



Multi-Agency Radio Communications System



Steering Committee Handout

December 8, 2014

John R. Kasich, Governor
Robert M. Blair, Director DAS
Stu Davis, State CIO / Assistant Director DAS
Darryl Anderson, MARCS Program Director



**Multi-Agency Radio Communications System (MARCS)
Steering Committee • Meeting Minutes
September 16, 2014 • 1:00 p.m.**

**Committee
Members In
Attendance:**

Stu Davis, State CIO/Assistant Director DAS, as Chair
Randy Cole, President Ohio Controlling Board
representing OBM
John Born, Director ODPS
Toby Wagner, Law Enforcement Chief, ODNR

Kelly Saunders, Deputy Director ODRC
Sonja Simpson, Deputy Director Operations ODOT
Larry Flowers, Ohio State Fire Marshall

Welcome

Chairman, Stu Davis called the MARCS Steering Committee Meeting to order.

1. Introduction (Darryl L. Anderson, MARCS Program Director).

Steering Committee Members (hereinafter “The Committee”) in attendance were introduced, noting Kelly Saunders, Deputy Director, ODRC, as a new committee member. All other individuals in audience attendance introduced.

2. Review of 04/30/2014 Meeting Minutes:

The minutes of the April 30, 2014 were introduced by D. Anderson. Minutes reviewed by all.

MOTION	Larry Flowers made a motion to accept the April 30, 2014 minutes. Seconded by John Born. Stu Davis called for a vote, the motion passed.
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3. Operating Budget Review:

Presented and reviewed by Darryl Anderson.

Handout “B” MARCS/P-FY14 Budget Review.

- FY14 Budget - \$14,548,683.
- FY14 Actual - \$14,051,224.
- Percentage spent in FY 14- 97%.

Handout “C” MARCS/P-FY15 Budget Review.

- FY 14 Actual- \$14,051,224.
- FY 15 Working- \$14,512,028.
- FY 15 Expended- \$6,733,788.

4. MARCSIP Roll-out Update:

Presented and reviewed by Stuart Johnston, Motorola Project Manager.

Handout “D” - 7.13 700 MHz Voice overlay.

- Stuart Johnston: Phase II completion scheduled for end of March/April 2015 with project completion date scheduled on July 2015.
- The turn-down of the current 3.5 system is scheduled for late March/early April 2015.

Handout “E” - MARCSIP Transition Customer Preparation Process.

- D. Anderson reviewed IP Transition Letter, 2nd mailing recently sent out to all MARCS customers to assist in their migration to MARCSIP.
- D. Anderson reviewed the updated MARCS Policy MPP-31. In the policy, four radio vendors have demonstrated their ability to provide radios proven to work on the MARCSIP platform. Have 4 vendors with 5th vendor very close to having a Secure System Key for MARCS security.
 - **ACTION ITEM.** President Cole requested new MPP-31 policy to distribute to the Controlling Board when the fifth vendor is added.

Motorola Premier One CAD/FBR/RMS:

Presented and reviewed by Tom Bretthauer.

Handout “F” PremierOne Computer Aided Dispatch.

- Tom Bretthauer gave update on CAD Upgrade.
- Positive progress on upgrade.
- Moved PremierOne to 3.31 to resolve issues. Performed upgrade Sept. 8th-test went well.
- ODNR-to go live beginning November 10th, CAD & Mobile.
- Working on Records Management Project to be added after ODNR goes live on PremierOne.
- OSHP to go live 2015, Q1, still needs broadband connectivity at all dispatch posts.
- Ohio EPA also now included in the CAD Project – good progress being made.
- OIT has set a new rate for EPA CAD & Mobile, contract being reviewed by legal parties.
- President Cole inquired into tying Public Safety, and the Attorney General’s Office into Records Management.
- Tom Bretthauer stated yes, there is interaction with the Attorney General’s Office. We are offering the CAD product to all law enforcement agencies in Ohio.

Handout “G” - Stark County PremierOne Computer Aided Dispatch.

- Received call from Joe Concatto-Stark County, they did not select PremierOne as their solution, went with New World Computer Aided Dispatch.

- Stark County had concerns with being the first non-state participant. Concerns around emergency calls having issues. However The County was as is pleased with the MARCS CAD product and team, the rates were acceptable to the county, but they ultimately choose NewWorld.
- The County stated the Motorola team and PremierOne were both solid and Motorola changes were acceptable to the county.
 - **ACTION ITEM.** Stu Davis would like a follow-up conversation on Stark County, clearer input after meeting.

Agile Update:

Presented and reviewed by Kyle Quillen.

- Kyle Quillen gave update on the MARCS next-generation, dual-path backhaul.
- Running three crews to get everything in green. Added regional switches.
- Target date-60 to 90 days to have all sites complete and on the air.
- Going with Fiber Optic and above-ground microwave for redundancy.

- D. Anderson: MARCS will notify AT&T to terminate all existing T-1s no later than 1/1/15, once the entire Agile system is up and running.

5. MARCS In Schools-Update:

Presented and reviewed by Darryl Anderson.

Handout “H” MARCS In Schools Information.

- Over 1300 in-school radios have been approved.
- 2nd round of funding for Public Schools and Parochial Schools will be made available.
- Coordination between schools and law enforcement has proven to be an ongoing logistical challenge.
 - **ACTION ITEM.** Randy Cole inquired about any actual “emergency” initiations of the MIS to date.
 - Darryl Anderson stated nothing journalized as of present time, no specific instances but will investigate and get back next Steering Committee.

6. Additional Customers/Tiering Update:

Presented and reviewed by Darryl Anderson.

Handout “T” - Additional Customers/Tiering Update.

- Butler County. Tier 3 Partnership agreement, in review by DAS Legal and OIT Business Office.
- Coshocton County. Tier 2 Agreement document being finalized to send to the County Commissioners – will co-locate on a 3rd party vendor tower.
- Dayton/Montgomery County. Captain Stephens spoke from audience, moving closer to agreement, the County ‘s goal is to be in contract by the end of the year. Detailed communications and

discussions are ongoing between the city/county and DAS/OIT MARCS, DAS legal and OIT Business Office. Looking at both Tier 2 and Tier 4 as options.

- Cincinnati/Hamilton County. Talks ongoing to partner with MARCS, share zone controller, most recently met with Cincinnati City Manager's office 9/12. Both the city and the county currently share an early-version trunked system, which is at the end of its useful life. Looking at a Tier 4 partnership.
- City of Columbus. Ready to partner, Tier 4. Co-located on 3 towers. Preliminary document being reviewed by DAS legal, should be finalized by the next Steering Committee meeting.
- Future Partnerships. Ongoing interest being shown by many counties for future Tier 2 partnerships.

7. Brief NPSBN Update:

Presented and reviewed by Kelly Castle.

Handout "J" - The OhioFirst.Net Plan

- FirstNet still not fully staffed after two years, still advertising
- Independent Authority questions continue to cause delays.
- The Board is meeting in Reston, Virginia today.
- Recent Ohio activities include continued work on our initial consultation package, FEMA Region 5 recently met in Chicago, Director Davis continues to lead this group.
- The first FirstNet consultation with other states are set for July 29th, then September 24th.
- Kelly Castle noted Ohio does not want to be first for consultation' with February being the earliest date we are considering.
- Will have more follow-ups on FirstNet.

8. Standing Sub-Committee-Local Government Partners Input Public Safety Director William Vedra II:

- Director Vedra was not in attendance at September 16, 2014 Steering Committee meeting due to family illness.
- Commerce \$3.0M Grant Funding Report-presented by Larry Flowers.
- Put grant announcement out on 2nd of July.
- Have 40 multi-jurisdictional requests.
- 475 fire departments have applied, with total requests at around 17M.
- Looking at each request and will do the best we possibly can.
- Expect to announce recipients in late 2014.

Public Safety/Administrative Services Initiative report:

Presented and reviewed by Darryl Anderson.

Handout "K".

- House Bill 483, 130th General Assembly, Appropriations/Mid-Biennium Review. FY2014-FY2015
- Working a current draft document within DAS. Presently being generated under the Director's leadership. Will be complete within the next few weeks, then will schedule a meeting with ODPS to review.

LEUO/Mutual Aid status discussion-Cuyahoga County interaction:

Presented and reviewed by Darryl Anderson.

Handout "L"

- Significant interest in status of current LEUO radios – once the transition to MARCS/IP is complete.
- Mutual Aid talk groups – traditionally offered to other public safety agencies with MARCS-compatible system.
- Similar policy issues will need addressed upon migration to the IP platform and turndown of the current 3.5 system.
- Letter sent from Edward Fitzgerald, Cuyahoga County Executive, July 22, 2014.
- Reply letter from Director Davis, August 29, 2014.
- Discussion.
- Stu Davis: the Steering Committee is considering LEUO in future, will keep interested parties updated. Will continue to work through process.

9. Rebanding Updates:

Presented and reviewed by Dick Miller.

Handout "M".

- Data Radio second touch has been completed.
- Completed FNE process at 145 tower sites between August and September 2013.
- Completed second touch of radios with a total of 19,121 radios being serviced from October 2013 through August 2014.
- Pending inconvenience fee due to agencies. Sprint/Nextel will make payments to each agency affected separately. Completion plan set for end of November 2014.

10. Long-Term Sustainment of MARCSIP:

Presented and reviewed by Robert Rummel, Motorola.

Handout "N"

- Motorola is proposing the extension of the already negotiated contract.
- Demonstrates ongoing commitment to the investment in the System, and commitment to the Users.
- Lengthy discussions back and forth for firm pricing for maintaining platform through 2039.
- Stu Davis inquired what level of support looking for and voiced concerns on technological side.

MOTION	President Cole made a motion to direct the MARCS staff to continue to pursue determining the details of a fixed pricing partnership with Motorola for Motorola Services, through the 2037-2039 time frames, with the advice and consent of the OIT Business Office, the DAS Fiscal Department, and the DAS Legal Department, looking at extending the support of the platform through 2039; and present back at the next Steering Committee meeting. Seconded by John Born. Stu Davis called for a vote, the motion passed.
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11. Change Order Proposal: GTR8000’s replacing Intellirepeaters:

Presented and reviewed by Joe Harris, Motorola.

- Very lengthy discussions back and forth on technical aspect of foregoing Quantar upgrades and increasing purchase of GTR 8000’s.
- The current base contract includes Quantar Upgrade Kits.
- Upon implementation of the 7.19 upgrade, early 2019, the Quantars will have to be replaced.
- This proposal is a Zero-cost change order.
- Have to buy now with installation starting around April 2015.
- Propose to Steering Committee for approval to replace Quantar Upgrade Kits with GTRS Base Stations to increase channel capacity, resulting in no upgrade needed in 2019.

MOTION	Sonja Simpson made a motion to approve the substitution of the currently-scheduled Quantar Upgrade Kits with GTRS Base Stations, at no additional cost, which will preclude the need for Quantar replacements in 2019, through a zero dollar change order to the existing contract. Seconded by Toby Wagner. Stu Davis called for a vote, the motion passed.
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12. Additional Site Development:

Presented and reviewed by Darryl Anderson.

- Ashtabula County- coverage in the Piedmont Lake area on our eastern Border is far less than ideal. We are working with Ashtabula County public safety officials to determine a cost-effective additional site in east-central Ashtabula County. This new site will also greatly benefit the ODNR officers working the area.
- Morrow County –working a Tier 2 partnership and co-location, with County public safety officials and OREC. Will again benefit ODRC officers working the Mt. Gilead State Park area.
- Highland County-Working on a Tier partnership with local fire departments, preliminary discussions only at this time, pending the Fire Marshall grant out comes, will continue to update the Steering Committee.

13. MARCS/OREC/FCC Interaction:

Presented and reviewed by Ken Keylor, OREC.

- OREC has been granted FCC approval to be on the current MARCS 800-only platform.
- The addition of the 700 MHz frequencies results in mandatory further discussions with the FCC.
- Planning an in-person discussion with the FCC in Washington D.C. in the November time frame.
- Request D. Anderson attend to explain the upgrade and migration in depth.

14. Other Items:

- Stu Davis requested Motorola have more detailed info on the “2039” proposal and present at the next Steering Committee meeting.
- Larry Flowers briefed on meeting with folks about Grant funding for fire departments.
 - Budget \$40k for smaller fire departments and receiving applications from fire department agencies.

15. Establishment of Next Meeting Date:

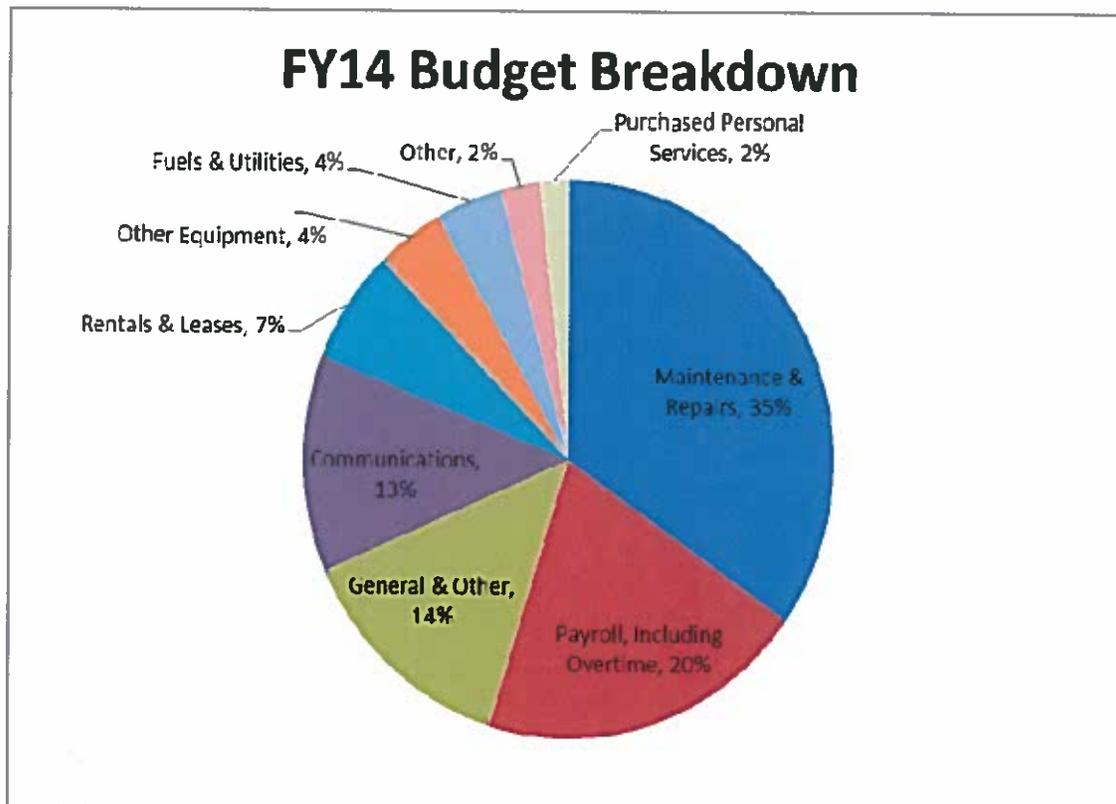
- Darryl Anderson requesting to establish next MARCS Steering Committee meeting with Stu Davis requesting tentatively around the 1st or 2nd week of December.
- Later note: the next Steering Committee meeting set for December 8, 2014, Riffe Center, 1-3pm.

Adjournment	Randy Cole made a motion to adjourn the meeting. Seconded by John Borne. None opposed. Motion passed, the committee adjourned at 2:59 pm.
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MARCSIP – FY14 Budget Review

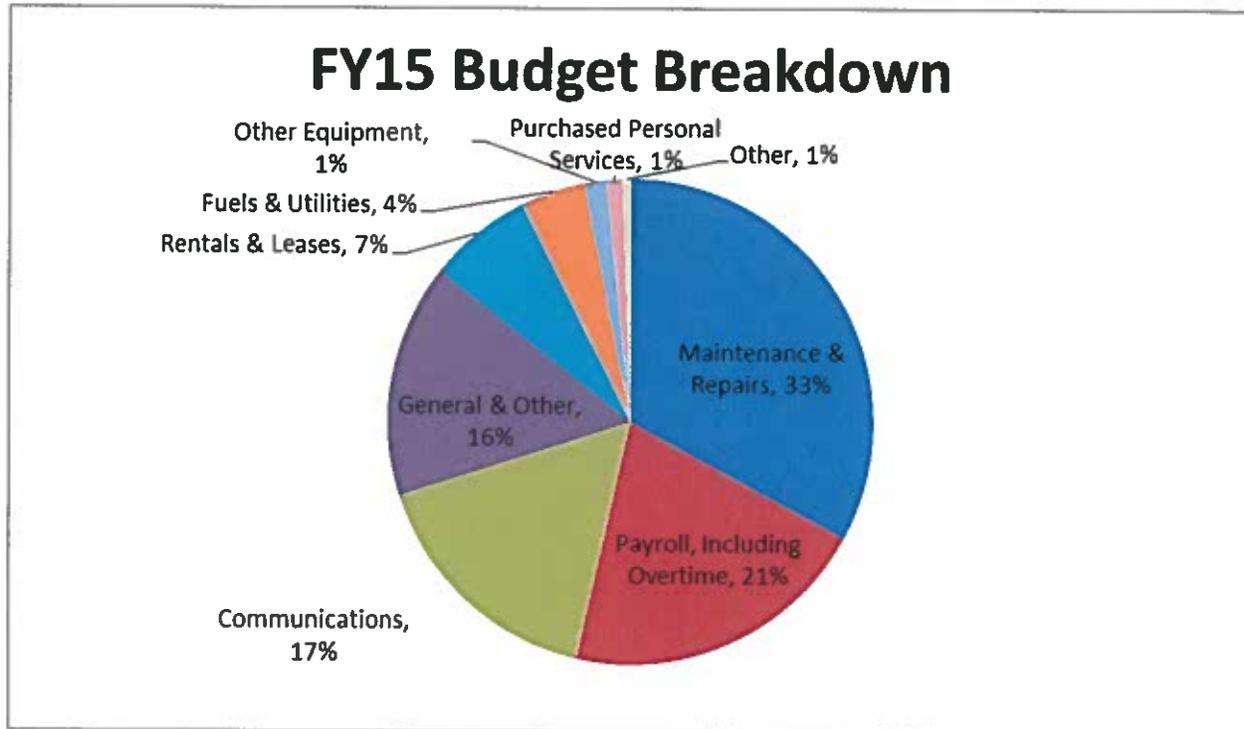
DESCRIPTION	FY14 Budget	FY14 Actual	% Spend
Payroll, Including Overtime	\$2,923,940	\$2,889,727	98.8%
Purchased Personal Services	\$265,457	\$210,676	79.4%
Communications	\$1,828,583	\$1,732,631	94.8%
Fuels & Utilities	\$589,112	\$630,164	107.0%
General & Other	\$1,985,329	\$2,210,564	111.3%
Maintenance & Repairs	\$5,043,077	\$4,844,756	96.1%
Motor Vehicles	\$56,000	\$47,747	85.3%
Rentals & Leases	\$958,012	\$1,002,454	104.6%
Supplies	\$16,751	\$12,891	77.0%
Travel	\$18,314	\$9,192	50.2%
Other Equipment	\$608,352	\$560,162	92.1%
Federal Reimbursement	\$255,756	\$255,756	100.0%
TOTALS	\$14,548,683	\$14,406,720	99.0%



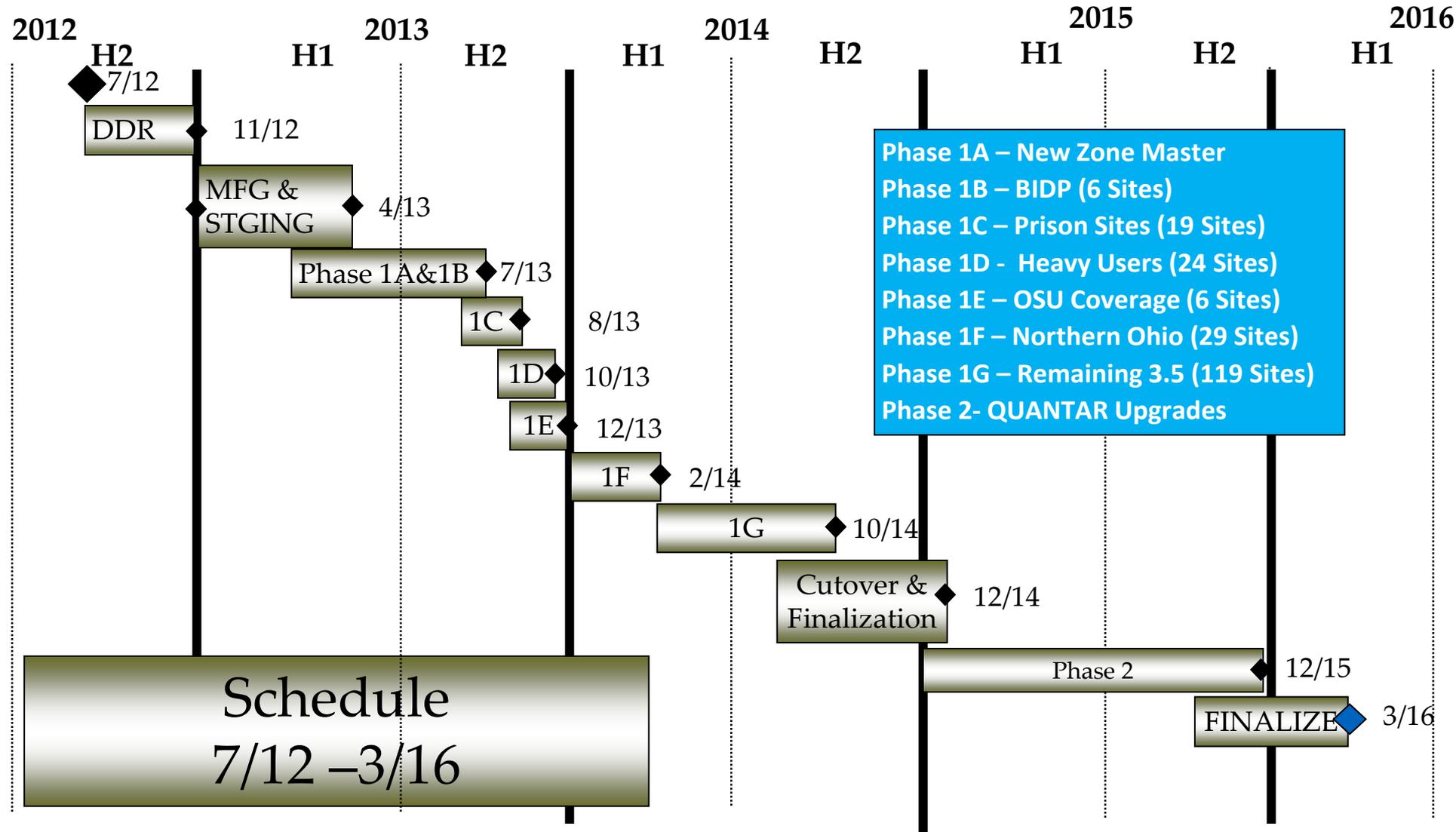
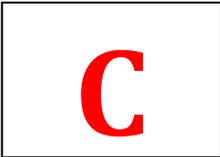


MARCSIP – FY15 Budget Review

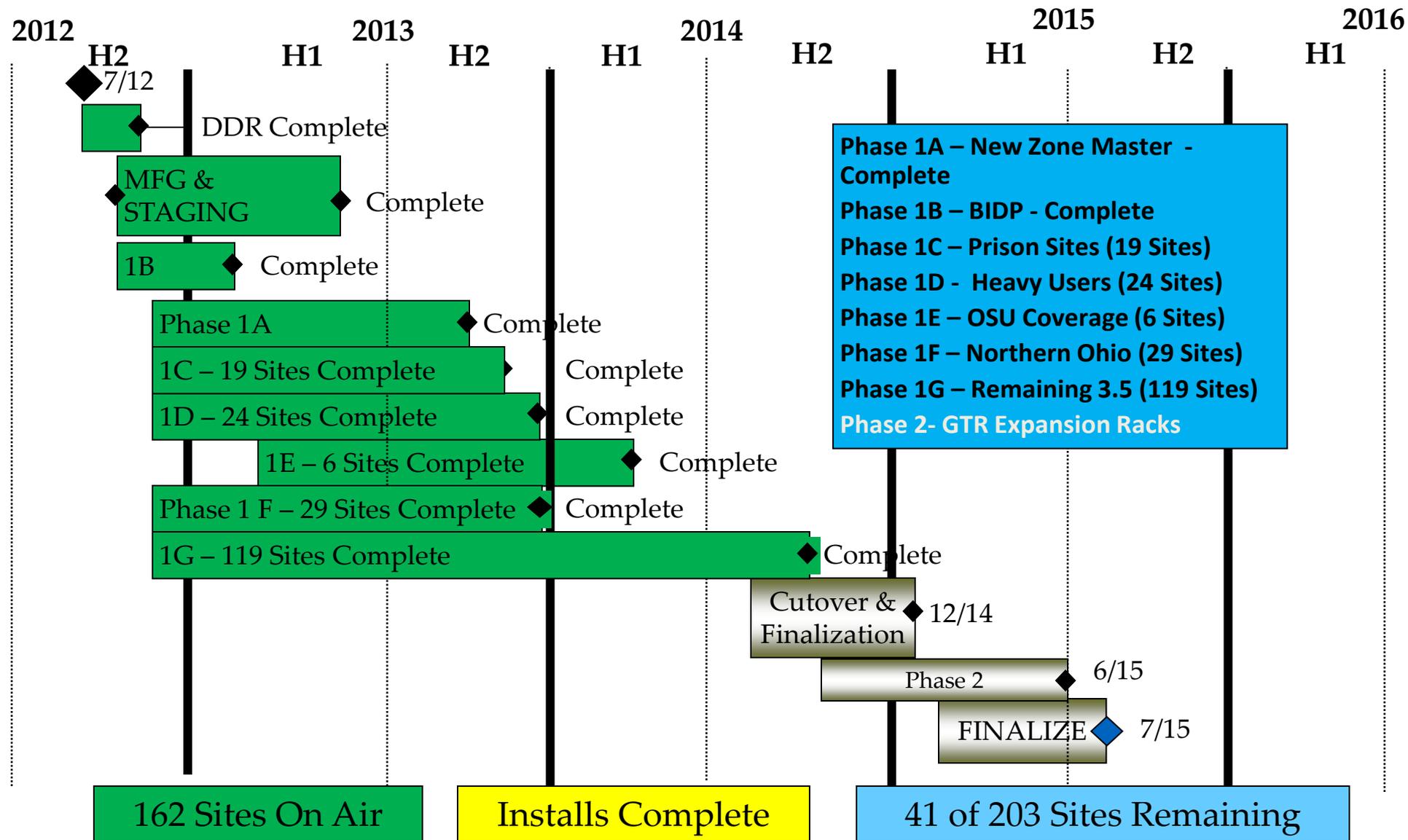
DESCRIPTION	FY14 Actual	FY15 Working	FY15 Expended
Payroll, Including Overtime	\$2,889,727	\$2,998,652	\$1,203,780
Purchased Personal Services	\$210,676	\$155,100	\$139,811
Communications	\$1,732,631	\$2,396,000	\$2,515,162
Fuels & Utilities	\$630,164	\$625,100	\$258,240
General & Other	\$2,210,564	\$2,255,750	\$119,248
Maintenance & Repairs	\$4,844,756	\$4,771,786	\$4,708,834
Motor Vehicles	\$47,747	\$60,000	\$24,731
Rentals & Leases	\$1,002,454	\$1,011,000	\$977,014
Supplies	\$12,891	\$8,000	\$2,533
Travel	\$9,192	\$16,000	\$2,506
Other Equipment	\$560,162	\$214,600	\$0
Federal Reimbursement	\$255,756	\$40	\$40
TOTALS	\$14,406,720	\$14,512,028	\$9,951,898



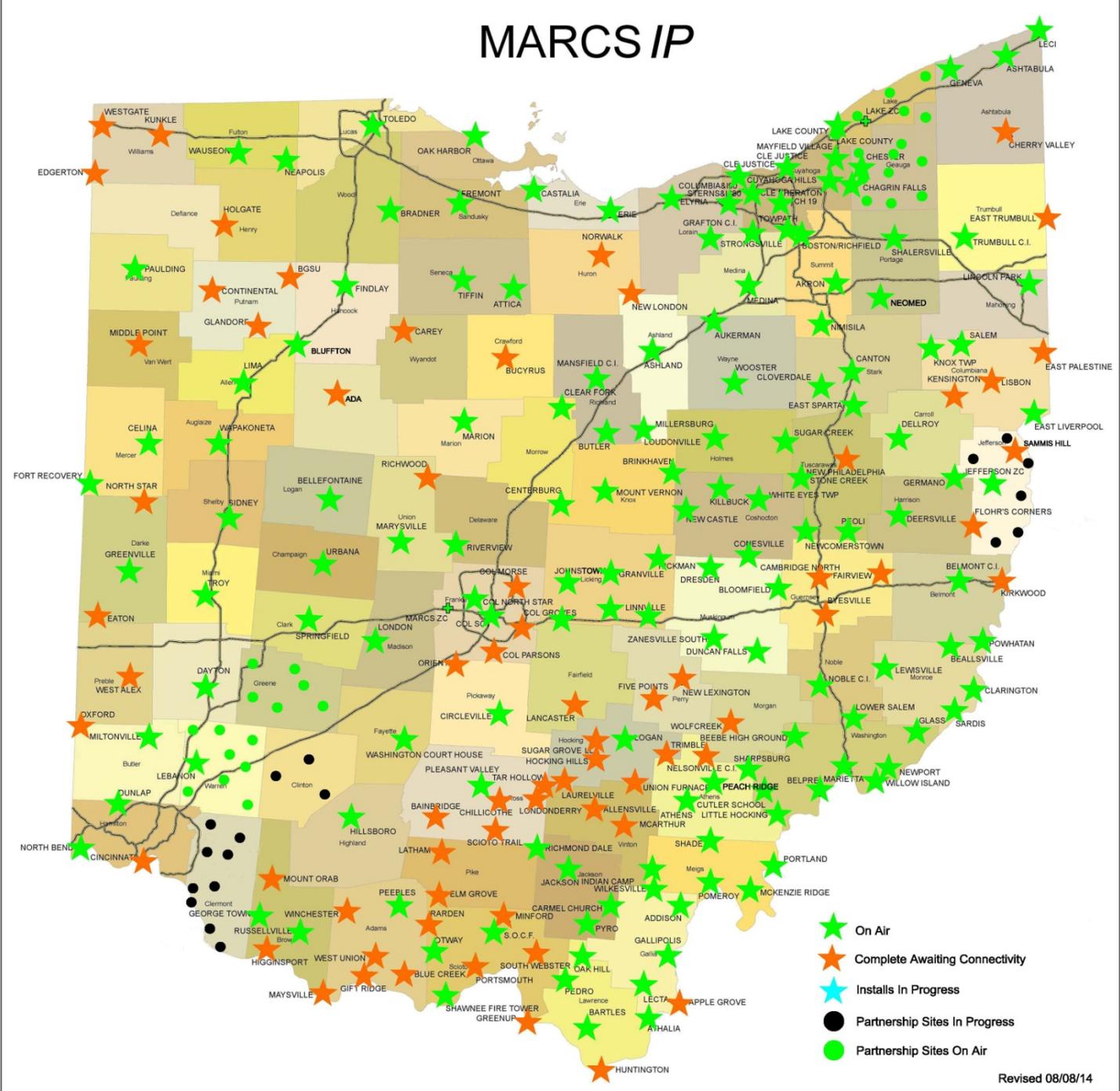
High Level Project Schedule - Contract



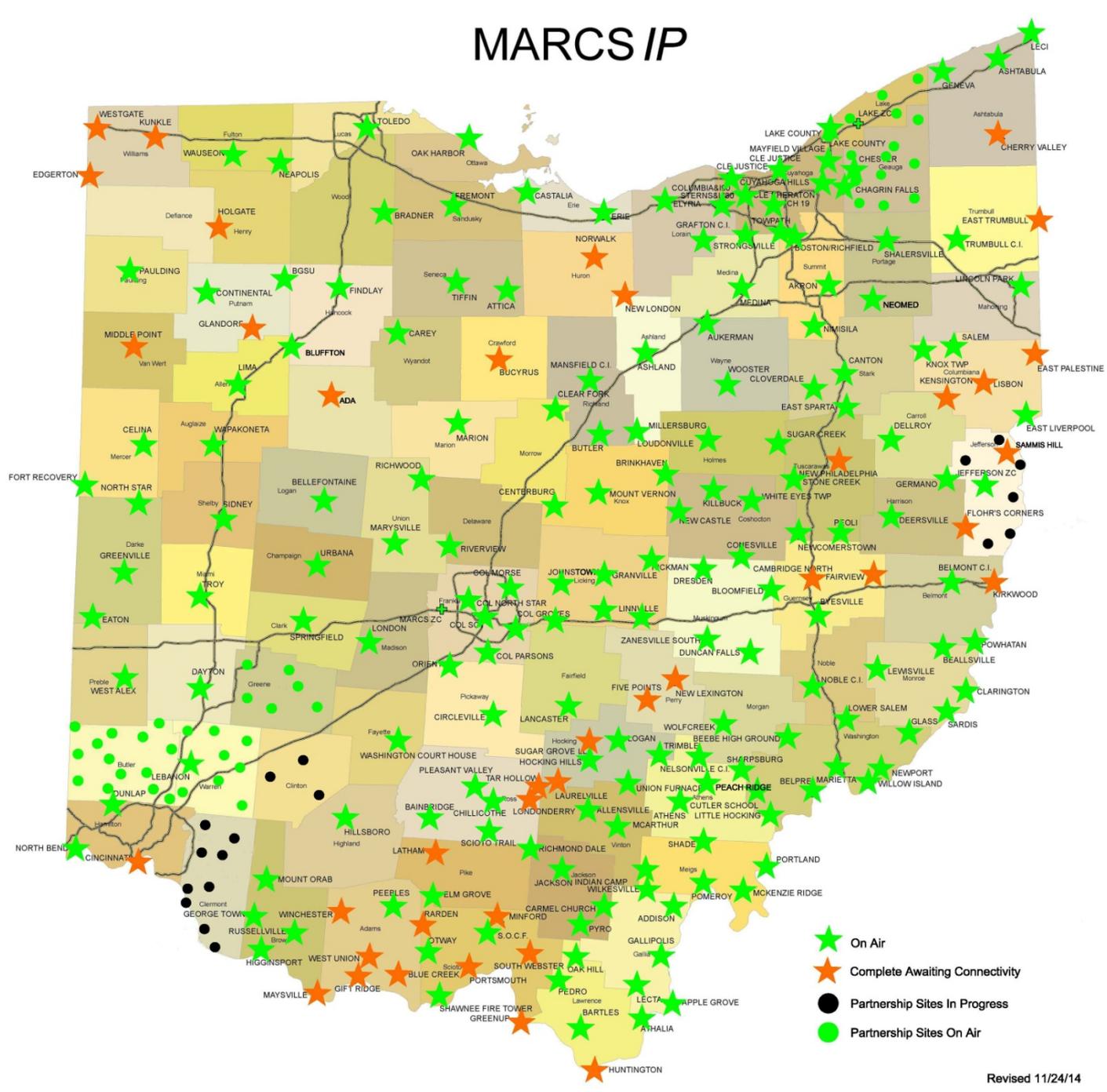
High Level Project Schedule – December 2014



MARCS IP



MARCS IP



- ★ On Air
- ★ Complete Awaiting Connectivity
- Partnership Sites In Progress
- Partnership Sites On Air



D

Change Order #3-GTR Expansion Racks

- Change Order #3 Approved and Signed
- 36 GTR Expansion Racks have been ordered and will be shipped in December
- Electrical Upgrades at the sites are in progress and scheduled to be completed in December
- Equipment will be prepared for 7.15 System upgrade



E

Motorola PremierOne CAD/FBR/RMS

November 12, 2014 ODNR PremierOne CAD/Mobile – Successful “Live Cut”

- **Transition to PremierOne**
- **Dispatch handled the increase in stride**
- **Most common issues related to connectivity in the field and unit check-up’s**

ODNR Path Forward

- **PremierOne Records Phase**

OSHP Path Forward

- **Network**
- **Wireless Modem Purchase**

OEPA Path Forward

- **MOU**
- **Motorola Contract**

Clermont County Update

- **Motorola Contract Delivered**
- **Meeting planned with the county for December 9, 2014**



MPO.14

MARCS 3.5 Radio customer

RE : Migration of Current MARCS Platform to MARCSIP

Dear Agency Head :

As you probably know, our current MARCS 800 MHz trunked, digital radio platform (which we refer to as MARCS 3.5) is migrating to the new, P-25 700/800 MHz platform, MARCSIP.

The benefits of MARCSIP are many – P-25 Phase 1 compliant; P-25 Phase 2 compatible; IP-based; significantly increased coverage and capacity; 20 + year life cycle; and the freedom for you as an end-user to select from several vendors and price-points for radios are some of the most obvious improvements.

From a strategic standpoint, the state-wide upgrade, scheduled to be completed by early in the calendar year 2015, allows us as a state to forward the #1 goal of our Statewide Communications Interoperability Plan (Ohio's SCIP) - by providing the statewide backbone allowing for a true system of systems for our public safety forces. MARCSIP will allow any and all first responders to share an integrated 21st century mission critical radio system, which will save taxpayers' dollars by reducing duplicative systems, maximize interoperability, and ultimately, save lives.

For you as a current MARCS 3.5 customer, you will need to be involved in the transition to MARCSIP.

We currently project the turn-off of the current platform to occur in mid- March of 2015!!

This means your current radios will quit working unless you take steps to migrate to MARCSIP.

Our MARCS staff is totally dedicated to ensuring a smooth transition of your radios to MARCSIP. You may contact us at any time to request assistance in your transition.

Here is a list of items need to considering immediately:

- 1.) Some of your radios may not work on MARCSIP. If you have **Motorola XTS-3000 handheld** radios, or **Motorola Astro Spectra in-vehicle** (mobile) radios, they will need to be replaced with new or newer radios. Fortunately, you have many options in getting these radios replaced. You can contact your local vendor, and/or contact us to find replacement sources.
- 2.) Some of your radios may need “flash upgrades” to work on MARCSIP. Again, you may contact us or your local radio vendor to determine if a flash upgrade is needed.
- 3.) All of your radios will need to be programmed on the MARCSIP platform if you have not already completed this task. Again, programming may be performed by your local radio vendor or by our MARCS programming staff.

We have established the e-mail account DAS-MARCS.admin@das.ohio.gov for you to utilize to make inquiries concerning the migration. Feel free to utilize it!

We are asking subscribers to please update your subscriber information on the form found online at <http://das.ohio.gov/marcs> “Subscriber Process.” Scroll down to the bottom of the page to **subscriber information update form**. Additionally, please visit this website for information on being a MARCS user, or to make any changes to your inventory.

Updates on MARCSIP will be posted on the announcements tab of the MARCS website.

We have the MARCSIP upgrade completed at almost all of our 240+ tower sites statewide. This may allow you to transition to MARCSIP as soon as you see fit! We encourage you to do so due to the additional coverage and capacity.

As a point of clarity, the MARCSIP upgrade and migration is a totally separate initiative and un-related to the current “800 MHz rebanding” project.

If you have any further questions, please feel free to utilize the e-mail account noted above, or call or e-mail me at the contact points provided below.

Best Regards,



Darryl L. Anderson, MARCS Program Director
darryl.anderson@das.ohio.gov
614.466.2257



G

MARCSIP – Policy MPP-31 Update Approval

Recently, both Harris and Motorola have submitted radios for approval to be utilized on our MARCSIP 700/800 MHz platform.

All radios listed in the most recent attachments to our policy MPP-31 have been programmed and tested on our platform and are approved for use.

Final approval of this updated policy, dated 12/8/2014 is necessary.

See updated Policy MPP-31, with approval letters, updated 12/8/2014, is attached.

	<p>MARCS IT Policy Minimum Requirements for P25 Compliance on the MARCS Statewide Public Safety Communication System</p>	No: MPP-31.0
		Effective: 11/19/13 Revised: 12/08/2014
		Issued By: MARCS Steering Committee Published By: OIT MARCS

1.0 Purpose

The purpose of this document is to define the rules and regulations concerning the eligibility, security, distribution and utilization of APCO P-25 compliant radio devices on the MARCS/IP Statewide Public Safety Communication Network.

2.0 Scope

This policy, and the rules and regulations set forth herein, apply universally for all radio devices sold/purchased for used on the MARCS/IP Statewide Public Safety Communication System.

3.0 Background

The MARCS/IP Statewide Public Safety Communication Network is a Motorola VoIP v. 7.13, Project 25 Phase 1 compliant public safety communication system. Project 25 (P25 or APCO-25) is a suite of standards for digital radio communications for use by federal, state/province and local public safety agencies in North America, enabling radio devices from various manufacturers to communicate with each, both for operability and interoperability. In order to remain P25 complaint, MARCS outlines herein minimum requirements for radio devises to be placed on the MARCS/IP Statewide Public Safety Communication Network.

4.0 Minimum Requirements

All prospective voice and devices shall meet all of the below listed conditions:

- a.) All voice radio devices (e.g. - portable, mobile, remote control station) shall operate on the MARCS/IP P-25 digital trunked 700/800 MHz system, including seamless inter-zone roaming. The roaming requirement includes affiliation into different zones upon activation of the radio from the "off" position.
- b.) All devices shall be P-25 compatible, capable and compliant.
- c.) All devices shall operate on the 700 MHz frequency range as well as 800 MHz.
- d.) The device provider/manufacture must guarantee, in writing, the device's successful performance on MARCS/IP, or provide a full refund to the purchaser.
- e.) The device provider/manufacture must provide a system security protocol (i.e. – system key) **allowing MARCS and MARCS only to activate the devices on the MARCSIP Public Safety Communication Network.**
- f.) All devices shall fully comply with State of Ohio procurement policies, and should be registered and accepted on the Ohio State Term Schedule.

- g.) Vendors must provide MARCS with operational radio units from production, and demonstrate the unit's capabilities as outlined above, prior to making the units available to MARCS/IP subscribers. This provisioning shall include all necessary hardware, software and cabling to allow MARCS to program radios on an ongoing basis.

5.0 Prohibitions

To facilitate point 4.0 g above, MARCS technical staff will assist prospective vendors and/or manufacturers in seeking compliance by programming the MARCS system into production version test devices. Consequently vendor representatives may have limited access to MARCS/IP security keys.

Any unauthorized sharing or copying of MARCS Public Safety Communication System data, including system key information, other security codes, hexadecimal identifiers and/or any related documentation; publicizing of the said data; or other unauthorized use of the MARCS/IP secure footprint is **expressly prohibited**.

6.0 Enforcement of Violations

Alleged violations of these rules shall result in thorough administrative and/or criminal investigation by agents of MARCS and/or authorized criminal justice representatives.

Proven violations of these rules shall result in MARCS administrative disciplinary actions, up to and including restriction or termination of MARCS participation, and/or prosecution pursuant to ORC 2913.04, or other appropriate charges found in the Ohio Revised Code.

7.0 Effective Date

This policy has been approved by the Ohio MARCS Steering Committee on Tuesday, November 19, 2013 and is effective until further notice.

8.0 Updates

The following updates to the original 11/19/13 policy have been made:

11/20/2013 – “Kenwood” letter – MPO.13.136 – dated November 8, 2013, added as attachment.

01/14/2014 – grammar change in 3.0, emphasis added to 4.0 “e”; detail added to 4.0 “g”.

01/15/2014 – “Motorola” letter – MPO.14.006 – dated January 14, 2014, added as attachment.

03/12/2014 – “Relm” letter – MPO 14.028 – dated March 10, 2014, added as attachment.

04/02/2014 – “EFJohnson” letter – MPO.14.044 – Dated April 2, 2014, added as attachment.

11/27/2014 – “Harris” letter – MPO.14.244 – Dated 11/26/2014, added as attachment.

12/03/2014- “Motorola” letter # 2 – MPO.14.243 – dated 12/03/2014, added as attachment.

Ohio Department of Administrative Services
Ohio Office of Information Technology
John Kasich, Governor
Robert Blak, Director
Stu Davis, State Chief Information Officer

MARCS Program Office
4200 Surface Road
Columbus, Ohio 43228

614-995-0060 voice
614-995-0067 fax
www.ohio.gov

Ohio **DAS**

November 8, 2013
MPO.13.136

Kenwood USA-Communications Sector
Dave Brandkamp, Eastern Region Manager
3970 Johns Creek Court
Suwanee, GA 30024

RE : MARCS Approval for Kenwood P-25 radios

Mr. Brandkamp,

Thanks for your acknowledgement and request for Kenwood P-25 radio approval in your letter to MARCS dated November 5, 2013.

You have demonstrated to MARCS the Kenwood P25 model radios listed below perform as necessary to function on our Ohio MARCS/IP System.

Kenwood TK-5410K2 Portable
Kenwood TK-5410K3 Portable
Kenwood TK-5410-ISK3 Portable
Kenwood TK-5410-ISK3 Portable
Kenwood TK-5910BK Mobile

Please ensure your continued compliance to our policy MPP-31, which is attached.

DO NOT attempt to market any other Kenwood radios for MARCS/IP until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,



Darryl L. Anderson, MARCS Program Director
Darryl.Anderson@ohio.gov
614.466.2257

Ohio Department of Administrative Services
Ohio Office of Information Technology
John Kaslich, Governor
Robert Blair, Director
Stu Davis, State Chief Information Officer

MARCS Program Office
4200 Surface Road
Columbus, Ohio 43228

614-895-0060 voice
614-895-0067 fax
www.oit.ohio.gov



January 14, 2014
MPO.14.006

Motorola Solutions-Communications Sector
Robert Rummel, Area Sales Manager-Ohio
350 Worthington Road, Ste. C
Westerville, OH 43082

RE : MARCS Approval for Motorola P-25 radios

Mr. Rummel,

Thanks for your acknowledgement and request for Motorola P-25 radio approval in your letter to MARCS dated January 13, 2014.

You have demonstrated to MARCS the Motorola P25 model radios listed below perform as necessary to function on our Ohio MARCS/IP System.

Motorola APX3000 Portable
Motorola APX4000, 4000LI Portable
Motorola APX6000, 6000XE, 6000LI Portable
Motorola APX7000, 7000XE Portable
Motorola XTS1500 Portable
Motorola XTS2500 Portable
Motorola XTS5000 Portable
Motorola APX4500, 4500LI Mobile
Motorola APX6500, 6500LI Mobile
Motorola APX7500 Mobile
Motorola XTL1500 Mobile
Motorola XTL2500 Mobile
Motorola XTL5000 Mobile

Please ensure your continued compliance to our policy MPP-31, which is attached.

DO NOT attempt to market any other Motorola radios for MARCS/IP until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,

Darryl L. Anderson, MARCS Program Director
Darryl.Anderson@ohio.gov
614.466.2257

Ohio Department of Administrative Services
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John Kasich, Governor
Robert Blair, Director
Stu Davis, State Chief Information Officer

MARCS Program Office
4200 Surface Road
Columbus, Ohio 43228

614-995-0060 voice
614-995-0067 fax
www.oit.ohio.gov



March 12, 2014
MPO.14.028

RELM WIRELESS
Jim Holthaus, VP – Project 25 Solutions
7100 Technology Drive
West Melbourne, FL 32904

RE : MARCS Approval for RELM P-25 radios

Mr. Holthaus,

Thanks for your acknowledgement and request for RELM WIRELESS P-25 radio approval letter to MARCS dated February 1, 2014.

You have demonstrated to MARCS that RELM P25 model radios listed below have met all requirements needed and thus are approved for use on Ohio MARCSIP System.

KNG-P800 Portable Radio
KNG-P800T2 Portable Radio
KNG-M800 Mobile Radio
KNG-B800 Control Station
TMR-800 Transportable Radio

Please ensure your continued compliance to our policy MPP-31, which is attached.
DO NOT attempt to market any other RELM radios for MARCSIP until the same protocol is followed.

With the current RELM software system key for MARCSIP, all radios added to the system **SHALL** be programmed by the MARCS programming staff. Once MARCS has possession of hardware based permission capable Advanced System Keys, arrangements can be made with RELM service shops to supplement programming and/or cloning capabilities.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,

A handwritten signature in blue ink, appearing to read "Darryl L. Anderson".

Darryl L. Anderson, MARCS Program Director
darryl.anderson@das.ohio.gov
614.466.2257

March 31 2014

Mr. Darryl L. Anderson
MARCS Program Director
4200 Surface Road
Suite 321
Columbus Ohio 43228

RE; MARCS approval for EF Johnson Technologies P-25 radios

Mr. Anderson,

EF Johnson Technologies request approval to deploy our products on the MARCS statewide communications system. I acknowledge receipt of MARCS IT Policy MPP-31.0 dated March 12 2014. I have listed the EF Johnson Technology products below.

EF Johnson VP 600
EF Johnson VP900
EF Johnson 5100
EF Johnson 51ES
EF Johnson 51SL
EF Johnson 5300
EF Johnson X Platform

If you have any further questions, please feel free to call me at 312 720 2946.

Regards,



Paul Marshall
Territory Sales Manager
EF Johnson Technologies
1440 Corporate Drive
Irving TX 75038-2401

Ohio Department of Administrative Services
Ohio Office of Information Technology
John Kasich, *Governor*
Robert Blair, *Director*
Stu Davis, *State Chief Information Officer*

MARCS Program Office
4200 Surface Road
Columbus, Ohio 43228

614-995-0060 voice
614-995-0067 fax
www.oit.ohio.gov



April 02, 2014
MPO.14.044

E.F. Johnson Technologies
Paul Marshall
Territory Sales Manager
1440 Corporate Drive
Irving, Texas 75038-2401

RE : MARCS Approval for EFJohnson P-25 radios

Mr. Marshall :

Thanks for your acknowledgement and request for EFJohnson P-25 radio approval letter to MARCS dated March 31, 2014.

You have demonstrated to MARCS the EFJohnson P25 model radios listed below have met all requirements needed and thus are approved for use on Ohio MARCS/IP System.

EFJohnson VP 600
EFJohnson VP 900
EFJohnson 5100
EFJohnson 51ES
EFJohnson 51SL
EFJohnson 5300
EFJohnson XPlatform

Please ensure your continued compliance to our policy MPP-31, which is attached.
DO NOT attempt to market any other EFJohnson radios for MARCS/IP until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,

A handwritten signature in blue ink, appearing to read "Darryl L. Anderson".

Darryl L. Anderson, MARCS Program Director
darryl.anderson@das.ohio.gov
614.466.2257

Ohio Department of Administrative Services
Ohio Office of Information Technology
John Kasich, *Governor*
Robert Blair, *Director*
Stu Davis, *State Chief Information Officer*

MARCS Program Office
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Columbus, Ohio 43228

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November 26, 2014
MPO.14.244

Harris Corporation RF Communications Division
John Hawn, Area Sales Manager
Columbus, Ohio

RE : MARCS approval for Harris P-25 radios

Mr. Hawn,

Thanks for your acknowledgement and request for Harris P-25 radio approval, via your letter to MARCS dated November 25, 2014.

You have demonstrated to MARCS the Harris P-25 model radios listed below have met all requirements needed, and thus are approved, for use on Ohio's MARCSIP 700/800 MHz System.

Harris 7200M Mobile Radio
Harris 7200P Portable Radio
Harris 7300M Mobile Radio
Harris 7300P Portable Radio
Harris Unity XG-100 Mobile Radio
Harris Unity XG-100 Portable Radio
Harris XG-75 Mobile Radio
Harris XG-75 Portable Radio
Harris XG-25 Portable Radio

Please ensure your continued compliance to our policy MPP-31, which is attached.
DO NOT attempt to market any other Harris radios for MARCSIP until the same protocol is followed.

As you know, we now are in possession of a unique Harris Advanced System Key. In order for your radios to be added to our system, you will need to work with our staff to obtain unique system Identification numbers and programming.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,

A handwritten signature in blue ink, appearing to read "D.A.A.", written over a light blue horizontal line.

Darryl L. Anderson, MARCS Program Director
darryl.anderson@das.ohio.gov
614.466.2257

Ohio Department of Administrative Services
Ohio Office of Information Technology
John Kasich, *Governor*
Robert Blair, *Director*
Stu Davis, *State Chief Information Officer*

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4200 Surface Road
Columbus, Ohio 43228

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December 03, 2014
MPO.14.243

Motorola Solutions
Emily Allen, Area Sales Manager-Ohio
350 Worthington Road, Suite C
Westerville, OH 43082

RE : MARCS Approval for Motorola P-25 APX 1000 portable radio

Ms. Allen,

Thanks for your acknowledgement and request for Motorola P-25 radio approval, in your letter to MARCS dated November 16, 2014.

You have demonstrated to MARCS the Motorola P25 model radio listed below performs as necessary to function on our Ohio MARCSIP System, in addition to the radios you have previously been approved for.

Motorola APX1000 Portable

Please ensure your continued compliance to our policy MPP-31, which is attached.

DO NOT attempt to market any other Motorola radios for MARCSIP until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,

A handwritten signature in blue ink, appearing to read "Darryl L. Anderson".

Darryl L. Anderson, MARCS Program Director
Darryl.Anderson@ohio.gov
614.466.2257



MARCSIP Tiering Update

- **Butler County Tier 3** – Agreement signed by Butler County Commissioners; forwarded for Director Blair’s signature December 8, 2014
- **Coshocton County Tier 2**- Currently working through contractual language, will be forwarded to Coshocton County Commissioners – December, 2014
- **Montgomery County/Dayton Tier 2** – Working through final tower costing details with municipalities and the County
- **Hamilton County/Cincinnati Tier 4** – Both the City and the County are reviewing draft Tier 4 agreements
- **City of Columbus Tier 4** – Under review by the city law department
- **Harrison County Tier 2** – Currently being considered by the Commissioners
- **Future Partnerships** - ongoing

Chief William Shaw, EFO
Solon Fire Rescue



December 08, 2014

RE: Testimony of Chief William Shaw to the MARCS Steering Committee

I have been in the fire service for 30 years and was a police officer concurrently for 8 of those years. I serve as the Region 2 coordinator for the Ohio Fire Chiefs Association Emergency Response Plan and currently serve as the first Vice President of the OFCA. Please be clear that the views I am expressing today are that of Fire Chief for Solon, Ohio.

The city of Solon is a suburb of Cleveland located in the Southeast corner of Cuyahoga County and is home to 23,500 residents. During the day the population increases to approximately 40 - 45,000 due to our light industrial and office building occupancies.

Along with the increase in population comes an increase in tax revenue. Solon has been fortunate in years past regarding finances and has a healthy financial reserve. We would be considered an affluent community offering excellent services and a top ranked school system.

In 2012 the Solon Fire and Police departments decided to switch their day-to-day communications to MARCS. One of the enticements was the low rate available due to a resource sharing agreement with Cuyahoga County. The agreement called for a gradual increase in fees with the full fees effective in 2015.

When this decision was made there was discussion regarding the full rate fees that would eventually occur. While we realized there was the possibility the rates would increase to \$20/mo./radio, we were also aware that many people were working towards a funding source to bring the fees down to a reasonable level. Unfortunately that reduction has not occurred which brings me before this committee today.

It is now time for me to prepare my 2015 operating budget and I am faced with a dilemma. Should I continue on as a MARCS customer at \$20/mo./radio or should I look at less expensive alternatives? The alternative in my case is an offer from the City of Cleveland to use their radio system for \$7/mo./radio – nearly a 66% reduction in cost.

My first consideration is cost. This is not a difficult decision as the cost is clearly less – substantially less. But as I have learned in my 30 years in municipal public safety what costs less is not always the best. What sets MARCS apart from the City of Cleveland system? Coverage

Initially MARCS was built for use by the State Highway Patrol and other state agencies to meet their need for statewide communications. During the planning stages the idea came about to offer use of the system to local first responders as well. I believe the ultimate goal was to have as many first responders in Ohio on one communication system so that interoperability mandated by the Federal Government could be achieved.

MARCS provides coverage across the entire State of Ohio – an extremely valuable tool for state agencies to accomplish their daily operational mission. However this level of coverage is unnecessary for a local agency like mine to accomplish our daily operational mission. On a daily basis I have no need to communicate with 99% of the State.

The coverage of the City of Cleveland radio system is limited to Cuyahoga County and along the edges of the bordering counties. This limited coverage is sufficient for my department to achieve our daily operational mission.

So as I look at my options I quickly see that while MARCS is a superior system, however its' coverage is more than a local first responder would reasonably need. I also see that the cost of MARCS is becoming prohibitive and that comes from a community that has the financial resources available to pay the full fees.

Unfortunately I find myself in a predicament. I would prefer to stay with MARCS but in good conscience I cannot make that recommendation to my administration. It's just not right to pay for something you are not going to use. Unfortunately, I do not anticipate Solon continuing as a MARCS customer. I hope you do not interpret that as a threat but receive it for what it is – my reality.

I truly believe MARCS is a great communication system however I also feel the business model wasn't adjusted to consider use by local first responders. Let me explain.

My department uses 3 to 4 of the 225 towers on a daily basis. That is approximately 1.8% of the system. I pay to use 100% of the system but only use 1.8%. That doesn't seem to be an efficient use of local tax dollars does it?

Another way to look at my use could be by county. I operate in 1 county out of 88 or 1.1% of the MARCS coverage area. I pay to have coverage in 100% of the state but only use 1.1% of the coverage. That doesn't seem to be an efficient use of local tax dollars does it? Even if I figure in the three bordering counties I provide mutual aid to I still only use 4.5% of the coverage while 95.5% goes unused. Seems rather wasteful and inefficient doesn't it?

I fully understand it would be unreasonable to request MARCS be made available for \$2 to \$4/mo./radio. However, it seems clear to me that after 10 plus years of trying to entice local municipalities to transition to MARCS the original plan is not as effective as hoped. I have heard from many of my colleagues that what is holding people back is cost. The recent grant from the State Fire Marshal is a nice start but we all know that grants will eventually expire. What happens to the user who can't afford the fees when the grants run out? That will always be in the backs of their minds. It appears the time has come to make a change. Is it better to try to sell 50 people a \$100,000 Maserati or 1000 people a \$20,000 Chevy?

What is needed for the long term viability of MARCS are reasonable and equitable fees for local municipalities. Many state programs are funded on a percentage basis of state dollars and local dollars. Even a 50/50 split would lower the cost to municipalities by one-half. Another justification for a 50/50 split is most departments in Ohio will only ever respond to a particular half of the state for mutual aid in a disaster situation. This has been my observation during my 12 years experience in Statewide responses with the Ohio Fire Chief's Association Emergency Response Plan.

Again I thank you for the opportunity to share my experiences and thoughts with you. I hope I have given a local voice to a Statewide problem. In my opinion this is a critical problem that needs immediate attention. I have seen the good works of MARCS and its' positive impact on residents of Ohio in their time of need. Thank you.



SPRINT/NEXTEL REBANDING UPDATE

The actual rebanding of radios in Ohio is completed.

The only part still pending will be the inconvenience fee due to the agencies for their efforts in getting the radios reprogrammed by Sprint/Nextel. This process will involve MARCS and its partners in verifying the radios affected and certifying an invoice to Sprint/Nextel for payment. Payments will be made by Sprint/Nextel to each agency affected separately. The plan is for this to be completed in the first quarter of 2015. S/N payment of the inconvenience fees is the only unknown at this point.

The S/N unknown has proven to be the reason for the extended period of time. For over six weeks, S/N would not approve the payment methods or the paperwork required. Once we began, we submitted approximately 50 packages only to have S/N reject them as "incomplete" even though they were following the approved guidelines.

To date, we have submitted nearly 200 packets for payment to S/N. The process involves RCC preparing an invoice, sending the invoice to the local user, verification by the local user, back to RCC, entire package is then sent to MARCS for verification, and then the packet is submitted to S/N for payment. S/N will then issue payment to the over 900 agencies. Some issues with the local agencies have occurred and are being handled as they develop.

Thanks to Lana White of the MARCS staff for assisting in this process.

Dick Miller is available to answer any questions.



Proposed Long-Term Sustainment of MARCSIP “2039” Pricing - Motorola

Motorola Commitment to upgrade and support MARCSIP through 2039

- Extending already negotiated pricing model through 2039
- Upgrades system every two years through 2039
- Commitment to the investment in System with favorable opt out language if replacement technology replaces current platform
- No COLA pricing increases
- No penalty of cancellation after 2027



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MARCSIP - Additional Site Development

- **Ashtabula County - update**

- **Morrow County – update**

- **Highland County – update**

- **Preble County**

MARCS WAVE Project Update



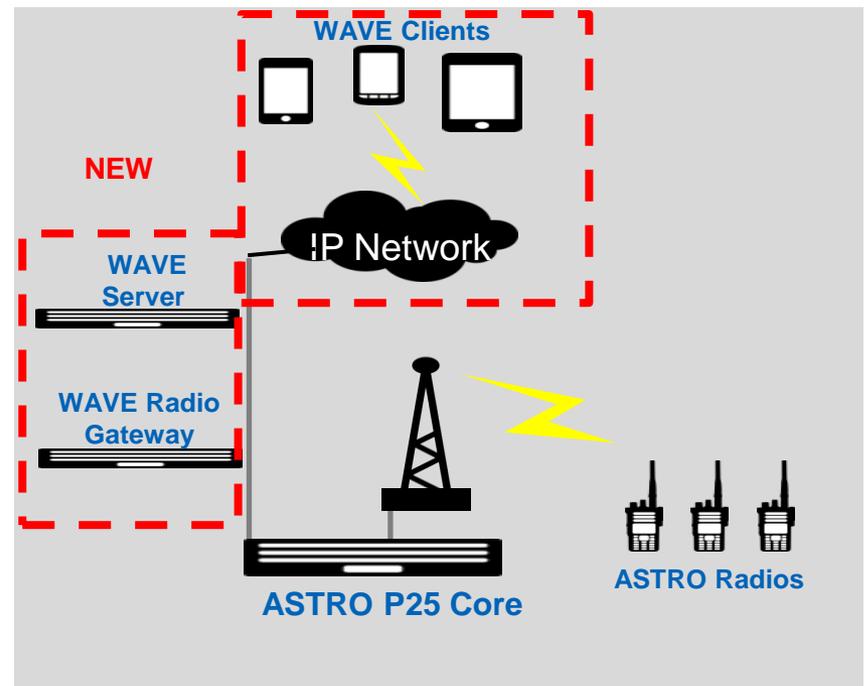
- Extends the MARCS system to smartphones, tablets, & desktops
- Delivered as part of the P25 system upgrade
- Planned installation weeks of 1/19-30/15
- Planned Go live/Training week of 2/2/15



MARCS WAVE UPTT System Capabilities

- **WAVE Client Infrastructure**
Initial 400 client deployment
Standard representative mix of mobile, desktop, web clients
Hardware supports 3,000-4,000 clients, 1,000 concurrent conversations
- **ASTRO P25 Controller Infrastructure**
Initial 50 talkgroup deployment
Hardware supports 250 talkgroups
Wireline digital P25 CORE connection
- **Server Infrastructure**
Dual redundant virtual windows servers
Active failover and load balancing
Three WAVE servers on each virtual machine

MARCS ASTRO P25 Wireline WAVE Configuration



MARCS WAVE Project Update



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