

**MEMORANDUM OF UNDERSTANDING**  
**REGARDING THE OWNERSHIP AND OPERATION OF**  
**THE SHARED CORE OF THE**  
**WAUKESHA COUNTY AND MILWAUKEE COUNTY**  
**ORGANIZATION OF AFFILIATED SECURE INTEROPERABLE RF SUBSYSTEMS (OASIS)**  
**800MHZ DIGITAL TRUNKED RADIO SYSTEM**

SECTION 1: PURPOSE

This Memorandum of Understanding (MOU) is between Waukesha County and Milwaukee County, (referred to individually as “Charter Core Partner” and collectively as “the Charter Core Partners”). Expansion of this MOU to Subsequent Core Partners may occur according to the provisions of Section 8.

The purpose of this Memorandum of Understanding is to define the roles and responsibilities regarding the ownership and operation of the Shared Core of the Waukesha County and Milwaukee County OASIS 800MHz digital trunked radio system.

SECTION 2: RECITALS

Whereas, the provision of radio communications to public safety agencies is critical to their operational efficiency and safety and to the well-being of the citizens they serve; and

Whereas, the current individual 800MHz analog trunked radio systems now in use in Waukesha County and Milwaukee County have served each County well but are aging, expensive to maintain, and do not make efficient use of the radio spectrum and technology that is now available; and

Whereas, a regional 800MHz digital trunked radio system will make more efficient use of available radio spectrum, increase interoperability, and decrease operational costs to each county, all while allowing for better coordination of radio voice communications between both Counties by allowing large numbers of users to share common technology; and

Whereas, the operation of a regional 800MHz digital trunked radio system utilizes equipment known as the Shared Core to perform the critical tasks of delivering the overall system control, call-processing, and network management.

Now, therefore, the Charter Core Partners, in accordance with authority granted to counties, cities, villages and towns under §66.0301, Wisconsin Statutes, by the signatures of their authorized representatives below, agree to the provisions of this Memorandum of Understanding.

SECTION 3: DEFINITIONS

- Backhaul: The method of connectivity between the components of a Subsystem and the Shared Core; typically, a microwave, fiber, and/or leased telecommunication circuit.
- Charter Core Partners: Waukesha County and Milwaukee County.
- Class “A” Key: A physical device or a set of credentials that is configured in such a way to allow for the creation of Class “B” or Class “C” keys.
- Class “B” Key: A physical device or a set of credentials that is configured in such a way to allow for the programming of Subscriber Radio equipment with the potential for explicit restrictions on the ability to program only selected radio ID’s, talkgroups, features and/or other capabilities of the System. Also, a Class “B” Key shall explicitly lack the ability to create any other Class “A”, “B”, or “C” keys. Class “B” Keys shall also: i) operate no later than 365 days from the day the Key was created and ii) if available, be equipped with a Personal Identifier (PIN) that shall serve as a password for usage.
- Class “C” Key: A physical device or a set of credentials that is configured in such a way to allow for the programming of Subscriber Radio equipment with explicit restrictions on the ability to change only those parameters related to the ergonomic interface (human-to-subscriber-radio) of the Subscriber Radio equipment and with no ability to change those parameters related to the System interface (system-to-subscriber-radio) of the Subscriber Radio equipment. The definition of those ergonomic interface parameters that shall be allowed and those System interface parameters that shall be restricted shall be per Section 18 of this MOU. Also, a Class “C” Key shall explicitly lack the ability to create any other Class “A”, “B”, or “C” keys. The Charter Core Partners recognize that the Class “C” Key does not currently exist and that it may or may not be developed in the future. Class “C” Keys shall also: i) operate no later than 365 days from the day the Key was created and ii) if available, be equipped with a Personal Identifier (PIN) that shall serve as a password for usage.
- Collective Core Partner(s): Individually, either a Charter or Subsequent Core Partner; or together, the aggregate of all Charter and Subsequent Core Partners.
- Direct Access, alternately Native Access: Operation of a Subscriber Radio by a member of a Subscriber Organization on a Subsystem that is connected to the Shared Core such that the unique identifier of that Subscriber Radio must be operational within the Shared Core’s identifier database.
- ISSI Interconnection: The connection between two Shared Cores using the protocols of the Inter RF-Subsystem Interface as defined by Project 25 standards; different than the mechanism used to directly interconnect a Subsystem to a Shared Core or to interconnect Shared Cores within the same system.
- Mutual Aid Use: Direct Access use of the System, including any and all interconnected Subsystems that is in accordance with the following:
  - For coordinating activities and/or exchanging official information with: i) departments that use the System for primary, dispatch, or intradepartmental communications or ii) other Mutual Aid Subscriber Organizations.
  - For purposes other than primary, dispatch, or intradepartmental communications.
  - For only the duration of a specific incident or event.

- With access only to the features of Group Voice Call, Broadcast Group Voice Call, Emergency Group Call, Call Alert, and Encryption.
- Provide: To arrange for the delivery of services, to include paying for any/all costs associated with such services.
- Project 25: A suite of standards for digital radio communications used by federal, state/province and local public safety agencies; produced through the joint efforts of the Association of Public Safety Communications Officials International (APCO), the National Association of State Telecommunications Directors (NASTD), selected federal agencies and the National Communications System (NCS); and standardized under the Telecommunications Industry Association (TIA) 102 series of documents.
- Shared Core: The equipment (hardware and software) that provides the control, call-processing, and network management for and of trunked radio operations within the Waukesha County and Milwaukee County 800MHz digital trunked radio system.
  - At the signing of this MOU, the Shared Core includes the following components which are located at the Waukesha County Radio Services (WCRS) facility at 2120 Davidson Road, Waukesha, WI 53186: two Zone Controller servers which operate multiple applications, Core Routers, Exit/Gateway Routers, LAN/WAN Switches, a DMZ Switch, an ISSI server, and associated and ancillary other computer or networking equipment to interconnect these components to each other and to subsystems – a detailed list of the Shared Core components is included as Exhibit A.
- Subscriber Organization: The represented municipal body, department, agency, or organization that operate Subscriber Radios on one or more Subsystems.
- Subscriber Radio(s), alternately User Radio(s): The mobile and portable radio(s), wireline and wireless dispatch console(s), and control station(s) operated by users of the System in order to communicate via the System.
- Subsequent Core Partner: Those organizations other than the Charter Core Partners that interconnect a Subsystem to the Shared Core and that agree to the obligations identified in this MOU.
- Subsystem: The fixed-location towers, repeaters, Backhaul, and other equipment (hardware and software) that interface to the Shared Core in order to deliver radio operations within a geographic area.
- System ID: The numeric designation that is broadcast by a Project 25 radio system that uniquely identifies it from other systems; the System ID for the Waukesha County and Milwaukee County 800MHz digital trunked radio system is \$0692.
- System, alternately, the Organization of Affiliated Secure Interoperable RF Subsystems (OASIS): The Waukesha County and Milwaukee County 800MHz digital trunked radio system, known as OASIS, including the Shared Core and any and all attached Subsystems.
- Subscriber Radio Template, alternately Subscriber Radio Codeplug: The contents of a file created by Subscriber Radio programming software that contains all necessary System information required to enable operations of a Subscriber Radio on the System.

SECTION 4: TERM

This MOU is effective as of the date of the last signature by the Charter Core Partners.

The initial term of this MOU is ten (10) years, and shall renew automatically thereafter for consecutive 2-year terms unless any Charter Core Partner provides written notice to the other Charter Core Partner of its desire not to renew the MOU a minimum of ninety (90) days prior to the end of the initial or then-current term.

Any Subsequent Core Partner may terminate its participation under this MOU by providing written notice to the other Collective Core Partners of its desire not to renew its participation under the MOU a minimum of ninety (90) days prior to the end of the initial or then-current term.

Expansion of this MOU by the addition of Subsequent Core Partners, as described in Section 8, shall not affect the term of this MOU.

SECTION 5: POINTS OF CONTACT

Each Collective Core Partner shall designate one individual as their point of contact for any and all matters related to this MOU. That person shall be empowered to communicate on all issues related to the ownership and operation of that Collective Core Partner's Subsystem and shall be authorized to make and enforce decisions relating to the same.

The following are the points of contact for the Charter Core Partners:

For Waukesha County

Name: Chris Petterson  
 Title: Radio Systems Manager  
 Department/Division: Waukesha County  
 Radio Services  
 Address: 2120 Davidson Rd, Waukesha, WI  
 53186  
 Phone Number 262-548-7600  
 Email address:  
[cpetterson@waukeshacounty.gov](mailto:cpetterson@waukeshacounty.gov)

For Milwaukee County

Name: Erik Viel  
 Title: Director  
 Department/Division: Milwaukee County Office  
 of Emergency Management  
 Address: 821 W. State St, Room 305, Milwaukee,  
 WI 53233  
 Phone Number: 414-278-4834  
 Email address:  
[Erik.Viel@milwaukeecountywi.gov](mailto:Erik.Viel@milwaukeecountywi.gov)

Each Collective Core Partner will notify the others of changes to their point of contact and shall update this MOU via an Amendment to reflect said changes.

SECTION 6: GOVERNANCE6.1 Voting and Voting Process

Certain decisions regarding the operation, maintenance, and expansion of the Shared Core shall require a vote of the Charter Core Partners or the Collective Core Partners. Such voting decisions are explicitly identified in Section 6.2 of this MOU and shall occur in accordance with the following provisions:

- Voting decisions shall occur only at meetings at which the Points of Contact for all of the Charter or Collective Core Partners, or their expressly-identified designees, are present. Each Point of Contact, or their expressly-identified designee, shall be the sole party responsible for casting a vote for their respective Charter or Collective Core Partner organization and they shall reserve the right, at their sole discretion, to cast a vote on any matter until they have had the opportunity to consult with their Corporation Counsel.
- The Collective Core Partners shall meet at least twice annually, once in the first quarter and once in the third quarter of each calendar year on a date agreed to by all Collective Core Partners. Additional meetings shall be called if approved by all Collective Core Partners. The first action of each meeting of the Collective Core Partners shall be the identification of a meeting secretary who shall record votes and distribute them as described below in this Section.
- Each Charter Core Partner and Collective Core Partner shall have one and only one vote, however, as expressed throughout this MOU, certain decisions shall be made by the vote of only the Charter Core Partners.
- Proposals for decisions that are to be made by vote shall be written as draft Amendments to this MOU and shall be distributed to all Collective Core Partners at least five (5) days prior to a meeting.
- Decisions that have financial impact to any Collective Core Partners shall be evidenced as an Amendment to this MOU.
- Votes on all decisions that are to be made by votes shall be recorded in writing and shall be distributed by the meeting secretary to all Collective Core Partners no more than ten (10) days following a meeting.
- Decisions that are approved by voting shall be evidenced as Amendments to this MOU after signature by all relevant Core Partners; either Charter or Collective, depending on the decision.

Collective Core Partners are encouraged to seek and follow advice from Subscriber Organizations that operate on their Subsystem, including from any intra-subsystem Governance/ Advisory Councils or Boards, however, such Organizations, Councils, or Boards shall not have any direct voting authority on the decisions related to the Shared Core as listed in this MOU.

#### 6.2 Voting Decisions

The Charter or Collective Core Partners shall solely have the obligations and rights to make the following decisions regarding the Shared Core and shall do so according to the provision of Section 6.1 of this MOU:

- a) Approving by unanimous vote of the Charter Core Partners an amendment to this MOU to allow for its expansion to one or more Subsequent Core Partners as described in Section 8

- b) Approving by majority vote of the Collective Core Partners to modify the “Subscriber Radio Compliance Requirements” as described in Section 10
- c) Approving by unanimous vote of the Collective Core Partners the development of new, or modifications to existing, Configuration and Administration Policies Affecting Multiple Subsystems as described in Section 11.2
- d) Approving by unanimous vote of the Collective Core Partners adjustment of the selection of Shared Core vendor services as described in Section 12
- e) Approving by unanimous vote of the Charter Core Partners the amounts for vendor services to be paid by prospective/expansion Collective Core Partners as described in Section 12
- f) Approving by unanimous vote of the Charter Core Partners adjustment of the scope and costs (both total and proportional) of the Shared Core Hosting Services, including adjustments made because of expansion, as described in Section 13
- g) Approving by majority vote of the Collective Core Partners a Major Maintenance Exhibit as described in Section 14
- h) Approving by unanimous vote of the Charter Core Partners a Shared Core Platform Upgrade Exhibit as described in Section 15
- i) Approving by unanimous vote of the Charter Core Partners the assignment of interconnections of channel gateways that are jointly-purchased and jointly-owned by the Charter Core Partners as described in Section 16.1
- j) Approving by unanimous vote of the Charter Core Partners an ISSI Interconnection Exhibit as described in Section 16.2
- k) Approving by unanimous vote of the Charter Core Partners a Shared Core Modification Exhibit described in Section 17
- l) Approving by unanimous vote of the Charter Core Partners changes to the existing requirements and restrictions related to Class "B" and Class "C" Keys, as described in Section 18
- m) Approving by unanimous vote of the Charter Core Partners the establishment of the capabilities of Class "C" Keys, as described in Section 18
- n) Approving by unanimous vote of the Collective Core Partners an Amendment to this MOU as described in Section 23

Except as expressly allowed in this MOU, Collective Core Partners shall not take any actions on the topics listed above and described throughout this MOU unless or until approval by vote as described in Section 6.1.

Any other type of decision affecting the operation and use of the Shared Core not expressly set forth in this MOU shall require the unanimous agreement of the Charter Core Partners.

#### SECTION 7: LIMITATIONS ON SCOPE

Nothing within this MOU shall be interpreted as the establishment of a new organization, agency, or department.

Other than the sharing of and payment for explicitly-identified costs, nothing within this MOU shall be interpreted as an obligation of any Collective Core Partner to release any of its funds or its source of funding to any other Collective Core Partner.

The scope of this MOU is to establish the obligations of each Collective Core Partner for the ownership and operation of the Shared Core. Each Collective Core Partner recognizes that the other(s) also owns and operates radio Subsystems which interconnect to the Shared Core. Unless otherwise stated, the obligations of this MOU extend only to each Collective Core Partner's ownership and operation of the Shared Core.

This MOU extends solely to the Shared Core of the 800MHz Trunked Digital Radio System deployed in 2014 by Waukesha and Milwaukee Counties, known as OASIS, and has no relevance to other system(s), radio or otherwise, owned or operated by any Collective Core Partner, except to the degree that such other system(s), including radio subsystems that are connected to the Shared Core, are impacted by the operations of the Shared Core.

All Collective Core Partners must comply with all Federal and Wisconsin laws, rules, and regulations.

This MOU is governed by, and must be construed in accordance with the laws of the State of Wisconsin.

Each Collective Core Partner shall be solely responsible for any fines, penalties, settlements, or judgments that are imposed against or assigned to them as such fines, penalties, settlements, or judgments relate to the operation of their Subsystem.

#### SECTION 8: CHARTER AND SUBSEQUENT CORE PARTNER OWNERSHIP & EXPANSION

The Charter Core Partners have jointly purchased and equally own (on a 50%-50% basis) the Shared Core.

Charter Core Partners shall approve by unanimous vote the expansion to any Subsequent Core Partner after consultation with any Collective Core Partners and shall document such expansion with an Amendment to this MOU. The Amendment need be signed by only the Charter Core Partners and the joining Subsequent Core Partner and it shall explicitly state that the Subsequent Core Partner agrees to abide by the terms of this MOU. The Amendment shall also explicitly identify a Point of Contact for the Subsequent Core Partner and that individual shall be empowered to communicate on all issues related to the ownership and operation of that Subsequent Core Partner's Subsystem and shall be authorized to make and enforce decisions relating to the same. The Amendment shall list the Subsequent Core Partner's cost for vendor-provided shared core services as described in Section 12 as well as the total amount and each Collective Core Partner's amount of the Shared Core Hosting Services as described in Section 13. Collective Core Partners shall be bound by such Amendment, subject to their right to terminate their further participation in this MOU pursuant to Section 19.

Prior to approval of the expansion to any Subsequent Core Partner, the Charter Core Partners shall conduct a study of the available capacity of the Shared Core and of the required capacity by a prospective Subsequent Core Partner. The prospective Subsequent Core Partner shall be responsible for the costs of any such study. The conclusions of the capacity study must be mutually agreeable to the Charter Core Partners. If the conclusion of the capacity study indicates that the Share Core requires expansion or other modification to accommodate a prospective Subsequent Core Partner, then the Subsequent Core Partner shall be responsible for the costs of those expansions or modifications to the Shared Core. Any physical (hardware) assets purchased to accomplish such an expansion or modification of the Shared Core, to extent such assets become an integral part of the operation of the Shared Core, shall become the property (on a 50%-50% basis) of the of the Charter Core Partners. Any other physical (hardware) assets purchased by the Subsequent Core Partner shall remain the property of the partner and may be removed upon termination of the partner's participation in the MOU so long as the removal of the asset does not harm system performance or cause unreasonably long system downtime. The Subsequent Core Partner will be responsible for any costs associated with removal of the asset.

#### SECTION 9: SUBSYSTEMS AND ACCESS

Each Collective Core Partner shall be responsible for the purchase price, ownership, maintenance, and operations of their Subsystem so long as doing so is conducted in a manner that is not in conflict with this MOU.

Each Collective Core Partner shall be responsible for providing Backhaul from their Subsystem to the Shared Core.

Other roles and responsibilities relating to the operation of a Subsystem shall remain with each Collective Core Partner unless explicitly called out in this MOU.

#### SECTION 10: SUBSCRIBER RADIO ACCESS

The Charter Core Partners have developed and approved a set of "Subscriber Radio Compliance Requirements" that describe the technical specifications to which Subscriber Radios that are to operate with Direct Access on the System must comply. These "Subscriber Radio Compliance Requirements" are attached as Exhibit C1. All Collective Core Partners shall enforce those requirements in order to ensure that non-compliant radios do not operate in a Direct Access manner on the System. Changes to the "Subscriber Radio Compliance Requirements" shall require approval by a majority vote of the Collective Core Partners and the change(s) shall be included in an updated document that shall be incorporated in Exhibit C1.

Each Subscriber Organization will be solely responsible for their costs (including purchase, programming, and maintenance) and shall be considered the sole owners of their Subscribers Radios.

Collective Core Partners shall make every effort to ensure that Subscriber Organizations, other than those that operate only for Mutual Aid Use, provide to Waukesha County the Subscriber Radio



Codeplugs for their Subscriber Radios so that they may be stored on the repository described in Section 11.1.

Use of Subscriber Radios on a Subsystem shall be governed by the policies and procedures agreed to by a Collective Core Partner and the Subscriber Organizations that use that Subsystem but in no way shall the policies and procedures of any Subsystem: i) supersede any policies or procedures included in or attached to this MOU or ii) be implicitly or explicitly extended to pertain to another Subsystem.

Any Collective Core Partner may charge Subscriber Organizations within their political boundaries a usage fee for use of their Subsystem so long as it is expressly identified in a legally binding document between the Collective Core Partner and the Subscriber Organization.

In the event that a Subscriber Organization operates Subscriber Radios on more than one Subsystem, that Subscriber Organization shall not be responsible for paying usage fees to more than one Collective Core Partner but shall only pay usage fees to the owner/operator of the Subsystem on which they primarily operate (as a percentage of total operational time).

No Collective Core Partner shall charge any Subscriber Organizations a usage fee for use of their Subsystem so long as that use is limited exclusively to Mutual Aid Use.

## SECTION 11: SHARED CORE AND SUBSYSTEM OPERATIONS

### 11.1 Shared Core Hosting Services

Waukesha County shall provide the following services to host the operations and maintenance of the Shared Core:

- Facility:
  - Hardened, secure shelter rated for 200 mph winds
  - Computer floor, cable management and overhead cable trays, power and ground bus
  - 2-post and 4-post secured racks including:
    - 4 rack positions for Shared Core equipment
    - 4 rack positions for Milwaukee County co-located equipment
  - Redundant dry-agent fire suppression in transmitter room with extensive smoke detection (18 sensors)
  - Automatic diesel backup generator, with secondary backup generator typically stationed on premises (minimum 1 week fuel on premises) with water-mist fire suppression
  - Redundant, monitored HVAC with air cleaning and humidification
  - Entries for multiple-carrier fiber and telco
  - Network monitoring center
  - Secure underground cable vaults and underground utilities

- 24/7 monitored power and environmental
- Interior and exterior lighting
- On-premises parking with indoor truck loading/unloading
- Amenities and Power:
  - Redundant, dual-feed 110VAC
  - Dual, monitored, and independent AC Uninterruptible Power Supplies
  - Monitored, uninterruptible 48VDC
  - R56-level grounding to racks, electrical, HVAC, alarms, etc.
  - Halo personnel-protection ground system
  - Intrusion and fire detection alarms throughout to include 24/7 monitoring
  - Utilities and fuel
- Tower Space:
  - Class III certified tower
  - Fully grounded and protected
  - Space for one microwave dish to Milwaukee County
  - Space on ice-protected cable bridge, cable entry ports and interior cable trays required for WCRS-approved antenna transmission lines
  - Tower and compound illumination and 10-foot razor-ribbon protective fencing
- Staffing:
  - 24/7 Core and related infrastructure monitoring
  - 24/7 rapid technician response for emergency service
  - 24/7 monitoring of environmental and electrical system faults
  - Staff-provided administration and maintenance of shared infrastructure as applicable to include Operational Updates to include among others actions:
    - Centralized management of operational databases such as user ID's, talkgroup ID's, etc.
    - Application of minor software releases and patches as provided by Shared Core vendor
    - Provision of reports on system performance as agreed-to by Waukesha County
  - Staff-escorted access for vendors or outside service providers
  - Staff shall have passed background and FBI checks
  - Staff to test and certify all Uninterruptible Power Supplies, alarm systems, fire suppression, and generators, semi-annually or annually as appropriate
  - Staff to perform maintenance of HVAC, alarms, lighting, and other systems
  - Staff to conduct facility maintenance, repairs and cleaning
- Subscriber Radio Codeplug Repository
  - Equipment, software, and staff to operate a repository (computer server) that shall contain the Subscriber Radio Codeplugs for all Subscriber Radios from Subscriber Organizations on the System, other than those that operate for Mutual Aid Use. Access to this repository shall be made available to those

organizations that are provided a Class “B” or Class “C” Key, as described in Section 18, however, access to content within this repository may be restricted.

### 11.2 Configuration and Administration Policies

Policies regarding the configuration and administration of the Shared Core that affect the technical or operational functionality of more than one Subsystem shall be developed and approved by unanimous vote of the Collective Core Partners. Upon approval, such policies shall be attached to this MOU within Exhibit C, “Configuration and Administration Policies Affecting Multiple Subsystems”. Unless otherwise described in this MOU, changes to any such existing policies shall require approval by unanimous vote of, at a minimum, the Charter Core Partners, upon which changes shall be likewise attached to this MOU within Exhibit C.

### 11.3 Subsystem Services

Collective Core Partners shall be responsible for providing similar services as listed in Section 11.1 for their Subsystems.

### 11.4 System Management Access

System Management includes the following System Management Activities:

- Fault Management (the ability to view and respond to equipment-generated alarms),
- Configuration Management (the ability to configure system equipment and to provision the system to allow operations of specific Subscriber Radios),
- Accounting Management (the ability to view usage statistics of the system),
- Performance Management (the ability to define the methods and outcomes of features supported by the system), and
- Security Management (the ability to establish or restrict access to the system by Subscriber Radios and by personnel authorized to provide system support).

System Management Activities related solely to Shared Core shall be the responsibility of Waukesha County in accordance with Section 11.1 of this MOU and System Management Activities that affect the technical or operational functionality of more than one Subsystem shall be developed and approved in accordance with Section 11.2 of this MOU.

Each Collective Core Partner shall be granted the rights to conduct System Management Activities for their Subsystem but only to the degree to which such Activities:

- Effect the functions of their Subsystem or
- Are related to the Subscriber Radios that of the Subscriber Organizations that are primarily associated with their Subsystem (operate on a primary basis within their political boundaries).

To complete these Subsystem System Management Activities, each Collective Core Partner shall be granted access to, at a minimum, the following Shared Core System Management applications (or their successors that provide equivalent functionality):

- Provisioning Manager
- Unified Event Manager
- Private Radio Network Manager
- Unified Network Configurator (including Wizard)

System Management activities may occur from System Management equipment (i.e., terminals) that is on the same network as the Shared Core (“on-network access”) or that is on different networks as the Share Core (“remote access”), however, the latter shall occur only in accordance with the System Management Remote Access policy that is agreed to and incorporated into Exhibit C. No remote access shall occur until such policy is incorporated into Exhibit C.

All System Management access shall occur through credentials that include a unique user name and password that shall be granted and administered by Waukesha County. Such System Management credentials shall be granted to a specific individual who shall be solely responsible for their use. Any individual that is granted System Management credentials shall not assign their use to any other individual.

Such System Management credentials shall be granted only to the following individuals and only after they have: i) completed System Administration training provided by the System’s vendor and ii) passed a background check whose format is established in policy and agreed to and incorporated into Exhibit C:

- Each Collective Core Partner’s Radio System Administrator
- Any individual explicitly tasked by the Collective Core Partner with a job duty that specifically involves radio System Management and, in this case, the level of System Management access shall be commensurate only to the level of that individual’s responsibility for System Management Activities.

System Management credentials that are limited to the specific System Management components of provisioning the system to allow operations of specific Subscriber Radios shall be granted to those organizations that are approved.

Such System Management credentials shall be revoked should the individual granted them fail to abide by the terms of this MOU including this section or the Configuration and Administration Policies described in Section 11.2 of this MOU.

Each Collective Core Partner shall be solely responsible to purchase and maintain any and all hardware, software, or licenses to enable the System Management access described in this section.

## SECTION 12: SHARED CORE VENDOR-SUPPLIED OPERATIONAL COSTS

The Charter Core Partners have agreed to purchase from the vendor of the Shared Core a set of services that are directly related to the operations and maintenance of the Shared Core. This set of Shared Core vendor services includes:

- Technical Support
- System Upgrade Agreement (2-Year)
- Security Update Service
- Infrastructure Repair with Advanced Replacement
- Network Monitoring Operations

Details on these Shared Core vendor services are found in Waukesha County's Contract for Service #1332 as executed with Motorola Solutions, Inc.

Adjustments to this selection of Shared Core vendor services shall require approval by majority vote of Collective Core Partners. The exception to this clause shall be the service of Network Monitoring Operations which shall be removed from the set of services that are purchased from the vendor of the Shared Core if the Charter Core Partners approve by unanimous vote that a functionally-equivalent service can be delivered by Waukesha County Radio Services.

All Collective Core Partners shall be responsible for direct payment to the vendor of the Shared Core, their portion of the costs associated with the Shared Core vendor services.

- So long as there are only Charter Core Partners, they shall each pay an equal amount (i.e., on a 50%-50% basis) of the Shared Core vendor's total cost for the agreed-to set of Shared Core vendor services.
- Upon expansion through Subsequent Core Partners, each Collective Core Partner shall pay an amount of the agreed-to set of Shared Core vendor services that is set by the unanimous vote of the Charter Core Partners after consultation with all Collective Core Partners and after taking into account the appropriate proportional share attributable to each Collective Core Partner.
- Collective Core Partners shall be bound by the vote of the Charter Core Partners for the remaining term of this MOU, subject to their right to terminate their further participation in this MOU under Section 19.

### SECTION 13: SHARED CORE HOSTING SERVICES COSTS

The costs for the Shared Core Hosting Services to be provided by Waukesha County as described above in Section 11.1 for the period of the calendar year of 2016 are shown in Exhibit B.

So long as there are only Charter Core Partners, Milwaukee County shall pay Waukesha County for the delivery of Shared Core Hosting Services as follows:

- For the period of the calendar year of 2016: \$75,000.

- For each calendar year starting in 2017: an amount equal to the base amount of \$75,000 plus a 3% per year annual escalation.

The Charter Core Partners agree that these costs may be further increased by an amount that is no more than 50% of the costs that are directly attributable to Waukesha County's provision of the Subscriber Radio Codeplug Repository as described in Section 11.1. Any such increase shall be approved by unanimous vote of the Charter Core Partners and the costs in Exhibit B and the amounts listed in this Section shall be adjusted through a written Amendment to this MOU signed by the Charter Core Partners.

Within the first quarter of each calendar year starting in 2017, Waukesha County shall prepare and deliver an invoice to any/all Collective Core Partners for the Shared Core Hosting Services, as described above in Section 11.1, for that calendar year. Collective Core Partners shall pay such invoice within sixty (60) days of receipt.

In the event that the Charter Core Partners decide to a change in the scope of the Shared Core Hosting Services, such decision shall be approved by unanimous vote of the Charter Core Partners and the costs in Exhibit B and the amounts listed in this Section shall be adjusted through a written Amendment to this MOU, signed by the Charter Core Partners.

Upon expansion through Subsequent Core Partners, the Charter Core Partners shall, after consultation with the Collective Core Partners, approve by unanimous vote and establish by amendment: i) the total base amount for the Shared Core Hosting Services to be provided by Waukesha County as described above in Section 11.1, and ii) the portion of that total base amount to be paid by each Collective Core Partner for the then-current calendar year as well as for subsequent calendar years. Collective Core Partners shall be bound by such amendment, subject to their right to terminate further participation in this MOU under Section 19.

#### SECTION 14: MAJOR MAINTENANCE

Should the Shared Core require major maintenance, which are services required to maintain operations of the Shared Core above and beyond the daily-operations services of Waukesha County (as described in Section 11 of this MOU) and the Shared Core vendor services (as described in Section 12 of this MOU), the Collective Core Partners shall develop a Major Maintenance Exhibit that shall identify: i) a technical description of the maintenance services, ii) the organization that shall provide the required major maintenance services, iii) the costs to be borne by each Collective Core Partner as well as their method of payment of such costs, and iv) the expected impact to system performance to include the timing and duration of any system outages. Any Major Maintenance Exhibit shall be established upon approval by majority vote Collective Core Partners (but said majority must include the Charter Core Partners). Major Maintenance Exhibits shall, upon their approval, be attached to this MOU within Exhibit D. Disagreeing Collective Core Partners are subject to the Major Maintenance Exhibit's provisions to include their identified fiscal responsibility for its implementation.

Nothing in this Section shall prevent or preclude Waukesha County from taking steps as seen necessary by Waukesha County to deliver services (including the procurement of equipment or services from external vendors, as appropriate to the situation) as necessary to continue or restore operations to the Shared Core in the event of an unforeseen failure that significantly impacts Shared Core performance. Should such continuation or restoration actions be required, Waukesha County shall provide written notification to the other Collective Core Partners via their identified Points of Contact within 24 hours of restoration and notification shall contain a Major Maintenance Exhibit and, to the degree possible, identify the cause of the need for restoration services, the restoration services delivered, and any ongoing impacts to system operation. Costs directly attributable to preventing failures or restoring operations as described herein shall be considered as part of that calendar year's Shared Core Hosting Service costs.

#### SECTION 15: UPGRADES

The Collective Core Partners recognize that occasional changes will be required to maintain the operations of the system (e.g., changes to existing configuration parameters and the application of minor software releases and patches). Such changes shall be considered Operational Updates and they shall be made by Waukesha County as part of their delivery of daily-operations services (as described in Section 11 of this MOU) and shall not require approval by other Collective Core Partners.

The Collective Core Partners also recognize that periodic changes will be required to upgrade the platform of the Shared Core operating software in order to remain current with the Shared Core vendor's system-level of software. These Platform Upgrades shall be made only after approval by majority vote of the Collective Core Partners (but said majority must include the Charter Core Partners) of a Shared Core Platform Upgrade Exhibit that includes:

- i) The purpose of the Platform Upgrade,
- ii) The version(s) of software involved,
- iii) The Subsystem components, regardless of ownership, that are involved and how they will be modified,
- iv) The start, end, and significant intermediate milestone dates involved,
- v) The major responsibilities of Subsystem owners,
- vi) The impact to Subscriber Radios during and after the Platform Upgrade,
- vii) The costs to be borne by each Collective Core Partner, and
- viii) Any other components of the Shared Core Platform Upgrade Exhibit that are agreed to mutually by the Collective Core Partners.

Platform Upgrade Exhibits shall, upon their approval, be attached to this MOU within Exhibit D.

Disagreeing Collective Core Partners are subject to the Platform Upgrade Exhibit's provisions to include their identified fiscal responsibility for its implementation.

It shall be the responsibility of each Collective Core Partner to communicate with and solely represent the interests of all Subscriber Organizations that use their Subsystem in matters related to Platform Upgrades.

## SECTION 16: INTERCONNECTIONS

### 16.1 Joint Conventional Channel Gateway Interconnections

The Charter Core Partners recognize that they have jointly purchased and equally own sixteen (16) conventional channel gateway interconnections. Assignment of these gateway interconnections, and any others that are jointly purchased and owned by the Charter Core Partners, to actual channels and the corresponding physical radio hardware will occur only once the Charter Core Partners approve by unanimous vote a written CCGW Interconnection Exhibit that shall contain:

- Which channels will be interconnected,
- Which Charter Core Partner shall provide the corresponding physical radio hardware,
- Where the corresponding physical radio hardware shall be located, and
- How the connection between the conventional gateway and the corresponding physical radio hardware shall be achieved.

The CCGW Interconnection Exhibit shall, upon its approval, be attached to this MOU within Exhibit D.

Connection of conventional channel gateway interconnections that are purchased and operated by a single Collective Core Partner shall be the sole responsibility of that Collective Core Partner and shall not require approval by the other Collective Core Partners as long as such deployment will not result in a hindrance to another Collective Core Partner's Subsystem or the Shared Core.

### 16.2 ISSI Interconnections

Connection of the Shared Core to other, external systems shall be accomplished via an ISSI Interconnection. Such an ISSI Interconnection shall be implemented only after approval by unanimous vote of the Charter Core Partners, after consultation with the Collective Core Partners, of an ISSI Interconnection Exhibit that includes: which external system shall be connected, which roaming profiles and configurations shall be used, the method of physical interconnection of ISSI gateways, and which talkgroups shall be carried via the connection including any restrictions on use of those interconnected talkgroups. Excluding the costs incurred by the operator of the other, external systems to enable an ISSI interconnection, the costs for any and all ISSI interconnections shall be equally shared by all Collective Core Partners who wish to utilize the ISSI resources and those costs shall be enumerated in the ISSI Interconnection Exhibit. Access to the talkgroups from the other, external systems that are interconnected via ISSI shall be available to those Collective Core Partners who shared the cost of the ISSI interconnection. ISSI Interconnection Exhibits shall, upon their approval, be attached to this MOU within Exhibit D.

## SECTION 17: OTHER MODIFICATIONS OR EXPANSIONS



Other than Operational Updates, Major Maintenance Upgrades, Platform Upgrades and Interconnections; as described above in Section 14, Section 15, and Section 16 of this MOU, respectively; no modifications to, expansions of, or replacement of the Shared Core shall occur unless approved by unanimous vote of the Charter Core Partners, after consultation with the Collective Core Partners, of a Shared Core Modification Exhibit that includes:

- i) The purpose of the Modification,
- ii) The descriptions of the hardware and software involved,
- iii) A listing of any Subsystem components, regardless of ownership, that are involved and how they will be modified,
- iv) The start, end, and significant intermediate milestone dates involved,
- v) The major responsibilities of Subsystem owners,
- vi) The impact to Subscriber Radios during and after the Platform Upgrade,
- vii) The costs to be borne by each Collective Core Partner,
- viii) A listing of the ownership of any and all new hardware or software included in the modification,
- ix) The impact to system operations and performance (features, coverage, capacity, etc.) resulting from the modification, and
- x) Any other components of the Shared Core Modification Exhibit that are agreed to mutually by the Collective Core Partners.

Shared Core Modification Exhibits shall, upon their approval, be attached to this MOU within Exhibit D.

It shall be the responsibility of each Collective Core Partner to communicate with and solely represent the interests of all Subscriber Organizations that use their Subsystem in matters related to such modifications or expansions.

#### SECTION 18: SUBSCRIBER RADIO PROGRAMMING KEYS ("SYSTEM KEYS")

Each Charter Core Partner shall possess a Class "A" Key, however, they shall be used as follows:

1. The Class "A" Key held by Waukesha County shall be actively used by Waukesha County to create Class "B" and Class "C" Keys according to this MOU.
2. The Class "A" Key held by Milwaukee County shall be considered a backup to the Class "A" Key held by Waukesha County and shall not be used by any party so long as the functions of the Class "A" key can be met by the Class "A" Key held by Waukesha County.
3. Should circumstances arise such that the Class "A" Key held by Waukesha County is not available to fulfill its functions, Milwaukee County shall use its Class "A" Key to fulfill the functions of a Class "A" key in accordance with all provisions of this MOU. This shall continue until such time as Waukesha County is able to possess its own Class "A" key at which point Milwaukee County shall discontinue its use of the Milwaukee County Class "A" key.

4. Should circumstances arise such that the Class "A" Key held by Waukesha County is available to fulfill its functions but that Waukesha County staff are unavailable to support such functions, then, only following the written approval by both the Director of the Office of Emergency Management for Milwaukee County and the Director of Emergency Preparedness for Waukesha County, Milwaukee County shall use its Class "A" Key to create Class "B" and Class "C" Keys according to the provisions of this MOU. Should the above-specified Directors of either County be unavailable to grant this approval, it may be given by their respective County's County Executive. This shall continue until such time as the above-specified Directors of both Milwaukee County and Waukesha County agree in writing that the unavailability of Waukesha County staff has been resolved.

Each Charter Core Partner shall be entitled to possess and use a Class "B" Key that has the capabilities of programming the radio ID's, talkgroups, features and/or other capabilities of Subscriber Radios from all Subsystems. In using their Class "B" Keys, the Charter Core Partners shall adhere to any programming restrictions (of radio ID's, talkgroups, features and/or other capabilities) expressed to them in writing by their associated Subscriber Organizations.

Each Subsequent Core Partner shall be entitled to possess and use a Class "B" Key that has the capabilities of programming the radio ID's, talkgroups, features and/or other capabilities of Subscriber Radios from all Subsystems other than any programming restrictions (of radio ID's, talkgroups, features and/or other capabilities) that are expressly prohibited by their associated Subscriber Organization to the Charter Core Partners.

The Charter Core Partners understand that Milwaukee County has developed and has approved with the Subscriber Organizations to its Subsystems a set of provisions regarding the capabilities and provisions regarding the use of Class "B" Key or Class "C" Key for the Milwaukee County Subsystem. These provisions are included in the documented entitled "MILWAUKEE COUNTY EXHIBIT E: PROJECT 25 TRUNKED RADIO SYSTEM SYSTEM KEY REQUIREMENTS". The Charter Core Partners also understand that these provisions and the aforementioned document that contains them require further development before Class "B" Keys or Class "C" Keys can be developed or distributed to any parties or organizations beyond the Charter Core Partners. The Charter Core Partners agree to work together to further develop these provisions and to revise the aforementioned document that contains them in such a way that the both Charter Core Partners approve:

- The capabilities of the Class "C" Key (i.e., the "user ergonomic" parameters that can be changed by a user of a Class "C" Key")
- The processes by which Class "B" and Class "C" Keys are requested (applied for), approved (including the prerequisites for the organizations and/or individuals seeking a Class "B" or Class "C" key), distributed, used, controlled, and, if necessary, revoked.

The Charter Core Partners agree that, to the greatest degree possible allowed by the technology of the Class "C" Key, its capabilities shall be as outlined in the aforementioned document.

Upon its approval by unanimous vote of the Charter Core Partners, the agreed-to provisions and capabilities of the and Class "B" Key and Class "C" Key shall be included in a document that shall be incorporated in Exhibit C2 and no Class "B" Key and Class "C" Keys shall be created or distributed until the provisions of this paragraph are met.

#### SECTION 19: DISCONNECTION OR EARLY TERMINATION

By entering into this MOU, a Collective Core Partner agrees to not disconnect their Subsystem from the Shared Core for the term of the agreement.

Should any Charter Core Partner independently choose to disconnect or be forced to disconnect their Subsystem as an outcome of the dispute resolution process from the Shared Core prior to the expiration of the Term of this MOU, they shall be reimbursed by the other Charter Core Partner for the depreciated amount of their initial investment in the Shared Core.

In addition to the above, should any Collective Core Partner independently choose to disconnect or be forced to disconnect their Subsystem as an outcome of the dispute resolution process from the Shared Core prior to the expiration of the Term of this MOU, they shall be responsible for:

- The full amount of their share of the Shared Core Hosting Services Costs through the end of the then-current calendar year,
- Any and all of the Shared Core Partner's Shared Core Vendor-Supplied Operational Costs due to the Shared Core's Vendor, and
- Any and all costs associated with any hardware or software changes to their Subsystem, and to the Subscriber Radios of their Subscriber Organizations, resulting from the disconnection.

Should any Subsequent Core Partner independently choose to disconnect, or be forced to disconnect their Subsystem as an outcome of the dispute resolution process, from the Shared Core, the Charter Core Partners shall always retain ownership of the original System ID (\$0692) of the Shared Core.

Should any Charter Core Partner independently choose to disconnect, or be forced to disconnect their Subsystem as an outcome of the dispute resolution process, from the Shared Core, the Charter Core Partner that remains connected to the Shared Core shall retain ownership of the original System ID (\$0692) of the Shared Core.

#### SECTION 20: INDEMNIFICATION

To the extent permitted by law, each Collective Core Partner agrees to defend, indemnify and save harmless the other Collective Core Partner(s) from and against all claims, losses, costs, expenses, or damages arising from or relating to the negligence or willful misconduct of the Collective Core Partner or its agents, employees or contractors in the performance of, or otherwise related to, this MOU. However, each Collective Core Partner will have no liability to the other Collective Core Partner(s) to the extent that said claims, losses, costs, expenses or damages arise out of, result from or are contributed to

by any act, omission or negligence of the other Collective Core Partner, its agents, employees or contractors.

Notwithstanding the foregoing, nothing in this MOU, including but not limited to the indemnification terms above, shall in any way constitute a waiver by any party of any immunity, liability limitation, limitation on the amount recoverable, or other protection available to the Collective Core Partner under Section 893.80, Wis. Stats., or any other applicable statute or law.

## SECTION 21: INSURANCE

### 21.1 Collective Core Partners

Each Collective Core Partner is responsible for maintaining property insurance, or self-insure same, for its own property, other than the Shared Core which shall be insured as described below, such as subsystems and radios. It is understood and agreed that Collective Core Partners have no responsibility or liability associated with each other's property.

### 21.2 Shared Core

Waukesha County agrees to maintain property insurance on the Shared Core equipment located at Waukesha County's facilities and shall provide Milwaukee County a certificate of insurance evidencing such insurance on the Shared Core equipment with Milwaukee County listed as Loss Payee as their interest may appear.

## SECTION 22: FAILURE TO COMPLY, DISPUTE RESOLUTION

Should any Collective Core Partner fail to meet their obligations as expressed in this MOU, any other Collective Core Partner shall express in writing the nature and impact, to include cost, of the failure, and state what steps are necessary to fully cure the breach ("Default Notice"). Such Default Notice shall be delivered via hand delivery or via email to the point of contact identified in this MOU for each Collective Core Partner, including the defaulting Collective Core Partner.

The Collective Core Partner that has been identified as failing to meet their obligations shall have thirty (30) days from receipt of the Default Notice to correct the failure or dispute the Default Notice expressed by other Collective Core Partner(s) with refutation of the identified failure and/or purported cure. The basis for the dispute shall be stated in writing and delivered via hand delivery or via email to the point of contact for each Collective Core Partner ("Dispute Notice"). A failure to timely cure or dispute the failure shall be grounds for immediate termination of the Collective Core Partner from participation in and use of the Shared Core.

If the existence of the default or the appropriateness of the proposed cure is timely disputed, the points of contact for each Collective Core Partner shall work cooperatively and in good faith in an attempt to resolve the dispute. If a mutually agreeable resolution of the dispute cannot be agreed to by all Collective Core Partners within fifteen (15) days of receipt of the Dispute Notice, the Collective Core Partners may:

- All agree to continue working together to find a mutually agreeable resolution of the dispute;
- All agree to attempt mediation of the dispute with a mutually agreed upon mediator; or
- Pursue any and all other remedies available at law or in equity, including but not limited to the termination of the defaulting Collective Core Partner's participation in this MOU and use of the Shared Core and/or filing suit in a court of competent jurisdiction seeking damages or declaratory/injunctive relief as may be appropriate.

Each Collective Core Partner shall bare its own cost of the dispute resolution process, except that mediation fees, if any, shall be shared equally among participants.

#### SECTION 23: ENTIRETY OF THE MEMORANDUM OF UNDERSTANDING, CHANGES TO MEMORANDUM OF UNDERSTANDING

This MOU with Appendices, Attachments, Exhibits, and Addendums constitutes the entire Memorandum of Understanding and understanding between the Collective Core Partners and supersedes all previous memorandum, agreements, understandings, discussions, or representations concerning its subject matter. This MOU may not be changed or amended in whole or in part except in a written Amendment executed by all Collective Core Partners, except to the extent this MOU otherwise expressly calls for execution of a written amendment by fewer than all Collective Core Partners.

#### SECTION 24: FORCE MAJEURE

Except as otherwise specifically provided herein, no Collective Core Partner shall be considered to be in default in the performance of any of its obligations under this MOU, other than obligations to make payments as specified in this MOU or in any other agreement entered into by the Collective Core Partners, when there is the occurrence of an event of Force Majeure, as defined below, and the result is a delay or failure of performance of a Collective Core Partner, and in such case, no Collective Core Partner shall be liable for any loss or damage suffered by the other Collective Core Partner as a result thereof. Force Majeure, as used herein, shall mean any conditions affecting a Collective Core Partner in connection with the MOU, which condition is beyond the reasonable control of the Collective Core Partner, including, without limitation: acts of God, acts of public enemy, wars, blockages, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, civil disturbances, or explosions.

#### SECTION 25: ATTESTATIONS & SIGNATURES

The signatures below attest that the Charter Core Partner, represented by the individuals authorized to enter into this MOU, do acknowledge and accept the expectations, obligations, rights, and responsibilities contained within this MOU.

**Organization Name:** Waukesha County Department of Emergency Preparedness

---

**Signatory Name (written):**

---

**Signatory Title:**

---

**Signature:**

---

**Date:**

---

**Organization Name:** Milwaukee County Office of Emergency Management

---

**Signatory Name (written):**

---

**Signatory Title:**

---

**Signature:**

---

**Date:**

---

**IN WITNESS WHEREOF**, This Agreement executed the day and year first above written.

**FOR MILWAUKEE COUNTY**

\_\_\_\_\_  
Chris Abele, County Executive  
Office of the County Executive

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
Comptroller  
Office of the Comptroller

\_\_\_\_\_  
(Date)

**REVIEWED AS TO THE INSURANCE REQUIREMENTS**

\_\_\_\_\_  
Risk Manager  
Office of Risk Management

\_\_\_\_\_  
(Date)

**REVIEWED AS TO DISADVANTAGE  
BUSINESS ENTERPRISE REQUIREMENTS  
Approved with regards to  
County Ordinance Chapter 42**

\_\_\_\_\_  
Community Business  
Development Partners

\_\_\_\_\_  
(Date)

**Approved as to form and Independent contractor status  
By Corporation Counsel**

\_\_\_\_\_  
Corporation Counsel

\_\_\_\_\_  
(Date)

**Approved as compliant under  
Sec.59.42(2)(b)s, Stats**

\_\_\_\_\_  
Corporation Counsel

\_\_\_\_\_  
(Date)

**MUNICIPAL PROPERTY INSURANCE COMPANY**

9701 Brader Way, Suite 301

Middleton, WI 53562

608-821-6303

policy@mpicwi.com

**CERTIFICATE OF INSURANCE**

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policies below:

**Insured:**

Waukesha County  
1320 Pewaukee Road  
Room 310  
Waukesha, WI 53188

Type of Insurance	Policy Number	Effective Date	Expiration Date
Contractors Equipment	5000034	01/01/18	01/01/19
Replacement Cost	\$805,000		
Deductible	\$5,000		

**Description of Coverages/Operations:**

Description: Shared Core Equipment for Waukesha County and Milwaukee County

Model: N/A

Year: N/A

Value: \$805,000

Other: N/A

*This policy insures against sudden and accidental direct physical loss or damage except as limited or excluded.*

*The certificate holder is named as Loss Payee as \_\_\_\_\_ their interest may appear.*

**Certificate Holder:**

Milwaukee County Office of Emergency MGMT  
901 N. 9th Street, Room 308  
Milwaukee, WI 53233

Issue Date: 01/28/18



Ben Hagen-MPIC Policy Services



**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, 9th Floor - 633 W. Wisconsin	<b>CONTRACT TYPE</b>			
	Professional Service - Operating		x	
	Professional Service - Capital			
	Purchase of Service			
	Preliminary		Final	x

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

**VENDOR INFORMATION**

VENDOR NO.	ORDER TYPE	NEW or	AMEND	CONTRACT NO.
		x		

NAME OF VENDOR	ADDRESS
Waukesha County	515 W. Moreland Blvd. Waukesha, WI 53188

TAX I.D. NO.	EFFECTIVE DATES: begin date                      end date	LENGTH OF CONTRACT (IN MONTHS)	AMENDMENT ONLY: DOLLAR CHANGE	TOTAL CONTRACT AMOUNT
39-6005756	1.1.2016                      1.1.2026	120		\$ 859,790.95

**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
2017			480	4804			6509	(FY 2016 Payment)			\$ 75,000.00
2017			480	4804			6509				\$ 77,250.00
2018			480	4804			6509				\$ 79,567.50
2019			480	4804			6509				\$ 81,954.53
2020			480	4804			6509				\$ 84,413.16
2021			480	4804			6509				\$ 86,945.56

**PURPOSE OF CONTRACT**

This MOU with Waukesha County Department of Emergency Preparedness/Radio Services will allow the Office of Emergency Management to pay its portion of the operation and hosting costs of the jointly owned Shared Radio Core. This work is necessary for implementation of Milwaukee County Resolution #13-886, authorizing the Contract for Service with Motorola Solutions for the build-out of ten digital radio sites.

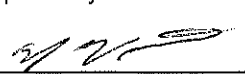
Was County Board approval received prior to contract execution or contract amendment or extension?

If YES, give County Board File No. (approval pending) Date Approved \_\_\_\_\_

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

Erik Viel	10.27.2017	OEM Radio Services Director
Prepared By	Date	Title
	10.27.2017	OEM Radio Services Director
Signature of County Administrator	Date	Title



**COMMUNITY BUSINESS DEVELOPMENT PARTNERS  
MILWAUKEE COUNTY**

**Participation Recommendation**

To be completed by project owner. Please, direct questions regarding this form to CDBP, 414-278-4851 or  
cbdpcpliance@milwaukeecountywi.gov

**FUNDING SOURCE**

Local     State     Federal     Grant    If Federally Funded, what percentage? \_\_\_\_\_ %  
Federal Source of Funds:  FAA     FTA     DOT (includes WisDOT)     Other: \_\_\_\_\_

**CONTACT INFORMATION**

Contract Administrator: Erik Viel    Phone: 414-617-7708    Date: 10.27.2017  
Email Address erik.viel@milwaukeecountywi.gov    Fund: 6509    Agency: 480    Org No. 4804

**PROJECT INFORMATION**

Project Name: Shared Core Hosting MOU    Project No.: \_\_\_\_\_

Contract Scope/Project Description (**attach scope/description of work or estimating sheet**):

This MOU with Waukesha County Department of Emergency Preparedness/Radio Services will allow the Office of Emergency Management to pay its portion of the operation and hosting costs of the jointly owned Shared Radio Core. This work is necessary for implementation of Milwaukee County Resolution #13-886, authorizing the Contract for Service with Motorola Solutions for the build-out of ten digital radio sites.

Contracting Opportunities (List NAICS codes): \_\_\_\_\_

RFP/BID will be used (Yes/No) No    Advertising Date: \_\_\_\_\_    Bid/Proposal Due Date: \_\_\_\_\_

**TYPE OF PROJECT**

<b><u>Professional Services</u></b>	<u>Estimated Amount</u>	<u>Recommended Participation</u>
	<u>\$ 859,790.95 – over ten year term</u>	_____ %

<b><u>Construction Related</u></b>	<u>Estimated Amount</u>	<u>Estimated Allowance</u>	<u>Recommended Participation</u>
_____	\$ _____	\$ _____	_____ %
_____	\$ _____	\$ _____	_____ %

**APPROVALS**

Is county board approval required? Yes    Resolution #: \_\_\_\_\_    **(pending approval)**

**WAIVER REQUEST**

**Request for a goal of 0% requires signature of department head, a full scope of project and explanation.**

Explanation: The jointly owned Shared Radio Core is physically located at Waukesha County Radio Services (WCRS). This MOU will allow Milwaukee County to pay for its portion of the Shared Radio Core costs to Waukesha County.

Department/Division Administrator Name \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

**CBDP USE ONLY**

Concur with Recommendation , or provide the following goals: \_\_\_\_\_ 0 %

This contract is exempt from a participation goal:  Yes     No

Approved: Rick Davis    Date: 11/14/2017

*	NAICS CODE	DESCRIPTION
	212319	Other Crushed & Broken Stone Mining & Quarrying
	212321	Construction Sand & Gravel Mining
	212322	Industrial Sand Mining
	236117	New Housing Operative Builders
	236118	Residential Remodelers
	236210	Industrial Building Construction
	236220	Commercial & Institutional Building Construction
	237110	Water & Sewer Line & Related Structures Construction
	237120	Oil & Gas Pipeline & Related Structures Construction
	237130	Power & Communication Line & Related Structures Construction
	237310	Highway, Street & Bridge Construction
	237990	Other Heavy & Civil Engineering Construction
	238110	Poured Concrete Foundation & Structure Contractors
	238120	Structural Steel and Precast Concrete Contractors
	238130	Framing Contractors
	238140	Masonry Contractors
	238150	Glass and Glazing Contractors
	238160	Roofing Contractors
	238170	Siding Contractors
	238190	Other Foundation, Structure & Building Exterior Contractors
	238210	Electrical Contractors & Other Wiring Installation Contractors
	238220	Plumbing, Heating & Air-Conditioning Contractors
	238290	Other Building Equipment Contractors
	238310	Drywall & Insulation Contractors
	238320	Painting and Wall Covering Contractors
	238330	Flooring Contractors
	238340	Tile & Terrazzo Contractors
	238350	Finish Carpentry Contractors
	238390	Other Building Finishing Contractors
	238910	Site Preparation Contractors
	238990	All Other Specialty Trade Contractors
	323114	Quick Printing
	323116	Manifold Business Forms Printing
	323117	Books Printing
	323119	Other Commercial Printing
	325998	All Other Miscellaneous Chemical Product & Preparation Manufacturing
	327215	Glass Product Manufacturing Made of Purchased Glass
	327320	Ready-Mix Concrete Manufacturing
	331210	Iron & Steel Pipe & Tube Manufacturing from Purchased Steel
	332116	Metal Stamping
	332311	Prefabricated Metal Building & Component Manufacturing
	332312	Fabricated Structural Metal Manufacturing
	332321	Metal Window & Door Manufacturing
	332322	Sheet Metal Work Manufacturing
	332323	Ornamental & Architectural Metal Work Manufacturing
	332510	Hardware Manufacturing
	423210	Furniture Merchant Wholesalers
	423310	Lumber, Plywood, Millwork & Wood Panel Merchant Wholesalers
	423320	Brick, Stone & Related Construction Material Merchant Wholesalers
	423330	Roofing, Siding & Insulation Material Merchant Wholesalers
	423390	Other Construction Material Merchant Wholesalers
	423510	Metal Service Centers & Other Metal Merchant Wholesalers
	423610	Electrical Apparatus & Equipment, Wiring Supplies & Related Equipment Merchant Wholesalers
	423690	Other Electronic Parts & Equipment Merchant Wholesalers
	423710	Hardware Merchant Wholesalers
	423720	Plumbing & Heating Equipment & Supplies (Hydronics) Merchant Wholesalers
	423730	Warm Air Heating & Air-Conditioning Equipment & Supplies Merchant Wholesalers

423740	Refrigeration Equipment & Supplies Merchant Wholesalers
423840	Industrial Supplies Merchant Wholesalers
443120	Computer & Software Stores
445299	All Other Specialty Food Stores
453110	Florists
453210	Office Supplies and Stationery Stores
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)
454210	Vending Machine Operators
454390	All Other Direct Selling Establishments
485991	Special Needs Transportation
485999	All Other Transit & Ground Passenger Transportation
488410	Motor Vehicle Towing
492110	Couriers & Express Delivery Services
492210	Local Messengers & Local Delivery
493110	General Warehousing & Storage
517110	Wired Telecommunications Carriers (except Satellite)
523120	Security Brokers and Dealers
523930	Investment Advice
524210	Insurance Agents, Brokers and Service
524291	Claims Adjusting
524292	Third Party Administration of Insurance
532490	Equipment Rental and Leasing, NEC
541110	Office Administrative Services
541211	Accounting, Auditing and Bookkeeping
541213	Tax Return Preparation Services
541219	Accounting Services/Other
541310	Architectural Services
541320	Landscape Architectural Services
541330	Engineering Services
541340	Drafting Services
541360	Geophysical Surveying & Mapping Services
541370	Surveying & Mapping (Except Geophysical) Services
541380	Testing Laboratories
541410	Interior Designs Services
541420	Industrial Design Services
541430	Commercial Art and Graphic Design / Graphic Design Services
541511	Custom Computer Programming Services
541512	Computer Systems Design Services
541513	Computer Facilities Management Services
541611	Management Consulting Services
541613	Marketing Consulting Services
541618	Other Management Consulting Services
541620	Environmental Services
541730	Landscape Services (lawn care, sod laying, seeding, installations, etc.)
541810	Advertising Agencies
541820	Public Relations Services
541860	Direct Mail Advertising Services
541910	Educational Research Commercial
541922	Photographic Services
541930	Translation and Interpretation Services
561110	Legal Services
561210	Facilities Support Services
561320	Temporary Help Services
561410	Computer Process/Data Preparation and Processing
561439	Photocopying and Duplicating Services
561440	Collection Services
561510	Travel Agencies

561520	Tour Operators
561611	Investigation Services
561612	Security Guards and Patrol Services
561621	Security Systems Services
561720	Janitorial/Building Cleaning and Maintenance Services
561730	Ornamental Shrub & Tree Services (tree planting/removal, trimming, pruning)
561740	Carpet and Upholstery Cleaning Service
561990	All Other Business Support Services
562119	Local Trucking w/o Storage
562910	Asbestos/Lead Abatement, Remediation Services
562998	Sanitary Services
621610	Home Health Care Services
621999	Health and Allied Services, NEC
624110	Child and Youth Services
624190	Individual and Family Social Services
624310	Vocational Rehabilitation Services
722110	Full Service Restaurants
722211	Retail Bakeries
722213	Eating Places
722410	Drinking Places Alcoholic Beverages
811121	Automotive Body, Paint and Interior Repair
812990	Shoe Repair Shops and Shoeshine parlors
813319	Other Social Advocacy Organizations

**Note:** For a comprehensive listing of NAICS codes please go to the address,  
<http://www.census.gov/eos/www/naics/index.html>

**EXHIBIT A: Shared Core Equipment List**

LINE ITEM	OPTION	QTY	MODEL NO.	DESCRIPTION
1	-	1	SQM01SUM0226	MASTER SITE CONFIGURATION
1	A	1	CA02093AA	ADD: M3 SYSTEM (1-100) 1ST ZONE
1	B	1	CA02113AA	ADD: ASTRO 25 FDMA TRKG OPERATION
1	D	1	CA01723AB	BASELINE BACK UP
1	E	1	CA01471AA	ADD: WINDOWS SUPPLEMENTAL TRANS CONFIG
1	F	1	CA01561AC	RADIO AUTHENTICATION
1	G	9	CA02106AA	ASTRO 25 FDMA VOICE SITE
1	H	4	CA02105AA	MCC7500/MCC7100 CONSOLE LIC
1	I	9	CA01316AA	ADD: UNC ADDTL DEVICE LIC (QTY 10)
1	J	48	CA01208AA	ENH: 500 RADIO USER LICENSES
1	K	22	CA01562AA	ENH: 500 RADIO AUTHENTICATION USER LICENSES
1	L	23	CA02193AA	ADD: ANTI-MALWARE DEF UPDATE LIC
1	M	1	Z13AG	ENH: UNIFIED NETWORK CONFIGURATOR (UNC)
1	N	2	ZA00921AA	ENH: PROVISIONING MANAGER
1	O	2	CA01224AB	ENH: UNIFIED EVENT MANAGER (UEM)
1	P	1	CA01238AA	ENH: EMAIL ALARM NOTIFICATIONS
1	q	1	D999AL	ENH: SECURITY PARTITIONING
1	r	1	D52AJ	ENH: ZONEWATCH
1	s	1	DA00148AG	ENH: ZONE HISTORICAL REPORTS
1	t	1	ZA00151AG	ENH: AFFILIATION USER REPORTS
1	u	1	Z801AM	ENH: RADIO CONTROL MANAGER
1	v	1	ZA00149AD	ENH: DYNAMIC REPORTS
2	-	1	DSKVT417A8UVB	SRVTRY 17" SCREEN, 8 VGA USB/PS2 PORTS W RMB2 RAIL
3	-	8	DSEHN9000U0015	15' SERVSWITCH EC-SERIES CPU CABLE
4	-	1	TT2565	NM Z420 HIGH TIER WIN7-IE9 64BIT

LINE ITEM	OPTION	QTY	MODEL NO.	DESCRIPTION
5	-	1	T7557	ASTRO 25 RADIO AUTHENTICATION CLIENT SOFTWARE
6	-	1	T7787	ASTRO 7.13 CLIENT APPLICATION SW
7	-	1	DDN9657	CRYSTAL REPORTS
8	-	48	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
9	-	1	DDN9590	SSG140 FIREWALL W/ 2 YEARS SUPPORT
10	-	1	T7413	JUNIPER FIREWALL RECOVERY MEDIA
11	-	1	CLN1856	2620-24 ETHERNET SWITCH
12	-	2	SQM01SUM0205	GGM 8000 GATEWAY
13	a	2	CA01616AA	ADD: AC POWER
14	-	1	DSTRAK91009EDC	REMOTE SITE REDUNDANT MODULAR FREQUENCY TIMING SYSTEM DC
15	-	200	L1700	FSJ1-50A CABLE: 1/4" SUPERFLEX POLY JKT PER FOOT
16	-	4	DDN9769	F1PNM-HC 1/4" TYPE N MALE CONNECTOR FOR FSJ1-50A CABLE
17	-	1	SQM01SUM0227	ISGW SERVER USED FOR ISSI / CSSI
17	a	2	UA00004AA	ISSI MANUAL ROAMING 10 SIMULTANEOUS TALK GROUP CAPACITY LICENSE
18	-	1	TT1932	ISG 1000 FIREWALL W/ 2 YR SUPPORT
19	-	2	SQM01SUM0205	GGM 8000 GATEWAY
19	a	2	CA01616AA	ADD: AC POWER
20	-	1	CLN1856	2620-24 ETHERNET SWITCH
21	-	1	SQM01SUM0238	SRC7500 SWITCHING ROUTING CENTER (7.13 AND BEYOND)
21	a	1	CA01342AA	ADD: HIGH TIER CORE LAN 96 PORTS
21	b	1	CA01344AA	ADD: DUAL GATEWAY ROUTERS AEB IF
21	c	1	CA01346AA	ADD: QTY 1 PAIR CORE ROUTERS CWR
21	d	1	CA01355AA	ADD: DUAL LINK 2 PAIRS CWR
21	e	1	CA01360AA	ADD: CORE BACKHAUL SWITCHES
22	-	1	B1905	MCC 7500 ASTRO 25 SOFTWARE
23	-	1	B1933	MOTOROLA VOICE PROCESSOR MODULE

LINE ITEM	OPTION	QTY	MODEL NO.	DESCRIPTION
23	a	1	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
23	b	1	CA01643AA	ADD: MCC 7500 / MCC 7100 TRUNKING OPERATION
23	c	1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
23	d	1	CA00182AB	ADD: AES ALGORITHM
23	e	1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
24	-	1	DS22WBLK	22" WIDE FORMAT LCD MONITOR BLACK, NON-TOUCH
25	-	1	TT2538	Z420 LOW TIER WORKSTATION WINDOWS 7 64BIT
26	-	1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
27	-	2	B1912	MCC SERIES DESKTOP SPEAKER
28	-	2	B1913	MCC SERIES HEADSET JACK
29	-	1	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
30	-	1	T7885	MCAFEE WINDOWS AV CLIENT
31	-	2	SQM01SUM0205	GGM 8000 GATEWAY
32	a	2	CA01616AA	ADD: AC POWER
33	b	2	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
34	-	8	DSPDU1215	POWER STRIP, 120 VAC 15 AMP 15 FT CORD
35	-	1	DVN4046B	MASTER SYSTEM KEY STARTER KIT



**EXHIBIT B: Base (2016) Costs for Shared Core Hosting Services**

The costs for the Shared Core Hosting Services to be provided by Waukesha County as described above in Section 11.1 for the period of the calendar year of 2016 are shown below:

<b>Item</b>	<b>Description</b>	<b>Base Cost</b>
1	Staff	\$34,940
2	Operations Including Utilities, Building Depreciation, etc.	\$17,573
3	Tower Space	\$22,487
<b>Total:</b>		<b>\$75,000</b>

**EXHIBIT C: Configuration and Administration Policies Affecting Multiple Subsystems**

Contents:

- EXHIBIT C1 - PROJECT 25 TRUNKED RADIO SYSTEM SUBSCRIBER RADIO COMPLIANCE REQUIREMENTS
- Upon its further development as described In Section 18, EXHIBIT C2 PROJECT 25 TRUNKED RADIO SYSTEM - SYSTEM KEY REQUIREMENTS

Additional Configuration and Administration Policies Affecting Multiple Subsystem shall be added to this as Exhibit C3 according to the processes described in Section 11.

**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).

### 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.



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



(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 re-certify 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



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



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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.





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



**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>				
1. Portable Subscriber Radio SDOC Requirements		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.
4. Portable Subscriber Radio P25 Trunking Feature Requirements				
	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	



**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
	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	
<b>5. Non-P25 Trunking Feature Requirements</b>				
	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	
<b>6. Portable Subscriber Radio Scan Mode Requirements</b>				
<b>7. Portable Subscriber Radio – Radio Parametric Requirements</b>				
	a) Frequency Band	Mandatory	Conditional Mandatory	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	



**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
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-Worn 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	
<b>H. Technical Requirements: Mobile Subscriber Radios</b>			
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				
	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	
	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	



**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
<b>5. Non-P25 Trunking Feature Requirements</b>				
	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	
<b>6. Mobile Subscriber Radio Scan Mode Requirements</b>		Mandatory	Mandatory	
<b>7. Mobile Subscriber Radio – Radio Parametric Requirements</b>				
	a) Frequency Band	Mandatory	Conditional Mandatory	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	
<b>8. Mobile Subscriber Radio Programming Capacity Requirements</b>		Mandatory	Mandatory	
<b>9. Mobile Subscriber Radio Connector Requirements</b>		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 Mandatory	Conditional Mandatory	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.).
12. Mobile Subscriber Radio – Public-Safety Standard Control for Vehicle Requirements	Conditional Mandatory	Conditional Mandatory	
13. Mobile Subscriber Radio – Public-Safety Standard Control for Motorcycle Requirements	Conditional Mandatory	Conditional Mandatory	
14. Mobile Subscriber Radio – Public-Safety Standard Control for Extreme (Fire External) Conditions	Conditional Mandatory	Conditional Mandatory	
15. Mobile Subscriber Radio – Public-Safety Expanded Control Requirements	Conditional Mandatory	Conditional Mandatory	
16. Mobile Subscriber Radio – Public-Safety Microphone (or Handheld) Control Requirements	Conditional Mandatory	Conditional Mandatory	
17. Mobile Subscriber Radio – Public-Service Model Requirements	Conditional Mandatory	Conditional Mandatory	
18. Mobile Subscriber Radio – Environmental Requirements	Recommended	Recommended	
19. Mobile Subscriber Radio – Programming Security	Mandatory	Mandatory	
20. Mobile Subscriber Radio Programming Requirements	Not Applicable	Not Applicable	
21. Mobile Subscriber Radio Project 25 Phase II Migration Requirements	Recommended	Recommended	
22. Mobile Subscriber Radio – Requirements for Upgrades to Existing Mobile Subscriber Radios	Not Applicable	Not Applicable	
23. Mobile Subscriber Radio – Mobile Control Station and Consolette Radio Requirements	Conditional Mandatory	Conditional Mandatory	All Compliance Requirements shall apply as written to all Mobile Control Stations or Consolette Radios.



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## 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 C2 PROJECT 25 TRUNKED RADIO SYSTEM - SYSTEM KEY REQUIREMENTS**

## MOU Section 18:

The Charter Core Partners understand that Milwaukee County has developed and has approved with the Subscriber Organizations to its Subsystems a set of provisions regarding the capabilities and provisions regarding the use of Class "B" Key or Class "C" Key for the Milwaukee County Subsystem. These provisions are included in the documented entitled "MILWAUKEE COUNTY EXHIBIT E: PROJECT 25 TRUNKED RADIO SYSTEM SYSTEM KEY REQUIREMENTS". The Charter Core Partners also understand that these provisions and the aforementioned document that contains them require further development before Class "B" Keys or Class "C" Keys can be developed or distributed to any parties or organizations beyond the Charter Core Partners. The Charter Core Partners agree to work together to further develop these provisions and to revise the aforementioned document that contains them in such a way that the both Charter Core Partners approve.

Exhibit C2 will be inserted in this section upon completion and mutual agreement by the Charter Core Partners.



**EXHIBIT C3: Configuration and Administration Policies Affecting Multiple Subsystem**

1. **General Security Philosophy:** OASIS shall be administered, partitioned and operated such that security and reliability are maximized, and opportunities for unauthorized access and system intrusion are minimized or eliminated. To that end:
  - a. Physical or electronic credentials that provide access to System Management Activities, the site that houses the Shared Core, or the sites that house Subsystem equipment shall be made available solely based on the need for such access in order to fulfill specific assigned responsibilities within OASIS. Where temporary physical access is required by personnel that have not been granted permanent by the Collective Core Partner responsible for the Subsystem site, such personnel shall be escorted at all times by the Collective Core Partner responsible for the Subsystem site. Waukesha County Radio Services shall be considered the Collective Core Partner responsible for the site that houses the Shared Core until/unless it is moved from its current location.
  - b. Sensitive system information (any information that could in any way be used or misused to disrupt, damage or gain unauthorized access to OASIS or its sites, or in any way compromise system security) shall be released strictly on a need-to-know basis, subject to the Wisconsin Open Records Law and Federal Freedom of Information Act.
  - c. Access credentials, including but not limited to login IDs, passwords, lock combinations, alarm codes, authentication files, and any type of physical or electronic keys shall be issued only to individuals, and shall not be released to organizations, groups or business firms. Individual holders of these items are personally responsible for their security, and may not share, issue or lend them to other individuals or groups.
  - d. Maintenance information regarding common sites, security, and system topology shall not be shared, published, or otherwise made public except as needed for: i) system maintenance or improvements, ii) licensing or regulatory purposes, or iii) as explicitly required by the Wisconsin Open Records Law and Federal Freedom of Information Act, as a result of a legitimate formal and lawful information request.
  - e. Each Collective Core Partner shall maintain and secure its subsystem tower sites and equipment to the extent that it will not disrupt or degrade operation of any other subsystem, or negatively affect overall system integrity.
  - f. Individuals granted secure access to any portion of OASIS shall agree not to discuss or divulge information regarding security measures, system access procedures, or network topology.
  - g. Collective Core Partners are responsible for maintaining agreements and records involving the release of login IDs, passwords, and system keys, and shall be aware at all times of the assignment, location and expiration of such items. Such records shall be available to other OASIS Collective Core Partners.
  - h. Class "B" keys shall be kept secure by the respective owners. Class "A" keys shall be secured in a repository requiring two persons for access.
  - i. Subject to Section 18 of the Memorandum of Understanding, only Waukesha County shall generate or issue system programming keys, except in the case of a bona fide public safety emergency.

- j. Signed, formal written user agreements reflecting and mandating these security policies may be developed and required from technicians and service provider organizations.
- k. Each Collective Core Partner shall retain complete control over access to and security related to their non-shared infrastructure sites and equipment.

**2. Core Site security:**

- a. The Shared Core site shall be maintained to maximize security and continuity of system operation.
- b. Shared Core site equipment room access shall be by key card or brass key only, and shall be protected by a monitored alarm when the facility is unattended.
- c. Shared Core site equipment room unaccompanied access is limited to Waukesha County Emergency Preparedness/Waukesha County Radio Services (WCRS) personnel or other personnel as approved by Waukesha County Radio Services.
- d. Personnel not approved for Shared Core site equipment room unaccompanied access, but requiring access (e.g. service personnel) shall be escorted by Waukesha County Radio Services approved personnel at all times.
- e. The Shared Core site transmitter room shall remain secured at all times. At no time shall doors be left unlocked, ajar or propped open unattended. Nominal, non-emergency access shall be by card key only, with card keys issued on an as-needed basis to Waukesha County Emergency Preparedness personnel only. Card key usage is logged by Waukesha County Public Works/Facilities Management. Temporary card keys may be distributed to authorized vendors during attended work hours only, but must be surrendered before leaving the premises. The temporary card keys shall not access exterior doors, nor be active during non-business hours.
- f. Shared Core site entrance and parking lot activity shall be monitored by recorded high-definition video on a 24/7 basis. WCRS shall retain video surveillance recordings in accordance with Waukesha County records retention policy. Waukesha County will provide their records retention policy to the Collective Core partners and will provide an updated policy should it be changed. Waukesha County will provide copies of the video surveillance to Collective Core partners upon request, with the costs to produce such record to be bore by those making the request.  

After-hours facility access by Fire Department personnel in the case of a fire alarm may be made via brass key secured in the outdoor Knox Box. However, such entry will trigger an intrusion alarm which will be handled appropriately by WCRS personnel. Waukesha County will provide their intrusion alarm response policy to the Collective Core partners and will provide an updated policy should it be changed. Waukesha County will notify the Collective Core partners anytime a triggered intrusion alarm is determined to be a potential threat to Core operations as soon as they are reasonably able to do so and provide details concerning the event and any system impact that resulted.
- g. The Shared Core site tower compound shall be secured at all times, except when equipment within the compound requires access for service tasks. The collision guardrail shall remain in place and secured except during events where the gate section of guardrail must be removed to permit maintenance access to the compound.

- h. Shared Core site visitors shall normally be restricted to the lobby and reception office except as needed for specific business needs, i.e. meetings, etc.

### **3. Infrastructure Data Access:**

- a. Data access to any equipment or applications that are responsible for System Management Activities of OASIS shall be permitted only through security measures provisioned and approved by the Customer Service Manager or System Engineer specifically assigned by Motorola Solutions, Inc. to OASIS.
- b. Management terminals shall be secured by individual, credential-based logins with unique passwords. Terminals shall further be physically secured to prevent unauthorized personnel from physical access. Under no circumstances may logins be shared by multiple individuals or by members of an organization.
- c. Internet VPN access to management terminals shall be permissible only through two factor authentication via Fortinet Fortigate® firewall solution or other product specifically identified in writing by the Customer Service Manager or System Engineer specifically assigned by Motorola Solutions, Inc. to OASIS. No portion of OASIS shall connect to the internet except through this two-factor security firewall.
- d. Either Fortitoken® hard tokens or Fortitoken® mobile tokens are acceptable. Personnel issued tokens shall safeguard them to prevent unauthorized access. Misplaced or lost Fortitoken® tokens shall be reported to WCRS personnel without delay.
- e. To the extent possible, infrastructure data access shall be partitioned by login credentials and utilize individual credential to limit individual access to only those modules specifically required for the performance of their job.

### **4. Computers Associated with OASIS**

- a. Organizations that use computers (laptop and desktop) to perform System Management Activities shall submit their computer security policies to the Collective Core Partners who shall either: i) approve them by unanimous vote or ii) suggest amendments or edits to the policies of the submitting organization. Computer security policies shall address, at a minimum:
  - i) Security patches and operating system (OS) updates
  - ii) Antivirus requirements
  - iii) Firewall requirements
  - iv) Naming of user accounts including administrator accounts
  - v) Wireless (including infrared, Wireless LAN, BlueTooth, etc.) access
  - vi) Hard drive encryption
  - vii) Inactivity lock period
  - viii) Password age
  - ix) Password length
  - x) Password complexity
  - xi) Login threshold (number of invalid login attempts allowed)
  - xii) Biometric security alternatives

- b. Only computers that comply with security policies that have been approved by unanimous vote of the Collective Core Partners shall be allowed to perform System Management Activities on OASIS.
- c. Laptops shall be physically secured at all times. If not in a secured environment such as a secured shop or locked vehicle, laptop shall be secured with a cable lock if it is left unattended.

**5. Subscriber Radio Programming:**

- a. OASIS Subscriber radio vendors shall provide only equipment which is solely capable of being programmed in conjunction with a hard key or dongle, or through technology which provides security equivalent or superior to a hard key, as evaluated by WCRS. Alternately, subscriber radio programming via a credential-driven and partitioned VPN server in lieu of a hard key, if evaluated and approved by the Charter Core Partners, is acceptable. Radios which are programmable without a key, with a soft key, by unauthorized disabling of the hard key requirement, through a key available to any parties other than the OASIS system administrator, or by security technology deemed inadequate by Waukesha County Radio Services, are disallowed and shall not be permitted native access to OASIS.
- b. All Subscriber Radio Class "B" keys shall be PIN protected, which shall not be disabled.
- c. System administrators and persons programming OASIS radios shall enforce the requirement that P25 radio authentication shall be a requirement for all subscriber radios operating natively on OASIS. The authentication insertion hardware and process shall be readily compatible with the Motorola OASIS infrastructure as evaluated by Waukesha County Radio Services. ISSI access to OASIS for interoperability purposes is permitted without authentication
- d. Subscriber Organization "owners" of talkgroups shall identify in writing to the Collective Core Partners which talkgroups assigned by name to their Organization their transmit capability on their talkgroups and which entity or individuals may program them.

**6. Key Variable Loaders (KVLs):** KVLs are devices used for insertion of authentication keys and/or encryption keys into subscriber radios and/or consoles. As such, they are extremely sensitive from a security standpoint, and are subject to the following restrictions:

- a. KVLs shall be physically secured, or in the physical possession of an authorized KVL user, at all times.
- b. Any KVL that is lost, stolen or missing shall immediately be reported to WCRS. Stolen KVLs shall be immediately reported to law enforcement.
- c. Motorola KVLs utilize two levels of access: Administrator and Operator. The Administrator login shall not be disseminated to daily KVL users, and shall be used only by system administrators when performing administrative functions on the KVL.
- d. The Operator login shall be used for all daily encryption and authentication keyloading functions. Since there is only one possible non-administrative login per KVL, passwords must be shared among users of a shared KVL.
- e. Password protection on KVLs shall be enabled and employed at all times. Each password must contain between 15 and 30 characters, incorporating at least one special character, one numeric character, and one uppercase character.

- f. There shall be one encryption key that shall be used for talkgroups that serve Mutual Aid purposes and it shall be considered the "OASIS Common Encryption Key". No individual organization shall be considered the owner of the OASIS Common Encryption Key and it may be stored in any and all KVLs that are used to program Subscriber Radios for use on OASIS and that also meet all obligations of this Exhibit. Subscriber Organizations may use this same OASIS Common Encryption Key to encrypt the talkgroups assigned by name to their Organization. A change to the alphanumeric content of the OASIS Common Encryption Key shall occur only upon the majority vote of the Collective Core Partners and that such a change shall require the rekeying of all associated KVLs and of all Subscriber Radios that are programmed with the OASIS Common Encryption Key. Such a rekeying shall be the responsibility of the owners of the KVLs and of the Subscriber Radios.
- g. All encryption keys other than the OASIS Common Encryption Key shall be considered as Organization-Private Encryption Keys. KVLs may store only those Organization-Private Encryption Keys for which the KVL owner has formal authority to program. For example, a municipal KVL owner may not possess a KVL equipped with another entity's Organization-Private Encryption Key unless that key owner has provided explicit written permission.
- h. Organization-Private Encryption Keys not required by the subscriber equipment for which the KVL owner is responsible shall not be stored in the KVL.
- i. Agencies which do not have direct responsibility regarding the encryption key insertion process may possess a KVL, but such KVLs shall only possess authentication capabilities. Encryption keys shall not be stored on such KVLs.
- j. Agencies which do not have direct responsibility regarding authentication may possess a KVL, but such KVLs shall only possess encryption key insertion capabilities.

**7. Background checks & investigations:**

- a) All personnel issued a "A" key or "B" key will be required to pass a FBI Criminal Justice Information Services (CJIS) background check. All personnel with unescorted physical access to Core facilities or login credentials to Core applications will be required to pass a CJIS background check.
  - a. If the FBI CJIS background check finds a criminal history for an individual, a background investigation (to include interview by an investigator) will be conducted.
  - b. If the criminal history is determined to be substantively relevant to the duties the individual will be performing for OASIS, the individual's access will be denied.
- b) Personnel background checks may only be performed by governmental Law Enforcement agencies. Investigations may not be performed by private-sector organizations as they have limited access to law enforcement resources.
- c) The Sheriff's Department, or the candidate's Municipal Law Enforcement agency in the respective core member county shall be responsible for background investigations of personnel related to that member, or private service providers located within that member's jurisdiction. Background investigation costs shall remain the responsibility of the respective core member.
- d) Physical core access, remote core access, core application access, and the possession of "A" or "B" keys can be revoked for any individual, at any time, upon mutual agreement of the Charter Core Partners.

**EXHIBIT D: Maintenance, Upgrade, Interconnection and Modification Exhibits**

Major Maintenance, Shared Core Platform Upgrade, CCGW Interconnection, ISSI Interconnection, and Shared Core Modification Exhibits shall be added to this Exhibit according to the processes described in Sections 14, 15, 16.1, 16.2 and 17.