Exhibit A

MOTOROLA SOLUTIONS

SANTA ROSA POLICE DEPARTMENT

TDMA INFRASTRUCTURE & SUBSCRIBERS **NOVEMBER 14, 2019**

Motorola Solutions
10680 Treena Street, Suite #200
San Diego, CA. 92131
USA

November 14, 2019

Keith Hinton
Santa Rosa Police Department
965 Sonoma Ave
Santa Rosa, CA 95404

Subject: TDMA Infrastructure & Subscribers

Dear Keith Hinton:

Motorola Solutions, Inc. ("Motorola Solutions") is pleased to have the opportunity to provide the Santa Rosa Police Department with quality communications equipment and services. The Motorola Solutions 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 Solutions' response includes a combination of hardware, software, and services. Specifically, this solution provides:

- P25 ASTRO 25 TDMA 3-site Simulcast Cell
- (275) APX 8000 Portables
- (140) APX 8500 Mobiles
- Optional Device Management Services Offer (DMSO)

This proposal will be incorporated into Amendment #1 to the existing agreement between Motorola Solutions and the City of Santa Rosa dated December 21, 2018. This proposal shall remain valid until December 20, 2019. Any questions can be directed to your Manufacturer's Representative Greg Weisman at (707) 805-6097 or your Motorola Solutions Account Executive, Bill Vlahandreas, at (707) 321-7007.

We thank you for the opportunity to furnish Santa Rosa Police Department 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.

Micah Applewhite
Territory Vice President

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SECTION 1

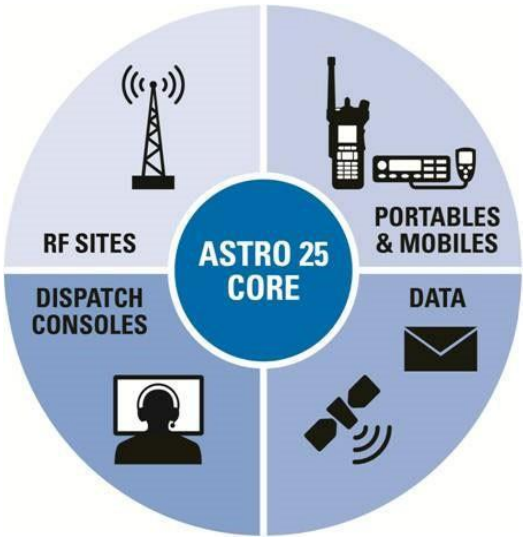
SYSTEM DESCRIPTION

1.1 ASTRO 25 INFRASTRUCTURE

Motorola is pleased to provide the City of Santa Rosa with our next generation ASTRO 25 digital P25 trunked radio system solution.

This solution provides the means for the City of Santa Rosa public safety users the ability to migrate from their current analog UHF conventional system to a new digital 700 MHz trunked system. This system allows for improved capabilities including encryption, data and numerous other applications while maintaining the reliability the city and users have come to expect from Motorola.

ASTRO 25 offers Santa Rosa a Project 25 (P25), standards-based Internet Protocol (IP) solution with a flexible, modular network.



ASTRO 25 can expand to accommodate additional radio users, increased geographic coverage, enhanced data applications, and connectivity to other networks, ensuring efficient and cost- effective communications for decades to come.

ASTRO 25 also provides advanced call processing capabilities designed to meet the needs of public safety. On an ASTRO 25 network, first responders can share voice and data communications between members of the same team, across an agency, or among different agencies.

The system's P25-compliant IV&D operation allows data traffic to travel seamlessly over the ASTRO 25 radio system, improving in-field efficiency and providing a platform for additional capabilities.

By creating a data transport layer capable of supporting both industry-standard IP and customer-developed applications, IV&D will provide Santa Rosa with a number of important benefits:

- Conserves valuable airtime.
- Increases communications accuracy.
- The ability to automatically get the location of an officer when they press the emergency button

Because ASTRO 25 automatically prioritizes voice communications over data transmissions, first responders will always be able to transmit and receive mission-critical communications.

1.2 SYSTEM ARCHITECTURE

The proposed system design leverages the existing City of Santa Rosa P25 Master Site equipment and MCC7500 IP dispatch console. This approach allows for the continued use of the conventional UHF operation as Santa Rosa migrates new radios users to the new P25 trunked solution. During the design process Motorola evaluated the existing equipment locations used by the City and based on the current conditions and space available and as a result are using the Bethlehem site located in downtown Santa Rosa and a new location located on the Eastern ridge of the City called Barham that overlooks Fountain Grove and Highway 12. In addition Motorola has included the option to include the R5 Skyfarm water tank location as an optional 3rd site location in the design. The R5 location provides fill in coverage along the Mark West Spring Road area that is in a bowl and limits the coverage due to the terrain. Motorola has provided the predicted coverage maps for the two, three and mobile coverage to allow the City to evaluate the coverage using these locations identified in the design.The proposed 700MHz trunking simulcast subsystem is comprised of the following two site locations with the optional R5 Skyfarm water tank location as a potential third site:

- Bethlehem (Tupper Street) site: 38°26'13.82"N, 122°42'27.77"W
- Barham site : 38° 30' 32" N, 38° 30' 32" N
- Optional R5 Skyfarm site: 38°29'52.05"N, 122°43'19.31"W

The RF site locations that make up the Simulcast cell require a connection between all of the sites as well as the existing Master Site located at the Police Department.

Motorola has based the proposed design on the estimated 500 users or less, this proposed simulcast cell includes 5 total 700MHz TDMA Base radios. TDMA provides a better use of the RF spectrum than the previous FDMA technology. Excluding the control channel, Each TDMA channel provides two talk paths, this design provides 8 total talkpaths or channels, on the Santa Rosa trunked system.

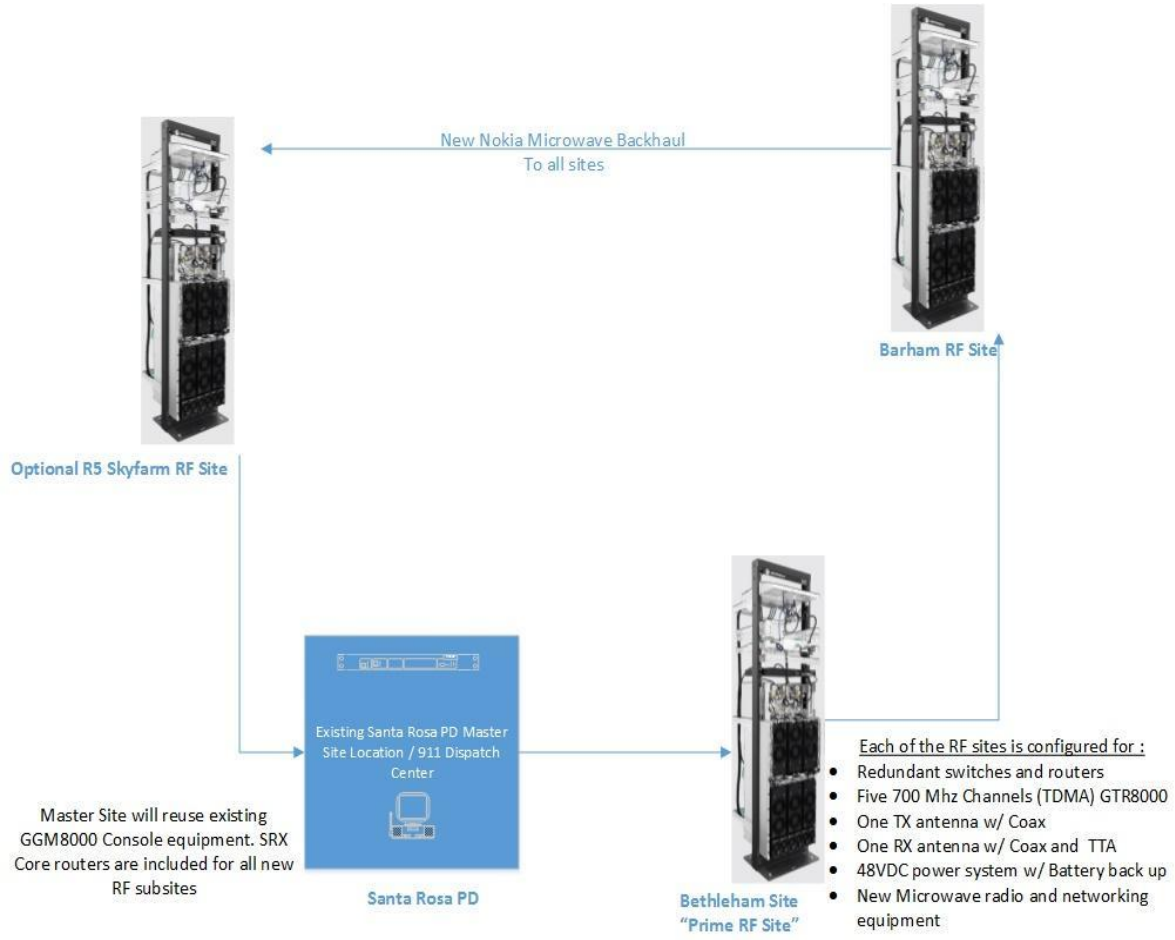


Figure 1-1: System Overview Diagram

The System provides increased reliability through the deployment of a new Nokia Loop microwave design, redundant switches and routers hardware as well as implementation of IP-based technology that inherently provides increased system resiliency.

The proposed **simulcast** solution for Santa Rosa includes the following summary of equipment:

- Two (2) SRX1500 Core Routers
  - Two (2) simulcast subsites with the following equipment:
- One (1) 700 MHz Motorola Expandable Site Subsystems (ESS) supporting the following channels/talk-paths:
  - (1) Trunked Control Channel
  - (4) P25 Phase 2 TDMA Channels
  - 6-Channel Combiner
  - 6-Channel Multicoupler
  - Transmit Filter
- One (1) Tower-Top Amplifiers.
- One (1) 700 MHz Transmit Antennas.
- One (1) 700 MHz Receive Antennas.
- 200 feet of 7/8" Coaxial cable.

- 200 feet of 1/2" Coaxial cable.
- Two (2) Juniper SRX345 Site Gateways.
- ASTRO Core Site Licensing for one (1) TDMA repeater site.
- Site Spares.

Our proposed solution includes the following **simulcast prime site** related components:

- Two (2) SRX1500s and Two (2) 24-Port switches to connect the Simulcast Prime to the RF subsites
- Two (2) SRX1500s and Two (2) 24-Port switches to connect the Simulcast Prime to the 7.18 ASTRO L Core at SRPD
- Spares

Our proposed **simulcast subsite** solution includes the **optional** R5 Skyfarm for Santa Rosa includes the following summary of equipment:

- One (1) 700 MHz Motorola Expandable Site Subsystem (ESS) supporting the following channels/talk-paths:
  - (1) Trunked Control Channel
  - (5) P25 Phase 2 TDMA Channels
  - 6-Channel Combiner
  - 6-Channel Multicoupler
  - Transmit Filter
- One (1) Tower-Top Amplifier.
- One (1) 700 MHz Transmit Antenna.
- One (1) 700 MHz Receive Antenna.
- 200 feet of 7/8" Coaxial cable (for a 700 MHz repeater site antenna run of 150').
- 200 feet of 1/2" Coaxial cable (for a TTA test line run of 150').
- Two (2) Juniper SRX345 Site Gateways.
- ASTRO Core Site Licensing for one (1) TDMA repeater site.

Our proposed solution includes the following subscribers:

- (275) Santa Rosa PD APX Portables
  - Model APX 8 000 Model 1.5
  - Frequency Bands – 7/800 and UHF
  - ASTRO P25 TDMA Trunking Operation (Includes Analog Conventional Operation)
  - Programming over P25 (OTAP)
  - AES Encryption
  - Wifi Capability
  - 3 Year Essential Service Package
  - Wired RSM
  - Radio Management
- (200) Single Unit Impres 2 Portable Chargers
- (15) Multi-Unit Impres 2 Portable Chargers
- (140) Santa Rosa PD APX Remote Mount Mobiles
  - Model APX 8500 Mid Power
  - Frequency Bands – 7/800 and VHF
  - ASTRO P25 TDMA Trunking Operation (Includes Analog Conventional Operation)
  - Programming over P25 (OTAP)
  - O5 Control Head

- AES Encryption
- All Band Antenna
- GPS/Wifi Antenna
- Palm Microphone
- Auxiliary Speaker
- Radio Management
- 3 Year Essential Service Package

The existing “master site”—at the Santa Rosa Police Department where the current core equipment is located—provides a central point of control for the operation of the radio communication system. The system administrators will have access to the hardware and software components that control call processing, network management, and system configuration using remote network management clients.

Common Server Architecture (CSA) reduces physical space and individual component requirements at the master site by using Virtual Management Servers (VMSs) to host server applications in a Virtual Machine (VM) environment.

The standard Simulcast prime site architecture supports redundancy to protect against single points of failure that may occur within the prime site, however, it does not account for events that could knock out an entire prime site (e.g., prime site location being destroyed intentionally by fire or natural disaster).

The Simulcast Sites provides simultaneous broadcast of the same voice or message from multiple transmitters on the same frequency. Simulcast sites provide consistent communications throughout large geographical areas, such as a large city, metropolitan area, county, or country.

The architecture of a simulcast cell includes a simulcast prime site, which controls the cell and communicates with the system’s master site, and one or more simulcast remote sites, which provide simulcast coverage to users. Because each simulcast cell operates like a single-site system, City users benefit from simplified roaming and talkgroup configurations.

1.3 SYSTEM COVERAGE

Below are coverage maps for the following configurations:

- Two site 95% CAR DAQ 3.4 Portable Round Trip on hip- on street coverage
- Three site 95% CAR DAQ 3.4 Portable Round Trip on hip- on street coverage
- Two site 95% CAR DAQ 3.4 Mobile Round Trip on street coverage

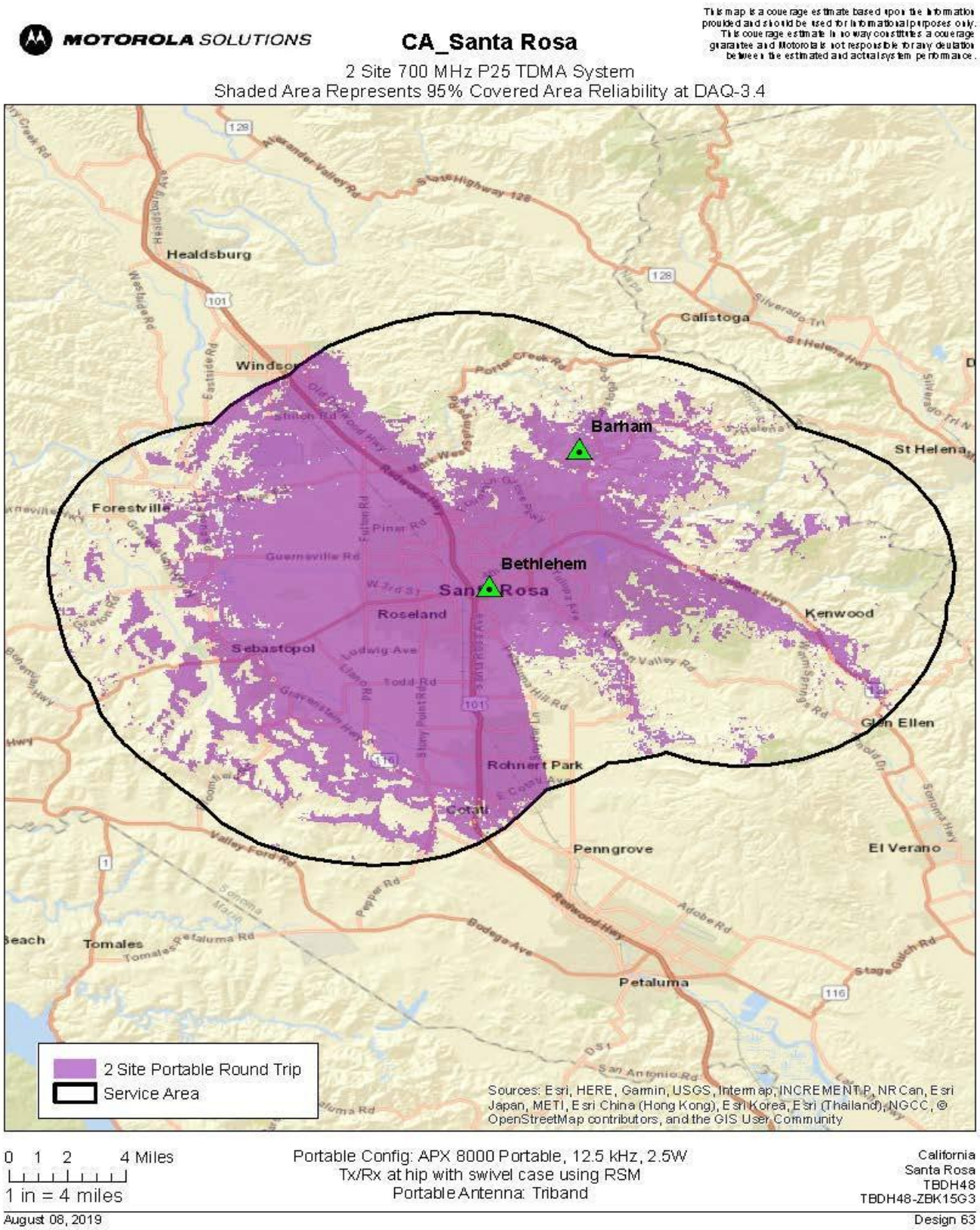


Figure 1-2: Two Site PORTABLE round trip coverage on Hip- on Street

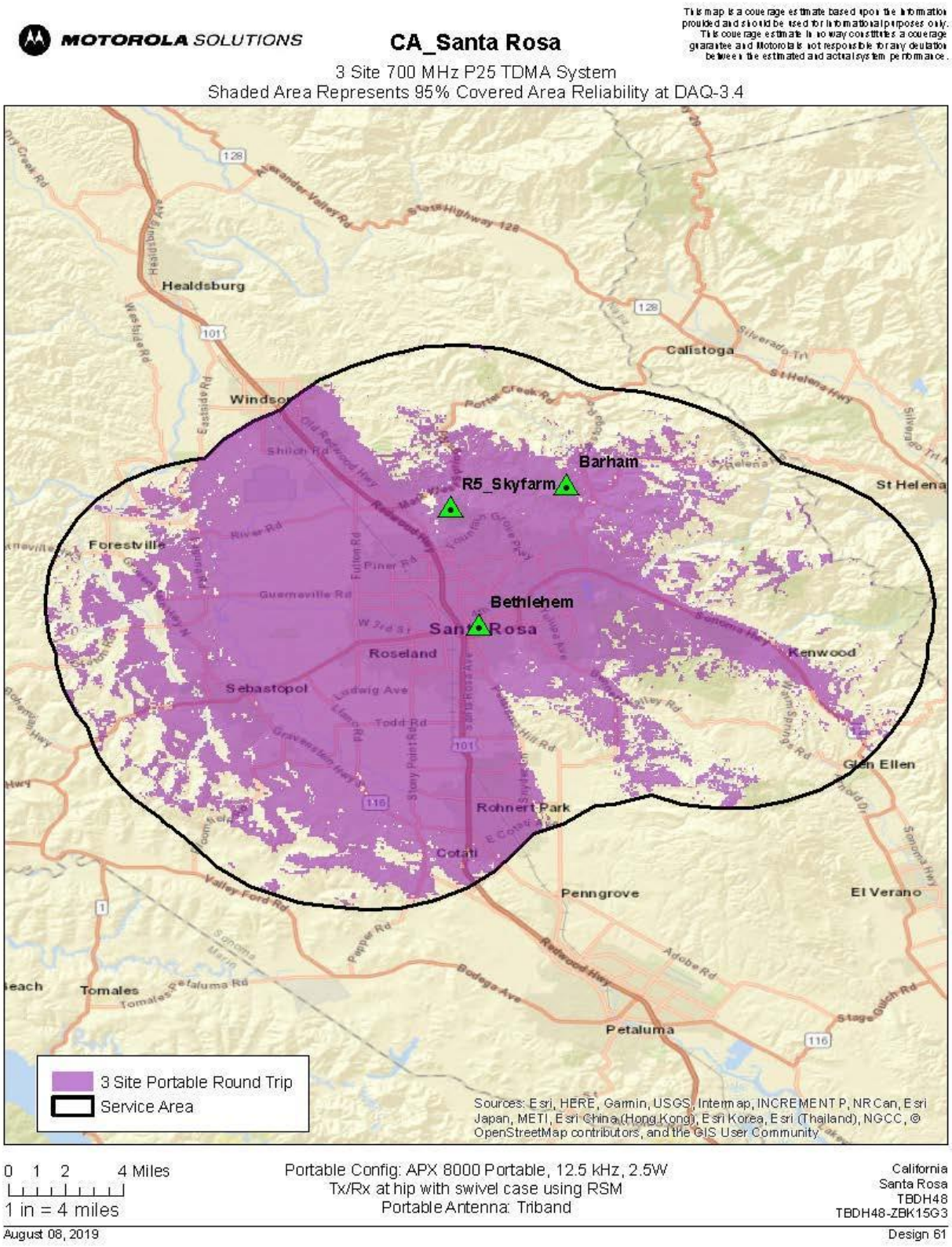


Figure 1-3: Three Site PORTABLE Round Trip coverage on hip- On Street

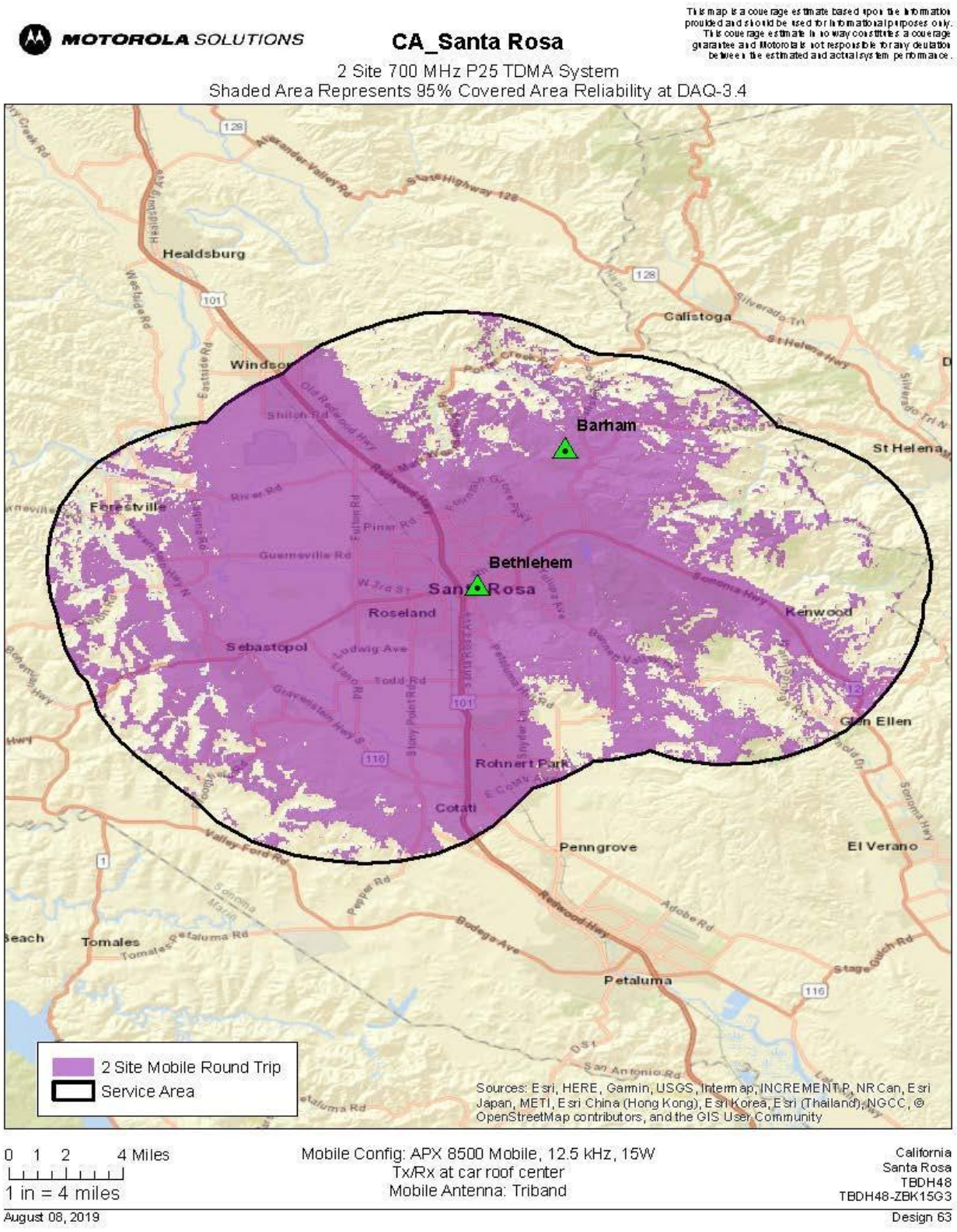


Figure 1-4: Two Site MOBILE Round Trip coverage

1.4 SYSTEM VOICE AND DATA ENCRYPTION

The system supports end-to-end encryption using the AES encryption algorithm to ensure that only authorized radios can listen to encrypted transmissions on the network. The Mobile and Portable subscribers included in this proposal are equipped with the AES encryption option.

The **Advanced Encryption Standard (AES)** is an improvement over Data Encryption Standard **(**DES) algorithms and uses keys of 128, 192, or 256 bits to encrypt blocks of 128-bit traffic. The Motorola Solutions secure voice solution uses a 256- bit key.

1.5 SYSTEM CYBERSECURITY

In addition to system-level security capabilities, ASTRO 25 includes a robust set of cybersecurity service standards that will provide communications continuity and security for the system, such as:

- Centralized Authentication – Provides one control point for identification, authentication, and authorization services, using Centralized Authentication, Authorization, and Accounting (AAA) with Active Directory (AD) for all Windows, Solaris and Linux platforms. Remote Authentication Dial-In User Service (RADIUS) extends the service to infrastructure network devices.
- Secure Network Communications – Provides secure point-to-point connections between two different machines through Secure Shell (SSH).
- Secure Network Management – Secures network traffic between network managers and SNMPv3-enabled elements through the inherent authentication and encryption capabilities of SNMPv3.
- Router Access Control Lists (ACLs) **–** Ensure that only authorized traffic can traverse the network by filtering traffic at core, exit, gateway, and site routers.
- Ethernet Switch Port Security **–** Prevents unauthorized access to the system through the ports on a network switch by providing an additional layer of security at the physical location of the equipment.
- Secure Software Download (SWDL) **–** Ensures that transfer operations are authenticated and encrypted, based on the Secure File-Transfer Protocol (SFTP), impeding interception of transmissions by unauthorized devices.
- Backup and Recovery – Enables the quick restoration of system devices under failure conditions through the centralized management of data backup and restore operations.
- Transparent Element Hardening – Removes nonessential tools, services, and utilities from the Windows Operating System, which could be used by an attacker to gain unauthorized access to system settings or data.

1.6 SYSTEM VOICE COMMUNICATIONS MANAGEMENT

The successful completion of calls is a vital factor in the ASTRO 25 radio system design. Targeting communications is important for both privacy and efficiency. Some information may be sensitive and intended for a specific person, while other information may be important for an entire group of radio users. Communications that are relevant for one group should not distract another group, and some radio users may need priority over other radio users when the system is busy.

The proposed design includes a collection of features to maximize communications availability, target and prioritize communications, and minimize the effort required by radio users to complete calls.

The zone controller manages call processing in the system. If a zone controller failure prevents channel requests from being acknowledged, the Automatic Retry feature will continue sending channel requests from the individual user radio until the request is acknowledged, or until a total of 16 automatic retries occur. If a radio user presses the push-to-talk (PTT) button and fails to find an open channel, Busy Queuing/Call Back will deliver a busy tone and place the call into a busy queue. As channels become available, they will be assigned to calls in the queue using pre-assigned priority levels. Radio users will be notified of the assigned channel through a call- back tone.

To ensure uninterrupted communications, Recent User Priority will give priority over other radio users to radio users who have been recently assigned a voice channel. Recent User Priority will provide priority system access for up to 10 seconds between transmissions to a talkgroup engaged in a conversation. With Continuous Assignment Updating, the control channel will continue to transmit the channel assignment for as long as a talkgroup is using an assigned channel. This ensures a radio just coming into service will be sent to the appropriate voice channel to join the rest of its talkgroup. Radio Talkgroup Muting will allow the radio user to mute all voice traffic for the currently selected talkgroup, including emergency voice received. The radio can be automatically unmuted by the dispatch operator or another radio user by sending the muted radio a Call Alert.

The system provides the City with 10 Priority Levels, allowing system administrators to segment radio users according to their communications needs. Priority 1 is always reserved for emergencies. Priorities 2 through 10 can be assigned on a per radio or talkgroup basis. These priorities are only applicable when the system is busy. Priority Monitor allows the radio user to scan talkgroups in their system, and mark up to two talkgroups in their scan list as Priority. A non-priority conversation will be interrupted by Priority 1 or Priority 2 talkgroup activity.

Dispatch operators can selectively call and carry on a Private Call with another individual radio, as long as that radio is not already engaged in another Private Call. The calling radio receives an acknowledgment of a successful Private Call. If the receiving radio has a display, it shows the calling party’s radio ID. To protect channel availability for mainstream operations, Private Call management can control how many resources are dedicated for private calls at a trunking RF site. The system administrator can pre-configure and limit the number of simultaneous private calls that are active at a particular site, or even disallow private calls entirely.

Dispatch operators can make a simultaneous call to multiple talkgroups, with all radios configured for talk-back capability. Dispatchers can program this Multi-Group Call to operate in one of two ways:

1. The requesting radio user waits for all requested talkgroups to finish all calls in progress.
2. The requested call immediately interrupts other conversations in progress without waiting for active radio users to de-key. Radio users who are transmitting on a voice channel do not hear the call until they de-key.

The system provides a dispatch function called Dispatch Console/Talkgroup Merge to allow multiple talkgroups to operate together on one voice channel, improving channel efficiency.

1.7 SYSTEM DATA COMMUNICATIONS MANAGEMENT

The system's Project 25-compliant Integrated Voice and Data (IV&D) operation allows data traffic to seamlessly use the Santa Rosa ASTRO 25 radio system, improving in-field efficiency. The IV&D service creates a data transport layer capable of supporting both industry-standard IP and customer-developed applications.

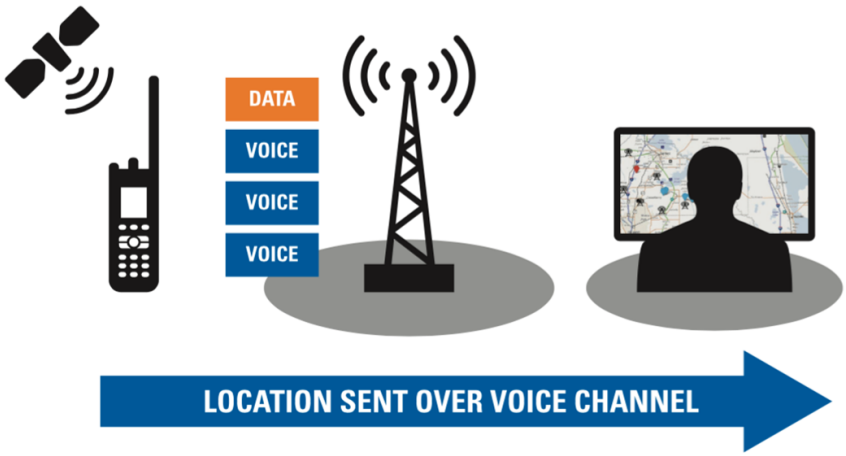
Key data features and applications items that have been included in this proposal:

Location on Receive, This feature will request the location of users operating on a talkgroup while a user is talking. The City of Santa Rosa is responsible for the mapping application and any interface with the CAD system to display the subscribers location on the CAD monitor. The Group Management feature has not been included.

POP25, or Programming over P25, updates the configuration parameters of fielded user radios over-the-air while the radios remain in use, enabling quick reprogramming of the entire fleet of radios with no disruption to operations.

Location on PTT, the Location on PTT feature enables ASTRO 25 trunked radio systems to continuously track the location of individual radio users while they are involved in voice calls. With each transmission, the APX radio with Location on PTT will send its Global Positioning System (GPS) location to the dispatch mapping application. ASTRO 25 Location on PTT provides timely, accurate location information when needed most – during emergencies and critical incidents that require intense voice collaboration.

Location on PTT improves the safety of field personnel by providing more accurate and reliable location services during an emergency call. GPS location data is sent with each PTT or "hot mic" activation, following an emergency button press or man-down situation. This allows dispatchers to effectively coordinate back-up and support services during an emergency situation. Additionally, Location on PTT increases location accuracy even during times when the radio system is heavily congested with voice traffic. Every time a first responder presses the PTT button, their location is updated, helping dispatchers make quick decisions based on current location data.



These features and applications below are not included and can be discussed in more detail during the design review process.

Optional Over-The-Air Rekeying (OTAR) feature employs encryption keys to keep communications secure, and updates those keys automatically without the delays, inconvenience, and administrative cost of having radio users bring their radios into the shop for manual reprogramming.

Optional Enhanced Data introduces a new type of data channel to support short, periodic inbound messages, such as GPS location, on APX user radios. Dispatch operators use these inbound messages to track radio users' status and location. ASTRO 25 Enhanced Data provides up to 12 times the capacity of a P25 standard data channel. For agencies using carriers for broadband traffic, Enhanced Data moves the short-burst inbound traffic to the ASTRO 25 network, avoiding carrier charges and coverage limitations.. Enhanced Data enables several data-driven applications (i.e.

SCADA, geofencing, telemetry, and biometrics) over the ASTRO 25 radio system. When supporting a variety of special-purpose applications, Enhanced Data can help provide a timelier and detailed view of resource locations and conditions.

1.8 SYSTEM CONFIGURATION MANAGEMENT

The ASTRO 25 system will provide the Santa Rosa system administrator with a centralized approach to configuring the system.

With the Unified Network Configurator (UNC), city system administrator will be able to configure network and devices in the ASTRO 25 system through easy editing screens and configuration "wizards." Role-based radio user setup, auto discovery of devices/configurations, and minimized data entry reduces configuration errors and initial configuration time. Personnel can quickly access historical configuration and forensic information, and quickly roll back to previous configuration versions, if necessary.

The UNC can direct comparison between the current P25 system configuration with any planned changes, simultaneously displaying the configurations and enabling the scheduling of any changes for distribution during off hours, minimizing the impact of system changes on communications. The UNC is highly secure, supporting SSH and SNMP passwords and providing an automated mechanism to seamlessly roll passwords and passphrases.

The Provisioning Manager (PM) enables the city system administrator to provision the infrastructure and devices in the ASTRO 25 radio system through a GUI. The PM offers a well- rounded set of features:

- **Streamlined Web-Based Graphic User Interface –** Requires fewer keystrokes to manage critical information. Provides a central point for the configuration of operational parameters for mobile and portable radios, dispatch operator positions, and system administrators.
- **Batch Creation of Radios and Talkgroups –** Minimizes data entry and reuses configuration information through "Multi-Instance Creation."
- **Enhanced Agency Partitioning –** Allows system administrators to define data partitions of system management resources among various agencies and radio users.
- **Provisioning Manager Audit –** enables stricter enforcement of system policies and provides an efficient way of troubleshooting configuration issues. Allows the system

administrators to navigate between an audit record and the corresponding configuration record.

- **External Provisioning Manager Interface –** Provides an interface that partners with an identified third-party vendor (Genesis, MCM, Premier One, NGI) to provide an integrated solution for critical customer applications on the system, such as, Asset Management, Billing, and Fleet Mapping applications.
- **Radio and Radio User fields Combined into One Window –** Provides efficient management of user radio provisioning by eliminating the need to enter device information multiple times.
- **Import/Export Capabilities –** Offer a convenient mechanism to export and import data from external applications using .csv protocol.

With the PM's integrated database, system administrators are required to enter data only once, improving accuracy, saving time, and maintaining data integrity.

1.8.1 Additional System Configuration Management

The Optional User Login Alias Update feature (Figure 1-5) provides a unique username and password to each radio user individually, enabling that user to log into any APX radio affiliated with the ASTRO 25 trunking system.

Instead of manually updating and maintaining a database to keep track of which radio is in use by which user, User Login Alias Update associates aliases with the users, saving time and money while ensuring the system remains secure. Motorola has included radio alias update licenses for 2,000 subscribers.

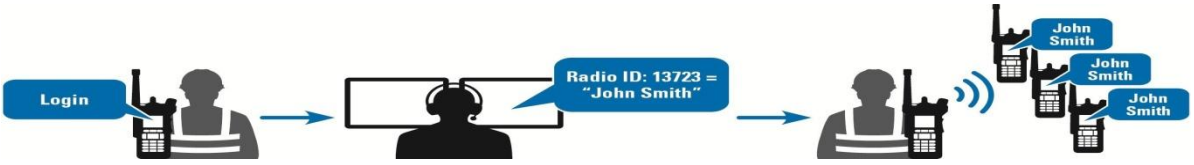


Figure1-5: User Login Alias Update

This proposal includes the Interference Locator feature (Figure 1-6) is included on this proposal. This feature is a software- based solution that quickly pinpoints the location of interfering transmitters on inbound frequencies. This feature significantly reduces the time and manpower needed to locate sources of interference by reducing the possible interference location from 100 square miles to one square mile.

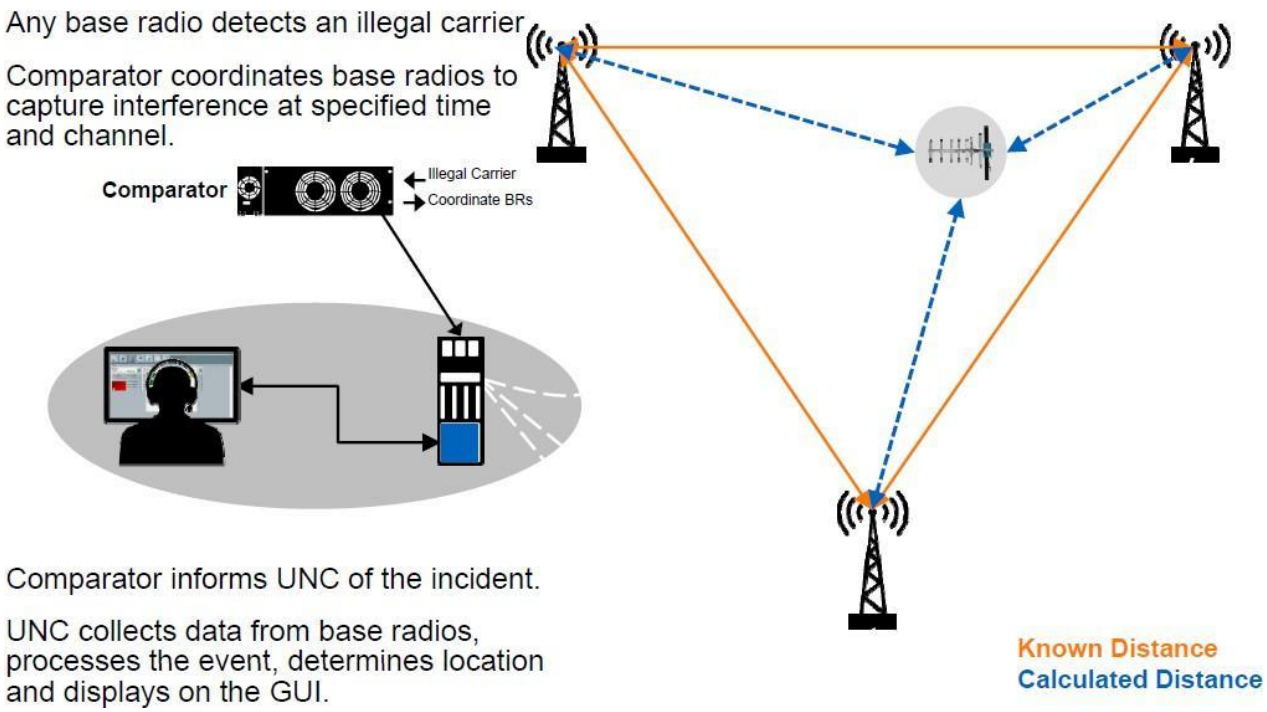


Figure 1-6: Interference Locator

1.9 SYSTEM PERFORMANCE MANAGEMENT

The ASTRO 25 performance suite will enable system administrators to monitor, manage, and report on system performance in near real-time, as well as proactively plan for expansion. The performance suite comprises both Motorola Solutions and third-party management applications that are certified, integrated, and supported by Motorola Solutions. Together, these applications provide a complete picture of how the system is operating.

The existing ZoneWatch application is a performance management tool that has customizable displays and grids to monitor real-time communications activity. The information displayed will help system administrators become proactive in resource planning decisions, such as when additional channels are needed. ZoneWatch also receives fault information related to repeater sites, console sites, and the zone controller from the Unified Event Manager (UEM). Motorola has included one additional Zonewatch license.

The systems existing affiliation Display provides a dynamic view of the affiliated sites for all operating radios, allowing the city's system administrator to monitor how radio users travel between different sites and communicate with assigned talkgroup members and those outside of their talkgroup. Affiliation Display traces the state/location of each user radio on the system and can also identify each user radio's location and affiliation information by site, console site, radio, channel, and talkgroup. Motorola has included one additional affiliation user license in this proposal.

Historical Reports will provide the city with statistical data that is gathered at specific, predefined time intervals. System administrators can use these reports to monitor and analyze information about sites, channels, talkgroups, and radio users.

This data is displayed using predefined report templates and parameters. Historical reports allow system administrators to do long-term analysis of traffic data. Motorola has included one additional historical reports license.

1.10 SYSTEM FAULT MANAGEMENT

System performance depends on the proper functioning of the system's software and components. The system includes the following features to facilitate the detection, isolation, and resolution of events that are reported by system components.

The existing Unified Event Manager (UEM) provides critical fault management, including processing and presentation of events that are sent by managed devices. Historical and real-time traffic screens will give the city system administrator access to radio events, radio status, and any device alarms. Motorola has included one additional UEM license with enhanced navigation and the ability to forward 100 SNMP elements into UEM. Motorola has also included the microwave map view segment view license as part of this proposal.

The UEM supports the following main functions:

- **Device discovery –** The UEM is optimized to quickly discover the managed devices in the system.
- **Fault management –** Fault management in the UEM includes processing and presentation of events sent by a managed device.
- **Supervision –** The UEM periodically checks its ability to communicate with the devices it manages.
- **Synchronization –** The UEM performs synchronization automatically, by validating the health of a device with the information stored in the fault management database.

The UEM will provide secure communications with the city's managed devices. If a loss of communication with a managed device occurs, that failure will be reported to the UEM, which will alert administrators according to the severity of the event. The UEM's alarm view dynamically updates based on the condition of the reported device (that is, the alarm will be cleared from the alarm view when a device sends a clear event to the UEM).

The UEM is the system's main fault manager, aggregating all system health information and managing the status of non-Motorola Solutions equipment through SDM3000 Remote Terminal Units (RTUs). Devices from other manufacturers managed by the UEM include power and security equipment, microwave radios, and environmental alarms for doors, and control tower lights.

Optional UEM Enhanced Navigation enables advanced navigation and data visualization capabilities in the UEM client. The user can navigate through zone and system health information using a drill- down navigation concept, traversing through additional views and visualizing data related to infrastructure health. The enhance navigation enables the following features:

- System Map
- Site View

- Network Element View
- Visualization of RTU Digital Input/Digital Output/Analog Input information
- Advanced drill-down navigation

The optional UEM Microwave View enables an advanced map view of microwave radio infrastructure, enabling system administrators to view the status of all microwave radios in a system on a single map screen. The microwave radios are represented as symbols on a static or geographical map, including the capability to mark the link relation between specific microwave radios.

The UEM Simple Network Management Protocol (SNMP) Element Management Toolkit enables third-party vendors to define SNMP messages between their devices and the UEM, allowing system administrators to monitor faults on critical third-party devices directly from the UEM.

UEM Email Alarm Notifications will allow the city's system administrator to configure e-mail notifications for events and alarms in the Unified Event Manager (UEM) application. Alarm notifications can also be forwarded to a mobile device such as a cell phone or personal digital assistant (PDA). This feature is included in the proposal.

1.11 SYSTEM COMPONENTS

An ASTRO 25 radio system is comprised of a master site and one or more radio frequency sites. This section provides descriptions of the components at each location.

1.11.1 Master Site Core Components

The equipment at Santa Rosa Police Department master site provides an adaptable and affordable platform for mission critical wireless communications in a scalable and virtualized configuration. The master site equipment comprises the system's core components, including a common server architecture (running the applications that provide command and control for the system) and LAN switches (routing information to and from the master site to the radio frequency sites that provide system coverage).

1.11.1.1 Common Server Architecture

A master site's Common Server Architecture (CSA) deploys server applications with the Linux/Windows operating systems on a HP DL380 Virtual Management Server (VMS) host. The VMS hosts the following server applications through VMware in a Virtual Machine (VM) environment:

- Unified Event Manager (UEM) – Provides fault management.
- Unified Network Configurator (UNC) – Provides controlled and validated configuration management of system devices.
- Network Management (NM) Client – Provides a virtual workstation for system administrators and technicians to use for various system-related tasks.

1.11.1.2 Firewall

A firewall provides network boundary enforcement and attack detection features. The firewall restricts traffic to known sources, destinations, and protocols, based on the hosts and services that are specified in the firewall configuration. All undefined traffic is discarded.

1.11.1.3 LAN Switches

The master site includes one or more LAN switches. The LAN switches aggregate all the Ethernet interfaces for all servers, clients, and routers at the core.

The system for the city will include redundant LAN switches for added system resilience.

1.11.2 Radio Frequency Site Component Descriptions

An ASTRO 25 Radio Frequency (RF) site supports a wide variety of configurations to meet critical communications requirements for present and future communication needs. Depending on the RF site configuration, each RF site has several different components. Motorola is providing its G-series site Equipment in this proposal. The trunking G-series equipment will utilize the Motorola Expandable Site Sub-System (ESS) configuration and be configured in the following manner:

- Two site with one optional site, Five (5) Channel 700Mhz P25 Phase 2 TDMA simulcast trunked system
  - Redundant network gateways
  - Expandable radio frequency distribution system
  - Remote terminal units for environmental alarms
  - One TX antenna
  - One RX antenna
- Network Management System with:
  - One additional network management terminal

Simulcast Prime site

In this design the prime site location would be located at the Bethlehem site.

Simulcast Comparators and Voting

The simulcast cell in addition to the prime site will have two with an optional third simulcast remote sites. The prime simulcast controller serves as a control and audio center for the simulcast cell. Audio from the user radios is received by the GTR 8000 simulcast receivers at the sites, packetized, and routed to the prime site. At the prime site, a GCM 8000 voting comparator votes the multiple audio streams from different sites on a frame-by-frame basis. The resulting voted composite signal is better than any one site can provide. This “voted” audio at the prime site is again packetized and routed to the following two destinations:

- The audio is redistributed to each site in the simulcast cell. The sites simultaneously transmit the voted audio to the user radios operating in that cell. This allows all members of the call to receive this optimum audio.
- The prime site also routes the voted audio to the core site. The core site services the audio to MCC7500 dispatch centers, simulcast cells/ repeater sites that require participation in the call.

1.11.2.1 GTR 8000 Expandable Site Subsystem

The GTR 8000 Expandable Site Subsystem (ESS), enclosure integrates reconfigured GTR 8000 base stations, site LAN switches, and GCP 8000 controllers, along with an optional Radio Frequency Distribution System (RFDS), depending on the needs of the configuration, into a single cabinet (Figure 1-7).

The ESS provides the following important benefits:

- Integrated design provides a smaller footprint at the site.
- Front/top access design and minimized cabling reduces install and service labor.
- Increased power supply redundancy through common power bus.

Figure 1-7: Example of a GTR 8000 Expandable Site Subsystem –Integrates base radios, site controllers, reference distribution modules, and Ethernet LAN switches in a single cabinet

Voice traffic is routed from each of the site base stations to the system for distribution to all sites associated with the call.

1.11.2.2 G-Series Site Components

G-series site equipment uses a standard chassis (Figure 1-8) for individual site components. Six basic modules create the entire G-series platform, resulting in reduced spare parts inventory.

Modules have front access to improve serviceability with hot-swap support to ensure channels are back on the air in minimum possible time.

Figure 1-8: G-Series Chassis – A single chassis and six basic modules create the entire G-series platform, resulting in reduced spare parts inventory

- **GTR 8000 Site Repeater/Base Radio –** The GTR 8000 base radio consists of a transceiver module, power amplifier module, fan module, and power supply. The transceiver module includes the functionality for the exciter, receiver, and station control. The base radio software, configuration, and network management, as well as inbound/outbound traffic handling, are performed through this transceiver module. On-board serial and Ethernet ports are located on this module for local servicing through Configuration/Service Software (CSS). The power amplifier module amplifies the low-level modulated RF signal from the transceiver module and delivers the amplified signal on the path to the transmit antenna. The power supply module supports the transceiver and power amplifier modules, and can also provide auxiliary power to a connected site controller or receive multicoupler/low noise amplifier.
- **GCP 8000 Site Controller –** The GCP 8000 Site Controller is used at an ASTRO 25 trunking site to assign voice and data channels, manage and report alarms on site resources, provide Ethernet switching capability, and provide a frequency reference to GTR 8000 Base Radios. The frequency reference is provided either via a GPS receiver or an ultra-high stability oscillator. The nature of these frequency references eliminates or minimizes site visits for frequency tuning servicing.
- **GCM 8000 Comparator –** The GCM 8000 Comparator performs frame-by- frame voting on multiple received signals and recombines the frames to produce a signal with the best possible audio quality. GPS launch-delay timing ensures seamless broadcast of the voted frames from multiple voice signals into one high-quality transmit signal.

1.11.2.3 Prime Site Ethernet Switches

Two paired Ethernet switches form the prime site LAN in a system with IP simulcast sites. They are paired for redundancy so if one of them fails, half of the hosts (site controllers, comparators) on the LAN are still connected to a working Ethernet switch.

1.11.2.4 Dual Prime Site Link

In a dual prime site link configuration, there are two prime site routers, each of which is attached to a different prime site LAN switch. This ensures that if either switch fails, there is still a path to a prime site router for connectivity to the master site.

1.11.2.5 Dual Remote Site Link Switches

In a dual remote site link configuration, two switches are used so that there is no single point of failure for the remote site's entire IP network.

1.11.2.6 Dual Remote Site Link Routers

The remote site access routers, located at the prime site, provide the IP network routing interfaces between the prime site and all of the remote sites. In the dual remote site link configuration, two remote site access routers each serve as the endpoint for one of the remote site's Wide Area Network (WAN) links. The remote site access routers only support Ethernet links.

1.11.2.7 SDM3000 Remote Terminal Units (RTUs)

The SDM3000 Remote Terminal Units (RTUs) enables the Unified Event Manager (UEM) to acquire information regarding the fault and configuration of elements/devices in sites. Each SDM3000 RTU has a web server that provides service access through a standard web browser.

An RTU can retrieve the topology map of the site and alarms stored in the events buffer (Figure 1-9).

Figure 1-9: SDM3000 Remote Terminal Unit – Enables the UEM to acquire information regarding the fault and configuration of elements/devices in sites

1.11.2.8 SRX Gateway

The SRX core gateways (Figure 1-10) provide routing control of audio, data, and network management traffic for devices that forward packets beyond their local LAN. The gateways replicate packets while achieving the fast access levels required by real-time voice systems.

Figure 1-10: SRX Gateway –Provides routing control of audio, data, and network management traffic for devices that forward packets beyond their local LAN

Note: Redundant gateways have been provided in the system design.

1.11.2.9 TRAK 9100 Simulcast Site Reference

The TRAK 9100 Simulcast Site Reference (Figure 1-11) is a GPS-based frequency and time reference. The TRAK frequency reference provides the simulcast system 1 Pulse per Second (PPS), 5 Millions of Pulses per Second (MPPS), and 1 PPS + 5 MPPS composite signals.

These signals are used to synchronize the simulcast transmissions, improving overall performance and coverage. The TRAK 9100 provides a high-level of redundancy, including redundant GPS receivers, a backup rubidium standard, and redundant power supplies.

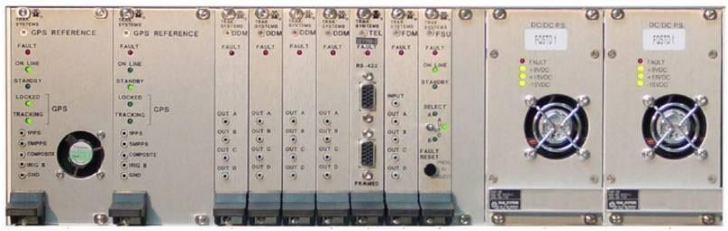


Figure 1-11: TRAK 9100 Simulcast Site Reference –Provides the simulcast system 1 PPS, 5 MPPS, and 1 PPS + 5 MPPS composite signals to synchronize the simulcast transmissions

1.12 APX 8000 PORTABLE RADIO

The APX 8000 is Motorola Solutions' first all-band P25 portable radio, created specifically for mission- critical first responders who need to communicate across all frequency bands using the same device. It is a 4-in-1 radio that offers multi-band interoperability, with the clearest and loudest audio on the market as well as seamless Wi-Fi connectivity. With four RF bands and multi-mode system access, the APX 8000 enables radio users to communicate across 700 MHz, 800MHz, VHF and UHF Bands 1 and 2. The APX 8000 offers backward and forward compatibility (FDMA and TDMA) and integrated GPS for outdoor location tracking. Designed with mission-critical technology, the APX 8000 amplifies the public safety official's ability to keep the community safer than ever before.

With four RF bands and multi-mode system access, the APX 8000 knows no limits when it comes to interoperability. With Wi-Fi access, the APX 8000 can quickly receive new codeplugs, firmware, and software features in order to redeploy the radio fleet with ease as users continue talking without interruption.

Intuitively designed with a familiar look and feel, the compact APX 8000 is always comfortable to use, while the Adaptive Audio Engine and ultra-loud speaker bring clarity into every conversation. Some of the standard features and benefits of the APX 8000 are identified below:

- **All-Band Interoperability** – The APX 8000 offers four-band multi-mode interoperability with systems in 700 MHz, 800 MHz, VHF, and UHF frequency bands.
- **Enhanced Efficiency and Safety through the Seamless Integration of Voice and Data Capabilities** – Incorporating Wi-Fi, IV&D, and P25 data connectivity in one radio enables simultaneous voice and data radio transmission. Management and configuration of each radio becomes transparent, with new software or data upgrades occurring while

the user continues to communicate via voice over the radio, resulting in no “shut-down” times. GPS Outdoor Personnel Tracking enables each radio user’s location to be shared, resulting in more efficient task assignment and enhanced radio user safety. Mission Critical Wireless Bluetooth allows the radio to connect quickly and securely with remote speaker microphones, surveillance kits, and the LEX L10 Mission-Critical LTE Handheld for remote radio control. Off-the-shelf Bluetooth audio and data accessories are also supported on all APX 8000 radios.

- Hear and be Heard More Clearly – First responders and other critical personnel must be able to communicate and coordinate their actions even in chaotic, high-noise environments. An adaptive audio engine and ultra-loud speaker enable the radio to automatically adjust to consistently produce the loudest and clearest audio in any environment. Adaptive dual-sided operation uses beam-forming technology to allow the radio user to speak into either side of the radio. Adaptive noise suppression adjusts the audio algorithm to cancel out the background noise as it changes in the radio user’s environment. Adaptive speaker equalization automatically adjusts the 3 Watt loud speaker settings based on volume selection to optimize sound for the talker’s authenticity and speech intelligibility at low or high volumes. Adaptive Windporting engages a third microphone to cancel out wind noise.
- **Comfortable Design** – This compact, rugged, and secure radio has been made with the user’s comfort in mind. The familiar look and feel of the APX 8000 was modeled after Motorola Solutions' award winning APX 6000 radio design, and enhanced with the RF band access of the APX 7000. A flexible all-band antenna bends easily while the radio user is moving around on the job, ensuring the antenna never gets in the way of doing their job.
- **Rugged, Robust, and Reliable Design Features** – The APX 8000 portable radio is ready for unpredictable environments by incorporating the most durable features to ensure radio functionality. Water-Tight Seal protects the radio’s interior from water intrusion, even if the outer housing is breached, with a shock- absorbing aluminum alloy endoskeleton. The IP 68 standard rating ensures that the APX 8000 can withstand 2 meters of water submersion for 2 hours. The Delta-T option can be added on to this radio to ensure it can withstand 2 meters of water submersion for 4 hours. Drop-Resistant Dual Battery Latch protects the radio from resetting, powering off, or ejecting the battery upon impact from being dropped. Tempered Glass Display protects the radio’s color display user interface from scratches, impact, and pressure.
- **Secure Communications** – The APX 8000 is designed to secure and protect voice and data information from unwanted intruders. Multiple Hardware Encryption Algorithms (ex: AES, DES, ADP with up to 128 keys) ensure that sensitive information stays protected from scanners and eavesdroppers. Over-the-Air Re- Keying (OTAR) offers the ability to efficiently rekey and update encryption keys of fielded radios over time. P25 Radio Authentication ensures that only valid users can access the system and all sensitive information. Two-Factor Authentication allows users to securely log in to query databases.

1.1.1 APX 8500 Mobile Radio

The APX 8500 is Motorola Solutions' first all- band P25 mobile radio, created specifically for mission-critical first responders, who need to communicate across all frequency bands using the same device. It is a 4-in-1 radio that offers four RF bands and multi-mode system access. The APX 8500 enables radio users to communicate across 700 MHz, 800MHz, VHF and UHF Bands 1 and 2. Designed with mission- critical technology, the APX 8500 amplifies a radio user with the ability to keep the community safer than ever before.

With four RF bands and multi-mode system access, the APX 8500 knows no limits when it comes to interoperability. Some of its standard features and benefits are identified below:

- **All-Band Interoperability** – The APX 8500 offers four-band multi-mode interoperability with systems in 700 MHz, 800 MHz, VHF, and UHF frequency bands.
- **Multiple Control Head Options** – The APX 8500 mobile radio can be controlled by multiple control heads, with four different wired locations. There are five control heads available for the APX 8500: the O2 Rugged Control Head, O3 Handheld Control Head, O5 Standard Control Head, O7 Enhanced Control Head, and 09 Integrated Control Head. Dual control head support is offered for the O2, O5, and O7 control heads.
- **Easy to Install** – The APX 8500's Mid-Power Model has been designed to fit into any existing Motorola XTL footprint, so no further installation is necessary. The High-Power Model has been designed with a trunion design that secures the mobile while enabling it to be removed without also removing connecting cables.
- **Meet Radio Users' Needs** – The APX 8500 is compatible with the following optional advanced features and data applications: Programming over Project 25 (POP25), Text Messaging, Over the Air Rekeying (OTAR), 12 character RF ID asset tracking, Tactical OTAR Siren and Light Interface Module, and Enhanced Encryption Software Options.

1.12.1.1 Radio Frequency Distribution System

The Radio Frequency Distribution System (RFDS) connects base radios and antennas, allowing for a completely contained and more compact installation footprint. For the transmitters, this can include isolators, combiners, TX filters, diplexers, and power monitors. For the receivers, this can include duplexers, site preselectors, and multicouplers.

Example Diagrams of the TX an RX RFDS with corresponding equipment notations are below (Figure 1-12 and Figure 1-13). The exact configuration will be done during the DDR.

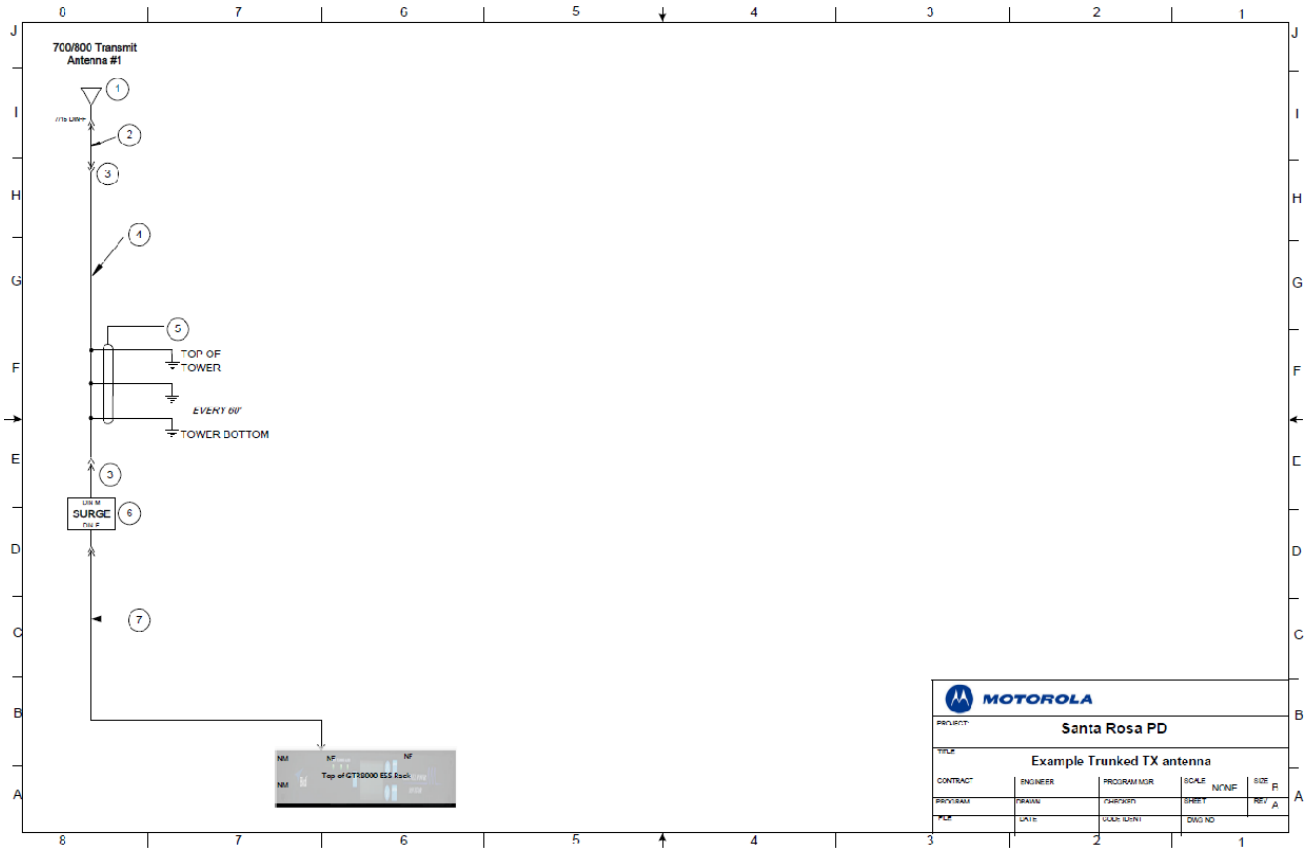


Figure 1-12: Example TX Antenna Diagram

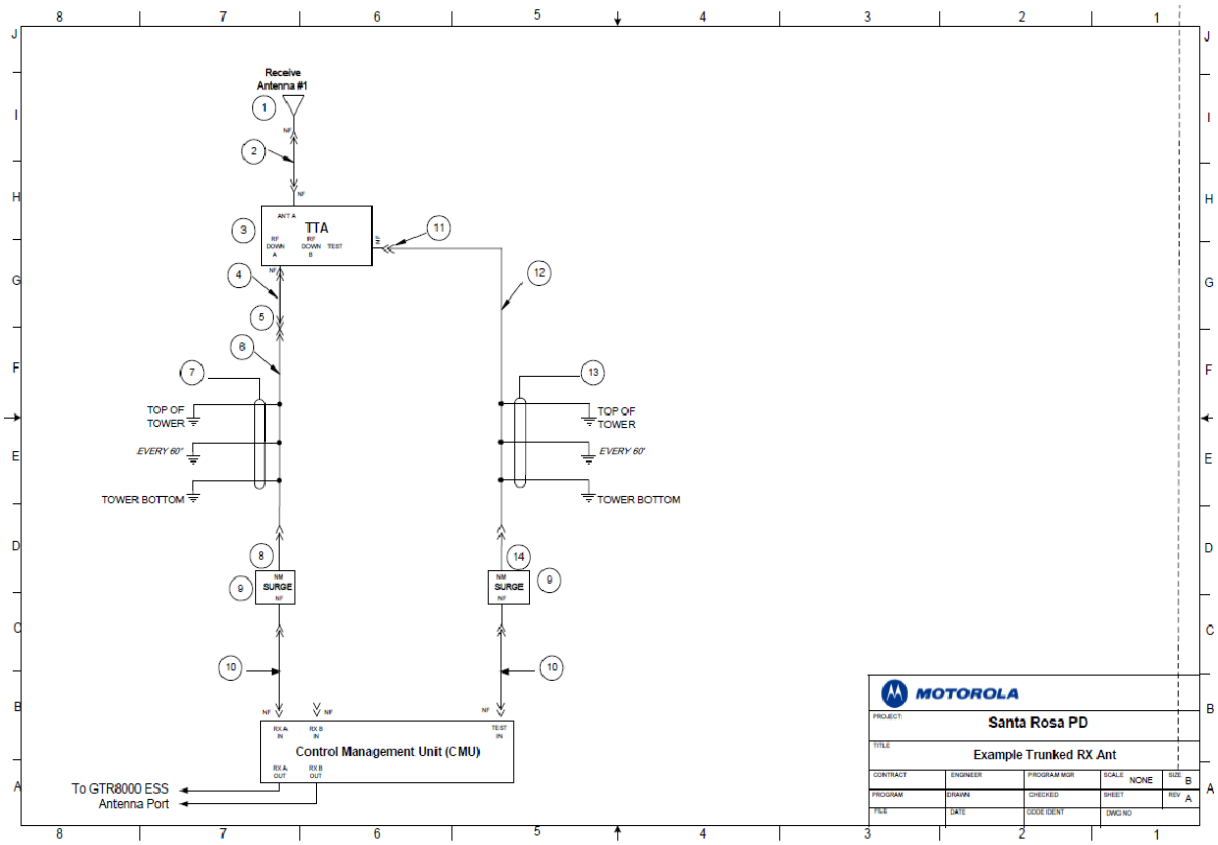


Figure 1-13: Example RX Antenna Diagram

SECTION 2

MICROWAVE AND MPLS

2.1 SYSTEM OVERVIEW

Motorola has teamed with Nokia to provide a best-in-class, comprehensive backhaul solution for Santa Rosa's new P25 system design.

Motorola is proposing the Nokia 9500 Microwave Packet Radio (MPR) and Nokia Service Aggregation Router (SAR-A) to provide the foundation of the new P25 Mission Critical networking needs. This combination provides a reliable solution that will meet the long term backhaul needs of the Santa Rosa P25 trunked system users.

Motorola has worked with CSI to meet the reliability and resiliency required as part of the new system implementation. The design provides a microwave backhaul network with increased reliability by incorporating the following design enhancements:

- No single point of failure within the IP network.
- Use of loop protection on all simulcast radio site connections.
- Hardware redundancy.
- Increased bandwidth that will allow for future growth.

In addition, all of the sites have been configured for 52Mbps. This proposal includes all new racks, antennas, waveguide, dehydrators and accessories.

Motorola's solution utilizes the Nokia 9500 Microwave Packet Radio with the Nokia SAR-A MPLS router to provide Santa Rosa with the flexibility to efficiently manage the backhaul network by prioritizing the traffic on the network as the system expands over time. Motorola understand that the P25 system is the primary application for the microwave backhaul and that over time additional applications might need to be supported on the network.

The design accounts for the following:

- Future voice capacity requirements at simulcast sites
- ISSI requirements between the P25 trunked system and P25 systems
- Future applications like video to protect against vandalism and theft at these RF sites
- Microwave and MPLS spares included for the Santa Rosa Microwave sites.

2.2 SYSTEM DESCRIPTION

2.2.1 System Design

The design includes all necessary engineering services and Installation of the new Nokia 9500 Microwave Packet Radios that will support the connectivity of the new P25 system in Santa Rosa. The following services are included as part of the microwave design:

Field path surveys, receiver baseline measurements, path coordination, dish alignment and waveguide sweeps, factory integration, engineering services, site surveys, microwave antenna and radio installation, final field testing and cutover, and cutover plans.

This design assumes all dish heights are available on the towers and unobstructed by trees. The final field path surveys will need to be performed as part of the design review process once the contract is approved to verify the paths are clear of obstructions.

The Nokia 9500 Microwave Packet Radio links will be implemented at the following locations:

Primary Design:

- SRPD to Bethlehem
- Bethlehem to Barham
- Barham to SRPD

Optional Design:

- SRPD to Bethlehem
- Bethlehem to R5
- R5 to Barham
- Barham to SRPD

At a high level the system is designed a high availability loop fashion as depicted in Figure 2-1. When the system detects a failure of one of the links in the loop, it will automatically reroute the traffic without service disruption.

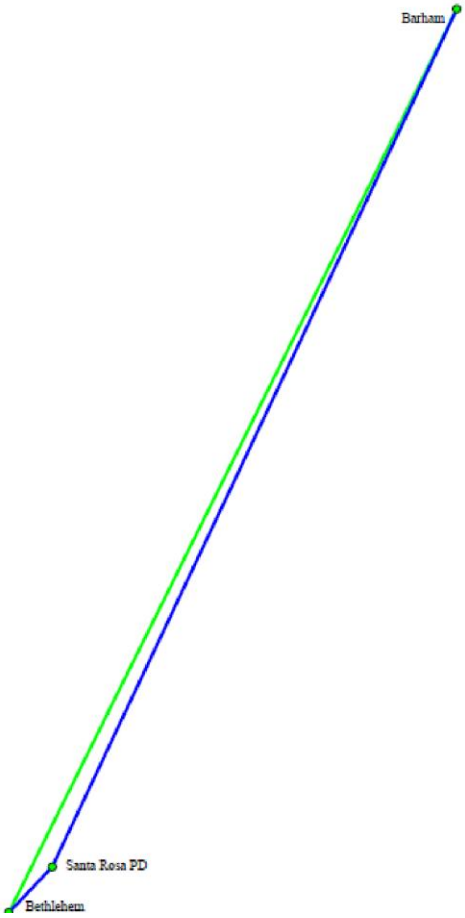


Figure 2-1: Microwave Loop

2.2.2 Microwave Components

2.2.2.1 Nokia 9500 Microwave Packet Radio (MPR)

The Nokia 9500 Microwave Packet Radio (MPR) enables smooth transformation of backhaul networks from TDM to IP - and provides efficient transport of multimedia traffic, while still supporting legacy TDM. It improves packet aggregation, increases bandwidth, optimizes Ethernet connectivity and delivers the quality of service needed to satisfy end users. With the 9500 MPR, networks can efficiently absorb rapid growth in multimedia traffic, because packets are handled natively and transmission is adapted to the propagation conditions and quality required by different types of services.
The 9500 MPR represents the new generation of Nokia microwave radio technology. This new technological product optimizes network transport, while diminishing costs.

The Nokia 9500 Microwave Packet Radio (MPR) includes a range of Microwave Packet Transport (MPT) units for long-haul applications in a full-indoor configuration. The 9500 MPR is designed to support long-distance, high-capacity mission-critical applications; the MPT-HLC units provide flexible, secure, scalable and highly reliable networks that also support a seamless TDM-to-packet migration path option. See Figure 2-1.

MPT-HLC

Two MPT-HLCs in a shelf T-HLC

Figure 2-1: Nokia 9500 Microwave Packet Radio (MPR)

2.2.2.2 Microwave Path Surveys

Microwave Path Surveys are included on the pages that follow.

2.3 NETWORK ROUTING

2.3.1 Multiprotocol Label Switching (MPLS) Routers

Motorola has included a Nokia IP/MPLS transport system in the design that will reside on top of the microwave network to support all the routing and management of IP traffic throughout the network. The MPLS transport system uses all COTS equipment designed for use with microwave in a public safety grade network (Figure 2-2). The services to implement and configure the traffic for the new backhaul network are included in this proposal.

Figure 2-2: Nokia 7705 Service Aggregation Router (SAR-A)

Motorola has designed a highly reliable IP/MPLS network solution that enables Santa Rosa to meet the performance requirements of all their mission-critical services and applications. The Nokia SAR platform provided in this proposal will provide a highly reliable network platform from which Ethernet services will be delivered to end user applications. An IP/MPLS implementation offers advantages and savings such as:

- Optimizing the bandwidth available in the network to make possible the introduction of new applications.
- Reducing the dependency on leased lines.
- Extending services to remote areas.
- Satisfying the growing IT functions.
- Providing network virtualization with QoS guaranteed for priority traffic.
- Improving agency interoperability and access to critical information.

The Nokia SAR-A is a one-rack unit (1 RU) version of the SAR-A that is Ethernet optimized with IP/MPLS and optional TDM.

This industry-leading, independently-validated High Availability feature has been inherited from the Service Router product line and is a strong contributor to overall network uptime.

Network uplink connectivity options are: Ethernet, FE, GigE, n × T1/ E1 MLPPP or n × T1/E1 ATM IMA. Integrated DS3 point-to-point trunking is supported using the 4-port DS3 adapter card. OC-3/STM-1 trunking is supported using Packet over SONET/ SDH (POS) on the 4-port OC-3/STM-1 clear channel adapter card.

Improved Bandwidth and Traffic Control

An IP/MPLS network improves the bandwidth efficiency of a public safety network, reduces cost, enables easier access to existing databases, and enhances the safety of the general public as well as the safety of personnel delivering these services. MPLS has a built-in mechanism, called traffic engineering, which allows for the selection of the best path across the network, taking the physical paths of the links and interfaces into account. This mechanism is used in networks to ensure that the best link is chosen to optimize network bandwidth.

The SAR-A features a rich set of QoS mechanisms and can provide each service on the network with its own committed information rate and peak information rate as well as a priority value to use as it traverses the network. Strong QoS capabilities ensure service-level awareness and effective management of multiple traffic streams, providing guaranteed levels of QoS, especially constraints for delay and delay variation, for maintaining Service Level Agreements for the different entities using the IP/MPLS network.

Network Resiliency

The SAR-A features redundant power supplies, fans, controller cards, Ethernet cards, and Ethernet SFP optics modules to provide the highest levels of resiliency. Through the use of industry standard protocols like OSPF and MPLS combined with our custom enhancements, the IP/MPLS system can route services around network failures while maintaining service level agreements for critical traffic.

The microwave loop topology also provides a reliable architecture because traffic can be rerouted to the opposite direction if a physical failure occurs in a link connecting any adjacent sites. The IP/MPLS network uses the MPLS fast reroute feature for resiliency where traffic is rerouted around a failure with sub-50 millisecond restoration time. This ensures that services on the network are not affected.

Service Definition Requirements

It is critical to maintain the end-to-end quality of service (QoS) for packet traffic. Not all types of traffic have the same set of requirements. Voice traffic in particular requires low latency and jitter (latency variation) as well as low loss, whereas data traffic often has less stringent delay requirements but may be very sensitive to loss, as packet loss can seriously constrain application throughput. To offer the required treatment throughout the network, traffic flows with different requirements are identified at the access and marked in-line with the appropriate QoS metrics. Traffic classification and marking are carried out based on the following categories:

- Time slot/port.
- Ethernet port/VLAN
- ATM service category (CBR/rt-VBR/ nrt-VBR/UBR)
- ATM VC
- Ethernet 802.1p/VLAN
- IP DSCP/MPLS EXP

The Nokia solution is unique in that its management system allows for true end to end provisioning of individual services from one end of the network to the other through multiple intermediate hops in under a minute with all the necessary QoS settings, bandwidth guarantees, and resiliency options provisioned. The solution offers every type of service connectivity option that a modern communications network requires. Service offerings include:

- Point to point TDM circuit emulation (Cpipe) for carrying circuits like T1s or RS232.
- Point to point Ethernet layer 1 (Epipe) – acts like a virtual patch cable.
- Point to multipoint Ethernet layer 2 (VPLS) – acts like a VLAN.
- Point to multipoint IP Layer 3 (VPRN) – acts like a virtual routed network.

The Nokia SAR-A utilizes extensive traffic management policies to ensure fairness with detailed classification and hierarchical scheduling including: minimum/maximum, queue type- based weighted round robin or strict priority and profiled scheduling, as well as multi-tier policing to differentiate and prioritize individual services and flows.

Quality of Service Requirements

The SAR-A can buffer thousands of individual services and then shape them to a strict SLA with Committed Information Rate (CIR) and Peak Information Rate (PIR) type guarantees.

Buffer allocation is programmable per-service to accommodate different maximum burst sizes (MBS).

The proposed MPLS routers are equipped with the following options for Santa Rosa:

2.4 48VOLT DC POWER SYSTEM COMPONENTS

LaMARCHE ISO 9001:2015 CERTIFIED

IX SERIES

High Frequency / Hot-Swap Inverter Systems

Fully Equipped 6KVA System with Optional SNMP Module

IX Series

This IX Inverter Series offered by La Marche Manufacturing is designed to operate from a 48VDC (40.5-58V range) input and produce either 120VAC or 230VAC nominal output at up to 6kVA total capacity. The low distortion 50 or 60 Hz sine wave is produced using an advanced DSP controlled archi- tecture which achieves better than 89% efficiency and 10.5VA per cubic inch power density.

The IX Series pre-configured inverter systems include a Controller, Static Transfer Switch, Power distribution and Maintenance by-pass facilities. Remote communications to a PC is provided via USB. SNMP alarm traps delivered over an Ethernet TCP/IP connection are also available as an option with network module.

LaMARCHE ISO 9001:2015 CERTIFIED

LMHF

La Marche High Frequency

Modular Switchmode Rectifier System

Unit Shown: LMHF-75-48V with Modules & Shelf

The La Marche model LMHF (La Marche High Frequency) is a 4 RU modular design rectifier for telecommunication applications. It is a highly compact self- contained power system. The current limiting circuitry, voltage regulation, high efficiency and high power factor makes the LMHF an ideal choice where power requirements are critical.

These rectifiers are available with nominal output voltages of 24 VDC or 48 VDC and can deliver 115 amps and 75 amps respectively. The nominal universal input range of 208 VAC to 277 VAC and the frequency range of 45 to 66 Hz provides the flexibility for world-wide power requirements.

The temperature controlled variable fan speed rectifier in a six across 23" rack configuration (five across in 19" configuration) offers high power density and efficiency. These parallel operating rectifiers are ideal for N+1 redundancy.

The system controller features data-logging, advanced alarm notification and full graphic LCD touch-screen. This user-friendly graphical (Menu Driven) display allows simple control and monitoring of LMHF rectifiers. Complete configurations and monitoring is possible through the Ethernet port and web browser. The communication ports provide reliable communication between LMHF power system and management system.

LMHF controller easily allows adjustments such as float voltage, equalize voltage, high voltage alarm, low voltage alarm and high voltage shutdown.

SECTION 3

EQUIPMENT LIST

3.1 INFRASTRUCTURE EQUIPMENT LIST

QTY	NOMENCLATURE	DESCRIPTION
1	SQM01SUM0274	SINGLE ZONE TRUNKED L CORE
1	CA02648AD	ADD: EXPANSION OFF L CORE CAPABILTI
2	UA00159AA	ADD: P25 PHASE 2 TDMA TRKNG OP SITE
15	UA00161AA	ADD: P25 PHASE 2 TDMA SW BASE RADIO
2	UA00407AA	ADD: CLASSIC DATA-P25 TRNK SITE
1	UA00482AA	ADD : LOCATION ON PTT 500 USER LICE
1	UA00521AA	ADD: INTERFERENCE LOCATOR UNC SYSTE
1	HKVN4621A	APX RM DOWNLOAD
1	TT3492	Z2 G4 MINI WORKSTATION NON RETURNAB
1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
1	T7885	MCAFEE WINDOWS AV CLIENT
1	DSTG191B	TECH GLOBAL EVOLUTION SERIES 19INCH
1	TT3492	Z2 G4 MINI WORKSTATION NON RETURNAB
1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
1	T7885	MCAFEE WINDOWS AV CLIENT
1	DSTG191B	TECH GLOBAL EVOLUTION SERIES 19INCH
2	T8555	EDGE ROUTER & FIREWALL DC
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
2	CLN1868	2930F 24-PORT SWITCH
1	SQM01SUM0257	INTELLIGENT MIDDLEWARE
1	CA03062AA	ADD: IMW HIGH TIER/NON-REDUNDANT
1	CA02384AE	ADD: UNIFIED NETWORK SERVICES SOFTW
1	CA02354AA	ADD: ASTRO NETWORK APPLICATION INTE
1	UA00014AA	ADD: 401-500 RESOURCES FOR LOCATION
1	UA00055AA	ADD: 401-500 RESOURCES FOR PRESENCE
1	CA02053AE	ADD: SUPPLEMENTAL CD IA (IMW)
10	BLN1311	MCC 7500 / MCC 7100 TRUNKING OPERAT
1	T7321	GCM 8000 COMPARATOR
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION

QTY	NOMENCLATURE	DESCRIPTION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	T8343	GSERIES SOFTWARE LICENSING
2	UA00402AA	ADD: GSERIES CM-P25 TRNK IP
2	UA00418AA	ADD: P25 TDMA TRNK COMPARATOR SW
1	T7321	GCM 8000 COMPARATOR
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	T8343	GSERIES SOFTWARE LICENSING
2	UA00402AA	ADD: GSERIES CM-P25 TRNK IP
2	UA00418AA	ADD: P25 TDMA TRNK COMPARATOR SW
1	T7321	GCM 8000 COMPARATOR
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA01183AA	GCM 8000 COMPARATOR
1	CA01185AA	ADD: IP BASED MULTISITE OPERATION
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	T8343	GSERIES SOFTWARE LICENSING
1	UA00402AA	ADD: GSERIES CM-P25 TRNK IP
1	T7038	GCP 8000 SITE CONTROLLER
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
1	CA01194AA	ADD: IP BASED MULTISITE SITE CONTRO
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE

QTY	NOMENCLATURE	DESCRIPTION
1	T8343	GSERIES SOFTWARE LICENSING
1	UA00405AA	ADD: GSERIES SC-P25 TRNK MS IP
1	T7038	GCP 8000 SITE CONTROLLER
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
1	CA01194AA	ADD: IP BASED MULTISITE SITE CONTRO
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	T8343	GSERIES SOFTWARE LICENSING
1	UA00405AA	ADD: GSERIES SC-P25 TRNK MS IP
1	DSTRAK91008EDC	PRIME/MASTER SITE REDUNDANT MODULAR
50	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY
4	DDN9769	F1PNM-HC 1/4" TYPE N MALE CONNECTOR
2	CLN1866	FRU: 1M DAC CABLE
2	T8555	EDGE ROUTER & FIREWALL DC
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
2	T8555	EDGE ROUTER & FIREWALL DC
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
4	CLN1868	2930F 24-PORT SWITCH
4	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
1	DSDST20A	DISTRIBUTION PANEL (UL) W/ REAR COV
5	DSPBA5	PBA PLUG-IN BREAKER 5 AMP
9	DSPBA20	PBA PLUG-IN BREAKER 20 AMP
1	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A P
1	THN1012	RACK 7' OPEN
1	DSTRAK91061	FOUR PORT DDM
1	CLN1868	2930F 24-PORT SWITCH
1	CLN1866	FRU: 1M DAC CABLE
3	CLN1868	2930F 24-PORT SWITCH
1	CLN1866	FRU: 1M DAC CABLE
1	DLN6966	FRU: GCP 8000/GCM 8000/GPB 8000
1	DLN6455	CONFIGURATION/SERVICE SOFTWARE
1	DSPBA5	PBA PLUG-IN BREAKER 5 AMP

QTY	NOMENCLATURE	DESCRIPTION
1	DSPBA20	PBA PLUG-IN BREAKER 20 AMP
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00855AA	ADD: 700/800 MHZ
1	X305AC	ADD: QTY (5) GTR 8000 BASE RADIOS
5	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO
1	CA03111AA	ADD: CEC COMPLIANCE
5	CA01842AA	ADD: P25 TDMA SOFTWARE
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
5	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILIT
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00882AA	ADD: 700 MHZ TX FILTER W/PMU
2	CA01536AA	ADD: GPB 8000 REFERENCE DISTRIBUTIO
2	CA01537AA	ADD: REFERENCE DISTRIBUTION SOFTWAR
1	CA01402AA	ADD: 7.0 FT OPEN RACK
1	T8343	GSERIES SOFTWARE LICENSING
5	UA00400AA	ADD: GSERIES BR-P25 TRNK MS IP
2	UA00409AA	ADD: GSERIES RDM
2	PMUG1017A	GNSS REMOTE RECEIVER ASSY
2	DSWM4	HEAVY DUTY W STYLE WALL MOUNT WITH
2	DSP04268	ALUMINUM 6061-T6. PIPE 1 INCH SCHED
2	DS30C87465CO1	125FT OUTDOOR UV PROTECTED CABLE 6
2	T8547	SITE AND HUB ROUTER AND FIREWALL -
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
1	DS428E83I01C48	CONTROL MONITORING UNIT, NON-DIVERS
1	DS428E83I01T	TTA, NON-DIVERSITY, 796-824 MHZ, RE
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO RE
3	V592	AAD TERM BLCK & CONN WI
1	VA00905	ADD:24/48 VDC PS TO SM
1	DSTRAK91061	FOUR PORT DDM
1	DLN6895	FRU: PA 7/800 MHZ
1	DLN6885	FRU: XCVR 7/800 MHZ V2
1	DLN6634	FRU: 700/800 MHZ SITE LNA

QTY	NOMENCLATURE	DESCRIPTION
1	DLN1306	FRU: 700/800 MHZ CABINET RMC MODULE
1	DLN6805	FRU: ENERGY EFFICIENT POWER SUPPLY
1	DLN6898	FRU: FAN MODULE
1	DLN6677	FRU: G-SERIES XHUB
1	DLN6455	CONFIGURATION/SERVICE SOFTWARE
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00855AA	ADD: 700/800 MHZ
1	X305AC	ADD: QTY (5) GTR 8000 BASE RADIOS
5	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO
1	CA03111AA	ADD: CEC COMPLIANCE
5	CA01842AA	ADD: P25 TDMA SOFTWARE
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
5	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILIT
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00882AA	ADD: 700 MHZ TX FILTER W/PMU
2	CA01536AA	ADD: GPB 8000 REFERENCE DISTRIBUTIO
2	CA01537AA	ADD: REFERENCE DISTRIBUTION SOFTWAR
1	CA01402AA	ADD: 7.0 FT OPEN RACK
1	T8343	GSERIES SOFTWARE LICENSING
5	UA00400AA	ADD: GSERIES BR-P25 TRNK MS IP
2	UA00409AA	ADD: GSERIES RDM
2	PMUG1017A	GNSS REMOTE RECEIVER ASSY
2	DSWM4	HEAVY DUTY W STYLE WALL MOUNT WITH
2	DSP04268	ALUMINUM 6061-T6. PIPE 1 INCH SCHED
2	DS30C87465CO1	125FT OUTDOOR UV PROTECTED CABLE 6
2	T8547	SITE AND HUB ROUTER AND FIREWALL -
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
1	DSDST20A	DISTRIBUTION PANEL (UL) W/ REAR COV
5	DSPBA5	PBA PLUG-IN BREAKER 5 AMP
3	DSPBA20	PBA PLUG-IN BREAKER 20 AMP
1	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A P
1	DS428E83I01C48	CONTROL MONITORING UNIT, NON-DIVERS
1	DS428E83I01T	TTA, NON-DIVERSITY, 796-824 MHZ, RE

QTY	NOMENCLATURE	DESCRIPTION
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO RE
3	V592	AAD TERM BLCK & CONN WI
1	VA00905	ADD:24/48 VDC PS TO SM
1	DSCC80706T5	OMNI, CORP COLLINEAR, 6DDBD, 746-87
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2
5	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
1	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
7	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY
1	DDN9769	F1PNM-HC 1/4" TYPE N MALE CONNECTOR
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY
1	DSCC80706T5	OMNI, CORP COLLINEAR, 6DDBD, 746-87
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE

QTY	NOMENCLATURE	DESCRIPTION
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2
5	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
1	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
7	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY
1	DDN9769	F1PNM-HC 1/4" TYPE N MALE CONNECTOR
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY
1	DSCC80706T5	OMNI, CORP COLLINEAR, 6DDBD, 746-87
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5DFD	D-CLASS 7-16 DIN FEMALE FOR AVA5-50
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DSTSXDFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH P
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
1	DSCC80706T5	OMNI, CORP COLLINEAR, 6DDBD, 746-87
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5DFD	D-CLASS 7-16 DIN FEMALE FOR AVA5-50
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE

QTY	NOMENCLATURE	DESCRIPTION
1	DSTSXDFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH P
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
1	DSDCPSX2003BS	48V, 200A DC POWER SYS, SEISMIC, 84
4	DSDCR50T	LA MARCHE DCPS 50A RECTIFIER
3	DSWL4GM200FT	180 AH, 48V, VLRA FRONT CONNECTED
8	DSSP4KCDPD70B1	BREAKER, 70 AMP
6	DSP4ALMLB1D5B	BREAKER 5 AMP FOR DCPS POWER SYSTEM
1	DSLMHFX450STT	48V, 450A DC POWER SYSTEM RACKED IN
5	DSLMHF7548VZE1T	48V, 75A LMHF RECTIFIER (T)
1	DSIX5USN23KIT3	5U, 23IN 48V TO 120V, 6KVA INVERTER
1	DSWLBG896ST	BATTERY, 896AH 48VDC STRING CONSIST
8	DSSP4KCDPD70B1	BREAKER, 70 AMP
6	DSP4ALMLB1D5B	BREAKER 5 AMP FOR DCPS POWER SYSTEM
1	DSMW3HE11473BE	MOTOROLA 7705 SAR-A BUNDLE - REDUND
1	DSMW3HE11473BE	MOTOROLA 7705 SAR-A BUNDLE - REDUND
1	DSMW3HE11473BE	MOTOROLA 7705 SAR-A BUNDLE - REDUND
1	T8586	FORTINET FIREWALL APPLIANCE
1	DSMW3HE11473BF	MOTOROLA 7705 SAR-A BUNDLE - SIMPLE
1	DQMWSTROSAPDRF	19.US.875981.03 INCL ITEMS 1.01-1.03, 5.01, 6.01 9500MPR, OPT & ADJ
1	DQMWSTROSAPDAD	19.US.875981.03 INCLUDES ITEMS 1.04 ANTENNA SYS

3.2 R5 SKYFARM EQUIPMENT LIST

QTY	NOMENCLATURE	DESCRIPTION
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00855AA	ADD: 700/800 MHZ
1	X305AC	ADD: QTY (5) GTR 8000 BASE RADIOS
5	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO
1	CA03111AA	ADD: CEC COMPLIANCE
5	CA01842AA	ADD: P25 TDMA SOFTWARE
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
5	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILIT
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER

QTY	NOMENCLATURE	DESCRIPTION
1	CA00882AA	ADD: 700 MHZ TX FILTER W/PMU
2	CA01536AA	ADD: GPB 8000 REFERENCE DISTRIBUTIO
2	CA01537AA	ADD: REFERENCE DISTRIBUTION SOFTWAR
2	CA00027AB	ADD: CABINET DOOR, SOLID
2	CA00027AC	ADD: FRONT/BACK DOOR, LOUVERED
1	CA00293AA	ADD: 43RU SCHROFF CABINET
1	T8343	GSERIES SOFTWARE LICENSING
5	UA00400AA	ADD: GSERIES BR-P25 TRNK MS IP
2	UA00409AA	ADD: GSERIES RDM
2	PMUG1017A	GNSS REMOTE RECEIVER ASSY
2	DSWM4	HEAVY DUTY W STYLE WALL MOUNT WITH
2	DSP04268	ALUMINUM 6061-T6. PIPE 1 INCH SCHED
2	DS30C87465CO1	125FT OUTDOOR UV PROTECTED CABLE 6
2	T8547	SITE AND HUB ROUTER AND FIREWALL -
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
4	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
1	DSDST20A	DISTRIBUTION PANEL (UL) W/ REAR COV
5	DSPBA5	PBA PLUG-IN BREAKER 5 AMP
3	DSPBA20	PBA PLUG-IN BREAKER 20 AMP
1	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A P
1	DS428E83I01C48	CONTROL MONITORING UNIT, NON-DIVERS
1	DS428E83I01T	TTA, NON-DIVERSITY, 796-824 MHZ, RE
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO RE
3	V592	AAD TERM BLCK & CONN WI
1	VA00905	ADD:24/48 VDC PS TO SM
1	DSCC80708T2	OMNI, CORP COLLINEAR, 8DBD, 746-870
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE

QTY	NOMENCLATURE	DESCRIPTION
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2
5	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
1	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
7	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY
1	DDN9769	F1PNM-HC 1/4" TYPE N MALE CONNECTOR
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY
1	DSBPA74966013	PANEL ANTENNA, 11DBD, 746-960MHZ, 6
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5DFD	D-CLASS 7-16 DIN FEMALE FOR AVA5-50
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DSTSXDFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH P
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
1	DSDCPSX2003BS	48V, 200A DC POWER SYS, SEISMIC, 84
4	DSDCR50T	LA MARCHE DCPS 50A RECTIFIER
3	DSWL4GM200FT	180 AH, 48V, VLRA FRONT CONNECTED
8	DSSP4KCDPD70B1	BREAKER, 70 AMP
6	DSP4ALMLB1D5B	BREAKER 5 AMP FOR DCPS POWER SYSTEM
1	DSMW3HE11473BE	MOTOROLA 7705 SAR-A BUNDLE - REDUND

3.3 SUBSCRIBER EQUIPMENT LIST

QTY	NOMENCLATURE	DESCRIPTION
275	H91TGD9PW5 N	APX 8000 ALL BAND PORTABLE MODEL 1.5
275	G996	ADD: PROGRAMMING OVER P25 (OTAP)
275	H38	ADD: SMARTZONE OPERATION
275	Q361	ADD: P25 9600 BAUD TRUNKING
275	Q58AU	ENH: 3 YEAR SERVICE FROM THE START LITE
275	Q629	ENH: AES ENCRYPTION
275	Q806	ADD: ASTRO DIGITAL CAI OPERATION
275	QA00580	ADD: TDMA OPERATION
275	QA05508	DEL: DELETE VHF BAND
275	QA09001	ADD: WIFI CAPABILITY
15	NNTN8844A	CHARGER, MULTI-UNIT, IMPRES 2, 6-DISP, NA/LA-PLUG, ACC USB CHGR
200	NNTN8860A	CHARGER, SINGLE-UNIT, IMPRES 2, 3A, 115VAC, US/NA
275	PMMN4069AL	MICROPHONE,IMPRES RSM, 3.5MM JACK, IP55
140	M37TSS9PW1 N	APX8500 ALL BAND MP MOBILE
140	B18	ADD: AUXILARY SPEAKER MOTORCYCLE
140	G361	ENH: P25 TRUNKING SOFTWARE APX
140	G442	ADD: O5 CONTROL HEAD
140	G51	ENH: SMARTZONE OPERATION APX
140	G67	ADD: REMOTE MOUNT MP
140	G78	ADD: 3Y ESSENTIAL SERVICE
140	G806	ENH: ASTRO DIGITAL CAI OP APX
140	G843	ADD: AES ENCRYPTION APX
140	G996	ENH: OVER THE AIR PROVISIONING
140	GA00580	ADD: TDMA OPERATION APX
140	GA01513	ADD: ALL BAND MOBILE ANTENNA (7/8/V/U)
140	GA01517	DEL: NO J600 ADAPTER CABLE NEEDED
140	GA05508	DEL: DELETE VHF BAND
140	GA09001	ADD: WI-FI CAPABILITY
140	W22	ADD: STD PALM MICROPHONE APEX
140	GA00250	ADD: WIFI/GNSS FLEXIBLE CABLE LMR195
140	G444	ADD: APX CONTROL HEAD SOFTWARE
1	T8476B	KVL 5000
1	CA00182AW	ADD: AES ENCRYPTION SOFTWARE
1	CA00243AJ	ADD: ADP PRIVACY
1	CA03358AA	ADD: ASTRO 25 MODE

QTY	NOMENCLATURE	DESCRIPTION
1	CA03467AA	ADD: NORTH AMERICA MICRO USB CHARGER 100/240V
1	DQUUSBOTG	STARTECH.COM 5IN MICRO USB TO USB OTG HOST ADAPTER M/F - USB ADAPTER

SECTION 4

STATEMENT OF WORK

This Statement of Work (SOW) describes the deliverables to be furnished to the City of Santa Rosa. The tasks described herein will be performed by Motorola, its subcontractors, and Santa Rosa to implement the solution described in the System Description. It describes the actual work involved in installation, identifies the installation standards to be followed, and clarifies the responsibilities for both Motorola and Santa Rosa during the project implementation. Specifically, this SOW provides:

- A summary of the phases and tasks to be completed within the project lifecycle.
- A list of the deliverables associated with the project.
- A description of the responsibilities for both Motorola and Santa Rosa
- The qualifications and assumptions taken into consideration during the development of this project.

This SOW provides the most current understanding of the work required by both parties to ensure a successful project implementation. In particular, Motorola has made assumptions of the sites to be used for the new system. Should any of the sites change, a revision to the SOW and associated pricing will be required. It is understood that this SOW is a working document, and that it will be revised as needed to incorporate any changes associated with contract negotiations, Contract Design Review (CDR), and any other change orders that may occur during the execution of the project.

Motorola is proposing a 3-site TDMA Simulcast Cell to be integrated into the existing Santa Rosa Core. Motorola has included the proposed Phase 3 subscriber units for PD, along with subscriber training and programming.

4.1 ASSUMPTIONS

Motorola has based the system design on information provided by Santa Rosa and an analysis of the system requirements. All assumptions have been listed below for review. Should Motorola's assumptions be deemed incorrect or not agreeable to Santa Rosa, a revised proposal with the necessary changes and adjusted costs may be required. Changes to the equipment or scope of the project after contract may require a change order

- Santa Rosa will supply all primary power. Motorola assumes that the existing electrical panels at each site have load and breaker capacity for the new equipment being provided. New DC Power systems will connect to existing site power. Any additional circuits are the responsibility of Santa Rosa.
- All work is to be performed during normal work hours, Monday through Friday 8:00 a.m. to 5:00 p.m.
- Sufficient space exists for installation of new equipment racks at each site.
- Santa Rosa is responsible for frequency licensing for each of the sites.
- Motorola has included a Coverage Acceptance Test for the new simulcast cell, which will be an objective, outbound only test.
- Motorola makes no guarantee of coverage provided by the simulcast cell. The Coverage Acceptance Test will provide a baseline of coverage proposed.

- All existing resources have been installed in a manner that meets current R56 standards.
- Motorola assumes all towers will support the proposed antenna equipment. Motorola has not included costs to upgrade towers.
- Tower modifications or replacements are not included in this proposal. Any structural modifications that are required based upon the structural analysis are the responsibility of Santa Rosa.
- Santa Rosa will provide Type 1 and Type 2 surge suppression for the equipment rooms per R56 requirements.
- Santa Rosa is responsible for installation of mobile subscriber units.
- The schedule provided as part of this project is preliminary in nature, and subject to change. It is meant to be representative of the schedule required to implement the scope of work of this proposal. The final Project Schedule will be customized to Santa Rosa and finalized during Contract Design Review.
- 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 Santa Rosa system experience interference, Motorola can be contracted to investigate the source and recommend solutions to mitigate the issue.
- Any inaccuracies in FCC data may drive additional services costs during field implementation. In addition, any other troubleshooting tasks related to frequency interference issues that are not directly attributed to the system are subject to additional services and require a change order to capture the extra cost to the project.
- All existing sites or equipment locations will have sufficient space available for the system described as required/specified by Motorola's R56 Guidelines for Communications sites
- Training is included for subscribers only (Phase 3). Training provided will be train-the-trainer.
- Proposed microwave links are assumed to be Line of Site by nature. Microwave paths will require confirmation by a Path/Site Survey. Should obstructions to the links be found during the Site Survey, a change order could be required for additional equipment.
- FCC Coordination for the microwave link will determine final frequency and dish size. If this varies from the proposed equipment, a change order could be required.
- The microwave path surveys will be conducted on all paths prior to the implementation of the microwave network.
- Proposed design is contingent on performing a path survey to confirm the provided path profiles.
- Sites will have suitable temperature control and lighting where work is to be performed or materials stored.
- Wall penetrations are existing for coax and/or waveguide.
- Motorola assumes all sites are free from interference from existing installed equipment, and the frequencies will not cause intermodulation or desensitization problems. If this is not the case, a change order may be required.
- Motorola anticipates that the HVAC system at the R5 site needs upgrades. No upgrades are included in this proposal, and are the responsibility of the customer should this site option be executed.

- 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.

- Site work will be performed in a progressive and contiguous manner without work stoppage due to non-Motorola related tasks. All additional mobilizations, beyond the initial one, that are not directly caused by Motorola, its contractors, or Motorola delivered equipment, will require a Change Order generated by the Motorola Program Manager and a Customer purchase order prior to the additional mobilizations.

Motorola Solutions will install and configure the proposed equipment. The following table describes the tasks involved with installation and configuration.

Tasks	Motorola Solutions	Customer
PROJECT INITIATION		
Contract Finalization and Team Creation		
Execute contract and distribute contract documents.	X	X
Assign a Project Manager as a single point of contact.	X	X
Assign resources.	X	X
Schedule project kickoff meeting.	X	X
Deliverable: Signed contract, defined project team, and scheduled project kickoff meeting.		
Project Administration		
Ensure that project team members attend all meetings relevant to their role on the project.	X	X
Set up the project in the Motorola Solutions information system.	X	
Record and distribute project status meeting minutes.	X	
Maintain responsibility for third-party services contracted by Motorola Solutions.	X	
Complete assigned project tasks according to the project schedule.	X	X
Submit project milestone completion documents.	X	
Upon completion of tasks, approve project milestone completion documents.		X
Conduct all project work Monday thru Friday, 7:30 a.m. to 5:00 p.m.).	X	
Deliverable: Completed and approved project milestones throughout the project.		
Project Kickoff		
Introduce team, review roles, and decision authority.	X	X
Present project scope and objectives.	X	
Review SOW responsibilities and project schedule.	X	X
Schedule Design Review.	X	X

Tasks	Motorola Solutions	Customer
Deliverable: Completed project kickoff and scheduled Design Review.		
Design Review		
Review the Customer's operational requirements.	X	X
Present the system design and operational requirements for the solution.	X	
Present installation plan.	X	
Present preliminary cutover plan and methods to document final cutover process.	X	
Present configuration and details of sites required by system design.	X	
Validate that Customer sites can accommodate proposed equipment.	X	X
Provide approvals required to add equipment to proposed existing sites.		X
Review safety, security, and site access procedures.	X	
Present equipment layout plans and system design drawings.	X	
Provide backhaul performance specifications and demarcation points.	X	
Provide heat load and power requirements for new equipment.	X	
Provide information on existing system interfaces.		X
Provide frequency and radio information for each site.		X
Assume liability and responsibility for proving all information necessary for complete installation.		X
Assume responsibility for issues outside of Motorola Solutions' control.		X
Complete the required forms required for frequency coordination and licensing.		X
Ensure that frequency availability and licensing meet project requirements, and pay licensing and frequency coordination fees.		X
Review and update design documents, including System Description, Statement of Work, Project Schedule, and Acceptance Test Plan, based on Design Review agreements.	X	
Provide minimum acceptable performance specifications for customer provided hardware, software, LAN, WAN and internet connectivity.	X	
Execute Change Order in accordance with all material changes to the Contract resulting from the Design Review.	X	
Deliverable: Finalized design documentation based upon "frozen" design, along with any relevant Change Order documentation.		
SITE PREPARATION AND DEVELOPMENT		

Tasks	Motorola Solutions	Customer
Site Access		
Provide site owners/managers with written notice to provide entry to sites identified in the project design documentation.		X
Maintain access roads in order to provide clear and stable entry to sites for heavy-duty construction vehicles, cement trucks and cranes. Ensure that sufficient space is available at the site for these vehicles to maneuver under their own power, without assistance from other equipment.		X
Obtain site licensing and permitting, including site lease/ownership, zoning, permits, regulatory approvals, easements, power, and telco connections.		X
Deliverable: Access, permitting, and licensing necessary to install system equipment at each site.		
Site Planning		
Provide necessary buildings, equipment shelters, and towers for installation of system equipment.		X
Provide the R56 requirements for space, power, grounding, HVAC, and connectivity requirements at each site.	X	
Provide adequate electrical power in proper phase and voltage at sites.		X
Provide as-built structural and foundation drawings of the structures and site locations, along with geotechnical reports, in order to facilitate a structural analysis.		X
Perform structural analysis of towers, rooftops, or other structures to confirm that they are capable of supporting proposed and future antenna loads.		X
Confirm that there is adequate utility service to support the new equipment and ancillary equipment.		X
Modify towers or other structures, or relocate sites in the system, to ensure that they are capable of supporting proposed and future antenna loads.		X
Conduct site walks to collect pertinent information (e.g. location of telco, power, structures, etc.)	X	
Ensure that each site meets the R56 standards for space, grounding, power, HVAC, and connectivity requirements.		X
Conduct one three-point ground resistance test of each site.	X	
Pay for application fees, taxes, and recurring payments for lease/ownership of property.		X
Ensure that required rack space is available for installation of the new equipment.		
Deliverable: Information and permitting requirements completed at each site.		
General Facility Improvements		
Provide adequate HVAC, grounding, lighting, cable routing, and surge protection based upon Motorola Solutions' Standards and Guidelines for Communication Sites (R56)		X

Tasks	Motorola Solutions	Customer
Ensure the resolution of environmental and hazardous material issues at each site including, but not limited to, asbestos, structural integrity (tower, rooftop, water tank, etc.), and other building risks.		X
Ensure that electrical service will accommodate installation of system equipment, including isolation transformers, circuit breakers, surge protectors, and cabling.		X
Provide obstruction-free area for the cable run between the demarcation point and system equipment.		X
Provide structure penetrations (wall or roof) for transmission equipment (e.g. antennas, microwave radios, etc.).		X
Supply interior building cable trays, raceways, conduits, and wire supports.		X
Pay for usage costs of power and generator fueling, both during the construction and installation effort, and on an ongoing basis.		X
Transport removed site equipment to a location designated by Customer and within Customer's jurisdiction.		X
Deliverable: Sites meet physical requirements for equipment installation.		
SYSTEM INSTALLATION		
Equipment Order and Manufacturing		
Create equipment order and reconcile to contract.	X	
Manufacture Motorola Solutions-provided equipment necessary for system based on equipment order.	X	
Procure non-Motorola Solutions equipment necessary for the system.	X	
Deliverable: Equipment procured and ready for shipment.		
System Staging		
Ship all equipment needed for staging to Motorola Solutions' Customer Center for Solutions Integration (CCSi).	X	
Provide information on existing system interfaces, room layouts, or other information necessary for the assembly to meet field conditions.		X
Set up and rack the solution equipment on a site-by-site basis, as it will be configured in the field at each of the sites.	X	
Cut and label the cables with to/from information to specify interconnection for field installation and future servicing needs.	X	
Complete the cabling/connecting of the subsystems to each other ("connectorization" of the subsystems).	X	
Assemble required subsystems to assure system functionality.	X	

Tasks	Motorola Solutions	Customer
Power up, load application parameters, program, and test all staged equipment.	X	
Confirm system configuration and software compatibility with the existing system.	X	
Inventory the equipment with serial numbers and installation references.	X	
Perform factory functional acceptance tests of system features	X	
Conduct site and system level testing.	X	
Perform system burn-in 24 hours a day during staging to isolate and capture any defects.	X	
Deliverable: System staged and ready for shipment.		
Equipment Shipment and Storage		
Provide secure location for solution equipment.		X
Pack and ship solution equipment to the identified, or site locations.	X	
Receive solution equipment.		X
Inventory solution equipment.	X	
Deliverable: Solution equipment received and ready for installation		
General Installation		
Deliver solution equipment to installation location.	X	
Coordinate receipt of and inventory solution equipment with designated contact.	X	
Install all proposed fixed equipment as outlined in the System Description based upon the agreed-upon floor plans, connecting audio, control, and radio transmission cables to connect equipment to the power panels or receptacles, and audio/control line connection points. Installation performed in accordance with R56 standards and state/local codes.	X	
Provide system interconnections that are not specifically outlined in the system design, including dedicated phone circuits, microwave links, or other types of connectivity.		X
Install and terminate all network cables between site routers and network demarcation points, including microwave, leased lines, and Ethernet.	X	
Ensure that Type 1 and Type 2 AC suppression is installed to protect installed equipment.		X
Connect installed equipment to the provided ground system.	X	
Label equipment, racks, and cables.	X	
Perform preliminary audit of installed equipment to ensure compliance with requirements and R56 standards.	X	

Tasks	Motorola Solutions	Customer
Note any required changes to the installation for inclusion in the “as-built” system documentation.	X	
Remove, transport, and dispose of old equipment.		X
Deliverable: Equipment installed.		
Antenna and Transmission Line Installation		
Install antennas, including supplying and installing new side arm mounts	X	
Coordinate tower crew with Motorola ST to conduct antenna and line sweeps		X
Install towertop amplifiers.	X	
Install transmission lines required for system.	X	
Provide structure penetrations for transmission equipment (e.g. antennas & microwave line.).		X
Install microwave waveguide and lines, as applicable.	X	
Perform sweep tests on transmission lines.	X	
Provide and install attachment hardware for supporting transmission lines on antenna support structure.	X	
Supply and install ground buss bar at the bottom of each antenna support structure.	X	
Deliverable: Antenna and Transmission Line installed.		
ASTRO 25 Remote Site Installation and Configuration		
Install fixed equipment contained in the equipment list and system description.	X	
Provide backhaul connectivity and associated equipment for all sites to meet latency, jitter and capacity requirements.	X	
Configure ASTRO 25 system to support the new RF sites.	X	
Verify site link performance, prior to the interconnection of the solution equipment to the link equipment.	X	
Provide list of subscriber IDs for loading into the Zone Controller.		X
Load subscriber IDs in the Zone Controller.	X	
Provide required radio ID and alias information to enable alias database setup for interface to consoles.		X
Integrate the RF sites into the system to ensure proper operation.	X	
Deliverable: ASTRO 25 remote site equipment installation completed.		
Develop Console and User Radio Fleetmap		
Review and determine modifications to existing fleetmap.		X

Tasks	Motorola Solutions	Customer
Review fleetmapping requirements with Customer, including user ID and talkgroup structures.	X	
Designate user group representatives for the user groups, to make timely decisions on their behalf.		X
Provide advisory input during fleetmap development.	X	
Develop templates.		X
Participate in a meeting to finalize any changes among user groups.	X	X
Review and approve fleetmap templates.		X
Program the approved templates into a radio-programming template tool.	X	
Program sample radios with approved templates and deliver for evaluation by Customer.	X	
Program approved templates into console.		X
Evaluate sample radios and provide feedback.		X
Approve templates.		X
Deliverable: Fleetmap plan completed and approved by Customer.		
Mobile Radio Installation and Programming		
Develop and approve prototypes for each type of mobile installation.		X
Test features and functionalities of the mobile templates.	X	
Program the mobile radios identified in the equipment list in accordance with the programming templates, client software, and fleetmap. A “one-time only” programming is included in the project pricing.	X	
Provide adequate number of vehicles for installations according to the project/installation schedule.		X
Install all the mobiles in the vehicles, as identified in the equipment list, and according to the installation schedule.		X
Permanently mount the antennas on each vehicle according to the approved prototype, appropriate for the vehicle type. Install the antennas close to the same location as the existing antennas, where practical, in vehicles that already have antennas installed. If applicable, plug the old antenna hole with an appropriate rubber plug.		X
Install the antennas on the roof, where practical, on the new antenna installations. If mobile antenna cannot be installed on the roof, determine an alternative location.		X
Remove the existing mobiles from the vehicle at the time of installation of the new radios		X
Deliverable: Mobile radios installed and accepted		
Portable Radio Programming and Distribution		

Tasks	Motorola Solutions	Customer
Pass all features and functionalities of the portable radio template.	X	
Program test portable radios with each template version and activate them on the system.	X	
Program the portable radios identified in the equipment list in accordance with the programming templates, client software, and fleetmap. A “one-time only” programming is included in the project pricing.	X	
Deliver portable radios to authorized Customer personnel and inventory upon receipt.	X	
Acknowledge receipt of portable radios and accessories and verify proper operation of a sampling of delivered portable radios.		X
Distribute portable radios to end users.	X	
Deliverable: Portable radios accepted and distributed.		
SYSTEM OPTIMIZATION AND TESTING		
R56 Site Audit		
Perform R56 site-installation quality-audits, verifying proper physical installation and operational configurations.	X	
Create site evaluation report to verify site meets or exceeds requirements, as defined in Motorola Solutions’ R56 Standards and Guidelines for Communication Sites.	X	
Deliverable: R56 Standards and Guidelines for Communication Sites audits completed successfully.		
Solution Optimization		
Verify that all equipment is operating properly and that all electrical and signal levels are set accurately.	X	
Verify that all audio and data levels are at factory settings.	X	
Verify communication interfaces between devices for proper operation.	X	
Ensure that functionality meets manufacturers’ specifications and complies with the final configuration established during design review or system staging.	X	
Deliverable: Completion of System Optimization.		
Functional Acceptance Testing		
Verify the operational functionality and features of the solution supplied by Motorola Solutions, as contracted.	X	
Witness the functional testing.		X
Document all issues that arise during the acceptance tests.	X	
If any major task for the system as contractually described fails during the Customer acceptance testing or beneficial use, repeat that particular task after Motorola Solutions determines that corrective action has been taken.	X	

Tasks	Motorola Solutions	Customer
Resolve any minor task failures before Final System Acceptance.	X	
Document the results of the acceptance tests and present for review.	X	
Review and approve final acceptance test results.		X
Deliverable: Completion of functional testing and approval by Customer.		
Coverage Testing		
Determine the required number of test vehicles for simultaneous testing of multiple service areas.	X	X
Perform coverage testing according to the Coverage Acceptance Test Plan (CATP), Submit test reports within the agreed period.	X	
For any area that fails, take corrective action.	X	
Retest any areas for which corrective action has been taken.	X	
Document all issues that arise during the coverage testing.	X	
Submit final test reports, according to the agreed period.	X	
Provide the required number of test vehicles, drivers, and resources to witness the coverage testing.		X
Review and approve test results.		X
Deliverable: Completion of coverage testing and approval by Customer.		
PROJECT TRANSITION		
Training		
Finalize schedule for training coursework.	X	
Provide training facility.		X
Ensure that the training participants fulfill course prerequisites.		X
Conduct the training classes outlined in the Training Plan.	X	
Attend proposed training classes.		X
Deliverable: Training coursework completed.		
Cutover		
Finalize Cutover Plan.	X	X
Calibrate and tune existing mobile and portable radios to ensure good working order.		X
Provide Motorola Solutions with user radio information for input into the system database and activation, as required.		X

Tasks	Motorola Solutions	Customer
Provide programming of user radios and related services (i.e. template building, re-tuning, testing and installations), as needed, during cutover period.		X
Conduct cutover meeting with relevant personnel to address both how to mitigate technical and communication problem impacts to the users during cutover and during the general operation of the system.	X	
Notify the personnel affected by the cutover of the date and time planned for cutover.		X
Provide ongoing communication with users regarding the project and schedule.	X	X
Cut over users and ensure that user radios are operating on system.		X
Resolve punchlist items, documented during the Acceptance Testing phase, in order to meet all the criteria for final system acceptance.	X	
Assist Motorola Solutions with resolution of identified punchlist items by providing support, such as access to the sites, equipment and system, and approval of the resolved punchlist items.		X
Deliverable: Migration to new system completed, and punchlist items resolved.		
Transition to Warranty		
Review the items necessary for transitioning the project to warranty support and service.	X	
Motorola Solutions to provide services during year 1 warranty which align with the proposed services.	X	
Provide a Customer Support Plan detailing the warranty support associated with the contract equipment.	X	
Participate in the Transition Service/Project Transition Certificate (PTC) process.		X
Deliverable: Service information delivered and approved by Customer		
Finalize Documentation and System Acceptance		
Provide manufacturer's installation material, part list and other related material to Customer upon project completion.	X	
Provide an electronic as-built system manual on CD or other Customer preferred electronic media. The documentation will include the following: - Site Block Diagrams. - Site Floor Plans. - Site Equipment Rack Configurations. - Antenna Network Drawings for RF Sites (where applicable). - ATP Test Checklists. - Functional Acceptance Test Plan Test Sheets and Results. - Equipment Inventory List. - Console Programming Template (where applicable). - Maintenance Manuals (where applicable).	X	

Tasks	Motorola Solutions	Customer
▪ Technical Service Manuals (where applicable). Drawings will be delivered in Adobe PDF format.		
Receive and approve documentation.		X
Execute Final Project Acceptance.	X	X
Deliverable: All required documents are provided and approved. Final Project Acceptance.		

SECTION 5

PROJECT SCHEDULE

Project Schedule is included on the pages that follow.

SECTION 6

COVERAGE ACCEPTANCE TEST PLAN

6.1 OVERVIEW

This Coverage Acceptance Test Plan (CATP) is designed to verify that the voice radio system implemented by Motorola Solutions for Santa Rosa meets or exceeds the required reliability as shown on Motorola Solutions' maps. The CATP defines the coverage testing method and procedure, the coverage acceptance criterion, the test documentation, and the responsibilities of both Motorola Solutions and Santa Rosa.

Coverage Acceptance Testing is based upon a coverage prediction that accurately represents the implemented infrastructure and parameters that are consistent with the contract agreements. To characterize system performance accurately, the actual user equipment radio series deployed for Santa Rosa will be used to conduct the coverage test.

Subsequent sections define the coverage acceptance test configuration(s) and test criteria.

6.2 CATP DEFINITIONS

Several definitions are needed to accurately describe the coverage acceptance test method and criteria. Where cited, these terms or methods are defined in TIA TSB-88.1-D[1] or TSB-88.3-D[2].

6.3 DEFINED TEST AREA

The defined test area is the geographical area in which communications will be provided that meet or exceed the specified Channel Performance Criterion (CPC) at the specified reliability for the specified equipment configuration(s). Coverage Acceptance Test Summary, along with names of the corresponding Motorola Solutions map(s) which show the defined test areas.

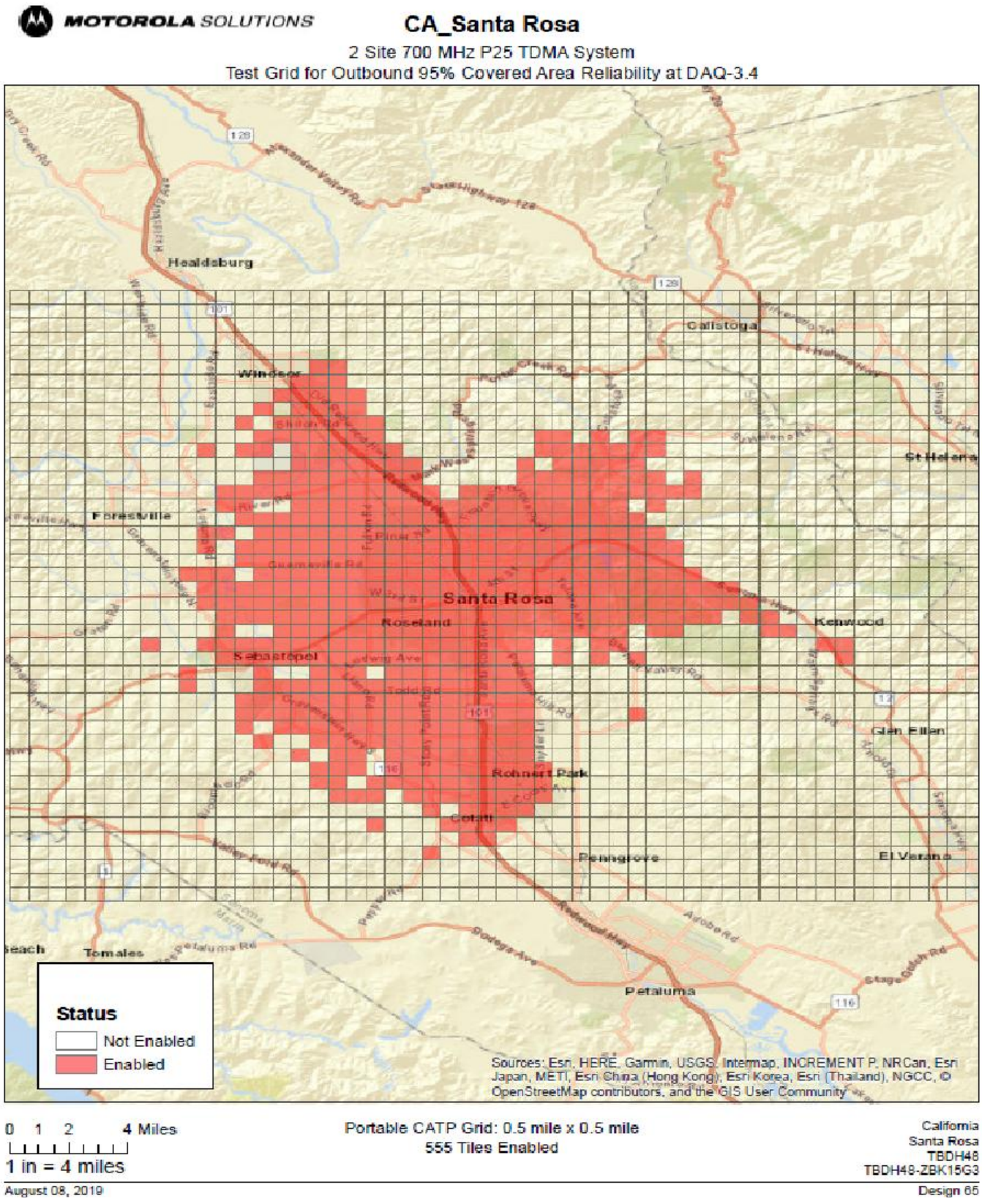


Figure 6-1: City of Santa Rosa Portable Outbound Grid map

6.3.1 Channel Performance Criterion (CPC)

The CPC is the specified minimum design performance level in a faded channel. [TSB-88.1-D,

§5.2] For this system, the CPC is the Delivered Audio Quality (DAQ) as stated Table 6-1. The DAQ definitions are provided Table 6-1. [TSB-88.1-D, §5.4.2, Table 3].

Table 6-1: DAQ Definitions

DAQ	Subjective Performance Description
1	Unusable, speech present but unreadable.
2	Understandable with considerable effort. Frequent repetition due to noise/distortion.
3	Speech understandable with slight effort. Occasional repetition required due to noise/distortion.
3.4	Speech understandable with repetition only rarely required. Some noise/distortion.
4	Speech easily understood. Occasional noise/distortion.
4.5	Speech easily understood. Infrequent noise/distortion.
5	Speech easily understood.

The CPC pass/fail criterion is the faded performance threshold, plus any adjustments for antenna performance, external noise, and in-building or in-vehicle losses. [TSB-88.1-D, §5.4.2, Figure 5] The faded performance threshold for the specified CPC is determined using the receiver's static reference sensitivity adjusted by the projected CPC parameters for the applicable Modulation Type and DAQ as listed in the current version of TSB-88.1, Annex A, Table A-1. For coverage testing of digital voice radio systems, the faded performance threshold is the applicable Bit Error Rate (BER) from the projected CPC parameters.

6.3.2 Reliability

The Covered Area reliability is the percentage of locations within the defined test area that are predicted to meet or exceed the specified CPC. The Motorola Solutions map(s) indicate the Covered Area(s) within which this system is predicted to provide at least the reliability of meeting or exceeding the CPC as stated in Table 12 Coverage Acceptance Test Summary.

For the defined test area(s) guaranteed for Covered Area reliability, only the painted covered area on Motorola Solutions' maps will be tested for coverage acceptance. No acceptance testing will be performed in locations predicted on Motorola Solutions' maps to be below the required Covered Area reliability.

After all accessible tiles in the defined test area have been tested, the Covered Area reliability will be determined by dividing the number of tiles tested that meet or exceed the CPC pass/fail criterion by the total number of tiles tested. [TSB-88.3-D, §5.1, equation].

6.3.3 Direction(s) of Test

The direction(s) of test in Table 6-2 Coverage Acceptance Test Summary defines the direction(s) which will be tested for coverage acceptance.

6.3.4 Equipment Configurations

This section defines the equipment configurations and infrastructure design parameters upon which the coverage guarantee and the coverage acceptance test are based. The equipment configurations are defined in Table 12 Coverage Acceptance Test Summary, and include user equipment, outdoor/in-building definition, defined test area, number of test tiles, reliability, CPC, CPC pass/fail, and direction(s) of test. The infrastructure design parameters are defined in Table 1-2 Infrastructure Design Parameters, and include site names, site locations, and antenna system parameters. If the implemented system equipment configuration and/or infrastructure design parameters vary from these configurations and/or parameters, a revised coverage map will be used to define the test configuration and potential areas from which test tiles will be included in the revised coverage acceptance test.

Coverage testing will be conducted with equipment installed per the configurations in Table 12 Coverage Acceptance Test Summary, and with the mobile antennas in unobstructed locations that are not adjacent to other large objects or metallic items which would distort the antenna patterns.

Table 6-2: Santa Rosa Coverage Acceptance Test Summary

User Equipment	Outdoor / In-Building	Defined Test Area & Map Name	Number of Test Tiles	Reliability	CPC	CPC Pass/Fail	Direction(s) of Test
APX 8000 Portable with tri-band antenna in swivel case with remote speaker microphone for transmit and receive	Outdoor	Covered Area Reliabilty (On-Roads Only)	555 (0. 5 mi tiles)	95%	DAQ -3.4	2.4% BER Outbound with Subjective DAQ Re-Test Allowed	Out bound Only

Table 6-3: Santa Rosa Infrastructure Design Parameters

Site Name	Latitude	Longitude	Transmit Antenna System		Receive Antenna System		
			Mount Height	Antenna Model	Mount Height	Antenna Model	External Noise assumed (relative to KToB)
Trunking Simulcast Subsystem							
Barham	38° 30' 32" N	122° 39' 48" W	165 ft	BPA7496-60-13_16	180 ft	CC807-08-T2	
Bethlehem	38° 26' 13.82" N	122° 42' 27.77" W	170 ft	CC807-06-T5	170 ft	CC807-08-T2	0

6.3.5 Outdoor Only Coverage

Motorola Solutions' portable coverage prediction is for outdoor locations only. Portable coverage inside buildings and vehicles is not a design requirement of this system and is, therefore, not guaranteed.

6.3.6 CPC Pass / Fail Criterion for a Test Tile

For each equipment configuration, the CPC pass/fail criterion for a test tile is stated in Table 6-2 Coverage Acceptance Test Summary. Each equipment configuration will have only one CPC pass/fail criterion for a test tile.

To measure BER, the coverage test will be performed with the appropriate attenuator value installed in the test radio antenna line, to establish an equivalent signal level performance for each equipment configuration.

The TSB-88 definition of DAQ 3.4 allows for a minimal number of re-tries/repetition (the definitions are provided in Section 1.2.2). Any tile that fails the objective BER test described above will be re-tested using a subjective DAQ test. All said tiles will be re-tested using the subjective DAQ test outlined in this CATP. However, the number of successful retries may constitute no more than 10% of the total test tiles.

Coverage for the portable outdoor equipment configurations will be verified for acceptance by attenuation of the test radio for BER tests. The attenuation will be the difference between the test radio's antenna system and the additional loss used in Motorola Solutions' coverage prediction to account for portable antenna performance. The attenuator values are provided in Table 6-5.

This provides a method of verifying that the radio system provides the required BER for the specified CPC for each of the defined equipment configurations.

Below are the attenuator values required to evaluate each equipment configuration. The methodology to determine the attenuator value is demonstrated in TSB-88.1-D §5.4.2, Figure 5. The attenuator value includes the proper values for the equipment configuration requirement plus adjustments for the test equipment setup. Should the test equipment setup losses (e.g. cable length) vary, an adjustment to the attenuator value may be required to represent the required equipment configuration accurately.

User Equipment Configuration and Outdoor / In-Building	Attenuator Value
Portable Outdoors	8.1dB

6.3.7 Required Number of Test Tiles in the Defined Test Area

The method used to test coverage is a statistical sampling of the defined test area to verify that the CPC is met or exceeded at the required reliability for each of the defined equipment configurations. It is impossible to verify every point within a defined test area, because there are infinite points; therefore, coverage reliability will be verified by sampling a statistically significant number of randomly selected locations, quasi-uniformly distributed throughout the defined test area. There is one test sample per test tile, where a sample consists of multiple sub-samples.

Coverage acceptance testing will be performed in the defined test area as indicated on Motorola Solutions-provided maps. To verify that the reliability requirement is met, the defined test area indicated on Motorola Solutions' maps will be divided into uniformly sized test tiles, with at least the number of test tiles indicated in Table 6-2 Coverage Acceptance Test Summary. The number of test tiles indicated in Table 6-2 is at least the minimum required by the Estimate of Proportions formula as stated in section 1.2.1 (Defined Test Area) of this document.

Per TSB-88.3-D, the stated minimum outdoor tile size is 100 by 100 wavelengths; however, the minimum *practical* test tile size is typically about 400 by 400 meters (about 0.25 by 0.25 miles). The minimum practical tile size for any system is determined by the distance traveled at the speed of the test vehicle while sampling, GPS error margin, and availability of road access within very small test tiles. A related consideration is the time, resources, and cost involved in testing very large numbers of very small tiles. For a given defined test area, all test tiles must be of equal size. The maximum test tile size is 2 by 2 km (1.24 by 1.24 miles) [TSB-88.3-D, §5.5.1]. In some wide-area systems, this constraint on maximum tile size may dictate a greater number of test tiles than the minimum number required by the Estimate of Proportions formula.

No acceptance testing will be performed in locations outside the defined test area as indicated on the Motorola Solutions-provided maps. Motorola Solutions and Santa Rosa may agree to perform "information only" tests in locations outside the defined test area; however, these "information only" test results will not be used for coverage acceptance. Any "information only" test locations must be defined before starting the test. If the added locations require significant additional time and resources to test, a change order will be required and Motorola Solutions may charge Santa Rosa on a time-and-materials basis.

6.3.8 Accessibility to Test Tiles

Prior to testing, Motorola Solutions and Santa Rosa will plan the route for the test vehicle(s) through the defined test area, to ensure that at least the minimum required number of tiles is tested.

While planning the route (if possible) or during the test, Motorola Solutions and Santa Rosa will identify any test tiles that are inaccessible for the coverage test (due to lack of roads, restricted land, etc.). Inaccessible tiles will be eliminated from the acceptance test calculation. [TSB-88.3- D, §5.5.4]

If elimination of inaccessible test tiles results in less than a statistically significant number of test tiles or substantially alters the defined test area, Motorola Solutions reserves the right to adjust the committed reliability based on the reduced number of accessible test tiles within the altered test area and the Estimate of Proportions formula. [TSB-88.3-D, §5.2.1, equation 2]

6.3.9 Random Selection of a Test Location in each Tile

This CATP provides an objective method of randomly selecting and tracking test locations using Motorola Solutions' Voyager coverage testing tool. The method [follows TIA TSB-88.3-D §5.0, "Performance Confirmation", and] has direct correlation with Motorola Solutions' coverage prediction methodology.

Using Voyager, the actual test location within each test tile will be randomly selected by the test vehicle crossing into the tile at an arbitrary point, with an arbitrary speed and direction. If the selected test location is in a shielded area such as a tunnel or underground parking garage, the data from that test location must be eliminated and a replacement test location must be used.

6.3.10 CPC Measurements in each Tile

For Outbound BER in each test tile, a series of sequential measurements (subsamples) will be made while the test vehicle is moving at a typical speed for the surrounding environment.

This test tile measurement, containing a number of subsamples, constitutes the test sample for this location. The test sample will establish the mean BER within the test tile.

The BER subsamples will typically be measured for at least 1 second. A mean of multiple BER subsamples is used rather than a single measurement to ensure that the measurement is not biased by taking a single sample that might be at a peak or null point on the radio wave.

6.3.11 Responsibilities and Preparation

This section identifies the responsibilities of Santa Rosa and Motorola Solutions regarding requirements for equipment, personnel, and time during the coverage test.

Santa Rosa will provide the following for the duration of the coverage test:

- At least [one] test vehicle(s) that is representative of the vehicles to be installed with radios, and will provide the driver(s).
- Exclusive use of the test channels required by Motorola Solutions during the test.
- Provide at least four user radios for the test.

Motorola will provide the following for the duration of the coverage test:

- At least one Motorola Voyager coverage testing tool.

Before starting the test, Santa Rosa and Motorola will agree upon the time frame for Motorola's submission of a report containing the coverage test results.

6.4 CATP PROCEDURES

A coverage acceptance test will be performed using Motorola Solutions' Voyager tool to randomly select test locations, and to manage BER data collection.

Voyager consists of the following:

- A voice test radio connected to an antenna installed in a representative location on the test vehicle. The test radio will monitor transmissions from the fixed network radio site(s).
- A Global Positioning System (GPS) receiver, which will provide the computer with the location and speed of the test vehicle.
- A laptop computer with Voyager software and a mapping database, which includes highways and local streets.

The procedure for the objective BER coverage test will be as follows:

- The Voyager tool will be installed in a test vehicle, which will be driven over a route planned to cover the accessible tiles within the defined test area.
- During the coverage test, the laptop computer screen will display the vehicle's location on a map of the defined test area overlaid with the grid of test tiles. Voyager will automatically initiate measurements when the GPS receiver indicates that a test tile has been entered. The computer will provide a visual indication that a measurement has been completed in a tile. Voyager will manage the coverage test data collection, and will store the outbound measurements for each tested tile for later analysis.

Any tile that fails the objective BER test will be re-tested using a subjective DAQ test. All said tiles will be re-tested using the subjective DAQ test outlined in this CATP. However, the number of successful retries may constitute no more than 10% of the total test tiles.

The procedure for the subjective DAQ re-test of failed BER tiles (if needed) will be as follows:

A subjective listening re-test will be performed on tiles that fail the objective BER test, to verify undefined DAQ performance of those tiles.

To perform a statistically valid subjective DAQ test, a large group of people is required to ensure high confidence in the results. However, obtaining a large group of people for a subjective listening test is usually impractical; therefore, several (at least 3) people in a car or van must be used for the test. Since a group this small cannot provide statistically significant results, it is very important that the personnel participating in the subjective test be familiar with the sound of radio conversations. Before subjectively testing, all personnel who will evaluate audio quality must be “calibrated” by listening to examples of audio that pass and fail the subjective DAQ test.

6.4.1 CATP Documentation and Coverage Acceptance

During the coverage acceptance test, Voyager generates computer files that include the raw test data. A copy of this data will be provided to Santa Rosa at the conclusion of the coverage test. Motorola Solutions will process this data to produce a map detailing the coverage test results, and to determine whether the coverage test was passed for each user equipment configuration.

The coverage acceptance criterion for a user equipment configuration will be that the voice radio system implemented by Motorola Solutions for Santa Rosa meets or exceeds the reliability stated in Table 6-2 Coverage Acceptance Test Summary for that user equipment configuration. The system coverage acceptance criterion will be the successful passing of each of the user equipment configurations defined in Table 6-2 Coverage Acceptance Test Summary.

Motorola Solutions reserves the right to review any test tiles that fail. If a coverage test, or a portion thereof, is suspected by Motorola Solutions to have failed due to external interference, those tiles suspected of being affected by an interferer may be re-tested. If the test tiles re-tested are confirmed to have failed due to interference or external noise, those test tiles will be excluded from all acceptance calculations and Motorola Solutions will work with Santa Rosa to identify potential solutions to the interference issues.

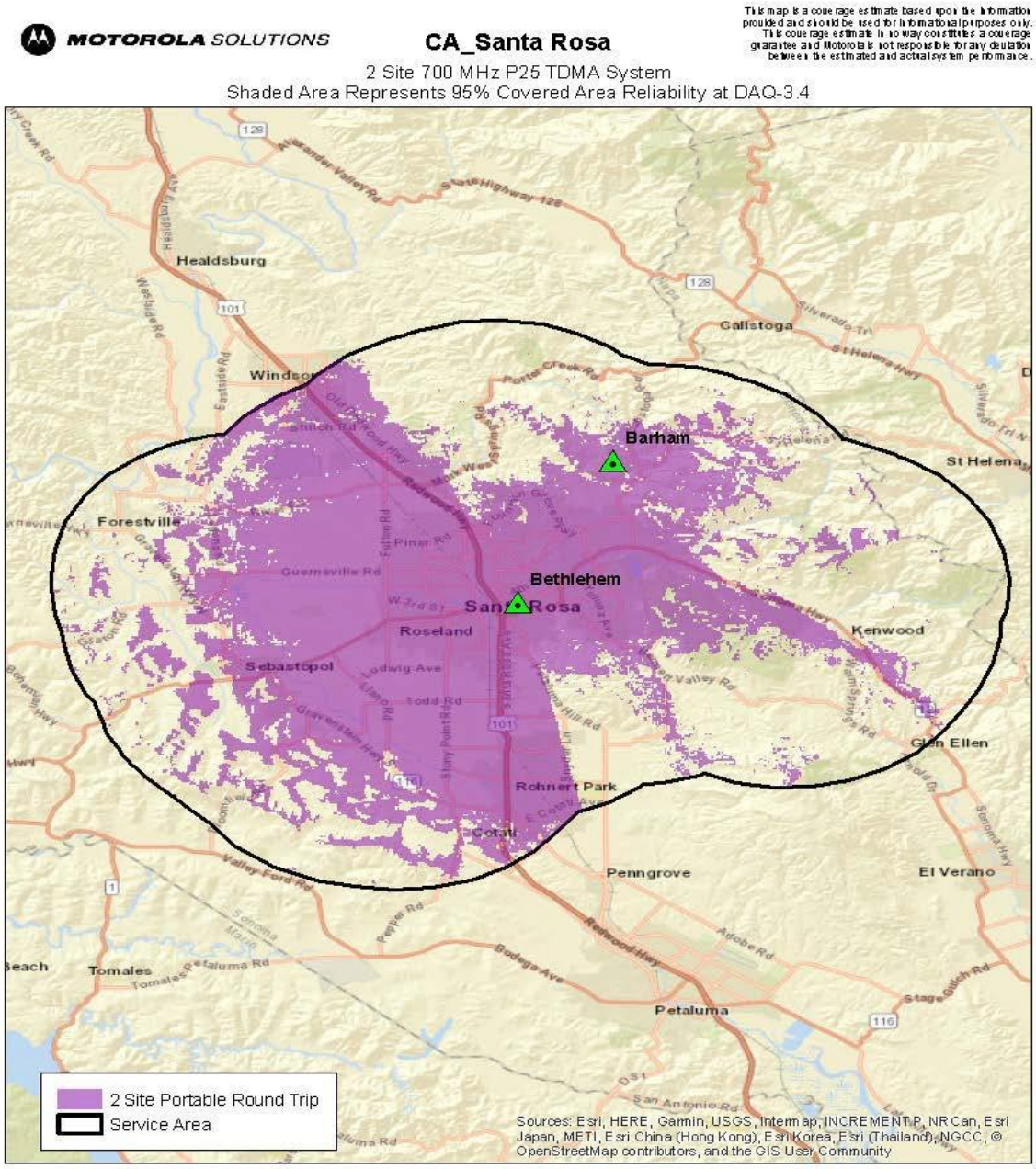
Motorola Solutions will conduct this Coverage Acceptance Test only once. If any portion of the test is determined to be affected by proven equipment malfunctions or failures, Motorola Solutions will repeat the portion of the test affected by the equipment malfunction or failure.

Santa Rosa will have the option to accept the coverage at any time prior to completion of the coverage test or documentation process.

Motorola Solutions will submit to Santa Rosa a report detailing the coverage test results. This report will include a document, which is to be signed by both Santa Rosa and Motorola Solutions, indicating the test was performed in accordance with this CATP and the results of the test indicate the acceptance or non-acceptance of the coverage portion of the system.

6.5 COVERAGE MAPS

For your convenience, Motorola Solutions has provided Coverage Maps below.

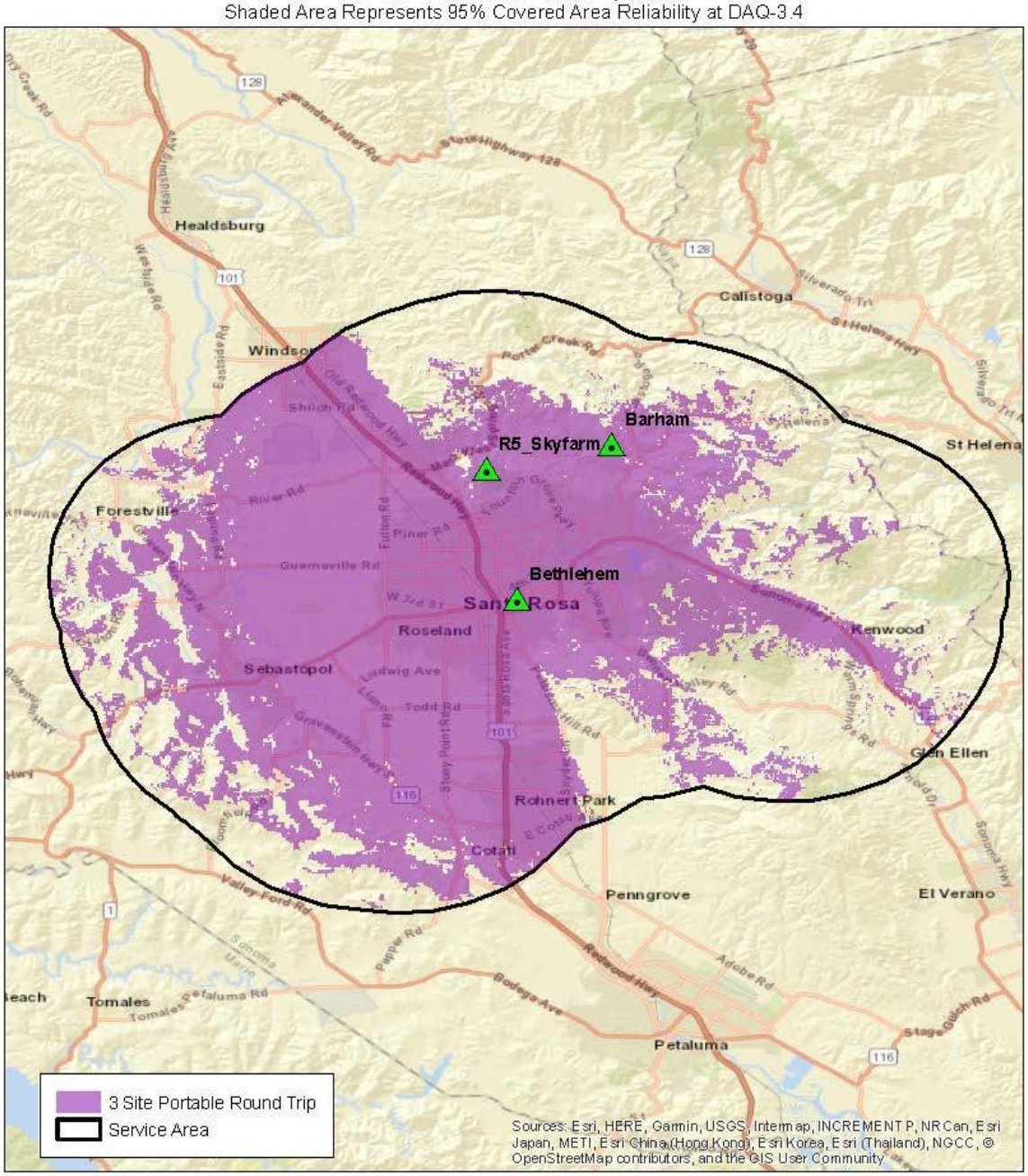

MOTOROLA SOLUTIONS
CA_Santa Rosa
This map is a coverage estimate based upon the information provided and should be used for informational purposes only. This coverage estimate in no way constitutes a coverage guarantee and Motorola is not responsible for any deviation between the estimated and actual system performance.
2 Site 700 MHz P25 TDMA System
Shaded Area Represents 95% Covered Area Reliability at DAQ-3.4
Healdsburg
Windsor
Calistoga
Barham
St Helena
Forestville
Bethlehem
Santa Rosa
Roseland
Kenwood
Sebastopol
Glen Ellen
Rohnert Park
Cotati
Penngrove
El Verano
Tomales
Petaluma
2 Site Portable Round Trip
Service Area
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community
0 1 2 4 Miles
1 in = 4 miles
Portable Config: APX 8000 Portable, 12.5 kHz, 2.5W
Tx/Rx at hip with swivel case using RSM
Portable Antenna: Triband
California
Santa Rosa
TBDH48
TBDH48-ZBK15G3
August 08, 2019
Design 63

MOTOROLA SOLUTIONS

This map is a coverage estimate based upon the information provided and should be used for informational purposes only. This coverage estimate in no way constitutes a coverage guarantee and Motorola is not responsible for any deviation between the estimated and actual system performance.

CA_Santa Rosa

3 Site 700 MHz P25 TDMA System
Shaded Area Represents 95% Covered Area Reliability at DAQ-3.4



0 1 2 4 Miles
1 in = 4 miles

Portable Config: APX 8000 Portable, 12.5 kHz, 2.5W
Tx/Rx at hip with swivel case using RSM
Portable Antenna: Triband

California
Santa Rosa
TBDH48
TBDH48-ZBK15G3

August 08, 2019

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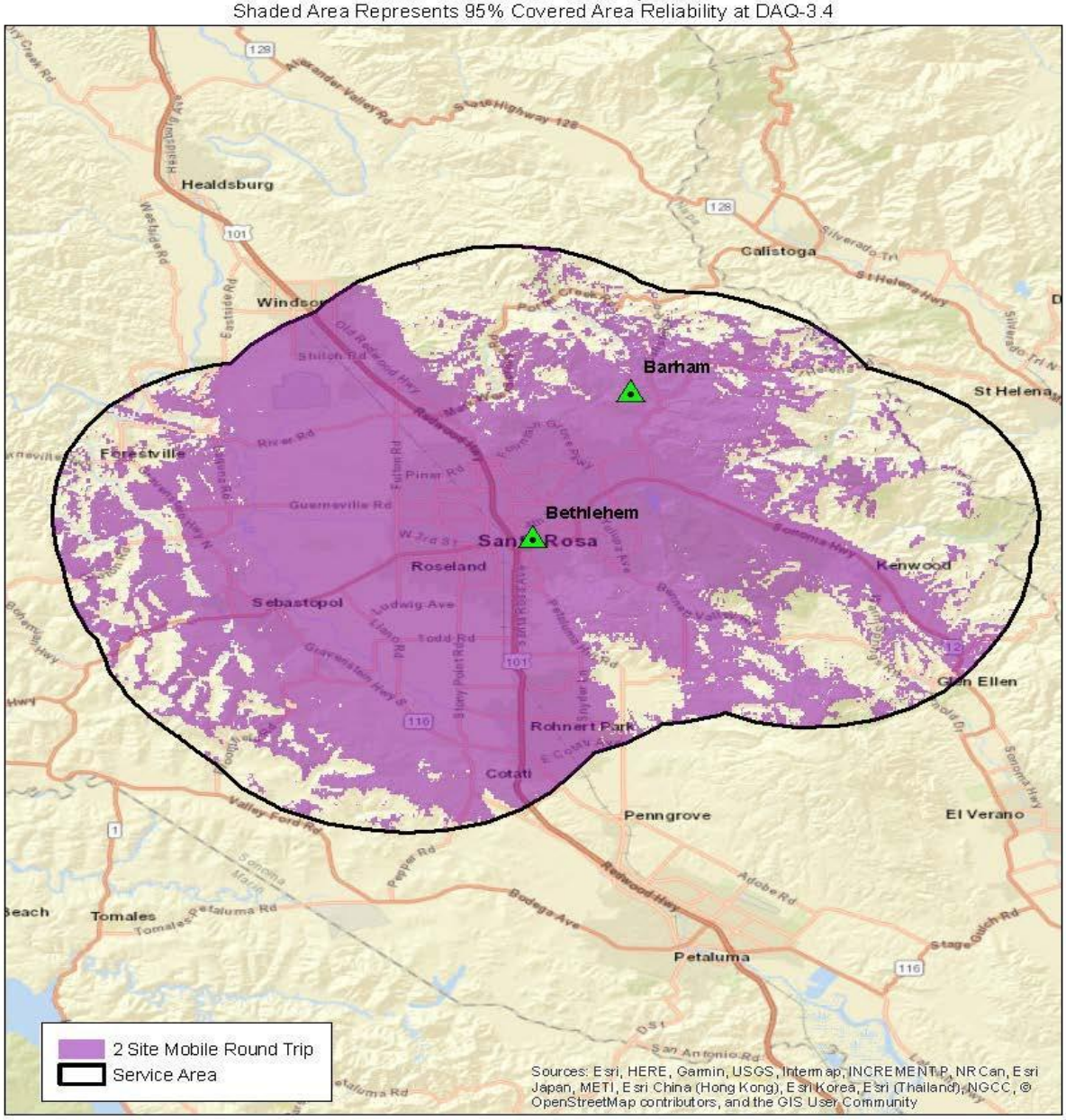
MOTOROLA SOLUTIONS

CA_Santa Rosa

2 Site 700 MHz P25 TDMA System
Shaded Area Represents 95% Covered Area Reliability at DAQ-3.4



0 1 2 4 Miles
1 in = 4 miles

Mobile Config: APX 8500 Mobile, 12.5 kHz, 15W
Tx/Rx at car roof center
Mobile Antenna: Triband

California
Santa Rosa
TBDH48
TBDH48-ZBK15G3

August 08, 2019

Design 63

SECTION 7

ACCEPTANCE TEST PLAN

Wide Area Trunking - TDMA Only Sites

7.1.1 Talkgroup Call

1. DESCRIPTION

The Talkgroup is the primary level of organization for communications on a trunked radio system. Radios with Talkgroup call capability will be able to communicate with other members of the same Talkgroup. This provides the effect of a private channel down to the Talkgroup level.
This test will demonstrate that a Talkgroup transmission initiated by a radio user will only be heard by system users, which have, the same Talkgroup selected. As with other types of calls, Talkgroup calls can take place from anywhere in the system.

SETUP

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

VERSION #1.040

2. TEST

Step 1. Initiate a Wide Area Call with RADIO-1 in TALKGROUP 1.

Step 2. Observe that only RADIO-2 will be able to monitor and respond to the call.

Step 3. Initiate a Wide Area Call with RADIO-3 in TALKGROUP 2.

Step 4. Observe that only RADIO-4 will be able to monitor and respond the call.

Pass____ Fail____

Wide Area Trunking - TDMA Only Sites

7.1.2 Continuous Assignment Updating

1. DESCRIPTION

When a talkgroup is assigned a voice channel, the site controller continues to transmit the channel assignment on the control channel for the duration of the talkgroup call. Radios coming into use on the system are automatically sent to voice channels with conversations in progress involving their selected talkgroups.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 1
RADIO-3 - TALKGROUP 1

VERSION #1.010

2. TEST

Step 1. Turn OFF RADIO-1.

Step 2. Initiate a Talkgroup Call using RADIO-2 and verify RADIO-3 hears the audio.

Step 3. While the Talkgroup Call is in progress, turn ON RADIO-1.

Step 4. Observe RADIO-1, which was just brought back into service, joins the Talkgroup Call already in progress.

Step 5. End the talkgroup call.

Step 6. Switch RADIO-1 to another talkgroup.

Step 7. Initiate a Talkgroup Call from RADIO-2 to RADIO-3.

Step 8. While the Talkgroup Call is in progress, set RADIO-1 back to TALKGROUP 1.

Step 9. Observe that RADIO-1 joins the Talkgroup Call already in progress.

Pass____ Fail____

Wide Area Trunking - TDMA Only Sites

7.1.3 Call Alert

1. DESCRIPTION

Call Alert is a tone page that allows a user to selectively alert another radio unit. The initiating radio will receive notification from the trunked system as to whether or not the page was received by the target radio. Units receiving a Call Alert will sound an alert tone. As with other types of calls, Call Alerts can take place from anywhere in the system.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 2
RADIO-3 - TALKGROUP 3

VERSION #1.010

2. TEST

Step 1. Using RADIO-1, press the page button.

Step 2. Enter the unit ID of RADIO-2 with the keypad, or scroll to the location where this ID is stored

Step 3. Press the PTT to initiate the call alert. Verify that the RADIO-1 user receives audible indication that the Call Alert was sent.

Step 4. Verify that RADIO-2 user receives an audible indication of an incoming Call Alert was sent but RADIO-3 does not.

Step 5. Verify RADIO-1 gets an audible indication that the Call Alert was successfully received at the target radio.

Step 6. Turn off RADIO-2. Send a Call Alert from RADIO-1 to RADIO-2.

Step 7. Verify that the RADIO-1 user receives audible indication that the Call Alert was sent.

Step 8. Verify RADIO-1 receives a "No Acknowledgement" indication that the Call Alert was not received at the target radio.

Pass____ Fail____

7.1.4 Private Call

1. DESCRIPTION

Private Call is a selective calling feature that allows a radio user to carry on one-to-one conversation that is only heard by the 2 parties involved. Subscriber units receiving a private call will sound an alert tone. As with other types of calls, Private Calls can take place from anywhere in the system.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 1
RADIO-3 - TALKGROUP 1

VERSION #1.020

2. TEST

Step 1. Using RADIO-1, press the Private Call (Call) button.

Step 2. Enter the unit ID of RADIO-2 with the keypad, or scroll to the location where this ID is stored.

Step 3. Press the PTT to initiate the Private Call.

Step 4. Verify that RADIO-2 hears tones and the display indicates that a Private Call has been received, but RADIO-3 receives no indications.

Step 5. Answer the call at RADIO-2 by pressing the Private Call (Call)/Respond button. If RADIO-2 has a display, verify it shows the ID number or Alias of the calling unit.

Step 6. Press the PTT switch on RADIO-2 and respond to the Private Call. Note that if you do not press the Private Call button before pressing PTT, your audio will be heard by all members of the talkgroup, and not just by the radio initiating the Private Call.

Step 7. Verify that RADIO-2 can communicate with RADIO-1.

Step 8. Verify that RADIO-3 does not monitor the Private Call.

Step 9. End the Private Call by pressing the "home" key and return to normal talkgroup operation.

Pass____ Fail____

7.1.5 Multigroup Call in Wait Mode

1. DESCRIPTION

This trunking feature allows an equipped radio user to transmit an announcement to several different talkgroups simultaneously. The multigroup (ATG) call can be flagged for Wait Mode in the Provisioning Manager (PM) database forcing all attached talkgroups to finish calls in progress before the trunked system will process the multigroup call. The system does not permit inactive, attached talkgroups to initiate Talkgroup Calls during the "wait" timeframe. As with other types of calls, multigroup calls can take place from anywhere in the system.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 2
RADIO-3 - RANDOM (Not part of MG)
RADIO-4 - ATG 1

* TALKGROUP 1 and TALKGROUP 2 are members of ATG 1.

* RANDOM is any talkgroup not a member of ATG 1.

* Multigroups are set up through both the Provisioning Manager (PM) and the Subscriber Programming software.

VERSION #1.020

2. TEST

Step 1. Verify ATG 1 is set for the Wait mode.

Step 2. Using RADIO-1, initiate a call on TALKGROUP 1.

Step 3. While RADIO-1 is keyed, attempt to initiate a multigroup call using RADIO-4 on ATG 1. Verify RADIO-4 receives a busy tone because one of the talkgroups attached to ATG 1 is involved in a Talkgroup Call.

Step 4. Key RADIO-2 and verify that a busy tone is received because the ATG 1 call is in queue.

Step 5. Dekey RADIO-1 and verify RADIO-4 receives a callback.

Step 6. Key RADIO-4 and verify both RADIO-1 and RADIO-2 hear the multigroup call while RADIO-3 does not unmute.

Pass____ Fail____

Wide Area Trunking - TDMA Only Sites

7.1.6 Emergency Alarm and Call with Top of Queue (TDMA)

1. DESCRIPTION

Users in life threatening situations can use the Emergency button on the radio to immediately send a signal to the dispatcher and be assigned the next available voice channel. An Emergency Call can be set to either Top of Queue or Ruthless Preemption operation. To accomplish this test, an Emergency Alarm and Call will be initiated from a subscriber which will be received by a subscriber affiliated at any site of any zone in the system.

NOTE: If the subscriber does not have the Display option, the Emergency ID will not be displayed.

NOTE: All radios and talkgroups should start with default priorities. Default is 10.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-1 - SITE - SITE 1
RADIO-2 - TALKGROUP 1
RADIO-2 - SITE - Any Site
RADIO-3 - TALKGROUP 2
RADIO-3 - SITE - SITE 1
RADIO-4 - TALKGROUP 3
RADIO-4 - SITE - SITE 1
RADIO-5 - TALKGROUP 4
RADIO-5 - SITE - Any Site

VERSION #1.020

2. TEST

Step 1. Verify the emergency type for TALKGROUP 1's template to be set up as Top of Queue.

Step 2. Simulate a busy system by disabling all channels at SITE 1 with the exception of the control channel and one physical voice channel. Press the PTT on RADIO-5 and hold until the completion of the test.

Step 3. Press the PTT to initiate a call with RADIO-3 and hold the PTT switch until instructed to release.

Step 4. Key RADIO-4 and verify the radio receives a busy tone. Release the PTT switch on RADIO-4.

Step 5. Using RADIO-1, send an Emergency Call by depressing the emergency switch and then the PTT switch.

Step 6. Observe that RADIO-1 cannot transmit due to the voice channel being busy.

Step 7. Release the PTT switch on RADIO-3. Observe that RADIO-1 receives the call back before RADIO-4 and is able to proceed with the call.

Step 8. Observe that the display on RADIO-2 denotes an emergency and the unit ID or alias of RADIO-1.

Step 9. Dekey RADIO-1 and end the Emergency Call by holding down the Emergency button on RADIO-1 until an alert tone sounds. Verify RADIO-1 returns to normal operation.

Step 10. Verify RADIO-4 receives a callback. Release the PTT on RADIO-5. Return the system to normal operation.

Pass____ Fail____

Site Trunking - TDMA Only Sites

7.1.7 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 - TDMA Only Sites

7.1.8 Talkgroup Call

1. DESCRIPTION

When a site goes into Site Trunking, radios with Talkgroup Call capability will be able to communicate with other members of the same talkgroup at that same site. Members of the same talkgroup at other sites will not be able to monitor those conversations.

SETUP

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

Note: All Radios should be "Site Locked"

VERSION #1.010

2. TEST

Step 1. Place SITE 1 into the Site Trunking mode.

Step 2. Initiate a Talkgroup Call with RADIO-1 on TALKGROUP 1 at SITE 1.

Step 3. Observe that only RADIO-2 will be able to monitor and respond to the call. Note that RADIO-3 and RADIO-4 are not able this monitor the call since the site is not in wide area operation.

Step 4. Initiate a Talkgroup Call with RADIO-3 on TALKGROUP 1 at SITE 2.

Step 5. Observe that only RADIO-4 will be able to monitor and respond to the call.

Pass____ Fail____

Site Trunking - TDMA Only Sites

7.1.9 Private Call

1. DESCRIPTION

Private Call is a selective calling feature that allows a dispatcher or radio user to carry on one-to-one conversation that is only heard by the 2 parties involved. When a site is in Site Trunking, Radios at the site will only be able to Private Call other radios at the same site.

SETUP

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

Note: All Radios should be "Site Locked"

VERSION #1.020

2. TEST

Step 1. Place SITE 1 into the Site Trunking mode.

Step 2. Using RADIO-1, press the Private Call button.

Step 3. Enter the Unit ID of RADIO-2 with the keypad, or scroll to the location where this ID is stored.

Step 4. Press the PTT to initiate the call.

Step 5. Verify that at RADIO-2 only tones are heard and the display indicates that a call has been received.

Step 6. Answer the call at RADIO-2 by pressing the Private Call/Respond button. Verify its display shows the ID number or alias of the calling unit.

Step 7. Press the PTT switch on RADIO-2 and respond to the call. Note that if you do not press the Private Call button before pressing PTT, your audio will be heard by all members of the talkgroup, and not by the radio initiating the Private Call.

Step 8. Verify only RADIO-1 hears the audio from RADIO-2.

Step 9. End the Private Call. Return the site to Wide Area Trunking unless the next test requires Site Trunking.

Pass____ Fail____

Site Trunking - TDMA Only Sites

7.1.10 Busy Queuing and Callback

1. DESCRIPTION

Once the system channel capacity is full, all radio users trying to enter the system will receive a busy signal and be put in queue by priority. Once a voice channel is available, the system will call back the highest queued user with a callback tone. When a remote site is Site Trunking, there are only two priority levels, talkgroup and emergency.

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
RADIO-5 - TALKGROUP 4
RADIO-5 - SITE - SITE 1

VERSION #1.010

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 call using RADIO-5 on TALKGROUP 4. Keep this call in progress until instructed to release.

Step 3. Initiate a call on TALKGROUP 1 using RADIO-1 and observe that RADIO-4 receives the call. Keep this call in progress until instructed to end the call.

Step 4. Key RADIO-2 and observe that the radio receives a busy.

Step 5. Key RADIO-3 and observe that the radio receives a busy.

Step 6. End the Talkgroup Call established in Step 3.

Step 7. Observe that RADIO-2 receives a callback prior to RADIO-3 receiving a callback.

Step 8. Return the site to Wide Area Trunking unless the next test requires Site Trunking

Pass____ Fail____

Site Trunking - TDMA Only Sites

7.1.11 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 or alias 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. If the subscriber does not have the Display option, the Emergency ID will not be displayed.

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 4
RADIO-4 - SITE - SITE 1
RADIO-5 - TALKGROUP 5
RADIO-5 - SITE - SITE 1

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. Press the PTT on RADIO-5 and RADIO-3 and hold the PTT switch until instructed to release

Step 3. Key RADIO-4 and observe that the radio receives a busy

Step 4. Using RADIO-1, initiate an emergency alarm followed by an emergency call.

Step 5. Observe that RADIO-1 cannot transmit due to the voice channel being busy.

Step 6. Release the PTT switch on RADIO-3.

Step 7. 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 RADIO-1.

Step 8. End the emergency call and verify that RADIO-4 gets a callback.

Step 9. Release the PTT switch on RADIO-5.

Step 10. Restore all channels to service and return the site to Wide Area Trunking unless the next test requires Site Trunking.

Pass____ Fail____

System Management Tests

7.1.12 ZoneWatch

1. DESCRIPTION

ZoneWatch is an administration tool for monitoring radio traffic on a system. A system manager can use ZoneWatch to analyze traffic patterns for load distribution and troubleshoot radio and site problems. ZoneWatch is used to view current radio traffic activity for the system. This activity is displayed in graphical format, color-coded for easy identification of the type of activity occurring on the system.

SETUP

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

VERSION #1.010

2. TEST

Step 1. Verify that ZoneWatch has been configured for the Grid and Multi Site Scroll windows to display system activity.

Step 2. From the PC Application Launcher, select a zone folder.

Step 3. From within that zone, select ZoneWatch.

Step 4. Select the appropriate profile to be able to view the channel usage on the system.

Step 5. Initiate several calls with the radios and observe that the appropriate channel usage information is displayed.

Pass____ Fail____

System Management Tests

7.1.13 Affiliation Display

1. DESCRIPTION

Affiliation Display is a Private Radio Network Management (PRNM)application that monitors the mobility of radios for a particular zone. Mobility describes how radio users travel between different sites in a zone and how they communicate with other members of their assigned talkgroup or even with members outside of their talkgroup. A radio can be viewed in more than one zone. As a radio roams from one site to another or changes talkgroups, Affiliation Display updates and displays the affiliation and de-affiliation information for a monitored radio. This information can be useful for the troubleshooting and tracking of radios in the system and for monitoring the movement of traffic within a zone.
The Affiliation Display is divided into three sections: Site Viewer, Talkgroup Viewer, and Radio Viewer.
- The Site Viewer displays the number of talkgroups and number of radios affiliated to that site.
- The Talkgroup Viewer displays how many radios are affiliated to that talkgroup and the number of sites at which the talkgroup has radios affiliated.
- The Radio Viewer window displays affiliation information for a custom list of radios.

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 2
RADIO-4 - TALKGROUP 2
RADIO-4 - SITE - SITE 2

VERSION #1.010

2. TEST

Step 1. Add RADIO-1,RADIO-2,RADIO-3, and RADIO-4 to the Affiliation Display.

Step 2. Verify that RADIO-1 and RADIO-2 show they are affiliated to SITE 1 and TALKGROUP 1.

Step 3. Verify that RADIO-3 and RADIO-4 show they are affiliated to SITE 2 and TALKGROUP 2.

Step 4. Change the talkgroup of RADIO-1 and RADIO-2 to TALKGROUP 2.

Step 5. Verify that RADIO-1 and RADIO-2's affiliated talkgroup changes to TALKGROUP 2 on the Affiliation Display.

Step 6. Change the site of RADIO-3 and RADIO-4 to SITE 1.

Step 7. Verify that RADIO-3 and RADIO-4's affiliated site changes to SITE 1 on the Affiliation Display.

Pass____ Fail____

Location On PTT

7.1.14 Location on PTT - Enabled for All Calls

1. DESCRIPTION

The test will demonstrate Location on PTT capability when enabled for all calls. The dispatcher will see updated locations a subscriber transmitting in a group call and transmitting in an emergency call.

SETUP

RADIO-1 - TALKGROUP 1
CONSOLE-1 – TALKGROUP 1
MAPPING-1 – RADIO-1

RADIO-1 is configured in the UNS for Location on PTT - Enabled for All Calls.
Subscribers must have GPS coverage.

VERSION #1.040

2. TEST

Step 1. Using RADIO-1 transmit on TALKGROUP 1.

Step 2. Will demonstrate that CONSOLE-1 hears RADIO-1 and a little more than 2 seconds after audio starts MAPPING-1 shows an updated location for RADIO-1 not indicating emergency.

Step 3. Dekey RADIO-1.

Step 4. Using RADIO-1 press and release emergency button and then transmit on TALKGROUP 1.

Step 5. Will demonstrate that CONSOLE-1 hears RADIO-1 and a little more than 2 seconds after audio starts MAPPING-1 shows an updated location for RADIO-1 indicating emergency.

Step 6. Dekey RADIO-1 and press and release emergency button to exit emergency.

Step 7. Using CONSOLE-1, knockdown the emergency call.

Step 8. Will demonstrate no more locations are updated for RADIO-1 at MAPPING-1.

Pass____ Fail____

Radio Management

7.1.15 Radio Management Test using POP25

1. DESCRIPTION

Radio Management (RM) facilitates the creation of an extremely efficient radio programming configuration. Radio Management allows you to manage and program multiple radios at a time. Radio codeplugs are stored on a central database server allowing for remote configuration of data and remote programming of radios. A single codeplug can be used as a template, which can then be shared across multiple radios. Template edits may then be easily applied to all affected radios.

SETUP

RADIO-1
RADIO-2
RADIO-3
RADIO-4
System Key is loaded on the CEN client running CPS

Connection from Radio Manager to ARS application is working.

VERSION #1.010

2. TEST

Step 1. Using the CPS application on the CEN client select the Radio Management button.

Step 2. A pop up window with the settings for the Radio Management (RM) server will appear. Verify or enter the information needed to connect to the RM server and select "OK".

Step 3. A pop up should appear displaying the currently managed subscribers.

Step 4. Select a radio to modify, right click and select a template. (or a change can be made in the radio grid).

Step 5. Make the changes desired to perform the test.

Step 6. Select the orange schedule button to make the changes.

Step 7. Select write and POP25 in the pop up window, give a job name (optional) to the task and select "OK".

Step 8. On the ZoneWatch screen a channel should be assigned to data, the Radio screen should update to "Upgrade" (message may be different for different model subscribers). Hit yes on the Radio to accept the update.

Step 9. Verify the changes have been made in the subscriber.

Pass____ Fail____

7.2 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: _____

SECTION 8

SUPPORT PLAN

8.1 SERVICES OVERVIEW

In order to ensure the continuity of the City of Santa Rosa's network and reduce system downtime Motorola Solutions proposes our maintenance services offering to the City of Santa Rosa. Appropriate for customers who wish to leverage Motorola Solutions' experienced personnel to maintain mission-critical communications for their first responders, Motorola maintenance services focus on monitoring the network on an ongoing basis, proactively mitigating potential functionality and security issues, and providing both remote and on-site support. The proposed offering consists of the following specific services:

- Service Desk.
- Technical Support.
- Network Event Monitoring.
- On-site Support.
- Network Hardware Repair with Advanced Replacement.

These services will be delivered to Santa Rosa through the combination of local service personnel either dedicated to the network or engaged as needed; a centralized team within our Solutions Support Center (SSC), which operates on a 24 x 7 x 365 basis; and our Repair Depot, which will ensure that equipment is repaired to the highest quality standards. The collaboration between these service resources, all of who are experienced in the maintenance of mission-critical networks, will enable a swift analysis of any network issues, an accurate diagnosis of root causes, and a timely resolution and return to normal network operation.

8.2 SUPPORT PLAN SERVICES DESCRIPTIONS

8.2.1 Centralized Service Delivery

Centralized support will be provided by Motorola Solutions' support staff, located at our Service Desk and Solutions Support Center (SSC). These experienced personnel will provide direct service and technical support through a combination of Service Desk telephone support, technical consultation and troubleshooting through the SSC, and ongoing network monitoring of Santa Rosa's system.

Motorola Solutions will provide **Service Desk** response as a single point of contact for all support issues, including communications between Santa Rosa, third-party subcontractors and manufacturers, and Motorola Solutions. When Santa Rosa's personnel call for support, the Service Desk will record, track, and update all Service Requests, Change Requests, Dispatch Requests, and Service Incidents using our Customer Relationship Management (CRM) system. The Service Desk is responsible for documenting Santa Rosa's inquiries, requests, concerns, and related tickets; tracking and resolving issues; and ensuring timely communications with all stakeholders based on the nature of the incident.

As tickets are opened by the Service Desk, issues that require specific technical expertise and support will be routed to our Solutions Support Center (SSC) system technologists for **Technical Support**, who will provide telephone consultation and troubleshooting capabilities to diagnose and resolve infrastructure performance and operational issues. Motorola Solutions' recording, escalating, and reporting process applies ISO 90001 and TL 9000-certified standards to the Technical Support calls from our contracted customers, reflecting our focus on maintaining mission-critical communications for the users of our systems.

The same SSC staff that provide direct telephone support to Santa Rosa will also provide **Network Event Monitoring** to Santa Rosa's network in real-time, ensuring continuous management of the system's operational functionality. The SSC's technicians will utilize sophisticated tools to remotely monitor Santa Rosa's system, often identifying and resolving anomalous events before they might affect user communications.

8.2.2 Field Service Delivery

On-site repairs and network preventative maintenance will be provided by authorized local field services delivery personnel, who will be dispatched from and managed by the Solutions Support Center.

On-Site Support provides local, trained and qualified technicians who will arrive at the City's location upon a dispatch service call to diagnose and restore the communications network. This involves running diagnostics on the hardware or Field Replacement Unit (FRU) in order to identify defective elements, and replacing those elements with functioning ones. The system technician will respond to the Santa Rosa location in order to remedy equipment issues based on the impact of the issue to overall system function.

8.2.3 Network Hardware Repair

Motorola Solutions' authorized Repair Depot will repair the equipment provided by Motorola Solutions, as well as select third-party infrastructure equipment supplied as part of the proposed solution. The Repair Depot will manage the logistics of equipment repair (including shipment and return of repaired equipment), repair Motorola Solutions equipment, and coordinate the repair of third-party solution components.

Motorola Solutions also proposes **Network Hardware Repair with Advanced Replacement** to the City of Santa Rosa. With this additional service, Motorola Solutions will exchange malfunctioning components and equipment with advanced replacement units or Field Replacement Units (FRUs) as they are available in the Repair Depot's inventory. Malfunctioning equipment will be evaluated and repaired by the infrastructure repair depot and returned to the Repair Depot's FRU inventory upon repair completion. If Santa Rosa prefers to maintain their existing FRU inventory, Santa Rosa will be able to request a "loaner" FRU while their unit is being repaired.

8.3 MOTOROLA SOLUTIONS' SERVICES CAPABILITIES

Our focus on the needs of our public safety partners has led us to recognize that an integrated implementation and service delivery team that takes a new system from system installation, to acceptance, to warranty, and all the way through extended maintenance, is

the best way to ensure that public safety communications systems meet the needs of first responders. Motorola Solutions' team of experts, have developed refined processes and sophisticated tools through our experience in delivering mission-critical communications.

8.3.1 On-Call Support through the Solutions Support Center (SSC)

The cornerstone of our customer care process, our Solution Support Center (SSC) is staffed 24x7x365 by experienced system technologists. This TL 9000/ISO 9001-certified center responds to over 5000 public safety, utility, and enterprise customers. With over 100,000 phone and email interactions with Motorola Solutions customers per month, the SSC provides our customers with a centralized contact point for service requests.

8.3.2 On-Site Service through a Field Service Team

On-site maintenance and repair of Santa Rosa's system will be provided by Motorola Solutions' local team of service personnel. Motorola Solutions will provide Santa Rosa with a Customer Support Plan (CSP) that outlines the details of each service, provides escalation paths for special issues, and any other information specific to Santa Rosa's service agreement. Some of these details will include items such as access to sites, response time requirements, severity level definitions, and parts department access information.

Local technicians will be dispatched for on-site service by the SSC, who will inform the technician of the reason for dispatch. This will enable the technician to determine if a certain component or Field Replacement Unit (FRU) will be needed from inventory to restore the system. Once on site, the field technician will notify the SSC and begin to work on the issue. The technician will review the case notes to determine the status of the issue, and begin the troubleshooting and restoration process. Once the system is restored to normal operation, the field technician will notify the SSC that the system is restored. The SSC, in turn, will notify Santa Rosa that the system is restored to normal operation and request approval to close the case.

8.3.3 Centralized Repair Management through Motorola Solutions' Repair Depot

Our repair management depot coordinates component repair through a central location, eliminating the need to send system equipment to multiple vendor locations for repair. Once equipment is at the depot, technicians will replicate Santa Rosa's network configuration in our comprehensive test labs in order to reproduce and analyze the issue. Technicians will then restore the equipment to working order. After repairs are completed, equipment will be tested to its original performance specifications and, if appropriate, configured for return to use in Santa Rosa's system. All components being repaired are tracked throughout the process, from shipment by Santa Rosa's to return through a case management system where users can view the repair status of the equipment via a web portal.

SECTION 9

OPTIONAL DEVICE MANAGEMENT

9.1 SERVICES DESCRIPTION

For the past 80 years, our persistent goal at Motorola is to maximize our customers' communications capabilities to prepare for the moments that matter. We develop solutions tailored to situational needs and service offerings that maximize the effectiveness of those solutions. This unrelenting focus on customer experience has provided the skills to create service models that better prepare our self-managed customers and Motorola-managed customers to meet and exceed their desired outcomes. Thank you for allowing us to serve you as you serve your communities.

We are pleased to offer you the Device Management Service Offer (or DMSO), a recent addition to the Motorola Solutions service portfolio. DMSO features Essential (basic), Advanced (enhanced) and Premier (fully managed) packages of some of our most popular device service features plus some new and innovative ones to better meet the needs of more customers. Each of the packages is additive, meaning that:

- Essential is our basic offer
- Advanced includes all features from Essential
- Premier includes all features from Advanced and Essential

DMSO is available for subscription with existing customer APX radio fleets or with new radio purchase. We strive to support you in a progressive, flexible manner so please let us know how we can better meet your particular need.

Motorola is offering its Advanced DMSO offering for Santa Rosa. Motorola has accounted for the following major components in this proposal.

- Motorola Hosted DMSO Advanced Offering to support four hundred fifteen (415) APX subscribers.
- On-site setup and on boarding services. (optional)

9.2 DEVICE MANAGEMENT SERVICE OFFER (DMSO)-ADVANCED

In this version, a "**Do It Yourself**" approach will be employed for fulfilment. Customers who regularly perform their own creation, provisioning, programming and maintenance of radio attributes, codeplugs, fleetmaps and templates will continue their role. As a **Standard Base**, MSI will provide the customer with a subscription to our Radio Management (RM) Programming Tool licenses for each unit as well as access to our Service Support Center technical personnel.

Also, included in this proposal for Santa Rosa are the following option

Option 1: Motorola provides onsite deployment for the customer's Radio Management hardware and software. Commissioning of available APX radios into Radio Management will also be provided (for a one-week period). This deployment and commissioning provides a unique opportunity for customer technicians to receive on-the-job training for Radio Management in an immersion-like setting.

Motorola Radio Management Programming Solution

Motorola Solutions' Radio Management solution is unique to our APX subscriber radios and ASTRO 25 infrastructure, comprehensively managing radio configurations and dramatically increasing productivity, allowing radio users to remain in the field while reducing Total Cost of Ownership.

Key Radio Management Features include:

- Easily searchable Radio Inventory database
- Multi-unit programming for deployment efficiency
- Wireless programming for broad fleet update support
- Centralized Radio Configuration and Codeplug Management
- Automated Radio Updates of Codeplugs, Firmware and Software Flash Versions
- Batch Programming of APX Radios over a Motorola ASTRO25 P25 System
- No Missed Calls with OTAP due to Voice Priority with Motorola Solutions' Infrastructure.

Radio Management (RM) is a tool created by Motorola Solutions to streamline the radio programming process and is widely used today. Radio management enriches each agency's management of radio inventory, reduces initial programming time, optimizes routine programming maintenance and aids in software updates on a regular basis. The control, ease of use and efficiency Radio Management provides compliments the APX radio subscriber fleet and offers a dynamic and well organized fleet management solution.

Using Radio Management (RM), APX Radios are assigned a codeplug template that can be unique or shared among a large group of radio users. Changes to these templates can then be performed via RM either individually or scheduled as part of a batch job by a radio technician. Radio Management will track if the radios have been successfully programmed, providing a clear view of the entire radio fleet and each radio's codeplug history.

Radio Management can also be used to manage the Software Flash Versions, or enabled feature sets, as well as the firmware of each APX Subscriber. These updates can be performed on an individual or group basis using the RM server to manage the process.

Radio Management is agnostic to how the APX radio is connected to the RM system and is able to use multiple methods to communicate with the subscriber. Regardless to how the APX radio is updated the RM server will provide a report to the radio technician of current programming status of each radio.

Motorola's ASTRO 25 OTAP feature offers users many unique enhancements over standard OTAP processes. These include:

Voice Priority - An ASTRO 25 P25 system provides priority to voice communications so that a data call will be preempted if a voice transmission is either received or initiated. The APX subscriber is able to pause the data call until the voice transmission is ended and then resume the programming job from the place it left off, eliminating retransmission of already sent data.

Differential Write - APX radios in conjunction with RM use a differential write process whereby only **changes** to the subscriber codeplug are transmitted over the air, minimizing data usage and allowing for more subscribers to be programmed via the ASTRO 25 system.

Batch Programming - APX subscribers on an ASTRO 25 system can be batch programmed via RM rather than having to program each radio, one by one. This programming can also be set as a job within the RM server, allowing for codeplug changes to be made ahead of time and then disseminated on a pre-programmed day and time.

Motorola APX subscribers on an ASTRO 25 system are also able to have their firmware updated over the air via the **Over the Air Software Update** process. The OTA Software

update can send new firmware to every APX subscriber on the system in a broadcast fashion. This is done by using the voice channel to send small packets of data to the APX radios at the same time over the voice channel. This allows all of the APX radios in the fleet to compile the new firmware over a period of days and then allow the radio users to accept the new firmware when it is fully downloaded. The OTA software process runs in the background of the APX radio's operation and does not affect its' voice or data communications.

Lastly, Motorola's APX subscribers can also take advantage of the new Alias Update if operating on an ASTRO 25 system. Alias Update allows for the entire APX radio fleet to use the latest radio alias available on the system without necessitating reprogramming. This process works by the System Administrator making a change to the core's Provisioning Manager to update a radios' alias. Once added to the system, the new alias is instantaneously broadcast to the APX radio fleet and allows the whole APX fleet to begin using the new radio alias. This enables the more effective use of radio IDs as it is now a simple procedure to make a change to the alias' stored in each APX radio.

By using Radio Management, OTAP, OTA Software, and Alias Update, the APX radio fleet can be kept up to date with the latest software and features with minimal downtime, allowing First Responders to focus on the task at hand and not their radios. The resultant operational efficiencies translate into significant costs savings by significantly reducing the time customer personnel need to spend on administrative task such as codeplug and firmware updates, and the complete history of each Subscriber Unit is instantly available.

9.3 STATEMENT OF WORK

9.3.1 DMS r1.0 Advanced SoW

Motorola is offering the Advanced solution, with on site setup and MSI hosting (listed as options 1 and 2). The below Statement of Work details customer and Motorola responsibilities.

9.3.1.1 DMS Advanced Feature Description Summary

Standard Base

The Radio Management 2.0 software provides APX radio provisioning and programming capability with convenience and efficiency provided by value-added features. Updated codeplugs can be stored on the customer's local server or network server, allowing distributed access among many users with a single 'golden' version.

Radio downtime is minimized with multi-unit programming. RM architecture has been divided into components (RM Client, RM Server, Job Processor, Device Programmer) which can be placed in a single environment or distributed between host and remote locations.

Basic Tech Support is also provided with the Standard Base, employing a cost-efficient model that is ideal for skilled customers who require only basic break-fix service for Radio Management software and when issues affecting multiple APX radio units arise.

Option 1: On Site set up, commissioning and training for either on premise or hosted DMS solution

Motorola will provide on-site deployment and commissioning of the Radio Management client and server hardware and software at the customer's location. Motorola will also on-board new DMS radios into the Radio Management user database (radios must be made available for on-boarding). Unless otherwise agreed, customer will purchase and maintain computing hardware for radio programming stations. These activities will take place for 2 days typical (with a 1wk maximum), at which point the install/commissioning team will transition remaining work to the customer. Motorola assumes on-site deployment and commissioning will be occurring at one location. If this activity needs to occur at multiple locations, a customer quote may be necessary.

Customer is also entitled to seats in regularly scheduled Radio Management Workshops (RDS 2017) located in Plantation, Florida. Participants will receive user and admin training so they can begin provisioning and programming their APX radio fleet with confidence. Three seats are provided for every 500 radios subscribed to DMS up to a maximum of twelve seats.

9.3.1.2 DMS-Advanced Motorola Solutions Roles - Responsibilities

- Upon a customer call to Motorola Service Desk, a representative will answer to address issues with RM 2.0 programming tool/software
- Categorize and route issue requests appropriately
- Validate requests against Customer-agreed policies
- Review issue details and ensure required evidence has been recorded
- Approve requests and schedule actions as required
- Implement actions as required and verify with the Customer
- Provide updates to Radio Management software from the core and push to customer client stations

9.3.1.3 Advanced OPTION 1-specific responsibilities

Motorola Solutions will:

- Provide implementation of (install and configure) the RM application on customer premise and begin commissioning radios in customer's database.
- Allow customer technicians to join deployment and informally learn about RM and how to commission radios
- Handoff radio commissioning to customer technicians and depart (typically within 2 days of hardware installation)
- Provide seats to regularly scheduled RDS2017 Radio Management Workshop in Plantation Florida (3 seats per 500-unit DMS subscription up to a maximum of 12 seats. DMS subscriptions less than the 500-unit minimum allow customer 1 seat to RDS2017 Workshop)
- Provide RM application installation and configuration for customer hardware, if the Customer is utilizing Bring your Own Network and PC and has chosen OPTION 1: Onsite Deployment was selected
- ***Note: If customer intends to use OTAP or WiFi for programming, please refer to "Addendum 1 - DMS OTAP & WiFi Support" document for Motorola responsibility details***

9.3.1.4 DMS-Advanced Customer Roles and Responsibilities

The Customer will:

- Provide a list of customer Problem Management contacts
- Coordinate with Motorola to define Problem Management Policies
- Provide Motorola with additional information when required
- Purchase and maintain computing hardware (server and clients) for Radio Management Database and Device Programming stations in accordance with the Radio Management System Planner.
- Be responsible for the security posture of the client, including maintenance as Required
- Be responsible for Operating System patching, Antivirus support, and Configuration Management as required
- Be responsible for the connectivity between Database server and device programmers.

9.3.1.5 Advanced OPTION 1-specific responsibilities:

The Customer will:

- Make all radios available for commissioning by installation commencement
- Have their technicians available to shadow MSI or MSI 3rd party representative for the RM hardware & module install
- Have their technicians assume responsibility for radio commissioning (read/write) activity from Motorola installation technician by end of day 2 and will add remainder of radios to RM database
- Have their technicians attend RDS2017 Radio Management Workshop located in Plantation Florida (Motorola will provide seats per method in previous section). Customer will provide travel/lodging for their technicians to RDS2017 Workshop

Note 1: If customer intends to use OTAP or WiFi for programming, please refer to “Addendum 1 - DMS OTAP & WiFi Support” document for customer responsibility details

Customer Roles and Responsibilities for Bring Your Own Network and PC for Scenario-specific Support Models

(all considerations and responsibilities above still apply):

DMS-Advanced w/USB

- This is the most standard RM support model for BYO Client
- Customer is responsible for the development of their USB IP plan (since factory has all same IPs)
- Programming from factory out of the box’, if selected, is a Motorola SI activity

DMS-Advanced w/OTAP

- This solution presumes the customer has OTAP and IV&D services
- Currently OTAP/IMW isn’t centrally monitored, hence MSI does not manage/monitor OTAP performance for the customer
- Customer is responsible for maintenance of their OTAP/IMW instance (firmware, patching, aliases if required, etc)
- Motorola supports the Device Programmer in the DMS OTAP solution, which is linked to the customer managed OTAP server.)

DMS-Advanced w/WIFI

- This solutions presumes the customer has purchased APX radios with WiFi enabled and has a fully functional WiFi network
- MSI is not responsible for WiFi security, bandwidth, coverage, design nor maintenance of the WiFi network
- Motorola supports the Device Programmer in the DMS WIFI solution, which is linked to the customer managed WiFi Network.
- Review Addendum 1 "RM Programming Over WiFi Requirements", paying particular attention to the list of supported protocols for Radio Management

Note*: If Customer can not provide their own internet connectivity for hosted offer, contact the DMS Offer Manager for a special quote

9.3.2 DMS r1.0 SLA & Exclusions

Advanced

- Motorola will provide required Radio Management software licenses required for each radio unit
- Motorola Tech Support will not accept radio programming assistance calls – radio management calls are limited to the correction of defects with the radio management tool.
- Motorola will provide customer access to MOL or MyView Portal (when available) but customer has responsibility for maintaining the current nature of the Portal data. The CSM will assist customer in establishing MOL or MyView accounts, as applicable.

Exclusions

- FLEETMAP MANAGEMENT: DMS packages do not include initial fleetmap template creation nor consultation required to assemble a fleetmap strategy. This can be provided on a custom basis as required.
- NEW CODEPLUG CREATION: DMS packages do not include the creation of new codeplugs. Rather, the focus of the Premier package is on the modification of existing codeplugs. This can be provided on a custom basis as required.
- ADDING NON-DMS SYSTEMS: DMS packages do not include the service to add new non-DMS systems to the customer DMS network. This can be provided on a custom basis as required.
- Current Radio Management features not currently supported: Bluetooth, Password Lock on Radios

List of on-Boarding Actions For Supporting CSM

- Identify the number/location of remote client sites and how many clients are supported at each site. (maximum of 3 clients are supported per 500-radio DMS purchase)
- For customer who continue to utilize the MSI 4G LTE connectivity solution the CSM will locate physical addresses to verify 4G coverage when the customer opts to use the Motorola provided 4G modem.
- Identify the contact who that has ASK keys or software keys that will be delivered to the SSC for processing
- Identify the quantity of Devices by model (to validate VM sizing and appropriately assess effort and labor for any mobiles involved). Including - Create list of device serial

numbers, group them by template type, identify which serial # in each grouping is the key template for that group
- Manage the collection of devices and coordinate with the on boarding team to import them into the Core Radio Management Server

9.3.3 GLOSSARY OF TERMS

Tech Support

Tech Support employs a cost-efficient model that is ideal for skilled customers who require only basic break-fix service for radios (and Radio Management software for Advanced package)

Radio Management Software

The Radio Management 2.0 software provides APX radio provisioning and programming capability with convenience and efficiency provided by value-added features. Updated codeplugs can be stored on a network server, allowing distributed access among many users with a single 'golden' version. Radio downtime is minimized with multi-unit programming, either over-the-air or fixed hardware solution. RM architecture has been divided into components (RM Client, RM Server, Job Processor, Device Programmer) which can be placed in a single environment or distributed between host and remote locations.

Radio Management Software Training

Radio Management software training courses take place on a regularly scheduled basis at Motorola locations. Participants will receive user and admin training so they can begin provisioning and programming their APX radio fleet with confidence

Radio Management User Database Hosting (Motorola Private Cloud)

Motorola will host the customer's Radio Management "RM Server" database in our secure private cloud. The customer will be able to access their radio fleet provisioning data at any time with the knowledge that Motorola will be responsible for maintenance of the server and stored data.

MyView Portal for DMS Advanced Offer support includes the display of all radios in acustomer's fleet with serial number, unit number and initial codeplug/firmware versionsrecorded at initial delivery.

On-Demand Provisioning & Programming

On-Demand Provisioning & Programming allows the customer to focus on their mission-critical activities while Motorola accepts tasks and performs new codeplug modifications and programming for radios in the customer's fleet.

Radio Preventive Maintenance

For Radio Preventive Maintenance, all radios will be physically cleaned, checked and optimized for best performance. Specific tasks include:

- Physical inspection of radio
- Clean external housing of radio
- Measure, test, align and restore to spec per FCC regulation
- Ensure correct receive/transmit frequencies

- Assess battery condition based on charging capability

Premier Technical Support

Premier Technical Support with Concierge service allows the customer to engage Motorola as their 'one-stop shop' for all radio-related problems, technical questions and, of course, Subscriber Radio modifications via Change Request process.

Premier Myview Portal

The Premier MyView Portal provides the customer with a single dashboard for all radio-related data and status. This version of the portal will include reports and trends produced with analytical tools. For more on MyView Portal, please see a brief video at: https://www.youtube.com/watch?v=15ntGqJFfXw

Bring Your Own Network and PC

Bring your own Network and PC feature for APX-Device Management Services allows Motorola Private Cloud -Hosted Radio Management customers to provide their own RM-client hardware while programming their APX radios. Available for Advanced Hosted and Premier Offerings.

9.4 EQUIPMENT LIST

This section lists the equipment necessary for the proposed solution.

Qty	Model Description	Description
415	LSV01S01034A	DMSO ADVANCED RM
1		DMSO OPTIONAL ONSITE COMMISSION AND TRAINING APX ADVANCED

SECTION 10

PRICING SUMMARY

10.1 EQUIPMENT AND SERVICES SUMMARY–COMPLETE SYSTEM (3 SITES) IF BUNDLED TOGETHER AS ONE AGREEMENT

Description	Price ($)
Equipment – 3-site simulcast cell, including Prime Site Equipment and RF at Barham and Bethlehem; Microwave; DC Power Systems; 275 APX 8000 Portable Radios, 140 APX 8500 Mobile Radios, Single and Multi-Unit Chargers, Remote Speaker Microphones.	$5,749,993.00
Equipment HGAC Discount	<$1,270,152.00>
Professional Technical Services – System integration services including optimization, Network integration, Coverage Testing, Acceptance Testing, Project Management, Engineering, System Technologist, Staging, Travel, Documentation and 1st Year warranty/maintenance services, Subscriber Programming, Subscriber Training	$1,023,300.00
Installation Services	$286,564.00
Complete System Bundle Discount – 3 site Solution - Phase 2 Infrastructure, Phase 3 Subscribers – Total for all Equipment & Services with purchase by December 20, 2019	<$889,705.00>
TOTAL SYSTEM	**$4,900,000.00**
Estimated Tax on Equipment (9%)	**$403,185.69**
Complete System Bundle Purchase Price, with Tax, 3 site solution	**$5,303,186.69**

10.2 OPTIONAL DMSO

Description	Price ($)
Device Management Services Offer (DMSO) – Radio Management Services as described in section 9– 3 years of Subscription for 415 subscriber units	$39,889.80
Optional On Site Setup and Training – One time	$30,303.00
Total DMSO Option	**$70,192.80**

Note: The Contract Price will be paid via the disbursement of the financing proceeds pursuant to the Equipment Lease-Purchase Agreement executed between the parties.

10.3 PAYMENT TERMS

The Contract Price will be paid via the disbursement of the financing proceeds pursuant to the Equipment Lease-Purchase Agreement to be executed between the parties.

SECTION 11

CONTRACTUAL DOCUMENTATION

This proposal is subject to the terms and conditions of the Communications System and Services Agreement entered into between the City of Santa Rosa and Motorola Solutions, Inc., dated December 21, 2018 and the attached Equipment Lease Purchase Agreement.

MOTOROLA SOLUTIONS

11/15/19

City of Santa Rosa
100 Santa Rosa Ave
Santa Rosa CA 95404

RE: Municipal Lease # 24719

Enclosed for your review, please find the **Municipal Lease** documentation in connection with the [radio equipment] to be leased from Motorola. The interest rate and payment streams outlined in Equipment Lease-Purchase Agreement #24719 are valid for contracts that are executed and returned to Motorola on or before **December 15, 2019**. After **12/15/19**, the Lessor reserves the option to re-quote and re-price the transaction based on current market interest rates.

Please have the documents executed where indicated and forward the documents to the following address:

Motorola Solutions Credit Company LLC
Attn: Bill Stancik / 44th Floor
500 W. Monroe
Chicago IL 60661

Should you have any questions, please contact me at 847-538-4531.

Thank You,

MOTOROLA SOLUTIONS CREDIT COMPANY LLC
Bill Stancik

LESSEE FACT SHEET

Please help Motorola provide excellent billing service by providing the following information:

1. Complete Billing Address: City of Santa Rosa

   _____

   E-mail Address: _____

   Attention: _____

   Phone: _____

2. Lessee County Location: _____

3. Federal Tax I.D. Number _____

4. Purchase Order Number to be referenced on invoice (if necessary) or other "descriptions" that may assist in determining the applicable cost center or department: _____

5. Equipment description that you would like to appear on your invoicing: _____

Appropriate Contact for Documentation / System Acceptance Follow-up:

6. Appropriate Contact & Mailing Address _____

   _____

   _____

   _____

   Phone: _____

   Fax: _____

7. Payment remit to address: **Motorola Solutions Credit Company LLC**
   P.O. Box 71132
   Chicago IL 60694-1132

Thank you

EQUIPMENT LEASE-PURCHASE AGREEMENT

Lease Number: 24719

LESSEE:

City of Santa Rosa
100 Santa Rosa Ave
Santa Rosa CA 95404

LESSOR:

Motorola Solutions, Inc.
500 W. Monroe
Chicago IL 60661

Lessor agrees to lease to Lessee and Lessee agrees to lease from Lessor, the equipment and/or software described in Schedule A attached hereto ("Equipment") in accordance with the following terms and conditions of this Equipment Lease-Purchase Agreement ("Lease").

1. TERM. This Lease will become effective upon the execution hereof by Lessor. The Term of this Lease will commence on date specified in Schedule A attached heretoand unless terminated according to terms hereof or the purchase option, provided in Section 18, is exercised this Lease will continue until the Expiration Date set forth in Schedule B attached hereto ("Lease Term").

2. RENT. Lessee agrees to pay to Lessor or its assignee the Lease Payments (herein so called), including the interest portion , in the amounts specified in Schedule B. The Lease Payments will be payable without notice or demand at the office of the Lessor (or such other place as Lessor or its assignee may from time to time designate in writing), and will commence on the first Lease Payment Date as set forth in Schedule B and thereafter on each of the Lease Payment Dates set forth in Schedule B. Any payments received later than ten (10) days from the due date will bear interest at the highest lawful rate from the due date. Except as specifically provided in Section 5 hereof, the Lease Payments will be absolute and unconditional in all events and will not be subject to any set-off, defense, counterclaim, or recoupment for any reason whatsoever. Lessee reasonably believes that funds can be obtained sufficient to make all Lease Payments during the Lease Term and hereby covenants that a request for appropriation for funds from which the Lease Payments may be made will be requested each fiscal period, including making provisions for such payment to the extent necessary in each budget submitted for the purpose of obtaining funding. It is Lessee's intent to make Lease Payment for the full Lease Term if funds are legally available therefor and in that regard Lessee represents that the Equipment will be used for one or more authorized governmental or proprietary functions essential to its proper, efficient and economic operation.

3. DELIVERY AND ACCEPTANCE. Lessor will cause the Equipment to be delivered to Lessee at the location specified in Schedule A ("Equipment Location"). Lessee will accept the Equipment as soon as it has been delivered and is operational. Lessee will evidence its acceptance of the Equipment either (a) by executing and delivering to Lessor a Delivery and Acceptance Certificate in the form provided by Lessor; or (b) by executing and delivering the form of acceptance provided for in the Contract (defined below).

Even if Lessee has not executed and delivered to Lessor a Delivery and Acceptance Certificate or other form of acceptance acceptable to Lessor, if Lessor believes the Equipment has been delivered and is operational, Lessor may require Lessee to notify Lessor in writing (within five (5) days of Lessee's receipt of Lessor's request) whether or not Lessee deems the Equipment (i) to have been delivered and (ii) to be operational, and hence be accepted by Lessee. If Lessee fails to so respond in such five (5) day period, Lessee will be deemed to have accepted the Equipment and be deemed to have acknowledged that the Equipment was delivered and is operational as if Lessee had in fact executed and delivered to Lessor a Delivery and Acceptance Certificate or other form acceptable to Lessor.

4. REPRESENTATIONS AND WARRANTIES. Lessor acknowledges that the Equipment leased hereunder is being manufactured and installed by Lessor pursuant to contract (the "Contract") covering the Equipment. Lessee acknowledges that on or prior to the date of acceptance of the Equipment, Lessor intends to sell and assign Lessor's right, title and interest in and to this Agreement and the Equipment to an assignee ("Assignee").

LESSEE FURTHER ACKNOWLEDGES THAT EXCEPT AS EXPRESSLY SET FORTH IN THE CONTRACT, LESSOR MAKES NO EXPRESS OR IMPLIED WARRANTIES OF ANY NATURE OR KIND WHATSOEVER, AND AS BETWEEN LESSEE AND THE ASSIGNEE, THE PROPERTY SHALL BE ACCEPTED BY LESSEE "AS IS" AND "WITH ALL FAULTS". LESSEE AGREES TO SETTLE ALL CLAIMS DIRECTLY WITH LESSOR AND WILL NOT ASSERT OR SEEK TO ENFORCE ANY SUCH CLAIMS AGAINST THE ASSIGNEE. NEITHER LESSOR NOR THE ASSIGNEE SHALL BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER AS A RESULT OF THE LEASE OF THE EQUIPMENT, INCLUDING WITHOUT LIMITATION, LOSS OF PROFITS, PROPERTY DAMAGE OR LOST PRODUCTION WHETHER SUFFERED BY LESSEE OR ANY THIRD PARTY.

Lessor is not responsible for, and shall not be liable to Lessee for damages relating to loss of value of the Equipment for any cause or situation (including, without limitation, governmental actions or regulations or actions of other third parties).

5. NON-APPROPRIATION OF FUNDS. Notwithstanding anything contained in this Lease to the contrary, Lessee has the right to not appropriate funds to make Lease Payments required hereunder in any fiscal period and in the event no funds are appropriated or in the event funds appropriated by Lessee's governing body or otherwise available by any lawful means whatsoever in any fiscal period of Lessee for Lease Payments or other amounts due under this Lease are insufficient therefor, this Lease shall terminate on the last day of the fiscal period for which appropriations were received without penalty or expense to Lessee of any kind whatsoever, except as to the portions of Lease Payments or other amounts herein agreed upon for which funds shall have been appropriated and budgeted or are otherwise available. The Lessee will immediately notify the Lessor or its Assignee of such occurrence. In the event of such termination, Lessee agrees to peaceably surrender possession of the Equipment to Lessor or its Assignee on the date of such termination, packed for shipment in accordance with manufacturer specifications and freight prepaid and insured to any location in the continental United States designated by Lessor. Lessor will have all legal and equitable rights and remedies to take possession of the Equipment. Non-appropriation of funds shall not constitute a default hereunder for purposes of Section 16.

6. LESSEE CERTIFICATION. Lessee represents, covenants and warrants that: (i) Lessee is a state or a duly constituted political subdivision or agency of the state of the Equipment Location; (ii) the interest portion of the Lease Payments shall be excludable from Lessor's gross income pursuant to Section 103 of the Internal Revenue Code of 1986, as it may be amended from time to time (the "Code"); (iii) the execution, delivery and performance by the Lessee of this Lease have been duly authorized by all necessary action on the part of the Lessee; (iv) this Lease constitutes a legal, valid and binding obligation of the Lessee enforceable in accordance with its terms; (v) Lessee will comply with the information reporting requirements of Section 149(e) of the Internal Revenue Code of 1986 (the "Code"), and such compliance shall include but not be limited to the execution of information statements requested by Lessor; (vi) Lessee will not do or cause to be done any act which will cause, or by omission of any act allow, the Lease to be an arbitrage bond within the meaning of Section 148(a) of the Code; (vii) Lessee will not do or cause to be done any act which will cause, or by omission of any act allow, this Lease to be a private activity bond within the meaning of Section 141(a) of the Code; (viii) Lessee will not do or cause to be done any act which will cause, or by omission of any act allow, the interest portion of the Lease Payment to be or become includible in gross income for Federal income taxation purposes under the Code; and (ix) Lessee will be the only entity to own, use and operate the Equipment during the Lease Term.

Lessee represents, covenants and warrants that: (i) it will do or cause to be done all things necessary to preserve and keep the Lease in full force and effect, (ii) it has complied with all laws relative to public bidding where necessary, and (iii) it has sufficient appropriations or other funds available to pay all amounts due hereunder for the current fiscal period.

If Lessee breaches the covenant contained in this Section, the interest component of Lease Payments may become includible in gross income of the owner or owners thereof for federal income tax purposes. In such event, notwithstanding anything to the contrary contained in Section 11 of this Agreement, Lessee agrees to pay promptly after any such determination of taxability and on each Lease Payment date thereafter to Lessor an additional amount determined by Lessor to compensate such owner or owners for the loss of such excludibility (including, without limitation, compensation relating to interest expense, penalties or additions to tax), which determination shall be conclusive (absent manifest error). Notwithstanding anything herein to the contrary, any additional amount payable by Lessee pursuant to this Section 6 shall be payable solely from Legally Available Funds.

It is Lessor's and Lessee's intention that this Agreement not constitute a "true" lease for federal income tax purposes and, therefore, it is Lessor's and Lessee's intention that Lessee be considered the owner of the Equipment for federal income tax purposes.

7. TITLE TO EQUIPMENT; SECURITY INTEREST. Upon shipment of the Equipment to Lessee hereunder, title to the Equipment will vest in Lessee subject to any applicable license; provided, however, that (i) in the event of termination of this Lease by Lessee pursuant to Section 5 hereof; (ii) upon the occurrence of an Event of Default hereunder, and as long as such Event of Default is continuing; or (iii) in the event that the purchase option has not been exercised prior to the Expiration Date, title will immediately vest in Lessor or its Assignee, and Lessee shall immediately discontinue use of the Equipment, remove the Equipment from Lessee's computers and other electronic devices and deliver the Equipment to Lessor or its Assignee. In order to secure all of its obligations hereunder, Lessee hereby (i) grants to Lessor a first and prior security interest in any and all right, title and interest of Lessee in the Equipment and in all additions, attachments, accessions, and substitutions thereto, and on any proceeds therefrom; (ii) agrees that this Lease may be filed as a financing statement evidencing such security interest; and (iii) agrees to execute and deliver all financing statements, certificates of title and other instruments necessary or appropriate to evidence such security interest.

8. USE; REPAIRS. Lessee will use the Equipment in a careful manner for the use contemplated by the manufacturer of the Equipment and shall comply with all laws, ordinances, insurance policies, the Contract, any licensing or other agreement, and regulations relating to, and will pay all costs, claims, damages, fees and charges arising out of the possession, use or maintenance of the Equipment. Lessee, at its expense will keep the Equipment in good repair and furnish and/or install all parts, mechanisms, updates, upgrades and devices required therefor.

9. ALTERATIONS. Lessee will not make any alterations, additions or improvements to the Equipment without Lessor's prior written consent unless such alterations, additions or improvements may be readily removed without damage to the Equipment.

10. LOCATION; INSPECTION. The Equipment will not be removed from, [or if the Equipment consists of rolling stock, its permanent base will not be changed from] the Equipment Location without Lessor's prior written consent which will not be unreasonably withheld. Lessor will be entitled to enter upon the Equipment Location or elsewhere during reasonable business hours to inspect the Equipment or observe its use and operation.

11. LIENS AND TAXES. Lessee shall keep the Equipment free and clear of all levies, liens and encumbrances except those created under this Lease. Lessee shall pay, when due, all charges and taxes (local, state and federal) which may now or hereafter be imposed upon the ownership, licensing, leasing, rental, sale, purchase, possession or use of the Equipment, excluding however, all taxes on or measured by Lessor's income. If Lessee fails to pay said charges and taxes when due, Lessor shall have the right, but shall not be obligated, to pay said charges and taxes. If Lessor pays any charges or taxes, Lessee shall reimburse Lessor therefor within ten days of written demand.

12. RISK OF LOSS: DAMAGE; DESTRUCTION. Lessee assumes all risk of loss or damage to the Equipment from any cause whatsoever, and no such loss of or damage to the Equipment nor defect therein nor unfitness or obsolescence thereof shall relieve Lessee of the obligation to make Lease Payments or to perform any other obligation under this Lease. In the event of damage to any item of Equipment, Lessee will immediately place the same in good repair with the proceeds of any insurance recovery applied to the cost of such repair. If Lessor determines that any item of Equipment is lost, stolen, destroyed or damaged beyond repair (an "Event of Loss") , Lessee at the option of Lessor will: either (a) replace the same with like equipment in good repair; or (b) on the next Lease Payment date, pay Lessor the sum of : (i) all amounts then owed by Lessee to Lessor under this Lease, including the Lease payment due on such date; and (ii) an amount equal to all remaining Lease Payments to be paid during the Lease Term as set forth in Schedule B.

In the event that Lessee is obligated to make such payment with respect to less than all of the Equipment, Lessor will provide Lessee with the pro rata amount of the Lease Payment and the Balance Payment (as set forth in Schedule B) to be made by Lessee with respect to that part of the Equipment which has suffered the Event of Loss.

13. INSURANCE. Lessee will, at its expense, maintain at all times during the Lease Term, fire and extended coverage, public liability and property damage insurance with respect to the Equipment in such amounts,

covering such risks, and with such insurers as shall be satisfactory to Lessor, or, with Lessor's prior written consent, Lessee may self-insure against any or all such risks. All insurance covering loss of or damage to the Equipment shall be carried in an amount no less than the amount of the then applicable Balance Payment with respect to such Equipment. The initial amount of insurance required is set forth in Schedule B. Each insurance policy will name Lessee as an insured and Lessor or it's Assigns as an additional insured, and will contain a clause requiring the insurer to give Lessor at least thirty (30) days prior written notice of any alteration in the terms of such policy or the cancellation thereof. The proceeds of any such policies will be payable to Lessee and Lessor or it's Assigns as their interests may appear. Upon acceptance of the Equipment and upon each insurance renewal date, Lessee will deliver to Lessor a certificate evidencing such insurance. In the event that Lessee has been permitted to self-insure, Lessee will furnish Lessor with a letter or certificate to such effect. In the event of any loss, damage, injury or accident involving the Equipment, Lessee will promptly provide Lessor with written notice thereof and make available to Lessor all information and documentation relating thereto.

14. INDEMNIFICATION. Lessee shall, to the extent permitted by law, indemnify Lessor against, and hold Lessor harmless from, any and all claims, actions, proceedings, expenses, damages or liabilities, including attorneys' fees and court costs, arising in connection with the Equipment, including, but not limited to, its selection, purchase, delivery, licensing, possession, use, operation, rejection, or return and the recovery of claims under insurance policies thereon.

15. ASSIGNMENT. Without Lessor's prior written consent, Lessee will not either (i) assign, transfer, pledge, hypothecate, grant any security interest in or otherwise dispose of this Lease or the Equipment or any interest in this Lease or the Equipment or; (ii) sublet or lend the Equipment or permit it to be used by anyone other than Lessee or Lessee's employees. Lessor may assign its rights, title and interest in and to this Lease, the Equipment and any documents executed with respect to this Lease and/or grant or assign a security interest in this Lease and the Equipment, in whole or in part. Any such assignees shall have all of the rights of Lessor under this Lease. Subject to the foregoing, this Lease inures to the benefit of and is binding upon the heirs, executors, administrators, successors and assigns of the parties hereto.

Lessee covenants and agrees not to assert against the Assignee any claims or defenses by way of abatement, setoff, counterclaim, recoupment or the like which Lessee may have against Lessor. No assignment or reassignment of any Lessor's right, title or interest in this Lease or the Equipment shall be effective unless and until Lessee shall have received a notice of assignment, disclosing the name and address of each such assignee; provided, however, that if such assignment is made to a bank or trust company as paying or escrow agent for holders of certificates of participation in the Lease, it shall thereafter be sufficient that a copy of the agency agreement shall have been deposited with Lessee until Lessee shall have been advised that such agency agreement is no longer in effect. During the Lease Term Lessee shall keep a complete and accurate record of all such assignments in form necessary to comply with Section 149(a) of the Code, and the regulations, proposed or existing, from time to time promulgated thereunder. No further action will be required by Lessor or by Lessee to evidence the assignment, but Lessee will acknowledge such assignments in writing if so requested.

After notice of such assignment, Lessee shall name the Assignee as additional insured and loss payee in any insurance policies obtained or in force. Any Assignee of Lessor may reassign this Lease and its interest in the Equipment and the Lease Payments to any other person who, thereupon, shall be deemed to be Lessor's Assignee hereunder.

16. EVENT OF DEFAULT. The term "Event of Default", as used herein, means the occurrence of any one or more of the following events: (i) Lessee fails to make any Lease Payment (or any other payment) as it becomes due in accordance with the terms of the Lease when funds have been appropriated sufficient for such purpose, and any such failure continues for ten (10) days after the due date thereof; (ii) Lessee fails to perform or observe any other covenant, condition, or agreement to be performed or observed by it hereunder and such failure is not cured within twenty (20) days after written notice thereof by Lessor; (iii) the discovery by Lessor that any statement, representation, or warranty made by Lessee in this Lease or in writing delivered by Lessee pursuant hereto or in connection herewith is false, misleading or erroneous in any material respect; (iv) proceedings under any bankruptcy, insolvency, reorganization or similar legislation shall be instituted against or by Lessee, or a receiver or similar officer shall be appointed for Lessee or any of its property, and such proceedings or appointments shall not be vacated, or fully stayed, within twenty (20) days after the institution or occurrence thereof; or (v) an attachment, levy or execution is threatened or levied upon or against the Equipment.

17. REMEDIES. Upon the occurrence of an Event of Default, and as long as such Event of Default is continuing, Lessor may, at its option, exercise any one or more of the following remedies: (i) by written notice to Lessee, declare all amounts then due under the Lease, and all remaining Lease Payments due during the fiscal period in effect when the default occurs to be immediately due and payable, whereupon the same shall become immediately due and payable; (ii) by written notice to Lessee, request Lessee to (and Lessee agrees that it will), at Lessee's expense, promptly discontinue use of the Equipment, remove the Equipment from all of Lessee's computers and electronic devices, return the Equipment to Lessor in the manner set forth in Section 5 hereof, or Lessor, at its option, may enter upon the premises where the Equipment is located and take immediate possession of and remove the same; (iii) sell or lease the Equipment or sublease it for the account of Lessee, holding Lessee liable for all Lease Payments and other amounts due prior to the effective date of such selling, leasing or subleasing and for the difference between the purchase price, rental and other amounts paid by the purchaser, Lessee or sublessee pursuant to such sale, lease or sublease and the amounts payable by Lessee hereunder; (iv) promptly return the Equipment to Lessor in the manner set forth in Section 5 hereof; and (v) exercise any other right, remedy or privilege which may be available to it under applicable laws of the state of the Equipment Location or any other applicable law or proceed by appropriate court action to enforce the terms of the Lease or to recover damages for the breach of this Lease or to rescind this Lease as to any or all of the Equipment. In addition, Lessee will remain liable for all covenants and indemnities under this Lease and for all legal fees and other costs and expenses, including court costs, incurred by Lessor with respect to the enforcement of any of the remedies listed above or any other remedy available to Lessor.

18. PURCHASE OPTION. Upon thirty (30) days prior written notice from Lessee to Lessor, and provided that no Event of Default has occurred and is continuing, or no event, which with notice or lapse of time, or both could become an Event of Default, then exists, Lessee will have the right to purchase the Equipment on the Lease Payment dates set forth in Schedule B by paying to Lessor, on such date, the Lease Payment then due together with the Balance Payment amount set forth opposite such date. Upon satisfaction by Lessee of such purchase conditions, Lessor will transfer any and all of its right, title and interest in the Equipment to Lessee as is, without warranty, express or implied, except that the Equipment is free and clear of any liens created by Lessor.

19. NOTICES. All notices to be given under this Lease shall be made in writing and mailed by certified mail, return receipt requested, to the other party at its address set forth herein or at such address as the party may provide in writing from time to time. Any such notice shall be deemed to have been received five days subsequent to such mailing.

20. SECTION HEADINGS. All section headings contained herein are for the convenience of reference only and are not intended to define or limit the scope of any provision of this Lease.

21. GOVERNING LAW. This Lease shall be construed in accordance with, and governed by the laws of, the state of the Equipment Location.

22. DELIVERY OF RELATED DOCUMENTS. Lessee will execute or provide, as requested by Lessor, such other documents and information as are reasonably necessary with respect to the transaction contemplated by this Lease.

23. ENTIRE AGREEMENT; WAIVER. This Lease, together with Schedule A Equipment Lease-Purchase Agreement, Schedule B, Evidence of Insurance, Statement of Essential Use/Source of Funds, Certificate of Incumbency, Certified Lessee Resolution (if any), Information Return for Tax-Exempt Governmental Obligations and the Delivery and Acceptance Certificate and other attachments hereto, and other documents or instruments executed by Lessee and Lessor in connection herewith, constitutes the entire agreement between the parties with respect to the Lease of the Equipment, and this Lease shall not be modified, amended, altered, or changed except with the written consent of Lessee and Lessor. Any provision of the Lease found to be prohibited by law shall be ineffective to the extent of such prohibition without invalidating the remainder of the Lease.

The waiver by Lessor of any breach by Lessee of any term, covenant or condition hereof shall not operate as a waiver of any subsequent breach thereof.

24. EXECUTION IN COUNTERPARTS. This Lease may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the _____ day of December, 2019.

LESSEE:
City of Santa Rosa

By:_____
Title:_____

LESSOR:
MOTOROLA SOLUTIONS, INC.

By:_____
Title Treasurer

CERTIFICATE OF INCUMBENCY

I, _____ do hereby certify that I am the duly elected or
(Printed Name of Secretary/Clerk)
appointed and acting Secretary or Clerk of the City of Santa Rosa, an entity duly organized and existing under the laws of the **State of California** that I have custody of the records of such entity, and that, as of the date hereof, the individual(s) executing this agreement is/are the duly elected or appointed officer(s) of such entity holding the office(s) below his/her/their respective name(s). I further certify that (i) the signature(s) set forth above his/her/their respective name(s) and title(s) is/are his/her/their true and authentic signature(s) and (ii) such officer(s) have the authority on behalf of such entity to enter into that certain Equipment Lease Purchase Agreement number**24719**, between City of Santa Rosa and Motorola Solutions, Inc. If the initial insurance requirement on Schedule B exceeds $1,000,000,attached as part of the Equipment Lease Purchase Agreement is a Certified Lessee Resolution adopted by the governing body of the entity.

IN WITNESS WHEREOF, I have executed this certificate and affixed the seal of City of Santa Rosa , hereto this _____ day of December, 2019.

By: _____ SEAL
(Signature of Secretary/Clerk)

OPINION OF COUNSEL

With respect to that certain Equipment Lease-Purchase Agreement 24719 by and between Motorola Solutions, Inc. and the Lessee, I am of the opinion that: (i) the Lessee is, within the meaning of Section 103 of the Internal Revenue Code of 1986, a state or a fully constituted political subdivision or agency of the State of the Equipment Location described in Schedule A hereto; (ii) the execution, delivery and performance by the Lessee of the Lease have been duly authorized by all necessary action on the part of the Lessee, (III) the Lease constitutes a legal, valid and binding obligation of the Lessee enforceable in accordance with its terms; and (iv) Lessee has sufficient monies available to make all payments required to be paid under the Lease during the current fiscal year of the Lease, and such monies have been properly budgeted and appropriated for this purpose in accordance with State law. This opinion may be relied upon by the Lessor and any assignee of the Lessor's rights under the Lease.

_____

Attorney for City of Santa Rosa

SCHEDULE A
EQUIPMENT LEASE-PURCHASE AGREEMENT

Schedule A Lease Number: **24719**

This Equipment Schedule is hereby attached to and made a part of that certain Equipment Lease-Purchase Agreement Number **24719** ("Lease"), between Lessor and Lessee.

Lessor hereby leases to Lessee under and pursuant to the Lease, and Lessee hereby accepts and leases from Lessor under and pursuant to the Lease, subject to and upon the terms and conditions set forth in the Lease and upon the terms set forth below, the following items of Equipment

QUANTITY	DESCRIPTION (Manufacturer, Model, and Serial Nos.)
	Refer to attached Equipment List.
Equipment Location:	

Initial Term: 36 Months

Commencement Date: **12/15/2019**
First Payment Due Date: **12/15/2020**

3 annual payments as outlined in the attached Schedule B, plus Sales/Use Tax of $0.00, payable on the Lease Payment Dates set forth in Schedule B.

SECTION 3

EQUIPMENT LIST

3.1 INFRASTRUCTURE EQUIPMENT LIST

QTY	NOMENCLATURE	DESCRIPTION
1	SQM01SUM0274	SINGLE ZONE TRUNKED L CORE
1	CA02648AD	ADD: EXPANSION OFF L CORE CAPABILTI
2	UA00159AA	ADD: P25 PHASE 2 TDMA TRKNG OP SITE
15	UA00161AA	ADD: P25 PHASE 2 TDMA SW BASE RADIO
2	UA00407AA	ADD: CLASSIC DATA-P25 TRNK SITE
1	UA00482AA	ADD : LOCATION ON PTT 500 USER LICE
1	UA00521AA	ADD: INTERFERENCE LOCATOR UNC SYSTE
1	HKVN4621A	APX RM DOWNLOAD
1	TT3492	Z2 G4 MINI WORKSTATION NON RETURNAB
1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
1	T7885	MCAFEE WINDOWS AV CLIENT
1	DSTG191B	TECH GLOBAL EVOLUTION SERIES 19INCH
1	TT3492	Z2 G4 MINI WORKSTATION NON RETURNAB
1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
1	T7885	MCAFEE WINDOWS AV CLIENT
1	DSTG191B	TECH GLOBAL EVOLUTION SERIES 19INCH
2	T8555	EDGE ROUTER & FIREWALL DC
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
2	CLN1868	2930F 24-PORT SWITCH
1	SQM01SUM0257	INTELLIGENT MIDDLEWARE
1	CA03062AA	ADD: IMW HIGH TIER/NON-REDUNDANT
1	CA02384AE	ADD: UNIFIED NETWORK SERVICES SOFTW
1	CA02354AA	ADD: ASTRO NETWORK APPLICATION INTE
1	UA00014AA	ADD: 401-500 RESOURCES FOR LOCATION
1	UA00055AA	ADD: 401-500 RESOURCES FOR PRESENCE
1	CA02053AE	ADD: SUPPLEMENTAL CD IA (IMW)
10	BLN1311	MCC 7500 / MCC 7100 TRUNKING OPERAT
1	T7321	GCM 8000 COMPARATOR
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION

QTY	NOMENCLATURE	DESCRIPTION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	T8343	GSERIES SOFTWARE LICENSING
2	UA00402AA	ADD: GSERIES CM-P25 TRNK IP
2	UA00418AA	ADD: P25 TDMA TRNK COMPARATOR SW
1	T7321	GCM 8000 COMPARATOR
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
2	CA01183AA	GCM 8000 COMPARATOR
2	CA01185AA	ADD: IP BASED MULTISITE OPERATION
2	CA01901AA	ADD: P25 TDMA COMPARATOR SOFTWARE
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	T8343	GSERIES SOFTWARE LICENSING
2	UA00402AA	ADD: GSERIES CM-P25 TRNK IP
2	UA00418AA	ADD: P25 TDMA TRNK COMPARATOR SW
1	T7321	GCM 8000 COMPARATOR
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA01183AA	GCM 8000 COMPARATOR
1	CA01185AA	ADD: IP BASED MULTISITE OPERATION
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	T8343	GSERIES SOFTWARE LICENSING
1	UA00402AA	ADD: GSERIES CM-P25 TRNK IP
1	T7038	GCP 8000 SITE CONTROLLER
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
1	CA01194AA	ADD: IP BASED MULTISITE SITE CONTRO
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE

QTY	NOMENCLATURE	DESCRIPTION
1	T8343	GSERIES SOFTWARE LICENSING
1	UA00405AA	ADD: GSERIES SC-P25 TRNK MS IP
1	T7038	GCP 8000 SITE CONTROLLER
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER
1	CA01194AA	ADD: IP BASED MULTISITE SITE CONTRO
1	CA03111AA	ADD: CEC COMPLIANCE
1	X153AW	ADD: RACK MOUNT HARDWARE
1	CA01400AA	ADD: POWER CABLE, DC
1	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	T8343	GSERIES SOFTWARE LICENSING
1	UA00405AA	ADD: GSERIES SC-P25 TRNK MS IP
1	DSTRAK91008EDC	PRIME/MASTER SITE REDUNDANT MODULAR
50	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY
4	DDN9769	F1PNM-HC 1/4" TYPE N MALE CONNECTOR
2	CLN1866	FRU: 1M DAC CABLE
2	T8555	EDGE ROUTER & FIREWALL DC
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
2	T8555	EDGE ROUTER & FIREWALL DC
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
4	CLN1868	2930F 24-PORT SWITCH
4	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
1	DSDST20A	DISTRIBUTION PANEL (UL) W/ REAR COV
5	DSPBA5	PBA PLUG-IN BREAKER 5 AMP
9	DSPBA20	PBA PLUG-IN BREAKER 20 AMP
1	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A P
1	THN1012	RACK 7' OPEN
1	DSTRAK91061	FOUR PORT DDM
1	CLN1868	2930F 24-PORT SWITCH
1	CLN1866	FRU: 1M DAC CABLE
3	CLN1868	2930F 24-PORT SWITCH
1	CLN1866	FRU: 1M DAC CABLE
1	DLN6966	FRU: GCP 8000/GCM 8000/GPB 8000
1	DLN6455	CONFIGURATION/SERVICE SOFTWARE
1	DSPBA5	PBA PLUG-IN BREAKER 5 AMP

QTY	NOMENCLATURE	DESCRIPTION
1	DSPBA20	PBA PLUG-IN BREAKER 20 AMP
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00855AA	ADD: 700/800 MHZ
1	X305AC	ADD: QTY (5) GTR 8000 BASE RADIOS
5	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO
1	CA03111AA	ADD: CEC COMPLIANCE
5	CA01842AA	ADD: P25 TDMA SOFTWARE
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
5	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILIT
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00882AA	ADD: 700 MHZ TX FILTER W/PMU
2	CA01536AA	ADD: GPB 8000 REFERENCE DISTRIBUTIO
2	CA01537AA	ADD: REFERENCE DISTRIBUTION SOFTWAR
1	CA01402AA	ADD: 7.0 FT OPEN RACK
1	T8343	GSERIES SOFTWARE LICENSING
5	UA00400AA	ADD: GSERIES BR-P25 TRNK MS IP
2	UA00409AA	ADD: GSERIES RDM
2	PMUG1017A	GNSS REMOTE RECEIVER ASSY
2	DSWM4	HEAVY DUTY W STYLE WALL MOUNT WITH
2	DSP04268	ALUMINUM 6061-T6. PIPE 1 INCH SCHED
2	DS30C87465CO1	125FT OUTDOOR UV PROTECTED CABLE 6
2	T8547	SITE AND HUB ROUTER AND FIREWALL -
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
1	DS428E83I01C48	CONTROL MONITORING UNIT, NON-DIVERS
1	DS428E83I01T	TTA, NON-DIVERSITY, 796-824 MHZ, RE
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO RE
3	V592	AAD TERM BLCK & CONN WI
1	VA00905	ADD:24/48 VDC PS TO SM
1	DSTRAK91061	FOUR PORT DDM
1	DLN6895	FRU: PA 7/800 MHZ
1	DLN6885	FRU: XCVR 7/800 MHZ V2
1	DLN6634	FRU: 700/800 MHZ SITE LNA

QTY	NOMENCLATURE	DESCRIPTION
1	DLN1306	FRU: 700/800 MHZ CABINET RMC MODULE
1	DLN6805	FRU: ENERGY EFFICIENT POWER SUPPLY
1	DLN6898	FRU: FAN MODULE
1	DLN6677	FRU: G-SERIES XHUB
1	DLN6455	CONFIGURATION/SERVICE SOFTWARE
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00855AA	ADD: 700/800 MHZ
1	X305AC	ADD: QTY (5) GTR 8000 BASE RADIOS
5	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO
1	CA03111AA	ADD: CEC COMPLIANCE
5	CA01842AA	ADD: P25 TDMA SOFTWARE
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
5	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILIT
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER
1	CA00882AA	ADD: 700 MHZ TX FILTER W/PMU
2	CA01536AA	ADD: GPB 8000 REFERENCE DISTRIBUTIO
2	CA01537AA	ADD: REFERENCE DISTRIBUTION SOFTWAR
1	CA01402AA	ADD: 7.0 FT OPEN RACK
1	T8343	GSERIES SOFTWARE LICENSING
5	UA00400AA	ADD: GSERIES BR-P25 TRNK MS IP
2	UA00409AA	ADD: GSERIES RDM
2	PMUG1017A	GNSS REMOTE RECEIVER ASSY
2	DSWM4	HEAVY DUTY W STYLE WALL MOUNT WITH
2	DSP04268	ALUMINUM 6061-T6. PIPE 1 INCH SCHED
2	DS30C87465CO1	125FT OUTDOOR UV PROTECTED CABLE 6
2	T8547	SITE AND HUB ROUTER AND FIREWALL -
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
1	DSDST20A	DISTRIBUTION PANEL (UL) W/ REAR COV
5	DSPBA5	PBA PLUG-IN BREAKER 5 AMP
3	DSPBA20	PBA PLUG-IN BREAKER 20 AMP
1	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A P
1	DS428E83I01C48	CONTROL MONITORING UNIT, NON-DIVERS
1	DS428E83I01T	TTA, NON-DIVERSITY, 796-824 MHZ, RE

QTY	NOMENCLATURE	DESCRIPTION
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO RE
3	V592	AAD TERM BLCK & CONN WI
1	VA00905	ADD:24/48 VDC PS TO SM
1	DSCC80706T5	OMNI, CORP COLLINEAR, 6DDBD, 746-87
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2
5	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
1	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
7	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY
1	DDN9769	F1PNM-HC 1/4" TYPE N MALE CONNECTOR
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY
1	DSCC80706T5	OMNI, CORP COLLINEAR, 6DDBD, 746-87
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE

QTY	NOMENCLATURE	DESCRIPTION
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2
5	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
1	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
7	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY
1	DDN9769	F1PNM-HC 1/4" TYPE N MALE CONNECTOR
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY
1	DSCC80706T5	OMNI, CORP COLLINEAR, 6DDBD, 746-87
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5DFD	D-CLASS 7-16 DIN FEMALE FOR AVA5-50
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DSTSXDFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH P
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
1	DSCC80706T5	OMNI, CORP COLLINEAR, 6DDBD, 746-87
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5DFD	D-CLASS 7-16 DIN FEMALE FOR AVA5-50
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE

QTY	NOMENCLATURE	DESCRIPTION
1	DSTSXDFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH P
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
1	DSDCPSX2003BS	48V, 200A DC POWER SYS, SEISMIC, 84
4	DSDCR50T	LA MARCHE DCPS 50A RECTIFIER
3	DSWL4GM200FT	180 AH, 48V, VLRA FRONT CONNECTED
8	DSSP4KCDPD70B1	BREAKER, 70 AMP
6	DSP4ALMLB1D5B	BREAKER 5 AMP FOR DCPS POWER SYSTEM
1	DSLMHFX450STT	48V, 450A DC POWER SYSTEM RACKED IN
5	DSLMHF7548VZE1T	48V, 75A LMHF RECTIFIER (T)
1	DSIX5USN23KIT3	5U, 23IN 48V TO 120V, 6KVA INVERTER
1	DSWLBG896ST	BATTERY, 896AH 48VDC STRING CONSIST
8	DSSP4KCDPD70B1	BREAKER, 70 AMP
6	DSP4ALMLB1D5B	BREAKER 5 AMP FOR DCPS POWER SYSTEM
1	DSMW3HE11473BE	MOTOROLA 7705 SAR-A BUNDLE - REDUND
1	DSMW3HE11473BE	MOTOROLA 7705 SAR-A BUNDLE - REDUND
1	DSMW3HE11473BE	MOTOROLA 7705 SAR-A BUNDLE - REDUND
1	T8586	FORTINET FIREWALL APPLIANCE
1	DSMW3HE11473BF	MOTOROLA 7705 SAR-A BUNDLE - SIMPLE
1	DQMWSTROSAPDRF	19.US.875981.03 INCL ITEMS 1.01-1.03, 5.01, 6.01 9500MPR, OPT & ADJ
1	DQMWSTROSAPDAD	19.US.875981.03 INCLUDES ITEMS 1.04 ANTENNA SYS

3.2 R5 SKYFARM EQUIPMENT LIST

QTY	NOMENCLATURE	DESCRIPTION
1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
1	CA00718AA	ADD: ASTRO SYSTEM RELEASE 7.18
1	CA00855AA	ADD: 700/800 MHZ
1	X305AC	ADD: QTY (5) GTR 8000 BASE RADIOS
5	CA01193AA	ADD: IP BASED MULTISITE BASE RADIO
1	CA03111AA	ADD: CEC COMPLIANCE
5	CA01842AA	ADD: P25 TDMA SOFTWARE
1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
5	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
1	CA00862AA	ADD: SITE & CABINET RMC W/CAPABILIT
1	CA00879AA	ADD: PRIMARY 6 PORT CAVITY COMBINER

QTY	NOMENCLATURE	DESCRIPTION
1	CA00882AA	ADD: 700 MHZ TX FILTER W/PMU
2	CA01536AA	ADD: GPB 8000 REFERENCE DISTRIBUTIO
2	CA01537AA	ADD: REFERENCE DISTRIBUTION SOFTWAR
2	CA00027AB	ADD: CABINET DOOR, SOLID
2	CA00027AC	ADD: FRONT/BACK DOOR, LOUVERED
1	CA00293AA	ADD: 43RU SCHROFF CABINET
1	T8343	GSERIES SOFTWARE LICENSING
5	UA00400AA	ADD: GSERIES BR-P25 TRNK MS IP
2	UA00409AA	ADD: GSERIES RDM
2	PMUG1017A	GNSS REMOTE RECEIVER ASSY
2	DSWM4	HEAVY DUTY W STYLE WALL MOUNT WITH
2	DSP04268	ALUMINUM 6061-T6. PIPE 1 INCH SCHED
2	DS30C87465CO1	125FT OUTDOOR UV PROTECTED CABLE 6
2	T8547	SITE AND HUB ROUTER AND FIREWALL -
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
4	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
1	DSDST20A	DISTRIBUTION PANEL (UL) W/ REAR COV
5	DSPBA5	PBA PLUG-IN BREAKER 5 AMP
3	DSPBA20	PBA PLUG-IN BREAKER 20 AMP
1	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A P
1	DS428E83I01C48	CONTROL MONITORING UNIT, NON-DIVERS
1	DS428E83I01T	TTA, NON-DIVERSITY, 796-824 MHZ, RE
1	F4544	SITE MANAGER ADVANCED
1	VA00872	ADD: SDM ASTRO RTU FW CURR ASTRO RE
3	V592	AAD TERM BLCK & CONN WI
1	VA00905	ADD:24/48 VDC PS TO SM
1	DSCC80708T2	OMNI, CORP COLLINEAR, 8DBD, 746-870
2	DSUC114	ANTENNA CLAMP 60 TO 115MM
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
5	TDN9289	221213 CABLE WRAP WEATHERPROOFING
5	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5NFS	N FEMALE FOR AVA5-50 CABLE

QTY	NOMENCLATURE	DESCRIPTION
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
200	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN
1	DDN1089	L4TNF-PSA TYPE N FEMALE PS FOR 1/2
5	DSSG1212B2U	SG12-12B2U, SUREGROUND 1/2", 48"
1	DSL4SGRIP	L4SGRIP SUPPORT HOIST GRIP 1/2" LDF
7	MDN6816	STD HANGERS FOR 1/2IN CABLE & EW180
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
1	DS1090501WA	RF SPD, 700-1000MHZ BROADBAND 15 VD
25	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY
1	DDN9769	F1PNM-HC 1/4" TYPE N MALE CONNECTOR
25	L1702	FSJ4-50B CABLE: 1/2" SUPERFLEX POLY
1	DSBPA74966013	PANEL ANTENNA, 11DBD, 746-960MHZ, 6
15	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
2	TDN9289	221213 CABLE WRAP WEATHERPROOFING
200	DSAVA550	AVA5-50, COAXIAL CABLE, CORRUGATED
2	DSA5DFD	D-CLASS 7-16 DIN FEMALE FOR AVA5-50
5	DSSG7812B2U	SG78-12B2U SUREGROUND GROUNDING KIT
1	DSL5SGRIP	L5SGRIP 7/8" SUPPORT HOIST GRIP
7	MDN6817	42396A-5 7/8" CABLE HANGER STAINLE
1	DSTSXDFMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH P
1	DSGSAKITD	GROUND STRAP KIT - DIN
25	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POL
2	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2
1	DSDCPSX2003BS	48V, 200A DC POWER SYS, SEISMIC, 84
4	DSDCR50T	LA MARCHE DCPS 50A RECTIFIER
3	DSWL4GM200FT	180 AH, 48V, VLRA FRONT CONNECTED
8	DSSP4KCDPD70B1	BREAKER, 70 AMP
6	DSP4ALMLB1D5B	BREAKER 5 AMP FOR DCPS POWER SYSTEM
1	DSMW3HE11473BE	MOTOROLA 7705 SAR-A BUNDLE - REDUND

3.3 SUBSCRIBER EQUIPMENT LIST

QTY	NOMENCLATURE	DESCRIPTION
275	H91TGD9PW5 N	APX 8000 ALL BAND PORTABLE MODEL 1.5
275	G996	ADD: PROGRAMMING OVER P25 (OTAP)
275	H38	ADD: SMARTZONE OPERATION
275	Q361	ADD: P25 9600 BAUD TRUNKING
275	Q58AU	ENH: 3 YEAR SERVICE FROM THE START LITE
275	Q629	ENH: AES ENCRYPTION
275	Q806	ADD: ASTRO DIGITAL CAI OPERATION
275	QA00580	ADD: TDMA OPERATION
275	QA05508	DEL: DELETE VHF BAND
275	QA09001	ADD: WIFI CAPABILITY
15	NNTN8844A	CHARGER, MULTI-UNIT, IMPRES 2, 6-DISP, NA/LA-PLUG, ACC USB CHGR
200	NNTN8860A	CHARGER, SINGLE-UNIT, IMPRES 2, 3A, 115VAC, US/NA
275	PMMN4069AL	MICROPHONE,IMPRES RSM, 3.5MM JACK, IP55
140	M37TSS9PW1 N	APX8500 ALL BAND MP MOBILE
140	B18	ADD: AUXILARY SPEAKER MOTORCYCLE
140	G361	ENH: P25 TRUNKING SOFTWARE APX
140	G442	ADD: O5 CONTROL HEAD
140	G51	ENH: SMARTZONE OPERATION APX
140	G67	ADD: REMOTE MOUNT MP
140	G78	ADD: 3Y ESSENTIAL SERVICE
140	G806	ENH: ASTRO DIGITAL CAI OP APX
140	G843	ADD: AES ENCRYPTION APX
140	G996	ENH: OVER THE AIR PROVISIONING
140	GA00580	ADD: TDMA OPERATION APX
140	GA01513	ADD: ALL BAND MOBILE ANTENNA (7/8/V/U)
140	GA01517	DEL: NO J600 ADAPTER CABLE NEEDED
140	GA05508	DEL: DELETE VHF BAND
140	GA09001	ADD: WI-FI CAPABILITY
140	W22	ADD: STD PALM MICROPHONE APEX
140	GA00250	ADD: WIFI/GNSS FLEXIBLE CABLE LMR195
140	G444	ADD: APX CONTROL HEAD SOFTWARE
1	T8476B	KVL 5000
1	CA00182AW	ADD: AES ENCRYPTION SOFTWARE
1	CA00243AJ	ADD: ADP PRIVACY
1	CA03358AA	ADD: ASTRO 25 MODE

QTY	NOMENCLATURE	DESCRIPTION
1	CA03467AA	ADD: NORTH AMERICA MICRO USB CHARGER 100/240V
1	DQUUSBOTG	STARTECH.COM 5IN MICRO USB TO USB OTG HOST ADAPTER M/F - USB ADAPTER

City of Santa Rosa (Schedule B)

Compound Period:	Annual
Nominal Annual Rate:	0.000%

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Lease	12/15/2019	$ 3,458,186.69	1		
2	Lease Payment	12/15/2020	$ 1,152,728.90	3	Annual	12/15/2022

AMORTIZATION SCHEDULE - Normal Amortization, 360 Day Year

	Date	Lease Payment	Interest	Principal	Balance
Lease	12/15/2019				$ 3,458,186.69
1	12/15/2020	$ 1,152,728.90	$ -	$ 1,152,728.90	$ 2,305,457.79
2	12/15/2021	$ 1,152,728.90	$ -	$ 1,152,728.90	$ 1,152,728.89
3	12/15/2022	$ 1,152,728.90	$ 0.01	$ 1,152,728.89	$ -
Grand Totals		$ 3,458,186.70	$ 0.01	$ 3,458,186.69	

ORIGINAL ISSUE DISCOUNT:

Lessee acknowledges that the amount financed by Lessor is $3,305,645.59 and that such amount is the issue price for this Lease Payment Schedule for federal income tax purposes. The difference between the principal amount of this Lease Payment Schedule and the issue price is original issue discount as defined in Section 1288 of the Code. The yield for this Lease Payment Schedule for federal income tax purposes is 2.29%. Such issue price and yield will be stated in the applicable Form 8038-G.

INITIAL INSURANCE REQUIREMENT: $3,458,186.69

Except as specifically provided in Section five of the Lease hereof, Lessee agrees to pay to Lessor or its assignee the Lease Payments, including the interest portion, in the amounts and dates specified in the above payment schedule.

EVIDENCE OF INSURANCE

Fire, extended coverage, public liability and property damage insurance for all of the Equipment listed on Schedule A number **24719** to that Equipment Lease Purchase Agreement number **24719** will be maintained by the City of Santa Rosa as stated in the Equipment Lease Purchase Agreement.

This insurance is provided by:

_____
Name of insurance provider

_____
Address of insurance provider

_____
City, State and Zip Code

_____
Phone number of local insurance provider

_____
E-mail address

In accordance with the Equipment Lease Purchase Agreement Number **24719** , City of Santa Rosa , hereby certifies that following coverage are or will be in full force and effect:

Type	**Amount**	**Effective Date**	**Expiration Date**	**Policy Number**
Fire and Extended Coverage	_____	_____	_____	_____
Property Damage	_____	_____	_____	_____
Public Liability	_____	_____	_____	_____

Certificate shall include the following:
Description: All Equipment listed on Schedule A number 24719 to that Equipment Lease Purchase Agreement number 24719. Please include equipment cost equal to the Initial Insurance Requirement on Schedule B to Equipment Lease Purchase Agreement number 24719 and list any deductibles.

Certificate Holder:
MOTOROLA SOLUTIONS, INC. and or its assignee as additional insured and loss payee
1303 E. Algonquin Road
Schaumburg, IL 60196

If self insured, contact Motorola representative for template of self insurance letter.

STATEMENT OF ESSENTIAL USE/SOURCE OF FUNDS

To further understand the essential governmental use intended for the equipment together with an understanding of the sources from which payments will be made, please address the following questions by completing this form or by sending a separate letter:

1. What is the specific use of the equipment?

2. Why is the equipment essential to the operation of **City of Santa Rosa?**

3. Does the equipment replace existing equipment?

   If so, why is the replacement being made?

4. Is there a specific cost justification for the new equipment?

   If yes, please attach outline of justification.

5. What is the expected source of funds for the payments due under the Lease for the current fiscal year and future fiscal years?

CERTIFIED LESSEE RESOLUTION

At a duly called meeting of the Governing Body of the Lessee (as defined in the Lease) held on December_____, 2019, the following resolution was introduced and adopted.
BE IT RESOLVED by the Governing Board of Lessee as follows:

1. Determination of Need. The Governing Body of Lessee has determined that a true and very real need exists for the acquisition of the Equipment or other personal property described in the Lease between City of Santa Rosa (Lessee) and Motorola Solutions, Inc. (Lessor).

2. Approval and Authorization. The Governing body of Lessee has determined that the Lease, substantially in the form presented to this meeting, is in the best interests of the Lessee for the acquisition of such Equipment or other personal property, and the Governing Board hereby approves the entering into of the Lease by the Lessee and hereby designates and authorizes the following person(s) referenced in the Lease to execute and deliver the Lease on Lessee's behalf with such changes thereto as such person deems appropriate, and any related documents, including any escrow agreement, necessary to the consummation of the transactions contemplated by the Lease.

3. Adoption of Resolution. The signatures in the Lease from the designated individuals for the Governing Body of the Lessee evidence the adoption by the Governing Body of this Resolution.

Form **8038-G** (Rev. September 2018)

Department of the Treasury
Internal Revenue Service

Information Return for Tax-Exempt Governmental Bonds

▶ **Under Internal Revenue Code section 149(e)**
▶ **See separate instructions.**
Caution: *If the issue price is under $100,000, use Form 8038-GC.*
▶ **Go to *www.irs.gov/F8038G* for instructions and the latest information.**

OMB No. 1545-0720

Part I Reporting Authority

If **Amended Return**, check here ▶ ☐

1 Issuer's name
City of Santa Rosa

2 Issuer's employer identification number (EIN)

3a Name of person (other than issuer) with whom the IRS may communicate about this return (see instructions)

3b Telephone number of other person shown on 3a

4 Number and street (or P.O. box if mail is not delivered to street address) — Room/suite
100 Santa Rosa Ave

5 Report number *(For IRS Use Only)*
3

6 City, town, or post office, state, and ZIP code
Santa Rosa CA 95404

7 Date of issue
12/15/2019

8 Name of issue
Equipment Lease-Purchase Agreement 24719

9 CUSIP number

10a Name and title of officer or other employee of the issuer whom the IRS may call for more information (see instructions)

10b Telephone number of officer or other employee shown on 10a

Part II Type of Issue (enter the issue price). See the instructions and attach schedule.

11	Education	11	
12	Health and hospital	12	
13	Transportation	13	
14	Public safety	14	3,305,645.59
15	Environment (including sewage bonds)	15	
16	Housing	16	
17	Utilities	17	
18	Other. Describe ▶	18	
19a	If bonds are TANs or RANs, check only box 19a ▶ ☐		
b	If bonds are BANs, check only box 19b ▶ ☐		
20	If bonds are in the form of a lease or installment sale, check box ▶ ☑		

Part III Description of Bonds. Complete for the entire issue for which this form is being filed.

	(a) Final maturity date	(b) Issue price	(c) Stated redemption price at maturity	(d) Weighted average maturity	(e) Yield
21	12/15/2022	$ 3,305,645.59	$ 3,305,645.59	3 years	2.29 %

Part IV Uses of Proceeds of Bond Issue (including underwriters' discount)

22	Proceeds used for accrued interest			22	
23	Issue price of entire issue (enter amount from line 21, column (b))			23	3,305,645.59
24	Proceeds used for bond issuance costs (including underwriters' discount)	24			
25	Proceeds used for credit enhancement	25			
26	Proceeds allocated to reasonably required reserve or replacement fund	26			
27	Proceeds used to refund prior tax-exempt bonds. Complete Part V	27			
28	Proceeds used to refund prior taxable bonds. Complete Part V	28			
29	Total (add lines 24 through 28)			29	
30	Nonrefunding proceeds of the issue (subtract line 29 from line 23 and enter amount here)			30	3,305,645.59

Part V Description of Refunded Bonds. Complete this part only for refunding bonds.

31	Enter the remaining weighted average maturity of the tax-exempt bonds to be refunded ▶	years
32	Enter the remaining weighted average maturity of the taxable bonds to be refunded ▶	years
33	Enter the last date on which the refunded tax-exempt bonds will be called (MM/DD/YYYY) ▶	
34	Enter the date(s) the refunded bonds were issued ▶ (MM/DD/YYYY)	

Part VI Miscellaneous

35	Enter the amount of the state volume cap allocated to the issue under section 141(b)(5)	35		
36a	Enter the amount of gross proceeds invested or to be invested in a guaranteed investment contract (GIC). See instructions	36a		
b	Enter the final maturity date of the GIC ▶ (MM/DD/YYYY) _____			
c	Enter the name of the GIC provider ▶ _____			
37	Pooled financings: Enter the amount of the proceeds of this issue that are to be used to make loans to other governmental units	37		

38a If this issue is a loan made from the proceeds of another tax-exempt issue, check box ▶ ☐ and enter the following information:

b Enter the date of the master pool bond ▶ (MM/DD/YYYY) _____

c Enter the EIN of the issuer of the master pool bond ▶ _____

d Enter the name of the issuer of the master pool bond ▶ _____

39 If the issuer has designated the issue under section 265(b)(3)(B)(i)(III) (small issuer exception), check box . . . . ▶ ☐

40 If the issuer has elected to pay a penalty in lieu of arbitrage rebate, check box . . . . . ▶ ☐

41a If the issuer has identified a hedge, check here ▶ ☐ and enter the following information:

b Name of hedge provider ▶ _____

c Type of hedge ▶ _____

d Term of hedge ▶ _____

42 If the issuer has superintegrated the hedge, check box . . . . . ▶ ☐

43 If the issuer has established written procedures to ensure that all nonqualified bonds of this issue are remediated according to the requirements under the Code and Regulations (see instructions), check box . . . . . ▶ ☐

44 If the issuer has established written procedures to monitor the requirements of section 148, check box . . . . . ▶ ☐

45a If some portion of the proceeds was used to reimburse expenditures, check here ▶ ☐ and enter the amount of reimbursement . . . . . ▶ _____

b Enter the date the official intent was adopted ▶ (MM/DD/YYYY)

Signature and Consent

Under penalties of perjury, I declare that I have examined this return and accompanying schedules and statements, and to the best of my knowledge and belief, they are true, correct, and complete. I further declare that I consent to the IRS's disclosure of the issuer's return information, as necessary to process this return, to the person that I have authorized above.

▶ _____ Signature of issuer's authorized representative Date

▶ _____ Type or print name and title

Paid Preparer Use Only

Print/Type preparer's name	Preparer's signature	Date	Check ☐ if self-employed	PTIN

Firm's name ▶ | Firm's EIN ▶

Firm's address ▶ | Phone no.

EQUIPMENT LEASE PURCHASE AGREEMENT DELIVERY AND ACCEPTANCE CERTIFICATE

The undersigned Lessee hereby acknowledges receipt of the Equipment described below ("Equipment") and Lessee hereby accepts the Equipment after full inspection thereof as satisfactory for all purposes of lease Schedule A to the Equipment Lease Purchase Agreement executed by Lessee and Lessor.

Equipment Lease Purchase Agreement No.: 24719 Lease Schedule A No. : 24719

EQUIPMENT INFORMATION

QUANTITY	MODEL NUMBER	EQUIPMENT DESCRIPTION
		Equipment referenced in lease Schedule A# 24719. See Schedule A for a detailed Equipment List.

LESSEE:

City of Santa Rosa

By: _____

Date: _____

CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
06/10/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Aon Risk Services Central, Inc.
Chicago IL Office
200 East Randolph
Chicago IL 60601 USA

CONTACT NAME:
PHONE (A/C. No. Ext): (866) 283-7122 **FAX (A/C. No.):** (800) 363-0105
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	Lloyd's Syndicate No. 4711	AA1120090
INSURER B:	Liberty Mutual Fire Ins Co	23035
INSURER C:	Liberty Insurance Corporation	42404
INSURER D:		
INSURER E:		
INSURER F:		

INSURED
Motorola Solutions, Inc.
Attn: Karen Napier
500 West Monroe
Chicago IL 60661 USA

COVERAGES **CERTIFICATE NUMBER:** 570076654652 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:	Y		TB2641005169079	07/01/2019	07/01/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$1,000,000 $250,000 $10,000 $1,000,000 $2,000,000 $1,000,000
B	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY	Y		AS2-641-005169-019	07/01/2019	07/01/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$1,000,000
	UMBRELLA LIAB OCCUR **EXCESS LIAB** CLAIMS-MADE DED RETENTION						EACH OCCURRENCE AGGREGATE	
C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y/N ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	WA764D005169089 All Other States	07/01/2019	07/01/2020	X PER STATUTE OTH-ER	
C			Y	WC7641005169099 WI	07/01/2019	07/01/2020	E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT	$1,000,000 $1,000,000 $1,000,000
A	E&O-MPL-Primary			FSCE01900661	07/01/2019	07/01/2020	Each Claim Policy Aggregate	$2,000,000 $2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: L2 Core and 10 Positions MCC 7500 Dispatch Console. The City of Santa Rosa, its officers, agents, employees and volunteers are included as Additional Insured under the General Liability and Automobile Liability policies where required in writing and executed contract. The E&O-MP-Primary policy includes Cyber Liability coverage. A Waiver of Subrogation in favor of the City of Santa Rosa, its officers, agents, employees and volunteers is provided under the Workers' Compensation policy where required in writing and executed contract.

CERTIFICATE HOLDER

City of Santa Rosa
Santa Rosa Police Department
965 Sonoma Ave.
Santa Rosa CA 95404 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Central, Inc.

Holder Identifier :

Certificate No : 570076654652

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT - CALIFORNIA

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

You must maintain payroll records accurately segregating the remuneration of your employees while engaged in the work described in the Schedule.

The additional premium for this endorsement shall be 2% of the California workers' compensation premium otherwise due on such remuneration.

Schedule

Additional premium is a percent of the California Manual Workers Compensation premium. Subject to a minimum premium charge of $ 250

Person or Organization	Job Description
Where required by contract or written agreement prior to loss and allowed by law	

Issued by Liberty Insurance Corporation 21814

For attachment to Policy No. WA7-64D-005169-089 Effective Date Premium $

Issued to Motorola Solutions, Inc.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Not applicable in Kentucky, New Hampshire and New Jersey

The waiver does not apply to any right to recover payments which the Minnesota Workers Compensation Reinsurance Association may have or pursue under M.S. 79.36.

Schedule

Any person or organization for which the employer has agreed by written contract, executed prior to loss, may execute a waiver of subrogation. However, for purposes of work performed by the employer in Missouri, this waiver of subrogation does not apply to any construction group of classifications as designated by the waiver of right to recover from others (subrogation) rule in our manual.

Where required by contract or written contract prior to loss and allowed by law

In the states of Alabama, Arizona, Arkansas, Colorado, Delaware, Dist. Of Col, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Mexico, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Vermont, West Virginia, the premium charge is 2% of the total manual premium, subject to a minimum premium of $100 per policy.

In the states of Connecticut, Florida, Iowa, Maryland, Nebraska, Oregon, the premium charge is 1% of the total manual premium, subject to a minimum premium of $250 per policy.

In the state of Hawaii, the premium charge is $250 and determined as follows: The premium charge for this endorsement is 1% of the total manual premium, subject to a minimum premium of $250 per policy.

In the state of Louisiana, the premium charge is 2% of the total standard premium, subject to a minimum premium of $250 per policy.

In the state of Massachusetts, the premium charge is 1% of the total manual premium.

In the state of New York, Tennessee, the premium charge is 2% of the total manual premium, subject to a minimum premium of $250 per policy.

In the state of Virginia, the premium charge is 5% of the total manual premium, subject to a minimum premium of $250 per policy.

Issued by Liberty Insurance Corporation 21814

For attachment to Policy No. WA7-64D-005169-089 Effective Date Premium $

Issued to Motorola Solutions, Inc.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED FOR COVERED AUTOS LIABILITY COVERAGE

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" for Covered Autos Liability Coverage under the Who Is An Insured provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

SCHEDULE

Name Of Person(s) Or Organization(s):
Any person or organization whom you have agreed in writing to add as an additional insured, but only to coverage and minimum limits of insurance required by the written agreement, and in no event to exceed either the scope of coverage or the limits of insurance provided in this policy.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Each person or organization shown in the Schedule is an "insured" for Covered Autos Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured provision contained in Paragraph **A.1.** of Section **II -** Covered Autos Liability Coverage in the Business Auto and Motor Carrier Coverage Forms and Paragraph **D.2.** of Section **I -** Covered Autos Coverages of the Auto Dealers Coverage Form.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. **Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
All Entities as required in writing prior to the date of loss	All locations as required by a written contract or agreement entered into prior to an "occurrence" or offense

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
06/10/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Aon Risk Services Central, Inc.
Chicago IL Office
200 East Randolph
Chicago IL 60601 USA

CONTACT NAME:
PHONE (A/C. No. Ext): (866) 283-7122 **FAX (A/C. No.):** (800) 363-0105
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	Lloyd's Syndicate No. 4711	AA1120090
INSURER B:	Liberty Mutual Fire Ins Co	23035
INSURER C:	Liberty Insurance Corporation	42404
INSURER D:		
INSURER E:		
INSURER F:		

INSURED
Motorola Solutions, Inc.
Attn: Karen Napier
500 West Monroe
Chicago IL 60661 USA

COVERAGES **CERTIFICATE NUMBER:** 570076654651 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:	Y		TB2641005169079	07/01/2019	07/01/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$1,000,000 $250,000 $10,000 $1,000,000 $2,000,000 $1,000,000
B	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			AS2-641-005169-019	07/01/2019	07/01/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$1,000,000
	UMBRELLA LIAB OCCUR **EXCESS LIAB** CLAIMS-MADE DED RETENTION						EACH OCCURRENCE AGGREGATE	
C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	WA764D005169089 All Other States	07/01/2019	07/01/2020	X PER STATUTE OTH-ER	
C				WC7641005169099 WI	07/01/2019	07/01/2020	E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT	$1,000,000 $1,000,000 $1,000,000
A	E&O-MPL-Primary			FSCE01900661	07/01/2019	07/01/2020	Each Claim Policy Aggregate	$2,000,000 $2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Temporary Stations and New Combing Contract. The City of Santa Rosa, its officers, agents, employees and volunteers are included as Additional Insured per written agreement and executed contract with respect to the General Liability policy. Waiver of Subrogation is provided under the Workers' Compensation policy per written agreement and executed contract.

CERTIFICATE HOLDER

City of Santa Rosa
Santa Rosa Police Department
965 Sonoma Ave.
Santa Rosa CA 95404 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Central, Inc.

Holder Identifier :

Certificate No : 570076654651

CITY OF SANTA ROSA

INVOICE TO: Public Safety Building
Police (P)
965 Sonoma Avenue
Santa Rosa, CA 95404

PURCHASE ORDER NO.
158449

INQUIRIES TO: City of Santa Rosa
Purchasing Section
635 1st Street, 2nd Floor
Santa Rosa, CA 95404
(707) 543-3700 Fax: 543-3703

VENDOR: Motorola Solutions Inc
PO Box 1385
Kelseyville, CA 95451
FAX# (916) 644-6824

DELIVER TO: Public Safety Building
Police (P)
965 Sonoma Avenue
Santa Rosa, CA 95404

Vendor Contact:

Order Date: 12/20/2018

Buyer Name	Vendor Email	FOB	Freight	Terms
Myles, Jennifer	Bill.Vlahandreas@motorolasolutions.com	Destination	Pre-Paid	N/30
Buyer Phone #	**Buyer Email**		**End User**	**Date Required**
(707)543-3709	jmyles@srcity.org		Hinton, Keith	06/30/2019

QTY	UNIT	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
1	LS	L2Core and Ten Positions MCC 7500 Dispatch Console- Build and install a multisite trunking core software defined platform per HGAC RA05-18 Cooperative Agreement as awarded by City Council on 12/18/2018. One lump sum inclusive to taxable items.	$1,398,713.00	$1,398,713.00
			Net:	**1,398,713.00**

CITY OF SANTA ROSA

INVOICE TO: Public Safety Building
Police (P)
965 Sonoma Avenue
Santa Rosa, CA 95404

PURCHASE ORDER NO.
158449

INQUIRIES TO: City of Santa Rosa
Purchasing Section
635 1st Street, 2nd Floor
Santa Rosa, CA 95404
(707) 543-3700 Fax: 543-3703

VENDOR: Motorola Solutions Inc
PO Box 1385
Kelseyville, CA 95451
FAX# (916) 644-6824

DELIVER TO: Public Safety Building
Police (P)
965 Sonoma Avenue
Santa Rosa, CA 95404

Vendor Contact:

Order Date: 12/20/2018

Buyer Name	Vendor Email	FOB	Freight	Terms
Myles, Jennifer	Bill.Vlahandreas@motorolasolutions.com	Destination	Pre-Paid	N/30
Buyer Phone #	**Buyer Email**		**End User**	**Date Required**
(707)543-3709	jmyles@srcity.org		Hinton, Keith	06/30/2019

QTY	UNIT	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
			TOTAL	**$1,398,713.00**

Brandalyn Tramel, Purchasing Agent

Communications System and Services Agreement

Motorola Solutions, Inc. ("Motorola") and the City of Santa Rosa ("Customer") enter into this "Agreement," pursuant to which Customer will purchase and Motorola Solutions will sell the System and Services, as described below. Motorola Solutions and Customer may be referred to individually as a "Party" and collectively as the "Parties." For good and valuable consideration, the Parties agree as follows:

Section 1 ATTACHMENTS

1.1. EXHIBITS. The Exhibits listed below are exhibits related to the System sale and implementation. These Exhibits are incorporated into and made a part of this Agreement.

Exhibit A "Motorola Solutions Software License Agreement"
Exhibit B "Payment"
Exhibit C Technical and Implementation Documents
- C-1 "System Description" dated September 14, 2018
- C-2 "Pricing Summary & Equipment List" dated September 14, 2018
- C-3 "Implementation Statement of Work" dated September 14, 2018
- C-4 "Acceptance Test Plan" or "ATP" dated September 14, 2018

Exhibit D "System Acceptance Certificate"

Exhibit E "Insurance Requirements"

1.2. ADDENDUM (ADDENDA). Customer may elect to purchase professional or subscription services in addition to the System and related services. Any such services will be governed by the terms in the main body of the Agreement and the applicable Addendum containing terms specific to such service. Such Addendums will be labeled with the name of the service being purchased.

1.3 In interpreting this Agreement and resolving any ambiguities: 1) the main body of this Agreement takes precedence over the exhibits and any inconsistency between Exhibits A through D will be resolved in their listed order, and 2) The applicable service Addendum will take precedence over the main body of the Agreement and the Exhibits.

Section 2 DEFINITIONS

Capitalized terms used in this Agreement have the following meanings:

"Acceptance Tests" means those tests described in the Acceptance Test Plan.

"Addendum (Addenda)" is the title of the document(s) containing a specific set of terms and conditions applicable to a particular service or other offering beyond the communication System and System implementation services. The terms in the Addendum are applicable only to the specific service or offering described therein.

"Administrative User Credentials" means an account that has total access over the operating system, files, end user accounts and passwords at either the System level or box level. Customer's personnel with access to the Administrative User Credentials may be referred to as the Administrative User.

"Beneficial Use" means when Customer first uses the System or a Subsystem for operational purposes (excluding training or testing).

"Confidential Information" means all information consistent with the fulfillment of this Agreement that is (i) disclosed under this Agreement in oral, written, graphic, machine recognizable, and/or sample form, being clearly designated, labeled or marked as confidential or its equivalent or (ii) obtained by examination, testing or analysis of any hardware, software or any component part thereof provided by discloser to recipient. The nature and existence of this Agreement are considered Confidential Information. Confidential Information that is disclosed orally must be identified as confidential at the time of disclosure and confirmed by the discloser by submitting a written document to the recipient within thirty (30) days after such disclosure. The written document must contain a summary of the

Confidential Information disclosed with enough specificity for identification purpose and must be labeled or marked as confidential or its equivalent.

"Contract Price" means the price for the System and implementation Services, excluding applicable sales or similar taxes and freight charges. Further, unless otherwise stated in Exhibit B, "Payment Schedule" or the pricing pages of the proposal, recurring fees for maintenance, SUA, or subscription services are not included in the Contract Price.

"Deliverables" means all written information (such as reports, specifications, designs, plans, drawings, analytics, Solution Data, or other technical or business information) that Motorola prepares for Customer in the performance of the Services and is obligated to provide to Customer under this Agreement. The Deliverables, if any, are more fully described in the Statement of Work.

"**Derivative Proprietary Materials**" means derivatives of the Proprietary Materials that Motorola may from time to time, including during the course of providing the Services, develop and/or use and/or to which Motorola provides Customer access.

"Effective Date" means that date upon which the last Party executes this Agreement.

"Equipment" means the hardware components of the Solution that Customer purchases from Motorola under this Agreement. Equipment that is part of the System is described in the Equipment List.

"**Feedback**" means comments or information, in oral or written form, given to Motorola by Customer in connection with or relating to Equipment or Services, during the term of this Agreement.

"Force Majeure" means an event, circumstance, or act that is beyond a Party's reasonable control, such as an act of God, an act of the public enemy, an act of a government entity, strikes, other labor disturbances, supplier performance, hurricanes, earthquakes, fires, floods, epidemics, embargoes, war, riots, or any other similar cause.

"Motorola Software" means software that Motorola or its affiliated companies owns.

"Non-Motorola Software" means software that a party other than Motorola or its affiliated companies owns.

"Open Source Software" (also called "freeware" or "shareware") means software with either freely obtainable source code, license for modification, or permission for free distribution.

"Proprietary Materials" means certain software tools and/or other technical materials, including, but not limited to, data, modules, components, designs, utilities, subsets, objects, program listings, models, methodologies, programs, systems, analysis frameworks, leading practices and specifications which Motorola has developed prior to, or independently from, the provision of the Services and/or which Motorola licenses from third parties.

"Proprietary Rights" means the patents, patent applications, inventions, copyrights, trade secrets, trademarks, trade names, mask works, know-how, and other intellectual property rights in and to the Equipment and Software, including those created or produced by Motorola under this Agreement and any corrections, bug fixes, enhancements, updates or modifications to or derivative works from the Software whether made by Motorola or another party.

"Services" means system implementation, maintenance, support, subscription, or other professional services provided under this Agreement, which may be further described in the applicable Addendum and/or SOW.

"Software" (i) means proprietary software in object code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, enhancements, new versions and new releases of the software provided by Motorola; and (iii) may contain one or more items of software owned by a third party supplier. The term "Software" does not include any third party software provided under separate license or third party software not licensable under the terms of this Agreement.

"Software Support Policy" ("SwSP") means the policy set forth at http://www.motorolasolutions.com/softwarepolicy describing the specific technical support that will be provided to Customers under the Warranty Period and during any paid maintenance support period for Motorola Software. This policy may be modified from time to time at Motorola's discretion.

"Solution" means the combination of the System(s) and Services provided by Motorola under this Agreement.

"Solution Data" means Customer data that is transformed, altered, processed, aggregated, correlated or operated on by Motorola, its vendors or other data sources and data that has been manipulated or retrieved using Motorola know-how to produce value-added content to data consumers, including customers or citizens which is made available to Customer with the Solution and Services.

"Specifications" means the functionality and performance requirements that are described in the Technical and Implementation Documents.

"SUA" or "SUA II" means Motorola's Software Upgrade Agreement program.

"Subsystem" means a major part of the System that performs specific functions or operations. Subsystems are described in the Technical and Implementation Documents.

"System" means the Equipment, including incidental hardware and materials, Software, and design, installation and implementation services that are combined together into an integrated system; the System(s) is (are) described in the Technical and Implementation Documents.

"System Acceptance" means the Acceptance Tests have been successfully completed.

"System Data" means data created by, in connection with or in relation to Equipment or the performance of Services under this Agreement.

"Warranty Period" for System Hardware, Software, or services related to system implementation means one (1) year from the date of System Acceptance or Beneficial Use, whichever occurs first. Unless otherwise stated in the applicable Addendum, Warranty Period for other Services means ninety (90) days from performance of the Service.

Section 3 SCOPE OF AGREEMENT AND TERM

3.1. SCOPE OF WORK. Motorola will provide, install and test the System(s), and perform its other contractual responsibilities to provide the Solution, all in accordance with this Agreement. Customer will perform its contractual responsibilities in accordance with this Agreement.

3.2. CHANGE ORDERS. 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 or applicable subscription fees, Performance Schedule, or both, and will reflect the adjustment in a change order or Addendum. Neither Party is obligated to perform requested changes unless both Parties execute a written change order.

3.3. TERM. Unless terminated in accordance with other provisions of this Agreement or extended by mutual agreement of the Parties, the term of this Agreement begins on the Effective Date and continues until the date of Final Project Acceptance or expiration of the Warranty Period, whichever occurs last. The term and the effective date of recurring Services will be set forth in the applicable Addendum.

3.4. ADDITIONAL EQUIPMENT OR SOFTWARE. For three (3) years after the expiration date of the Agreement, Customer may order additional Equipment or Software, if it is then available. Each purchase order must refer to this Agreement, the expiration date of the Agreement, and must specify the pricing and delivery terms. The Parties agree that, notwithstanding expiration of the Agreement, the applicable provisions of this Agreement (except for pricing, delivery, passage of title and risk of loss to Equipment, warranty commencement, and payment terms) will govern the purchase and sale of the additional Equipment or Software. Additional or contrary terms in the purchase order will be inapplicable, unless signed by both parties. Title and risk of loss to additional Equipment

will pass at shipment, warranty will commence upon delivery, and payment is due within thirty (30) days after the invoice date. Motorola will send Customer an invoice as the additional Equipment is shipped or Software is licensed. Alternatively, Customer may register with and place orders through Motorola Online ("MOL"), and this Agreement will be the "Underlying Agreement" for those MOL transactions rather than the MOL On-Line Terms and Conditions of Sale. MOL registration and other information may be found at https://businessonline.motorolasolutions.com and the MOL telephone number is (800) 814-0601.

3.5. MOTOROLA SOFTWARE. Any Motorola Software, including subsequent releases, is licensed to Customer solely in accordance with the Motorola Software License Agreement in Exhibit A ("Software License Agreement"). Customer hereby accepts and agrees to abide by all of the terms and restrictions of the Software License Agreement.

3.6. NON-MOTOROLA SOFTWARE. Any Non-Motorola Software is licensed to Customer in accordance with the standard license, terms, and restrictions of the copyright owner on the Effective Date unless the copyright owner has granted to Motorola the right to sublicense the Non-Motorola Software pursuant to the Software License Agreement, in which case it applies and the copyright owner will have all of Licensor's rights and protections under the Software License Agreement. Motorola makes no representations or warranties of any kind regarding Non-Motorola Software. Non-Motorola Software may include Open Source Software.

3.7. SUBSTITUTIONS. At no additional cost to Customer, Motorola may substitute any Equipment, Software, or services to be provided by Motorola, if the substitute meets or exceeds the Specifications and is of equivalent or better quality to the Customer. Any substitution will be reflected in a change order.

3.8. OPTIONAL EQUIPMENT OR SOFTWARE. This paragraph applies only if a "Priced Options" exhibit is shown in Section 1, or if the parties amend this Agreement to add a Priced Options exhibit. During the term of the option as stated in the Priced Options exhibit (or if no term is stated, then for one (1) year after the Effective Date), Customer has option to purchase the equipment, software, and related services that are described in the Priced Options exhibit. Customer may exercise this option by giving written notice to Motorola which must designate what equipment, software, and related services Customer is selecting (including quantities, if applicable). To the extent they apply, the terms and conditions of this Agreement will govern the transaction; however, the parties acknowledge that certain provisions must be agreed upon, and they agree to negotiate those in good faith promptly after Customer delivers the option exercise notice. Examples of provisions that may need to be negotiated are: specific lists of deliverables, statements of work, acceptance test plans, delivery and implementation schedules, payment terms, maintenance and support provisions, additions to or modifications of the Software License Agreement, hosting terms, and modifications to the acceptance and warranty provisions.

Section 4 SERVICES

4.1. If Customer desires and Motorola agrees to continue Services beyond the Term, Customer's issuance and Motorola's acceptance of a purchase order for Services will serve as an automatic extension of the Agreement for purposes of the continuing Services. Only the terms and conditions applicable to the performance of Services will apply to the extended Agreement.

4.2. MAINTENANCE, SUPPORT, AND SUA SERVICES. During the Warranty Period, in addition to warranty services, Motorola will provide maintenance Services for the Equipment and support for the Motorola Software pursuant to the Statement of Work set forth in the Maintenance and Support Addendum. Support for the Motorola Software will be in accordance with Motorola's established Software Support Policy. Copies of the SwSP can be found at http://www.motorolasolutions.com/softwarepolicy and will be sent by mail, email or fax to Customer upon written request. Maintenance Services and support during the Warranty Period are included in the Contract Price. If Customer wishes to purchase 1) additional maintenance or software support services during the Warranty Period; or 2) continue or expand maintenance, software support, installation, and/or SUA services after the Warranty Period, Motorola will provide the description of and pricing for such services in a separate proposal document. Unless otherwise agreed by the Parties in writing, the terms and conditions in this Agreement applicable to the maintenance, support, installation, and/or SUA Services, will be included in the Maintenance and Support Addendum, SUA Addendum, the applicable Statements of Work, and the proposal. These collective terms will govern the provision of such Services.

To obtain any such additional Services, Customer will issue a purchase order referring to this Agreement and the separate proposal document. Omission of reference to this Agreement in Customer's purchase order will not affect the applicability of this Agreement. Motorola's proposal may include a cover page entitled "Service Agreement" or "Installation Agreement", as applicable, and other attachments. These cover pages and other attachments are incorporated into this Agreement by this reference.

4.3. PROFESSIONAL AND SUBSCRIPTION SERVICES. If Customer purchases professional or subscription Services as part of the Solution, additional or different terms specific to such Service will be included in the applicable Addendum and will apply to those Services. Customer may purchase additional professional or subscription services by issuing a purchase order referencing this Agreement and Motorola's proposal for such additional services.

4.4. Any information in the form of specifications, drawings, reprints, technical information or otherwise furnished to Customer in providing Services under this Agreement or Motorola data viewed or accessed by Customer will remain Motorola's property and will be deemed Confidential Information. This Confidential Information will be promptly returned at Motorola's request.

4.5. TOOLS. All tools, equipment, dies, gauges, models, drawings or other materials paid for or furnished by Motorola for the purpose of providing Services under this Agreement will be and remain the sole property of Motorola. Customer will safeguard all such property while it is in Customer's custody or control, be liable for any loss or damage to such property, and return it to Motorola upon request. Such property will be held by Customer for Motorola's use without charge and may be removed from Customer's premises by Motorola at any time without restriction. Upon termination of the Agreement for any reason, Customer shall return to Motorola all equipment delivered to Customer.

4.6. COVENANT NOT TO EMPLOY. During the term of this Agreement and continuing for a period of two (2) years thereafter, Customer will not hire, engage on contract, solicit the employment of, or recommend employment to any third party of any employee of Motorola or its subcontractors without the prior written authorization of Motorola. This provision applies only to those employees of Motorola or its subcontractors who are responsible for rendering Services under this Agreement. If this provision is found to be overly broad under applicable law, it will be modified as necessary to conform to applicable law.

4.7. CUSTOMER OBLIGATIONS. If the applicable Statement of Work or Addendum contains assumptions that affect the Services or Deliverables, Customer will verify that they are accurate and complete. Any information that Customer provides to Motorola concerning the Services or Deliverables will be accurate and complete in all material respects. Customer will make timely decisions and obtain any required management approvals that are reasonably necessary for Motorola to perform the Services and its other duties under this Agreement. Unless the Statement

of Work states the contrary, Motorola may rely upon and is not required to evaluate, confirm, reject, modify, or provide advice concerning any assumptions and Customer-provided information, decisions and approvals described in this section.

4.8. ASSUMPTIONS. If any assumptions or conditions contained in this Agreement, applicable Addenda or Statements of Work prove to be incorrect or if Customer's obligations are not performed, Motorola's ability to perform under this Agreement may be impacted and changes to the Contract Price, subscription fees, project schedule, Deliverables, or other changes may be necessary.

4.9. NON-PRECLUSION. If, as a result of the Services performed under this Agreement, Motorola recommends that Customer purchase products or other services, nothing in this Agreement precludes Motorola from participating in a future competitive bidding process or otherwise offering or selling the recommended products or other services to Customer. Customer represents that this paragraph does not violate its procurement or other laws, regulations, or policies.

4.10. PROPRIETARY MATERIALS. Customer acknowledges that Motorola may use and/or provide Customer with access to Proprietary Materials and Derivative Proprietary Materials. The Proprietary Materials and the Derivative Proprietary Materials are the sole and exclusive property of Motorola and Motorola retains all right, title and interest in and to the Proprietary Materials and Derivative Proprietary Materials.

4.11. ADDITIONAL SERVICES. Any services performed by Motorola outside the scope of this Agreement at the direction of Customer will be considered to be additional Services which are subject to additional charges. Any agreement to perform additional Services will be reflected in a written and executed change order, Addendum or amendment to this Agreement.

Section 5 PERFORMANCE SCHEDULE

The Parties will perform their respective responsibilities in accordance with the Performance Schedule. By executing this Agreement, Customer authorizes Motorola to proceed with contract performance.

Section 6 CONTRACT PRICE, PAYMENT AND INVOICING

6.1. Customer affirms that a purchase order or notice to proceed is not required for contract performance or for subsequent years of service, if any, and that Customer will appropriate funds according to the Payment Schedule. The Customer will pay all invoices as received from Motorola and any changes in scope will be subject to the change order process as described in this Agreement. At the time of execution of this Agreement, the Customer will provide all necessary reference information to include on invoices for payment in accordance with this Agreement.

6.2. CONTRACT PRICE. The Contract Price in U.S. dollars is $1,398,713. If applicable, a pricing summary is included with the Payment schedule in Exhibit B. Motorola has priced the Services, Software, and Equipment as an integrated System. A reduction in Software or Equipment quantities, or Services, may affect the overall Contract Price, including discounts if applicable. Fees for professional, SUA, and/or subscription services which are not included in the Contract Price may be listed in Exhibit B, the pricing pages of the proposal, or the applicable Addendum.

6.3. INVOICING AND PAYMENT. Motorola will submit invoices to Customer according to the Payment schedule in Exhibit B. Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within thirty (30) days after the date of each invoice. Customer will make payments when due in the form of a wire transfer, check, or cashier's check from a U.S. financial institution. Overdue invoices will bear simple interest at the maximum allowable rate. For reference, the Federal Tax Identification Number for Motorola is 36-1115800.

6.4. FREIGHT, TITLE, AND RISK OF LOSS. Motorola will pre-pay and add all freight charges to the invoices. Title and risk of loss to the Equipment will pass to Customer upon shipment. Title to Software will not pass to Customer at any time. Motorola will pack and ship all Equipment in accordance with good commercial practices.

6.5. INVOICING AND SHIPPING ADDRESSES. Invoices will be sent to the Customer at the following address:

Name: Santa Rosa Police Department
Address: 965 Sonoma Ave. Santa Rosa CA. 95404
Phone: 707-543-3645
Email: khinton@srcity.org

The address which is the ultimate destination where the Equipment will be delivered to Customer is:

Name: Santa Rosa Police Department
Address: 965 Sonoma Ave. Santa Rosa CA. 95404
Phone: 707-543-3645

The Equipment will be shipped to the Motorola Sub-Contractor at the following address (insert if this information is known):

Name: Day Wireless
Address: 4728 East 2nd Street Suite 10 Benicia CA. 94510

Customer may change this information by giving written notice to Motorola.

Section 7 SITES AND SITE CONDITIONS

7.1. ACCESS TO SITES. In addition to its responsibilities described elsewhere in this Agreement, Customer will provide a designated project manager; all necessary construction and building permits, zoning variances, licenses, and any other approvals that are necessary to develop or use the sites and mounting locations; and access to the worksites or vehicles identified in the Technical and Implementation Documents as reasonably requested by Motorola so that it may perform its duties in accordance with the Performance Schedule and Statement of Work. If the Statement of Work so indicates, Motorola may assist Customer in the local building permit process.

7.2. SITE CONDITIONS. Customer will ensure that all work sites it provides will be safe, secure, and in compliance with all applicable industry and OSHA standards. To the extent applicable and unless the Statement of Work states to the contrary, Customer will ensure that these work sites have adequate: physical space; air conditioning and other environmental conditions; adequate and appropriate electrical power outlets, distribution, equipment and connections; and adequate telephone or other communication lines (including modem access and adequate interfacing networking capabilities), all for the installation, use and maintenance of the System. Before installing the Equipment or Software at a work site, Motorola may inspect the work site and advise Customer of any apparent deficiencies or non-conformities with the requirements of this Section. This Agreement is predicated upon normal soil conditions as defined by the version of E.I.A. standard RS-222 in effect on the Effective Date.

7.3. SITE ISSUES. If a Party determines that the sites identified in the Technical and Implementation Documents are no longer available or desired, or if subsurface, structural, adverse environmental or latent conditions at any site differ from those indicated in the Technical and Implementation Documents, the Parties will promptly investigate the conditions and will select replacement sites or adjust the installation plans and specifications as necessary. If change in sites or adjustment to the installation plans and specifications causes a change in the cost or time to perform, the Parties will equitably amend the Contract Price, Performance Schedule, or both, by a change order.

Section 8 TRAINING

Any training to be provided by Motorola to Customer will be described in the applicable Statement of Work. Customer will notify Motorola immediately if a date change for a scheduled training program is required. If Motorola incurs additional costs because Customer reschedules a training program less than thirty (30) days before its scheduled start date, Motorola may recover these additional costs.

Section 9 SYSTEM ACCEPTANCE

9.1. COMMENCEMENT OF ACCEPTANCE TESTING. Motorola will provide to Customer at least ten (10) days notice before the Acceptance Tests commence. System testing will occur only in accordance with the Acceptance Test Plan.

9.2. SYSTEM ACCEPTANCE. System Acceptance will occur upon successful completion of the Acceptance Tests. Upon System Acceptance, the Parties will memorialize this event by promptly executing a System Acceptance Certificate. If the Acceptance Test Plan includes separate tests for individual Subsystems or phases of the System, acceptance of the individual Subsystem or phase will occur upon the successful completion of the Acceptance Tests for the Subsystem or phase, and the Parties will promptly execute an acceptance certificate for the Subsystem or phase. If Customer believes the System has failed the completed Acceptance Tests, Customer will provide to Motorola a written notice that includes the specific details of the failure. If Customer does not provide to Motorola a failure notice within thirty (30) days after completion of the Acceptance Tests, System Acceptance will be deemed to have occurred as of the completion of the Acceptance Tests. Minor omissions or variances in the System that do not materially impair the operation of the System as a whole will not postpone System Acceptance or Subsystem acceptance, but will be corrected according to a mutually agreed schedule.

9.3. BENEFICIAL USE. Customer acknowledges that Motorola's ability to perform its implementation and testing responsibilities may be impeded if Customer begins using the System before System Acceptance. Therefore, Customer will not commence Beneficial Use before System Acceptance without Motorola's prior written authorization, which will not be unreasonably withheld. Motorola is not responsible for System performance deficiencies that occur during unauthorized Beneficial Use. Upon commencement of Beneficial Use, Customer assumes responsibility for the use and operation of the System.

9.4. FINAL PROJECT ACCEPTANCE. Final Project Acceptance will occur after System Acceptance when all deliverables and other work have been completed. When Final Project Acceptance occurs, the parties will promptly memorialize this final event by so indicating on the System Acceptance Certificate.

Section 10 REPRESENTATIONS AND WARRANTIES

10.1. SYSTEM FUNCTIONALITY. Motorola represents that the System will perform in accordance with the Specifications in all material respects. Upon System Acceptance or Beneficial Use, whichever occurs first, this System functionality representation is fulfilled. Motorola is not responsible for System performance deficiencies that are caused by ancillary equipment not furnished by Motorola which is attached to or used in connection with the System or for reasons or parties beyond Motorola's control, such as natural causes; the construction of a building that adversely affects the microwave path reliability or radio frequency (RF) coverage; the addition of frequencies at System sites that cause RF interference or intermodulation; or Customer changes to load usage or configuration outside the Specifications.

10.2. EQUIPMENT WARRANTY. During the Warranty Period, Motorola warrants that the Equipment under normal use and service will be free from material defects in materials and workmanship. If System Acceptance is delayed beyond six (6) months after shipment of the Equipment by events or causes beyond Motorola's control, this warranty expires eighteen (18) months after the shipment of the Equipment.

10.3. SOFTWARE WARRANTY. Except as described in the SwSP and unless otherwise stated in the Software License Agreement, during the Warranty Period, Motorola warrants the Software in accordance with the warranty terms set forth in the Software License Agreement and the provisions of this Section that are applicable to the Software. If System Acceptance is delayed beyond six (6) months after shipment of the Motorola Software by events or causes beyond Motorola's control, this warranty expires eighteen (18) months after the shipment of the Motorola Software. **Nothing in this Warranty provision is intended to conflict or modify the Software Support Policy. In the event of an ambiguity or conflict between the Software Warranty and Software Support Policy, the Software Support Policy governs.** TO THE EXTENT, IF ANY, THAT THERE IS A SEPARATE LICENSE AGREEMENT PACKAGED WITH, OR PROVIDED ELECTRONICALLY WITH, A PARTICULAR PRODUCT THAT BECOMES EFFECTIVE ON AN ACT OF ACCEPTANCE BY THE END USER, THEN THAT AGREEMENT SUPERSEDES THE SOFTWARE LICENSE AGREEMENT AS TO THE END USER OF EACH SUCH PRODUCT.

10.4. EXCLUSIONS TO EQUIPMENT AND SOFTWARE WARRANTIES. These warranties do not apply to: (i) defects or damage resulting from: use of the Equipment or Software in other than its normal, customary, and authorized manner; accident, liquids, neglect, or acts of God; testing, maintenance, disassembly, repair, installation, alteration, modification, or adjustment not provided or authorized in writing by Motorola; Customer's failure to comply with all applicable industry and OSHA standards; (ii) breakage of or damage to antennas unless caused directly by defects in material or workmanship; (iii) Equipment that has had the serial number removed or made illegible; (iv) batteries (because they carry their own separate limited warranty) or consumables; (v) freight costs to ship Equipment to the repair depot; (vi) scratches or other cosmetic damage to Equipment surfaces that does not affect the operation of the Equipment; and (vii) normal or customary wear and tear.

10.5. SERVICE WARRANTY. During the Warranty Period, Motorola warrants that the Services will be provided in a good and workmanlike manner and will conform in all material respects to the applicable Statement of Work. Services will be free of defects in materials and workmanship for a period of ninety (90) days from the date the performance of the Services are completed. Customer acknowledges that the Deliverables may contain recommendations, suggestions or advice from Motorola to Customer (collectively, "recommendations"). Motorola makes no warranties concerning those recommendations, and Customer alone accepts responsibility for choosing whether and how to implement the recommendations and the results to be realized from implementing them.

10.6. WARRANTY CLAIMS. To assert a warranty claim, Customer must notify Motorola in writing of the claim before the expiration of the Warranty Period. Upon receipt of this notice, Motorola will investigate the warranty claim. If this investigation confirms a valid Equipment or Software warranty claim, Motorola will (at its option and at no additional charge to Customer) repair the defective Equipment or Motorola Software, replace it with the same or equivalent product, or refund the price of the defective Equipment or Motorola Software. These actions will be the full extent of Motorola's liability for the warranty claim. In the event of a valid Services warranty claim, Customer's sole remedy is to require Motorola to re-perform the non-conforming Service or to refund, on a pro-rata basis, the fees paid for the non-conforming Service. If this investigation indicates the warranty claim is not valid, then Motorola may invoice Customer for responding to the claim on a time and materials basis using Motorola's then current labor rates. Repaired or replaced product is warranted for the balance of the original applicable warranty period. All replaced products or parts will become the property of Motorola.

10.7. ORIGINAL END USER IS COVERED. These express limited warranties are extended by Motorola to the original user purchasing the System or Services for commercial, industrial, or governmental use only, and are not assignable or transferable.

10.8. DISCLAIMER OF OTHER WARRANTIES. THESE WARRANTIES ARE THE COMPLETE WARRANTIES FOR THE EQUIPMENT AND MOTOROLA SOFTWARE PROVIDED UNDER THIS AGREEMENT AND ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES. MOTOROLA DISCLAIMS ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

Section 11 DELAYS

11.1. FORCE MAJEURE. Neither Party will be liable for its non-performance or delayed performance if caused by a Force Majeure. A Party that becomes aware of a Force Majeure that will significantly delay performance will notify the other Party promptly (but in no event later than fifteen days) after it discovers the Force Majeure. If a Force Majeure occurs, the Parties will execute a change order to extend the Performance Schedule or applicable Addenda for a time period that is reasonable under the circumstances.

11.2. PERFORMANCE SCHEDULE DELAYS CAUSED BY CUSTOMER. If Customer (including its other contractors) delays the Performance Schedule, it will make the promised payments according to the Payment Schedule as if no delay occurred; and the Parties will execute a change order to extend the Performance Schedule and, if requested, compensate Motorola for all reasonable charges incurred because of the delay. Delay charges may include costs incurred by Motorola or its subcontractors for additional freight, warehousing and handling of Equipment; extension of the warranties; travel; suspending and re-mobilizing the work; additional engineering, project management, and standby time calculated at then current rates; and preparing and implementing an alternative implementation plan.

Section 12 DISPUTES

The Parties will use the following procedure to address any dispute arising under this Agreement (a "Dispute").

12.1. GOVERNING LAW. This Agreement will be governed by and construed in accordance with the laws of the State in which the System is installed.

12.2. NEGOTIATION. Either Party may initiate the Dispute resolution procedures by sending a notice of Dispute ("Notice of Dispute"). The Parties will attempt to resolve the Dispute promptly through good faith negotiations including 1) timely escalation of the Dispute to executives who have authority to settle the Dispute and who are at a higher level of management than the persons with direct responsibility for the matter and 2) direct communication between the executives. If the Dispute has not been resolved within ten (10) days from the Notice of Dispute, the Parties will proceed to mediation.

12.3. MEDIATION. The Parties will choose an independent mediator within thirty (30) days of a notice to mediate from either Party ("Notice of Mediation"). Neither Party may unreasonably withhold consent to the selection of a mediator. If the Parties are unable to agree upon a mediator, either Party may request that American Arbitration Association nominate a mediator. Each Party will bear its own costs of mediation, but the Parties will share the cost of the mediator equally. Each Party will participate in the mediation in good faith and will be represented at the mediation by a business executive with authority to settle the Dispute.

12.4. LITIGATION, VENUE and JURISDICTION. If a Dispute remains unresolved for sixty (60) days after receipt of the Notice of Mediation, either Party may then submit the Dispute to a court of competent jurisdiction in the state in which the System is installed. Each Party irrevocably agrees to submit to the exclusive jurisdiction of the courts in such state over any claim or matter arising under or in connection with this Agreement.

12.5. CONFIDENTIALITY. All communications pursuant to subsections 12.2 and 12.3 will be treated as compromise and settlement negotiations for purposes of applicable rules of evidence and any additional confidentiality protections provided by applicable law. The use of these Dispute resolution procedures will not be construed under the doctrines of laches, waiver or estoppel to affect adversely the rights of either Party.

Section 13 DEFAULT AND TERMINATION

13.1. DEFAULT BY A PARTY. If either Party fails to perform a material obligation under this Agreement, the other Party may consider the non-performing Party to be in default (unless a Force Majeure causes the failure) and may assert a default claim by giving the non-performing Party a written and detailed notice of default. Except for a default by Customer for failing to pay any amount when due under this Agreement which must be cured immediately, the defaulting Party will have thirty (30) days after receipt of the notice of default to either cure the default or, if the default is not curable within thirty (30) days, provide a written cure plan. The defaulting Party will begin implementing the cure plan immediately after receipt of notice by the other Party that it approves the plan. If Customer is the defaulting Party, Motorola may stop work on the project until it approves the Customer's cure plan.

13.2. FAILURE TO CURE. If a defaulting Party fails to cure the default as provided above in Section 13.1, unless otherwise agreed in writing, the non-defaulting Party may terminate any unfulfilled portion of this Agreement. In the event of termination for default, the defaulting Party will promptly return to the non-defaulting Party any of its Confidential Information. If Customer is the non-defaulting Party, terminates this Agreement as permitted by this Section, and completes the System through a third Party, Customer may as its exclusive remedy recover from Motorola reasonable costs incurred to complete the System to a capability not exceeding that specified in this Agreement less the unpaid portion of the Contract Price. Customer will mitigate damages and provide Motorola with detailed invoices substantiating the charges. In the event Customer elects to terminate this Agreement for any reason other than default, Customer shall pay Motorola for the conforming Equipment and/or Software delivered and all services performed.

Section 14 INDEMNIFICATION

14.1. GENERAL INDEMNITY BY Motorola. Motorola will indemnify and hold Customer harmless from any and all liability, expense, judgment, suit, cause of action, or demand for personal injury, death, or direct damage to tangible property which may accrue against Customer to the extent it is caused by the negligence of Motorola, its subcontractors, or their employees or agents, while performing their duties under this Agreement, if Customer gives Motorola prompt, written notice of any claim or suit. Customer will cooperate with Motorola in its defense or settlement of the claim or suit. This Section sets forth the full extent of Motorola's general indemnification of Customer from liabilities that are in any way related to Motorola's performance under this Agreement. Notwithstanding, this obligation does not apply if Motorola is entitled to immunity under the NG911 Act of 2012.

14.2. GENERAL INDEMNITY BY CUSTOMER. Customer will indemnify and hold Motorola harmless from any and all liability, expense, judgment, suit, cause of action, or demand for personal injury, death, or direct damage to tangible property which may accrue against Motorola to the extent it is caused by the negligence of Customer, its other contractors, or their employees or agents, while performing their duties under this Agreement, if Motorola gives Customer prompt, written notice of any the claim or suit. Motorola will cooperate with Customer in its defense or settlement of the claim or suit. This Section sets forth the full extent of Customer's general indemnification of Motorola from liabilities that are in any way related to Customer's performance under this Agreement.

14.3. PATENT AND COPYRIGHT INFRINGEMENT.

14.3.1. Motorola will defend at its expense any suit brought against Customer to the extent it is based on a third-party claim alleging that the Equipment manufactured by Motorola or the Motorola Software ("Motorola Product") directly infringes a United States patent or copyright ("Infringement Claim"). Motorola's duties to defend and indemnify are conditioned upon: Customer promptly notifying Motorola in writing of the Infringement Claim; Motorola having sole control of the defense of the suit and all negotiations for its settlement or compromise; and Customer providing to Motorola cooperation and, if requested by Motorola, reasonable assistance in the defense of the Infringement Claim. In addition to Motorola's obligation to defend, and subject to the same conditions, Motorola will pay all damages finally awarded against Customer by a court of competent jurisdiction for an Infringement Claim or agreed to, in writing, by Motorola in settlement of an Infringement Claim.

14.3.2 If an Infringement Claim occurs, or in Motorola's opinion is likely to occur, Motorola may at its option and expense: (a) procure for Customer the right to continue using the Motorola Product; (b) replace or modify the Motorola Product so that it becomes non-infringing while providing functionally equivalent performance; or (c) accept the return of the Motorola Product and grant Customer a credit for the Motorola Product, less a reasonable charge for depreciation. The depreciation amount will be calculated based upon generally accepted accounting standards.

14.3.3 Motorola will have no duty to defend or indemnify for any Infringement Claim that is based upon: (a) the combination of the Motorola Product with any software, apparatus or device not furnished by Motorola; (b) the use of ancillary equipment or software not furnished by Motorola and that is attached to or used in connection with the Motorola Product; (c) Motorola Product designed or manufactured in accordance with Customer's designs, specifications, guidelines or instructions, if the alleged infringement would not have occurred without such designs, specifications, guidelines or instructions; (d) a modification of the Motorola Product by a party other than Motorola; (e) use of the Motorola Product in a manner for which the Motorola Product was not designed or that is inconsistent with the terms of this Agreement; or (f) the failure by Customer to install an enhancement release to the Motorola Software that is intended to correct the claimed infringement. In no event will Motorola's liability resulting from its indemnity obligation to Customer extend in any way to royalties payable on a per use basis or the Customer's revenues, or any royalty basis other than a reasonable royalty based upon revenue derived by Motorola from Customer from sales or license of the infringing Motorola Product.

14.3.4. This Section 14 provides Customer's sole and exclusive remedies and Motorola's entire liability in the event of an Infringement Claim. Customer has no right to recover and Motorola has no obligation to provide any other or further remedies, whether under another provision of this Agreement or any other legal theory or principle, in connection with an Infringement Claim. In addition, the rights and remedies provided in this Section 14 are subject to and limited by the restrictions set forth in Section 15.

Section 15 LIMITATION OF LIABILITY

Except for personal injury or death, Motorola's total liability, whether for breach of contract, warranty, negligence, strict liability in tort, indemnification, or otherwise, will be limited to the direct damages recoverable under law, but not to exceed the price of the Equipment, Software, or implementation Services with respect to which losses or damages are claimed. With respect to all non-implementation Services and unless as otherwise provided under the applicable Addenda, Motorola's total liability will be limited to the direct damages recoverable under law, but not to exceed the price of twelve (12) months of Services preceding the incident giving rise to the claim. ALTHOUGH THE PARTIES ACKNOWLEDGE THE POSSIBILITY OF SUCH LOSSES OR DAMAGES, THEY AGREE THAT MOTOROLA WILL NOT BE LIABLE FOR ANY COMMERCIAL LOSS, INCONVENIENCE, LOSS OF USE, LOSS TIME, DATA, GOODWILL, REVENUES, PROFITS OR SAVINGS; OR OTHER SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO OR ARISING FROM THIS AGREEMENT, THE SALE OR USE OF THE EQUIPMENT OR SOFTWARE, OR THE PERFORMANCE OF SERVICES BY Motorola PURSUANT TO THIS AGREEMENT. This limitation of liability provision survives the expiration or termination of the Agreement and applies notwithstanding any contrary provision. No action for contract breach or otherwise relating to the transactions contemplated by this Agreement may be brought more than one (1) year after the accrual of the cause of action, except for money due upon an open account.

Section 16 CONFIDENTIALITY AND PROPRIETARY RIGHTS

16.1. CONFIDENTIAL INFORMATION.

16.1.1. Each party is a disclosing party ("Discloser") and a receiving party ("Recipient") under this Agreement. All Deliverables will be deemed to be Motorola's Confidential Information. During the term of this Agreement and for a period of three (3) years from the expiration or termination of this Agreement, Recipient will (i) not disclose Confidential Information to any third party; (ii) restrict disclosure of Confidential Information to only those employees (including, but not limited to, employees of any wholly owned subsidiary, a parent company, any other wholly owned subsidiaries of the same parent company), agents or consultants who must be directly involved with the Confidential Information for the purpose and who are bound by confidentiality terms substantially similar to those in this Agreement; (iii) not copy, reproduce, reverse engineer, de-compile or disassemble any Confidential Information; (iv) use the same degree of care as for its own information of like importance, but at least use reasonable care, in safeguarding against disclosure of Confidential Information; (v) promptly notify Discloser upon discovery of any unauthorized use or disclosure of the Confidential Information and take reasonable steps to regain possession of the Confidential Information and prevent further unauthorized actions or other breach of this Agreement; and (vi) only use the Confidential Information as needed to fulfill this Agreement.

16.1.2. Recipient is not obligated to maintain as confidential, Confidential Information that Recipient can demonstrate by documentation (i) is now available or becomes available to the public without breach of this agreement; (ii) is explicitly approved for release by written authorization of Discloser; (iii) is lawfully obtained from a third party or parties without a duty of confidentiality; (iv) is known to the Recipient prior to such disclosure; or (v) is independently developed by Recipient without the use of any of Discloser's Confidential Information or any breach of this Agreement.

16.1.3. All Confidential Information remains the property of the Discloser and will not be copied or reproduced without the express written permission of the Discloser, except for copies that are absolutely necessary in order to fulfill this Agreement. Within ten (10) days of receipt of Discloser's written request, Recipient will return all Confidential Information to Discloser along with all copies and portions thereof, or certify in writing that all such Confidential Information has been destroyed. However, Recipient may retain one (1) archival copy of the Confidential Information that it may use only in case of a dispute concerning this Agreement. No license, express or implied, in the Confidential Information is granted other than to use the Confidential Information in the manner and to the extent authorized by this Agreement. The Discloser warrants that it is authorized to disclose any Confidential Information it discloses pursuant to this Agreement.

16.2. PRESERVATION OF MOTOROLA'S PROPRIETARY RIGHTS. Motorola, the third party manufacturer of any Equipment, and the copyright owner of any Non-Motorola Software own and retain all of their respective Proprietary Rights in the Equipment and Software, and nothing in this Agreement is intended to restrict their Proprietary Rights. All intellectual property developed, originated, or prepared by Motorola in connection with

providing to Customer the Equipment, Software, or related services remain vested exclusively in Motorola, and this Agreement does not grant to Customer any shared development rights of intellectual property. Except as explicitly provided in the Software License Agreement, Motorola does not grant to Customer, either directly or by implication, estoppel, or otherwise, any right, title or interest in Motorola's Proprietary Rights. Customer will not modify, disassemble, peel components, decompile, otherwise reverse engineer or attempt to reverse engineer, derive source code or create derivative works from, adapt, translate, merge with other software, reproduce, distribute, sublicense, sell or export the Software, or permit or encourage any third party to do so. The preceding sentence does not apply to Open Source Software which is governed by the standard license of the copyright owner.

16.3 VOLUNTARY DISCLOSURE. Except as required to fulfill its obligations under this Agreement, Motorola will have no obligation to provide Customer with access to its Confidential Information and/or proprietary information. Under no circumstances will Motorola be required to provide any data related to cost and pricing.

16.4 DATA AND FEEDBACK.

16.4.1 To the extent permitted by law, Customer owns all right, title and interest in System Data created solely by it or its agents (hereafter, "Customer Data""), and grants to Motorola the right to use, host, cache, store, reproduce, copy, modify, combine, analyze, create derivatives from, communicate, transmit, publish, display, and distribute such Customer Data.

16.4.2 Motorola owns all right, title and interest in data resulting from System Data that is or has been transformed, altered, processed, aggregated, correlated or operated on (hereafter, "Derivative Data").

16.4.3 Any Feedback given by Customer is and will be entirely voluntary and, even if designated as confidential, will not create any confidentiality obligation for Motorola. Motorola will be free to use, reproduce, license or otherwise distribute and exploit the Feedback without any obligation to Customer. Customer acknowledges that Motorola's receipt of the Feedback does not imply or create recognition by Motorola of either the novelty or originality of any idea. The parties further agree that all fixes, modifications and improvements made to Motorola products or services conceived of or made by Motorola that are based, either in whole or in part, on the Feedback are the exclusive property of Motorola and all right, title and interest in and to such fixes, modifications or improvements to the Motorola product or service will vest solely in Motorola.

Section 17 GENERAL

17.1. TAXES. The Contract Price does not include any excise, sales, lease, use, property, or other taxes, assessments or duties, all of which will be paid by Customer except as exempt by law. If Motorola is required to pay any of these taxes, Motorola will send an invoice to Customer and Customer will pay to Motorola the amount of the taxes (including any interest and penalties) within thirty (30) days after the date of the invoice. Customer will be solely responsible for reporting the Equipment for personal property tax purposes, and Motorola will be solely responsible for reporting taxes on its income or net worth.

17.2. ASSIGNABILITY AND SUBCONTRACTING. Except as provided herein, neither Party may assign this Agreement or any of its rights or obligations hereunder without the prior written consent of the other Party, which consent will not be unreasonably withheld. Any attempted assignment, delegation, or transfer without the necessary consent will be void. Notwithstanding the foregoing, Motorola may assign this Agreement to any of its affiliates or its right to receive payment without the prior consent of Customer. In addition, in the event Motorola separates one or more of its businesses (each a "Separated Business"), whether by way of a sale, establishment of a joint venture, spin-off or otherwise (each a "Separation Event"), Motorola may, without the prior written consent of the other Party and at no additional cost to Motorola, assign this Agreement such that it will continue to benefit the Separated Business and its affiliates (and Motorola and its affiliates, to the extent applicable) following the Separation Event. Motorola may subcontract any of the work, but subcontracting will not relieve Motorola of its duties under this Agreement.

17.3. WAIVER. Failure or delay by either Party to exercise a right or power under this Agreement will not be a waiver of the right or power. For a waiver of a right or power to be effective, it must be in a writing signed by the waiving Party. An effective waiver of a right or power will not be construed as either a future or continuing waiver of that same right or power, or the waiver of any other right or power.

17.4. SEVERABILITY. If a court of competent jurisdiction renders any part of this Agreement invalid or unenforceable, that part will be severed and the remainder of this Agreement will continue in full force and effect.

17.5. INDEPENDENT CONTRACTORS. Each Party will perform its duties under this Agreement as an independent contractor. The Parties and their personnel will not be considered to be employees or agents of the other Party. Nothing in this Agreement will be interpreted as granting either Party the right or authority to make commitments of any kind for the other. This Agreement will not constitute, create, or be interpreted as a joint venture, partnership or formal business organization of any kind.

17.6. HEADINGS AND SECTION REFERENCES. The section headings in this Agreement are inserted only for convenience and are not to be construed as part of this Agreement or as a limitation of the scope of the particular section to which the heading refers. This Agreement will be fairly interpreted in accordance with its terms and conditions and not for or against either Party.

17.7. NOTICES. Notices required under this Agreement to be given by one Party to the other must be in writing and either personally delivered or sent to the address provided by the other Party by certified mail, return receipt requested and postage prepaid (or by a recognized courier service, such as Federal Express, UPS, or DHL), or by facsimile with correct answerback received, and will be effective upon receipt.

17.8. COMPLIANCE WITH APPLICABLE LAWS. Each Party will comply with all applicable federal, state, and local laws, regulations and rules concerning the performance of this Agreement or use of the System. Customer will obtain and comply with all Federal Communications Commission ("FCC") licenses and authorizations required for the installation, operation and use of the System before the scheduled installation of the Equipment. Although Motorola might assist Customer in the preparation of its FCC license applications, neither Motorola nor any of its employees is an agent or representative of Customer in FCC or other matters.

17.9. AUTHORITY TO EXECUTE AGREEMENT. Each Party represents that it has obtained all necessary approvals, consents and authorizations to enter into this Agreement and to perform its duties under this Agreement; the person executing this Agreement on its behalf has the authority to do so; upon execution and delivery of this Agreement by the Parties, it is a valid and binding contract, enforceable in accordance with its terms; and the execution, delivery, and performance of this Agreement does not violate any bylaw, charter, regulation, law or any other governing authority of the Party.

17.10. ADMINISTRATOR LEVEL ACCOUNT ACCESS. If applicable to the type of System purchased by Customer, Motorola will provide Customer with Administrative User Credentials. Customer agrees to only grant access to the Administrative User Credentials to those personnel with the training and experience to correctly use them. Customer is responsible for protecting Administrative User Credentials from disclosure and maintaining Credential validity by, among other things, updating passwords when required. Customer may be asked to provide valid Administrative User Credentials when in contact with Motorola System support personnel. Customer understands that changes made as the Administrative User can significantly impact the performance of the System. Customer agrees that it will be solely responsible for any negative impact on the System or its users by any such changes. System issues occurring as a result of changes made using the Administrative User Credentials may impact Motorola's ability to perform Services or other obligations under the Agreement. In such cases, a revision to the appropriate provisions of the Agreement, including the Statement of Work, may be necessary. To the extent Motorola provides assistance to correct any issues caused by or arising out of the use of or failure to maintain Administrative User Credentials, Motorola will be entitled to bill Customer and Customer will pay Motorola on a time and materials basis for resolving the issue.

17.11. SURVIVAL OF TERMS. The following provisions will survive the expiration or termination of this Agreement for any reason: Section 3.5 (Motorola Software); Section 3.6 (Non-Motorola Software); if any payment obligations exist, Sections 6.1 and 6.2 (Contract Price and Invoicing and Payment); Subsection 10.8 (Disclaimer of Implied Warranties); Section 12 (Disputes); Section 15 (Limitation of Liability); and Section 16 (Confidentiality and Proprietary Rights); and all of the General provisions in Section 17.

17.12. ENTIRE AGREEMENT. This Agreement, including all Exhibits, constitutes the entire agreement of the Parties regarding the subject matter of the Agreement and supersedes all previous agreements, proposals, and understandings, whether written or oral, relating to this subject matter. This Agreement may be executed in multiple

counterparts, and shall have the same legal force and effect as if the Parties had executed it as a single document. The Parties may sign in writing, or by electronic signature, including by email. An electronic signature, or a facsimile copy or computer image, such as a PDF or tiff image, of a signature, shall be treated as and shall have the same effect as an original signature. In addition, an electronic signature, a true and correct facsimile copy or computer image of this Agreement shall be treated as and shall have the same effect as an original signed copy of this document. This Agreement may be amended or modified only by a written instrument signed by authorized representatives of both Parties. The preprinted terms and conditions found on any Customer purchase or purchase order, acknowledgment or other form will not be considered an amendment or modification of this Agreement, even if a representative of each Party signs that document.

17.13. INSURANCE. **Insurance Policies:** Motorola shall maintain in full force and effect all of the insurance coverage described in, and in accordance with Exhibit E, "Insurance Requirements." Maintenance of the insurance coverage set forth in Exhibit E is a material element of this Agreement and a material part of the consideration provided by Motorola in exchange for City's agreement to make the payments prescribed hereunder. Failure by Motorola to (i) maintain or renew coverage, (ii) provide City notice of any changes, modifications, or reductions in coverage, or (iii) provide evidence of renewal, may be treated by City as a material breach of this Agreement by Motorola, whereupon City shall be entitled to all rights and remedies at law or in equity, including but not limited to immediate termination of this Agreement. Notwithstanding the foregoing, any failure by Motorola to maintain required insurance coverage shall not excuse or alleviate Motorola from any of its other duties or obligations under this Agreement. In the event Motorola, with approval of City, retains or utilizies any subcontractors or sub consultants in the provision of any services to City under this Agreement, Motorola shall assure that any such subcontractor has first obtained, and shall maintain, all of the insurance coverages set forth in the Insurance Requirements in Exhibit E.

17.14 ACCESSIBILITY REQUIREMENTS: City requires that all City telecommunication services, websites and web-based applications and services are accessible to, and usable by, persons with disabilities. Motorola shall provide all electronic, telecommunication, and information technology products and services to be provided under this Agreement in conformance with title 28, Part 35 of the Code of Federal Regulations, 28 C.F.R. SS 35.130, et seq., and the accessibility standards set forth in Section 508 of the Rehabilitation Act of 1973; as amended. Section 508 standards are viewable at: *https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards.*

The Parties hereby enter into this Agreement as of the Effective Date.

Motorola Solutions, Inc.

By: HChercoe

Name: Howard Chercoe

Title: MSSSI Vice President

Date: December 14, 2018

Motorola Solutions, Inc.

By:

Name: David Little

Title: Assistant Secretary

Date: December 14, 2018

City of Santa Rosa

By: TSchwedhelm

Name: TOM SCHWEDHELM

Title: MAYOR

Date: 12.20.18

City of Santa Rosa – Approved as to Form:

By: Angela Casagrande

Name: Angela Casagrande

Title: Assistant City Attorney

Date: 12/20/18

City of Santa Rosa – Attest:

By: Daisy Gomez

Name: Daisy Gomez

Title: City Clerk

Date: 12/21/2018

Santa Rosa Police Department
L2 Core and 10 Positions MCC 7500 Dispatch Console

Motorola Solutions Confidential Restricted

Motorola Solutions, Inc. CORPORATE Seal DELAWARE

Exhibit A

MOTOROLA SOFTWARE LICENSE AGREEMENT

This Exhibit A Motorola Software License Agreement ("Agreement") is between Motorola Solutions, Inc., ("Motorola"), and City of Santa Rosa ("Licensee").

For good and valuable consideration, the parties agree as follows:

Section 1 DEFINITIONS

1.1 "Designated Products" means products provided by Motorola to Licensee with which or for which the Software and Documentation is licensed for use.

1.2 "Documentation" means product and software documentation that specifies technical and performance features and capabilities, and the user, operation and training manuals for the Software (including all physical or electronic media upon which such information is provided).

1.3 "Open Source Software" means software with either freely obtainable source code, license for modification, or permission for free distribution.

1.4 "Open Source Software License" means the terms or conditions under which the Open Source Software is licensed.

1.5 "Primary Agreement" means the agreement to which this exhibit is attached.

1.6 "Security Vulnerability" means a flaw or weakness in system security procedures, design, implementation, or internal controls that could be exercised (accidentally triggered or intentionally exploited) and result in a security breach such that data is compromised, manipulated or stolen or the system damaged.

1.7 "Software" (i) means proprietary software in object code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, enhancements, new versions and new releases of the software provided by Motorola; and (iii) may contain one or more items of software owned by a third party supplier. The term "Software" does not include any third party software provided under separate license or third party software not licensable under the terms of this Agreement.

Section 2 SCOPE

Motorola and Licensee enter into this Agreement in connection with Motorola's delivery of certain proprietary software or products containing embedded or pre-loaded proprietary software, or both. This Agreement contains the terms and conditions of the license Motorola is providing to Licensee, and Licensee's use of the proprietary software and affiliated documentation.

Section 3 GRANT OF LICENSE

3.1. Subject to the provisions of this Agreement and the payment of applicable license fees, Motorola grants to Licensee a personal, limited, non-transferable (except as permitted in Section 7) and non-exclusive license under Motorola's copyrights and Confidential Information (as defined in the Primary Agreement) embodied in the Software to use the Software, in object code form, and the Documentation solely in connection with Licensee's use of the Designated Products. This Agreement does not grant any rights to source code.

3.2. If the Software licensed under this Agreement contains or is derived from Open Source Software, the terms and conditions governing the use of such Open Source Software are in the Open Source Software Licenses of the copyright owner and not this Agreement. If there is a conflict between the terms and conditions of this Agreement

and the terms and conditions of the Open Source Software Licenses governing Licensee's use of the Open Source Software, the terms and conditions of the license grant of the applicable Open Source Software Licenses will take precedence over the license grants in this Agreement. If requested by Licensee, Motorola will use commercially reasonable efforts to: (i) determine whether any Open Source Software is provided under this Agreement; and (ii) identify the Open Source Software (or specify where that license may be found).

Section 4 LIMITATIONS ON USE

4.1. Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation. Any other use of the Software is strictly prohibited. Without limiting the general nature of these restrictions, Licensee will not make the Software available for use by third parties on a "time sharing," "application service provider," or "service bureau" basis or for any other similar commercial rental or sharing arrangement.

4.2. Licensee will not, and will not allow or enable any third party to: (i) reverse engineer, disassemble, peel components, decompile, reprogram or otherwise reduce the Software or any portion to a human perceptible form or otherwise attempt to recreate the source code; (ii) modify, adapt, create derivative works of, or merge the Software; (iii) copy, reproduce, distribute, lend, or lease the Software or Documentation to any third party, grant any sublicense or other rights in the Software or Documentation to any third party, or take any action that would cause the Software or Documentation to be placed in the public domain; (iv) remove, or in any way alter or obscure, any copyright notice or other notice of Motorola's proprietary rights; (v) provide, copy, transmit, disclose, divulge or make the Software or Documentation available to, or permit the use of the Software by any third party or on any machine except as expressly authorized by this Agreement; or (vi) use, or permit the use of, the Software in a manner that would result in the production of a copy of the Software solely by activating a machine containing the Software. Licensee may make one copy of Software to be used solely for archival, back-up, or disaster recovery purposes; *provided* that Licensee may not operate that copy of the Software at the same time as the original Software is being operated. Licensee may make as many copies of the Documentation as it may reasonably require for the internal use of the Software.

4.3. Unless otherwise authorized by Motorola in writing, Licensee will not, and will not enable or allow any third party to: (i) install a licensed copy of the Software on more than one unit of a Designated Product; or (ii) copy onto or transfer Software installed in one unit of a Designated Product onto one other device. Licensee may temporarily transfer Software installed on a Designated Product to another device if the Designated Product is inoperable or malfunctioning, if Licensee provides written notice to Motorola of the temporary transfer and identifies the device on which the Software is transferred. Temporary transfer of the Software to another device must be discontinued when the original Designated Product is returned to operation and the Software must be removed from the other device. Licensee must provide prompt written notice to Motorola at the time temporary transfer is discontinued.

4.4 Licensee will maintain, during the term of this Agreement and for a period of two years thereafter, accurate records relating to this license grant to verify compliance with this Agreement. Motorola or an independent third party ("Auditor") may inspect Licensee's premises, books and records, upon reasonable prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations. Motorola is responsible for the payment of all expenses and costs of the Auditor. Any information obtained by Motorola and the Auditor will be kept in strict confidence by Motorola and the Auditor and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.

Section 5 OWNERSHIP AND TITLE

Motorola, its licensors, and its suppliers retain all of their proprietary rights in any form in and to the Software and Documentation, including, but not limited to, all rights in patents, patent applications, inventions, copyrights, trademarks, trade secrets, trade names, and other proprietary rights in or relating to the Software and Documentation (including any corrections, bug fixes, enhancements, updates, modifications, adaptations, translations, de-compilations, disassemblies, emulations to or derivative works from the Software or Documentation, whether made by Motorola or another party, or any improvements that result from Motorola's processes or, provision of information services). No rights are granted to Licensee under this Agreement by implication, estoppel or otherwise, except for those rights which are expressly granted to Licensee in this Agreement. All intellectual property developed, originated, or prepared by Motorola in connection with providing the Software, Designated Products, Documentation or related services, remains vested exclusively in Motorola, and Licensee will not have any shared development or other intellectual property rights.

Section 6 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

6.1. Unless otherwise stated in the Primary Agreement, the commencement date and the term of the Software warranty will be a period of ninety (90) days from Motorola's shipment of the Software (the "Warranty Period"). If Licensee is not in breach of any of its obligations under this Agreement, Motorola warrants that the unmodified Software, when used properly and in accordance with the Documentation and this Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether a defect occurs will be determined by Motorola solely with reference to the Documentation. Motorola does not warrant that Licensee's use of the Software or the Designated Products will be uninterrupted, error-free, completely free of Security Vulnerabilities, or that the Software or the Designated Products will meet Licensee's particular requirements. Motorola makes no representations or warranties with respect to any third party software included in the Software. Notwithstanding, any warranty provided by a copyright owner in its standard license terms will flow through to Licensee for third party software provided by Motorola.

6.2 Motorola's sole obligation to Licensee and Licensee's exclusive remedy under this warranty is to use reasonable efforts to remedy any material Software defect covered by this warranty. These efforts will involve either replacing the media or attempting to correct significant, demonstrable program or documentation errors or Security Vulnerabilities. If Motorola cannot correct the defect within a reasonable time, then at Motorola's option, Motorola will replace the defective Software with functionally-equivalent Software, license to Licensee substitute Software which will accomplish the same objective, or terminate the license and refund the Licensee's paid license fee.

6.3. Warranty claims are described in the Primary Agreement.

6.4. The express warranties set forth in this Section 6 are in lieu of, and Motorola disclaims, any and all other warranties (express or implied, oral or written) with respect to the Software or Documentation, including, without limitation, any and all implied warranties of condition, title, non-infringement, merchantability, or fitness for a particular purpose or use by Licensee (whether or not Motorola knows, has reason to know, has been advised, or is otherwise aware of any such purpose or use), whether arising by law, by reason of custom or usage of trade, or by course of dealing. In addition, Motorola disclaims any warranty to any person other than Licensee with respect to the Software or Documentation.

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Section 8 TERM AND TERMINATION

8.1 Licensee's right to use the Software and Documentation will begin when the Primary Agreement is signed by both parties and will continue for the life of the Designated Products with which or for which the Software and Documentation have been provided by Motorola, unless Licensee breaches this Agreement, in which case this Agreement and Licensee's right to use the Software and Documentation may be terminated immediately upon notice by Motorola.

8.2 Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Motorola that all copies of the Software have been removed or deleted from the Designated Products and that all copies of the Software and Documentation have been returned to Motorola or destroyed by Licensee and are no longer in use by Licensee.

8.3 Licensee acknowledges that Motorola made a considerable investment of resources in the development, marketing, and distribution of the Software and Documentation and that Licensee's breach of this Agreement will result in irreparable harm to Motorola for which monetary damages would be inadequate. If Licensee breaches this Agreement, Motorola may terminate this Agreement and be entitled to all available remedies at law or in equity (including immediate injunctive relief and repossession of all non-embedded Software and associated Documentation unless Licensee is a Federal agency of the United States Government).

Section 9 Commercial Computer Software

9.1 *This Section 9 only applies to U.S. Government end users.* The Software, Documentation and updates are commercial items as that term is defined at 48 C.F.R. Part 2.101, consisting of "commercial computer software" and "computer software documentation" as such terms are defined in 48 C.F.R. Part 252.227-7014(a)(1) and 48 C.F.R. Part 252.227-7014(a)(5), and used in 48 C.F.R. Part 12.212 and 48 C.F.R. Part 227.7202, as applicable. Consistent with 48 C.F.R. Part 12.212, 48 C.F.R. Part 252.227-7015, 48 C.F.R. Part 227.7202-1 through 227.7202-4, 48 C.F.R. Part 52.227-19, and other relevant sections of the Code of Federal Regulations, as applicable, the Software, Documentation and Updates are distributed and licensed to U.S. Government end users: (i) only as commercial items, and (ii) with only those rights as are granted to all other end users pursuant to the terms and conditions contained herein.

9.2 If Licensee is licensing Software for end use by the United States Government or a United States Government agency, Licensee may transfer such Software license, but only if: (i) Licensee transfers all copies of such Software and Documentation to such United States Government entity or interim transferee, and (ii) Licensee has first obtained from the transferee (if applicable) and ultimate end user an enforceable end user license agreement containing restrictions substantially identical to the ones contained in this Agreement. Except as stated in the foregoing, Licensee and any transferee(s) authorized by this subsection 9.2 may not otherwise use or transfer or make available any Motorola software to any third party nor permit any party to do so.

Section 10 CONFIDENTIALITY

Licensee acknowledges that the Software and Documentation contain Motorola's valuable proprietary and Confidential Information and are Motorola's trade secrets, and that the provisions in the Primary Agreement concerning Confidential Information apply.

Section 11 LIMITATION OF LIABILITY

The Limitation of Liability provision is described in the Primary Agreement.

Section 12 NOTICES

Notices are described in the Primary Agreement.

Section 13 GENERAL

13.1. COPYRIGHT NOTICES. The existence of a copyright notice on the Software will not be construed as an admission or presumption of publication of the Software or public disclosure of any trade secrets associated with the Software.

13.2. COMPLIANCE WITH LAWS. Licensee acknowledges that the Software is subject to the laws and regulations of the United States and Licensee will comply with all applicable laws and regulations, including export laws and regulations of the United States. Licensee will not, without the prior authorization of Motorola and the appropriate governmental authority of the United States, in any form export or re-export, sell or resell, ship or reship, or divert, through direct or indirect means, any item or technical data or direct or indirect products sold or otherwise furnished to any person within any territory for which the United States Government or any of its agencies at the time of the action, requires an export license or other governmental approval. Violation of this provision is a material breach of this Agreement.

13.3. ASSIGNMENTS AND SUBCONTRACTING. Motorola may assign its rights or subcontract its obligations under this Agreement, or encumber or sell its rights in any Software, without prior notice to or consent of Licensee.

13.4. GOVERNING LAW. This Agreement is governed by the laws of the United States to the extent that they apply and otherwise by the internal substantive laws of the State to which the Software is shipped if Licensee is a sovereign government entity, or the internal substantive laws of the State of Illinois if Licensee is not a sovereign government entity. The terms of the U.N. Convention on Contracts for the International Sale of Goods do not apply. In the event that the Uniform Computer Information Transaction Act, any version of this Act, or a substantially similar law (collectively "UCITA") becomes applicable to a party's performance under this Agreement, UCITA does not govern any aspect of this Agreement or any license granted under this Agreement, or any of the parties' rights or obligations under this Agreement. The governing law will be that in effect prior to the applicability of UCITA.

13.5. THIRD PARTY BENEFICIARIES. This Agreement is entered into solely for the benefit of Motorola and Licensee. No third party has the right to make any claim or assert any right under this Agreement, and no third party is deemed a beneficiary of this Agreement. Notwithstanding the foregoing, any licensor or supplier of third party software included in the Software will be a direct and intended third party beneficiary of this Agreement.

13.6. SURVIVAL. Sections 4, 5, 6.4, 7, 8, 9, 10, 11 and 13 survive the termination of this Agreement.

13.7. ORDER OF PRECEDENCE. In the event of inconsistencies between this Exhibit and the Primary Agreement, the parties agree that this Exhibit prevails, only with respect to the specific subject matter of this Exhibit, and not the Primary Agreement or any other exhibit as it applies to any other subject matter.

13.8 SECURITY. Motorola uses reasonable means in the design and writing of its own Software and the acquisition of third party Software to limit Security Vulnerabilities. While no software can be guaranteed to be free from Security Vulnerabilities, if a Security Vulnerability is discovered, Motorola will take the steps set forth in Section 6 of this Agreement.

Exhibit B

PAYMENT

Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within thirty (30) days after the date of each invoice. Customer will make payments when due in the form of a check, cashier's check, or wire transfer drawn on a U.S. financial institution. If Customer has purchased additional Professional or Subscription services, payment will be in accordance with the applicable Addenda. Payment for the System purchase will be in accordance with the following milestones.

System Purchase (excluding Subscribers, if applicable)

1. **25% of the Contract Price due upon contract execution (due upon effective date);**

2. **60% of the Contract Price due upon shipment of Equipment from Staging;**

3. **10% of the Contract Price due upon installation of Equipment; and**

4. **5% of the Contract Price due upon Final Project Acceptance.**

If Subscribers are purchased, 100% of the Subscriber Contract Price will be invoiced upon shipment (as shipped).

Motorola may make partial shipments of Equipment and will request payment upon shipment of such Equipment. In addition, Motorola will invoice for installations completed on a site-by-site basis or when professional services are completed, when applicable. The value of the Equipment shipped/services performed will be determined by the value of the shipped/services performed as a percentage of the total milestone value. Unless otherwise specified, contract discounts are based upon all items proposed and overall System package. For invoicing purposes only, discounts will be applied proportionately to the FNE and Subscriber Equipment values to total Contract Price. Overdue invoices will bear simple interest at the maximum allowable rate.

SANTA ROSA POLICE DEPARTMENT SEPTEMBER 14, 2018

L2 CORE AND 10 POSITIONS MCC 7500 DISPATCH CONSOLE

MOTOROLA SOLUTIONS

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MOTOROLA SOLUTIONS

Motorola Solutions
10680 Treena Street, Suite #200
San Diego, CA 92131
USA

September 14, 2018

Keith Hinton
Santa Rosa Police Department
965 Sonoma Ave
Santa Rosa, CA 95404

Subject: L2 Core and 10 Positions MCC 7500 Dispatch Console

Dear Keith Hinton,

Motorola Solutions, Inc. ("Motorola Solutions") is pleased to have the opportunity to provide the Santa Rosa Police Department with quality communications equipment and services. The Motorola Solutions 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 Solution's response includes a combination of hardware, software, and services. Specifically, this solution provides:

- P25 ASTRO L2 Core Master Site
- (10) MCC7500 Dispatch Positions
- (1) MCC7500 Archiving Interface Server (AIS)
- (1) Verint IP Logging Recorder

This proposal is subject to the enclosed Communications System and Services Agreement (CSSA), together with its Exhibits. This proposal shall remain valid for a period of 90 days from the date of this cover letter. Santa Rosa Police Department may accept the proposal by delivering to Motorola Solutions the CSSA signed by your Santa Rosa Police Department representative. Alternatively, Motorola Solutions would be pleased to address any concerns Santa Rosa Police Department may have regarding the proposal. Any questions can be directed to your Manufacturer's Representative Greg Weisman at (707) 805-6097 or your Motorola Solutions Account Executive, Bill Vlahandreas, at (707) 321-7007.

We thank you for the opportunity to furnish Santa Rosa Police Department 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.

Michael De Benedetti
Area Sales Manager
Motorola Solutions, Inc.

SECTION 1

SYSTEM DESCRIPTION

1.1 SOLUTION OVERVIEW

In response to Santa Rosa Police Department (SRPD)'s request for a new ASTRO core to support your legacy RF conventional equipment, Motorola Solutions is providing this proposal for an ASTRO 25 Core capable of supporting the legacy RF sites and to support a technology migration to trunking solutions available to the Public Safety market. The ASTRO 25 software-defined platform provides the freedom to deploy a right-sized system today, with the confidence of easily adding coverage, capacity, and new capabilities as the needs evolve in the future.

The solution is a P25 compliant, single zone, trunked configuration. The core supports trunked system configurations with up to 5 repeater sites, 10 simulcast subsites, and up to 150 base repeaters. Analog or digital conventional channels can also be supported. A single COTS server supports all call processing within the zone. The same server provides Active Directory functionality and can be used for the backup of databases at the core. Centralized system management applications also reside on this platform. With this core, agencies can enable Integrated Voice and Data, Enhanced Data, and can interoperate with other P25 networks.

An L2 core is a redundant core with redundant servers and network devices to prevent a single point of failure that would prevent the loss of radio communications. The high level features and capacities supported by a typical L2 core are summarized in the table below. The core will be licensed for features and capacities needed by the Santa Rosa Police Department.

System Capacities / Functionalities	ASTRO 25 L2 Core
ASTRO 25 Trunking	Supported
Total System Channels (Trunked or Mixed Trunked/Conventional/HPD) Digital	Maximum of 150
Trunked Sites	Maximum of 5
Total Simulcast Subsystems	2
Trunking Simulcast Subsites	10
Channels per Simulcast Subsite	30
Talkgroups	4,000
Individual Ids	16,000
Frequency Bands	700 MHz 800 MHz 900 MHz UHF - 380 to 520 MHz VHF - 136 to 174 MHz
Voice Encryption	Yes
ISSI 8000	Supported
Maximum Dispatch Sites	5
Maximum Dispatch Operator Positions	20 per site 50 system wide
Conventional Legacy Channels via CCGW per Dispatch Site	40 4 -wire 20 V.24

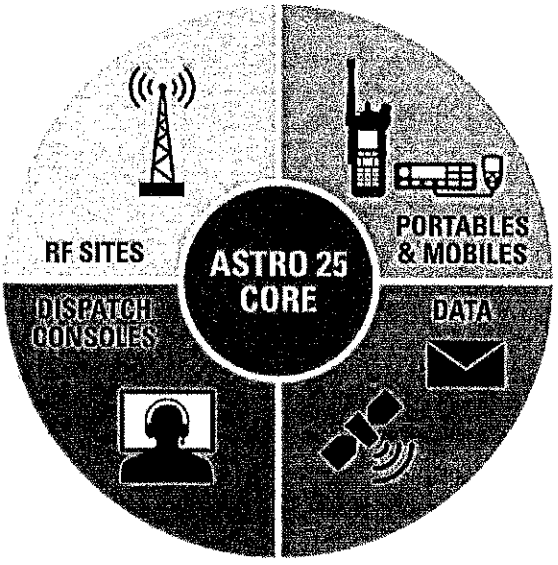
This proposal includes ten (10) MCC7500 Dispatch Console positions and associated equipment, one (1) MCC7500 Archiving Interface Server (AIS), (1) Verint IP Logging Recorder and an ASTRO 25 L2 Core. The dispatch site includes the necessary equipment to allow connection to the existing analog and V.24-based equipment.

The MCC 7500 is capable of accessing and controlling Santa Rosa PD's analog and digital conventional base stations through the use of conventional channel gateways (CCGW). The dispatch console processes audio received from the station and provides the transmit audio and control functions from the dispatch position. Each CCGW supports up to eight channels through 4-wire connectivity, or up to ten channels through IP connectivity.

1.2 ASTRO 25 INFRASTRUCTURE

Motorola Solutions, Inc. (Motorola Solutions) proposes our ASTRO® 25 platform with Integrated Voice and Data (IV&D) to provide secure and reliable communications for the Santa Rosa Police Department. ASTRO 25 offers a future-ready, wireless platform that combines a uncompromising, real-world performance and reliability.

ASTRO 25 offers SRPD a Project 25(P25), standards-based Internet Protocol (IP) solution with a flexible, modular network. ASTRO 25 can expand to accommodate additional radio users, increased geographic coverage, enhanced data applications, and connectivity to other networks, ensuring that SRPD will have efficient and cost-effective communications for decades to come.



ASTRO 25 also provides advanced call processing capabilities designed to meet the needs of public safety. On an ASTRO 25 network, first responders can share voice and data communications between members of the same team, across an agency, or among different agencies. In addition, the network's centralized command and control capabilities will enable SRPD to deploy resources, track personnel, and maintain communication security more efficiently and effectively.

The system's P25-compliant IV&D operation allows data traffic to travel seamlessly over the ASTRO 25 radio system, improving in-field efficiency and providing a platform for additional capabilities. By creating a data transport layer capable of supporting both industry-standard IP and customer-developed applications, IV&D will provide SRPD with a number of important benefits:

- Conserves valuable airtime.
- Increases communications accuracy.
- Allows queries in the field without involving dispatch.

Because ASTRO 25 automatically prioritizes voice communications over data transmissions, the Department's personnel will always be able to transmit and receive mission-critical communications.

1.3 PROPOSED SYSTEM ARCHITECTURE

The proposed ASTRO 25 solution will provide an adaptable and affordable platform for mission critical wireless communications throughout the Department's geographic area. The proposed system provides an L2-zone architecture. A zone comprises the master site and Radio Frequency (RF) sites referred to as the "system" throughout this proposal. The system will support Enhanced Conventional Channel Gateways to allow multiple users to share channel resources in a single-bandwidth. For added resiliency, the proposed system will feature the L2 configuration.

The "master site"—where core equipment is located—provides a central point of control for the operation of the radio communication system. From the master site, the Department's system administrators will have access to the hardware and software components that control call processing, network management, and system configuration. Common Server Architecture (CSA) reduces physical space and individual component requirements at the master site by using Virtual Management Servers (VMSs) to host server applications in a Virtual Machine (VM) environment.

1.4 OPTION FOR FUTURE SYSTEM INTEROPERABILITY

The proposed L-Core can support features and functionality above and beyond the scope of this proposal. This includes interoperability by means of the Inter-RF Subsystem Interface 8000 (ISSI 8000) to neighboring P25 systems.

1.5 SYSTEM COMPONENTS

An ASTRO 25 radio system is comprised of a master site and one or more radio frequency sites. This section provides descriptions of the components at each location.

1.5.1 Master Site Core Components

The equipment at an ASTRO 25 master site provides an adaptable and affordable platform for mission critical wireless communications in a scalable and virtualized configuration. The master site equipment comprises the system's core components, including a common server architecture (running the applications that provide command and control for the system) and LAN switches (routing information to and from the master site to the radio frequency sites that provide system coverage).

1.5.1.1 Common Server Architecture

A master site's Common Server Architecture (CSA) deploys server applications with the Linux/Windows operating systems on a HP DL380 Virtual Management Server (VMS) host. The VMS hosts the following server applications through VMware in a Virtual Machine (VM) environment:

- **Air Traffic Router (ATR)** – Captures data exhibited by Affiliation Display, Dynamic Reports, Historical Reports, Radio Control Manager (RCM) Reports, and for systems with the Inter-RF System Gateway (ISGW) employing the ISSI 8000/CSSI 8000 feature. The ATR also captures foreign talkgroup and foreign Subscriber Unit Identifier information for ZoneWatch to display.
- **Backup and Recovery (BAR) Server** – Backs up and restores critical data.
- **Core Security Management Server (CSMS)** – Provides antivirus service and multi-factor authentication.
- **User Configuration Server (UCS)** – Stores information about user radios, talkgroups, critical sites, and security information.

- **Zone Database Server (ZDS)** – Exports infrastructure and subscriber information it receives from the User Configuration Server (UCS) to consoles and site gateways (conventional channel interface).
- **Zone Statistics Server (ZSS)** – Provides database storage of statistics and back-end processes required for zone-level functions.
- **Zone Controller (ZC)** – Provides centralized control for call processing and mobility management functions.
- **License Manager** – Stores and manages software licenses.
- **Unified Event Manager (UEM)** – Provides fault management.
- **Unified Network Configurator (UNC)** – Provides controlled and validated configuration management of system devices.
- **Unified Network Configurator (UNC) Device Server (UNCDS)** – Enables the UNC to manage up to 15,000 devices.
- **Network Management (NM) Client** – Provides a virtual workstation for system administrators and technicians to use for various system-related tasks.
- **IP Packet Capture (IPCAP)** – Captures transactions between network elements and collects performance data for Virtual Management Servers (VMSs).

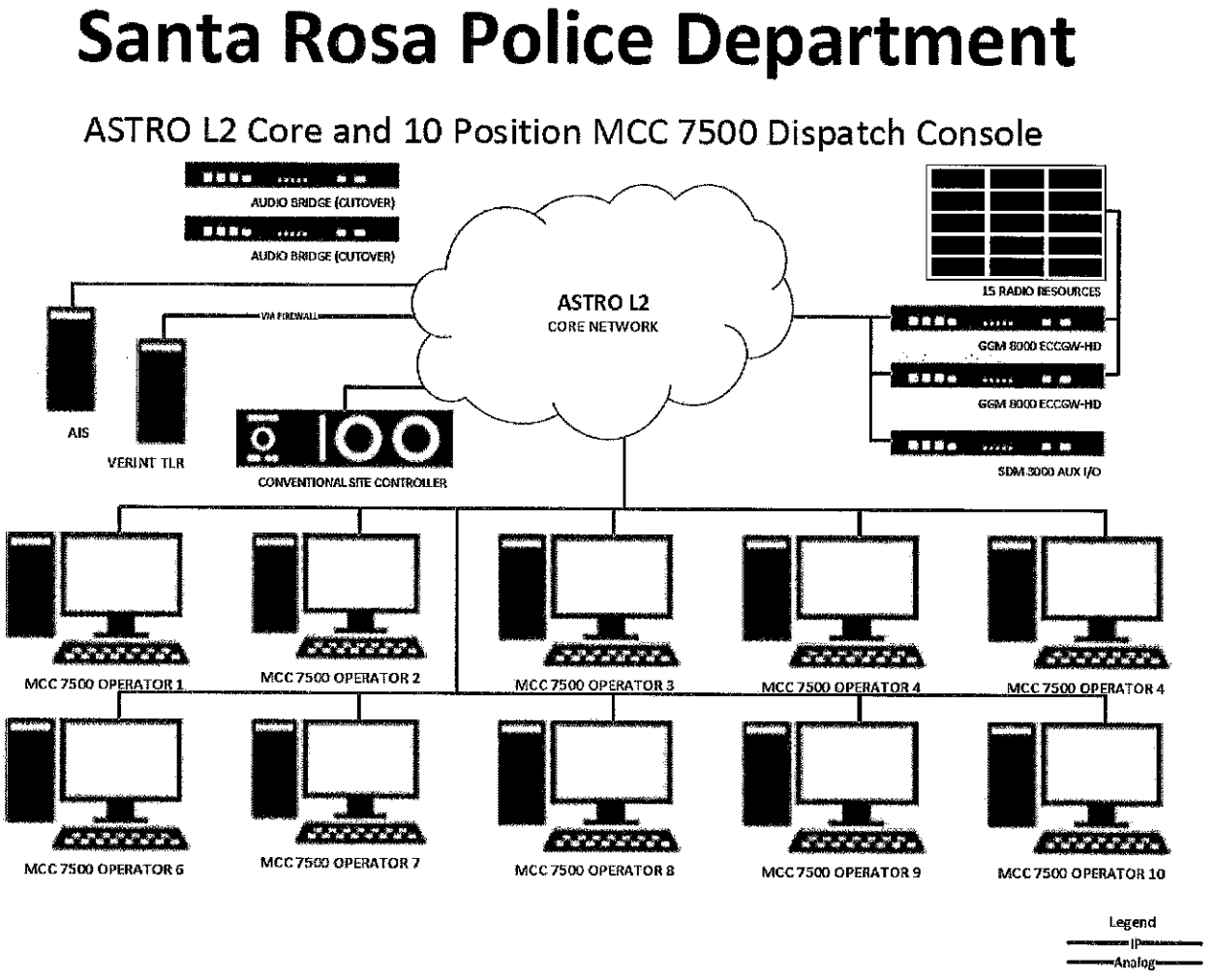


Figure 1-1 - System Diagram

1.5.1.2 Firewall

A firewall provides network boundary enforcement and attack detection features. The firewall restricts traffic to known sources, destinations, and protocols, based on the hosts and services that are specified in the firewall configuration. All undefined traffic is discarded.

1.5.1.3 LAN Switches

The master site includes one or more LAN switches. The LAN switches aggregate all the Ethernet interfaces for all servers, clients, and routers at the core.

The proposed system for SRPD will include redundant LAN switches for added system resilience.

1.5.2 Site Component Descriptions

An ASTRO 25 site supports a wide variety of configurations to meet critical communications requirements for present and future communication needs. Depending on the RF site configuration, each RF site has several different components. The following components are included in the RF sites provided as part of our solution for SRPD.

1.5.2.1 Enhanced GGM 8000 Conventional Channel Gateway

Enhanced Conventional Channel Gateways (ECCGWs) connect dispatch operators to analog or digital conventional channels in the system. Up to 16 conventional channels can be connected to the eight analog and eight V.24 ports on a GGM 8000-based ECCGW in any mixture of analog, MDC 1200 digital or mixed mode.

In addition to the 16 channels supported on the analog and V.24 ports, the ECCGW can support up to 16 digital conventional channels through its IP port. Mixed mode channels must use a V.24 port for the digital portion.

For this application Motorola has proposed (2) ECCGWs, which will support (14) analog resources, and (1) digital or (1) mixed-mode resource.

Figure 1-2: Enhanced GGM 8000 Conventional Channel Gateway - Connects dispatch operators to analog or digital conventional channels in the system.

1.5.2.2 Conventional Site Controller

G-series site equipment uses a standard chassis (see the figure titled "G-Series Chassis") for individual site components. Six basic modules create the entire G-series platform, resulting in reduced spare parts inventory. Modules have front access to improve serviceability with hot-swap support to ensure channels are back on the air in minimum possible time. Standard battery revert and charging capability is built into every G-series power supply. Integrating these capabilities eliminates the need for a large uninterrupted power supply and saves valuable site space.

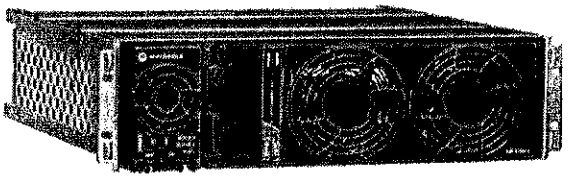


Figure 1-3: G-Series Chassis – A single chassis and six basic modules create the entire G-series platform, resulting in reduced spare parts inventory.

- **GCP 8000 Site Controller** – The GCP 8000 Site Controller is used at an ASTRO 25 trunking site to assign voice and data channels, manage and report alarms on site resources, provide Ethernet switching capability, and provide a frequency reference to GTR 8000 Base Radios. The frequency reference is provided either via a GPS receiver or an ultra-high stability oscillator. The nature of these frequency references eliminates or minimizes site visits for frequency tuning servicing.
- **GCP 8000 Conventional Site Controller** – The GCP 8000 Conventional Site Controller provides mission critical call processing and mobility management throughout the ASTRO 25 conventional system. The GCP 8000 interfaces through the Ethernet LAN switch, providing access to the packet switched network through the core gateway. Equipped with a single controller module, the GCP 8000 can support the full set of dispatch consoles, archiving interface servers, and conventional gateways.

1.5.2.3 GGSN Router

Motorola Solutions' General Packet Radio Service (GPRS) Gateway Service Node (GGSN) router provides for the internetworking between the ASTRO 25 data system and the Customer Enterprise Network (CEN), allowing for independent management of IP addresses across networks.

The GGSN router handles the IP routing services in support of end-to-end IP data messaging. These services include Static and Dynamic IP addressing, IP fragmentation, and ICMP error reporting messaging for diagnostics and troubleshooting.

1.5.2.4 SDM 3000 Remote Terminal Units (RTUs)

The SDM 3000 Remote Terminal Units (RTUs) (see the figure titled "SDM 3000 Remote Terminal Unit") enables the Unified Event Manager (UEM) to acquire information regarding the fault and configuration of elements/devices in sites. Each SDM 3000 RTU has a web server that provides service access through a standard web browser. An RTU can retrieve the topology map of the site and alarms stored in the events buffer.

We have proposed (1) RTU that can support (48) digital inputs and (16) digital outputs.

Figure 1-4: SDM3000 Remote Terminal Unit – Enables the UEM to acquire information regarding the fault and configuration of elements/devices in sites.

1.5.2.5 GGM 8000 Gateway

The GGM 8000 core gateways provide routing control of audio, data, and network management traffic for devices that forward packets beyond their local LAN. The gateways replicate packets while achieving the fast access levels required by real-time voice systems.

This proposal includes redundant gateways for the console site.

Figure 1-5: GGM 8000 Gateway – Provides routing control of audio, data, and network management traffic for devices that forward packets beyond their local LAN.

1.5.2.6 Site LAN Switch

The site LAN switch provides a LAN interface for site equipment and a LAN port for the site gateway. Through the switch, the service technicians gain access to service the site, and also access to the system's Graphical User Interface (GUI).

Redundant switches for the console site are included in this proposal.

1.5.2.7 KVL 4000 Key Variable Loader

The KVL 4000 (see the figure titled "KVL 4000 Key Variable Loader") is Motorola Solutions' encryption Key Variable Loader for secure-enabled Motorola Solutions products. Equipped with the Motorola Solutions MC55 handheld, the key loader is outfitted with state-of-the-art features and a user interface for increased efficiency and programming flexibility. A large LCD color display, paired with an easy-to-use alphanumeric keypad, enables simple viewing and data entry. Built with legendary Motorola Solutions quality and security, the KVL 4000 withstands everyday use in federal and public safety environments.

(1) KVL 4000 is included.

Figure 1-6: KVL 4000 Key Variable Loader – Features a large LCD color display and a user interface for increased efficiency and programming flexibility.

1.6 VERINT AUDIOLOG RECORDING SOLUTION

Today's environment requires Emergency Communication Centers to operate at peak efficiency while improving Service levels. Verint's advanced suite of contact center recording, monitoring, evaluation and reporting tools assist our customers in improving customer experience, enhancing productivity, retaining employees, enhancing employees' productivity, and minimizing training costs.

Verint's Impact 360® powered by Audiolog for Public Safety™ with the browser-based Verint Insight Center™ Web Based Multi-media software solution, are designed to be user-intuitive – significantly reducing the IT resources needed to implement and maintain, and requiring minimal training. This flexible, easy-to-install and easy-to-use recording solution gives our users the ability to record interactions and instantly retrieve recordings from their desktop or web browser for weeks, months or even years.

Verint Systems combines years of experience developing and delivering contact center software and services with a unique and comprehensive understanding of the public safety market given its extensive security intelligence work with government, public, and enterprise organizations to provide solutions designed to optimize the performance of public safety agencies. From Public Safety Answering Points (PSAPs) to command and control centers to emergency communications centers, Verint public safety recording and evaluation solutions expertly address the myriad of performance challenges that contribute to delayed emergency response, reduced productivity and effectiveness, and slow and cumbersome investigations.

An integral part of Verint's public safety solutions, the Verint Audiolog recording solution is an advanced digital call recording, playback, and archiving system that is designed for use both as a standalone recorder/playback unit and as a specialized recording server within a networked environment. Audiolog is built to provide functionally comprehensive, intelligent, and reliable recording, with fast and accurate retrieval and playback, that is scalable, quick to deploy, and easy to manage.

To assist management operations in communication centers Verint offers unique advanced applications such as Employee/Incident Evaluation Software as well as Speech Analytics software designed to empower management with tools to analyze and investigate recorded interactions.

1.6.1 Audiolog and NG9-1-1

Verint's Impact 360® for Public Safety Powered by Audiolog™ is designed to help support Emergency Response organizations in enhancing performance and responding to new challenges arising from Next-Generation 9-1-1 (NG9-1-1). The solution brings together a unique set of functionality that when combined assists in:

- Achieving high quality response by accurate call handling and dispatching.
- Liability reduction.
- Immediacy of incident data and efficient incident-based recording retrieval.

Verint is committed to providing our customers a strategy for Recording in a NG9-1-1 Emergency Response Center. This strategy not only applies to new customers who may be investing in Audiolog for their communications recording needs in NG9-1-1 equipped centers, but also to existing customers who will require their Existing Audiolog to be upgradeable to NG9-1-1 functionality to protect their investment in recording technology.

With this commitment Verint joined NENA's NG9-1-1 Partner Program in 2007, and continues to participate in NENA's NG9-1-1 Events. Recently Verint participated and completed in the ICE-8

Testing in Chicago. In addition, Verint has already performed independent NG9-1-1 interoperability testing with vendors such as Intrado, to ensure functionality of recording in a NG9-1-1 operation.

However, in a NG9-1-1 Emergency Response Operation, "Recording" is only a part of the solution. Verint believes strongly in the need for Operational Tools to enable Employees to handle these emerging technologies within NG9-1-1. These operational tools affect employee performance by measuring skills and providing learning methodologies to improve performance. This is the Impact 360® software suite.

Impact 360® for Public Safety Powered by Audiolog™ is a robust workforce optimization portfolio that combines radio and telephone recording, playback, and storage with quality assurance, incident reconstruction and analysis, employee coaching and training, and speech analytics. Improving emergency preparedness and response, reducing liability and risk, enhancing employee productivity and retention, and helping make the most of budgets and staff, Impact 360 for Public Safety Powered by Audiolog is an ideal call recording, retrieval, and quality management solution for virtually any public safety environment and situation. In addition, the solution can help facilitate and expedite implementation of NG9-1-1, E-112, and other emerging standards, which can otherwise place serious cost and operational burdens on public safety agencies already grappling with the challenges of diminished funding, shrinking staffs, growing workloads, and rising expectations.

1.6.2 Verint Product Descriptions

Audiolog is a very flexible recording platform that comes with a variety of standard client applications and server licenses. Not all licenses are used in every environment. For example, some are specifically designed for public safety organizations while others are used only in call centers. Listed below are the acronyms and descriptions for the licenses most likely to be used in your environment.

1.6.2.1 Audiolog

Audiolog is an advanced digital call recording system that is designed for use both as a stand-alone recorder/playback unit and as a specialized recording server within a networked environment. Built on an open architecture using standard PC components, the Microsoft Windows platform, and the Microsoft SQL database, a single Audiolog server can provide acquisition, storage, and processing, along with the application layer. This standards-based, packaged approach ensures delivery of a functionally comprehensive, reliable, intelligent recording solution that is scalable, quick to deploy, and easy to manage.

1.6.2.2 Central Archive Server (CAS)

The Audiolog Central Archive Server provides a central Storage and Database Server to unify the recordings from several Audiolog recording Servers in a multi-server solution. The CAS is the first step in call and data redundancy as calls uploaded to the CAS from the Audiolog Recording Servers are also retained on the Audiolog Recording Server. From the CAS, a user may access the unified database to quickly search for all calls recorded in the multi-server solution. The CAS also serves as a central point to enable a second step of data redundancy, as the CAS may be used in conjunction with a customer provided Network Attached Storage Server or SAN to provide long term call storage. When this method of long term storage is employed, the CAS retains the database for users to search, and will seamlessly return the calls from the NAS/SAN device to the user requesting the call record.

1.6.2.3 Insight Center

Insight Center is an end-user software interface which is browser based and allows for a user to search, retrieve and playback both telephone and radio recordings. Insight Center is designed to serve the user as a multi-channel and multimedia search and replay application to support full Incident Reconstruction of recordings, including: Audio, PC Screen recording and other multimedia file types which can be imported by a User.

1.6.2.4 Audiolog Management Console and Audiolog Messenger

The Audiolog Management Console (AMC) Client enables monitoring of the status of selected Audiolog servers and viewing of both Audiolog and Windows Event Logs. If an alarm condition is detected on an Audiolog server, a talking alarm will sound on the AMC client and an error message will scroll across the user's screen. In addition, the AMC enables changes to be made within the Audiolog Configuration Manager from a remote Windows multi-media PC workstation.

Audiolog Messenger facilitates an email notification from the Audiolog system to multiple defined recipients, identifying an Audiolog alarm condition and error messages written to the Windows Event Log of the Audiolog server.

Audiolog Messenger can also be used in combination with AMC on a client system to send an email notification in the event AMC loses communication with an Audiolog server. Audiolog Messenger uses Microsoft Outlook Express as the email client to send messages. Therefore, setting up the email application on the client system is a prerequisite to using AMC and Audiolog Messenger.

1.6.2.5 Housekeeping

Housekeeping is a process that can be scheduled to run automatically on a periodic basis, preferably daily. Housekeeping does critical maintenance routine that backs up the database, purges calls older than the retention period and repairs the database if needed.

1.6.2.6 Audiolog Reports

The Audiolog Report Client provides several standard reports to help PSAPs and other public safety agencies and organizations analyze and document the performance of their communications center operations. Each of the reports can be viewed on screen, printed, or exported to a number of formats, including Adobe® Acrobat® PDF. The standard reports include:

- Basic Account Information Report.
- Calls/Campaign Report.
- Executive Summary Report Agent Report.
- Call Audit Reports.
- Detailed Call Reports.
- Hourly Breakdown Report.
- Ring Duration Report by Channel.
- Talk Time Report.
- Work Code Report.

1.6.2.7 Audiolog Recording Solution Overview

Background

Motorola Solutions has asked Verint Systems to provide a proposal for a new Radio and Telephony Recording solution for Santa Rosa. The solution as required is to provide a recording solution at one physical site:

- Primary E-911 Center.

The Requirements of this new system have been set forth and are to provide a new logging recorder that will record all audio from:

- Trunked P25 radio (8 simultaneous conversations).
- Radio – all types of calls trunked or conventional.

The logging recorder requirements apply to both the 911 center. Currently this location provides a capture for audio to the Audiolog server in place at this location. The requirement for adding the TLR (Trunk Logger Recorder) will allow for recording the Motorola Solutions P25 IP from an AIS. The console electronics shall provide multiple independent audio outputs suitable for connection to a logging recorder. The outputs shall supply audio from all the radio channels and controlled by the console to the logging recorder. Both transmit and receive audio shall be provided. The outputs shall filter guard and function tones associated with tone remote controlled stations.

1.6.2.8 Audiolog Solution Design

Telephone & Radio Recording

To meet these requirements set forth by Santa Rosa, Verint Systems is proposing a Public Safety Recording Solution based upon the Verint Audiolog. This Audiolog Solution will be based upon the Audiolog release version 5.

To accomplish the recording requirements at this location, is to add a TLR to meet the needs for recording Radio Communications, a dedicated Trunked Logging Recording (TLR) Server will be deployed to Record the ASTRO P25 Trunked Radio Communications. This Audiolog TLR is designed to record 8 Talkgroups and capture Radio metadata with each recorded transmission. This metadata is provided by the Motorola Solutions Archive Information Server and includes such info as Radio ID, Radio Alias, Talk group ID and Talk Group Alias. This will enable users to search and retrieve recorded radio communications based upon Talk group and/or Radio information. The current Audiolog telephony server will be upgraded to the latest V5 SP and will upload the calls to the CAS to unify the calls from the TLR and Telephony server.

Search and Playback

The Search and Retrieval of Recorded Communications can be done by two methods: 1. Verint's Web Based Application, "Insight Center" or 2. Verint's Audiolog Client Software. Both Search and Replay applications are available to **Santa Rosa** to use at their discretion. Verint's Insight Center application provides a powerful, browser-based, set of tools to search for and play the recordings stored on your Audiolog servers from your desktop PC. With an easy-to-use browser interface, you can easily search for recordings by Recorded Channel, Date, Time, Duration, User Reference Tags, and other captured metadata from both the ASTRO Radio system and the E-911 Switch. Playback audio is delivered via the local area network to the speakers of the client PC.

The Audiolog System Administrator will assign each individual a User Name and Password. Each user account will have certain permissions associated with it. In order to play recordings back, the user account attributes must include "Playback" permissions. Depending upon a user account

attributes have been configured, a user may be permitted to playback all recordings or may be restricted to only playing recordings from a limited subset of telephone extensions or agents. If Playback permissions are limited, then the replay application will only show recordings for the Audio Channels or Radio Talk Groups to which have been assigned.

- **Important Note:** Verint's Insight Center is a Web based application and is required to be hosted on a "Web Hosting" Server; this will be required when there are more than 5 simultaneous users accessing the system. The specifications for this Web Hosting Server are listed within this document and should be provided by Motorola Solutions or the end user customer.

Call Storage

Verint's Recording Solutions are designed to fulfill the widest range of recording requirements while being one of the most efficient, easy-to-use and reliable solutions available. Audiolog's open architecture provides maximum storage flexibility, with internal RAID 5 Storage, automatic call archiving to Blu-ray removable media and support for Network-Attached Storage (NAS), or SAN storage, as well as Verint's Centralized Archiving Server (CAS).

To provide **Santa Rosa** with an effective and redundant storage solution, we have included the Verint Central Archive Server (CAS). The purpose of the CAS is to provide a unified and redundant storage location for all recorded calls from the Primary E-911 Center, the Backup E-911 Center and from the Trunked Radio Recorder. This provides the Search and Replay user a single point within the solution to search for any of the recorded audio regardless of it was recorded at either operations center.

Each Recording Server is equipped with at minimum a single RAID 5 Hard Disk Array, providing 600GB of local storage. In addition, the Central Archive Servers are equipped with Expanded Storage with a RAID 5 Array of 2TB. This provides for the following Storage capacities:

- 600GB – Analog Recording vocoded with GSM = 96,000 Channel Hours (160 hours/1 GB).
- 600GB – P25 Phase 1 Recording vocoded with IMBE = 220,000 Channel Hours (366.6 hours/1 GB).
- 2TB – Analog Recording vocoded with GSM = 320,000 Channel Hours (160 hours/1 GB).
- 2TB – P25 Phase 1 Recording vocoded with IMBE = 733,200 Channel Hours (366.6 hours/1 GB).

The process of unifying and creating redundant copies of recorded call begins with each Audiolog Recording Server recording all calls to the local Audiolog Server as a compressed wav file (files may be encrypted if the option is chosen by the customer). Each Audiolog Recording Server will then copy and upload recorded calls to the Central Archive Server (CAS). This Central Archive Server may be located anywhere on the Customer's LAN/WAN. It is not required to be "geographically" co-resident with the individual Audiolog Recording Servers.

Depending upon the call retention requirements by each agency, the CAS Server may not provide sufficient storage to retain the calls for the retention period. If this is the case, Audiolog allows for each CAS to also leverage a Network Attached Storage Device or a SAN to meet the requirement. There is no cost or license to enable this feature. Verint will be happy to work with **Santa Rosa** to determine the long term storage requirements.

- **Important Note:** NAS or SAN solutions may be added to the solution at a later date.
- As designed, we have included a Rewritable Blu-ray DVD Drive to provide for additional storage onto removable media.
- **Important Note:** Archival to removable Blu-ray Media is only supported in this design from the Central Archiving Server.

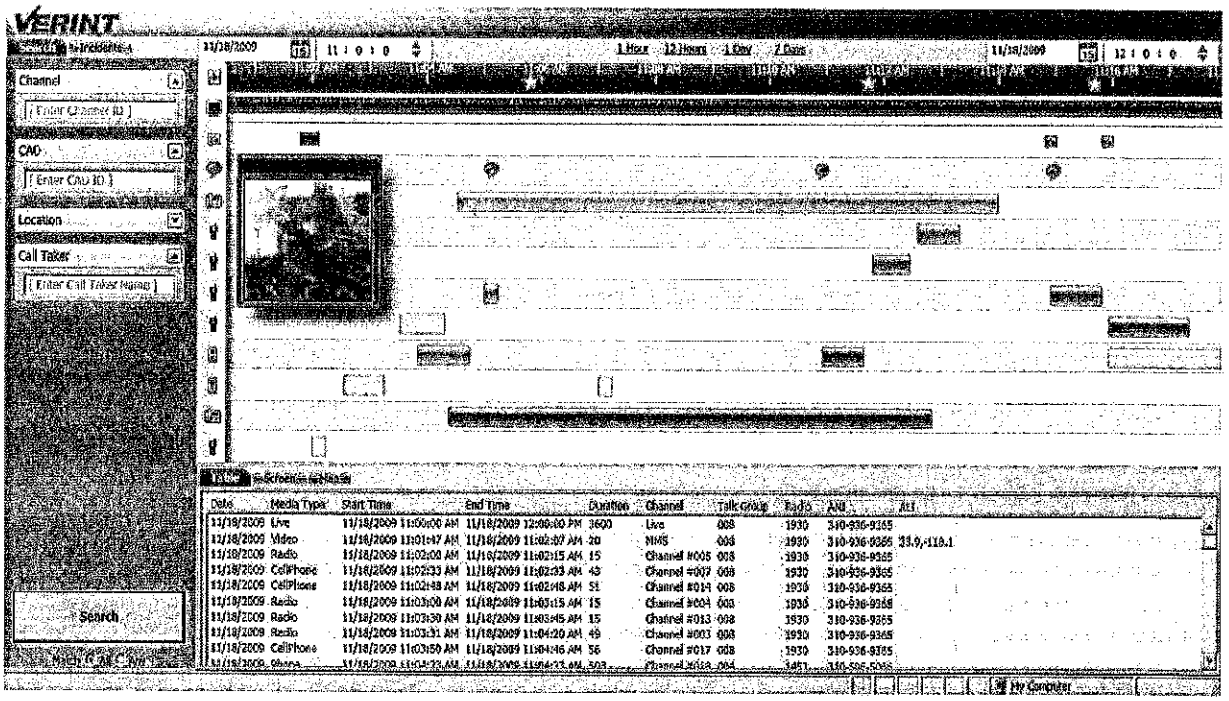
Verint Insight Center Multi-Media Replay and Incident Management

Insight Center provides a powerful, browser-based, set of tools to search for and play the recordings stored on your Verint enterprise recording system from your desktop PC. With an easy-to-use browser interface, you can easily search for recordings by channel, agent, date and time, or any available metadata associated with the recording.

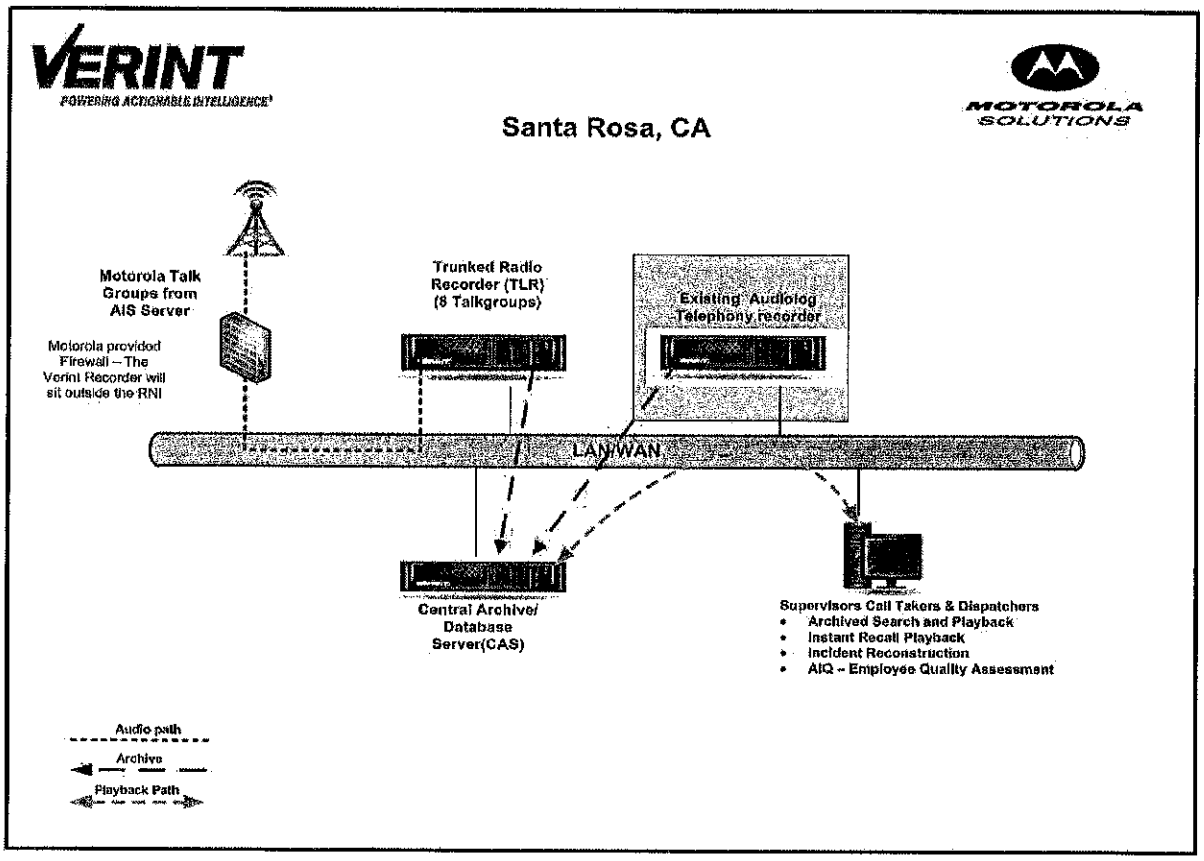
Insight Center allows you to playback multiple sequenced and/or simultaneous recordings, regardless of which channel they were recorded on. This allows you to reconstruct an incident by listening to a series of recordings in their entirety, even if the recordings overlap. Selected recordings can then be saved to an incident folder for ease of incident management. To assist you when creating a transcript of the recordings, you can configure Insight Center to provide a spoken time and date stamp at the beginning and end of the selected sequence of recordings. Insight Center plays the selected recordings in chronological order.

Verint's Recording solutions provide for full-time recording, selective recording, recording on demand, and dial-in recording across digital and analog telephones, trunked and conventional Land Mobile Radio systems, telephone lines and trunks, IP phones, short message service (SMS), and PC screens. It can record screens while minimizing network usage and storage requirements and can capture screen changes, including mouse movements and keystrokes, without disrupting call handlers.

Insight Center is designed to address the replay and incident management of these multi-media Interactions along with Multi-Channel mixing capabilities to allow effective Incident Reconstruction in the emergence of NG9-1-1 Technology, including replay capabilities for: Audio, Video, PC Screen Capture, Still Photos and Text messaging.



1.6.3 Verint Logging Recorder Solution Diagram



SECTION 2

EQUIPMENT LIST

This section lists the equipment necessary for the proposed solution.

QTY	NOMENCLATURE	DESCRIPTION	UNIT LIST	EXT LIST	EXT HGAC
		L2 CORE			
1	SQM01SUM0274	SINGLE ZONE TRUNKED L CORE	$0	$0	$0
1	CA02882AB	ADD: L2 REDUNDANT SW	$231,000	$231,000	$196,350
1	CA03112AA	ADD: L2 REDUNDANT HW	$103,575	$103,575	$88,039
1	CA01663AB	ADD: RACK	$495	$495	$495
1	CA01750AA	ADD: TERMINAL SERVER	$6,500	$6,500	$5,525
2	UA00156AA	ADD: MCC7500 CONSOLE LICENSES (QTY 5)	$5,000	$10,000	$8,150
13	CA02193AA	ADD: ANTI-MALWARE DEF UPDATE LIC	$165	$2,145	$1,748
1	UA00150AA	ADD: DYNAMIC REPORTS	$8,000	$8,000	$6,520
1	UA00151AA	ADD: AFFLIATION USER RPTS	$7,000	$7,000	$5,705
1	UA00147AA	ADD: PROVISIONING MANAGER	$5,000	$5,000	$4,075
1	UA00146AA	ADD: UNIFIED EVENT MANAGER (UEM)	$20,000	$20,000	$16,300
1	UA00136AA	ADD: UNIFIED NETWORK CONFIGURATOR (UNC)	$20,000	$20,000	$16,300
1	UA00141AA	ADD: ZONEWATCH GRID & CTRL	$20,000	$20,000	$16,300
1	UA00144AA	ADD: ZONE HISTORICAL RPTS	$5,000	$5,000	$4,075
1	DS11011188	PDU, 120/240 SPLIT PH OR N+1 REDUNDANT, 60A MAX PER PHASE, SIX DEDICAT	$2,790	$2,790	$2,511
15	DS3750297	BREAKER, 15 AMP, CB UL 489 LISTED FOR AC EDGE II (1101-1188)	$62	$930	$837
2	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A PLUG-IN W/ (6) 15A NEMA 5-15 OUTLETS	$258	$516	$464
1	TRN7343	SEVEN AND A HALF FOOT RACK	$495	$495	$446

1	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LINE GBE (1000MBPS) R56 COMPLIANT	$140	$140	$126
1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TSJ AND WPH SERIES DATA SPDS	$85	$85	$77
		NETWORK MANAGEMENT			
1	T8363	ASTRO 7.17 CLIENT	$850	$850	$693
1	TT3225	Z2 MINI WORKSTATION 258G 8G NON RET	$2,500	$2,500	$2,075
1	DSTG191B	TECH GLOBAL EVOLUTION SERIES 19INCH NON TOUCH	$1,398	$1,398	$1,160
		ENCRYPTION KEY LOADER			
1	T7537B	KVL 4000 PDA SNAP-ON	$1,250	$1,250	$1,125
1	U239AD	ADD: ASTRO 25 MODE	$250	$250	$225
1	X795AJ	ADD: ASN MODE	$600	$600	$540
1	CA01598AA	ADD: AC LINE CORD US	$11	$11	$10
1	C793BM	ADD: ADD: DVI-XL ENCRYPTION SOFTWARE	$750	$750	$675
1	CA00182AP	ADD: AES ENCRYPTION SOFTWARE	$750	$750	$675
1	X423AF	ADD: DES/DES-XL/DES-OFB ENCRYPTION	$1,550	$1,550	$1,395
1	C543	ADD: CABLE FOR RNC, DIU, MGEG	$84	$84	$84
1	CA01603AA	ADD: USB COMM/CHARGE CABLE W/ CUP	$115	$115	$104
1	TDN9390	KVL CABLE FOR XTS3000 AND MTS2000	$100	$100	$85
1	TKN8209	CABLE KEYLOAD MX	$75	$75	$68
1	DVN4046B	MASTER SYSTEM KEY STARTER KIT	$500	$500	$400
		CORE SPARES			
1	CLN1858	3800-48 ETHERNET SWITCH	$9,600	$9,600	$8,160
1	T7385	TERMINAL SERVER	$6,500	$6,500	$5,850
1	DLN6867	DAS POWER SUPPLY	$665	$665	$542
1	DLN6822	FRE: DL380p G8 HC 300GB DISK	$20,000	$20,000	$16,300
1	DLN6880	DAS - CHASSIS ONLY	$2,708	$2,708	$2,207
		MCC 7500 CONSOLE, SWITCH, AND GATEWAY			
1	B1905	MCC 7500 ASTRO 25 SOFTWARE	$250	$250	$200

10	B1933	MOTOROLA VOICE PROCESSOR MODULE	$11,920	$119,200	$95,360
10	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE	$12,000	$120,000	$96,000
10	CA01644AA	ADD: MCC 7500 /MCC 7100 ADV CONVL OPERATION	$3,000	$30,000	$24,000
10	CA00147AF	ADD: MCC 7500 SECURE OPERATION	$3,250	$32,500	$26,000
10	CA00143AC	ADD: DES-OFB ALGORITHM	$750	$7,500	$6,000
10	CA00182AB	ADD: AES ALGORITHM	$750	$7,500	$6,000
10	CA00245AA	ADD: ADP ALGORITHM	$300	$3,000	$2,400
10	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN	$0	$0	$0
10	DSTG191B	TECH GLOBAL EVOLUTION SERIES 19INCH NON TOUCH	$1,398	$13,980	$11,603
10	TT3225	Z2 MINI WORKSTATION 258G 8G NON RET	$2,500	$25,000	$20,750
10	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG	$50	$500	$408
20	B1912	MCC SERIES DESKTOP SPEAKER	$450	$9,000	$7,200
10	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE	$250	$2,500	$2,000
20	B1913	MCC SERIES HEADSET JACK	$200	$4,000	$3,200
10	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP	$290	$2,900	$2,407
10	T7885	MCAFEE WINDOWS AV CLIENT	$165	$1,650	$1,370
10	DDN2089	DUAL IRR SW USB HASP WITH LICENSE (V47)	$2,648	$26,480	$22,773
10	DDN2134	SOUND BLASTER AUDIGY FX PCIE SOUND CARD-NOT COMPAT WITH Z2 MINI	$75	$750	$645
10	CDN6673	PC DESKTOP SPEAKERS	$46	$460	$391
10	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A PLUG-IN W/ (6) 15A NEMA 5-15 OUTLETS	$258	$2,580	$2,322
2	CLN1868	2930F 24-PORT SWITCH	$2,500	$5,000	$4,500
2	CLN1866	FRU: 1M DAC CABLE	$200	$400	$360
2	SQM01SUM0205	GGM 8000 GATEWAY	$4,200	$8,400	$7,560
2	CA01616AA	ADD: AC POWER	$0	$0	$0

		AUX I/O			
1	F4543	SITE MANAGER BASIC	$1,855	$1,855	$1,670
1	VA00874	ADD: AUX I-O SERV FW CURR ASTRO REL	$175	$175	$158
3	V592	AAD TERM BLCK & CONN WI	$90	$270	$243
1	V266	ADD: 90VAC TO 260VAC PS TO SM	$120	$120	$108
		SITE CONTROLLER FOR CONVENTIONAL CHANNELS			
1	T7038	GCP 8000 SITE CONTROLLER	$3,000	$3,000	$2,460
1	CA00303AA	ADD: QTY (1) SITE CONTROLLER	$2,500	$2,500	$2,050
1	X153AW	ADD: RACK MOUNT HARDWARE	$50	$50	$41
1	CA01136AA	MCC 7500 CONVEN SITE OPER	$6,500	$6,500	$5,103
1	CA00717AA	ADD: ASTRO SYSTEM RELEASE 7.17	$0	$0	$0
		AUDIO BRIDGES FOR CHANNEL CUTOVER			
2	DS40200A208	BRIDGE SHELF WIRED FOR UP TO EIGHT 4WAY, 6-WAY, OR 8-WAY BRIDGE MODULE	$1,465	$2,930	$2,432
15	DSX41685	4-WAY/4-WIRE ACTIVE BRIDGE	$420	$6,300	$5,229
		CHANNEL RESOURCE GATEWAYS			
2	SQM01SUM0205	GGM 8000 GATEWAY	$4,200	$8,400	$7,560
2	CA01616AA	ADD: AC POWER	$0	$0	$0
2	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY	$6,000	$12,000	$10,800
		CONSOLE SPARES			
1	B1912	MCC SERIES DESKTOP SPEAKER	$450	$450	$360
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE	$250	$250	$200
1	B1913	MCC SERIES HEADSET JACK	$200	$200	$160
1	TT3225	Z2 MINI WORKSTATION 258G 8G NON RET	$2,500	$2,500	$2,075
1	B1934	MCC 7500 VOICE PROCESSOR MODULE FRU	$11,830	$11,830	$9,464
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION	$3,250	$3,250	$2,600

1	CA00143AC	ADD: DES-OFB ALGORITHM	$750	$750	$600
1	CA00182AB	ADD: AES ALGORITHM	$750	$750	$600
1	CA00245AA	ADD: ADP ALGORITHM	$300	$300	$240
1	DLN6966	FRU: GCP 8000/GCM 8000/GPB 8000	$2,500	$2,500	$2,125
1	DLN6781	FRU: POWER SUPPLY	$2,200	$2,200	$1,870
		ARCHIVE INTERFACE SERVER AND VERINT LOGGER			
1	B1905	MCC 7500 ASTRO 25 SOFTWARE	$250	$250	$200
1	B1933	MOTOROLA VOICE PROCESSOR MODULE	$11,920	$11,920	$9,536
1	CA00288AB	ADD: MCC 7500 ARCHIVING INTERFACE SERVER SOFTWARE LICENSE	$15,060	$15,060	$12,048
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION	$3,250	$3,250	$2,600
1	CA00143AC	ADD: DES-OFB ALGORITHM	$750	$750	$600
1	CA00182AB	ADD: AES ALGORITHM	$750	$750	$600
1	CA00245AA	ADD: ADP ALGORITHM	$300	$300	$240
1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN	$0	$0	$0
1	T7885	MCAFEE WINDOWS AV CLIENT	$165	$165	$137
1	TT3225	Z2 MINI WORKSTATION 258G 8G NON RET	$2,500	$2,500	$2,075
1	BLN1297	VPM POWER SUPPLY MOUNTING KIT	$250	$250	$200
1	DSF2B56AA	USB EXTERNAL DVD DRIVE	$172	$172	$143
1	DDN9748	19 INCH BLACK SHELF	$249	$249	$214
1	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A PLUG-IN W/ (6) 15A NEMA 5-15 OUTLETS	$258	$258	$232
1	DDN2093	17IN LCD DRAWER WITH KEYBOARD AND MOUSE, KVM 8 PORTS, CABLES	$6,358	$6,358	$5,468
1	DQ0508201710047LW	VERINT RECORDING QUOTE DQ05082017 1004 7LW	$84,370	$84,370	$72,558
1	DDN9748	19 INCH BLACK SHELF	$249	$249	$214
TOTAL Santa Rosa Police Department Equipment				**$1,113,408**	**$925,074**
				EXT LIST	**EXT HGAC**

SECTION 7

PRICING SUMMARY

Motorola Solutions is pleased to provide the following equipment and services to Santa Rosa Police Department:

Equipment and Services	Pricing
Santa Rosa Police Department Equipment	$1,113,408
Santa Rosa Police Department Equipment HGAC Discount	($188,334)
Santa Rosa Police Department HGAC Discounted Equipment	$925,074
Santa Rosa Police Department SI Project Management and Engineering	$214,118
Santa Rosa Police Department SI System Technologist	$269,161
Santa Rosa Police Department SI Standard Shop Installation	$150,852
Santa Rosa Police Department Tax (Equipment Only)	$78,631
Santa Rosa Police Department Total System	$1,637,837
Santa Rosa Customer Loyalty Discount	($239,124)
Santa Rosa Police Department Grand Total with System Incentive	$1,398,713

(Not applicable)

SECTION 3

STATEMENT OF WORK

Motorola is proposing to the Santa Rosa Police Department the installation and configuration of the following equipment at the specified locations.

Site Name	Major Equipment
Santa Rosa PD Dispatch Center	P25 ASTRO L2 Core Master Site
	(10) MCC7500 Dispatch Positions
	(1) MCC7500 Archiving Interface Server (AIS)
	(1) Verint IP Logging Recorder

3.1 OVERVIEW

Motorola Solutions proposes the installation and configuration of the core equipment defined in the System Description and Equipment List. The document delineates the general responsibilities between Motorola Solutions and Santa Rosa Police Department representatives ("Customer") as agreed to by contract.

3.2 MOTOROLA SOLUTIONS RESPONSIBILITIES

Motorola Solutions' general responsibilities include the following:

- Schedule the implementation in agreement with Santa Rosa Police Department officials.
- Conduct project kickoff meeting with the Customer to review project design and finalize requirements.
- Provide the Customer with the appropriate interconnect specifications, if required.
- Define electrical requirements for the new equipment to be installed, if required.
- Define space requirements for the new equipment to be installed, if required.
- Freeze the design for equipment ordering, and process the equipment order.
- Stage equipment at Motorola Solutions' facility and ship staged equipment to designated customer location.
- Schedule the implementation in agreement with the Customer.
- Verify all equipment is operating properly and all electrical and signal levels are set accurately.
- Perform Acceptance Test on the new core equipment.
  - Document all issues that arise during the acceptance tests.
  - For any test failures, repeat that particular test after Motorola Solutions determines that corrective action has been taken.
  - Document the results of the acceptance tests and present to customer for review.
- Resolve any punch list items before Final System Acceptance.
- Submit and receive Final Acceptance.

3.3 SANTA ROSA PD'S RESPONSIBILITIES

Santa Rosa Police Department staff 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 Solutions. Santa Rosa Police Department's general responsibilities include the following:

- Provide a single point of contact for the project.
- Provide site power for new equipment
- Provide site space for the additional site equipment
- Provide appropriate site backup power for new equipment
- Provide required site connectivity
- Provide any necessary control stations
- Obtain all licensing, site access, or permitting required for project implementation.
- Witness the Acceptance Testing.
- Sign System Acceptance upon completion of the Acceptance Test.
- Sign Final Acceptance upon completion of any punchlist items and delivery of documentation.

3.4 ASSUMPTIONS

Motorola Solutions has made several assumptions in preparing this proposal, which are noted below. Motorola Solutions will need to verify all assumptions or seek alternate solutions in the case of invalid assumptions. Alternate solutions required may impact the work effort and/or schedule constituting a change order.

- Appropriate IP networking connections between sites will be provided by Santa Rosa Police Department.
- MR will be responsible for installing and validating connections between the new Motorola Solutions core equipment and Santa Rosa Police Department's existing RF and other equipment.
- All existing sites or equipment locations will have sufficient space available for the equipment described as required/specified by R56.
- All existing sites or equipment locations will have adequate electrical power and UPS capacity in the proper phase and voltage and site grounding to support the requirements of the system described.
- Any site/location upgrades or modifications are the responsibility of the Santa Rosa Police Department.
- Any required system interconnections not specifically outlined here will be provided by the Santa Rosa Police Department. These may include dedicated phone circuits, microwave links or other types of connectivity.
- No training is required.
- No performance bond is required.
- No Subscriber Programming and Subscriber Templates are included in this proposal.
- Work is performed on non-holidays during normal business hours, Monday – Friday, 8am – 5pm.

SECTION 4

ACCEPTANCE TEST PLAN

4.1 RADIO TO RADIO FEATURES

4.1.1 Conventional Radio Resource Call - Clear Mode

1. DESCRIPTION

Subscribers can communicate to each other through a repeater that is selected via the channel selector on the individual radio.

The signals that are received from the subscriber radio are repeated so that other radios on that channel will be able to hear and participate in the conversation.

SETUP

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

VERSION #1.050

2. TEST

Step 1. Initiate a CONVENTIONAL CHANNEL 1 call on RADIO-1.

Step 2. Verify RADIO-2 can monitor and respond to the call on CONVENTIONAL CHANNEL 1.

Step 3. Initiate a CONVENTIONAL CHANNEL 1 call on RADIO-2.

Step 4. Verify RADIO-1 can monitor and respond to the call on CONVENTIONAL CHANNEL 1.

Step 5. Repeat above tests for each repeater channel.

Pass____ Fail____

4.2 MCC 7500 CONVENTIONAL RESOURCES

4.2.1 Frequency Selectable Resource - Secure Mode

1. DESCRIPTION

A Resource is selected on the console by placing the cursor over the Resource, choosing an area and selecting. The Resource choice area is the region where the name of the Resource is located (Top alphanumeric line of the Resource). When selected, the background of the Radio Resource will turn white and the border will turn green. Choosing the Instant Transmit button will send keying commands to the station.
The Frequency Select option provides the capability to choose up to 14 separate frequencies.

SETUP

RADIO-1 - CONVENTIONAL CHANNEL 1 (Secure TX mode)
CONSOLE-1 - CONVENTIONAL CHANNEL 1 (Secure TX mode)

VERSION #1.030

2. TEST

Step 1. Using CONSOLE-1, select the first frequency in the list for the resource.

Step 2. Select the corresponding frequency on RADIO-1 and verify that it is in secure mode.

Step 3. Verify communications between CONSOLE-1 and RADIO-1.

Step 4. Using CONSOLE-1, select another frequency in the list for the resource.

Step 5. Select the corresponding frequency on RADIO-1.

Step 6. Verify communications between CONSOLE-1 and RADIO-1.

Pass____ Fail____

MCC 7500 Conventional Resources

4.2.2 Frequency Selectable Conventional Resource

1. DESCRIPTION

A Resource is selected on the console by placing the cursor over the Resource, choosing an area and selecting. The Resource choice area is the region where the name of the Resource is located (Top alphanumeric line of the Resource). When selected, the background of the Radio Resource will turn white and the border will turn green. Choosing the Instant Transmit button will send keying commands to the station.
The Frequency Select option provides the capability to choose up to 14 separate frequencies.

SETUP

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

VERSION #1.070

2. TEST

Step 1. Using CONSOLE-1, select the first frequency in the list for the resource.

Step 2. Select the corresponding frequency on RADIO-1.

Step 3. Verify communications between CONSOLE-1 and RADIO-1.

Step 4. Using CONSOLE-1, select another frequency in the list for the resource.

Step 5. Select the corresponding frequency on RADIO-1.

Step 6. Verify communications between CONSOLE-1 and RADIO-1.

Pass____ Fail____

4.3 MCC 7500 CONSOLE FEATURES

4.3.1 Instant Transmit

1. DESCRIPTION

The instant transmit switch provides immediate operator access to a channel, independent of its select status (selected or unselected). It provides priority over other dispatcher transmit bars or optional footswitches.

SETUP

RADIO-1 - TALKGROUP 1
CONSOLE-1 – TALKGROUP 1 (Selected),
TALKGROUP 2 (Unselect mode)

VERSION #1.090

2. TEST

Step 1. Using CONSOLE-1, press the Instant Transmit button on TALKGROUP 1.

Step 2. Verify that the Transmit indicator is lit.

Step 3. Verify RADIO-1 can monitor and respond to the call on TALKGROUP 1.

Step 4. On RADIO-1 change to TALKGROUP 2.

Step 5. Using CONSOLE-1, press the Instant Transmit button on the TALKGROUP 2 radio resource.

Step 6. Verify RADIO-1 can monitor and respond to the call on TALKGROUP 2.

Pass____ Fail____

MCC 7500 Console Features

4.3.2 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 #1.040

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.

Step 10. Repeat steps 1-9 for a sample of the remaining OPs.

Pass____ Fail____

MCC 7500 Console Features

4.3.3 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 talkgroup 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 - TALKGROUP 1
RADIO-2 - TALKGROUP 2
CONSOLE-1 - TALKGROUP 1, TALKGROUP 2

VERSION #1.070

2. TEST

Step 1. From CONSOLE-1, create an Msel group with TALKGROUP 1 and TALKGROUP 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 7500 Console Features

4.3.4 Console Volume

1. DESCRIPTION

In the MCC 7500 console, the volume on the Resources window is divided in 7 level (0-min,7-max). When there is a Resource window selected, the volume will automatically adjust to maximum level. When the resource is de-selected, the volume will resume its original level.

SETUP

RADIO-1 - TALKGROUP 1
CONSOLE-1 TALKGROUP 1

VERSION #1.110

2. TEST

Step 1. Select the TALKGROUP 1 Resource window on CONSOLE-1.

Step 2. Initiate a TALKGROUP 1 call using RADIO-1.

Step 3. Observe that RADIO-1's audio comes out from the SELECT speaker of CONSOLE-1 in full volume.

Step 4. Adjust TALKGROUP 1's volume to a minimum level by means of the mouse.

Step 5. Note that the audio is reduced from the select speaker.

Pass____ Fail____

MCC 7500 Console Features

4.3.5 Acoustic Crossmute

1. DESCRIPTION

Acoustic crossmuting means that selected operator positions will not hear outbound transmissions from operator positions with which they are cross-muted. This feature is used when operator positions are located in the same dispatch site.

SETUP

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

VERSION #1.120

2. TEST

Step 1. Verify Acoustic Crossmute is not configured for CONSOLE-1 and CONSOLE-2.

Step 2. Select TALKGROUP 1 resource on CONSOLE-1 and CONSOLE-2

Step 3. Without Acoustic Crossmute configured, with the select speakers of CONSOLE-1 and CONSOLE-2 turned to maximum volume, initiate a call on TALKGROUP 1 using CONSOLE-1.

Step 4. Confirm feedback is heard on the operator positions and RADIO-1 hears feedback on TALKGROUP 1.

Step 5. Turn the volume to minimum on CONSOLE-1 and CONSOLE-2.

Step 6. Verify Acoustic Crossmute is configured for CONSOLE-3 and CONSOLE-4.

Step 7. Select TALKGROUP 1 resource on CONSOLE-3 and CONSOLE-4.

Step 8. With Acoustic Crossmute configured, with the select speakers of CONSOLE-3 and CONSOLE-4 turned to maximum volume, initiate a call on TALKGROUP 1 using CONSOLE-3.

Step 9. Verify no feedback is heard at CONSOLE-3 and CONSOLE-4 and that RADIO-1 doesn't hear any feedback on TALKGROUP 1.

Pass____ Fail____

MCC 7500 Console Features

4.3.6 Conventional Radio Resource

1. DESCRIPTION

A Radio Resource is selected on the MCC 7500 Dispatch consoles by placing the cursor over the Radio Resource (Channel Control Window) area and selecting. The Radio Resource area is the region where the name of the Radio Resource is located (Top alphanumeric line of the Radio Resource). When selected, the back-ground of the Radio Resource will turn white with a green border. The border of this line will also be green when the channel is involved in a multi-select operation. Choosing the PTT button will send keying commands to the station.

SETUP

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

VERSION #1.110

2. TEST

Step 1. Select a conventional Radio Resource by moving the cursor over the Radio Resource's name and selecting.

Step 2. Using CONSOLE-1, initiate a call using the PTT Button on the newly selected Radio Resource, in clear mode.

Step 3. Verify that console's outbound audio can be monitored by RADIO-1.

Step 4. Respond to the console outbound transmission from RADIO-1. Verify that RADIO-1's audio can be monitored at the console Select speaker.

Step 5. Depress any of the other available Radio Resources to "deselect" the present Radio Resource.

Step 6. Respond to the console outbound transmission from RADIO-1. Verify that RADIO-1's audio can be monitored at the unselect speaker.

Step 7. Repeat steps 1-6 for a sample of the remaining conventional resources.

Step 8. Repeat steps 1-7 for a sample of the remaining OPs.

Pass____ Fail____

MCC 7500 Console Features

4.3.7 Frequency Selectable Conventional Resource

1. DESCRIPTION

A Resource is selected on the console by placing the cursor over the Resource, choosing an area and selecting. The Resource choice area is the region where the name of the Resource is located (Top alphanumeric line of the Resource). When selected, the background of the Radio Resource will turn white and the border will turn green. Choosing the Instant Transmit button will send keying commands to the station.
The Frequency Select option provides the capability to choose up to 14 separate frequencies.

SETUP

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

VERSION #1.070

2. TEST

Step 1. Using CONSOLE-1, select the first frequency in the list for the resource.

Step 2. Select the corresponding frequency on RADIO-1.

Step 3. Verify communications between CONSOLE-1 and RADIO-1.

Step 4. Using CONSOLE-1, select another frequency in the list for the resource.

Step 5. Select the corresponding frequency on RADIO-1.

Step 6. Verify communications between CONSOLE-1 and RADIO-1.

Pass____ Fail____

MCC 7500 Console Features

4.3.8 All Mute Operation

1. DESCRIPTION

The All Mute icon allows the dispatcher to mute all audio routed to the UNSELECT speaker, so as not to interfere with the audio from the SELECT speaker.

SETUP

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

VERSION #1.070

2. TEST

Step 1. Select the TALKGROUP 1 Resource Window at CONSOLE-1.

Step 2. Initiate a call with RADIO-1 on TALKGROUP 1. Keep this call in progress until the completion of the test.

Step 3. Initiate a call with RADIO-2 on TALKGROUP 2. Keep this call in progress until the completion of the test.

Step 4. Verify that RADIO-1's audio can be heard at the SELECT speaker and that RADIO-2 audio can be heard at the UNSELECT speaker.

Step 5. Press the "ALL MUTE" icon, and verify that RADIO-2's audio cannot be heard from the UNSELECT speaker.

Step 6. Verify that RADIO-1's audio can still be heard out of the SELECT speaker.

Step 7. Press the "ALL MUTE" button again to un-mute the UNSELECT speaker.

Step 8. Verify the audio from RADIO-1 at the SELECT speaker and RADIO-2 at the UNSELECT speaker. Press the "ALL MUTE" icon, and verify that RADIO-2's audio cannot be heard from the UNSELECT speaker.

Step 9. Verify that the all mute feature times out (goes inactive) after 30 seconds and the UNSELECT audio from RADIO-2 can be heard. (Note the timer is programmable and is defaulted to 30 seconds.)

Step 10. End the RADIO-1 and RADIO-2 calls.

Pass____ Fail____

4.3.9 Operator Position Enable / Disable

1. DESCRIPTION

In an MCC 7500 Operator configuration, the Supervisory console position may disable the non-supervisory positions. This will disable all transmit capability from the disabled console.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-1 - SITE - SITE 1
CONSOLE-1 must be set up as Supervisor
CONSOLE-2 - TALKGROUP 1

VERSION #1.090

2. TEST

Step 1. Verify that CONSOLE-1 is set up as a Supervisor.

Step 2. Initiate a call on TALKGROUP 1 from CONSOLE-2 (non-supervisory) and verify communication with RADIO-1.

Step 3. Select the "Enable/Disable Op Position" button from the tool bar on CONSOLE-1, the Supervisory console.

Step 4. Disable Console-2.

Step 5. Verify that CONSOLE-2, the non-supervisory position is completely disabled from making a call.

Step 6. Select the "Enable/Disable Op Position" button from the tool bar on CONSOLE-1.

Step 7. Enable CONSOLE-2.

Step 8. Verify that Console-2 is completely enabled.

Step 9. Initiate a call on TALKGROUP 1 from CONSOLE-2 (non-supervisory) and verify communication with RADIO-1.

Pass____ Fail____

4.3.10 Alarm Input / Outputs (16 Aux I/O)

1. DESCRIPTION

The alarm inputs of the 16 Aux I/O can be connected to almost any device that requires or can detect a relay closure. These signals can be simulated and monitored with simple test equipment such as a multimeter.

SETUP

CONSOLE_1 - configured aux I/O buttons for at least one momentary input and one momentary output.

Aux I/O pinout:

Aux I/O 1 - pins 26,1
Aux I/O 2 - pins 27,2
Aux I/O 3 - pins 28,3
Aux I/O 4 - pins 29,4

VERSION #1.100

2. TEST

Step 1. Using a shorting wire, simulate a relay closure on an input via the punch block for the I/O to be tested.

Step 2. Verify that CONSOLE-1 momentary input displays the icon designated for an ON_STATE.

Step 3. Remove the shorting wire and verify that the Operator position displays the icon designated for an OFF_STATE.

Step 4. Connect the Multimeter to the pins to monitor a relay output.

Step 5. Verify that the meter reads an open circuit.

Step 6. Depress the momentary input button on the console to initiate a relay closure.

Step 7. Verify that the multimeter displays a closed circuit.

Step 8. Repeat Steps 1-7 as needed for a sample of the remaining OPs and/or I/Os.

Pass____ Fail____

MCC 7500 Console Features

4.3.11 Radio Check - Conventional

1. DESCRIPTION

Radio Check allows the console operator to determine if a subscriber is operational or within range. The subscriber sends the acknowledgment that it has received the Radio Check.

NOTE: The status/message line must be added to the Channel Control Window (CCW) of the resource in order for the "ACKNOWLEDGED" indication to be visible.

This test can be run using Digital Conventional or MDC1200 Channels.

SETUP

RADIO-1 - CONVENTIONAL CHANNEL 1

CONSOLE-1 - CONVENTIONAL CHANNEL 1

VERSION #1.060

2. TEST

Step 1. Using CONSOLE-1 select the CONVENTIONAL CHANNEL 1 Radio Resource.

Step 2. From the active Radio Resource select the Radio Check button. Enter the ID or alias of RADIO-1 in the Radio Check window.

Step 3. Click the "Send" button from the Radio Check window to initiate the Radio Check.

Step 4. Verify that "ACKNOWLEDGED" is shown on CONVENTIONAL CHANNEL 1's Channel Control Window.

Step 5. Turn off RADIO-1.

Step 6. Click the "Send" button from the Radio Check window to initiate the Radio Check on RADIO-1.

Step 7. Verify that an error message is logged: "Send Radio Check failed: Target not found."

Pass____ Fail____

4.4 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: _____

SECTION 5

WARRANTY AND MAINTENANCE PLAN

Motorola Solutions has over 85 years of experience supporting mission critical communications for public safety and public service agencies. Motorola Solutions' 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.

5.1 THE MOTOROLA SOLUTIONS SERVICE DELIVERY TEAM

5.1.1 Customer Support Manager

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

5.1.2 Motorola Solutions System Technologists

The Motorola Solutions System Technologists (ST) are available to assist Motorola Solutions' Authorized Servicers when needed.

5.1.3 Motorola Solutions 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 available from the System Support Center:

- Network Event Monitoring
- Service Desk
- Network Hardware Repair with Advanced Replacement
- Technical Support

5.1.4 Motorola Solutions Local Service Provider

Motorola Solutions' 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 Solutions' authorized service centers are assessed annually for technical and administrative competency.

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

5.2 WARRANTY SERVICES

Motorola Solutions will provide warranty services per our standard warranty terms and conditions as outlined within the Communication Systems Agreement OR Contract Reference within this proposal. In addition to the Standard Commercial Warranty, the service products that comprise the Custom Warranty package included in this proposal to Santa Rosa Police Department and are listed below along with a brief description.

ESSENTIAL PLUS SERVICES

5.3 ESSENTIAL PLUS SERVICES OVERVIEW

In order to ensure that the Santa Rosa PD has immediate access to Motorola Solutions' onsite and technical support teams for both unforeseen issues and ongoing maintenance, Motorola Solutions proposes our Essential Plus Services offering to the Santa Rosa PD. Appropriate for customers who want to minimize their system's downtime, Essential Plus Services provide a reliable service response and restoral process remote assistance to address unforeseen network events, effect onsite repairs to network components, and deliver patches to keep Santa Rosa PD's system secure. The proposed offering consists of the following specific services:

- Service Desk.
- Technical Support.
- Onsite Support.
- Annual Preventative Maintenance.
- Network Hardware Repair.
- Network Hardware Repair with Advanced Replacement.
- Self-Installed Security Patches.

These services will be delivered to Santa Rosa PD through the combination of local service personnel either dedicated to the network or engaged as needed; a centralized team within Motorola Solutions' Solutions Support Center (SSC), which operates on a 24 x 7 x 365 basis; and our Repair Depot, which will ensure that equipment is repaired to the highest quality standards. The collaboration between these service resources, all of who are experienced in the maintenance of mission-critical networks, will enable a swift analysis of any network issues, an accurate diagnosis of root causes, and a timely resolution and return to normal network operation.

5.4 ESSENTIAL PLUS SERVICES DESCRIPTION

5.4.1 Centralized Service Delivery

Centralized support will be provided by Motorola Solutions' support staff, located at our Service Desk and Solutions Support Center (SSC). These experienced personnel will provide direct service and technical support through a combination of Service Desk telephone support, technical

consultation and troubleshooting through the SSC, and ongoing network monitoring of Santa Rosa PD's system.

Motorola Solutions will provide **Service Desk** response as a single point of contact for all support issues, including communications between Santa Rosa PD, third-party subcontractors and manufacturers, and Motorola Solutions. When Santa Rosa PD's personnel call for support, the Service Desk will record, track, and update all Service Requests, Change Requests, Dispatch Requests, and Service Incidents using Motorola Solutions' Customer Relationship Management (CRM) system. The Service Desk is responsible for documenting Santa Rosa PD's inquiries, requests, concerns, and related tickets; tracking and resolving issues; and ensuring timely communications with all stakeholders based on the nature of the incident.

As tickets are opened by the Service Desk, issues that require specific technical expertise and support will be routed to our Solutions Support Center (SSC) system technologists for **Technical Support**, who will provide telephone consultation and troubleshooting capabilities to diagnose and resolve infrastructure performance and operational issues. Motorola Solutions' recording, escalating, and reporting process applies ISO 90001 and TL 9000-certified standards to the Technical Support calls from our contracted customers, reflecting our focus on maintaining mission-critical communications for the users of our systems.

5.4.2 Field Service Delivery

Onsite repairs and network preventative maintenance will be provided by authorized local field services delivery personnel, who will be dispatched from and managed by the Solutions Support Center.

OnSite Support provides local, trained and qualified technicians who will arrive at Santa Rosa PD's location upon a dispatch service call to diagnose and restore the communications network. This involves running diagnostics on the hardware or FRU (Field Replacement Unit) in order to identify defective elements, and replacing those elements with functioning ones. The system technician will respond to the Santa Rosa PD'slocation in order to remedy equipment issues based on the impact of the issue to overall system function.

Annual Preventive Maintenance Service provides proactive, regularly scheduled operational testing and alignment of infrastructure and network components to ensure that they continually meet original manufacturer specifications. Certified field technicians perform hands-on examination and diagnostics of network equipment on a routine and prescribed basis.

5.4.3 Network Hardware Repair

Network Hardware Repair – Motorola Solutions' authorized Repair Depot will repair the equipment provided by Motorola Solutions, as well as select third-party infrastructure equipment supplied as part of the proposed solution. The Repair Depot will manage the logistics of equipment repair (including shipment and return of repaired equipment), repair Motorola Solutions equipment, and coordinate the repair of third-party solution components.

Motorola Solutions also proposes **Network Hardware Repair with Advanced Replacement** to the Santa Rosa PD. With this additional service, Motorola Solutions will exchange malfunctioning components and equipment with advanced replacement units or Field Replacement Units (FRUs) as they are available in the Repair Depot's inventory. Malfunctioning equipment will be evaluated and repaired by the infrastructure repair depot and returned to the Repair Depot's FRU inventory upon repair completion. If Santa Rosa PD prefers to maintain their existing FRU inventory, Santa Rosa PD will be able to request a "loaner" FRU while their unit is being repaired.

5.4.4 Security Management Operations

The proposed **Self-Installed Security Patches Service** will provide Santa Rosa PD with security updates that are pre-tested by Motorola Solutions and installed by Santa Rosa PD's personnel. Motorola Solutions' dedicated vetting lab will pre-test security updates for the proposed ASTRO 25 system release. When appropriate, Motorola Solutions will make these updates available to outside vendors in order to enable them to test each patch, and will incorporate the results of those third-party tests into the updates provided to Santa Rosa PD. Once an update is fully tested and ready for deployment in Santa Rosa PD's system, Motorola Solutions will post it to a secured extranet website and send an email notification to Santa Rosa PD. If there are any recommended configuration changes, warnings, or workarounds, Motorola Solutions will provide detailed documentation for Santa Rosa PD along with the updates on the website.

5.5 MOTOROLA SOLUTIONS' SERVICE CAPABILITIES

Our focus on the needs of our public safety partners has led us to recognize that an integrated implementation and service delivery team that takes a new system from system installation, to acceptance, to warranty, and all the way through extended maintenance, is the best way to ensure that public safety communications systems meet the needs of first responders. Motorola Solutions' team of experts, have developed refined processes and sophisticated tools through our experience in delivering mission-critical communications.

5.5.1 On-Call Support through the Solutions Support Center (SSC)

The cornerstone of our customer care process, Motorola Solutions' Solution Support Center (SSC) is staffed 24x7x365 by experienced system technologists. This TL 9000/ISO 9001-certified center responds to over 5000 public safety, utility, and enterprise customers. With over 100,000 phone and email interactions with Motorola Solutions customers per month, the SSC provides our customers with a centralized contact point for service requests.

5.5.2 Onsite Service through a Field Service Team

Onsite maintenance and repair of Santa Rosa PD's system will be provided by Motorola Solutions' local team of service personnel. Motorola Solutions will provide Santa Rosa PD with a Customer Support Plan (CSP) that outlines the details of each service, provides escalation paths for special issues, and any other information specific to Santa Rosa PD's service agreement. Some of these details will include items such as access to sites, response time requirements, severity level definitions, and parts department access information.

Local technicians will be dispatched for onsite service by the SSC, who will inform the technician of the reason for dispatch. This will enable the technician to determine if a certain component or field replacement unit (FRU) will be needed from inventory to restore the system. Once on site, the field technician will notify the SSC and begin to work on the issue. The technician will review the case notes to determine the status of the issue, and begin the troubleshooting and restoration process. Once the system is restored to normal operation, the field technician will notify the SSC that the system is restored. The SSC, in turn, will notify Santa Rosa PD that the system is restored to normal operation and request approval to close the case.

5.5.3 Centralized Repair Management through Motorola Solutions' Repair Depot

Our repair management depot coordinates component repair through a central location, eliminating the need to send system equipment to multiple vendor locations for repair. Once equipment is at the depot, technicians will replicate Santa Rosa PD's network configuration in our comprehensive test labs in order to reproduce and analyze the issue. Technicians will then restore the equipment to working order. After repairs are completed, equipment will be tested to its original performance specifications and, if appropriate, configured for return to use in Santa Rosa PD's system. All components being repaired are tracked throughout the process, from shipment by Santa Rosa PD to return through a case management system where users can view the repair status of the radio via a web portal.

5.5.4 Direct Access to System Information through MyView Portal

Supplementing Motorola Solutions' proposed services plan for Santa Rosa PD is access to Motorola Solutions' online system information tool, MyView Portal. MyView Portal provides our customers with real-time visibility to critical system and services information, all through an easy-to-use, graphical interface. With just a few clicks, Santa Rosa PD's administrators will gain instant access to system and support compliance, case reporting, ability to update and create cases, have visibility to when the system will be updated, and receive pro-active notifications regarding system updates. Available 24x7x365 from any web-enabled device, the information provided by MyView will be based on your needs and user access permissions, ensuring that the information displayed is secure and pertinent to your operations.

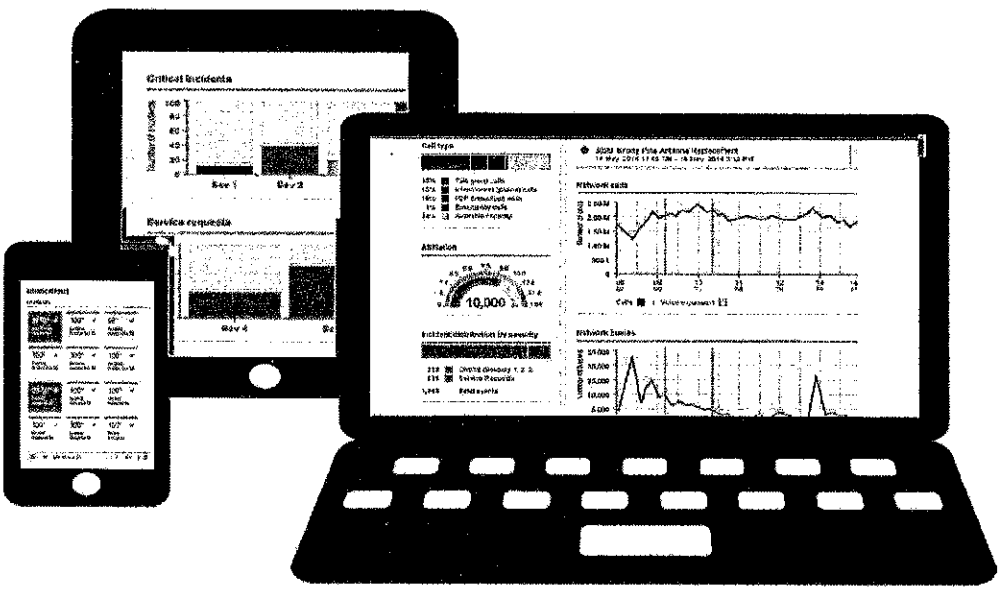


Figure 5-1: MyView Portal offers real-time, role-based access to critical system and services information.

5.6 POST WARRANTY SERVICES

As Motorola Solutions' 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 Santa Rosa PD 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.

5.7 SUMMARY

Whether it is a routine service call, or a disaster situation, Motorola Solutions understands its responsibility and takes pride in its commitment to deliver proven response service to the public safety community. Motorola Solutions 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 Solutions' goal is to provide Santa Rosa PD with the services and 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
Service Desk	Included	Optional
Technical Support	Included	Optional
Onsite Support	Included	Optional
Annual Preventative Maintenance	Included	Optional
Network Hardware Repair	Included	Optional
Network Hardware Repair with Advanced Replacement	Included	Optional
Self-Installed Security Patches	Included	Optional

SECTION 6

TRAINING

6.1 OVERVIEW

Motorola Solutions understands that successful implementation and use of your communications system depends on effective training. We have developed a training proposal for the Santa Rosa PD to ensure a comprehensive understanding of your proposed system and all user equipment. We are leveraging over 85 years of training experience working with customers just like you to provide recommendations for your consideration. The training proposal detailed in the following pages incorporates customer feedback coupled with a best practices systematic approach to produce effective course delivery and content.

Our commitment to the Santa Rosa PD is to provide unsurpassed services that ensure the equipment operates efficiently for the life of the system. To do so, we directly train your personnel to utilize the system to its maximum potential.

The Santa Rosa PD personnel will gain in-depth understanding of the power of your new system through education and proficient daily use. Our high-quality training focuses on student needs. The training is complemented by detailed documentation and available continuing education programs.

We will collaborate with the Santa Rosa PD to develop a final customized training plan that fits your needs. Our goal is to insure system administrators, technicians and end users are skilled in using your new system.

TRAINING APPROACH

Our training solutions deliver a combination of online training and field based instructor-led training in classrooms at the Santa Rosa PD locations using operational equipment. Motorola Solutions will employ knowledgeable and experienced instructors to deliver well-designed courseware and integrated lab activities.

Training is based upon several key criteria:

- Course design is driven by an analysis of student needs. It focuses on specific application rather than theory.
- Learning objectives are based upon what students need to accomplish on the job.
- Hands-on lab opportunities using the Santa Rosa PD specific job aids are incorporated to maximize learning and retention.

Our instructors bring invaluable experience and knowledge of customer communication solutions into their training approach. This gives them better insight and understanding into the practical aspects of the Santa Rosa PD manager, technician and end user job functions. Each instructor has the proven ability to communicate with a novice as well as expert personnel.

6.2 PROPOSED COURSES

Motorola Solutions has identified the following course(s) that are necessary to achieve the training goals for the Santa Rosa PD. Course description files for the recommended courses are provided in the matrix below. Class delivery for instructor-led courses in the field will be tailored for your system and features.

Specifically, our proposed training plan addresses the following categories as identified in your request for proposal:

- System Administrators
- Console Operators and Supervisors

It is recommended that participants bring their laptop computers for all system administrator and technician classes.

6.2.1 System Administrator Training Plan

Course Title	Target Audience	Sessions	Duration	Location	Date	Participants
ASTRO 25 IV&D System Overview Course #: AST1038 (Self-paced; On-line) Prerequisite	System Administrators	1	2.5 hours	Self-paced; on-line	Prior to Radio Administrator Workshop	3
Course Synopsis: The ASTRO®25 IV&D System Overview course will provide participants with knowledge and understanding of the ASTRO®25 IV&D system. This course will address M, L and K Core systems. System architecture, components and features will be explained. In addition, RF and console sites and their architecture, features and components will be discussed. Finally, call processing for voice and mobile data applications will be covered, and an introduction to applications available in the ASTRO®25 system will be provided.						
ASTRO 25 IV&D Radio System Administrator Workshop Course #: ACS717102 (Instructor-led)	System Administrators	1	4.5 days	Santa Rosa, CA	Prior to managing the system	3
Course Synopsis: This workshop covers administrator functions for an ASTRO 25 Integrated Voice and Data (IV&D) System. Learning activities in this 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.						

Detailed course descriptions are available upon request.

6.2.2 Console Dispatch Training Plan

Course Title	Target Audience	Sessions	Duration (Days)	Location	Date	Participants
MCC7500 Console Operator and Admin Utilizing the Interactive End User Tool Kit Course #:AST1054 3 training consoles required Ratio: 2 per training console (Instructor-led)	Console Supervisors	1 (8 hour) session	1 day	Santa Rosa, CA	Prior to cutover	2
Operator 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. **Admin Course Synopsis:** This course provides participants with the knowledge and skills to manage and utilize the MCC7000 series console administrator functions. Through facilitation and hands-on activities, the participant learns how to customize the console screens. **NOTE: The first half of the class is the operator portion of training. The second half covers Admin training and how to utilize the Interactive End User Tool Kit.**						
MCC7500 Console Operator Course #:AST1053 3 training consoles required Ratio: 2 per training console (Instructor-led)	Console Dispatchers	4 (4 hour) sessions	2 days	Santa Rosa, CA	Prior to cutover	21 (up to 6 per session)
Operator 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.						

Detailed course descriptions are available upon request.

EXHIBIT D

System Acceptance Certificate

Customer Name: _____

Project Name: _____

This System Acceptance Certificate memorializes the occurrence of System Acceptance. Motorola and Customer acknowledge that:

1. The Acceptance Tests set forth in the Acceptance Test Plan have been successfully completed.

2. The System is accepted.

Customer Representative:	Motorola Representative:
Signature: _____	Signature: _____
Print Name: _____	Print Name: _____
Title: _____	Title: _____
Date: _____	Date: _____

FINAL PROJECT ACCEPTANCE:

Motorola has provided and Customer has received all deliverables, and Motorola has performed all other work required for Final Project Acceptance.

Customer Representative:	Motorola Representative:
Signature: _____	Signature: _____
Print Name: _____	Print Name: _____
Title: _____	Title: _____
Date: _____	Date: _____

EXHIBIT E
INSURANCE REQUIREMENTS FOR
TECHNOLOGY AGREEMENTS

A. Insurance Policies: Motorola shall, at all times during the terms of this Agreement, maintain and keep in full force and effect, the following policies of insurance with minimum coverage as indicated below and issued by insurers with AM Best ratings of no less than A-:VI or otherwise acceptable to the City.

	Insurance	Minimum Coverage Limits	Additional Coverage Requirements
1.	Commercial general liability	$ 1 million per occurrence $ 2 million aggregate	Coverage must be at least as broad as ISO CG 00 01 and must include completed operations coverage. If insurance applies separately to a project/location, aggregate may be equal to per occurrence amount. **Coverage may be met by a combination of primary and umbrella or excess insurance but umbrella and excess shall provide coverage at least as broad as specified for underlying coverage.**
2.	Business auto coverage	$ 1 million	ISO Form Number CA 00 01 covering any auto (Code 1), or if Motorola has no owned autos, hired, (Code 8) and non-owned autos (Code 9), with limit no less than $ 1 million per accident for bodily injury and property damage.
3.	Professional liability (E&O), including Cyber Liability coverage	$ 2 million per claim $ 2 million aggregate	Motorola shall provide on a policy form appropriate to profession. If on a claims made basis, Insurance must show coverage date prior to start of work and it must be maintained for five (5) years after completion of work.
4.	Workers' compensation and employer's liability	$ 1 million	As required by the State of California, with Statutory Limits and Employer's Liability Insurance with limit of no less than $ 1 million per accident for bodily injury or disease. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Motorola, its employees, agents and subcontractors.
5.	Cyber Liability		Covering claims involving privacy violations, information theft, damage to or destruction of electronic information, intentional and/or unintentional release of private information, alteration of electronic information, extortion

and network security. Such coverage is required if any products and/or services related to information technology (including hardware and/or software) are provided to City and for claims involving any professional services for which Motorola is engaged with City for such length of time as necessary to cover any and all claims.

B. Endorsements:

1. All policies shall provide or be endorsed to provide that coverage shall not be canceled, except after prior written notice has been provided to the City in accordance with the policy provisions.

2. Liability, umbrella and excess policies shall provide or be endorsed to provide the following:

   a. For any claims related to this project, Consultant's general liability insurance coverage shall be primary and any insurance or self-insurance maintained by City shall be excess of the Consultant's insurance and shall not contribute with it; and,

   b. **The City of Santa Rosa, its officers, agents, employees and volunteers are to be covered as additional insureds on the CGL policy**. General liability coverage can be provided in the form of an endorsement to Consultant's insurance at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10 and CG 20 37 if a later edition is used.

C. Verification of Coverage and Certificates of Insurance: Motorola shall furnish City with original certificates and endorsements effecting coverage required above. Certificates and endorsements shall make reference to policy numbers. All certificates and endorsements are to be received and approved by the City before work commences and must be in effect for the duration of the Agreement. The City reserves the right to require complete copies of all required policies and endorsements.

D. Other Insurance Provisions:

1. Policies containing any self-insured retention (SIR) provision shall provide or be endorsed to provide that the SIR may be satisfied by either Motorola or City. Self-insured retentions above $10,000 must be approved by City. At City's option, Motorola may be required to provide financial guarantees.

2. Sole Proprietors must provide a representation of their Workers' Compensation Insurance exempt status.