as equipment from third-party infrastructure vendors. All repair management is handled through a central location eliminating your need to send equipment to multiple locations.

Comprehensive test labs replicate your network in order to reproduce and analyze the issue. State-of-the-art, industry-standard repair tools enable our technicians to troubleshoot, analyze, test, and repair your equipment. Our ISO9001 and TL9000-certified processes and methodologies ensure that your equipment is quickly returned maintaining the highest quality standards.

Service agreements allow you to budget your maintenance costs on an annual basis. Equipment covered under service agreements also receives higher service priority, which results in quicker repair times.

#### **4.2.5 Infrastructure Repair with Advanced Replacement**

Infrastructure Repair with our Advanced Replacement upgrade supplements your spares inventory with Motorola's centralized inventory of critical equipment. In advance of Motorola repairing the malfunctioning unit, a replacement unit is sent to you within 24 hours to ensure a spare unit is available. Upon receipt of the malfunctioning unit, Motorola repairs the unit and replace it in our centralized inventory.

#### **4.2.6 Technical Support Service**

Motorola Technical Support service provides an additional layer of support through centralized, telephone consultation for issues that require a high level of communications network expertise and troubleshooting capabilities. Technical Support is delivered by the System Support Center (SSC). The SSC is staffed with trained, skilled technologists specializing in the diagnosis and swift resolution of network performance issues. These technologists have access to a solutions database as well as in house test labs and development engineers. Technical Support cases are continuously monitored against stringent inbound call management and case management standards to ensure rapid and consistent issue resolution. Technical Support service translates into measurable, customer-specific metrics for assured network performance and system availability.

### **4.3 POST WARRANTY SERVICES**

As Motorola's continuing commitment to supporting your system, warranty services can be extended after the first year to provide maintenance and service support in future years. Any of the services that we identify can be customized in future years, and are available for purchase either in "System Support Services" packages or as individual service offerings. These system support services significantly benefit Lathrop-Manteca FPD because the system can be effectively supported after the warranty period, thereby maximizing the operational capabilities and useful life of the system and protecting your investment in the system.

Post-warranty support has not been included with this offering but can be provided upon request.

## 4.4 SUMMARY

Whether it's a routine service call, or a disaster situation, Motorola understands its responsibility and takes pride in its commitment to deliver proven response service to the public safety community. Motorola has the capability to provide the technical, administrative, consultative, and maintenance repair services needed to support, enhance, and maintain the effectiveness of your communications network. Motorola's goal is to provide Lathrop-Manteca FPD with the qualified resources, to maintain and improve system operation and availability, and to deliver world-class service support.

Warranty and Post Warranty Service support services to be delivered are outlined in Table 4-1.

**Table 4-1: Warranty and Post Warranty Service Overview**

Warranty and Post Warranty Service Overview	Warranty Year	Post Warranty Year
Dispatch Service	✓	Optional
On Site Infrastructure Response	✓	Optional
Network Preventative Maintenance	✓	Optional
Infrastructure Repair	✓	Optional
Infrastructure Repair with Advanced Replacement	✓	Optional
Technical Support Service	✓	Optional

# EQUIPMENT LIST

This section lists the equipment necessary for the proposed solution.

Qty	Nomenclature	Description
1	SQM01SUM0239	MASTER SITE CONFIG UPGRADE
1	CA00996AK	NM/ZC LICENSE KEY 7.13
1	CA00997AK	UCS LICENSE KEY 7.13
1	CA02105AA	MCC7500/MCC7100 CONSOLE LIC
1	B1905	MCC7500ASTRO 25 SOFTWARE
4	B1933	MOTOROLA VOICE PROCESSOR MODULE
4	CA01642AA	ADD: MCC7500BASIC CONSOLE FUNCTIO
4	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
4	CA01644AA	ADD: MCC7500/MCC 7100 ADV CONVL O
4	CA01643AA	ADD: MCC7500/ MCC 7100 TRUNKING
4	CA00143AC	ADD: DES-OFB ALGORITHM
4	CA00147AF	ADD: MCC7500SECURE OPERATION
4	DS019BLK	19" LCD, BLACK, NON-TOUCH
4	TT2538	Z400 MID TIER WITH WINDOWS 7 (64-BI
4	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
4	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A P
8	B1912	MCC SERIES DESKTOP SPEAKER
8	B1913	MCC SERIES HEADSET JACK
4	RLN6098	HDST MODULE BASE W/PTT, 15' CBL
4	RMN5078B	SUPRAPLUS NC SINGLE MUFF HEADSET
4	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH
4	T7885	MCAFFEE WINDOWS AV CLIENT
4	DDN1244	DUAL IRR SW USB HASP W LICENSE, SOU
4	CDN6673	CREATIVE LABS INSPIRE A60



Qty	Nomenclature	Description
1	CLN1856	2620-24 ETHERNET SWITCH ?
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A P
1	F4543	SITE MANAGER BASIC
1	VA00874	ADD: AUX I-O SERV FW CURR ASTRO REL
1	V266	ADD: 90VAC TO 260VAC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	F4547	SM IO EXPANSION BASIC
1	V266	ADD: 90VAC TO 260VAC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
1	T7038	GCP 8000 SITE CONTROLLER
1	CA01136AA	ADD: MCC7500CONVEN SITE OPER
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
2	CLN1856	2620-24 ETHERNET SWITCH ?
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER



Qty	Nomenclature	Description
3	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A P
1	BVN1013	MKM 7000 Console Alias Manager Soft
1	TT2538	Z420 LOW TIER WORKSTATION WINDOWS 7
1	T7885	MCAFFEE WINDOWS AV CLIENT
1	DS019BLK	19 INCH NON-TOUCH MONITOR, BLACK
1	L30SSS9PW1 N	APX7500 SINGLE BAND UHF R2 MP
1	GA00469	ENH: EXTENDED DISPATCH APX CONSOLE
1	CA01598	ADD: AC LINE CORD US
1	G78	ENH: 2 YR SFS LITE
1	G806	ADD: ASTRO? DIGITAL CAI OPERATION
1	QA01749	SW KEY SUPPLEMENTAL DATA
1	G361	ADD: P25 TRUNKING SOFTWARE
1	G51	ENH: SMARTZONE OPERATION APX
1	G625	ADD: DES/DES-XL/DES-OFB ENCRYPTION
1	W382	ADD: CONTROL STATION DESK GCAI MIC
1	G996	ENH: OVER THE AIR PROVISIONING
1	L999	ADD: FULL FP W/05/KEYPAD/CLOCK/VU
1	DDN9748	19 INCH BLACK SHELF
1	DSDS4C00F36UN	DS4C00F36U-N, 450-482 MHZ OMNI FIBE
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
20	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
1	DDN1077	7-16IN DIN FEMALE CONNECTOR EZ-FIT
200	L3617	7/8IN HELIAX VIRTUAL AIR FOAM FILL
1	DDN1077	7-16IN DIN FEMALE CONNECTOR EZ-FIT
1	DSTUSXDFM	RF SPD, 300-1400MHZ DC BLOCK HIGH P
1	DSF4PDMV2C	F4PDMV2-C 1/2" 7-16 DIN MALE CONNE
100	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY





Qty	Nomenclature	Description
1	TDN8810	F4PNF-C 1/2" TYPE N FEMALE CONNECTO
3	DS220497	220497 7/8" GROUNDING KIT, TWO HOLE
3	TDN9289	221213 CABLE WRAP WEATHERPROOFING
1	THN1012	RACK 7' OPEN



# PRICING

## Change Order #3

Equipment (Discounted)	\$207,625.44
<u>SI- (Discounted)</u>	<u>\$240,896.56</u>
Sub Total Change -	\$448,522.00
<u>Tax -</u>	<u>\$18,686.29</u>
Total Change Order	\$467,208.29

- (1) Discount tied to change order – Discount provided for this project to operate as a change order to the Lathrop Manteca FPD trunking project, and run concurrently with the same project schedule.
- (2) Additional discount for all items purchased including equipment and services.

Payment terms per CSA.

**PRICING VALID THROUGH 8/28/2015**



# CONTRACTUAL DOCUMENTATION

## Communications System Agreement

Motorola Solutions, Inc. (“Motorola”) and the Lathrop-Manteca Fire Protection District (the “District”) have entered into that certain Communications System Agreement (the “CSA”), dated December 2, 2014. Under Section 3.4 of the CSA, the District may purchase additional goods and services. This proposal is based on the assumption that the District will use this right under Section 3.4 of the CSA for the proposed transaction. Therefore, for the District to accept Motorola’s offer as set forth in the proposal, it may issue a purchase order that incorporates by reference this proposal and refers to the CSA.



# OUR COMMITMENT

Motorola products are growing and changing, as they have over the years, and Motorola's drive for excellence has strengthened and intensified. From the five-pound Handie-Talkie™ radio to the lightweight models of today, Motorola has been the leading provider of two-way radio services to public safety, government, transportation, utility, and manufacturing enterprises. Motorola changed the way the world communicates, from the introduction of the DynaTAC cell phone in 1983 to today's sleek handsets and innovative technology for mobile telephone service. It is also a key supplier of integrated systems for automobiles, portable electronic devices, and industrial equipment.

Throughout its history, Motorola has transformed innovative ideas into products that connect people to each other and the world around them. Moving forward, the company strives to keep its commitment of make things better and life easier, to make sound recommendations that will guide you in linking your current and future communication needs and objectives with technology's ever-evolving promise.

Upon request, your Motorola account executive can provide a proposal tailored to meet your total solution needs.

