



Office of Emergency Management (OEM)

**Milwaukee County**

Christine Westrich, Director OEM

Erik Viel, Director Radio Services Division

IGA Amendment No.1, dated 5.3.2015

Dear OASIS 800 MHz Public Safety Radio System Subscriber:

This administrative amendment denotes the following updates to the Intergovernmental Agreement (IGA) between Milwaukee County and your municipal body:

1. Contact and address change applicable to both:

**IGA Paragraph 15 *and* EXHIBIT B<sup>1</sup>:**

Milwaukee County, Office of Emergency Management  
Milwaukee County Courthouse, Room 308  
901 N 9<sup>th</sup> St, Milwaukee, WI 53233  
Attn: Christine Westrich

2. The Governance Board Structure is updated to reflect the replacement of the Milwaukee County Chief Information Officer with the Milwaukee County Director of Transportation:

**IGA EXHIBIT F, Section 5.01:**

[2] The Milwaukee County Director of Transportation

Please direct all questions to either Christine Westrich [414] 278-4751 or Erik Viel [414] 278-4834.

We look forward to our imminent digital migration and we know this strengthens not only public safety for first responders and our community members, but it stands as a County pledge to the fortification of our municipal partners.

Sincerely,

Christine Westrich  
Director

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<sup>1</sup> Payments shall be made annually, commencing January 1, 2015. Payments shall be made via check written to "Milwaukee County Treasurer" and submitted to the new address noted above.

**INTERGOVERNMENTAL AGREEMENT  
MILWAUKEE COUNTY AND THE \_\_\_\_\_ OF \_\_\_\_\_  
PERMITTING ACCESS TO MILWAUKEE COUNTY'S  
PUBLIC SAFETY RADIO SYSTEM**

THIS AGREEMENT is entered into pursuant to Section 66.0301, Wisconsin Statutes, between Milwaukee County, a municipal body corporate (hereinafter referred to as "COUNTY"), and the \_\_\_\_\_ of \_\_\_\_\_, a municipal body within the County of Milwaukee, State of Wisconsin (hereinafter referred to as "SUBSCRIBER"), permitting the use of Milwaukee County's Public Safety Radio System as defined herein. Together, COUNTY and SUBSCRIBER shall be referred to as "PARTIES".

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**1. STATUS**

1.1 In recognition of SUBSCRIBER's intended long term participation with COUNTY's Public Safety Radio System; which is a direct replacement of the COUNTY's existing analog Project 16 trunked radio system, which shall be initially deployed as described in Section 5.2, and which may be expanded or replaced as described throughout this Agreement; and in consideration of public safety and coordination of services between COUNTY and SUBSCRIBER to the mutual benefit of both PARTIES, SUBSCRIBER is entitled to:

1.1a Use COUNTY's Public Safety Radio System for a minimum period of Fifteen (15) years from the date of execution of this AGREEMENT with option of Two (2) Five (5) year automatic renewals. All provisions of this AGREEMENT are applicable to the original term thereof and shall apply with equal force to the extended term. Should SUBSCRIBER elect not to execute the option for renewal, a six (6) month written notice to COUNTY will be required.

1.1b Prompt access, upon execution of the AGREEMENT, for the quantity of radios described in Exhibit A, "Initial and Growth Loading onto COUNTY's Public Safety Radio System". Exhibit A may be modified at any time upon mutual consent of the PARTIES.

**2. ACCESS**

2.1 The PARTIES agree that reliable, efficient operation of the Public Safety Radio System is a mutual objective. If high system usage should ever create a condition where public safety radios receive a system busy signal, public safety radios will preempt any other radio system users for the next available system access. To maintain a reliable system, COUNTY will manage and control access to the system.

2.2 Except for cases of Mutual Aid (which shall be defined by the Governance Board, herein after defined in Section 8), access to COUNTY's

Public Safety Radio System shall be limited to radio units assigned to designated staff, departments, and agents of SUBSCRIBER.

2.3 COUNTY may periodically monitor talk groups allocated to SUBSCRIBER for SUBSCRIBER's internal use for system management purposes including but not limited to maintenance, troubleshooting, system performance assessments, unusual traffic patterns (sudden jump in usage), policy and procedure compliance checks, etc.

**3. USAGE FEES**

3.1 Commencing January 1, 2015, and each year thereafter, on an annual basis, SUBSCRIBER shall submit to the COUNTY a usage fee (hereinafter referred to as "FEE") for the use of the COUNTY's Public Safety Radio System. FEE structure is identified herein, Exhibit B, "System Usage Fee Structure".

3.2 Subscriber agencies executing this Agreement after January 1, 2015 will pay retroactive FEES equal to the amount from January 1, 2015 to the date the Subscriber joins the County's Public Safety Radio System. No penalties will be applied. COUNTY reserves the right to exempt Subscriber Agency from retroactive FEES.

3.3 Commencing January 1, 2020, and each year thereafter, the FEE may be adjusted by COUNTY based on the percentage increase or decrease in the January Consumer Price Index (All Urban Consumers) for the Milwaukee area, as published by the U.S. Department of Labor, Bureau of Labor Statistics, or the generally accepted national replacement or successor index, as readjusted to the base month and computed by comparison of the January index with the index of the preceding January.

**4. CAPITAL IMPROVEMENT FUND**

4.1 For the purpose of this AGREEMENT, the Capital Improvement Fund (hereinafter referred to as the "FUND"), is a segregated fund that is under the

control of the Public Safety Radio System Governance Board (hereinafter defined in section 8). The FUND shall be used for the purpose of the betterment or replacement of the Public Safety Radio System and not for the use or sole and direct benefit of the COUNTY, SUBSCRIBER or other entity using the Public Safety Radio System. Financial contribution to said FUND is outlined in Exhibit B, "Capital Improvement Fund Fee Structure". FUND allocation will be contingent on a five (5) year Capital Plan approved by the Governance Board.

4.2 The PARTIES mutually agree to share the expense for the enhancement of and eventual replacement of the Public Safety Radio System, to be initially deployed as described in Section 5.2, throughout the Term of this Agreement.

4.3 Commencing January 1, 2018, and each year thereafter, on an annual basis, PARTIES will submit payments to the public safety Capital Improvement Fund. PARTIES will continue making such payments annually until a unanimous decision of the Governing Board agrees otherwise. Each SUBSCRIBER agency executing this AGREEMENT after January 1, 2018 shall be financially responsible for retroactive Capital Improvement Fees as of January 1, 2018 at the rate outlined in Exhibit B.

4.4 The Governance Board, from time to time, may review and recommend modifications to the FUND fee structure for the purpose of system upgrades, enhancements and/or replacement of the Public Safety Radio System. Modification to the FUND fee structure shall be mutually agreed upon by the PARTIES and shall be in writing, designated as a written amendment to the AGREEMENT.

4.5 The Governance Board will allocate monies from the FUND in order to procure contracted services to identify system requirements for both PARTIES, and perform planning, design and analysis in preparation for the Project 25 system replacement. Such services herein described, Section 4.5, will begin no later than the first quarter of 2028. New system build will commence upon approval of the Governance Board and the appropriate and necessary approvals of each PARTY.

4.6 If Milwaukee County ceases to operate a Public Safety Radio System, the Capital Improvement Fund will be dissolved and The Governance Board will recommend the proportional disposition of the Fund balance, if applicable, and seek the appropriate and necessary approval of the SUBSCRIBER and COUNTY authorities prior to disbursement

## 5. EQUIPMENT

5.1 COUNTY shall own and maintain the fixed Public Safety Radio System infrastructure, e.g.,

trunking controller, trunking base stations, trunking antenna systems, and certain other common system elements.

5.2 It is agreed at the time of execution of this AGREEMENT that the Public Safety Radio System will be an 800MHz Project 25 trunked radio system will be deployed with nine (9) transmit/receive sites operating in a simulcast transmission mode. It may be later expanded or replaced as described throughout this Agreement.

5.3 Mobiles, portables, radio control stations, and certain other peripheral equipment used by SUBSCRIBER to access COUNTY's Public Safety Radio System (collectively referred to "SUBSCRIBER RADIOS" or "USER RADIOS") shall be paid for and owned by SUBSCRIBER. COUNTY shall permit SUBSCRIBER to optionally purchase Subscriber Radios needed to satisfy SUBSCRIBER's communications requirements through COUNTY's cooperative purchasing vendor agreement "Contract for Service #1332". All SUBSCRIBER RADIO equipment or software so owned by SUBSCRIBER shall meet COUNTY's specifications (as defined by Exhibit D, "Project 25 Trunked Radio System Subscriber Radio Compliance Requirements" or the Exhibit's direct future replacement as provided by signed amendment to this Agreement ) and shall become part of SUBSCRIBER's inventory.

5.4 Dispatch consoles used by SUBSCRIBER to access COUNTY's Public Safety Radio System shall be owned by SUBSCRIBER. COUNTY shall permit SUBSCRIBER to optionally purchase wireline dispatch consoles needed to satisfy SUBSCRIBER's dispatch requirements through COUNTY's vendor agreement as approved by the vendor, however, all wireline dispatch consoles shall be of the model and provide the same electronic interface as those specified in "Contract for Service #1332". All dispatch equipment or software so owned by SUBSCRIBER shall become part of SUBSCRIBER's inventory. SUBSCRIBER shall be responsible for providing (including all costs to deploy and to operate and maintain) backhaul from the dispatch consoles to the Public Safety Radio System's shared core site at 2120 Davidson Road, Waukesha, WI. Backhaul requirements and specifications shall be provided by COUNTY vendor to SUBSCRIBER.

## 6. COUNTY'S RESPONSIBILITY

6.1 COUNTY agrees to purchase and install a Public Safety Radio System, to be initially deployed as described in Section 5.2 and to be expanded or replaced as described throughout this Agreement, for the use of COUNTY, SUBSCRIBER

and other contracted public safety and non-public safety agencies.

6.2 COUNTY is solely responsible for budget requests and appropriations, system contracts and for the standards of service relating to the deployment of the Public Safety Radio System.

6.3 COUNTY shall be responsible for FCC licensing for the Public Safety Radio System. COUNTY will solely hold the channel frequency licenses for county-wide public safety purposes.

6.4 COUNTY shall be responsible for maintaining operational quality and continuity of the initial deployment of Public Safety Radio System, as described in Section 5.2, according to the following provisions of its agreement "Contract for Service #1332": i) system availability (including normal operations as well as limited-failure modes of operation such as "fail-soft") of 99.999% and ii) talk-in and talk-out service area coverage reliability at a delivered audio quality (DAQ) level of 3.4 for a portable radio (with specifications that meet Exhibit D) on a swivel clip at belt level in 15 dB density buildings across the service area of the political boundary of Milwaukee County. COUNTY shall take reasonable and customary measures to ensure that quality diminishment and service interruptions are minimized. When system outages can be forecast or scheduled, COUNTY agrees to notify SUBSCRIBER 48 hours in advance. COUNTY agrees to permit SUBSCRIBER radios accessing the trunked radio system to utilize "fail-soft" capabilities of the network to maintain critical communications continuity with reduced talk-group capacity in the event of a trunked radio system outage.

6.5 COUNTY agrees that if more favorable terms are developed for use of COUNTY's Project Public Safety Radio System<sup>25</sup> trunked radio system that those terms will be made available to both PARTIES upon signed amendment to this AGREEMENT.

6.6 Milwaukee County shall maintain its current funding level, plus applicable increases as identified in Section 3.3 herein. In recognition that additional municipalities or additional user agencies sign an Agreement with the COUNTY for long term participation in the Public Safety Radio System, it is understood that the County shall first have the right to recoup the additional operating costs beyond the County's current financial obligation and those not being covered by the Subscribers to the system. The remaining monies above the annual operating costs shall be placed in the Capital Improvement Fund.

6.7 COUNTY will manage and administer the System database records containing the information related to inventory, configuration, programming history, software version control, radio

IDs, service levels, statistical usage analysis, etc. for SUBSCRIBER's subscriber radios used on the System.

6.8 COUNTY will provide a System Key to SUBSCRIBER should SUBSCRIBER agree to the provisions in and meet the requirements of Exhibit E, "Radio System Key Agreement". For the duration that a System Key is held by SUBSCRIBER, it shall be recognized as the property of the COUNTY and use of it shall be entirely governed by Exhibit E.

**7. SUBSCRIBER'S RESPONSIBILITY**

7.1 The PARTIES agree that SUBSCRIBER will utilize COUNTY's Public Safety Radio System for purposes which are consistent with this AGREEMENT and in accordance with public safety purposes as defined by Title 47 of the Code of Federal Regulations (CFR) Part 90 Private Land Mobile Radio Services §90.20 Public Safety Pool or the appropriate section of CFR that pertain to the use of the frequencies and/or technologies of the Public Safety Radio System's direct future replacement.

7.2 SUBSCRIBER agrees to designate an official as a contact person for policy issues and a staff member as a contact person for technical matters. The contact information for that person is as follows:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone #: \_\_\_\_\_  
Email: \_\_\_\_\_

7.3 SUBSCRIBER shall be responsible for acquiring, installing, maintaining, and operating its equipment according to the terms of this AGREEMENT and consistent with applicable FCC rules. SUBSCRIBER shall likewise be responsible for all costs associated with programming, installing, templating, and otherwise preparing such subscriber radios for service.

7.4 SUBSCRIBER agrees to train its users on proper and appropriate use of the Public Safety Radio System using training content consistent with that provided by COUNTY to its users. SUBSCRIBER may request from COUNTY's vendors (at no cost to COUNTY) recommendations and source material for inclusion in the user training administered by SUBSCRIBER staff.

7.5 The PARTIES agree that if in-building portable radio coverage is required to serve SUBSCRIBER's needs beyond those defined in paragraph 5.2 above, the design, procurement,

installation, and maintenance of additional equipment or software to achieve those coverage levels shall be the sole responsibility of SUBSCRIBER and shall not compromise the operation of COUNTY's Public Safety Radio System.

7.6 Except for cases of Mutual Aid (which shall be defined by the Governance Board), SUBSCRIBER shall not permit any party other than those identified in Exhibit A to access COUNTY's Public Safety Radio System without the prior written consent of the COUNTY.

7.7 Except for cases of Mutual Aid (which shall be defined by the Governance Board, herein after defined in Section 8) records of SUBSCRIBER's radios eligible for participation on COUNTY's Radio System shall be maintained by SUBSCRIBER staff in accordance with SUBSCRIBER's formal equipment inventory procedure with a copy furnished to COUNTY. The PARTIES agree to collaborate to ensure the accuracy of the inventory. Annually, on the day SUBSCRIBER's inventory is due, SUBSCRIBER shall notify COUNTY of the number of radios in use. Each Subscriber Radio recorded in the inventory shall be counted as one access unit and shall count towards the total number of permitted units identified in Exhibit A.

7.8 SUBSCRIBER agrees to operate its equipment in accordance with the operational and technical standards and procedures of the Milwaukee County Public Safety Radio System Governance Board.

7.9 Should SUBSCRIBER agree to the provisions in and meet the requirements of Exhibit E, "Radio System Key Agreement", SUBSCRIBER shall receive and use any and all System Keys according to the terms of Exhibit E.

7.10 COUNTY shall enforce all provisions in Section 7 to COUNTY departments and divisions using the Public Safety Radio System.

## 8. GOVERNANCE BOARD

The Governance Board creates and publishes administrative plans and procedures regarding the usage, membership, operations, maintenance, and upgrade of the Public Safety Radio System. Additionally, the Governance Board shall provide guidance on such matters as: long range system planning and improvements, problem solving and dispute resolution, system expansion, process for joint purchasing of new system, network quality and performance, and other such matters that may arise from time to time.

## 9. LIMITATIONS

9.1 Nothing in this AGREEMENT shall prevent SUBSCRIBER from applying for or securing licenses on other FCC licensed radio channels to supplement the Public Safety Radio System's communications as may be determined to be essential to SUBSCRIBER's operations provided that operation of these supplementary systems does not compromise proper operation of COUNTY's Public Safety Radio System.

9.2 If it is determined that Public Safety Radio System upgrades are essential to further SUBSCRIBER's objectives, SUBSCRIBER may elect to invest funds to facilitate these system upgrades. System upgrades funded by SUBSCRIBER will require the approval of the Governance Board.

9.3 No party to this AGREEMENT may assign its interest in this AGREEMENT to any other party or individual.

## 10. TERMINATION

10.1 Either party's right to terminate this AGREEMENT shall be only for-cause if either party fails to fulfill its obligations under the terms of the AGREEMENT. Either shall give written notice of intent to terminate the AGREEMENT for-cause at least 180 days prior to the effective date of termination during which the alleged breach may be cured.

10.2 Notwithstanding the above, COUNTY may immediately terminate SUBSCRIBER's ability to access the Public Safety Radio System should SUBSCRIBER fail to meet the obligations of Sections 3.1, 4.3, 5.3, 7.1, 7.3, 7.7, and 7.9 of this AGREEMENT. Should SUBSCRIBER's access be terminated, it shall be solely responsible for: i) any and all costs associated with reconfiguring, replacing, or reprogramming its subscriber radio and/or dispatch console equipment to operate on another radio system, ii) the costs associated with damages to the radio system caused by SUBSCRIBER's direct action resulting in its immediate termination

10.3 In the event of termination for cause of either PARTY, breaching PARTY agrees to pay all use FEES as well as Capital Improvement Fund fees for those periods prior to its termination. Fees paid to the FUND, up to the point of termination, are non-refundable and will remain deposited into the Capital Improvement Fund.

## 11. LIABILITY

Subject to the provisions of Wisconsin statutory and case law, SUBSCRIBER and COUNTY hereby indemnify and shall defend and hold the other harmless for actions by each party's respective

employees, agents, or authorized representatives and against any and all suits, actions, legal or administrative proceedings, claims, demands, damages, and liabilities arising out of the injury or death of either party's employees, agents, or authorized representatives caused, occasioned, or contributed to in whole or in part, by reason of any act, omission, fault or negligence whether active or passive of either party or of its agents or anyone acting under their direction or control or on their behalf in connection with or incidental to the performance of this AGREEMENT. Each party's aforesaid indemnity and hold harmless obligations, or portions or applications thereof, shall apply even in the event of the fault or negligence, whether active or passive, of the party indemnified to the fullest extent permitted by law but in no event shall they apply to the liability caused by the sole negligence or willful misconduct of the party indemnified or held harmless.

**12. IMMUNITY**

All Parties to this Agreement are governmental entities entitled to immunities, including those in Section 893.80, Wisconsin Statutes. Nothing contained herein shall waive the rights and defenses to which each Party may be entitled under law, including but not limited to the immunities, limitations and defenses under Section 893.8, Wisconsin common law or other statutes.

**13. DISPUTES**

Both PARTIES shall attempt to resolve disputes informally as they arise. In the event that informal dispute resolution is unsuccessful, either party may bring the dispute before a third party mediator for consideration and final resolution. Nothing in this dispute resolution process shall preclude either party from pursuing remedies available under the law.

**14. CHANGES**

Changes to this AGREEMENT will be mutually agreed upon by and between the COUNTY and the SUBSCRIBER and shall be in writing and designated as written amendments to the AGREEMENT.

**15. NOTICES**

Notices to COUNTY provided for in this AGREEMENT shall be sufficient if sent by certified or registered mail, postage prepaid, addressed to: Milwaukee County, Department of Administrative Services, Information Management Services Division, 2711 West Wells St, Milwaukee, Wisconsin, 53208, Attn: IMSD Manager. Notices to SUBSCRIBER shall be sufficient if sent by certified or registered mail, postage prepaid, addressed to:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Phone #: \_\_\_\_\_  
Email: \_\_\_\_\_

Signature Page to Follow:





**CONTRACT FORM** 1684 R5 (Refer to ADMINISTRATIVE MANUAL Section 1.13, for procedures)

Mail to:  
 Preliminary: Office of the Comptroller, Contract Signatures, Room 301 Courthouse  
 Final: Office of the Comptroller, Accounts Payable, Room 301 Courthouse  
 Community Business Development Partners, 8th Floor City Campus

CONTRACT TYPE	
Professional Service - Operating	
Professional Service - Capital	
Purchase of Service	
Preliminary	Final

DEPARTMENT NAME	AGENCY NO.	DEPARTMENT (HIGH) ORG
Office of Emergency Management	480	4800

**VENDOR INFORMATION**

VENDOR NO.	ORDER TYPE	NEW or	AMEND	CONTRACT NO.

NAME OF VENDOR	ADDRESS
Attn:	

TAX I.D. NO.	EFFECTIVE DATES: begin date      end date	LENGTH OF CONTRACT (IN MONTHS)	AMENDMENT ONLY: DOLLAR CHANGE	TOTAL CONTRACT AMOUNT

**ACCOUNTING INFORMATION**

Year to be Expended	Line No	Fund	Agency	Org Unit	Activity	Function	Object	Job Number	Report Cat	Units	Amount to be Expended/ Amendment

**PURPOSE OF CONTRACT**

Subscriber fees for 2015 based upon the Intergovernmental Agreement signed between the County of Milwaukee and the Subscriber. Fees are \$2/radio/month.

Was County Board approval received prior to contract execution or contract amendment or extension?  
 If YES, give County Board File No. 14-696 Date Approved 9.25.2014  
 If NO, why is County Board approval not required? \_\_\_\_\_

Was Contract fully executed prior to work being performed (all signatures received)?  YES  NO

Is Vendor a certified professional service DBE?  YES  NO

Christine Westrich	<input type="text"/>	Director, Office of Emergency Management
Prepared By	Date	Title
	<input type="text"/>	
Signature of County Administrator	Date	Title

**EXHIBIT A**

**INITIAL AND GROWTH LOADING  
Milwaukee County Public Safety Radio System  
\_\_\_\_ of \_\_\_\_ Participation**

Below please list any/all quantities of subscriber radios, by Agency, for initial and growth (future) loading:

<b>Agency</b>	<b>Item Description</b>	<b>Initial Loading</b>	<b>Growth Loading</b>
City of ____ Police	Total Subscriber Radios:		
City of ____ Fire	Total Subscriber Radios:		
City of ____ DPW	Total Subscriber Radios:		

Below please list any/all quantities of dispatch consoles to be connected

**EXHIBIT B**

**SYSTEM USAGE FEE AND CAPITAL IMPROVEMENT FUND FEE STRUCTURE  
Milwaukee County Public Safety Radio System  
\_\_\_\_\_ of \_\_\_\_\_ Participation**

\_\_\_\_\_ of \_\_\_\_\_ shall pay COUNTY a sum for per active subscriber radio per month. An active subscriber radio is one whose identifier (ID) is authorized for use on system for use on \_\_\_\_\_'s daily-use talk groups.

Additionally, \_\_\_\_\_ of \_\_\_\_\_ shall pay COUNTY a sum for per active subscriber radio per month. Fee will be maintained in a segregated fund for the use of system enhancement and replacement. An active subscriber radio is one whose identifier (ID) is authorized for use on system for use on \_\_\_\_\_'s daily-use talk groups.

Usage and Capital-Improvement Fund Fee Structure is as follows:

Year	Usage Fee Per Radio Per Month	Capital Improvement Fund Fee Per Radio Per Month	Total Fee Per Radio Per Month
2014	\$0	\$0	\$0
2015	\$2	\$0	\$2
2016	\$5	\$0	\$5
2017	\$9	\$0	\$9
2018	\$12	\$2	\$14
2019	\$14	\$3	\$17
2020	\$14*	\$4	\$18*
2021		\$5	\$19*
2022 and beyond		\$5 **	\$19****

\* - FEE may be adjusted by COUNTY for an applicable increase as identified in Section 3.3 herein

\*\* - Unless mutually agreed to in writing by both PARTIES to increase fee for just cause. Just cause would be considered a system enhancement, upgrade or system replacement as approved by the Governing Board.

Payments shall be made annually, commencing January 1, 2015. Payments shall be made via check written to "Milwaukee County Treasurer" and submitted to:

Milwaukee County IMSD  
C/o Radio Administrator  
2711 West Wells Street  
Milwaukee, WI 53208

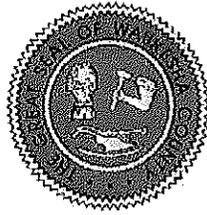
**EXHIBIT C**

**RESERVED**

**EXHIBIT D**

**PROJECT 25 TRUNKED RADIO SYSTEM SUBSCRIBER RADIO COMPLIANCE REQUIREMENTS**  
**Milwaukee County Public Safety Radio System**  
**\_\_\_\_\_ of \_\_\_\_\_ Participation**

**Waukesha County**



**And**

**Milwaukee County**



**PROJECT 25 TRUNKED RADIO SYSTEM  
SUBSCRIBER RADIO COMPLIANCE REQUIREMENTS**

Version: April 18, 2014



## Waukesha County and Milwaukee County Project 25 Trunked Radio System



### Overview and Scope

This document describes the technical specifications to which subscriber radios (also referred to as "user radios", "portable radios" and "mobile radios") that are to operate natively on the Waukesha County and Milwaukee County Project 25 Trunked Radio System (referred to as "the system") that must comply. No model of subscriber radio shall be allowed to operate on the system until and unless the following conditions are met:

- 1) The manufacturer or vendor of the subscriber radio states in writing (see Exhibit B) that they comply with the full requirements of the specifications included in this document, referred to together as "the compliance specifications" and listed in Exhibit A, and
- 2) Certification testing has been successfully completed by Waukesha County and Milwaukee County (referred to as "the Counties") to demonstrate that the subscriber radio model does indeed meet the compliance specifications.

Detailed procedures for certification testing shall be developed and provided in a separate document but they shall be limited to testing only those compliance specifications included in this document.



Important Note:

The contents of this document are the technical specifications that are required for a subscriber radio model to be allowed to operate natively on the system. Any statement that a specific subscriber radio model does comply with these requirements should in no way be interpreted as an endorsement by Waukesha County, Milwaukee County, or their representatives. Agencies, departments, or other organizations that procure new radio models to operate on the system must evaluate all compliant subscriber radios (i.e., those that successfully complete the processes described in this document) and they and the vendor of that subscriber radio model shall be responsible for ensuring that all procured subscriber radios meet their requirements for functionality, durability, and overall fit to their operations. Compliance with these minimum requirements for access to the system is in no way a guarantee that a compliant subscriber radio model will provide the coverage or performance necessary to satisfy the individualized needs of an organization when used on the system.

### References and Terms

This document references Waukesha County's Request for Proposals (RFP) #1332 as released on April 12, 2013, as amended three times, and as posted at the following Waukesha County website: <https://purchasing.waukeshacounty.gov>.



## Waukesha County and Milwaukee County Project 25 Trunked Radio System



This document references the Telecommunications Industry Association's TIA-102 series on Land Mobile Communications Radio Land Mobile Communications Radio Standards (also known as the Associations of Public Safety Communications Officers, International Project 25 and referred to as "P25").

- The term "RFP #1332" shall mean the above-described RFP document including all of its amendments.
- The term "radio model" shall mean the specific trade/brand designation of a subscriber radio.
- The term "native" or "natively" shall mean the method of operating on the system in which the radio model itself exchanges voice and/or data signally directly with the system (as opposed to a radio that communicates on the system via a gateway or a patch)
- The term "base configuration" shall mean the combination of hardware and software of a radio model that meets all of the Mandatory specifications (i.e., unless explicitly stated, the base configuration of each and all radio models must meet all Mandatory specifications).
- The term "Supported Existing Radio" is a specific radio unit that is both:
  - One of the following manufacturers' product lines: EF Johnson ES-51, EF Johnson ES-53, EF Johnson VP-600, EF Johnson VP-900, Motorola XTL, Motorola XTS, and Motorola APX; and
  - Listed by the specific trunking identifier (ID) programmed into it in the radio ID database of Waukesha or Milwaukee County's analog trunked radio system as of April 18, 2014.
- The term "New Radio" is a specific radio unit that is not a "Supported Existing Radio".

### **Compliance Requirements**

Appendix A of this document lists all specifications from RFP #1332 that apply to portable and mobile subscriber radios. Each specification includes one of the following compliance designations which hold the accompanying definition:

- A specification that is "Mandatory" is required of the radio model in its base configuration and the specification must be fully met as described by the referenced section of RFP #1332 in order for the radio model to be allowed to operate on the system.
  - A designation of "Conditional Mandatory" means that the radio model, in its base configuration, must meet only as subset of the specification as described by the referenced section of RFP #1332 and as limited by the accompanying "Compliance Requirement Notes".
- A specification that is "Recommended" is strongly suggested by the operators of the system but it is not required in the radio model's base configuration (i.e., the specification, if provided, may be met by the addition of hardware or software to the base configuration) and if it is provided the specification must be fully met as described by the referenced section of RFP #1332.
- A specification that is "Optional" is left to the user agency's discretion to purchase and/or enable but it is not required in the radio model's base configuration (i.e., the specification, if provided, may be met by the addition of hardware or software to the base configuration) and if it is provided the specification must be fully met as described by the referenced section of RFP #1332.

Waukesha County and Milwaukee County intend to operate the system, including the individual Counties' simulcast subsystem, under one System ID, therefore, there is no specification or requirement that any



**Waukesha County and Milwaukee County  
Project 25 Trunked Radio System**



radio model support multiple System ID's. Individual agencies may, however require for transitional or interoperability purposes a radio model to support multiple Project 25 System ID's and those agencies should evaluate their own requirements and ensure the subscriber radios they procure meet those requirements.

**Each individual agency shall be responsible to bear their costs associated with upgrading or replacing their subscriber radios if/when the system is upgraded to Project 25 Phase II operations<sup>1</sup>. To minimize the future financial and operational impact of such an upgrade, Waukesha County and Milwaukee County strongly recommend that agencies procure subscriber radios that require minimal changes in order to comply with Project 25 Phase II operations (i.e., that they comply with the requirements of RFP 1332 which state: "radios shall be able to be upgraded to Project 25 Phase II without the replacement of any proposed portable/mobile subscriber radio hardware" and "[u]pgrade to Project 25 Phase II may include the addition or reconfiguration of portable/mobile subscriber software."). All risks and costs associated with procuring a radio that is either not capable of any upgrade to Project 25 Phase II operations or that is not capable of software/configuration-only changes to enable Project 25 Phase II operations shall be borne entirely by the specific agency that chooses to procure a subscriber radio.**

Features or specifications above or beyond those listed in Appendix A are at "buyer's discretion" meaning that they are not Mandatory or Recommended and they will not be tested during they certification process. Should any such feature or specification prevent a radio model from meeting the compliance specifications of Appendix A, that radio model will not be allowed to operate on the system.

 Important Note:	New Radios and Supported Existing Radios have different designations for some specifications. This is intended to allow Supported Existing Radios to be "grandfathered in" to allow their operation on the system without requiring that they meet the same specifications as New Radios. Furthermore, Supported Existing Radios will not be subjected to the certification testing described above (however New Radios of the same model will be).
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**Compliance Process**

Any radio vendor seeking for a new radio model to be allowed to operate on the system shall designate in writing, using Appendix B, that the base configuration of that radio model meets all Mandatory specifications. They shall also use Appendix B to designate which Recommended and Optional specifications the radio model is capable of meeting and if additional hardware or software is required in order to meet the specification. They shall answer the additional specific questions included in Appendix B and they shall attach, at a minimum, the Supplier's Declaration of Compliance (SDOC) for the radio model as it was received from their participation in a Compliance Assessment Program.

<sup>1</sup> At the time of the publication of this document, Waukesha and Milwaukee Counties have no plans to upgrade the system to Project 25 Phase II operations, however, the Counties recognize that industry, regulatory, or operational changes may require such an upgrade during the lifespan of the system.



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(Additional documentation may be provided with Appendix B so long as it is in support of the completion of Appendix B.)

The radio vendor shall submit the completed Appendix B to Waukesha County Radio Services at the following contact information:

- Email: CPetterson@waukeshacounty.gov
- Fax Number: 262-548-7855

A list of the radio models that have successfully completed this compliance process will be posted at the Waukesha County Radio Services website: <http://www.waukeshacounty.gov/defaultwc.aspx?id=37419>.



Important Note:

Waukesha County and Milwaukee County strongly suggest that user agencies that buy new radios to operate on the system obtain written assurance from their vendor that the vendor will bear any and all costs associated with correcting any deficiency their radio model(s) may have in meeting any compliance specifications as identified during the certification testing process.

## **Expectations for Certification Process**

As is described above, detailed procedures for certification testing shall be developed and provided in a separate document. Those testing procedures shall be limited to testing only those compliance specifications included in this document.

Completion of the certification process is required initially to allow native operations of the radio model on the system and again any time there are hardware, software, or firmware modifications to the radio model that affect its ability to meet these compliance requirements. The vendor of the radio model shall notify Waukesha County Radio Services at the contact information listed above if such a need to recertify a radio model. Additionally, Waukesha County Radio Services (WCRS) may retest a radio model at any time and the results may modify prior approvals of the certification process.

Waukesha County will require each of the following prior to initiating the subscriber radio certification process:

- Radios to be tested (two each required)
- Programming software
- Programming cable(s) necessary for programming of radios being tested
- Keyloader device(s) used to load encryption and/or authentication keys
- Keyloader cable(s) necessary for loading of encryption and authentication keys to radios being certified
- Hardware based "Master" system key for system ID 0692
- Hardware based blank "Child" keys (3 each required)
- Software/Hardware necessary for programming of hardware based "Child" keys



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Any items (other than Windows PCs and power supplies) not listed needed to successfully program the radios for P25 and conventional operation shall also be required of the vendor. Two sets of radios and applicable accessories of each type will be required for certification. (If radio programming materials are common between a vendor's different radio models, that vendor will not be required to submit one set of programming materials for each radio model, however, the vendor shall ensure that Waukesha County Radio Services has one set of materials for all applicable radio models and that Waukesha County Radio Services is informed of which programming materials correspond to which radio models.)

Upon successful certification, one sample radio will be returned to the vendor with the remainder of the items to be retained by Waukesha County. In the event the radios fail certification, all radios and other items except for the hard key will be returned. Waukesha County reserves the right to selectively waive the requirement for any listed items.

Waukesha County will provide in advance a vendor agreement governing distribution of the master key. Radios will not be certified until this is signed and returned. Waukesha County will require one software key as well as the hard key since the certification process will include testing to ensure that soft keys will not operate in a hard key environment.

The certification process will be performed at no monetary charge to the vendor. In the event a radio fails certification, Waukesha County will work with the vendor to identify any deficiencies and retest as necessary. A "no issues" certification is expected to be completed within 30 days.



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**Appendix A – Compliance Specifications**

Specification as Stated in Section VI of RFP #1332		Compliance Requirement for New Radios	Compliance Requirement for Supported Existing Radios	Compliance Requirement Notes
<b>G. Technical Requirements: Portable Subscriber Radios</b>				
<b>1. Portable Subscriber Radio SDOC Requirements</b>				
		Mandatory	Not Applicable	
	2. Portable Subscriber Radio Mode of Operation Requirements	Mandatory	Mandatory	It is recommended that all radios support a mix of conventional channels and trunked talkgroups in any single zone ("bank"). Vendors shall declare if this operation is supported for each model being evaluated for compliance.
	3. Portable Subscriber Radio Vocoder Requirements	Mandatory	Mandatory	It is recommended that all radios support the AMBE +2 vocoder. Vendors shall declare if this vocoder is supported for each model being evaluated for compliance.
	<b>4. Portable Subscriber Radio P25 Trunking Feature Requirements</b>			
	a) Group Voice Calls and Broadcast Group Call	Mandatory	Mandatory	
	b) Emergency Alarm	Mandatory	Mandatory	
	c) Emergency Group Call	Mandatory	Mandatory	
	d) Individual Voice Call	Recommended	Recommended	
	e) Announcement Group Call	Mandatory	Mandatory	
	f) All Call / System Call	Mandatory	Mandatory	
	g) Radio Check	Recommended	Recommended	
	h) Call Alert	Recommended	Recommended	
	i) Radio Unit Inhibit/Uninhibit	Mandatory	Mandatory	
	j) Radio Unit Monitoring	Recommended	Recommended	
	k) Short Message	Optional	Optional	The compliance specification shall be per TIA-102.AABD-A which uses a 2 Byte exchange of data and not per the "Functional Requirement" as described in the RFP.
	l) Status Query / Status Update	Recommended	Recommended	
	m) AES Encryption	Optional	Optional	
	n) Registration/ Roaming	Mandatory	Mandatory	
	o) Affiliation	Mandatory	Mandatory	



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Specification as Stated in Section VI of RFP #1332	Compliance Requirement for New Radios	Compliance Requirement for Supported Existing Radios	Compliance Requirement Notes
p) Over-The-Air-Rekeying (OTAR)	Optional	Optional	This feature is not currently supported by the system infrastructure and additional infrastructure equipment is required to enable it. If such infrastructure equipment is deployed, the functionality must meet the requirements as described in the RFP.
q) Radio Authentication	Mandatory	Mandatory	
5. Non-P25 Trunking Feature Requirements			
a) Over-The-Air Reprogramming (OTAP)	Not Applicable	Not Applicable	This feature is not currently supported by the system infrastructure and additional infrastructure equipment is required to enable it.
b) Dynamic Regrouping	Optional	Optional	
6. Portable Subscriber Radio Scan Mode Requirements	Mandatory	Mandatory	
7. Portable Subscriber Radio – Radio Parametric Requirements			
a) Frequency Band	Mandatory	Conditional	For Existing Radios Only: Requirements a.i.1, a.i.2, and a.i.i.1 are not required
b) Channel Spacing	Mandatory	Mandatory	
c) Frequency Generation	Mandatory	Mandatory	
d) Transmitter: Power	Mandatory	Mandatory	
e) Transmitter: Modulation Limiting	Mandatory	Mandatory	
f) Transmitter: Audio Frequency Response	Mandatory	Mandatory	
g) Transmitter: Audio Distortion	Mandatory	Mandatory	
h) Transmitter: FM Hum and Noise Ratio	Mandatory	Mandatory	
i) Transmitter: Conducted Spurious Emissions	Mandatory	Mandatory	
j) Transmitter: Time Out Timer	Mandatory	Mandatory	
k) Transmitter/Receiver: Signaling Digital Mode	Mandatory	Mandatory	
l) Receiver: Reference Sensitivity	Mandatory	Mandatory	
m) Receiver: Adjacent Channel Rejection	Mandatory	Mandatory	
n) Receiver: Spurious Response Rejection	Mandatory	Mandatory	
o) Receiver: Intermodulation Rejection	Mandatory	Mandatory	
p) Receiver: Audio Frequency Response	Mandatory	Mandatory	
q) Receiver: Audio Distortion	Mandatory	Mandatory	



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Specification as Stated in Section VI of RFP #1332	Compliance Requirement for New Radios	Compliance Requirement for Supported Existing Radios	Compliance Requirement Notes
r) Receiver: Audio Output	Mandatory	Mandatory	
s) Receiver: Squelch Tail Elimination	Recommended	Recommended	
8. Portable Subscriber Radio Programming Capacity Requirements	Mandatory	Mandatory	
9. Portable Subscriber Radio Connector Requirements	Mandatory	Mandatory	Exceptions will be allowed for specialty devices (covert portables, telemetry/SCADA radios, transit mobiles, etc.).
10. Portable Subscriber Radio – Models to be Proposed	Conditional Mandatory	Conditional Mandatory	Any portable subscriber radio must: i) have built-in speaker and microphone; ii) have the abilities to power radio on/off, control volume, generate PTT, select different talkgroups/channels; iii) operate Mandatory features; iv) generate emergency message; v) display at least 1 line of 12 characters; and vi) include a half-wave flexible dipole antenna. Exceptions will be allowed for specialty devices (covert portables, telemetry/SCADA radios, transit mobiles, etc.).
11. Portable Subscriber Radio – Full Keypad Model Requirements	Conditional Mandatory	Conditional Mandatory	
12. Portable Subscriber Radio – Limited Keypad Model Requirements	Conditional Mandatory	Conditional Mandatory	
13. Portable Subscriber Radio – Public Service Model Requirements	Conditional Mandatory	Conditional Mandatory	
14. Portable Subscriber Radio – Environmental Requirements	Recommended	Recommended	
15. Portable Subscriber Radio Battery Charging Requirements	Recommended	Recommended	
16. Portable Subscriber Radio Battery Charger Unit Requirements	Recommended	Recommended	
17. Portable Subscriber Radio – Hip-Worm Configuration	Not Applicable	Not Applicable	
18. Portable Subscriber Radio – Shoulder Public Safety Mic Configuration	Not Applicable	Not Applicable	
19. Portable Subscriber Radio – Programming Security	Mandatory	Mandatory	
20. Portable Subscriber Radio Programming Requirements	Not Applicable	Not Applicable	
21. Portable Subscriber Radio Project 25 Phase II Migration Requirements	Recommended	Recommended	
22. Portable Subscriber Radio – Requirements for Upgrades to Existing Portable Radios	Not Applicable	Not Applicable	
H. Technical Requirements: Mobile Subscriber Radios			
1. Mobile Subscriber Radio SDOC Requirements	Mandatory	Mandatory	



**Waukesha County and Milwaukee County  
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Specification as Stated in Section VI of RFP #1332	Compliance Requirement for New Radios	Compliance Requirement for Supported Existing Radios	Compliance Requirement Notes
2. Mobile Subscriber Radio Mode of Operation Requirements	Mandatory	Mandatory	It is recommended that all radios support a mix of conventional channels and trunked talkgroups in any single zone ("bank"). Vendors shall declare if this operation is supported for each model being evaluated for compliance.
3. Mobile Subscriber Radio Vocoder Requirements	Mandatory	Mandatory	It is recommended that all radios support the AMBE +2 vocoder. Vendors shall declare if this vocoder is supported for each model being evaluated for compliance.
4. Mobile Subscriber Radio P25 Trunking Feature Requirements	Mandatory	Mandatory	
a) Group Voice Calls and Broadcast Group Call	Mandatory	Mandatory	
b) Emergency Alarm	Mandatory	Mandatory	
c) Emergency Group Call	Mandatory	Mandatory	
d) Individual Voice Call	Recommended	Recommended	
e) Announcement Group Call	Mandatory	Mandatory	
f) All Call / System Call	Mandatory	Mandatory	
g) Radio Check	Recommended	Recommended	
h) Call Alert	Recommended	Recommended	
i) Radio Unit Inhibit/Uninhibit	Mandatory	Mandatory	
j) Radio Unit Monitoring	Recommended	Recommended	The compliance specification shall be per TIA-102.AABD-A which uses a 2 Byte exchange of data and not per the "Functional Requirement" as described in the RFP.
k) Short Message	Optional	Optional	
l) Status Query / Status Update	Recommended	Recommended	
m) AES Encryption	Optional	Optional	
n) Registration/ Roaming	Mandatory	Mandatory	
o) Affiliation	Mandatory	Mandatory	This feature is not currently supported by the system infrastructure and additional infrastructure equipment is required to enable it. If such infrastructure equipment is deployed, the functionality must meet the requirements as described in the RFP.
p) Over-The-Air-Rekeying (OTAR)	Optional	Optional	
g) Radio Authentication	Mandatory	Mandatory	



**Waukesha County and Milwaukee County  
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Specification as Stated in Section VI of RFP #1332	Compliance Requirement for New Radios	Compliance Requirement for Supported Existing Radios	Compliance Requirement Notes
5. Non-P25 Trunking Feature Requirements			
a) Over-The-Air Reprogramming (OTAP)	Not Applicable	Not Applicable	This feature is not currently supported by the system infrastructure and additional infrastructure equipment is required to enable it.
b) Dynamic Regrouping	Optional	Optional	
6. Mobile Subscriber Radio Scan Mode Requirements	Mandatory	Mandatory	
7. Mobile Subscriber Radio – Radio Parametric Requirements			
a) Frequency Band	Mandatory	Conditional	For Existing Radios Only: Requirements a.i.1, a.i.2, and a.ii.1 are not required
b) Channel Spacing	Mandatory	Mandatory	
c) Frequency Generation	Mandatory	Mandatory	
d) Transmitter: Power	Mandatory	Mandatory	
e) Transmitter: Modulation Limiting	Mandatory	Mandatory	
f) Transmitter: Audio Frequency Response	Mandatory	Mandatory	
g) Transmitter: Audio Distortion	Mandatory	Mandatory	
h) Transmitter: FM Hum and Noise Ratio	Mandatory	Mandatory	
i) Transmitter: Conducted Spurious Emissions	Mandatory	Mandatory	
j) Transmitter: Time Out Timer	Mandatory	Mandatory	
k) Transmitter/Receiver: Signaling Digital Mode	Mandatory	Mandatory	
l) Receiver: Reference Sensitivity	Mandatory	Mandatory	
m) Receiver: Adjacent Channel Rejection	Mandatory	Mandatory	
n) Receiver: Spurious Response Rejection	Mandatory	Mandatory	
o) Receiver: Intermodulation Rejection	Mandatory	Mandatory	
p) Receiver: Audio Frequency Response	Mandatory	Mandatory	
q) Receiver: Audio Distortion	Mandatory	Mandatory	
r) Receiver: Audio Output	Mandatory	Mandatory	
s) Receiver: Squelch Tail Elimination	Recommended	Recommended	
8. Mobile Subscriber Radio Programming Capacity Requirements	Mandatory	Mandatory	
9. Mobile Subscriber Radio Connector Requirements	Mandatory	Mandatory	



**Waukesha County and Milwaukee County  
Project 25 Trunked Radio System**



Specification as Stated in Section VI of RFP #1332	Compliance Requirement for New Radios	Compliance Requirement for Supported Existing Radios	Compliance Requirement Notes
10. Mobile Subscriber Radio Physical Construction Requirements	Not Applicable	Not Applicable	
11. Mobile Subscriber Radio – Models to be Proposed	Conditional	Conditional	
12. Mobile Subscriber Radio – Public-Safety Standard Control for Vehicle Requirements	Mandatory	Mandatory	
13. Mobile Subscriber Radio – Public-Safety Standard Control for Motorcycle Requirements	Conditional	Conditional	Any mobile subscriber radio must have speaker and microphone plus ability to power radio on/off, control volume, generate PTT, select different talkgroups/channels, operate Mandatory features, generate emergency message, display at least 1 line of 12 characters, and fixe-mount (non-magnetic-mount) dipole antenna. Exceptions will be allowed for specialty devices (covert portables, telemetry/SCADA radios, transit mobiles, etc.).
14. Mobile Subscriber Radio – Public-Safety Standard Control for Extreme (Fire External) Conditions	Mandatory	Mandatory	
15. Mobile Subscriber Radio – Public-Safety Expanded Control Requirements	Conditional	Conditional	
16. Mobile Subscriber Radio – Public-Safety Microphone (or Handheld) Control Requirements	Mandatory	Mandatory	
17. Mobile Subscriber Radio – Public-Service Model Requirements	Conditional	Conditional	
18. Mobile Subscriber Radio – Environmental Requirements	Mandatory	Mandatory	
19. Mobile Subscriber Radio – Programming Security	Recommended	Recommended	
20. Mobile Subscriber Radio Programming Requirements	Mandatory	Mandatory	
21. Mobile Subscriber Radio Project 25 Phase II Migration Requirements	Not Applicable	Not Applicable	
22. Mobile Subscriber Radio – Requirements for Upgrades to Existing Mobile Subscriber Radios	Recommended	Recommended	
23. Mobile Subscriber Radio – Mobile Control Station and Console Radio Requirements	Not Applicable	Not Applicable	All Compliance Requirements shall apply as written to all Mobile Control Stations or Console Radios.



**Waukesha County and Milwaukee County  
Project 25 Trunked Radio System**



## Appendix B – Compliance Statement

<b>Radio Model Information</b>		
Vendor Name:		
Radio Model:		
Sub-Model ("Type" or "Package"):		
<b>Base Model Compliance to Mandatory Specifications</b>		
Does the radio model meet all specifications designated as "Mandatory", including those specifically noted portions of specifications designated as "Partially Mandatory", in Appendix A of this document?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
List the vocoder(s) supported by the radio model:		
Does the radio model support a mix of trunked talkgroups and conventional channels in one zone/bank?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Notes		
<b>Base Model Compliance to Mandatory Specifications for Specialty Models</b>		
Is the radio model a specialty device such as a covert portable, telemetry/SCADA radio, transit mobiles, etc.? If so, please describe its purpose and limitations (the Mandatory specifications it does not meet) in the Notes area below.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Notes		
<b>Support of Recommended and Optional Specifications</b>		
Does the radio model support each of the following specifications that are designated as Recommended or Optional as described by the referenced section of RFP #1332?		
Individual Voice Call	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Radio Check	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Call Alert	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Radio Unit Monitoring	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Short Message	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Status Query / Status Update	<input type="checkbox"/> Yes	<input type="checkbox"/> No
AES Encryption	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Over-The-Air-Rekeying (OTAR)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Dynamic Regrouping	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Receiver: Squelch Tail Elimination	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Environmental Requirements	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Portable Subscriber Radio Battery Charging Requirements	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Portable Subscriber Radio Battery Charger Unit Requirements	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Notes (incl. special additions required)		
Describe the modifications; including any/all software, hardware, firmware, or configuration changes; that are required to allow the radio model to operate on a Project 25 Phase II system.		
<b>Signature of Vendor's Authorized Personnel</b>		
Signature	Name & Email Address	Date

Vendors: Submit via email: [CPetterson@waukeshacounty.gov](mailto:CPetterson@waukeshacounty.gov) or fax: 262-548-7855. Attach additional information if necessary and relevant.

**EXHIBIT E**

**Public Safety Radio System  
SYSTEM KEY AGREEMENT  
Milwaukee County Public Safety Radio System  
\_\_\_\_ of \_\_\_\_ Participation**

**Milwaukee County**



**EXHIBIT E:  
PROJECT 25 TRUNKED RADIO SYSTEM  
SYSTEM KEY REQUIREMENTS**

Version: August 27, 2014



## Overview and Scope

Milwaukee County has determined that user radios (subscriber radios) that are to operate natively on the Waukesha County and Milwaukee County Project 25 Trunked Radio System must meet the requirements for Programming Security as defined by Sections VI.G.19 and VI.H.19 of Waukesha County's Request for Proposals (RFP) #1332<sup>1</sup>. This requirement, which mandates the use of an advanced/enhanced (hardware-based) user radio programming key ("system key"), exists so that unauthorized personnel or organizations do not have the ability to program or configure user radios and that those that do have such abilities can only do so in ways that do not negatively affect i) system performance, ii) the ability of a user to access the system, iii) the system's security and integrity, and iv) the functionality of critical user-features. For these reasons, Milwaukee County, through this document, describes the requirements of and restrictions on those individuals/organizations that may be eligible to be a licensee of a system key for the Milwaukee County Project 25 Trunked Radio System as well as a framework for establishing the capabilities of different types, or "classes", of system keys.

This document introduces three different classes of keys:

- A Class "A" key which is the "parent" key as defined in RFP 1332.
- A Class "B" key which is a "child" key (as defined in RFP 1332) that is to be used by a qualified radio shop (as defined below) to initially program and provision new radios and maintain user radios
- A Class "C" key which is also a "child" key but which has yet to be developed and which is envisioned to allow a user agency to make minor adjustments to those programming/configuration parameters that affect operations of user-ergonomics and do not affect system performance, user access, system security or integrity, or the functionality of critical user-features.

Important  
Note:



At this time, the exact capabilities of a Class "C" key are to be determined. Such a Class "C" key is a concept that is currently being developed by Milwaukee County in conjunction with user agencies, the Governance Board, and Motorola Solutions, Inc. The capabilities of the Class "C" key shall be approved jointly by Milwaukee County and the Milwaukee County Radio System Governance Board but the Class "C" key shall not: ,

- a) Unless specifically permitted by both Milwaukee County and the Milwaukee County Radio System Governance Board, allow its Licensee or user to have access to programming parameters that could negatively impact the integrity or security of the system (such that the system could be willingly or unwillingly exposed to a threat, eminent or not, that could: i) disrupt the system from delivering it's contracted coverage, capacity, features, management, or reliability, ii) prevent authorized users from accessing the system's contracted

<sup>1</sup> Released on April 12, 2013, amended three times, and posted at the following Waukesha County website: <https://purchasing.waukeshacounty.gov>.



	<p>levels of coverage, capacity, features, management, or reliability or iii) allow a party, either a user or non-user of the system, to have use of the system or to have access to communications for which they have not been explicitly authorized) or</p> <p>b) Prohibit Milwaukee County's ability to ensure contractual obligations per the "Contract for Service #1332" with Motorola Solutions, Inc.</p> <p>Should the development of a Class "C" Key not occur, Milwaukee County and the Governance Board shall work to identify alternate solutions to meet the identified requirements including use of alternate technologies or products as well as possible alterations to the terms of this Exhibit.</p>
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## References and Terms

- Class "A" Key (also known as "Master Key") - A physical device as defined by following matrix that is capable of being encoded with system information that: i) allows for the programming of subscriber equipment, ii) may allow for the creation of Child Keys, and iii) has no restrictions on the ability to program any/all radio ID's, talkgroups, features and/or other capabilities of the system
- Class "B" or Class "C" Key (also known together as "Child Keys") - A physical device with the capabilities listed below that is encoded with system information that: i) allows for the programming of subscriber equipment, ii) expressly cannot allow for the creation of Child Keys, and iii) has explicit restrictions on the ability to program any/all radio ID's, talkgroups, features and/or other capabilities of the system
- User Radio or Subscriber Radio: A mobile (vehicle-mounted), portable (human-worn or handheld), and control stations (fixed-location) radios used and operated by the actual end-users of two-way voice communication systems.
  - NOTE: The definition of "Subscriber" as used in this Exhibit is different from that used within the Inter-Governmental Agreement to which it is attached. To be clear, in this Exhibit, the term "Subscriber Radio" refers to the radio equipment used by end users to communicate to each other through the radio system.
- User Agency: An agency, organization, or department that uses the system for daily or interoperable (occasional, event- or incident-based) purposes; must be a public safety and public service agency from a State, Tribal, County, or Local government; federal agency; special district; or emergency medical service provider; must also be eligible under Title 47 of the Code of Federal Regulations (CFR) Part 90 Private Land Mobile Radio Services §90.20 Public Safety Pool; the person that programs subscriber radio equipment through the use of a slave hardware or software system key.

**Milwaukee County  
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- System Information: Information that specifies technical and performance features and capabilities of the system, (including all physical or electronic media upon which such information is provided).
- Licensor: An owner of the system infrastructure switch, also the owner of the Class "A" Master Key
- Licensee: The agency/organization to whom use of the Child Key is granted
- Template: The contents of a file created by the programming software that contains all necessary System Information required to enable operations of a User Radio on the System
- System: The Milwaukee County subsystem of the Milwaukee County and Waukesha County 800MHz Project 25 Public Safety Trunked Radio System
- Radio ID or Unit Radio ID: A number that uniquely identifies a user radio and that can be used to permit or restrict access to the system
- Radio Shop (or Shop): An organization, including an independent business enterprise or a specialized division of a government agency, whose specific purpose is the deployment and maintenance (including programming) of radio equipment and which employs dedicated and specifically-trained staff to accomplish this purpose. The staff of the Shop shall have within their combined background the following credentials and certifications: Federal Communications Commission (FCC) Licensed Technician, Electronics Technicians Associations (ETA) Wireless Communications Technician, ETA R56 Technician, Associate's degree or specific military service training in electronics communications or related field, completion of system-administrator-level training from the vendor of the County's digital trunked radio system, and completion of detailed product-service-level training from major land mobile radio manufacturers such as Motorola Solutions Inc., Harris Corporations, EF Johnson Technologies, and others. A radio shop shall also have, at a minimum the following equipment:
  - A Digital Radio Service Analyzer, equivalent to the capabilities of an AeroFlex 3920 or its direct future replacement
  - A Digital and Analog Communications Service Monitor, equivalent to the capabilities of an AeroFlex 2945 or its direct future replacement
  - A mixed domain oscilloscope, equivalent to the capabilities of a Tektronix MDO4000 or its direct future replacement
  - A work area environment dedicated to the provisioning, repair, and maintenance of land mobile radios that is not used for other purposes and that is free of dust, debris, and other possible contaminants
  - Dedicated test bench(es) with tools (such as multi-meters, soldering irons, lighted magnification glasses) and electronics (computers and cables for programming, multi-meters, variable power supplies, dummy loads) that are specifically dedicated to the provisioning, repair, and maintenance of land mobile radios
  - A dedicated and shared library, available to all shop staff, of either printed or electronic copies of product service manuals from major land mobile radio manufacturers such as Motorola Solutions Inc., Harris Corporations, EF Johnson



Technologies, and others, specifically including those products expected to be programmed via the system key being sought.

A User Agency may be considered as a Radio Shop so long as they meet the requirements listed directly above.

## **System Key Provisions**

### SECTION 1: TERM OF USE

- Class "A" Key: Not applicable
- Class "B" and "C" Keys: The term of the agreement for a Class B or Class C Key shall be one year and the capabilities of the Class B or Class C Key shall be set to expire concurrent with the Term of the Agreement. The Agreement (and the capabilities Class B or Class C Key) can be renewed on a yearly basis but it must be actively (not automatically) renewed.

### SECTION 2: ALLOWED USERS AND USEAGE

- Class "A" Key: To be held by the Waukesha County and/or Milwaukee County Radio System Administrator(s), to be used to generate other keys, not to be used to program radios.
- Class "B" Key: To be used only by organizations that meet the definition of "Radio Shop" as listed above as well as all other requirements for Class "B" Keys as listed throughout this Exhibit. To be used to program radios for any authorized user agency.
- Class "C" Key: To be used by User Agencies or organizations that meet the requirements for Class "C" Keys as listed throughout this Exhibit. To be used to make minor adjustments (capabilities listed below) to radios that are used by that specific user agency and that were initially programmed by an authorized and qualified radio shop.

### SECITON 3: KEY CAPABILITIES – CREATION OF CHILD KEYS

- Class "A" Key: Shall have capabilities to create child keys.
- Class "B" and "C" Keys: Shall not have capabilities to create child keys.

### SECTION 4: KEY CAPABILITIES – RADIO PROVISIONING

- Class "A" Key: Not applicable
- Class "B" Key: Class "B" Keys shall be used by qualified radio programming shop for initial radio provisioning (first programming of radio for operation on new system)
- Class "C" Key: Class "C" Keys shall not be used for initial radio provisioning

### SECTION 5: KEY CAPABILITIES – RADIO PROGRAMMING

- Class "A" Key: Not applicable
- Class "B" Key: Class "B" Keys shall have the ability to program radios as required to allow operations on the system as authorized.



- Class "C" Key: See the "IMPORTANT NOTE ①", above, in the "Overview and Scope" Section of this Exhibit regarding the definition of the capabilities of the Class "C" key.
  - RADIO PROGRAMMING CAPABILITIES SHALL DEFINE LEVELS OF ACCESS TO/OF, AT A MINIMUM, THE FOLLOWING PROGRAMMING PARAMETERS:
    - The talkgroups that can be accessed and whether or not they can be designated as transmit-and-receive or receive-only
    - The radio unit ID range(s) that can be accessed
    - The "RADIO WIDE" parameters that can be accessed
    - The "SECURE" parameters that can be accessed
    - The "EMERGENCY" parameters that can be accessed
    - The "TRUNKING SYSTEM " parameters that can be accessed

#### SECTION 6: OWNERSHIP AND POSSESSION

- Class "A" Key: Milwaukee County shall own and possess one Class "A" key.
- Class "B" and "C" Keys: Licensee of Class B and Class C keys shall:
  - Request a Key from the Milwaukee County Radio System Governance Board Technical Committee who shall i) confirm in written documentation, including documents provided by Licensee, that the Licensee fully meets the requirements of this Exhibit including those regarding Use and Usage and ii) if confirmation is successful by unanimous vote of the Milwaukee County Governance Board Technical Committee, forward their approval and the Licensee's request to the Milwaukee County Radio System Administrator who shall provide the requesting Licensee with the requested Key according to the provisions of this Exhibit.
  - Recognize the Key as the sole property of the Licensor – it is licensed, not given or sold, by Licensor to Licensee.
  - Designate a specific Point of Contact (an individual person) for the Key and shall grant that Point of Contact access to and use of the Key so long as that individual meets the criteria listed throughout this Agreement.
  - Return Key to Licensor if the designated individual (or all designated individuals) leaves Licensee's organization.
  - Reimburse Licensor for all actual costs incurred by the Licensor in the acquisition of the Key.
  - Keep Key in a secured location (locked office or locked box/desk) when not in use by Point of Contact.
  - Report the loss of the Key to the Licensor within 24 hours of loss.
  - Return Key to Licensor at the end of the term of Agreement or actively renew Term.
  - Return Key to Licensor as directed by the Governance Board for violation(s) as described herein Section 14.

#### SECTION 7: RESTRICTIONS

- Class "A" Key: Not applicable
- Class "B" and "C" Keys: Licensee of Class B and Class C keys shall not:
  - Reverse engineer, disassemble, peel components, decompile, reprogram or otherwise reduce the Child Key or any portion to a human perceptible form or otherwise attempt to recreate the source code
  - Modify, adapt, create derivative works of, or merge the System Key



- Copy, reproduce, distribute, lend, or lease the System Key to any third party, grant any sublicense or other rights in the System Key to any third party, or take any action that would cause the System Key to be placed in the public domain
- Provide, copy, transmit, disclose, divulge or make the System Key or System Information available to, or permit the use of the System Key by any third party except as expressly authorized by this Agreement
- Use, or permit the use of, the System Key in a manner that would result in the production of a copy of the System Key

**SECTION 8: SYSTEM KEY POINT OF CONTACT TRAINING REQUIREMENTS**

- Class "A" Key: Not applicable
- Class "B" Key: In addition to holding the credentials and certifications listed above as being required of a Radio Shop, licensees of a Class B Key shall have completed following training from the vendor of the Key and the radios to be programmed by the Key:
  - Programming of radios via the programming software – training must be completed for all radio models to be programmed by Point of Contact. A radio of a new model shall not be programmed until/unless the Point of Contact attends training for the programming software for that new model. (If new model uses an existing version of programming software, then new training is not required).
  - Tuning/alignment of radios via the programming software.
- Class "C" Key: Licensees of a Class C Key shall have completed the following training from the vendor of the Key as well as the vendor of the radios to be programmed by the Key:
  - Programming of radios via the programming software – training must be completed for all radio models to be programmed by Point of Contact. A radio of a new model shall not be programmed until/unless the Point of Contact attends training for the programming software for that new model. (If new model uses an existing version of programming software, then new training is not required).
  -

**SECTION 9: SYSTEM KEY POINT OF CONTACT OTHER EQUIPMENT REQUIREMENTS**

- Class "A" Key: Not applicable
- Class "B" Key: In addition to having the equipment listed above as being required of a Radio Shop, licensees of Class B Key shall purchase and maintain at their expense all equipment (hardware, PC's, cables, and software) designated by radio model vendor as being required to complete the following:
  - Programming of any authorized user radio
  - Tuning/alignment of any authorized user radio
- Class "C" Key: Licensees of Class C Key shall purchase and maintain at their expense all equipment (hardware, PC's, cables, and software) designated by radio model vendor as being required to complete
  - Programming of Agency user radio

**SECTION 10: WARRANTY OF WORK**

- Class "A" Key: Not applicable
- Class "B" and Class "C" Key: Licensees of Class B or Class C Keys shall:
  - Be solely responsible for the quality and content of their programming work.



- Not hold Licensor responsible for any omissions or other mistakes made during the completion of programming by Licensee.
- Warrant for their work and shall correct any programming omissions or mistakes made during the completion of programming by Licensee. (Designations of omissions or mistakes shall be relative to the programming instructions agreed to in writing by the end users of the radios.)

**SECTION 11: OWNERSHIP OF TEMPLATES**

- Class "A" Key: Not applicable
- Class "B" and Class "C" Key: Licensees of Class B or Class C Keys shall:
  - Provide any/all templates created by Licensee to the agency for which they were created upon request from that agency
  - Provide any/all templates created by Licensee to Licensor upon request at no cost to Licensor
  - Not provide any/all templates created by Licensee to others without written approval by the agency for which they were created

**SECTION 12: COMPLIANCE WITH SYSTEM OPERATIONAL STANDARDS**

- Class "A" Key: Not applicable
- Class "B" and Class "C" Key:
  - Licensees of Class B or Class C Keys shall:
    - Not program any talkgroups for which they do not have explicit approval from the agency that operates the talkgroup for daily or other agency-specific use)
    - Agree to adhere to, comply with, and act in accordance with any and all Operational Procedures approved by the Milwaukee County Radio System Governing Board. Such Operational Procedures may include, but shall not be limited to:
      - Mandatory talkgroups and mandatory talkgroup locations
      - Mandatory feature settings
  - Licensee shall be responsible for any/all costs associated with such correcting the programming so as to eliminate the cause of interference or negative impact to system integrity.
  - Provide any/all templates created by Licensee to the agency for which they were created upon request from that agency
  - Provide any/all templates created by Licensee to Licensor upon request at no cost to Licensor
  - Not provide any/all templates created by Licensee to others without written approval by the agency for which they were created

**SECTION 13: COMPLIANCE WITH FCC RULES AND REGULATIONS**

- Class "A" Key: Not applicable
- Class "B" and "C" Keys: Licensees of Class B or Class C Keys shall use Child Key only in ways that are consistent with, and in no way a violation of, any requirement of Title 47 of the Code of Federal Regulations (CFR), Part 90 Private Land Mobile Radio Services.

**SECTION 14: MISUSE AND REVOCATION**

**Milwaukee County  
Project 25 Trunked Radio System**



- Class "A" Key: Not applicable
- Class "B" and "C" Keys:
  - Misuse:
    - Licensor may actively disable/inhibit a radio from use on the system if it is determined that Licensee has violated the provisions herein in the programming of that radio.
    - Licensor may actively disable/inhibit a radio from use on the system if it is determined that Licensee has in any way programmed a radio in such a way that could negatively impact system security or integrity.
    - If Licensor disables/inhibits a radio from use for the reasons listed above, Licensor shall immediately notify both the Licensee and the affected user agency and provide a brief description of the cause for their action. All disabled/inhibited radios shall be enabled/uninhibited when the Licensee or affected user agency can demonstrate that the misuse has been corrected and the cause of the violation or negative impact to system security or integrity will not continue.
    - If Licensee feel that Licensor has disabled/inhibited a radio (or radios) without cause (as defined herein), Licensee shall petition the Milwaukee County Radio System Governing Board who shall review materials provided Licensee and Licensor and who shall be solely responsible for upholding or reversing Licensor's actions.
  - Revocation:
    - If Licensor identified that Licensee has misused the Key in a way that violates the provisions herein or that negatively impact system security or integrity, Licensor shall, in addition to the provisions for misuse as listed above, revoke Licensee's license and require immediate return of the Licensee's Key(s). In such a case, Licensor shall provide Licensee with notice that includes a description of the misuse(s) of the Key. Licensee shall immediately discontinue use of Key and shall have 5 business days to either return the Key(s) or respond in writing to the notice of revocation with evidence that the misuse did not occur.
    - If Licensor agrees with Licensee's response, they shall provide in writing within 5 business days a withdraw of the notice of revocation and the matter shall be considered closed.
    - If Licensor disagrees with Licensee's response or if Licensor does not provide a withdraw of revocation within 5 days of receipt of Licensee's response, Licensee shall have the option to petition the Milwaukee County Radio System Governing Board who shall review materials provided by the Licensee and Licensor and who shall be solely responsible for upholding or reversing Licensor's revocation.

**EXHIBIT F**

**Public Safety Radio System  
Milwaukee County Public Safety Radio System  
Governance Board**

# Milwaukee County Radio System Governance Board

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## Section 1: Purpose

The Milwaukee County Public Safety Digital Trunked Radio Subsystem Governance Board ("Radio System Governance Board") will represent the user agencies and establish administrative plans and procedures regarding the on-going use, operation, and maintenance of the Milwaukee County Subsystem ("the Subsystem") of the joint Waukesha County and Milwaukee County Public Safety Digital Trunked Radio System ("the System") with the goals of ensuring the System meets user requirements and does so in the most cost-effective manner possible.

## Section 2: Authority

The Radio System Governance Board is created by action of the County Executive and the County Board pursuant to (file number).

### **Section 3: Order**

It is hereby ordered that the Radio System Governance Board shall be created and shall have the term defined below in Section 4 ("Term"), that it shall be comprised of the structure included below in Section 5 ("Board Structure"), and that it shall hold and perform the duties included below in Section 6 ("Board Duties"). It is hereby further ordered that the Radio System Governance Board shall be supported by Committees that shall report to the Board and that shall have the structure included below in Section 7 ("Committee Structure") and that shall hold and perform the duties included below in Section 8 ("Committee Duties").

### **Section 4: Term**

The Radio System Governance Board shall operate until the end of operation of the Subsystem. The Radio System Governance Board may be dissolved or amend this document before the end of the operation of the Subsystem upon concurrence of five members of the Board of Directors and the County Executive.

### **Section 5: Board Structure**

#### **5.01. Board of Directors Membership**

There shall be a Board of Directors ("the Board") whose membership shall be as follows and each of the following members (or their designee) shall have an equal vote for matters that require a decision by vote. The Directors appointed or selected pursuant to this section serve at the pleasure of the appointing or selecting authority:

- (1) The Milwaukee County Director of Department of Administrative Services;
- (2) The Milwaukee County Chief Information Officer;
- (3) The Milwaukee County Director of Emergency Management;
- (4) As appointed by the County Executive and approved by the Intergovernmental Cooperation Council of Milwaukee County: a Mayor or other elected executive of a city, town, or village with at least one public safety agency that participates as a daily user in the Subsystem;
- (5) As appointed by the County Executive: the director of finance or administration of a city, town, or village with at least one public safety agency that participates as a daily user in the Subsystem;
- (6) As appointed by the County Executive and approved by the Milwaukee County Law Enforcement Executives Association: the Chief of Police of a city, town, or village that participates as a daily user in the Subsystem; and
- (7) As appointed by the County Executive and approved by the Milwaukee County Association of Fire Chiefs: the Fire Chief of a city, town, or village that participates as a daily user in the Subsystem.

#### **5.02. Board of Directors Membership Provisions**

The Board of Directors shall operate according to the following provisions:

- (1) Any single municipal agency can have no more than one appointed Director on the Board;
- (2) When a Director and their designee are present at a meeting, only the Director may cast votes and be recorded in the proceedings;

- (3) In the case of a vacancy in a Board members position, the incumbent from the municipality or county position it represents shall become the interim Board member until a permanent appointment has been made;
- (4) The Board of Directors shall be comprised of seven (7) members. Upon implementation of this Board, at the first meeting called for this purpose, Board members shall establish staggered terms to ensure consistent stewardship;
- (5) Other non-voting/advisory members of the Board of Directors shall be allowed at the discretion of the Board, including vendors or owner's representatives; and
- (6) Two standing non-voting/advisory members in such capacity shall be:
  - (a) Chairperson of the Technical Subcommittee; and
  - (b) Chairperson of the Operational Subcommittee.

### **5.03. Officers of the Board of Directors**

There shall be the following Officers elected by a majority vote of the Board:

- (1) A Chairperson whose duties are to represent the Board as its principal spokesperson; preside at Board meetings; direct the preparation of the agenda for all Board meetings; appoint members to the Standing Committees and to any Special Committees; and present recommendations of the Board to the County Executive, or designee, for action;
- (2) A Vice Chairperson whose duties are to exercise the duties and responsibilities of the Chair whenever the Chair is unable to serve;
- (3) A Secretary whose duties are to record meeting proceedings and distribute communications and materials to Board Members and other interested parties as necessary;
- (4) Elections of the Officers shall occur at their first meeting and shall occur thereafter according to the following schedule:
  - (a) Vice Chairperson: On January 1<sup>st</sup> of the first year following the first Board meeting and then again every two years thereafter; and
  - (b) Chairperson and Secretary: On January 1<sup>st</sup> of the second year following the first Board meeting and then again every two years thereafter;
- (5) No individual shall hold any more than one Officer position;
- (6) Officers shall serve until a replacement is elected; and
- (7) The Board shall hold regular meetings, at a frequency that is designated by the Chair and approved by majority vote of the Board of Directors. Meetings of the Board are subject to the following:
  - (a) Five (5) Directors shall constitute a quorum. Any action requiring Board approval may be adopted by a majority vote of those present and voting where a quorum is present;
  - (b) The agenda for each meeting shall include, at a minimum, the following: Approval of Last Meeting Minutes, Approval of Current Meeting Agenda, Officer's Reports, Committee Reports, Old Business, New Business, Open Forum for Members, Open Forum for Non-Members, and Adjournment;

- (c) An agenda for each meeting shall be established and published by the Chairperson and be sent to the Board members five (5) business days prior to the meeting. At the beginning of a regular meeting, any Director may move to amend the published meeting agenda and such amendments shall require majority approval of the voting members of the Board of Directors; and
- (d) Special meetings shall be called if approved by two (2) of the three (3) Officers and with a minimum of five (5) days advanced notice which is to include distribution of an agenda to all Directors.
- (e) The Board's records and meetings shall be open to the public as described in the Open Records and Open Meetings provisions in Chapter 19 of the Wisconsin Statutes.
- (f) Where this Order or laws of the state do not provide procedures to be used by the Board in conducting its meetings, "Robert's Rules of Order Newly Revised" shall govern the proceedings.

## **Section 6: Board Duties**

Recognizing that Milwaukee County shall own and maintain the Subsystem (e.g., trunking controller, trunking base stations, trunking antenna systems, and certain other common system elements) as described in the Intergovernmental Agreement between Milwaukee County and various municipalities ("Permitting Access to Milwaukee County's 800 MHz Project 25 Trunked Public Safety Radio System"), the duties of the Board of Directors shall be the following:

### **6.01. Annual Operational Budget**

Develop and recommend to the County Executive an annual Operational Budget for the Subsystem by May 1<sup>st</sup> of each year to include:

- (1) Recommendations for changes or additions to the operational and/or technical design of the Subsystem that improve or more efficiently maintain operational standards;
- (2) Estimated costs, timelines, and impact to current performance for the recommended changes or additions;
- (3) Recommendations for the funding model (legislative or otherwise) which may be needed to meet the costs or operational standards associated with a more sustainable and/or stable funding mechanism; and
- (4) The County Executive shall use the Board of Directors' Operational Budget for the Subsystem as advice to adjust the county's plans for system operations and maintenance.

### **6.02. Technical and Operational Standards**

Establish and implement technical and operational standards and procedures regarding the on-going use and operations of the Subsystem.

- (1) Standards and procedures that have a financial impact will require approval by the County Executive;
- (2) The County Executive shall have the right to veto standards or procedures that do not meet Milwaukee County's contractual obligations of the system; and

- (3) Such technical and operational standards and procedures shall be developed and shall establish the ways in which the Subsystem shall be used and operated and shall not include any recommendations, guidelines, or requirements that negatively impact the ability of users to complete their assigned duties of public safety or public service or adversely affect the performance or security of the subsystem.

#### **6.03. Five (5) Year Capital Improvement Plan**

By May 1<sup>st</sup> of each year, develop and approve a Five (5) Year Capital Improvement Plan for the Subsystem for which funds from the Capital Improvement Fund are to be allocated. Capital Improvement Plan will include:

- (1) Business case for the upgrades, expansions, and/or replacements of/to the Milwaukee County Subsystem;
- (2) Estimated implementation and run costs, timelines, and impact to current performance for the recommended capital improvements changes or additions; and
- (3) Recommendations for the Capital Improvement Fund (legislative or otherwise) which may be needed to meet the costs or operational standards associated with a more sustainable and/or stable funding mechanism.

#### **6.04. Usage and Fees of the Subsystem for Non-Public Safety Organization**

Approve the use of the Subsystem by non-members or non-Public-Safety organizations (Public Safety eligibility as defined by 47 CFR §90.421) and recommend fees for such use.

#### **6.05. Annual Report**

Prepare and submit by the end of the first quarter of the calendar year an Annual Report to the County Executive, appropriate elected officials and user bodies. The Annual Report will include, but is not limited to, financial information, system metrics, previous year highlights, Five (5) Year Capital Improvement Plan and goals for the upcoming year.

#### **6.06. Standing and Special Committees**

Create the Technical, the Operational and the Special Committees as described in Sections 7.02 – 7.05. The Board shall operate and collaborate with these committees.

#### **6.07. Prohibited Actions of the Board**

The Board is expressly not allowed to:

- (1) Establish policy that would violate or be in conflict with the Memorandum of Understanding (MOU) established between Milwaukee County and Waukesha County or with the Intergovernmental Agreement (IGA) that acts as the participation agreement with user departments/agencies;
- (2) Establish policies for the non-P25 existing analog system or for any radio system owned or operated by local municipalities;
- (3) Oversee implementation of the Subsystem;
- (4) Negotiate with Contractor or other vendors or make commitments regarding purchases;
- (5) Collect, hold, or distribute funds;
- (6) Levy taxes;
- (7) Incur debts;
- (8) Issue bonds; and

(9) Sue.

## **Section 7: Committee Structure**

### **7.01. Committee Creation**

The Board may create and dissolve Special Committees to assist the Board in performing its duties and responsibilities according to the following:

- (1) Creation of a Special Committee shall require action by the Board and shall include definition of the duties and responsibilities of the Committee, its chair and members, and any other matters necessary for the efficient operation of the Committee. Committees operate under the same Authority as the Board, reference Section 2.
- (2) The Board may direct a Special Committee to prepare investigations, reports, etc. of a particular topic and that Committee shall prepare their response in a timeframe agreed to by the Board Chairperson and the Chairperson of the Committee.

### **7.02. Standing Committees**

There shall be two standing committees whose existence is inherent in the creation of the Board and that the Board shall not be able to dissolve. These two standing committees shall be the Technical Committee and the Operational Committee.

### **7.03. Technical Committee**

#### **(1) Technical Committee Voting Membership**

The membership of the Technical Committee shall be as follows and each of the following members shall have an equal vote for matters that require a decision by vote:

- (a) A representative of the Milwaukee County Radio Services;
- (b) A representative of the Milwaukee County Department of Transportation;
- (c) A representative of a Police Department of a city, town, or village that participates as a daily user in the Subsystem;
- (d) A representative of a Fire Department of a city, town, or village that participates as a daily user in the Subsystem or relevant to Emergency Management and Planning; and
- (e) Three technical representatives at large from public safety agencies that participate as daily users in the Subsystem to be appointed by the Board.

#### **(2) Technical Committee Advisory/Non-Voting Membership**

The membership of the Technical Committee shall also include the following members in an advisory and non-voting capacity:

- (a) A representative from Waukesha County Radio Services; and
- (b) A representative from the Motorola Solutions, Inc.

### **7.04. Operational Committee**

#### **(1) Operational Committee Voting Membership**

The membership of the Operational Committee shall be as follows and each of the following members shall have an equal vote for matters that require a decision by vote:

- (a) A representative of the Milwaukee County Radio Services;
- (b) A representative of the Milwaukee County dispatching services;

- (c) A representative of Milwaukee County Department of Transportation;
  - (d) A representative of a Police Department of a city, town, or village that participates as a daily user in the Subsystem;
  - (e) A representative of a Fire Department of a city, town, or village that participates as a daily user in the Subsystem;
  - (f) A representative of an Emergency Medical Services Division that participates as a daily user in the Subsystem;
  - (g) A municipal representative of a dispatch center that has a wireline connection into the Subsystem to provide dispatch services for at least one public safety agency that participates as a daily user in the Subsystem
- (2) Operational Committee Advisory/Non-Voting Membership  
The membership of the Operational Committee shall also include the following members in an advisory and non-voting capacity:
- (a) A representative from Waukesha County Radio Services;
  - (b) A representative from The Wisconsin Interoperable System for Communications (WISCOM); and
  - (c) A representative from Amateur Radio Emergency Service (ARES)/Radio Amateur Communications Emergency Services (RACES).

#### **7.05. Technical and Operational Committee Membership Provisions**

The Technical and Operational Committees shall operate according to the following provisions:

- (1) All members of the Technical and Operational Committees shall be nominated by and approved by the Board of Directors;
- (2) Any Technical and Operational committee member may be recommended for removal from their position if a full three-quarters of the other committee members so decide by vote. The recommendation will be reviewed by the Board; the Board, with a majority vote, may uphold the recommendation. In such a case, that position shall be filled by a different individual within the same functional group through nomination and approval by the Board of Directors;
- (3) Agencies should not have more than one appointed member on the Technical Committee and should not have more than one member on the Operational Committee unless voted and approved by the Board;
- (4) The Technical Committee and on the Operational Committee shall each have Officers that shall be elected from and by their respective Voting Memberships;
- (5) A Chairperson whose duties are to represent the Committee as its principal spokesperson; preside at Committee meetings; direct the preparation of the agenda for all Committee meetings; and present recommendations of the Committee to the Board of Directors, or designee, for action;
- (6) A Vice Chairperson whose duties are to exercise the duties and responsibilities of the Chair whenever the Chair is unable to serve;
- (7) A Secretary whose duties are to record meeting proceedings, develop & distribute communications and materials to committee members and other interested parties as necessary;

- (8) Elections of the Officers for each Committee shall occur at their first meeting and shall occur thereafter according to the following schedule:
  - (a) Vice Chairperson: On January 1<sup>st</sup> of the first year following their first meeting and then again every two years thereafter; and
  - (b) Chairperson and Secretary: On January 1<sup>st</sup> of the second year following their first meeting and then again every two years thereafter;
- (9) Officers serve until a replacement is elected.

## **Section 8: Committee Duties**

### **8.01. Technical Committee Duties**

The duties of Technical Committee shall be to:

- (1) Make recommendations regarding the design or configuration of the Subsystem;
- (2) Prepare technical advice for methods to implement the recommendations of the Operations Committee;
- (3) Provide input regarding the technical state of the Subsystem for the Board's Annual Report; and
- (4) Other duties as assigned or directed by the Board.

### **8.02. Operational Committee Duties**

The duties of the Operational Committee shall be to:

- (1) Make recommendations regarding the use of the Subsystem including allowed/authorized talk groups, daily and special (incident/event) usage protocols, terms and conventions, usage exercises, and training programs;
- (2) Describe the operational impacts of recommendations developed by the Technical Committee;
- (3) Provide input regarding the operational state of the Subsystem for the Board's Annual Plan; and
- (4) Other duties as assigned or directed by the Board.

### **8.03. Standing Committee Coordination**

The Technical and Operational Committees shall review and provide comments to the recommendations or reports submitted to the Board by the other Committee prior to submission.