

Work Authorization

Contract: **MASTER MAINTENANCE AND SERVICES AGREEMENT BETWEEN
BROWARD COUNTY AND MOTOROLA SOLUTIONS, INC.**

Work Authorization No. **WA-OCT-RADIO-007**

Board of County Commissioners
Award Authority for Optional Services

This Work Authorization is between Broward County and Motorola Solutions, Inc. as required pursuant to the Agreement, executed on December 27, 2013. In the event of any inconsistency between this Work Authorization and the Agreement, the provisions of the Agreement shall govern and control.

Services to be provided: Procurement, Installation and Configuration of three (3) radio consolettes for Broward County Courthouse, as set forth in Exhibit A hereto.

Agreement at issue includes Optional Services for Radio (SOW-1) in the not-to-exceed amount of \$2,647,606.00. The time period for this Work Authorization will consist of 180 calendar days from the issuance of the Purchase Order and applicable Notice to Proceed (NTP) from the County, unless extended in writing by the Contract Administrator.

Total Fees: Payment for goods and services under this Work Authorization shall be as follows:

Professional Services Fees	\$153,784.00
Software and Equipment	\$ 27,524.00
Total Fees of this Work Authorization	\$181,308.00

Invoicing: Motorola shall invoice for the above-stated Total Fees as follows:

- 50% of Total Fees upon delivery of the Equipment to the County,
- 20% of Total Fees following completion of implementation services, and
- 30% of Total Fees upon written notice of Final Acceptance by the County Contract Administrator

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**MASTER MAINTENANCE AND SERVICES AGREEMENT BETWEEN
BROWARD COUNTY AND MOTOROLA SOLUTIONS, INC.
Work Authorization No. WA-OCT-RADIO-007**

County

ATTEST:

BROWARD COUNTY, by and through
its Board of County Commissioners

Broward County Administrator, as
Ex-officio Clerk of the Broward County
Board of County Commissioners

By _____
Mayor

____ day of _____, 2018

Tim Crowley 5/30/18
Tim Crowley Property Specialist
RISK INSURANCE AND CONTRACTS SECTION
RISK MANAGEMENT DIVISION

Approved as to form by
Andrew J. Meyers
Broward County Attorney
Governmental Center, Suite 423
115 South Andrews Avenue
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600
Telecopier: (954) 357-7641

By *[Signature]* *5/30/18*
René D. Harrod (Date)
Deputy County Attorney

**MASTER MAINTENANCE AND SERVICES AGREEMENT BETWEEN
BROWARD COUNTY AND MOTOROLA SOLUTIONS, INC.
Work Authorization No. WA-OCT-RADIO-007**

VENDOR

Attest:



Signed:



Typed Name:

Daniel Sanchez

Title:

Florida Sales VP

Exhibit A Statement of Work

Project Description:

Motorola will provide and install the equipment on the Equipment List set for the below in the Broward County Courthouse at 201 SE 6th Street Fort Lauderdale, Florida, at the specific locations(s) designated by the Office of Regional Communications and Technology. The work includes generally the installation and configuration of three (3) new Motorola APX7500 consolettes with three (3) MCD5000 desk sets and one (1) omni-directional antenna and line.

Equipment List:

Motorola will provide the following equipment ("Equipment"), all of which shall be covered under a one (1) year warranty by Motorola commencing upon Final Acceptance:

Qty	Nomenclature	Description
3	F2380	MCD 5000 DESKSET
3	FHN7469	MCD 5000 DESKSET / RGU POWER SUPPLY WITH USA POWER CORD
3	TDN1113	ETHERNET CABLE 50'
1	FVN5847	MCD 5000 DESKSET SYSTEM CONFIG TOOL - SYSTEM W/OUT OMC
3	FHN7470	MCD 5000 DESKSET HEADSET JACK BOX & CABLE
3	BLN6732B	FOOT, SWITCH TRADITIONAL
3	RLN6098	HDST MODULE BASE W/PTT, 15' CBL
3	RMN5079B	SUPRAPLUS DUAL MUFF HEADSET
3	L30URS9PW1 N	APX7500 SINGLE BAND 7/800
3	G806	ADD: ASTRO DIGITAL CAI OPERATION
3	G51	ENH: SMARTZONE OPERATION APX
3	QA01648	ADD: ADVANCED SYSTEM KEY - HARDWARE KEY
3	G361	ADD: P25 TRUNKING SOFTWARE
3	GA00580	ADD: TDMA OPERATION
3	G996	ENH: OVER THE AIR PROVISIONING
3	G298	ENH: ASTRO 25 OTAR W/ MULTIKEY
3	G851	ADD: AES/DES-XL/DES-OFB ENCRYPTION
3	GA01767	ADD: RADIO AUTHENTICATION
3	G90	ADD: NO MICROPHONE NEEDED
3	CA01598	ADD: AC LINE CORD US
3	L998	ADD: LIMITED FRONT PANEL W/CLOCK/VU
3	G78	ADD: 3 YEAR SERVICE FROM THE START LITE
3	HKN6233	ASSEMBLY, ACCESSORY, APX CONSOLETTES RACK MOUNT TRAY HARDWARE KIT

Qty	Nomenclature	Description
1	TRN7343	SEVEN AND A HALF FOOT RACK
1	DSSC473HF1LDF	COLLINEAR OMNI ANTENNA, 3 DBD GAIN, LOW PIM, HD, 746-869MHZ
3	DDN1090	L4TDM-PSA 7-16 DIN MALE PS FOR 1/2 IN CABLE
1	TDN9289	221213 CABLE WRAP WEATHERPROOFING
1	DSSG1206B2A	SG12-06B2A 1/2IN SURE GROUND GROUNDING KIT
1	DSTSXD FMBF	RF SPD, 698-2700MHZ DC BLOCK HIGH PWR, DIN FEM/MALE BI-DIR W/ BRACKET
1	DSGSAKITD	GROUND STRAP KIT - DIN
250	L1705	LDF4-50A CABLE: 1/2" LDF HELIAX POLY JKT PER FOOT
1	DDN1091	L4TDF-PSA 7-16 DIN FEMALE PS FOR 1/2 IN CABLE
1	DDN1088	L4TNM-PSA TYPE N MALE PS FOR 1/2 IN CABLE
1	DDN9743	TK-TW TORQUE WRENCH KIT FOR 7-16 DIN & TYPE N COUPLING NUTS
1	DS430501A04SH	SHORT HAUL CONTROL STATION COMBINER, 100-1000 MHZ, 4 CHANNEL
3	DDN9769	F1TNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
30	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
3	DSF1TNRHC	TYPE N MALE RIGHT ANGLE FOR 1/4 IN FSJ1-50A CABLE

Deliverables:

Motorola will provide the following Deliverables:

- Perform the installation of the Equipment:
 - Install (1) omni antenna on outside wall of courthouse at approximately 15ft above ground level
 - Penetrate wall and pass jumper cable through wall into surge arrestor
 - Run up to 250 ft of 1/2" hard line cable from building entry point to 1st floor sally port in NW corner
 - Provide and install 2" pipe conduit
 - Install (1) 4-channel Short-haul Control Station Combiner in AV Equipment Room 01150-17
 - Install (3) APX 7500 Consolettes in AV Equipment Room 01150-17
 - Provide and install 7.5 foot rack
 - Connect jumper cables from consolettes to combiner
 - Install (3) MCD 5000 desk sets in Dispatch Room
 - Run (3) Ethernet cables from consolettes to desk sets in nearby Dispatch Room
- Power up, commission, program and test the Equipment
- Provide required drawings for permits
- Supply and use a 2ft x3ft vertical lift for into the facility for installation purposes

Service Standards, Schedule, and Coordination with County:

All work will comply with R56 and other applicable standards. Motorola will schedule and perform the implementation of the Equipment in accordance with a mutually-agreed upon schedule as approved by County Contract Administrator. Work will be performed during normal business days and hours (Monday – Friday; 8AM-5PM) unless otherwise approved by County. All intrusive work will be performed after court hours, at County's request.

Motorola will be solely responsible for coordinating the activities of all Motorola's subcontractors. Motorola will ensure safe work procedures for all services, including installation.

Motorola will assign a Project Manager (PM) before an initial kickoff design review meeting. Motorola's designated PM will attend a kickoff design review meeting with County, and will conduct monthly update meetings with County.

Documentation:

Motorola will provide as built drawings and appropriate system interconnect specifications. Motorola will obtain all necessary licensing and permits for services provided under this Work Authorization and provide a structural design for the antenna installation.

Excluded Scope:

- Motorola does not guarantee coverage.
- The signal to/from the nearest RF site ("Core") is predicted to be strong. The signal reach to alternate RF sites is less certain due to substantial building shadowing around the courthouse. Field measurements from alternate sites is not included.
- Motorola is not responsible for interference caused or received by the Motorola provided equipment other than interference caused by the Motorola-provided transmitter(s) to the Motorola provided-receiver(s).

Broward County's Responsibilities:

- Provide three (3) Radio IDs for Consolettes.
- Provide template for programming for Consolettes.
- Ensure communications sites meet space, grounding, power, and connectivity requirements for the installation of all equipment under this Work Authorization.
- Provide site access.
- Obtain frequencies for project as required.
- Make available the usage of building UPS.

Support and Maintenance:

Following Final Acceptance, County will provide any necessary support and maintenance for the Equipment, so there is no increased cost to County for support and maintenance after Final Acceptance under this Work Authorization. Nothing in this provision affects or diminishes the one-year warranty provided by Motorola for the Equipment after Final Acceptance.

Project Schedule:

Motorola will perform all work and services required under this Work Authorization in accordance with the following schedule, unless otherwise approved in writing by the Contract Administrator. Any delays caused by County or the courthouse will extend the applicable deadlines by a commensurate period as the delay.

Event	Deadline
Equipment to be delivered at Site	Within 60 days after Notice to Proceed
Installation and commencement of Final Acceptance testing	60 days after equipment delivery at site
Final Acceptance	120 days after Notice to Proceed

Final Acceptance Test:

The following acceptance test will be used for Final Acceptance testing, which shall be conducted and completed in accordance with Sections 4.5 and 4.6 of the Agreement within 10 business days of successful Final Acceptance testing as determined by the Contract Administrator.

Final Acceptance testing will consist of the successful completion of all of the following Final Acceptance tests and delivery of as built drawings.

3.1 APX 7500 CONSOLETTTE

Control Station Operation

1. DESCRIPTION

The Control Station is programmed to a particular talkgroup in the system.

SETUP

RADIO-1 - TALKGROUP 1
CONTROL STATION 1 - TALKGROUP 1
CONTROL STATION 2 - TALKGROUP 1

VERSION #1.010

2. TEST

- Step 1. While the system is in Wide Area Trunking verify that CONTROL STATION 1, 2 and 3 are affiliated.
- Step 2. Select TALKGROUP 1 on CONTROL STATION 1 and 2.
- Step 3. Initiate a TALKGROUP 1 call from RADIO-1
- Step 4. Verify that RADIO-1 alias is displayed as the TALKGROUP 1 resource on CONTROL STATION 1 and 2.

Pass____ Fail____

3.2 MCD 5000 Deskset Features

3.2.1 Connecting to a Radio

2. DESCRIPTION

The MCD 5000 Deskset provides radio dispatch capability when connected to a two-way radio device. The MCD 5000 Deskset connects to a single radio device at a time. The Radio Resources Screen allows to select and interface to a radio to create a talkpath.

SETUP

MCD 5000 DESKSET – 1
CONSOLETTTE – 1

VERSION #1.010

2. TEST

- Step 1. From the MCD 5000 Deskset Home screen press the [Connect] soft key button.
- Step 2. Press the [Recent] soft key button to view the recently used radio or press the [All] soft key button to view all radio resources.
- Step 3. Select Radio to connect to:
Use the Navigation Keys to select a radio from the list. Press the [Connect] soft key button.
To Search for a Radio press the [Find] soft key button and enter in a prefix of the radio. The list selection will automatically select radio by inserted prefix.
To connect the select radio, press the [OK] button of the Navigation Keys or press the [Connect] soft key button.
- Step 4. Verify that the Emulated Radio Screen is displayed of the connected radio.

Pass____ Fail____

MCD 5000 Deskset Features

3.2.2 Transmit – “Off-Hook”

1. DESCRIPTION

The MCD 5000 Deskset is always in receive mode unless the PTT, Transmit or Base Intercom button is pressed.

When the handset is on-hook, the MCD 5000 Deskset continuously routes all radio communication and intercom audio to the internal speaker. Alternately, if the handset is lift (off-hook) the audio is heard via the handset earpiece and the voice is transmitted via handset microphone.

SETUP

CONSOLETTTE - 1

VERSION #1.010

2. TEST

- Step 1. Lift the handset (off-hook).
- Step 2. Press and hold the PTT Button in the middle of the handset.
- Step 3. Verify that the “Transmit LED” turns on while the PTT Button is pushed.
- Step 4. Speak into the mouthpiece while pressing the PTT Button.
- Step 5. Release the PTT Button to end transmission.
- Step 6. Verify that the “Transmit LED” turns off when the PTT Button is released.

Pass____ Fail____

MCD 5000 Deskset Features

3.2.3 Outbound / Inbound* Emergency Alarm

1. DESCRIPTION

The MCD 5000 Deskset is equipped with an Emergency Button that allows a MCD 5000 Deskset user to send an Emergency Alert. The Emergency Alert is sent to all parallel MCD 5000 Desksets connected to the same radio and is set until one of the MCD 5000 Deskset users acknowledges the alert.

An inbound emergency alarm is an alarm that is generated either from a parallel MCD 5000 Deskset, connected to the same radio, or from a field radio. The Emergency display shows the name of the deskset user and resource name of the deskset that initiated the Alarm. In cases where the emergency alarm is initiated by a radio, the display shows the ID or alias of the radio and resource name of the radio. When an inbound emergency alarm is received, all MCD 5000 Desksets connected to the same radio display alarm indications and emit an alarm sound.

* When the MCD 5000 Deskset is connected to the APX 7500 Console, the Emergency Button on the MCD 5000 Deskset can be provisioned to perform in several ways. This test is testing the Inbound Emergency Alarm setup.

SETUP

CONSOLE-1
RADIO-1

VERSION #1.010

2. TEST

- Step 1. Initiate an Emergency Alarm by pressing the Emergency Button located on the right hand side of the MCD 5000 Deskset.
- Step 2. Observe the Emergency Alert icon is displayed on the status bar of the MCD 5000 Deskset. The inbound emergency alert message is displayed blinking on all MCD 5000 Desksets connected to the same radio.
- Step 3. Initiate an Emergency Alarm from a parallel MCD 5000 Deskset, connected to the same radio, or from RADIO-1.
- Step 4. Press [Ack] to acknowledge the alarm and remove the alarm indication from the display of all MCD 5000 Deskset screens.
OR
Press [Ignore] to clear the alarm from the screen. The alarm remains active in the system and will continue to be displayed on all MCD 5000 Desksets and radios in the field until it is acknowledged.

Pass____ Fail__