



TRI-COM BOARD OF DIRECTORS SPECIAL MEETING
Special Meeting Agenda
Friday, September 20, 2019

Location: Tri-Com Central Dispatch, 3823 Karl Madsen Drive, St. Charles, IL 60175

Time: 8:00 AM

Call Meeting to Order: Roll Call

Old Business:

New Business:

- 1) Authorize the Board Chair or His Designee to Negotiate and Enter into an Employment Contract to Secure the Services of an Interim Director
- 2) Authorize the Board Chair or His Designee to Enter into an Agreement with GOVHRUSA to Conduct a National Search for a Director
- 3) Authorize Use of ETSB Grant Funds for Motorola Change Order #2 for ADP Encryption and Improvements to Meet R56 Standards

Public Comment:

Closed Session:

- 1) For the purpose of discussing:
 - A) Employment/Appointment Matters
 - B) Legal Matters
 - C) Business Matters
 - D) Security/Criminal Matters
 - E) Miscellaneous Exceptions to the Open Meetings Act

Adjournment:

Next Regular Meeting: Wednesday, November 13, 2019 at 8:00 A.M.



CHANGE ORDER

TRI-COM Central Dispatch CO2

Change Order No. 2

Date: September 20, 2019

Project Name: STARCOM21 Conversion Project

Customer Name: TRI-COM Central Dispatch

Customer Project Mgr: Nicole Lamela

The purpose of this Change Order is to: *(highlight the key reasons for this Change Order)*

To change the following to Motorola Solutions' scope of work:

Add ADP encryption to the operator positions for interoperability with South Elgin encrypted talk groups.

R56 Dispatch improvements that include 1 new ground bar to be installed in the radio room, 6 new small ground bars in Dispatch Center, 1 new big ground bar in Dispatch Center, wiring cleanup, fix conductor connections to the Primary Bonding Bar and Secondary Bonding Bar to follow approved connection methods, fix separation of cables and cable groups of different functions to the requirements see the attached Tri-Com Central Dispatch R56 Audit Report.

Contract # The Communications System and Services Agreement between Motorola Solutions, Inc. and Tri-Com Central Dispatch dated September 25, 2018

Contract Date: September 25, 2018

In accordance with the terms and conditions of the contract identified above between TRI-COM Central Dispatch and Motorola Solutions, Inc., the following changes are approved:

Contract Price Adjustments

Original Contract Value:	\$3,830,383
Previous Change Order amounts for Change Order <input type="text"/> s 1 thru <input type="text"/>	\$25,571
This Change Order:	\$32,176
New Contract Value:	\$3,888,130

Completion Date Adjustments

Original Completion Date:	August 2019
Current Completion Date prior to this Change Order:	October 31, 2019
New Completion Date:	January 2020

Changes in Equipment: (additions, deletions or modifications) Include attachments if needed

Qty	Nomenclature	Description
8	T8063	MCC7500 Secure VPM Algorithm Upgrade
8	CA00245AA	Add: ADP Algorithm

Changes in Services: (additions, deletions or modifications) Include attachments if needed

Install and configure ADP encryption to the operator positions for interoperability with South Elgin encrypted talk groups.

R56 Dispatch improvements that include 1 new ground bar to be installed in the radio room, 6 new small ground bars in Dispatch Center, 1 new big ground bar in Dispatch Center, Clean up wiring.

See attached Tri-Com Central Dispatch R56 Audit Report.

Schedule Changes: (describe change or N/A)

Extend expected completion date: January 2020

Pricing Changes: (describe change or N/A)

Contract Increase \$32,176 to \$3,888,130

Customer Responsibilities: (describe change or N/A)

Supply the VPM and the KVL4000 for the ADP encryption add on. Access to site.

Payment Schedule for this Change Order:

(describe new payment terms applicable to this change order)

100% of Change Order will be invoiced upon final acceptance. Due Net 30 days

Unless amended above, all other terms and conditions of the Contract shall remain in full force. If there are any inconsistencies between the provisions of this Change Order and the provisions of the Contract, the provisions of this Change Order will prevail.

IN WITNESS WHEREOF the parties have executed this Change Order as of the last date signed below.

**Motorola Solutions,
Inc.**

Customer

By: _____

By: _____

Printed Name: Jeff Stowasser

Printed Name: _____

Title: Area Sales Manager (IL)

Title: _____

Date: _____

Date: _____

Reviewed by: Debra L Brown
Motorola Solutions Project Manager

Date: _____

Customer Name:	Tri-Com Central Dispatch						
Equipment Location	3823 Karl Madsen Drive, St. Charles, IL 60175						
Requestor:	Debra Brown			Project #:		TBD	
Inspector's Name:	Michael Barton			Audit Date:		August 5th, 2019	
Site Name:	Central Dispatch						
Motorola Pass/Fail	Pass	33	Fail	12	N/A	95	

SITE/SYSTEM DESCRIPTION



Central Dispatch Equipment.

The Tri-Com Central Dispatch new equipment consists of 7 new APX Consolettes, RFI Combiner, FortiGate, LAN switch, KVM, GGM 8000, SDM, IP Logger and other associated peripherals. Two new Omni antennas were mounted on a steel structure on the roof. Some existing equipment was reviewed and listed on this report for information. Not all deficiencies listed are related to the new equipment. This R56 audit consists of defining all deficiencies that are related to the installation of equipment that was installed under the above noted project number only. Any existing conditions of this site were not part of this audit and no deficiencies have been identified on this document that pertains to those existing conditions.

SPECIFIC DEFICIENCIES/REASONS

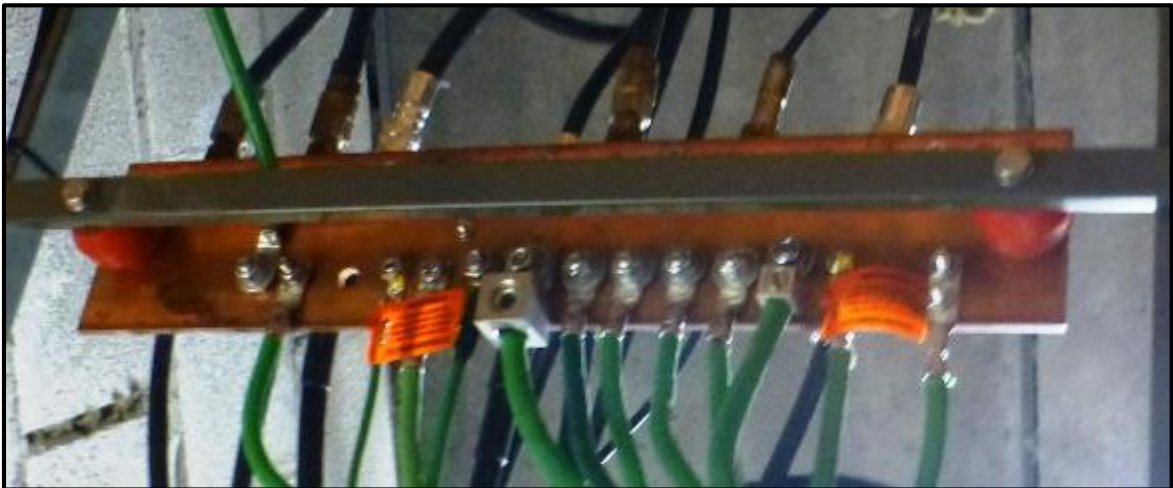
2: BUILDING DESIGN AND INSTALLATION

No Motorola deficiencies noted. All applicable items passed. All equipment installed in customer's existing equipment room.

3: EXTERNAL GROUNDING

No Motorola deficiencies noted. All applicable items passed.

4: INTERNAL GROUNDING



PBB in equipment room.

- 4.a: A properly sized Primary Bonding Bar (PBB) is not installed as required. The current bus bar in the equipment room does not meet sizing requirements. Minimum dimensions in height is 4 inches, length-variable to meet the application requirements and allow for future growth, 12 inches is recommended as the minimum length. Holes should be 7/16 inches on 3/4 inch or 1-inch centers to permit the convenient use of two-hole lugs. *Reference R56, Paragraph 5.6.1.*



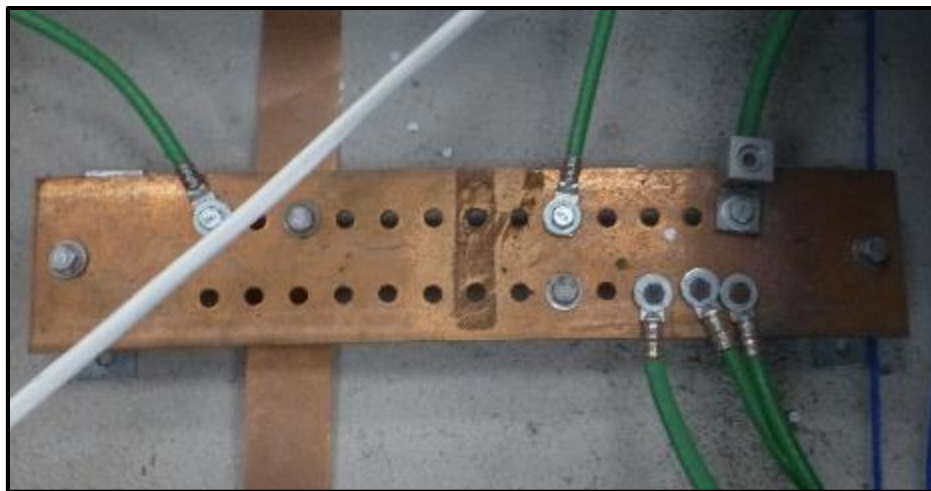
PBB earth grounding connection.

- 4.b: The PBB grounding electrode conductor has not been properly bonded by approved connection methods. It is attached to the PBB with a mechanical lug. Lugs equipped with mechanical set screw securing hardware for conductor connection shall not be used on bonding/grounding conductors. Single hole lugs are not permitted. The PBB grounding conductor shall be secured to the PBB by exothermic welding, listed compression two-hole lug, or irreversible compression-type connection device. The earth grounding conductor is attached to the earth grounding conductor with a split bolt. Split Bolt connection devices shall not be used to bond ground conductors. The PBB grounding electrode conductor shall be free of splices. Should a splice become necessary, splicing shall be permitted only by exothermic weld or listed irreversible compression-type connection. Grounding electrode system connections shall be joined using exothermic welding or listed irreversible high-compression fittings *Reference R56, Paragraphs 5.6.1.4 & 5.6.1.6.*



Connections to the equipment room PBB.

- 4.c: Not all conductor connections to the PBB follow the approved connection methods. Ground bus conductors are secured with single hole lugs. The lug circled in the picture is the conductor to the RBB in the rack with the new APX Consolettes. Single-hole lugs or mechanical set screw securing hardware for conductor connections shall not be used on bonding/grounding conductors. Connections to the Primary Bonding Bar (PBB) shall utilize exothermic welding, irreversible high-compression connection, listed irreversible compression two-hole lugs or listed exothermic two-hole lugs. Bus bonding conductors shall be bonded to the PBB by exothermic weld, listed irreversible compression two-hole lug, two-hole exothermic lug or irreversible high compression-type connection. Single-hole lugs are not permitted. *Reference R56, Paragraphs 5.8.1 & 5.8.9.1*



SBB in dispatch area.

- 4.d: The Secondary Bonding Bar (SBB) in the dispatch area has not been properly installed. The SBB is not secured. The SBB shall be secured to the structure using brackets suitable for the application and shall be insulated from its support structure using listed insulators. *Reference R56, Paragraph 5.6.3.*
- 4.f: Not all conductor connections to the SBB follow the approved connection methods. The bonding conductors on the SBB in the dispatch area going to the individual dispatch positions are secured to the SBB with single hole lugs. Bus bonding conductors shall be bonded to the SBB by exothermic weld, listed irreversible compression two-hole lug, two-hole exothermic lug or irreversible high compression-type connection. Single-hole lugs are not permitted. The SBB grounding conductor to the equipment room is secured with a mechanical connection. Lugs equipped with mechanical set screw securing hardware for conductor connection shall not be used on bonding/grounding conductors. *Reference R56, Paragraph 5.6.3.5.*



Example of ancillary equipment not bonded.

- 4.i: Each ancillary support apparatus is not properly bonded to the IPBB, PBB, or SBB. All ancillary support apparatus within an equipment shelter, room or specific equipment area shall be bonded to the PBB, SBB or IPBB. In areas other than where the PBB is installed, ancillary support apparatus shall be bonded to the SBB, or to the internal perimeter bonding bus conductor (IPBB), using an equipment grounding conductor. *Reference R56, Paragraph 5.9.1.8.*



Bonding jumpers exceed minimum bending and routing requirements.

- 4.r: Not all ground bus conductors, ground bus extensions and equipment grounding conductors are routed towards the PBB, RBB or SBB as required. Grounding conductors shall be run as short, straight, and smoothly as possible, with the fewest possible number of bends and curves. All bends and curves shall be made toward the ground location. Ground conductors of all sizes shall maintain a minimum bending radius of 8 inches. The angle of any bend shall not be less than 90 degrees. (The FortiGate, HP 2620, GGM 8000s (top and 3rd units), and bottom SDM are shown.) *Reference R56, Paragraph 5.6.6.3.*



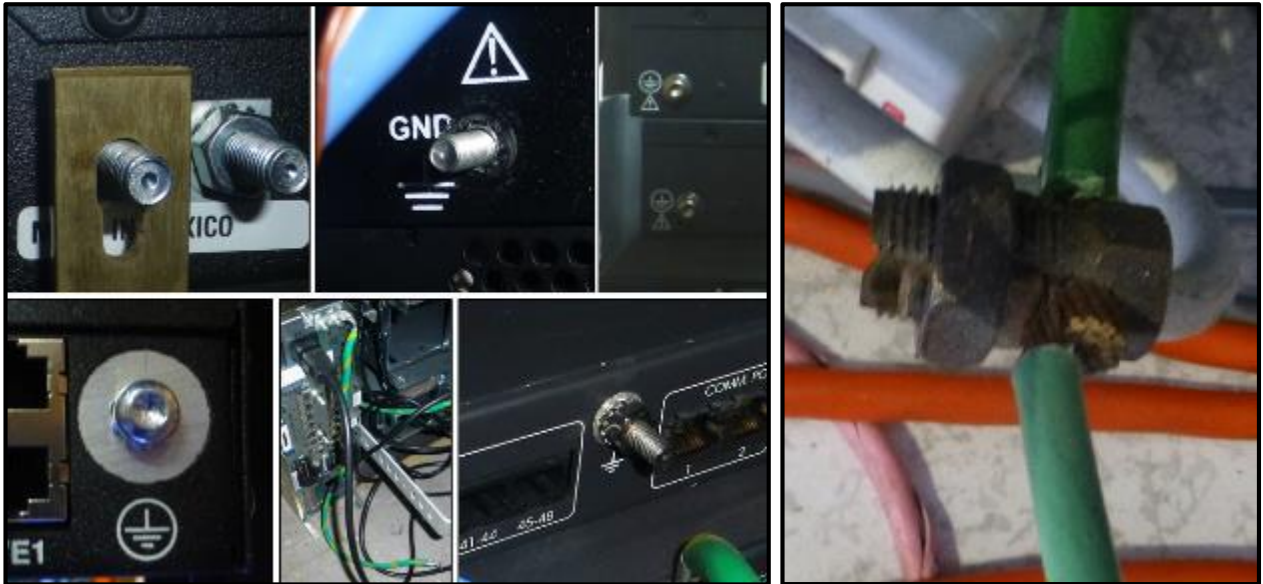
Examples of ancillary secured to the perimeter bus in the wrong direction.

- 4.r: Not all ground bus conductors, ground bus extensions and equipment grounding conductors are routed towards the PBB, RBB or SBB as required. Multiple pieces of ancillary equipment is secured to the perimeter bus conductor in the wrong direction - flowing away from the ground source. Grounding conductors shall be run as short, straight, and smoothly as possible, with the fewest possible number of bends and curves. All bends and curves shall be made toward the ground location. The main reason is because the perimeter bus is bonded to ground with multiple down conductors. *Reference R56, Paragraph 5.6.6.3.*



APX radio rack not bonded to ground

- 4.u: Racks have not been properly bonded back to the PBB, SBB or ground bus by approved methods. The existing rack used to for the new APX Consolettes is not bonded to ground. Racks or cabinets equipped with a Rack Bonding Bar (RBB) shall have an independent bonding jumper installed between the rack or cabinet grounding connection point and the RBB. Conductor connections to racks and cabinets shall be made at the designated ground (earth) connection point or ground "pad." *Reference R56, Paragraph 5.9.1.6.*



Individual chassis equipment not bonded.

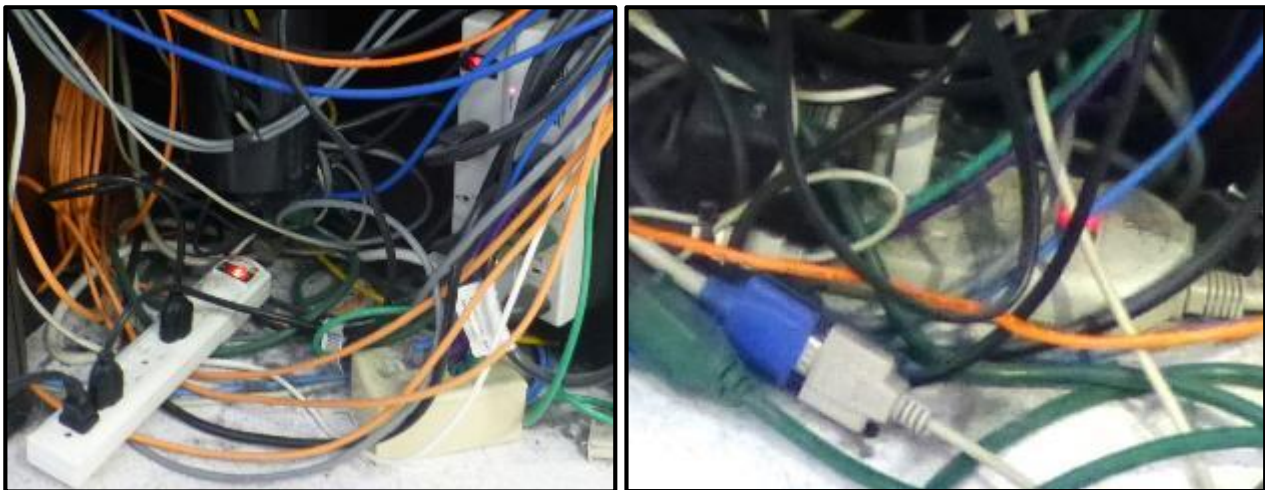
- 4.w: Individual system component chassis equipment is not properly bonded as required. On equipment where a ground stud or connection point is provided by the manufacturer a #6 AWG or coarser equipment grounding conductor shall be attached to this attachment point and bonded to the RBB, equipment grounding bus conductor or other suitable grounding point. The NBB shall be attached directly to each equipment chassis with suitable stainless-steel hardware. (Shown are an improperly attached NBB, existing APX installed in rack with new APX Consolettes, LAN switches, GGM 8000, SDM and GCP 8000.) There is other existing/older equipment not properly bonded. The VPMs at the dispatch positions are secured to bonding conductor with split bolts. Split bolts are not permitted. Some of the above was existing and some will be replaced. *Reference R56, Paragraphs 5.6.6.8 & 5.9.1.5.*



Multiple pieces of existing equipment secured to bus conductors with split bolts.

- 4.w: Individual system component chassis equipment is not properly bonded as required. Split bolt connection devices are not permitted. Bonding bus branch conductors and equipment bonding jumpers shall be connected to the main bonding bus conductor using exothermic welding or listed irreversible compression-type connectors. Multiple connections shall not be made to one attachment point on the bonding bus conductor unless this connection is made using exothermic welding or listed irreversible compression-type connector listed for multiple conductors. In all cases the connection means shall be listed for the size and number of conductors to be connected. *Reference R56, Paragraphs 5.8.8 & 5.9.1.*

5: POWER SOURCES



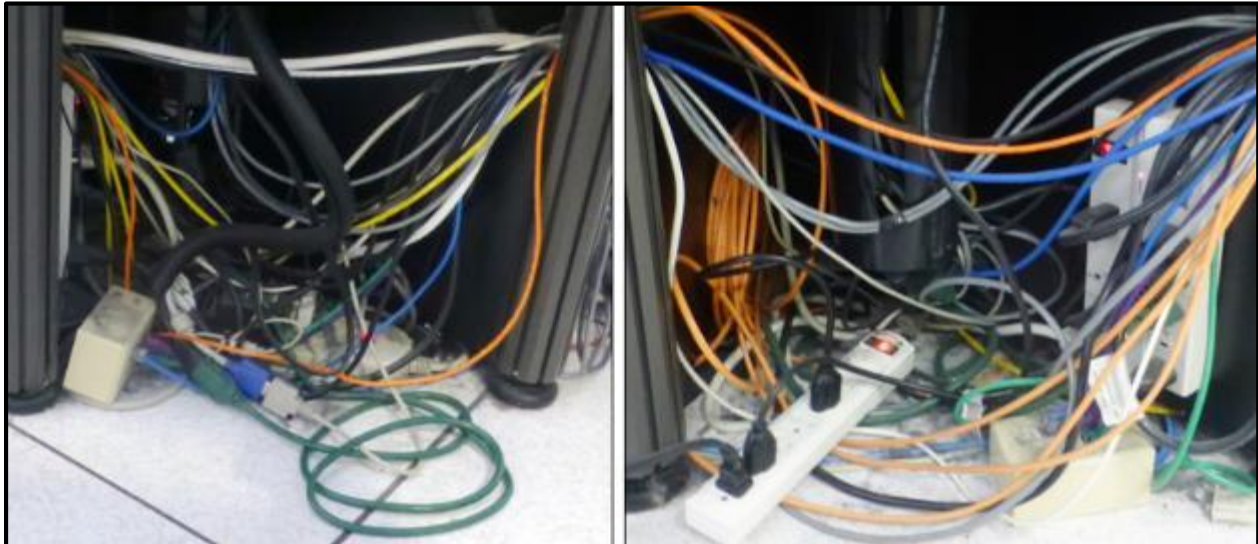
Receptable strips do not installation requirements.

- 5.j: AC power receptacle outlets and strips are not of the proper type and not securely mounted off the floor. Receptacle strips at the dispatch positions do not meet requirements. (Not shown are receptacle strips in the equipment room that are of same type and plugged into the same circuits. They are not used on the new equipment.) Receptacle strip shall be securely mounted to the supporting structure using intended bolt mounting and shall not be secured by being tie-wrapped. Receptacle strips shall not include ON/OFF switches unless the ON/OFF switch is covered to help prevent the switches from being inadvertently switched off. Consumer-grade surge-protected or locally fused receptacle strips shall not be used. No more than one receptacle strip shall be connected to the same branch circuit. Redundant equipment pairs shall not be connected to the same receptacle strip. If multiple receptacle strips are used, they shall be plugged into dedicated simplex receptacles on individual branch circuits. *Reference R56, Paragraph 6.2.13.*

6: TRANSIENT VOLTAGE SURGE SUPPRESSION

No Motorola deficiencies noted. All applicable items passed.

7: EQUIPMENT INSTALLATION



Cabling not installed to standards.

- 7.f: Cables and cable groups of different function do not maintain a minimum 2-inch separation as required. Cable groups shall be separated by 2 inches from other cable groups. All ground conductors shall be separated a minimum of 2 inches from conductors of other cable groups. Transmission lines (coax) for transmitting stations shall be separated a minimum of 4 inches from electrical lights, power, and signaling circuits. *Reference R56, Paragraphs 9.9.1.5 & 9.9.3.2.*
- 7.n: CAT-5 cables do not maintain the proper separation from AC power cables. Avoid routing CAT 5 cable near sources of EMI/RFI. Routing cables near sources of EMI/RFI can cause data errors and degraded system performance. Cables shall be separated by at least 2 inches from AC power conductors. Such noise sources may be electrical power wiring, dimmer switches, radio frequency transmitters, motors, generators, and fluorescent lights. Doing so can be unsafe and is likely to cause EMI onto the CAT 5 cable, causing network errors. *Reference R56, Paragraph 9.9.6.4.*

EXPLANATION OF N/A

All items marked in the N/A column are either existing or therefore not part of this project, are not required for this project or were unavailable for inspection.