

Washburn County, Wisconsin



REQUEST FOR PROPOSAL (RFP)

To provide simulcast enhancements to the Washburn County Radio System

ISSUED: March 30, 2021

The County of Washburn (hereafter referred to as the "County") requests proposals from Vendors to supply enhancements and replacement of equipment to the county's existing two-way radio system.

Except as otherwise specified, it is the intention of the County to enter into a single contract with the selected vendor for the entire scope of work. Vendors submitting proposals must have the capability of providing the products and services requested in this RFP. Vendors may use joint ventures or subcontractors, but must disclose these in their RFP response.

The County assumes no obligation of any kind for expenses incurred by any respondent to this solicitation prior to execution of an agreement.

The County reserves the right to reject any or all proposals, including determining any or all submittals to be non-responsive.

All specifications and data produced for a County project belong to the County. No specifications or data shall be supplied to any third party unless permission in writing is obtained from the County. Unless otherwise specified, all products will be delivered to Washburn County.

Proposals will be evaluated on: Vendor experience and technical qualifications, vendor record of past performance, project approach, cost, and proposed implementation schedule.

Proposals must be delivered by Friday, April 30, 2021 at 4:00 PM and should be addressed to: **Washburn County Clerk, RE: RADIO SYSTEM PROPOSAL, PO Box 639, Shell Lake, WI 54871**

Vendors may request to inspect the existing radio system equipment and facilities prior to submitting their proposal. The County will make reasonable efforts to accommodate any such requests. All requests must follow local, state, and federal COVID-19 guidelines.

Questions concerning the scope of this project should be directed to Sheriff Dennis Stuart, 421 Hwy 63, Shell Lake, WI 54871, RadioRFP@co.washburn.wi.us

Project Overview:

Washburn County currently operates a several different technologies for different channels. Washburn County is utilizing VHF for all sites.

The Sheriff channel is a mixed mode conventional VHF repeater system that consists of two transmit and receive standalone sites operating under the FCC license WLA64. The first site is Lampson located at W4998 County Highway F. The second site is located in Long Lake approximately 0.35 miles West of East Side Road on County Highway D. The new system will **not** utilize mixed mode technology and will only use P25 Digital.

The Fire channels are analog narrowband VHF repeaters consisting of five transmit and receive standalone sites operating under the FCC license WPIK592. The first site is Lampson located at W4998 County Highway F. The second site is located in Long Lake approximately 0.35 miles West of East Side Rd on County Highway D. The third site is located in Shell Lake located on a water tower at 803 East County Highway B. The fourth site is located in Spooner located on a water tower off of Northland Drive. The fifth site is a paging only transmitter under FCC license WREY505 (different frequency) located on the water tower off of South Vance Street. The fifth site in Birchwood shall use 155.100 as a frequency to match the rest of the Fire system. The new system will continue to use analog narrowband.

The Highway channels are analog narrowband VHF repeaters consisting of three transmit and receive standalone sites operating under the FCC license WPSL675. The first site is Lampson located at W4998 County Highway F. The second site is located in Long Lake approximately 0.35 miles West of East Side Rd on County Highway D. The third site is located in Spooner at 1600 County Highway H. The new system will continue to use analog narrowband.

The County desires to improve the entire system performance by simulcasting all of the Law, Fire, and Highway channels. The County desires to have a new "Law 1" system with a new frequency on the new simulcast network while leaving the existing repeaters in place. The existing Sheriff channel repeaters will become Law 2 North and Law 2 South and will operate independently of the microwave network to serve as an extra channel and a backup if the simulcast system fails. This would add the new Law 1 and Highway channels to the same sites as the Fire channel. The County's plan is to replace all current repeater equipment, coax, and antennas at all sites with new equipment and install the necessary equipment to create a microwave network with redundant paths between sites. There is county fiber

between the Sheriff's Office location at 421 Highway 63 and the Washburn County Highway Shop located at 1600 County Highway H. Old equipment (with the exception of the existing Sheriff channel repeaters that will become the "Law 2") shall be retained and stored by the County for potential use for future noncritical standalone repeater sites for Emergency Management, MARC 1, and potential tactical standalone repeater sites. The repurposing of old equipment are not included in the scope of work for this RFP.

Any proposal must maintain the functionality of all current communication infrastructure until the system "go live" date.

General System Requirements:

All site equipment supplied by the Vendor shall be of high quality, and designed to provide high reliability to support mission critical communications. The system shall have a high degree of redundancy and survivability.

The simulcast system shall operate without the need for frequent manual optimization and alignment. All alignment and adjustments shall be automated where possible.

The microwave network should ideally have two paths to each site for redundancy in the event one path fails.

Should any of the sites fail, or a loss of connectivity occur between sites, the rest of the system should continue to function with the loss of a site (diminished coverage would be expected).

Receiver voting equipment shall monitor all receivers in the system, both simulcast transmit/receive and present the most usable signal for the dispatch consoles and simulcast retransmission use.

All radio and simulcast interconnection equipment at the each tower site shall be capable of battery-backup operation in the event of an AC power failure. Ideally, a generator should be at each site for long term outages.

System Supervision and Monitoring:

The system supplied shall be self-monitoring and have a method of automatic reporting/notification of faults. Desired monitored events/elements include TX/Simulcast failure, remote site AC power loss, and remote site under/over ambient temperature. The automatic reporting should be visible on the dispatch consoles at the Washburn County Sheriff's Department. Email notification would also be desirable.

Quality Assurance:

The Vendor shall comply with applicable provisions of the following standards, rules, regulations, and industry guidelines, presented here alphabetically with no priority implied:

- American National Standards Institute (ANSI)
- American Society of Testing Materials (ASTM)

- Electronic Industry Association (EIA)
- Institute of Electrical and Electronics Engineers (IEEE) National Electric Code (NEC)
- National Electrical Manufacturer's Association (NEMA) National Fire Protection Association (NFPA)
- Telecommunications Distribution Methods Manual (TDMM) Telecommunications Industry Association (TIA)
- Underwriters Laboratories, Inc. (UL)

If the requirements of this specification conflict with those of the governing codes and regulations, then the more stringent of the two shall become applicable.

The Vendor shall comply with industry best practices for system installation, grounding, bonding, and transient voltage surge suppression (TVSS). Either of the following standards are acceptable:

- Motorola R56 — Standards and Guidelines for Communications Sites
- Harris Site Grounding and Lightning Protection Guidelines AE/LZT — 123 4618/1

Licensing:

The Vendor shall obtain the required FCC licensing and FAA authorizations on behalf of the County for the scope of this project.

Operations During Installation:

The County realizes that some interruption to the current radio system may be necessary during installation. The Vendor shall work with the County's representative to minimize these interruptions. The County does not have alternative communications methods available other than the sites listed above. As noted above, the existing Sheriff channel (North and South) will become "Law 2" and will remain independent of the new microwave system.

Progress Meetings:

Progress meetings shall be scheduled when deemed advisable by the Vendor or County representative. Meetings are intended to have change orders signed, review progress of the work, identify and mitigate impediments to timely completion, or otherwise facilitate a successful project outcome.

Payment:

Payment to the Vendor for equipment and services provided shall be as follows:

- 10% upon acceptance of the Vendors proposal
- 40% upon delivery of equipment
- 40% upon completion of installation and system activation
- 10% upon final acceptance of the system by the County as meeting all RFP requirements, and upon completion of any punch list items.

Additional Requirements:

Along with their proposal, vendors shall identify three (3) recent projects where they have supplied a similar public safety simulcast radio system, including the name of a contact person at each identified agency.

The Vendor shall include detailed specification sheets/manuals for all supplied equipment. In addition to all manufacturer's documentation, the chosen vendor, upon completion of the project, shall supply a system block/functional diagram to the County.

The Vendor shall provide three coverage maps showing the anticipated levels of transmit and receive coverage for their proposed simulcast system.

- The first map should be based upon a standard 50-watt mobile radio, and a 95% coverage with 95% reliability over the required service area.
- The second map should be based upon a standard 5-watt portable on-hip operation, no speaker-mic antenna, and a 95% coverage with 95% reliability over the required service area along with an 8 dB of building attenuation. Indoor and outdoor maps are desired.
- The third map should be based upon a standard analog fire pager on-hip operation and a 95% coverage probability and 8 dB of building attenuation. Indoor and outdoor maps are desired.

The Vendor and sub-contractors to provide a Certificate of Insurance with Washburn County named as Additional Insured before project starts.