AGENDA COVER MEMO

Memorandum Date: June 13, 2023

Order Date: June 27, 2023

TO: Board of County Commissioners

DEPARTMENT: Sheriff's Office

PRESENTED BY: Chief Deputy Carl Wilkerson
Ryan Wells, AIC Lieutenant
Brian Greig, Radio Network Coordinator
Mike Harman, LRIG System Manager

AGENDA ITEM TITLE: ORDER/IN THE MATTER OF ENTERING INTO A CONTRACT WITH MOTOROLA SOLUTIONS IN THE AMOUNT OF $2,322,606 FOR RADIO SITE EQUIPMENT INSTALLATION AND DELEGATING AUTHORITY TO THE COUNTY ADMINISTRATOR TO EXECUTE THE CONTRACT

I. MOTION

Move approval of a contract with Motorola Solutions in the amount of $2,322,606 for equipment and installation at radio sites in Lane County and delegate authority to the County Administrator to execute the contract.

II. AGENDA ITEM SUMMARY

Lane County Sheriff's Office (LCSO) owns and operates communications sites throughout Lane County. Lane Regional Interoperability Group (LRIG) owns equipment and manages a UHF trunked radio system that supports first responder communications across the county. LCSO was awarded funding through HB5202 to add two additional radio sites and move one existing site to address known coverage gaps on the radio system.

The contract with Motorola Solutions will add radio sites at Prairie Mt. and Dead Mt. and to move existing radio equipment from the Herman Peak site to a new site at Mapleton.

III. BACKGROUND/IMPLICATIONS OF ACTION

A. Board Action and Other History

The Motorola 10-year Service Level Agreement (SLA) was approved in December

of 2022 on Order 22-12-13-07 and is set to begin July 1, 2023. The SLA portion of this contract will increase the annual costs for site maintenance and those costs will become part of the ongoing LRIG budget process.

Grant funding for this project was awarded through the state of Oregon under HB5202, which was accepted by the Board of Commissioners on August 2, 2022 on Order 22-08-02-06.

The Lane Radio Interoperability Group (LRIG) is a consortium of radio users across Lane County that has been operating the trunked UHF radio network since 2006. The radio network provides 'roaming' coverage across Lane County for system users. Individual members, from time to time, have added radio sites to the network to fill in known coverage gaps. While individual system members may purchase the radio sites in whole or in part, once sites are added to the network, ongoing support and maintenance costs become the responsibility of the entire consortium.

This project is funded through the HB5202 grant after a series of snowstorm and wildfire events in Lane County identified coverage gaps in the radio system including the City of Oakridge, Mapleton, and Highway 36.

B. Board Goals

Approval of this contract has impacts in two areas of the Lane County Strategic Plan.

1. Safe, Healthy County:
    a. The additional coverage obtained by the work under this contract will provide radio coverage for first responders working in the City of Oakridge, responders along Highway 36 and responders in Mapleton.
2. Robust Infrastructure:
    a. The additional sites added by approval of this project will also become part of the expanded radio network backhaul system currently under development. Each of these sites will have redundant connection paths back to the network core and will be built to withstand disruptions caused by natural and man-made events. Having a robust infrastructure that can be relied upon to maintain functionality during critical incidents is consistent with Board goals and is a goal of this project.

C. Financial and/or Resource Considerations

Awarded grant funds under HB5202 will cover the initial cost for equipment and installation of this project, $1,852,620. The attached Final Proposal also quotes the support and maintenance costs for these sites through the remainder of the SUA of $469,986. Ongoing support and maintenance costs will be added to the Motorola SUA agreement once the sites have been built and the warranty period has expired. The LRIG partners are aware that additional sites will increase the cost of the SUA and will vote to accept them once they will become part of the agreement. In the

event the LRIG partners are unable to bear the additional costs, the Sheriff's Office has an option to either use reserves remaining in the HB5202 grant or reserves within the department for radio network costs. These additional maintenance and support fees will be included in any future SUA costs to be shared by the LRIG partners.

Analysis

HB5202 awarded funds to the Lane County Sheriff's Office to improve emergency response capabilities. In partnership with, and in conjunction with their role as a key stakeholder in the LRIG consortium, the Sheriff's Office has identified noticeable coverage gaps in the UHF trunked system that impact emergency responses and operations in certain areas. Specifically, communications along Highway 36 in northern Lane County are not covered well by the trunking system, and the town of Mapleton has difficulties finding radio coverage. Also, as was noticed during the 2022 evacuation of Oakridge, the trunking system does not reach the eastern edge of the county along Highway 58.

Approval of this contract will provide a trunked radio site near Oakridge, another new site at Prairie Peak for coverage along Highway 36 and will move an underutilized site from Herman Peak to Mapleton. All these sites will be on property managed by the Lane County Sheriff's Office.

D. Alternatives/Options

1. Approve the contract with Motorola and proceed with the project as outlined.

2. Do not approve the contract with Motorola and develop a smaller project to fill in the coverage gaps. This solution will minimally meet the needs of the Sheriff's Office but requires users to move away from their normal operating channel. Also, this does not provide radio coverage for any other users, including Public Works staff or Emergency Management staff responding to an incident.

IV. RECOMMENDATION

Staff recommends Option 1.

V. TIMING/IMPLEMENTATION

Upon approval and execution of this contract, staff will engage with Motorola to establish timelines for completion. Work is scheduled to begin in 2024.

VI. ATTACHMENTS

Board Order

Motorola Proposal

BEFORE THE BOARD OF COMMISSIONERS OF LANE COUNTY, OREGON

ORDER NO: 23-06-27-10	In the Matter of ENTERING INTO A CONTRACT WITH MOTOROLA SOLUTIONS IN THE AMOUNT OF $2,322,606 FOR RADIO SITE EQUIPMENT INSTALLATION AND DELEGATING AUTHORITY TO THE COUNTY ADMINISTRATOR TO EXECUTE THE CONTRACT

WHEREAS, the Sheriff's Office (LCSO) was awarded funding through HB5202 to enhance communications within Lane County; and

WHEREAS, the LCSO is a partner in the Lane Regional Interoperability Group (LRIG) and has agreed to provide grant funding to construct communication sites at Prairie and Dead Mountains and to move existing equipment from Herman Peak to a site in Mapleton; and

WHEREAS, LRIG has approval from members to include additional maintenance costs in the 10-year Motorola Service Level Agreement; and

WHEREAS, the Board of County Commissioners approves all contracts in excess of $150,000 and three years in length as defined in Lane Manual Chapter 20.

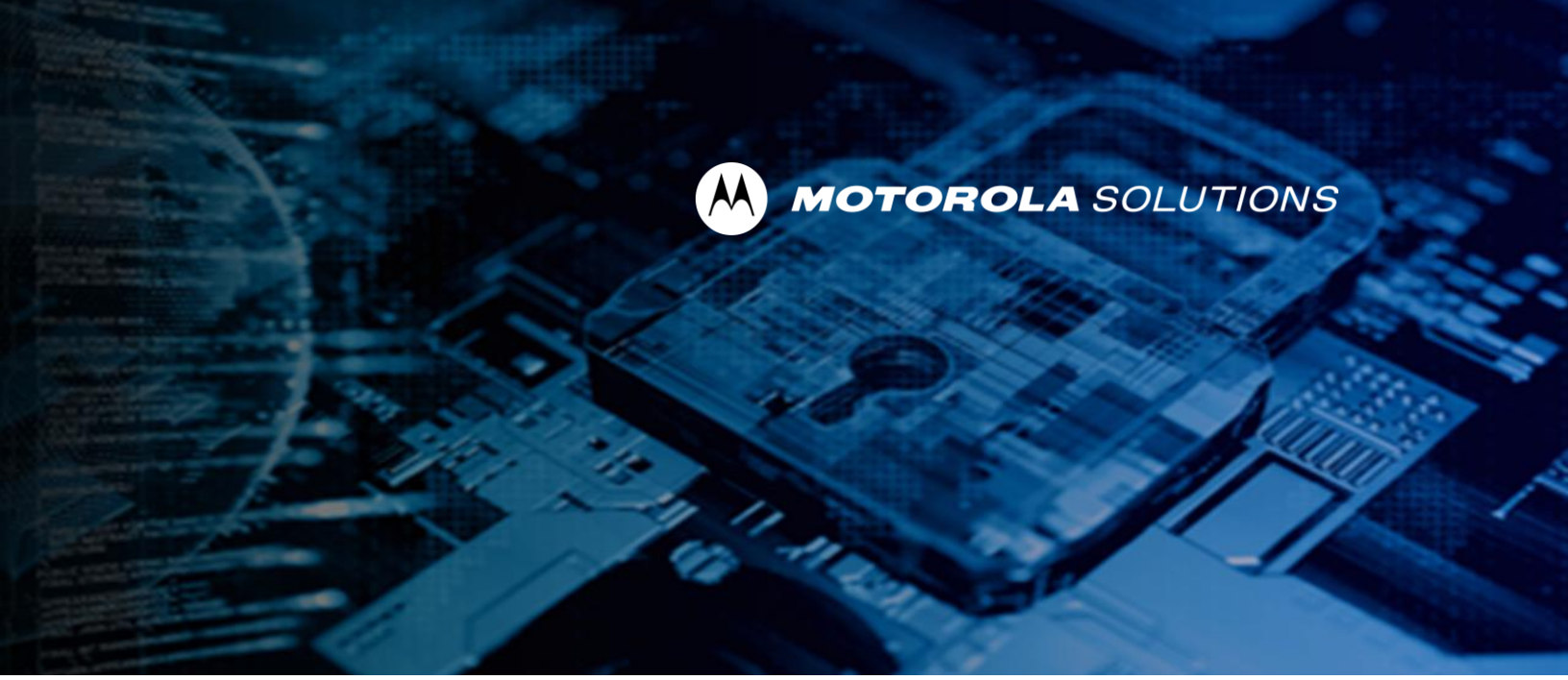
NOW, THEREFORE, the Board of County Commissioners of Lane County **ORDERS** as follows:

1. Approve a contract with Motorola Solutions in the amount of $2,322,606 for installation and ongoing maintenance of radio site equipment.

2. Delegate authority to the County Administrator to execute the contract.

ADOPTED this 27th day of June, 2023.

_____
Pat Farr, Chair
Lane County Board of Commissioners



LANE COUNTY

ADDITIONAL SITES **MAY 16, 2023**

FIRM PRICED PROPOSAL

The design, technical, pricing, and other information (“Information”) furnished with this submission is proprietary and/or trade secret information of Motorola Solutions, Inc. (“Motorola Solutions”) and is submitted with the restriction that it is to be used for evaluation purposes only. To the fullest extent allowed by applicable law, the Information is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the Information without the express written permission of Motorola Solutions.

MOTOROLA, MOTO, MOTOROLA SOLUTIONS, and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners. © 2018 Motorola Solutions, Inc. All rights reserved.

Motorola Solutions, Inc.
500 W Monroe St Ste 4400
Chicago, IL, 60661-3781

May 16, 2023

Sheriff Cliff Harrold
125 E 8th Ave
Eugene, OR 97401
(541) 682-4150
Subject: Lane County Additional Sites

Dear Mr. Harrold,
Motorola Solutions, Inc. (“Motorola Solutions”) is pleased to have the opportunity to provide Lane County 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, our solution includes a combination of hardware, software, and services. Specifically, this solution provides Lane County with three (3) additional sites that will expand coverage and capabilities with the existing ASTRO 25 system.

This proposal is subject to the Communications System and Services Agreement (CSSA) together with its Exhibits, and the Maintenance, Support and Lifecycle Addendum. (MSLMA) This proposal shall remain valid until July 14, 2023. Lane County may accept the proposal by delivering to Motorola the CSSA signed by an appropriate Lane County representative. Alternatively, Motorola Solutions would be pleased to address any concerns Lane County may have regarding this proposal. Any questions can be directed to your Motorola Account Executive, George Nissan at 541-408-0219 or at george.nissan@motorolasolutions.com.

We thank you for the opportunity to furnish Lane County 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 DeBenedetti
MSSSI Vice President

TABLE OF CONTENTS

Cover Letter

Section 1

System Description 1-1
1.1 Overview 1-1
1.2 Description 1-1
1.2.1 Site Equipment 1-2
1.2.2 Site Antennas 1-2
1.2.3 System Equipment 1-2
1.2.4 Radio Frequency Site Component Descriptions 1-3
1.2.4.1 GTR 8000 Expandable Site Subsystem 1-3
1.2.4.2 MC-EDGE Remote Terminal Units (RTUs) 1-3
1.2.4.3 SRX Site Gateways 1-4
1.2.4.4 Conventional Channel Gateways (CCGWs) 1-4
1.2.4.5 Radio Frequency Distribution System 1-5
1.2.5 Channel Partitioning 1-5
1.3 Network Link Requirements 1-6
1.4 System Drawings 1-7
1.5 Design Assumptions 1-11

Section 2

Equipment List 2-1

Section 3

Statement of Work 3-7
3.1 Responsibility Matrix 3-7
3.2 Assumptions 3-18
3.3 Change Order Process 3-18

Section 4

Project Schedule 4-19

Section 5

Acceptance Test Plan 5-23
5.1 Dispatch Console Acceptance Plan 5-23
5.2 Wide Area Trunking - FDMA Only Sites 5-24
5.2.1 Talkgroup Call 5-24
5.2.2 Emergency Alarm and Call with Hot Mic 5-25
5.3 Site Trunking - FDMA Only Sites 5-26
5.3.1 Site Trunking Indication 5-26
5.3.2 Talkgroup Call 5-27

Use or disclosure of this proposal is subject to the restrictions on the cover page.

5.4 MCC 7100/7500 Trunked Resources 5-28
5.4.1 Talkgroup Selection and Call 5-28
5.4.2 Emergency Alarm and Call Display Description 5-29
5.5 Signoff Certificate 5-1

Section 6

Coverage Survey 6-1
6.1 Overview 6-1
6.1.1 Defined Test Area 6-1
6.1.2 Channel Performance Criterion (CPC) 6-1
6.1.3 Reliability 6-2
6.1.4 Direction(s) of Survey 6-2
6.1.5 Equipment Configurations 6-2
6.1.6 Outdoor Only Coverage 6-1
6.1.7 CPC Criteria for a Survey Tile 6-1
6.1.8 Required Number of Survey Tiles in the Defined Survey Area 6-1
6.1.9 Accessibility to Survey Tiles 6-1
6.1.10 Random Selection of a Survey Location in Each Tile 6-2
6.1.11 CPC Measurements in Each Tile 6-2
6.2 Survey Responsibilities and Preparation 6-2
6.3 Coverage Survey Documentation 6-3

Section 7

Training Plan 7-1

Section 8

Warranty & Maintenance Plan 8-1
8.1 Advance Plus Overview 8-1
8.2 Advanced Plus Services Element Descriptions 8-1
8.2.1 Network Event Monitoring 8-1
8.2.2 Remote Technical Support 8-1
8.2.3 Network Hardware Repair with Advanced Replacement 8-2
8.2.4 Remote Security Update Service 8-2
8.2.5 On-site Infrastructure Response 8-2
8.2.6 Annual Preventive Maintenance 8-3
8.2.7 Network Updates 8-3
8.2.8 Security Monitoring 8-3
8.3 Motorola Solutions Service Delivery Ecosystem 8-3
8.3.1 Centralized Managed Support Operations 8-4
8.3.2 Field Service 8-4
8.3.3 Repair Depot 8-4
8.3.4 Customer Support Manager 8-4
8.3.5 MyView Portal 8-4

Use or disclosure of this proposal is subject to the restrictions on the cover page.

8.4 System Upgrade Agreement (SUA II) 8-5

Section 9

Pricing Summary 9-1
9.1 RF Subsystem Equipment and Installation 9-1
9.2 Motorola Extended Services and SUA II- Years 2- 8 9-1
9.3 Complete System Pricing 9-1
9.4 Payment Terms 9-1

Section 10

Contractual Documentation 10-1
Communications System and Services Agreement 10-1
Maintenance, Support, and Lifecycle Management Addendum 10-24
Appendix A 10-29
Appendix B 10-30
Appendix C 10-32
Appendix D 10-34

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SECTION 1

SYSTEM DESCRIPTION

1.1 OVERVIEW

In response to the request from Lane County, Motorola Solutions, Inc. (Motorola) is pleased to present a design for new ASTRO radio sites. These will provide reliable, mission-critical communications in Lane County.

Motorola will establish new ASTRO System Repeaters (ASRs) at the following sites:

- Mapleton
- Prairie
- Dead

1.2 DESCRIPTION

Each ASR will have the following features:

- GTR 8000 Expandable Site Subsystem
- Five (5) RF Frequencies (Base Radios)
- ASTRO Trunking Operation (5-Channels)
- Conventional Operation (1-Channel)
- P25 Phase 1 - Frequency-Division Multiple Access (FDMA) Operation
- P25 Digital Over-The-Air Operation
- UHF R2 (450-512 MHz) Frequency Band

A new GTR 8000 ESS rack will be provided for the Mapleton and Dead sites.

An existing GTR 8000 ESS rack from Lane County's Herman site will be reused for the Prairie site.

Existing customer base radios will be used at Prairie, Mapleton & Dead for the conventional channels.

(1) New Conventional Channel Gateway (CCGW) will be provided and installed for each site.

New antenna and line systems will be used at all three (3) sites.

A phase approached for integration will be executed as follows:

- Phase 1- Install Mapleton, install Prairie (2024)
- Phase 2- Install Dead site (expected to be ready in 2025)

Use or disclosure of this proposal is subject to the restrictions on the cover page.

1.2.1 Site Equipment

Each site will include the following equipment:

QTY	ITEM
2	7/8” Coaxial Cable Transmission Lines with associated connectors and jumpers
1	dbSpectra DSRMC06 Receive Multicoupler, 8-Channel
1	dbSpectra DB3826 UHF Dual Sub-band Receive Window Filter
1	dbSpectra DB4368-Series UHF Dual Sub-Band Combiner (5-Channel)
1	dbSpectra MWDTF4AU-D UHF Dual Sub-Band Transmit Window Filter
1	AC Edge II SPD/PDU
1	MC-EDGE Remote Terminal Unit (RTU)

NOTE: RFDS assumes frequencies in the UHF R2 (450-470MHz) Range. Reference the spec sheets in Appendix A, B, C, and D at the end of this proposal for specific frequency requirements of: DSRMC06, DB3826, DB4368 and MWDTF4AU-D.

1.2.2 Site Antennas

Each site will include the following antennas:

SITE	TX QTY	RX QTY	ANTENNA
MAPLETON	**1**	**1**	dB Spectra - DS4F06P36U3M, 6 dBd, Omnidirectional, Low-PIM/High-PIP, 4.3-10
DEAD	**1**	**1**	RFI - BA160-67-T3P 9dBd, Omnidirectional, Low-PIM/High-PIP, 4.3-10
PRAIRIE	**1**	**1**	RFI - BA160-67-T3P 9dBd, Omnidirectional, Low-PIM/High-PIP, 4.3-10

1.2.3 System Equipment

The following will be added to the ASTRO core:

- Master site expansion licenses will be provisioned to support two (2) new FDMA trunked sites.
- New Radio Management licenses will be provided for an additional 400 radios.
- Channel Partitioning License
  - While this license is included to attempt to fix issues with voice bleed-over across channels, there may be a better, more permanent, solution available Motorola is happy to work with Lane County to explore other solutions.
    System Components

Use or disclosure of this proposal is subject to the restrictions on the cover page.

1.2.4 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. The following components are included in the RF sites provided as part of our solution for Lane County.

1.2.4.1 GTR 8000 Expandable Site Subsystem

The GTR 8000 Expandable Site Subsystem (ESS) (see the figure titled "GTR 8000 Expandable Site Subsystem") enclosure integrates reconfigured GTR 8000 base stations and GCP 8000 controllers, into a single cabinet.

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 1-1: 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.

1.2.4.2 MC-EDGE Remote Terminal Units (RTUs)

The MC-EDGE Remote Terminal Units (RTUs) enables the Unified Event Manager (UEM) to acquire information regarding the fault and configuration of elements/devices in sites. The MC-EDGE can be wall-mounted or rack mounted. Each unit supports up to five (5) expansion modules for monitoring a variety of signals.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Each RTU is configured to support up to 24 digital outputs and 48 digital inputs. Motorola anticipates a connection to up to (5) customer provided alarm points (temp, door, gen etc). The RTU will be terminated on punch blocks less than 25 feet from the rack.

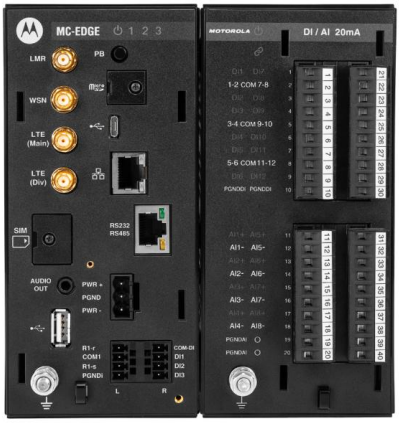


Figure1-2: MC-EDGE Remote Terminal Unit – One Expansion Module Shown

1.2.4.3 SRX Site Gateways

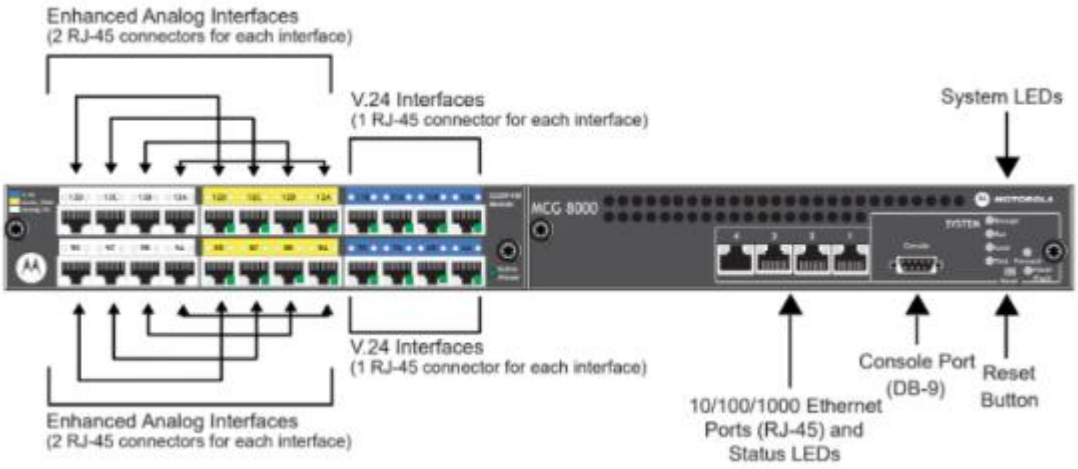
The Juniper SRX gateways provide routing control of audio, data, and network management traffic for devices that forward packets beyond their local LAN. The gateways replicate packets while achieving the fast access levels required by real-time voice systems. SRX 345 gateways are used for repeater sites.

Figure1-3: SRX 345 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 proposed system design.

1.2.4.4 Conventional Channel Gateways (CCGWs)

The MCG 8000 provides the interface between the IP network and conventional sites in ASTRO®25 system by translating the voice and data into the format needed for each individual site type.



(3) CCGWs are included, one per ASR site proposed. Each CCGW has 8-ports and is capable of connecting to up to (8) conventional channels (analog, V.24 or IP).

1.2.4.5 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.

This design includes UHF R2 omnidirectional antennas, transmission lines, surge protectors, connectors, grounding and weatherproofing materials, as well as services to install antennas and RFDS onto the customer-provided tower. Inside the shelter, UHF R2 transmit combiners, receive multicouplers, RF filtering, and surge protection are included.

1.2.5 Channel Partitioning

Channel Partitioning is an ASTRO® 25 system feature that provides agencies, or a subset of agencies, with the exclusive use of specific RF channels. Channel Partitioning is accomplished by having the zone controller in the system steer calls to channel resources that are configured with the appropriate agency or user group designation. The use of this feature allows the segregation of one set of users from another in an attempt to improve the level of service available to one set of users. In other words, Channel Partitioning is used to prevent user group B's calls from busying user group A's calls. Channel Partitioning controls which talkgroups or radio units are assigned to each RF channel resource in the system. This control is accomplished by steering each talkgroup or radio unit to an RF channel resource that is permitted for that talkgroup or radio unit, when service requests are granted. RF channel resources are configured with specific user groups during the User Configuration Server application (UCS) channel configuration process. Channel Partitioning does not control site registration for the radio units. The radio unit and/or talkgroup must first be registered

Use or disclosure of this proposal is subject to the restrictions on the cover page.

and/or affiliated to the site. Then Channel Partitioning is used to control which RF channel resource is assigned to the radio unit or the talkgroup.

1.3 NETWORK LINK REQUIREMENTS

Preliminary network and backhaul link specifications are provided below. Network source to destination links can vary from just a few connection points to many depending on the number of sites and the specific system topology. The number of connection points will vary depending on the following source-destination links:

- ASR – ASR
- Dispatch – ASR
- ASR – Simulcast sub-site

Bandwidth

The bandwidth referenced is the minimums needed to ensure the performance of a fully utilized site. The port speed and/or internal backhaul network may need to be greater to ensure the jitter specification is met.

- ≥ 2 Mbps

Tolerance to Backhaul Network Congestion or Outage

- Repeater Site Links : 2s
- IP Trunked Simulcast Sub-Site Links: 800ms

Detection and Convergence

An outage detection mechanism is required to efficiently converge traffic over to alternate paths. As a result, Bidirectional Failure Detection (BFD) is used to assess and inform link-state between site link endpoints.

- Site Links: 300ms interval x 3, or 900ms
- BFD packets are marked as IP-Precedence/Class Selector 6.

Latency

- Latency, up to a certain point, does not affect speech quality. However, it directly affects system access time, which could lead to audio truncation and delays. The maximum latency tolerances defined are total from source to destination.ASR – ASR: 100ms
- Dispatch – ASR: 70ms
- ASR – Simulcast sub-site: 40ms

Jitter

Jitter is the variation in latency. Audio relies on a constant, steady, delivery of voice packets from the source to all the destinations. If the jitter in the network exceeds the limits, the voice stream will be affected and audio holes, loss of intelligibility, etc. will be observed, and the overall voice conversation will degrade. Below are the maximum link jitter tolerances for the three link scenarios:

Use or disclosure of this proposal is subject to the restrictions on the cover page.

- ASR – ASR: 20ms
- Dispatch – ASR: 20ms
- ASR – Simulcast sub-site: 20ms

Packet Loss

Unlike jitter, packet loss in an audio stream cannot be mitigated and there is an immediate impact to speech quality. The probability of packet loss needs to be kept extremely low to prevent site backhaul sourced audio quality issues. Packet loss is defined per RFC 2680. The specification for end-to-end packet loss is no more than 0.01% of packets for all link types. Packet loss is additive and can be combined among all the link segments.

QoS Mechanisms

Four QoS levels are recommended for optimal user experience, but at least two are required.

The following QoS mechanisms are supported:

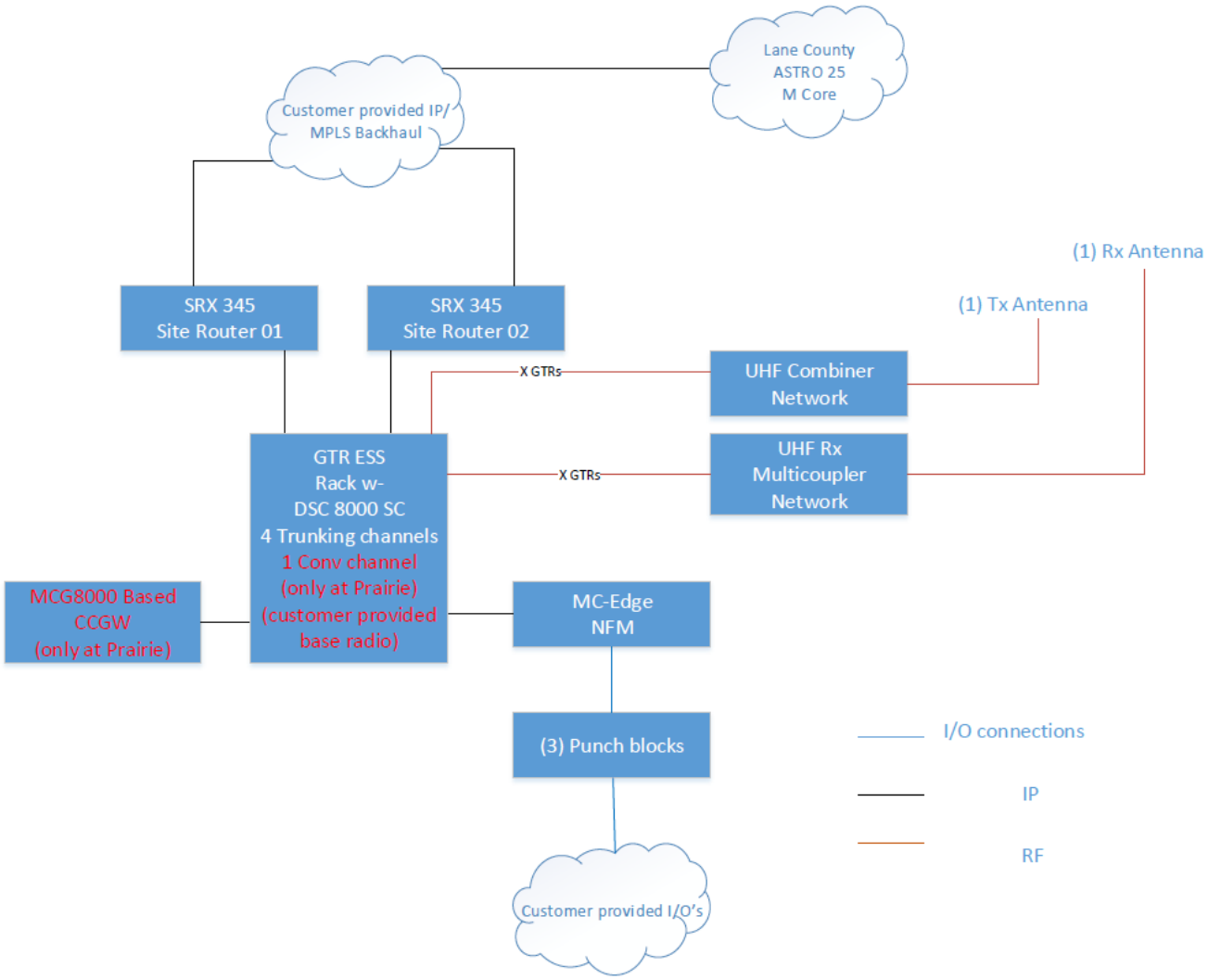
- Layer 3 (ToS or DSCP)
- MPLS

Motorola can provide MPLS requirements, upon request.

1.4 SYSTEM DRAWINGS

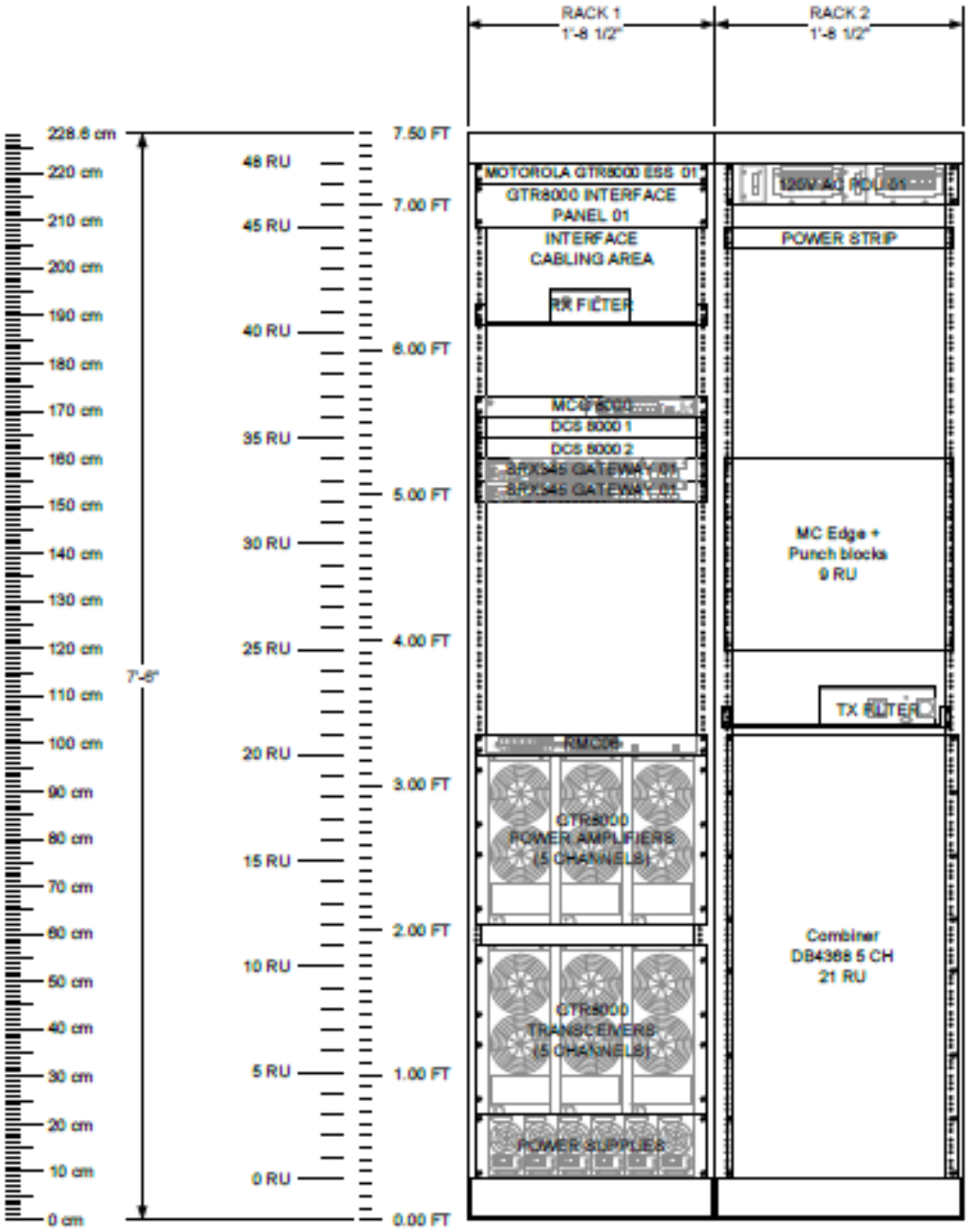
Drawings are provided on the next page.

Block Diagram

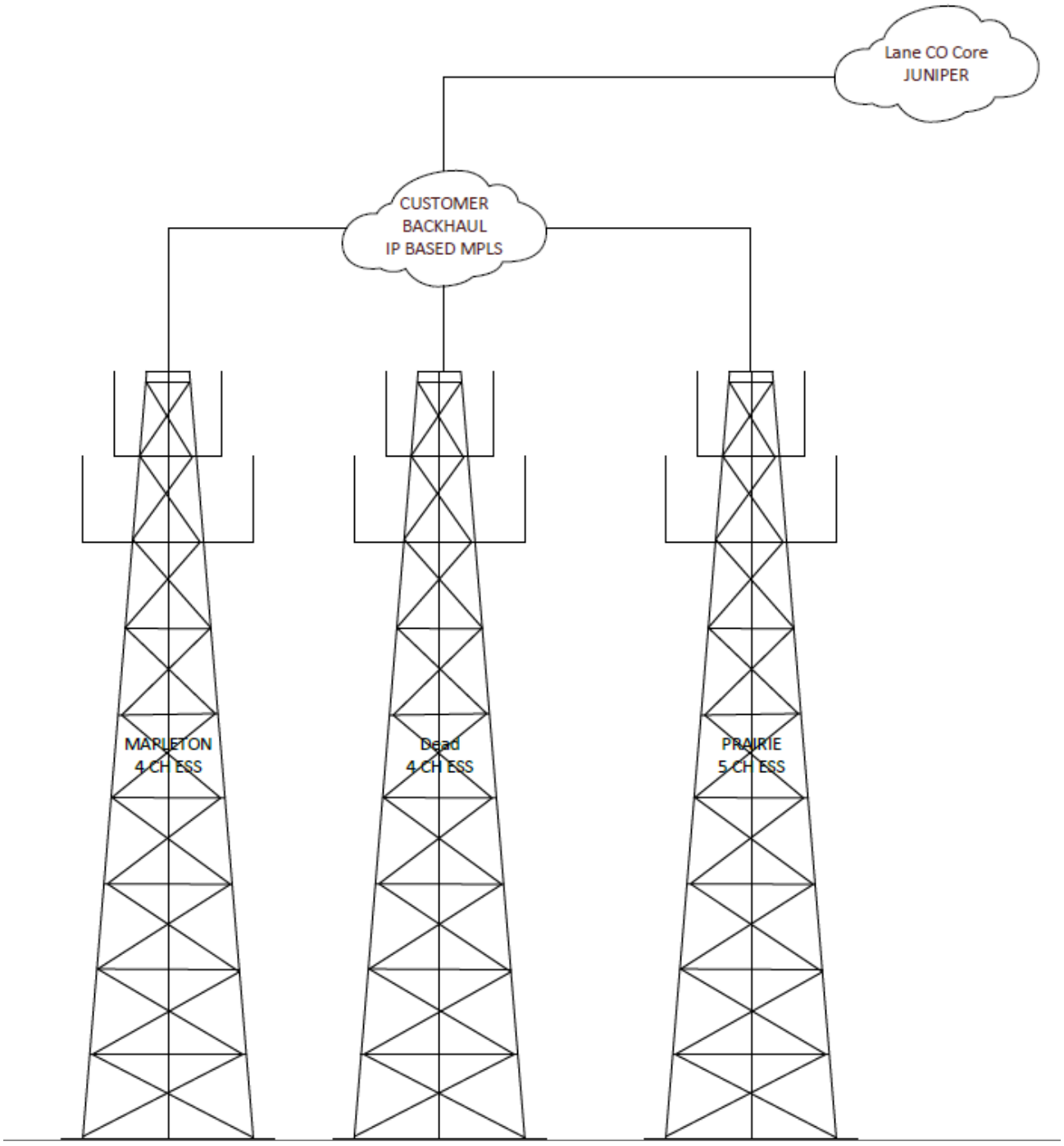


Use or disclosure of this proposal is subject to the restrictions on the cover page.

Rack Layout for Prairie, Dead & Mapleton Sites



Site Connectivity



Use or disclosure of this proposal is subject to the restrictions on the cover page.

1.5 DESIGN ASSUMPTIONS

Motorola's design is based on the following assumptions. If any of these are incorrect, Motorola will revise our scope of work and may require a change order.

- The GTR 8000 Expandable Site Subsystem (ESS) rack at Lane County's existing Herman site will be used at the new Prairie ASR. This rack is in good working order. Motorola will test the rack prior to installation and turn-up; if the rack is not in good working order Lane will need to order a new GTR 8000 ESS via change order. The antenna system from Herman will not be reused and a new one will be provided for Prairie.
- Other than shutdown, disconnection and removal of the existing GTR 8000 ESS racks at the Herman sites, no scope is included for any equipment decommissioning, removal or disposal at this site.
- Lane County's ASTRO core is at system release A2020.1 and is Juniper-enabled.
- Lane County is responsible for civil work at all sites, including shelter and tower construction and modification. No site surveying, tower surveying or tower analysis is included.
- Lane County is responsible for providing backhaul connectivity, including Multi-Protocol Label Switching (MPLS) services between the sites and the ASTRO core. No microwave, fiber-optic, or other backhaul is included. Motorola's backhaul demark is the WAN port of the rack-mounted data SPDs.
- Lane County is responsible for providing power in the correct phase and voltage for all equipment racks, as well as surge suppression and backup power. Motorola's power demark is the line side connection of the AC EDGE II SPD/PDU. Motorola has not evaluated existing site power infrastructure.
- Lane County is responsible for connecting third party equipment to MOSCAD punchblocks for monitoring and alarms. Motorola's aux I/O demarks are the punchblock connections.
- Lane County is responsible for all frequency searches, applications and licensing. Motorola has not included any frequency search or licensing services. Lane County must provide frequencies before equipment can be shipped.
- Any site upgrades required to meet R56 "Standards and Guidelines for Communications Sites" requirements are Lane County's responsibility.
- Multiple sites have existing transmitters, including transmitters in the UHF R2 frequency band. Since the operating frequencies of the new ASRs are not yet known, no additional Radio Frequency (RF) filtering equipment beyond standard practice is included. Additional equipment and services to protect either proposed equipment from existing transmitters or existing transmitters from proposed equipment (such as notch filters) may require a change order.
- A coverage survey will be conducted for reference purposes only. Motorola will share the results with Lane County.
- Prior to conducting the coverage survey, Noise Floor Monitoring & Spectrum Fingerprinting will be conducted over a 24-hour period at each site to identify any external noise issues. If the noise is determined to be higher than Motorola's assumptions, the coverage survey will be revised accordingly.
- Motorola's coverage survey will test only outbound BER. Motorola will conduct a covered area reliability test for each site individually.
- Lane County will provide vehicles and drivers for coverage survey.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SECTION 2

EQUIPMENT LIST

SUB SYS	QTY	NOMENCLATURE	DESCRIPTION
MASTER	1	SQM01SUM0323	ASTRO MASTER SITE
MASTER	1	CA03517AC	ADD: CORE EXPANSION
MASTER	2	UA00153AB	ADD: P25 FDMA TRUNKING OPERATION SI
MASTER	3	CA01316AA	ADD: UNC ADDTL DEVICE LIC (QTY 10)
MASTER	1	UA00134AA	ADD:CHANNEL PARTITIONING
MAPLEON	1	DSDS4F06P36U3D	450-470MHZ 6DB GAIN OMNI FIBERGLASS
MAPLETON	15	DSEC450	COAXIAL CABLE, 1/2" 50 OHM CORRUGAT
MAPLETON	2	DS4310M50V12N1	CONNECTOR, 4.3-10 MALE INTERFACE FO
MAPLETON	2	DSWKU	WK-U, UNIVERSAL WEATHERPROOFING KIT
MAPLETON	200	DSEC550A	COAXIAL CABLE, "A" SERIES 7/8 IN 50
MAPLETON	2	DS4310F50V78N1	CONNECTOR, 4.3-10 FEMALE INTERFACE
MAPLETON	5	DSGKC78	CLIP ON GROUND KIT FOR 7/8" CABLES,
MAPLETON	7	DSBH78	BH-78 BUTTERFLY HANGER FOR 7/8 AIRC
MAPLETON	1	DSVHF50B43MABD	4.3-10 M/F RF SPD, 100-520MHZ, DC B
MAPLETON	15	DSEC450	COAXIAL CABLE, 1/2" 50 OHM CORRUGAT
MAPLETON	2	DS4310M50V12N1	CONNECTOR, 4.3-10 MALE INTERFACE FO
MAPLETON	1	DSDB3826BPB	UHF DUAL UNIVERSAL MILLED WINDOW FI
MAPLETON	1	DSDSRMC0608BA	RMC06, 8 CH HIGH GAIN AMP UNIV RMC
MAPLETON	2	DSDS4F06P36U3D	450-470MHZ 6DB GAIN OMNI FIBERGLASS
MAPLETON	15	DSEC450	COAXIAL CABLE, 1/2" 50 OHM CORRUGAT
MAPLETON	2	DS4310M50V12N1	CONNECTOR, 4.3-10 MALE INTERFACE FO
MAPLETON	2	DSWKU	WK-U, UNIVERSAL WEATHERPROOFING KIT
MAPLETON	200	DSEC550A	COAXIAL CABLE, "A" SERIES 7/8 IN 50
MAPLETON	2	DS4310F50V78N1	CONNECTOR, 4.3-10 FEMALE INTERFACE
MAPLETON	5	DSGKC78	CLIP ON GROUND KIT FOR 7/8" CABLES,
MAPLETON	7	DSBH78	BH-78 BUTTERFLY HANGER FOR 7/8 AIRC
MAPLETON	1	DSVHF50B43MABU	4.3-10 M/F RF SPD, 100-520MHZ, DC B
MAPLETON	15	DSEC450HF	COAXIAL CABLE, 1/2" HIFLEX, 50 OHM
MAPLETON	2	DS4310M50B12X	CONNECTOR, 4.3-10 MALE INTERFACE FO
MAPLETON	1	DSMWDTF4AUD	450-455/460-465MHZ ,DUAL BAND TX MI
MAPLETON	1	DSDB4368BPD5B	COMBINER, 5 CHANNEL UHF, 380-512MHZ
MAPLETON	1	T8492	SITE ROUTER & FIREWALL- AC
MAPLETON	1	CA03445AA	ADD: MISSION CRITICAL HARDENING
MAPLETON	1	CA03448AA	ADD: STATEFUL FIREWALL
MAPLETON	1	T8492	SITE ROUTER & FIREWALL- AC
MAPLETON	1	CA03445AA	ADD: MISSION CRITICAL HARDENING

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SUB SYS	QTY	NOMENCLATURE	DESCRIPTION
MAPLETON	1	CA03448AA	ADD: STATEFUL FIREWALL
MAPLETON	1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
MAPLETON	1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
MAPLETON	1	CA03677AA	ADD: ASTRO SYSTEM RELEASE 2020.1
MAPLETON	1	X640AL	ADD: UHF R2 (435-524 MHZ)
MAPLETON	1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
MAPLETON	4	X591AE	ENH: ASTRO 25 SITE REPEATER SW
MAPLETON	1	CA03111AA	ADD: CEC COMPLIANCE
MAPLETON	4	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
MAPLETON	2	CA03736AA	ADD: DSC 8000 REPEATER SITE CONTROL
MAPLETON	2	CA03745AA	ADD: DSC 8000 REPEATER SITE CONTROL
MAPLETON	1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
MAPLETON	1	T8343	GSERIES SOFTWARE LICENSING
MAPLETON	4	UA00401AA	ADD: GSERIES BR-P25 TRNK ST RPTR
MAPLETON	2	UA00759AA	ADD: DSC 8000 REPEATER SITE CONTROL
MAPLETON	1	DS11011188	PDU, 120/240 SPLIT PH OR N+1 REDUND
MAPLETON	7	DS3750295	BREAKER, 5 AMP, CB UL 489 LISTED FO
MAPLETON	1	DS3750296	BREAKER, 10 AMP, CB UL 489 LISTED F
MAPLETON	7	DS3750297	BREAKER, 15 AMP, CB UL 489 LISTED F
MAPLETON	1	F0016A	MC IOT MAIN MODEL
MAPLETON	1	VA01370AA	ADD: MC-EDGE
MAPLETON	1	VA00973AA	ADD: IOT MC-EDGE ENHANCED COMM PLUG
MAPLETON	3	VA00989AA	ADD: 8DO EE 16DI 5-18 V /DRY
MAPLETON	1	VA00147	ADD: FRONT CABLE COVERS
MAPLETON	1	VA00155	ADD:DC POWER CABLE
MAPLETON	1	VA00991AA	ADD: DC/DC - Ý48 >>24¨ PS W/O HOUSI
MAPLETON	1	VA01946AA	ADD: MC EDGE AS NFM SDM3000
MAPLETON	1	DSIABDIN4	PANDUIT IABDIN4 4 RACK UNIT DIN RAI
MAPLETON	3	FKN0044A	MC_EDGE AUX IO MIGRATION CABLE
MAPLETON	1	FHN0057	DIN RAIL STOPPER
MAPLETON	3	QRN5066	PUNCHBLOCK W/PANEL
MAPLETON	1	TRN7343	SEVEN AND A HALF FOOT RACK
DEAD	1	DSBA16067T3P	OMNI, EXPOSED DIPOLE ARRAY, 9DBD, 4
DEAD	15	DSEC450	COAXIAL CABLE, 1/2" 50 OHM CORRUGAT
DEAD	2	DS4310M50V12N1	CONNECTOR, 4.3-10 MALE INTERFACE FO
DEAD	2	DSWKU	WK-U, UNIVERSAL WEATHERPROOFING KIT
DEAD	200	DSEC550A	COAXIAL CABLE, "A" SERIES 7/8 IN 50
DEAD	2	DS4310F50V78N1	CONNECTOR, 4.3-10 FEMALE INTERFACE
DEAD	5	DSGKC78	CLIP ON GROUND KIT FOR 7/8" CABLES,
DEAD	7	DSBH78	BH-78 BUTTERFLY HANGER FOR 7/8 AIRC

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SUB SYS	QTY	NOMENCLATURE	DESCRIPTION
DEAD	1	DSVHF50B43MABD	4.3-10 M/F RF SPD, 100-520MHZ, DC B
DEAD	15	DSEC450	COAXIAL CABLE, 1/2" 50 OHM CORRUGAT
DEAD	2	DS4310M50V12N1	CONNECTOR, 4.3-10 MALE INTERFACE FO
DEAD	1	DSDB3826BPB	UHF DUAL UNIVERSAL MILLED WINDOW FI
DEAD	1	DSDSRMC0608BA	RMC06, 8 CH HIGH GAIN AMP UNIV RMC
DEAD	2	DSBA16067T3P	OMNI, EXPOSED DIPOLE ARRAY, 9DBD, 4
DEAD	15	DSEC450	COAXIAL CABLE, 1/2" 50 OHM CORRUGAT
DEAD	2	DS4310M50V12N1	CONNECTOR, 4.3-10 MALE INTERFACE FO
DEAD	2	DSWKU	WK-U, UNIVERSAL WEATHERPROOFING KIT
DEAD	200	DSEC550A	COAXIAL CABLE, "A" SERIES 7/8 IN 50
DEAD	2	DS4310F50V78N1	CONNECTOR, 4.3-10 FEMALE INTERFACE
DEAD	5	DSGKC78	CLIP ON GROUND KIT FOR 7/8" CABLES,
DEAD	7	DSBH78	BH-78 BUTTERFLY HANGER FOR 7/8 AIRC
DEAD	1	DSVHF50B43MABU	4.3-10 M/F RF SPD, 100-520MHZ, DC B
DEAD	15	DSEC450HF	COAXIAL CABLE, 1/2" HIFLEX, 50 OHM
DEAD	2	DS4310M50B12X	CONNECTOR, 4.3-10 MALE INTERFACE FO
DEAD	1	DSMWDTF4AUD	450-455/460-465MHZ ,DUAL BAND TX MI
DEAD	1	DSDB4368BPD5B	COMBINER, 5 CHANNEL UHF, 380-512MHZ
DEAD	1	T8492	SITE ROUTER & FIREWALL- AC
DEAD	1	CA03445AA	ADD: MISSION CRITICAL HARDENING
DEAD	1	CA03448AA	ADD: STATEFUL FIREWALL
DEAD	1	T8492	SITE ROUTER & FIREWALL- AC
DEAD	1	CA03445AA	ADD: MISSION CRITICAL HARDENING
DEAD	1	CA03448AA	ADD: STATEFUL FIREWALL
DEAD	1	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM
DEAD	1	CA02686AA	ADD: AC DC POWER DISTRIBUTION
DEAD	1	CA03677AA	ADD: ASTRO SYSTEM RELEASE 2020.1
DEAD	1	X640AL	ADD: UHF R2 (435-524 MHZ)
DEAD	1	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
DEAD	4	X591AE	ENH: ASTRO 25 SITE REPEATER SW
DEAD	1	CA03111AA	ADD: CEC COMPLIANCE
DEAD	4	CA01953AA	ADD: POWER EFFICIENCY PACKAGE
DEAD	2	CA03736AA	ADD: DSC 8000 REPEATER SITE CONTROL
DEAD	2	CA03745AA	ADD: DSC 8000 REPEATER SITE CONTROL
DEAD	1	X882AH	ADD: 7.5 FT OPEN RACK, 48RU
DEAD	1	T8343	GSERIES SOFTWARE LICENSING
DEAD	4	UA00401AA	ADD: GSERIES BR-P25 TRNK ST RPTR
DEAD	2	UA00759AA	ADD: DSC 8000 REPEATER SITE CONTROL
DEAD	1	DS11011188	PDU, 120/240 SPLIT PH OR N+1 REDUND
DEAD	7	DS3750295	BREAKER, 5 AMP, CB UL 489 LISTED FO

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SUB SYS	QTY	NOMENCLATURE	DESCRIPTION
DEAD	1	DS3750296	BREAKER, 10 AMP, CB UL 489 LISTED F
DEAD	7	DS3750297	BREAKER, 15 AMP, CB UL 489 LISTED F
DEAD	1	F0016A	MC IOT MAIN MODEL
DEAD	1	VA01370AA	ADD: MC-EDGE
DEAD	1	VA00973AA	ADD: IOT MC-EDGE ENHANCED COMM PLUG
DEAD	3	VA00989AA	ADD: 8DO EE 16DI 5-18 V /DRY
DEAD	1	VA00147	ADD: FRONT CABLE COVERS
DEAD	1	VA00155	ADD:DC POWER CABLE
DEAD	1	VA00991AA	ADD: DC/DC - Ý48 >>24¨ PS W/O HOUSI
DEAD	1	VA01946AA	ADD: MC EDGE AS NFM SDM3000
DEAD	1	DSIABDIN4	PANDUIT IABDIN4 4 RACK UNIT DIN RAI
DEAD	1	FHN0057	DIN RAIL STOPPER
DEAD	3	FKN0044A	MC_EDGE AUX IO MIGRATION CABLE
DEAD	3	QRN5066	PUNCHBLOCK W/PANEL
DEAD	1	TRN7343	SEVEN AND A HALF FOOT RACK
PRAIRIE	1	DSBA16067T3P	OMNI, EXPOSED DIPOLE ARRAY, 9DBD, 4
PRAIRIE	1	DSDB3826BPB	UHF DUAL UNIVERSAL MILLED WINDOW FI
PRAIRIE	1	DSDSRMC0608BA	RMC06, 8 CH HIGH GAIN AMP UNIV RMC
PRAIRIE	15	DSEC450	COAXIAL CABLE, 1/2" 50 OHM CORRUGAT
PRAIRIE	2	DS4310M50V12N1	CONNECTOR, 4.3-10 MALE INTERFACE FO
PRAIRIE	2	DSWKU	WK-U, UNIVERSAL WEATHERPROOFING KIT
PRAIRIE	200	DSEC550A	COAXIAL CABLE, "A" SERIES 7/8 IN 50
PRAIRIE	2	DS4310F50V78N1	CONNECTOR, 4.3-10 FEMALE INTERFACE
PRAIRIE	5	DSGKC78	CLIP ON GROUND KIT FOR 7/8" CABLES,
PRAIRIE	1	DSHG78L	HOISTING GRIP, PRE-LACED, 7/8 IN CO
PRAIRIE	7	DSBH78	BH-78 BUTTERFLY HANGER FOR 7/8 AIRC
PRAIRIE	1	DSVHF50B43MABU	4.3-10 M/F RF SPD, 100-520MHZ, DC B
PRAIRIE	15	DSEC450HF	COAXIAL CABLE, 1/2" HIFLEX, 50 OHM
PRAIRIE	2	DS4310M50B12X	CONNECTOR, 4.3-10 MALE INTERFACE FO
PRAIRIE	2	CA03736AA	ADD: DSC 8000 REPEATER SITE CONTROL
PRAIRIE	2	CA03745AA	ADD: DSC 8000 REPEATER SITE CONTROL
PRAIRIE	1	CA03677AA	ADD: ASTRO SYSTEM RELEASE 2020.1
PRAIRIE	1	T8343	GSERIES SOFTWARE LICENSING
PRAIRIE	1	UA00759AA	ADD: DSC 8000 REPEATER SITE CONTROL
PRAIRIE	1	SQM01SUM0333	MCG 8000 CONVENTIONAL GATEWAY
PRAIRIE	1	CA03714AA	ADD: AC POWER
PRAIRIE	1	CA03719AA	ADD: DIGITAL IP INTERFACE
PRAIRIE	1	CA03716AA	ADD: V.24 INTERFACE
PRAIRIE	1	CA03717AA	ADD: ACIM INTERFACE
PRAIRIE	1	CA03718AA	ADD: ANALOG 4WIRE INTERFACE

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SUB SYS	QTY	NOMENCLATURE	DESCRIPTION
PRAIRIE	1	CA03720AA	ADD: ANALOG IP INTERFACE
PRAIRIE	1	CA03748AA	ADD: MDC1200 OVER IP INTERFACE
PRAIRIE	1	DLN8037	FRU: MCG 8000 AC POWER MODULE
PRAIRIE	1	TRN7343	SEVEN AND A HALF FOOT RACK
PRAIRIE	2	DSBA16067T3P	OMNI, EXPOSED DIPOLE ARRAY, 9DBD, 4
PRAIRIE	15	DSEC450	COAXIAL CABLE, 1/2" 50 OHM CORRUGAT
PRAIRIE	2	DS4310M50V12N1	CONNECTOR, 4.3-10 MALE INTERFACE FO
PRAIRIE	2	DSWKU	WK-U, UNIVERSAL WEATHERPROOFING KIT
PRAIRIE	200	DSEC550A	COAXIAL CABLE, "A" SERIES 7/8 IN 50
PRAIRIE	2	DS4310F50V78N1	CONNECTOR, 4.3-10 FEMALE INTERFACE
PRAIRIE	5	DSGKC78	CLIP ON GROUND KIT FOR 7/8" CABLES,
PRAIRIE	1	DSHG78L	HOISTING GRIP, PRE-LACED, 7/8 IN CO
PRAIRIE	7	DSBH78	BH-78 BUTTERFLY HANGER FOR 7/8 AIRC
PRAIRIE	1	DSVHF50B43MABD	4.3-10 M/F RF SPD, 100-520MHZ, DC B
PRAIRIE	15	DSEC450	COAXIAL CABLE, 1/2" 50 OHM CORRUGAT
PRAIRIE	2	DS4310M50V12N1	CONNECTOR, 4.3-10 MALE INTERFACE FO
PRAIRIE	1	DSMWDTF4AUD	450-455/460-465MHZ ,DUAL BAND TX MI
PRAIRIE	1	DSDB4368BPD5B	COMBINER, 5 CHANNEL UHF, 380-512MHZ
MASTER	1	DSBA16067T3P	OMNI, EXPOSED DIPOLE ARRAY, 9DBD, 4
MASTER	1	DSDS4F06P36U3D	450-470MHZ 6DB GAIN OMNI FIBERGLASS
MASTER	1	CLN1868	2930F 24-PORT SWITCH
MASTER	1	CLN1866	FRU: 1M DAC CABLE
MASTER	1	T8492	SITE ROUTER & FIREWALL- AC
MASTER	1	CA03445AA	ADD: MISSION CRITICAL HARDENING
MASTER	1	CA03448AA	ADD: STATEFUL FIREWALL
MASTER	1	DLN6846	FRU: GTR ESS INTEGRATION KIT FOR EX
MASTER	1	DLN6896	FRU: PA UHF R2
MASTER	1	DLN6887	FRU: XCVR UHF R2 V2 PWR EFF OPT CRD
MASTER	1	DLN6781	FRU: POWER SUPPLY
MASTER	1	DLN6898	FRU: FAN MODULE
MASTER	1	DLN1444A	FRE: DSC 8000
MASTER	1	FHN0057	DIN RAIL STOPPER
MASTER	1	FLN9985A	8DO EE 16DI 5-18 V /DRY
MASTER	1	FLN0096	AC POWER SUPPLY 12V/120W DC OUT
PRAIRIE	3	FKN0044A	MC_EDGE AUX IO MIGRATION CABLE
MAPLEON	2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
PRAIRIE	2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
DEAD	2	DS1101990	SPD, SHIELDED RJ-45 JACK, SINGLE LI
MAPLEON	1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
PRAIRIE	1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SUB SYS	QTY	NOMENCLATURE	DESCRIPTION
DEAD	1	DSTSJADP	RACK MOUNT GROUND BAR, 19 IN FOR TS
MAPLEON	2	DQ128268	ISOLATION KIT FOR 19IN RACK WITH
PRAIRIE	2	DQ128268	ISOLATION KIT FOR 19IN RACK WITH
DEAD	2	DQ128268	ISOLATION KIT FOR 19IN RACK WITH
DEAD	1	F0016A	MC IOT MAIN MODEL
DEAD	1	VA01370AA	ADD: MC-EDGE
DEAD	1	VA00973AA	ADD: IOT MC-EDGE ENHANCED COMM PLUG
DEAD	3	VA00989AA	ADD: 8DO EE 16DI 5-18 V /DRY
DEAD	1	VA00147	ADD: FRONT CABLE COVERS
DEAD	1	VA00155	ADD:DC POWER CABLE
DEAD	1	VA00991AA	ADD: DC/DC - Ý48 >>24¨ PS W/O HOUSI
DEAD	1	VA01946AA	ADD: MC EDGE AS NFM SDM3000
DEAD	1	DSIABDIN4	PANDUIT IABDIN4 4 RACK UNIT DIN RAI
DEAD	1	FHN0057	DIN RAIL STOPPER
DEAD	3	FKN0044A	MC_EDGE AUX IO MIGRATION CABLE
PRAIRIE	1	SQM01SUM0333	MCG 8000 CONVENTIONAL GATEWAY
PRAIRIE	1	CA03714AA	ADD: AC POWER
PRAIRIE	1	CA03719AA	ADD: DIGITAL IP INTERFACE
PRAIRIE	1	CA03716AA	ADD: V.24 INTERFACE
PRAIRIE	1	CA03717AA	ADD: ACIM INTERFACE
PRAIRIE	1	CA03718AA	ADD: ANALOG 4WIRE INTERFACE
PRAIRIE	1	CA03720AA	ADD: ANALOG IP INTERFACE
PRAIRIE	1	CA03748AA	ADD: MDC1200 OVER IP INTERFACE
PRAIRIE	1	SQM01SUM0333	MCG 8000 CONVENTIONAL GATEWAY
PRAIRIE	1	CA03714AA	ADD: AC POWER
PRAIRIE	1	CA03719AA	ADD: DIGITAL IP INTERFACE
PRAIRIE	1	CA03716AA	ADD: V.24 INTERFACE
PRAIRIE	1	CA03717AA	ADD: ACIM INTERFACE
PRAIRIE	1	CA03718AA	ADD: ANALOG 4WIRE INTERFACE
PRAIRIE	1	CA03720AA	ADD: ANALOG IP INTERFACE
PRAIRIE	1	CA03748AA	ADD: MDC1200 OVER IP INTERFACE
PRAIRIE	1	DLN8037	FRU: MCG 8000 AC POWER MODULE
PRAIRIE	1	DLN8037	FRU: MCG 8000 AC POWER MODULE
RM	1	T7914	RADIO MANAGEMENT ONLINE
RM	400	UA00049AA	ADD: RADIO MANAGEMENT LICENSES ONLI

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SECTION 3

STATEMENT OF WORK

3.1 RESPONSIBILITY MATRIX

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

Tasks	Motorola Solutions	Lane County
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, 0700 to 1700.	X	
Deliverable: Completed and approved project milestones throughout the project.		
Project Kickoff		
Introduce team, review roles, and decision authority.	X	X

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
Present project scope and objectives.	X	
Review SOW responsibilities and project schedule.	X	X
Schedule Design Review.	X	X
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 providing 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

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
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 if required.		
SITE PREPARATION AND DEVELOPMENT		
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
Provide construction documentation and drawings for shelter and towers, as applicable.		X

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
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	
Prepare and submit Electromagnetic Energy (EME) plans for the site (as licensee) to demonstrate compliance with FCC RF Exposure Guidelines.		X
Prepare site drawings showing the layout of new and existing equipment.	X	
Review and approve site drawings.		X
Obtain the permits needed to complete site development, including electrical, building, and construction permits.		X
Ensure that required rack space is available for installation of the new equipment.		X
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
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

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
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 (not customer witnessed)		
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	
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	

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
Review and approve proposed Factory Acceptance Test Plan.		X
Perform factory functional acceptance tests of system features	X	
Conduct site and system level testing.	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 Motorola provided equipment, racks, and cables.	X	

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
Perform preliminary audit of installed equipment to ensure compliance with requirements and R56 standards.	X	
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: General Installation Tasks Completed.		
Antenna and Transmission Line Installation		
Install antennas, including supplying and installing new side arm mounts. Customer mounts are not included.	X	
Provide custom antenna mounts, if necessary.		X
Install transmission lines required for system.	X	
Provide structure penetrations for transmission equipment (e.g. antennas & microwave line.).		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.		
Site Link Assessment		
Verify site link requirements via 24 hour standard Motorola Link testing by MSI system technician prior to the interconnection of the solution equipment to the link equipment. This is a one-time test. Any additional testing for compliance will require a Change Order.	X	
Motorola Solutions will not perform any work on non-Motorola Solutions owned equipment.		X
Provide information on customer public Internet connection for evaluation purposes.		X
Evaluate customer’s network from an IT perspective.	X	
Deliverable: Internet Bandwidth Assessment completed and findings are presented to the Customer.		
Conventional Channels		
Provide, install and configure the conventional GTRs required at sites.		X

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
Provide, install and configure the CCGWs and RFDS to connect to the conventional GTRs.	X	
Provide remote support to update the console templates.	X	
Update the console templates and apply to appropriate consoles.		X
Deliverable: Conventional Channel Scope of Work complete.		
Site Installation and Configuration		
Install fixed equipment contained in the equipment list and system description in customer provided shelter and on tower.	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 as stated above, prior to the interconnection of the solution equipment to the link equipment. This is a one-time test. Any additional testing for compliance will require a Change Order.	X	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: Site Installation and Configuration completed.		
Radio Management Software (RM)		
Motorola will provide additional licenses of the Radio Management Software for 300 subscribers. RM portion of the scope is equipment only; implementation services are not included.	X	
Ensure specification of hardware, software and network requirements for installation of RM is met.		X
Ensure IT network requirements are as outlined by Motorola Solutions.		X
Lane County is responsible for the installation and configuration of Radio Management software.		X
Any Core reconfiguration (for example, for OTAP) is not included in the scope of this proposal.	NA	NA
Lane County is responsible for all subscribers programming with Radio Management software.		X
Deliverable: Radio Management Tasks Completed.		

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
SYSTEM OPTIMIZATION AND TESTING		
R56 Site Audit		
Perform R56 site-installation quality-audits, verifying proper physical installation and operational configurations.	X	
Create a high level 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.		
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	
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 Survey (for Informational Purposes only)		
Determine the required number of vehicles for simultaneous surveying of multiple service areas.	X	X
Perform coverage survey, Submit survey reports.	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 survey.	X	

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
Submit final survey reports, according to the agreed period.	X	
Provide the required number of vehicles, drivers, and resources to witness the coverage survey.		X
Review and approve survey results.		X
Deliverable: Completion of coverage survey and approval by Customer.		
Console Re-configuration		
Provide remote support to update the console templates to add the conventional channels. New console templates or adding new trunked talkgroups is not within the scope of this proposal.	X	
Update the console templates and apply to appropriate consoles.		X
Backup consolettes are not included.	NA	NA
New consoles are not included.	NA	NA
Deliverable: Console Re-configuration complete.		
PROJECT TRANSITION		
Cutover		
Finalize Cutover Plan.	X	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: Cutover to new system completed, and punchlist items resolved.		

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Tasks	Motorola Solutions	Lane County
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. - Drawings will be delivered in Adobe PDF format.	X	
Receive and approve documentation.		X
Execute Final Project Acceptance.	X	X
Deliverable: All required documents are provided and approved. Final Project Acceptance.		

Use or disclosure of this proposal is subject to the restrictions on the cover page.

3.2 ASSUMPTIONS

Motorola Solutions has made several assumptions in preparing this proposal, which are noted below.

- All existing sites or equipment locations will have sufficient space available for the system described as required/specified by R56.
- All existing sites or equipment locations will have adequate electrical power in the proper phase and voltage, and site grounding to support the requirements of the system described.
- All existing towers will have adequate space and size to support the antenna network requirements of the system described.
- FCC licensing is responsibility of Lane County
- Approved local, State, or Federal permits as may be required for the installation and operation of the proposed equipment are the responsibility of Lane County
- Any required system interconnections not specifically outlined here will be provided by Lane County. This may include dedicated phone circuits, microwave links, or other types of connectivity.
- Coverage survey is included in this proposal.
- Portable and mobiles used for coverage survey will be provided by Lane County.
- No training is required or included in this proposal.
- Motorola Solutions is not responsible for interference caused or received by the Motorola Solutions-provided equipment except for interference that is directly caused by the Motorola Solutions-provided transmitter(s) to the Motorola Solutions-provided receiver(s). Should the Lane County system experience interference, Motorola Solutions can be contracted to investigate the source and recommend solutions to mitigate the issue.
- Prevailing wages are included.
- Performance bond is not included.
- Union Labor is not included.
- Interfacing to 3rd party equipment or applications is not a part of this proposal.

3.3 CHANGE ORDER PROCESS

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

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SECTION 4

PROJECT SCHEDULE

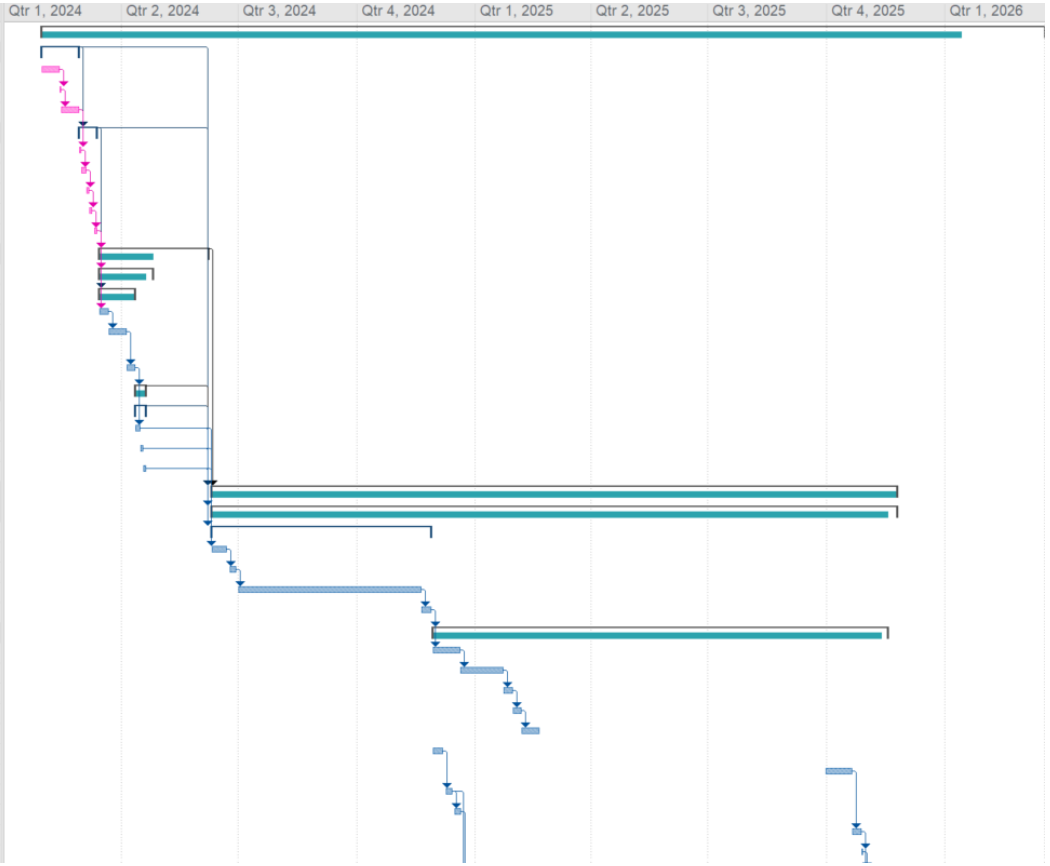
Motorola estimates the project implementation to be approximately 16-20 months from Contract Execution to Final Acceptance. As part of the Design Review and Implementation Planning, the implementation project schedule will be fine-tuned by Motorola's Project Manager with Union County.

NOTE: Current supply chain issues, worldwide parts, and resource shortages may impact schedule.

A sample Project schedule is shown below.

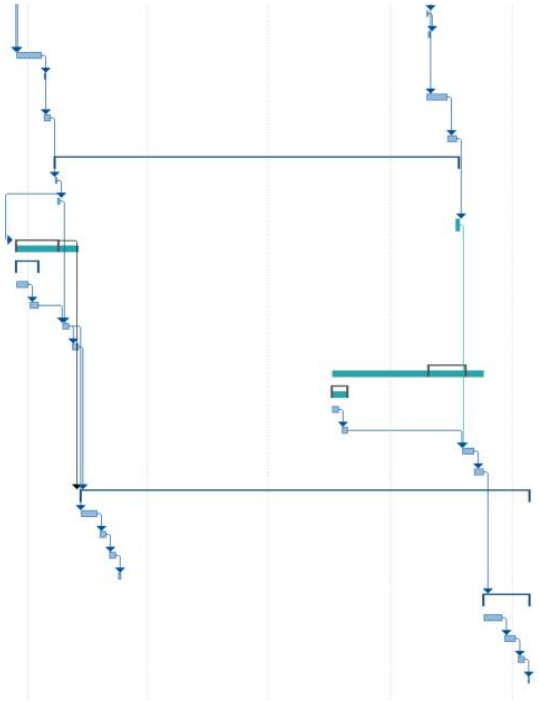
Use or disclosure of this proposal is subject to the restrictions on the cover page.

Task Name	Duration	Start	Finish
Lane County- Site Adds	**540 d**	**Tue 1/30/24**	**Thu 3/19/26**
Project Initiation	**21 d**	**Tue 1/30/24**	**Tue 2/27/24**
Project Set Up	10 d	Tue 1/30/24	Mon 2/12/24
Post Sale Transition Meeting Completed	1 d	Tue 2/13/24	Tue 2/13/24
Internal Project Plan/Design Review	10 d	Wed 2/14/24	Tue 2/27/24
Project Kick-off	**10 d**	**Wed 2/28/24**	**Tue 3/12/24**
Kick-off Preparation	2 d	Wed 2/28/24	Thu 2/29/24
Internal Project Kick-off	2 d	Fri 3/1/24	Mon 3/4/24
Project Reports and Recurring Deliverables Established	2 d	Tue 3/5/24	Wed 3/6/24
Project Kick-off Conducted	2 d	Thu 3/7/24	Fri 3/8/24
Project Initiation Complete	2 d	Mon 3/11/24	Tue 3/12/24
Project Planning	**60 d**	**Fri 3/15/24**	**Fri 6/7/24**
Contract Design Review	**30 d**	**Fri 3/15/24**	**Thu 4/25/24**
System Architecture/Equipment Overview	**20 d**	**Fri 3/15/24**	**Thu 4/11/24**
System Architecture/Equipment Overview Finalized	5 d	Fri 3/15/24	Thu 3/21/24
System Architecture/Equipment Overview Delivered and Comments Received	10 d	Fri 3/22/24	Thu 4/4/24
System Architecture/Equipment Overview Final Delivered	5 d	Fri 4/5/24	Thu 4/11/24
RF Noise Floor Monitoring & Spectrum Fingerprinting	**6 d**	**Fri 4/12/24**	**Fri 4/19/24**
LMR NFM and SF	**6 d**	**Fri 4/12/24**	**Fri 4/19/24**
Mapleton testing	2 d	Fri 4/12/24	Mon 4/15/24
Dead Testing	2 d	Tue 4/16/24	Wed 4/17/24
Prairie Testing	2 d	Thu 4/18/24	Fri 4/19/24
Project Execution	**370 d**	**Mon 6/10/24**	**Mon 11/24/25**
System Order, Manufacture, Stage, Ship, Build, ATP	**370 d**	**Mon 6/10/24**	**Mon 11/24/25**
RF Equipment Order	**120 d**	**Mon 6/10/24**	**Wed 11/27/24**
Process Equipment List	10 d	Mon 6/10/24	Fri 6/21/24
Make Order	5 d	Mon 6/24/24	Fri 6/28/24
Manufacture Equipment	100 d	Mon 7/1/24	Tue 11/19/24
Equipment Ordering and Manufacturing Complete	5 d	Wed 11/20/24	Wed 11/27/24
System Build	**245 d**	**Fri 11/29/24**	**Mon 11/17/25**
FNE System Build	15 d	Fri 11/29/24	Thu 12/19/24
CCSI at factory for equipment build	20 d	Fri 12/20/24	Wed 1/22/25
FNE Configure and Validate Equipment	5 d	Thu 1/23/25	Wed 1/29/25
FNE Breakdown / Pack for Shipment	5 d	Thu 1/30/25	Wed 2/5/25
FNE Ship to Warehouse	10 d	Thu 2/6/25	Wed 2/19/25
Install all Antennas at Mapleton and Prairie (Phase 1)	6 d	Fri 11/29/24	Fri 12/6/24
Install all antennas at Dead site (Phase 2)	15 d	Tue 9/30/25	Mon 10/20/25
Install all equipment at Mapleton (Phase 1)	5 d	Mon 12/9/24	Fri 12/13/24
Install all equipment at Prairie (Phase 1)	5 d	Mon 12/16/24	Fri 12/20/24
Install all equipment at Dead (Phase 2)	5 d	Tue 10/21/25	Mon 10/27/25
Network Link Testing	1 d?	Tue 10/28/25	Tue 10/28/25



Use or disclosure of this proposal is subject to the restrictions on the cover page.

Network Link Testing	1 d?	Tue 10/28/25	Tue 10/28/25
ENG TNCT Configuration prior to Opto on Phase 1	2 d	Wed 10/29/25	Thu 10/30/25
Optimize the RF Subsystem (Phase 1)	12 d	Mon 12/23/24	Fri 1/10/25
ENG TNCT Configuration prior to Opto on Phase 2	1 d	Mon 1/13/25	Mon 1/13/25
Optimize the RF Subsystem (Phase 2)	12 d	Tue 10/28/25	Wed 11/12/25
System Acceptance Testing (Phase 1)	5 d	Mon 1/13/25	Fri 1/17/25
System Acceptance Testing (Phase 2)	5 d	Thu 11/13/25	Wed 11/19/25
Coverage Survey	**216 d**	**Tue 1/21/25**	**Fri 11/21/25**
Survey for Mapleton Area -2024	2 d	Tue 1/21/25	Wed 1/22/25
Survey for Prairie Area- 2024	2 d	Thu 1/23/25	Fri 1/24/25
Survey for Dead Area- 2025	2 d	Thu 11/20/25	Fri 11/21/25
Cut-Over (Phase 1)	**20 d**	**Mon 12/23/24**	**Thu 1/23/25**
Verify System Readiness and Cutover Plan Reviews	**10 d**	**Mon 12/23/24**	**Wed 1/8/25**
Plan: Disable Old RF Subsystem & Enabling New RF Subsystem	5 d	Mon 12/23/24	Tue 12/31/24
Planning: Radio End-user Readiness	5 d	Thu 1/2/25	Wed 1/8/25
System Acceptance	5 d	Mon 1/27/25	Fri 1/31/25
Engage Warranty Services	5 d	Mon 2/3/25	Fri 2/7/25
Cut-Over (Phase 2)	**20 d**	**Thu 10/30/25**	**Wed 11/26/25**
Verify System Readiness and Cutover Plan Reviews	**10 d**	**Mon 8/18/25**	**Fri 8/29/25**
Plan: Disable Old RF Subsystem& Enabling New RF Subsystem	5 d	Mon 8/18/25	Fri 8/22/25
Planning: Radio End-user Readiness	5 d	Mon 8/25/25	Fri 8/29/25
System Acceptance	5 d	Mon 11/24/25	Tue 12/2/25
Engage Warranty Services	5 d	Wed 12/3/25	Tue 12/9/25
Project Close (Phase1)	**234 d**	**Mon 2/10/25**	**Tue 1/13/26**
Punch List Resolution	10 d	Mon 2/10/25	Fri 2/21/25
Finalize Documentation and Deliver As-Builts	5 d	Mon 2/24/25	Fri 2/28/25
Complete Service Transition Meeting	5 d	Mon 3/3/25	Fri 3/7/25
Final System Acceptance	2 d	Mon 3/10/25	Tue 3/11/25
Project Close (Phase 2)	**22 d**	**Wed 12/10/25**	**Tue 1/13/26**
Punch List Resolution	10 d	Wed 12/10/25	Tue 12/23/25
Finalize Documentation and Deliver As-Builts	5 d	Fri 12/26/25	Fri 1/2/26
Complete Service Transition Meeting	5 d	Mon 1/5/26	Fri 1/9/26
Final System Acceptance	2 d	Mon 1/12/26	Tue 1/13/26



Use or disclosure of this proposal is subject to the restrictions on the cover page.

SECTION 5

ACCEPTANCE TEST PLAN

5.1 DISPATCH CONSOLE ACCEPTANCE PLAN

Testing of the proposed equipment is included. This generally includes the following:

- Test features and functionality are in accordance with manufacturers' specifications.
- Verify the operational functionality and features of the individual subsystems and the system supplied by Motorola, as contracted.
- Each newly installed console position check will include:
  - Voice Check at each position for each resource
  - Microphone test for each position
  - Footswitch operation at each position

A detailed Acceptance Test Plan will be generated upon award. A sample Acceptance Test Plan template is provided below.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

5.2 WIDE AREA TRUNKING - FDMA ONLY SITES

5.2.1 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____

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Wide Area Trunking - FDMA Only Sites

5.2.2 Emergency Alarm and Call with Hot Mic

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. During an emergency call the Emergency ID will appear on the display of the subscribers. To demonstrate this, an Emergency Alarm and Call will be initiated from a portable which will be received by a portable, on the same talkgroup, affiliated at any site of any zone in the system.
This test will demonstrate when the Hot Mic option is configured, the subscriber will send an emergency and after a voice channel is assigned, the subscriber will automatically transmit for a programmable period of time.
Emergency Alarm with Voice to Follow (Hot Mic) is an option in the portable and must be enabled via software. This test case works for all portable radios. For mobile radios, specific mobile microphone models are required.
NOTE: If the subscriber does not have a display, the Emergency ID will not be displayed.

SETUP

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

Emergency Alarm w/ Voice Following must be enabled in the subscriber.

VERSION #1.030

2. TEST

Step 1. Using RADIO-1 send an Emergency Alarm by pressing the emergency button.

Step 2. Observe the display on RADIO-2 and RADIO-3 denotes an emergency and the unit ID or alias of RADIO-1.

Step 3. Observe that RADIO-2 and RADIO-3 can hear any audio from RADIO-1 even though RADIO-1 does not have its PTT switch pressed.

Step 4. Observe that RADIO-1 PTT times out and the radio dekeys.

Step 5. End the Emergency Call by holding down the Emergency button.

Pass____ Fail____

Use or disclosure of this proposal is subject to the restrictions on the cover page.

5.3 SITE TRUNKING - FDMA ONLY SITES

5.3.1 Site Trunking Indication

1. DESCRIPTION

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

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

SETUP

RADIO-1 - TALKGROUP 1
RADIO-1 - SITE - SITE 1
RADIO-2 - TALKGROUP 2
RADIO-2 - SITE - SITE 1
Lock the subscribers to SITE 1 if more than one site exists on the system.

VERSION #1.010

2. TEST

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

Step 2. Verify that RADIO-1 and RADIO-2 are displaying the "Site Trunking" indication.

Step 3. Return the site to Wide Area Trunking unless the next test requires Site Trunking.

Pass____ Fail____

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Site Trunking - FDMA Only Sites

5.3.2 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____

Use or disclosure of this proposal is subject to the restrictions on the cover page.

5.4 MCC 7100/7500 TRUNKED RESOURCES

5.4.1 Talkgroup Selection and Call

1. DESCRIPTION

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

SETUP

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

VERSION #1.010

2. TEST

Step 1. Initiate a wide area call from CONSOLE-1 on TALKGROUP 1.

Step 2. Observe that RADIO-1 and RADIO-3 will be able to monitor the call. Dekey the console and have either radio respond to the call.

Step 3. Observe that all consoles with TALKGROUP 1 can monitor both sides of the conversation.

Step 4. Initiate a wide area call from CONSOLE-2 on TALKGROUP 2.

Step 5. Observe that RADIO-2 and RADIO-4 will be able to monitor the call. Dekey the console and have either radio respond to the call.

Step 6. Observe that all consoles with TALKGROUP 2 can monitor both sides of the conversation.

Pass____ Fail____

Use or disclosure of this proposal is subject to the restrictions on the cover page.

MCC 7100/7500 Trunked Resources

5.4.2 Emergency Alarm and Call Display Description

1. DESCRIPTION

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

SETUP

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

VERSION #1.020

2. TEST

Step 1. Initiate an Emergency Alarm from RADIO-1.

Step 2. Observe the Emergency from RADIO-1 is received at CONSOLE-1 for TALKGROUP 1 and the text in the talkgroup resource indicates the trigger condition for the emergency when applicable (mandown condition, vehicle crash or vest pierce).

Step 3. Acknowledge the Emergency at the operator position. Verify CONSOLE-2 receives notification that the call has been acknowledged.

Step 4. Initiate a call with RADIO-1 to initiate an Emergency call.

Step 5. Observe CONSOLE-1 and CONSOLE-2 can monitor RADIO-1

Step 6. Clear the Emergency from CONSOLE-1 on TALKGROUP 1.

Step 7. End the Emergency Alarm from RADIO-1.

Pass____ Fail____

Use or disclosure of this proposal is subject to the restrictions on the cover page.

5.5 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: _____

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SECTION 6

COVERAGE SURVEY

6.1 OVERVIEW

A coverage survey will be performed at Lane County for informational purposes only as a best practice to baseline the new UHF sites, antennas, and associated equipment.

The coverage survey is designed to verify that the voice radio system implemented by Motorola Solutions for Lane County meets or exceeds the required reliability as defined by Motorola Solutions.

The coverage survey 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 Lane County will be used to conduct the coverage survey.

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

6.1.1 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). The defined survey area(s) are listed in Table 6-2: Lane County Coverage Survey Summary

6.1.2 Channel Performance Criterion (CPC)

The CPC is the specified minimum design performance level in a faded channel. For this system, the CPC is the Delivered Audio Quality. (DAQ) The DAQ definitions are provided in Table 6-2: Lane County Coverage Survey Summary

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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

6.1.3 Reliability

The Covered Area reliability is the percentage of locations within the defined survey area that are predicted to meet or exceed the specified CPC.

6.1.4 Direction(s) of Survey

The direction(s) of survey in Table 6-2: Lane County Coverage Survey Summary defines the direction(s) that will be surveyed for coverage. Outbound is the path from the fixed equipment outward to the portable radios. All coverage surveys will be performed for the outbound direction only utilizing an automated BER survey.

6.1.5 Equipment Configurations

This section defines the equipment configurations and infrastructure design parameters upon which the coverage survey and the coverage survey are based. The equipment configurations are defined in Table 6-2: Lane County Coverage Survey Summary and include user equipment, outdoor/in-building definition, and defined survey area, number of survey tiles, reliability, CPC, and direction of survey. The infrastructure design parameters are defined in Table 6-3: Lane County 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 grid will be used to define the survey configuration and potential areas from which survey tiles will be included in the revised coverage survey.

Coverage surveying will be conducted with equipment installed per the configurations in Table 6-2: Lane County Coverage Survey Summary, and with the mobile antennas in unobstructed locations that are not adjacent to other large objects or metallic items that would distort the antenna patterns.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Table 6-2: Lane County Coverage Survey Summary

User Equipment	Outdoor / In-Building	Defined Survey Area & Map Name	Number of Survey Tiles	Reliability	CPC	CPC Survey	Direction(s) of Survey
APX Portable with tri-band in belt clip with remote speaker microphone for transmit and receive	Outdoor	Mapleton Coverage Area	~579 On-roads (0.25 mile tiles)	95% Covered Area Reliability	DAQ-3.4	2.0% BER Outbound	Outbound Only
APX Portable with tri-band in belt clip with remote speaker microphone for transmit and receive	Outdoor	Prairie Coverage Area	~376 On-roads (1 mile tiles)	95% Covered Area Reliability	DAQ-3.4	2.0% BER Outbound	Outbound Only
APX Portable with tri-band in belt clip with remote speaker microphone for transmit and receive	Outdoor	Dead Coverage Area	~550 On-roads (0.5 mile tiles)	95% Covered Area Reliability	DAQ-3.4	2.0% BER Outbound	Outbound Only

Table 6-3: Lane County Infrastructure Design Parameters

Site Name	Latitude	Longitude	Transmit Antenna System				Receive Antenna System				
			Height	Azimuth	Antenna Model	ERP (watts)	Height	Azimuth	Antenna Model	External Noise assumed (relative to KToB)	EFS (dBm)
Standalone Sites											
Prairie	44° 16' 46.98" N	123° 35' 26.94" W	90 ft	0°	RFI - BA160-67-DIN-T3	103.8 watts	120 ft	0°	RFI - BA160-67-DIN-T3	6 dB	-116.6 dBm
Mapleton	44°2’59.34” N	123°50’47.22” W	50 ft	0°	dB Spectra - DS4F06P36 U3D-460-T3	57.6 watts	65 ft	0°	dB Spectra - DS4F06P36U3D-460-T3	6 dB	-113.7 dBm
Dead	43°46’31.8” N	122°24’20.94” W	130 ft	0°	RFI - BA160-67-DIN-T3	101.5 watts	155 ft	0°	RFI - BA160-67-DIN-T3	6 dB	-116.4 dBm

Use or disclosure of this proposal is subject to the restrictions on the cover page.

6.1.6 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. Portable coverage will be surveyed with a mobile drive survey where the portable is connected to a ¼ wave magnetic mounted antenna on the roof of a vehicle with appropriate attenuation to simulate the specified portable configuration.

6.1.7 CPC Criteria for a Survey Tile

For each equipment configuration, the CPC criteria for a survey tile is stated in Table 1-2 Coverage Survey Summary and each equipment configuration will have only one CPC pass or fail criterion for a survey tile.

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

Coverage for the portable outdoor equipment configurations will be verified by attenuation of the survey radio for BER surveys. The attenuation will be the difference between the survey radio's antenna system and the additional loss used in Motorola Solutions' coverage prediction to account for portable antenna performance. The attenuator values will be calculated with the actual, calibrated survey kit before the survey begins. 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.

6.1.8 Required Number of Survey Tiles in the Defined Survey Area

The method used to survey coverage is a statistical sampling of the defined survey 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 survey 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 survey area. There is one survey sample per survey tile, where a sample consists of multiple sub-samples.

No surveying will be performed in locations outside the defined survey area.

6.1.9 Accessibility to Survey Tiles

Prior to surveying, Motorola Solutions and Lane County will plan the route for the survey vehicle(s) through the defined survey area, to ensure that at least the minimum required number of tiles is surveyed. While planning the route (if possible) or during the survey, Motorola Solutions and Lane County will identify any survey tiles that are inaccessible for the coverage survey (due to lack of roads, restricted land, etc.). Inaccessible tiles will be eliminated from the survey.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

6.1.10 Random Selection of a Survey Location in Each Tile

This coverage survey provides an objective method of randomly selecting and tracking survey locations using Motorola Solutions' Voyager℠ coverage surveying tool.

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

6.1.11 CPC Measurements in Each Tile

For Outbound BER in each survey tile, a series of sequential subsample measurements will be made while the survey vehicle is moving at a typical speed for the surrounding environment. This survey tile measurement, containing a number of subsamples, constitutes the survey sample for this location. The survey sample will establish the mean BER within the survey 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.

6.2 SURVEY RESPONSIBILITIES AND PREPARATION

This section identifies the responsibilities of Lane County and Motorola Solutions regarding requirements for equipment, personnel, and time during the coverage survey.

Lane County will provide the following for the duration of the coverage survey:

- At least one survey vehicle(s) that is representative of the vehicles to be installed with radios, and will provide the driver(s).
- Exclusive use of the survey channels required by Motorola Solutions during the survey.

Motorola Solutions will provide the following for the duration of the coverage survey:

- At least one Motorola Solutions Voyager coverage surveying tool.
- Provide sufficient user radios for the survey.

As required, Motorola Solutions will provide a receiver signal strength calibration file for the survey radio(s) used with the Voyager coverage surveying tool.

Before starting the survey, Lane County and Motorola Solutions will agree upon the time frame for Motorola Solutions' submission of a report containing the coverage survey results.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

6.3 COVERAGE SURVEY DOCUMENTATION

During the coverage survey, the Voyager computer(s) generate comma separated value (.CSV) files that include the coverage survey data. A copy of the .CSV files will be provided to Lane County at the conclusion of the coverage survey. Motorola Solutions will process this data to produce a map detailing the coverage survey results, and to determine whether the coverage survey was passed for each user equipment configuration.

Motorola Solutions will submit to Lane County a report detailing the coverage survey results. This report will include a document, which is to be presented to Lane County indicating the coverage survey was performed for informational purposes only.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SECTION 7

TRAINING PLAN

No training for the System upgrade is included in this proposal.

SECTION 8

WARRANTY & MAINTENANCE PLAN

8.1 ADVANCE PLUS OVERVIEW

Motorola Solutions is proposing our Advanced Plus Services for ASTRO® 25 infrastructure, a comprehensive program to sustain the long-term performance of Lane County's network. Advanced Plus Services consists of the following elements:

- Network Monitoring.
- Technical Support
- MSI Dispatch
- Onsite System Support
- Preventive Maintenance 1
- Remote Technical Support.
- Network Hardware Repair with Advanced Replacement.
- MSI Security Update Service
- Remote Security Update Service (RSUS).

Together, these elements will help to avoid operational disruptions and maintain the value of Lane County's communications investment.

8.2 ADVANCED PLUS SERVICES ELEMENT DESCRIPTIONS

The following sections describe the elements proposed for Lane County's ASTRO 25 infrastructure.

8.2.1 Network Event Monitoring

Motorola Solutions will continuously monitor Lane County's ASTRO 25 network to detect potential issues or communications outages, maximizing network uptime. Motorola Solutions assesses each alert with advanced event detection and correlation algorithms to determine how to respond. Potential responses include remote restoration or dispatching a local field technician to resolve the incident on-site.

8.2.2 Remote Technical Support

Motorola Solutions' Centralized Managed Support Operations (CMSO) will provide Remote Technical Support for infrastructure issues that require specific technical expertise. Experienced technical support specialists will be available to consult with Lane County to help diagnose, troubleshoot, and resolve infrastructure issues. Service Desk maintenance procedures and incident resolution techniques are based on ISO 9001 and TL 9000 standards.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

8.2.3 Network Hardware Repair with Advanced Replacement

To restore Lane County's ASTRO 25 network components if they malfunction, Motorola Solutions will repair Motorola Solutions-provided infrastructure equipment. This includes select third-party infrastructure equipment supplied by Motorola Solutions. Motorola Solutions will ship and return repaired equipment, and will coordinate the repair of third-party solution components.

To reduce the impact of a malfunction, Motorola Solutions will exchange malfunctioning equipment with Advanced Replacement units or Field Replacement Units (FRU), as available. Motorola Solutions' repair depot will diagnose and repair malfunctioning components, and once repaired, add those to the depot's FRU inventory. Replacement components will remain in Lane County's ASTRO 25 network to maintain continued network functionality.

If Lane County prefers to maintain their existing FRU inventory rather than using Motorola Solutions' depot inventory, Motorola Solutions can provide "loaner" FRUs during the repair process.

8.2.4 Remote Security Update Service

Commercial security software updates are often designed without consideration for specialized systems like radio communications networks. These updates may inadvertently disrupt ASTRO 25 network operations and functionality.

To minimize cyber risks and software conflicts, Motorola Solutions provides the Remote Security Update Service (RSUS). With this service, Motorola Solutions deploys antivirus and operating system security updates on an ASTRO 25 network in a dedicated information assurance lab to test and validate them for use with ASTRO 25 networks.

Motorola Solutions tests whether applying these security updates degrades network service. If an update degrades performance, Motorola Solutions searches for a solution or workaround to address the issue before releasing that update.

With RSUS, Motorola Solutions will remotely install tested updates on Lane County's ASTRO 25 network. If there are any recommended configuration changes, warnings, or workarounds, Motorola Solutions will provide detailed documentation on a secured extranet website.

8.2.5 On-site Infrastructure Response

Motorola Solutions will provide repair service from trained and qualified technicians. Once dispatched, technicians will travel to Lane County's ASTRO 25 network location to diagnose issues and restore functionality. These technicians will run diagnostics on hardware to identify defective components, and repair or replace them as appropriate. Infrastructure Response times are based on a given issue's impact on overall system function.

Travel times and service levels are governed by local geography. Motorola Solutions will provide additional information in the Statement of Work for ASTRO 25 Advanced Plus Services and in the Customer Support Plan agreed between Lane County and Motorola Solutions.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

8.2.6 Annual Preventive Maintenance

Motorola Solutions will annually test and service network components. Qualified field technicians will perform routine hands-on examination and diagnostics of network equipment to keep them operating according to original manufacturer specifications.

8.2.7 Network Updates

The Network Updates service provides public safety radio system release updates on a consistent, budgeted plan. These updates maintain reliable network operations and cybersecurity protection. In addition, Network Updates keeps Lane County's ASTRO 25 network compatible with expansion elements, as well as new products or features. With Network Updates, Lane County's network will remain on a release that qualifies for support services.

Motorola Solutions will deliver updates based on a predefined cadence of upgrade windows, with up to one update in each window. The Network Updates service includes the following:

- **Software Release Updates** - Motorola Solutions-certified software that improves network functions over previous releases. This also includes commercial operating system and application software updates.
- **Hardware Update** – When needed to support a software release update, Motorola Solutions provides new hardware. New hardware will both support the new software update, as well as maintain existing functions and features.
- **Professional Implementation Services** – Motorola Solutions will plan and implement updates at Lane County's sites. This includes factory integration, testing, and supply chain management for new software and hardware.

With these services, Lane County will have access to the technology, support, and planning expertise needed for an effective upgrade.

8.2.8 Security Monitoring

Increased network activity, reduced performance, and loss in functionality may be symptoms of malicious software intrusion. Motorola Solutions will continuously monitor Lane County's ASTRO 25 network for attempts to compromise the network. Security Monitoring tools will collect automatic alerts from network firewalls, intrusion detection systems (IDS), Syslog, and anti-malware systems. Motorola Solutions security personnel will evaluate if that alert indicates there is an active cybersecurity threat. If personnel find a potential threat, Motorola Solutions will alert Lane County.

8.3 MOTOROLA SOLUTIONS SERVICE DELIVERY ECOSYSTEM

Advanced Plus Services are delivered through a tailored combination of field service personnel, centralized teams, product repair depots, and MyView Portal. These service resources will collaborate to swiftly analyze network issues, accurately diagnose root causes, and efficiently resolve issues to return the network to normal operation.

Motorola Solutions services will be delivered by staff experienced in servicing mission-critical networks. Motorola Solutions uses the Information Technology Infrastructure Library

Use or disclosure of this proposal is subject to the restrictions on the cover page.

(ITIL) framework to define service tasks based on industry-recognized best practices. As staff performs tasks, service incident information will be available to Lane County's administrators and personnel through MyView Portal.

Service activities and Motorola Solutions' service team are described in more detail below.

8.3.1 Centralized Managed Support Operations

The cornerstone of Motorola Solutions' support process is the Centralized Managed Support Operations (CMSO) organization. This TL 9000/ISO 9001-certified organization is staffed 24x7x365 by experienced service desk specialists, security analysts, and operations managers. The CMSO houses critical central functions, including the Service Desk.

The CMSO Service Desk will serve as a single point of contact for services. It processes service requests, service incidents, change requests, and dispatching. The Service Desk communicates necessary information to stakeholders, bridging communications among Lane County, Motorola Solutions, and third-party subcontractors.

Service Desk teams record, track, and update incidents through the Motorola Solutions Customer Relationship Management (CRM) system. They document and respond to inquiries, requests, concerns, and service tickets. When an incident is initiated, the CMSO will engage with teams to resolve that incident. The CMSO will escalate to new teams when needed. Depending on the incident, the CMSO will coordinate incident resolution with local field service and authorized repair depots.

8.3.2 Field Service

Motorola Solutions authorized and qualified field service technicians will perform the On-site Infrastructure Response service, repair malfunctioning hardware in the field, and conduct preventive maintenance tasks. These technicians will coordinate with the Service Desk, technical support teams, and product engineering as needed to resolve incidents.

8.3.3 Repair Depot

The Motorola Solutions Repair Depot will provide Lane County with a central repair location. This will eliminate the need to send network equipment to multiple vendor locations for repair. Motorola Solutions tracks products sent to the Depot via a case management system throughout the repair process. This system will enable Lane County's representatives to check repair status, from inbound shipment to return.

8.3.4 Customer Support Manager

A Motorola Solutions Customer Support Manager (CSM) will be Lane County's key point of contact for the definition and administration of services. The CSM will work with Lane County to define service delivery details to address Lane County's specific priorities.

8.3.5 MyView Portal

To provide Lane County with quick access to service details, Motorola Solutions will provide our MyView Portal online network information tool. MyView Portal provides our customers

Use or disclosure of this proposal is subject to the restrictions on the cover page.

with real-time critical network and services information through an easy-to-use graphical interface.

Figure 8-1: MyView Portal offers real-time, role-based access to critical network and services information.

With MyView Portal, Lane County's administrators will be able to monitor system health and maintenance updates. Capabilities include:

- Viewing network and support compliance.
- Viewing incident reports.
- Updating and creating incidents.
- Checking system update status.
- Receiving pro-active notifications regarding 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.

8.4 SYSTEM UPGRADE AGREEMENT (SUA II)

The System Upgrade Agreement II (SUA II) service provides public safety radio system release updates on a consistent, budgeted plan. These updates maintain reliable network operations and cybersecurity protection.

In addition, SUA II keeps Union County's ASTRO 25 network compatible with expansion elements, as well as new products or features. With SUA II, the Union County network will remain on a release that qualifies for support services. Motorola Solutions will deliver SUA II in two-year periods, with up to one update in each period. The SUA II service includes the following:

- **Software Release Updates** - Motorola Solutions-certified software that improves network functions over previous releases. This also includes commercial operating system and application software updates.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

- **Hardware Update-** When needed to support a software release update, Motorola Solutions provides new hardware. New hardware will both support the new software update, as well as maintain existing functions and features.
- **Professional Implementation Services-** Motorola Solutions will plan and implement updates at Union County sites. This includes factory integration, testing, and supply chain management for new software and hardware.

With these services, Union County will have access to the technology, support, and planning expertise needed for an effective upgrade.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SECTION 9

PRICING SUMMARY

Motorola Solutions is pleased to provide the following equipment and services to Lane County.

9.1 RF SUBSYSTEM EQUIPMENT AND INSTALLATION

Description	Price
Total Equipment List Price	$818,942
Discount	($128,255)
Total Equipment with Discount	$690,687
Implementation Services w/ 1st year Warranty and SYSTEM discount	$1,161,933
Total (no taxes included)	**$1,852,620**

9.2 MOTOROLA EXTENDED SERVICES AND SUA II- YEARS 2- 8

Description	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	Total Pricing
Advanced Plus	$38,457	$39,994	$41,594	$43,259	$44,989	$46,791	$48,662	$303,746
SUA II	$22,288	$22,744	$23,217	$23,709	$24,221	$24,754	$25,307	$166,240
Total	**$60,745**	**$62,738**	**$64,811**	**$66,968**	**$69,210**	**$71,545**	**$73,969**	**$469,986**

9.3 COMPLETE SYSTEM PRICING

Description	Price
System Total	$1,852,620
Extended Services (8 yrs) Total	469,986
Complete System with Extended Services Total (no taxes included)	**$2,322,606**

9.4 PAYMENT TERMS

Except for a payment that is due on the Effective Date, Customer will make payments to Motorola Solutions 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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

System Purchase (excluding Subscribers, if applicable)

1. 25% of the Contract Price due upon contract execution (due upon effective date);

2. 30% of the Contract Price due upon shipment of Prairie site equipment from staging

3. 30% of the Contract Price due upon shipment of Mapleton site equipment from staging

4. 10% of the Contract Price due upon installation of all equipment; and

5. 5% of the Contract Price due upon Final Acceptance.

Motorola Solutions may make partial shipments of Equipment and will request payment upon shipment of such Equipment. In addition, Motorola Solutions 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.

MATERIALS AND LABOR PRICE INCREASE. In the event that there are significant increases in the prices that Motorola pays for materials and supplies for the work to be performed between the date the Agreement is signed and the date that materials are purchased for the work to be performed, Motorola shall be entitled to additional compensation from Customer as described herein. A significant increase in price is defined herein as an increase as to any specific items of materials of three percent (3%) or more from original proposal. In such a case, Customer shall pay to Motorola, on request, all sums by which the cost to Motorola for any such items of materials has increased beyond 3%. This would apply, but not be limited to price increases in any components included in the Bill of Materials or Scope of Work as well as manufactured products and equipment or third party manufactured products and equipment. Motorola shall not be responsible for increased prices of materials when caused by delays, shortages or unavailability of materials due to conditions not caused by Contractor. Any pricing change would be documented in a change order executed with the Customer.

For Lifecycle Support Plan and Subscription Based Services:
Motorola Solutions will invoice Customer annually in advance of each year of the plan.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

SECTION 10

CONTRACTUAL DOCUMENTATION

Communications System and Services Agreement

Motorola Solutions, Inc. ("Motorola") and _____ ("Customer") enter into this "Agreement," pursuant to which Customer will purchase and Motorola will sell the System and Services, as described below. Motorola 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 Software License Agreement"
Exhibit B "Payment"
Exhibit C Technical and Implementation Documents
- C-1 "System Description" dated _____
- C-2 "Pricing Summary & Equipment List" dated _____
- C-3 "Implementation Statement of Work" dated _____
- C-4 "Acceptance Test Plan" or "ATP" dated _____
- C-5 "Performance Schedule" dated _____

Exhibit D "System Acceptance Certificate"

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 an applicable Addendum containing terms specific to such service. Such Addenda will be labeled with the name of the service being purchased.

1.3 ORDER OF PRECEDENCE. In interpreting this Agreement and resolving any ambiguities: 1) the main body of this Agreement takes precedence over the exhibits (unless otherwise specified in an exhibit), 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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

"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" 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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

"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 License Agreement" means the Motorola Software License Agreement (Exhibit A).

"Software Support Policy" ("SwSP") means the policy set forth at https://www.motorolasolutions.com/content/dam/msi/secure/services/software_policy.pdf 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, or completion of the Services, 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 the Motorola Solutions Customer Portal eCommerce Shop, and this Agreement will be the “Underlying Agreement” for those eCommerce transactions rather than the eCommerce Shop Terms and Conditions of Sale. eCommerce Shop registration and other information may be found at https://www.motorolasolutions.com/en_us/registration and the shop support 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 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 the right and 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 Seller 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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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. 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 applicable maintenance and support Statements of Work. Support for the Motorola Software will be in accordance with Motorola's established Software Support Policy. Copies of the SwSP can be found at: https://www.motorolasolutions.com/content/dam/msi/secure/services/software_policy.pdf 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. Unless already 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 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, (if applicable). 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, accessed, will remain Motorola's property, will be deemed proprietary, 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 this property, and return it to Motorola upon request. This 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 contract 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

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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 paragraph.

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 sufficient funds have been appropriated in accordance with applicable law. 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 $_____. 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 change 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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

6.3. INVOICING AND PAYMENT. Motorola will submit invoices to Customer according to the Payment schedule in Exhibit B. Invoices will be mailed or emailed to Customer pursuant to Section 6.5, Invoicing and Shipping Addresses. 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:_____
Address:_____
Phone:_____

E-INVOICE. To receive invoices via email:
Customer Account Number:_____
Customer Accounts Payable Email:_____
Customer CC(optional) Email: _____

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

The Equipment will be shipped to the Customer at the following address (insert if this information is known):
Name:_____
Address:_____
Phone:_____

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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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.**

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 is 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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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.

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 and other one-time Services with respect to which losses or damages are claimed. With respect to all subscription or other ongoing 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, decompile, 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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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 FUTURE REGULATORY REQUIREMENTS. The Parties acknowledge and agree that this is an evolving technological area and therefore, laws and regulations regarding Services and use of Solution may change. Changes to existing Services or the Solution required to achieve regulatory compliance may be available for an additional fee. Any required changes may also impact the price for Services.

17.10. 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.

17.11. 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.

17.12. 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 6.2 and 6.3 (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.

17.13. 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

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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.

The Parties hereby enter into this Agreement as of the Effective Date.

Motorola Solutions, Inc.	**Customer**
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____
Date: _____	Date: _____

Exhibit A

MOTOROLA SOFTWARE LICENSE AGREEMENT

This Exhibit A Motorola Software License Agreement ("Agreement") is between Motorola Solutions, Inc., (“Motorola"), and _____ (“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

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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).

3.3 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.

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.

Section 7 TRANSFERS

Licensee will not transfer the Software or Documentation to any third party without Motorola's prior written consent. Motorola's consent may be withheld at its discretion and may be conditioned upon transferee paying all applicable license fees and agreeing to be bound by this Agreement. If the Designated Products are Motorola's radio products and Licensee transfers ownership of the Motorola radio products to a third party, Licensee may assign its right to use the Software (other than CPS and Motorola's FLASHport® software) which is embedded in

or furnished for use with the radio products and the related Documentation; *provided* that Licensee transfers all copies of the Software and Documentation to the transferee, and Licensee and the transferee sign a transfer form to be provided by Motorola upon request, obligating the transferee to be bound by this Agreement.

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 FUTURE REGULATORY REQUIREMENTS. The Parties acknowledge and agree that this is an evolving technological area and therefore, laws and regulations regarding Services and use of Solution may change. Changes to existing Services or the Solution required to achieve regulatory compliance may be available for an additional fee. Any required changes may also impact the price for Services.

13.4. 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.

13.5. 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.

13.6. 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.

13.7. SURVIVAL. Sections 4, 5, 6.4, 7, 8, 9, 10, 11 and 13 survive the termination of this Agreement.

13.8. 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.

13.9. 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.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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. 30% of the Contract Price due upon shipment of Prairie site equipment from staging

3. 30% of the Contract Price due upon shipment of Mapleton site equipment from staging

4. 10% of the Contract Price due upon installation of all equipment; and

5. 5% of the Contract Price due upon Final Acceptance.

If Subscribers are purchased, 100% of the Subscriber Contract Price will be invoiced upon shipment (as shipped).

Motorola shall make partial shipments of equipment and will request payment upon shipment of such equipment. In addition, Motorola shall 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 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 by state law.

For Lifecycle Support Plan and Subscription Based Services:
Motorola will invoice Customer annually in advance of each year of the plan.
The chart below outlines the hourly labor rates for Motorola System Integration resources to be used. The staffing requirements shall be multiplied by the appropriate rate per resource in the table below. The hourly labor rates are fully burdened. The hourly rates per resource type and level are listed in Table 1.

	Resource Types			
Levels	Project Management	System Engineering	System Technologist	Project Administration
4	$ 290.00	$ 300.00	$ 280.00	$ 200.00
3	$ 240.00	$ 250.00	$ 240.00	$ 180.00
2	$ 220.00	$ 220.00	$ 220.00	$ 170.00
1	$ 190.00	$ 210.00	$ 210.00	$ 160.00

Table 1 - Hourly Rates

These rates apply to ordinary days and times (Monday to Friday during the hours 8am to 5pm). Additional surcharges may apply to work done outside these timeframes. The minimum charge for any resource will be 4 hours. Travel expenses are not included in these rates and may be charged separately. The qualifications of each type and level of resource are defined in the tables found at https://www.motorolasolutions.com/content/dam/msi/secure/services/labor-rates-exhibit-160408.pdf. All Motorola System Integration personnel assigned to this project will be classified according these levels. Project Administrative roles are varied and their specific duties and qualifications will be determined by the complexity and requirements of each project.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

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: _____

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Maintenance, Support, and Lifecycle Management Addendum

This Addendum to the Communications System and Services Agreement or other previously executed Agreement currently in force, as applicable ("Primary Agreement") provides additional or different terms and conditions to govern the sale of Maintenance, Support and Lifecycle Management services. The terms in this Addendum are integral to and incorporated into the Primary Agreement signed by the Parties.

1. DEFINITIONS

All capitalized terms not otherwise defined herein shall have the same meaning as defined in the Primary Agreement.

"MUA" means Microwave Upgrade Agreement (MUA).

"NUA" means Network Upgrade Agreement (NUA).

"SUA" or "SUA II" means Motorola's Software Upgrade Agreement program for Motorola's P25 radio system.

2. SCOPE

Motorola will provide Maintenance and Support Services and/or Lifecycle Management as further described in the applicable Statement of Work, or attachment to Motorola's proposal for additional services.

3. TERMS AND CONDITIONS

The terms of the Primary Agreement combined with the terms of this Addendum will govern the products and services offered pursuant to this Addendum. To the extent there is a conflict between the terms and conditions of the Primary Agreement and the terms and conditions of this Addendum, this Addendum takes precedence.

3.1 MAINTENANCE AND SUPPORT SERVICES

3.1.1 PURCHASE ORDER ACCEPTANCE. Purchase orders for additional, continued, or expanded maintenance and software support, during the Warranty Period or after the Warranty Period, become binding only when accepted in writing by Motorola.

3.1.2 START DATE. The "Start Date" for Maintenance and Support Services will be indicated in the proposal or a cover page entitled "Service Agreement".

3.1.3 AUTO RENEWAL. Unless the cover page or SOW specifically states a termination date or one Party notifies the other in writing of its intention to discontinue the Services, this Agreement will renew for an additional one (1) year term on every anniversary of the Start Date. At the anniversary date, Motorola may adjust the price of the Services to reflect the renewal rate.

3.1.4 TERMINATION. Written notice of intent to terminate must be provided thirty (30) days or more prior to the anniversary date. If Motorola provides Services after the termination or expiration of this Addendum, the terms and conditions in effect at the time of termination or expiration will apply to

Use or disclosure of this proposal is subject to the restrictions on the cover page.

those Services and Customer agrees to pay for those services on a time and materials basis at Motorola's then effective hourly rates.

3.1.5 EQUIPMENT DEFINITION. For maintenance and support services, Equipment will be defined to mean the hardware specified in the applicable SOW or attachments to the maintenance and support proposal.

3.1.6 ADDITIONAL HARDWARE. If Customer purchases additional hardware from Motorola that becomes part of the System, the additional hardware may be added to this Addendum and will be billed at the applicable rates after the warranty period for that additional equipment expires. Such hardware will be included in the definition of Equipment.

3.1.7 MAINTENANCE. Equipment will be maintained at levels set forth in the manufacturer's product manuals and routine procedures that are prescribed by Motorola will be followed. Motorola parts or parts of equal quality will be used for Equipment maintenance.

3.1.8 EQUIPMENT CONDITION. All Equipment must be in good working order on the Start Date or when additional equipment is added to the Addendum. Upon reasonable request by Motorola, Customer will provide a complete serial and model number list of the Equipment. Customer must promptly notify Motorola in writing when any Equipment is lost, damaged, stolen or taken out of service. Customer's obligation to pay maintenance and support fees for this Equipment will terminate at the end of the month in which Motorola receives the written notice. If Equipment cannot, in Motorola's reasonable opinion, be properly or economically maintained for any reason, Motorola may modify the scope of Services related to that Equipment; remove that Equipment from the Agreement; or increase the price to maintain that Equipment.

3.1.9 EQUIPMENT FAILURE. Customer must promptly notify Motorola of any Equipment failure. Motorola will respond to Customer's notification in a manner consistent with the level of Service purchased as indicated in this Addendum and applicable SOW.

3.1.10 INTRINSICALLY SAFE. Customer must specifically identify any Equipment that is labeled intrinsically safe for use in hazardous environments.

3.1.11 EXCLUDED SERVICES.

a) Service excludes the repair or replacement of Equipment that has become defective or damaged from use in other than the normal, customary, intended, and authorized manner; use not in compliance with applicable industry standards; excessive wear and tear; or accident, liquids, power surges, neglect, acts of God or other force majeure events.

b) Unless specifically included in this Addendum, Service excludes items that are consumed in the normal operation of the Equipment, such as batteries or magnetic tapes; upgrading or reprogramming Equipment; accessories, belt clips, battery chargers, custom or special products, modified units, or software; and repair or maintenance of any transmission line, antenna, microwave equipment, tower or tower lighting, duplexer, combiner, or multicoupler. Motorola has no obligations for any transmission medium, such as telephone lines, computer networks, the internet or the worldwide web, or for Equipment malfunction caused by the transmission medium.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

3.1.12 TIME AND PLACE. Service will be provided at the location specified in this Addendum and/or the SOW. When Motorola performs maintenance, support, or installation at Customer's location, Customer will provide Motorola, at no charge, a non-hazardous work environment with adequate shelter, heat, light, and power and with full and free access to the Equipment. Waivers of liability from Motorola or its subcontractors will not be imposed as a site access requirement. Customer will provide all information pertaining to the hardware and software elements of any system with which the Equipment is interfacing so that Motorola may perform its Services. Unless otherwise stated in this Addendum or applicable SOW, the hours of Service will be 8:30 a.m. to 4:30 p.m., local time, excluding weekends and holidays. Unless otherwise stated in this Addendum or applicable SOW, the price for the Services exclude any charges or expenses associated with helicopter or other unusual access requirements; if these charges or expenses are reasonably incurred by Motorola in rendering the Services, Customer agrees to reimburse Motorola for those charges and expenses.

3.1.13 CUSTOMER CONTACT. Customer will provide Motorola with designated points of contact (list of names and phone numbers) that will be available twenty-four (24) hours per day, seven (7) days per week, and an escalation procedure to enable Customer's personnel to maintain contact, as needed, with Motorola.

3.2 LIFECYCLE MANAGEMENT SERVICES

3.2.1 The Software License Agreement included as Exhibit A to the Primary Agreement applies to any Motorola Software provided as part of the Lifecycle Management transactions.

3.2.2 The term of this Addendum is _____ years, commencing on _____, 201_. The Lifecycle Management Price for the ___ years of services is $_____, excluding applicable sales or use taxes but including discounts as more fully set forth in the pricing pages. Because the Lifecycle Management is a subscription service as more fully described in the applicable Lifecycle Management Statement of Work, payment from Customer is due in advance and will not be in accordance with any Payment Milestone Schedule.

3.2.3 The System upgrade will be scheduled during the subscription period and will be performed when Motorola's system upgrade operation resources are available. Because there might be a significant time frame between when this Addendum is executed and when a System upgrade transaction is performed, Motorola may substitute any of the promised Equipment or Software so long as the substitute is equivalent or superior to the initially promised Equipment or Software.

3.2.4 Acceptance of a Lifecycle Management transaction occurs when the Equipment (if any) and Software are delivered and the Lifecycle Management services are fully performed; there is no Acceptance Testing with a Lifecycle Management transaction.

3.2.5 The Warranty Period for any Equipment or Motorola Software provided under a Lifecycle Management transaction will commence upon shipment and not on System Acceptance or Beneficial Use, and is for a period of ninety (90) days rather than one (1) year. The ninety (90) day warranty for Lifecycle Management services is set forth in the Lifecycle Management Statement of Work.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

3.2.6 In addition to the description of the Lifecycle Management services and exclusions provided in the Lifecycle Management Statement of Work, the following apply:

a) Upon reasonable request by Motorola, Customer will provide a complete serial and model number list of the Equipment.

b) Lifecycle Management services exclude the repair or replacement of Equipment that has become defective or damaged from use in other than the normal, customary, intended, and authorized manner; use not in compliance with applicable industry standards; excessive wear and tear; or accident, liquids, power surges, neglect, acts of God or other force majeure events.

c) Unless specifically included in this Addendum or the Lifecycle Management Statement of Work, Lifecycle Management services exclude items that are consumed in the normal operation of the Equipment; accessories; and repair or maintenance of any transmission line, antenna, microwave equipment, tower or tower lighting, duplexer, combiner, or multicoupler. Motorola has no obligations for any transmission medium, such as telephone lines, computer networks, the internet or the worldwide web, or for Equipment malfunction caused by the transmission medium.

d) Customer will provide Motorola with designated points of contact (list of names and phone numbers) that will be available during the performance of the Lifecycle Management services.

3.2.7 The Lifecycle Management annualized price is based on the fulfillment of the two year cycle. If Customer terminates this service during a two-year cycle, except for Motorola's default, then Customer will be required to pay for the balance of payments owed for the two year cycle if a major system release has been implemented before the point of termination.

3.2.8 If Customer terminates this service and contractual commitment before the end of the __ year term, for any reason other than Motorola's default, then the Customer will pay to Motorola a termination fee equal to the discount applied to the last three years of service payments related to the __ year commitment.

4. PAYMENT

4.1 Unless alternative payment terms are stated in this Agreement, Motorola will invoice Customer in advance for each payment period. All other charges will be billed monthly, and the Customer must pay each invoice in U.S. dollars within thirty (30) days of the invoice date. Customer will reimburse Motorola for all property taxes, sales and use taxes, excise taxes, and other taxes or assessments that are levied as a result of Services rendered under this Agreement (except income, profit, and franchise taxes of Motorola) by any governmental entity.

4.2 INFLATION ADJUSTMENT. For multi-year agreements, at the end of the first year of the Agreement and each year thereafter, a CPI percentage change calculation shall be performed using

the U.S. Department of Labor, Consumer Price Index, “All Items,” Unadjusted Urban Areas (CPI-U). Should the annual inflation rate increase greater than 3% during the previous year, Motorola shall have the right to increase all future maintenance prices by the CPI increase amount exceeding 3%. “All items,” not seasonally adjusted shall be used as the measure of CPI for this price adjustment. The adjustment calculation will be based upon the CPI for the most recent twelve (12) month increment beginning from the most current month available as posted by the U.S. Department of Labor (http://www.bls.gov) immediately preceding the new maintenance year. For purposes of illustration, if in year 5 the CPI reported an increase of 8%, Motorola may increase the Year 6 price by 5% (8%-3% base). Any pricing change would be documented in a change order executed with the Customer.

5. ENTIRE AGREEMENT. This Addendum, any related attachments, and the Primary Agreement, constitutes the entire agreement of the Parties regarding the subject matter of this Addendum and supersedes all previous agreements, proposals, and understandings, whether written or oral, relating to this subject matter. This Addendum 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 Addendum, even if a representative of each Party signs that document.

END

Use or disclosure of this proposal is subject to the restrictions on the cover page.

Appendix A

DSRMC06 (100 MHz – 1 GHz)

Universal Single Path Multi-Receiver Receiver Multicoupler

MOTOROLA SOLUTIONS

ELECTRICAL SPECIFICATIONS

Frequency Range	See Ordering Information
System Gain (typical)	15 dB (0 dB attenuator setting)
LNA Type	Quadrature Coupled
Isolation: RX to RX Port	20 dB (min)
VSWR (Input/Output)	1.5:1 (at 50 Ohms)
Power Requirements	90-240 VAC @ 50/60 Hz or -48 VDC
Attenuator	Adjustable via DIP Switch 0-15 dB in 1 dB steps
Test Port	Integrated Test Coupler for RX Testing
Return Loss	> 14 dB

MECHANICAL SPECIFICATIONS

RX Antenna Input Connector	N-Female
Connector to RX Filter	N-Female
Connector from Filter	N-Female
Test Port Input Connector (Front)	BNC-Female
Alarm Contacts	Form-C Contacts
Temperature Range	-30° to +60° C
Color	Tek Black / Gold Alodine
Mounting Hardware	EIA 19" Rack Mountable

DIMENSIONS

Width	19 in. (482.6 mm)
Height	1.75 in. (44.45 mm)
Depth	10.25 in. (260.3 mm)
Height (RU)	1

NOISE FIGURE AND GAIN

Frequency Range	System Noise Figure	LNA Gain	LNA Noise Figure	Amplifier IP3 (Output)
150 – 174 MHz	3 dB	30 dB	2.3 dB	43 dBm (typical)
350 – 512 MHz	3 dB	30 dB	2.2 dB	46 dBm (typical)
700 – 902 MHz	1.5 dB	33 dB	0.8 dB	40 dBm (typical)

FEATURES AND BENEFITS

- Quadrature coupled low noise amplifier (LNA)
- Post-LNA electronic attenuator for optimum gain setting
- Test port to allow receiver system sensitivity testing
- Alarm output dry contact
- 16 channels in 1 RU of space
- External filter ports

ACCESSORIES

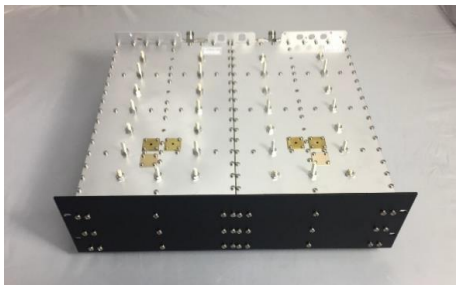
DSBCRMC06EXP – 8 Channel expansion kit will be factory installed when ordered with RMC.

Use or disclosure of this proposal is subject to the restrictions on the cover page.

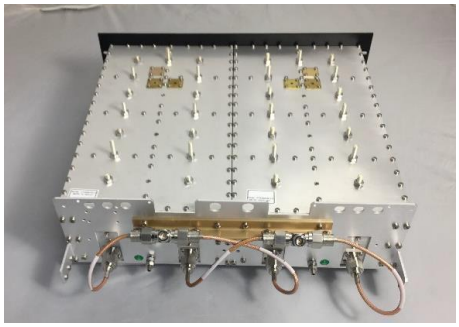
Appendix B

DB3826BP UHF Dual Sub-band Receive Window Filter
(450MHz and 460 MHz Sub-bands)

dbSpectra



Dual Sub-band Receive Milled Window Filter



Dual Sub-band Window Filter
Rear View with N Connectors

Features and Benefits

- High performance dual sub-band filter system for two separated UHF receive passbands; Very selective; provides >65 dB of isolation at 1.5 MHz from edge of passband.
- Milled aluminum construction provides outstanding selectivity characteristics in a rugged and compact package – only 3 RU and 16.5" depth.
- Antenna and Multicoupler connections located at rear panel.

Ordering Information

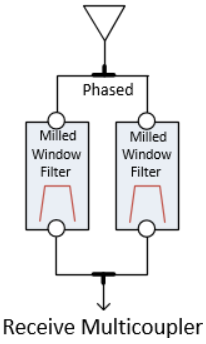
Model	Band /Sub-band	Passbands
DB3826BPB	450 and 460 MHz	3.5 MHz

Filter must be factory tuned; Provide frequency information at time of order. Call or contact Tech@dbSpectra.com for frequency planning assistance. Filter is provided with mounting brackets for four-post mounting in 20-inch or 24-inch deep cabinet. For two-post mounting, order 072985-004 Extender Brackets (Quantity 2).

Specifications

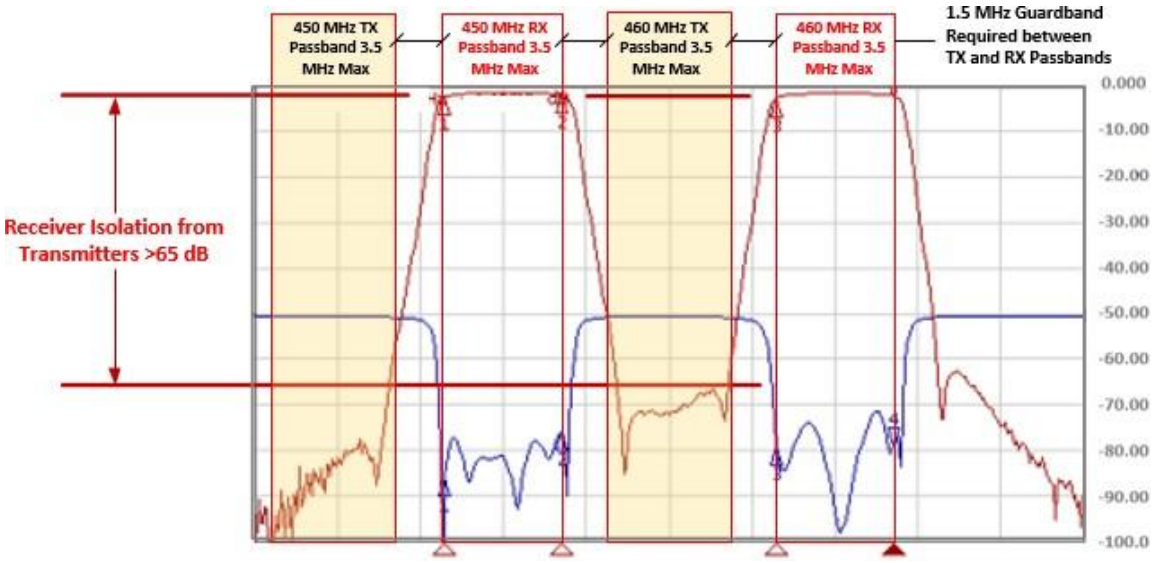
Electrical Specifications	
Frequency Range	450-470 MHz
Passband Bandwidths	3.5 MHz
Minimum TX-RX Guard Band	1.5 MHz
Isolation (typical) *@ 1.5 MHz from passband edge*	> 65 dB
Insertion Loss	<2.5 dB
Return Loss	>14 dB
Mechanical Specifications	
Filter Construction/Finish	Milled Casting /Clear Chem Film
Mounting Chassis Rear & brackets	Aluminum Clear Chem Film
Mounting Chassis Front	AL panel, black powdercoat
Connectors	N Female
Mounting	EIA 19-inch rack with 4-post brackets **
Grounding Provision	¼-20 Stud 1" at Rear
Temperature Range	-30° C to +60° C
Dimensions and Weight	
Chassis Width	17.5 in
Front Panel Height	5.25 in (3 RU)
RU Height	3 RU
Chassis Depth	16.5 in; 20" including cables
Net Weight /Shipping Weight	36 Lbs. / 45 Lbs.

Typical Application



Use or disclosure of this proposal is subject to the restrictions on the cover page.

Filter Characteristics – Typical Tuning



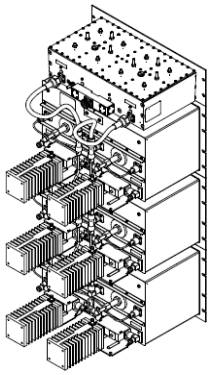
Appendix C

DB4368BP Series (450-470 MHz)

UHF Public Safety Best Practices Transmitter Combiner

dbSpectra

DESCRIPTION



The DB4368BP Transmitter Cavity Combiner Series is designed for Public Safety Critical Communications Systems. The combiner consists of 8" copper bandpass cavities. Each channel includes a broadband dual stage isolator with 100 watt load and RF sampling port. The sampling port provides the ability to tune each channel under power preventing system downtime concerns. The output of the combiner will have a 7/16 DIN female connector.

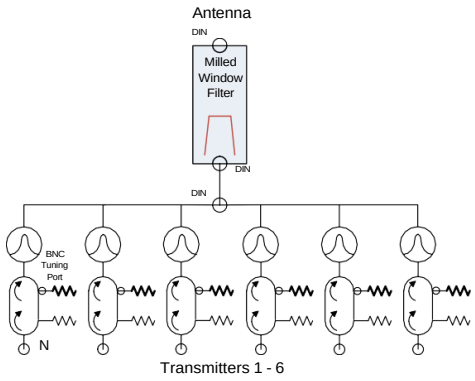
Integrated Milled Filter Advantage

To further protect system receivers from transmitter noise, a dbSpectra universal milled filter is standard on the output of the combiner. For systems with frequencies in different UHF sub-bands (450/460, 470/480), an integrated milled filter diplexer is standard to combine the sub-bands and to also provide the additional transmitter noise attenuation.

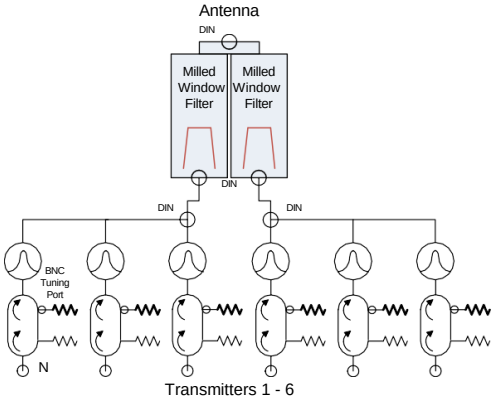
Rack Mounting Options

The combiner can be installed in a separately ordered two or four post grounded rack. When installed in a rack at the dbSpectra factory all cavity phasing cables where multi-channel signals exist are sealed with shrink tubing to help ensure PIM compliance.

BLOCK DIAGRAMS



6 Channel Single Band Configuration



6 Channel Dual Band Configuration

Use or disclosure of this proposal is subject to the restrictions on the cover page.

ELECTRICAL SPECIFICATIONS	
Frequency range	380 – 512 MHz
Number of channels	2 - 6
Frequency separation	50 kHz minimum
Output diplexer or TX Filter	Milled Window Filter Design
Diplexer or TX filter Passband	3.5 MHz (Max)
TX Noise Attenuation @ 1.5 MHz Frequency Separation from Passband edge	>45 dB
Insertion loss	See Insertion Loss chart
Isolator type	Dual Stage with 100 watt Load
Tuning Port	30 dB
Isolation Antenna to Transmitter	50 dB min / 55 dB typical
Isolation Transmitter to Transmitter	65 dB min / 70 dB typical
Impedance	50 Ohms
Return loss	14 dB
Power / channel (continuous)	100 Watts
Temperature range	-30 to +60° C
MECHANICAL SPECIFICATIONS	
Construction/Finish	Aluminum - Black powder coated
Input RF connectors	N- female
Output RF connector	DIN- female
Rack	Order rack as separate item with combiner

DIMENSIONS				
Mounting		EIA 19” rack mounting		
Width		19 in (482.6 mm)		
Depth		17.1 in (434.3 mm)		
# of CH	Height	RU	Net Weight	Shipping Weight*
2 CH	16 in (400 mm)	9 RU	56 lb (25.4 kg)	66 lb (29.9 kg)
3 CH	26 in (667 mm)	15 RU	75 lb (34.2 kg)	85 lb (38.6 kg)
4 CH	26 in (667 mm)	15 RU	94 lb (42.6 kg)	104 lb (47.2 kg)
5 CH	37 in (934 mm)	21 RU	113 lb (51.3 kg)	123 lb (55.8 kg)
6 CH	37 in (935 mm)	21 RU	132 lb (59.9 kg)	142 lb (64.4 kg)

* Shipping weight of rack ordered must be added to combiner shipping weight.

INSERTION LOSS CHART

	Insertion Loss				
Frequency Separation	2 CH	3 CH	4 CH	5 CH	6 CH
50-100 KHz	6.2 dB	8.4 dB	9.3 dB	9.5 dB	10.4 dB
100-150 KHz	5.9 dB	6.1 dB	6.3 dB	6.5 dB	6.7 dB
150-200 KHz	4.6 dB	4.8 dB	5.0 dB	5.2 dB	5.4 dB
200-300 KHz	3.9 dB	4.1 dB	4.3 dB	4.5 dB	4.7 dB
300-400 KHz	3.5 dB	3.6 dB	3.8 dB	4.0 dB	4.2 dB
400 KHz or greater	3.5 dB	3.5 dB	3.5 dB	3.7 dB	3.9 dB

ACCESSORIES

For Expansion Channels Order Separately:
DB4368BPWBXX – WB=with bracket, XX=Frequency
DB4368BPWOXX – WO=without bracket, XX=Frequency

For Power Monitor Order Separately:
DSPM Series, RF Power Monitors

For Rack Options Order Separately:
DBMOFR-43UM – 43 RU Rack with copper ground bar
DSTU45BM – 45 RU (84”) Rack with copper ground bar

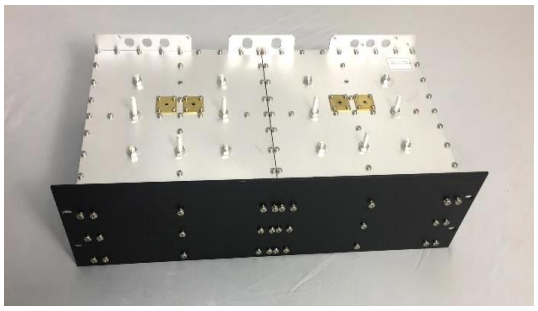
Use or disclosure of this proposal is subject to the restrictions on the cover page.

Appendix D

MWDTF UHF Dual Sub-band Transmit Window Filter (450 MHz and 460 MHz Sub-bands)

Use with DB4368 UHF Combiner

dbSpectra



Front View showing 450 MHz Sub-band and 460 MHz Sub-band filters mounted to 3 RU Front Panel

Features and Benefits

- High performance dual sub-band transmit filter system for two separated passbands – ideal for DB4368 and similar transmit combiners with transmit channels in both 450 and 460 MHz sub-bands.
- Very selective; provides >25 dB of additional isolation at 1.5 MHz from edge of passbands.
- Milled aluminum construction provides outstanding selectivity characteristics in a rugged and compact package – only 3 RU and 10.75" depth.
- See also DB4368BP-series UHF Public Safety Best Practices Transmit Combiner which incorporates similar 450/460 MHz Milled Window Filter.

Ordering Information

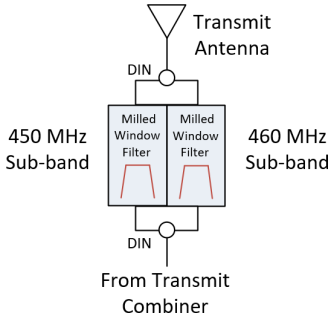
MWDTF4AU-D
UHF Dual Sub-band Transmit Milled Window Filter

Filter must be factory tuned; Provide frequency information at time of order. Includes mounting brackets for two-post or four-post mounting.

Specifications

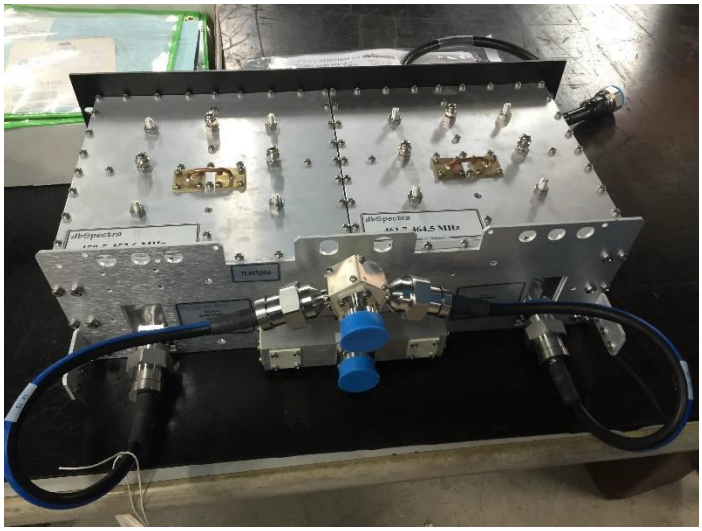
Electrical Specifications	
Maximum RF Power	300W/Filter
Frequency Range	450-455 MHz 460-465 MHz
Passband Bandwidth	3.5 MHz
Isolation (typical) *at 1.5 MHz from passband edge*	> 25 dB
Insertion Loss	<1.5 dB
Return Loss	>14 dB
Mechanical Specifications	
Filter Construction/Finish	Milled AL Casting /Clear Chem Film
Mounting Chassis Rear & brackets	Aluminum Clear Chem Film
Mounting Chassis Front	AL panel, black powdercoat
Connectors	7/16"DIN Female
Mounting	EIA 19-inch rack
Temperature Range	-30° C to +60° C
Dimensions and Weight	
Width -- Filter only	8.75
Height	5.25 in.
RU Height	3 RU
Depth	10.75 in..
Weight / Shipping Weight	25 lbs. / 32 lbs.

Typical Application



Use or disclosure of this proposal is subject to the restrictions on the cover page.

MWDTF UHF Dual Sub-band Transmit Window Filter (450 MHz and 460 MHz Sub-bands)

Use with DB4368 UHF Combiner

Rear Panel DIN Connectors