

Request for Proposal - Radio Infrastructure Study
RFP # POL-23-R-004 Attachment A
Scope of Work

Overview:

The Town of Westwood (“Owner”) is seeking proposals for Radio Infrastructure Study for the Town of Westwood Police, Fire, Public Works, Recreation, Council on Aging, and School departments. The services include review and analysis of the status and execution of radio communications throughout all departments as well as proposed design of a new radio system.

Project Background:

Westwood, Massachusetts is a suburban community of approximately 16,000 residents located about 25 miles southwest of Boston. Westwood is easily accessible from Boston as it is located near routes 95, 93 and route 1. Westwood has an open town meeting form of government and is made up of a Select Board with three (3) Members and a Town Administrator. Westwood is a Massachusetts Green Community, and any type of sustainability will be integral in this project.

The Town of Westwood has a land area of approximately 11.12 square miles. It is bordered by or in close proximity to six (7) other municipalities: Dover, Needham, Dedham, Canton, Norwood, Walpole and Medfield. The Town is traversed by Massachusetts State Route 95.

Radio communications are crucial to the day-to-day operations of the Westwood Police Department and the Westwood Fire Department. The Fire Department also operates the Emergency Medical Services for the Town. The Westwood Emergency Dispatch Center is located at the Westwood Police Department and is the Public Safety Answering Point (PSAP).

Westwood Fire Department: The Fire Department has a roster of 44 personnel, and a fleet of 19 pieces of apparatus. All fire fighters are issued a portable UHF radio, and all fleet vehicles have a mobile UHF radio installed. There are additional portables in various vehicles. There are 60 total portable Motorola radios mixed between APX 4000, and XTS 2500. There is 1 Kenwood mobile, and the rest are Motorola Mobiles.

Westwood Police Department: The Police Department has a roster of 35 sworn members and a fleet of 21 various vehicles. All police officers are issued a portable UHF radio and all fleet vehicles have mobile UHF radios installed. Currently the department uses Motorola portable radios and a mix of Motorola and Kenwood mobile radios.

Westwood Department of Public Works: The Department of Public Works operates on a Motorola Turbo system. They have 50 vehicles with Motorola mobile units, 7 offices/garages with Motorola units, and 6 Motorola XPR3300 portables.

Westwood Recreation Department: The Recreation Department currently uses Motorola UHF CP185 transceiver radios, and has approximately 30 in service. They have 1 van that does not have a mobile radio.

Westwood Council on Aging: The Council on Aging operates on a Motorola Turbo system. They have 1 base unit at the Council on Aging building as well as 3 vans with 1 Motorola mobile unit in each. They do not have any portable radios.

Westwood School Department: The Westwood School Department has 7 vehicles that currently do not have mobiles, and approximately 100 portable radios. Most portable radios are model Motorola XPR 7550e. The schools are on their district wide frequency.

Communications Center: The present combined dispatch system dates back to 1996 when both police and fire dispatch services were combined to create a police & fire communications center operated by the police department. In 2011 the combined center became 100% civilian communications department under the purview of the police department. The department is housed in the police station which was newly constructed in 2017. The communications department currently operates a Motorola MCC5500 radio console system operating on 4 dispatch consoles.

Goals:

The Goal of this Radio Infrastructure Study is to develop options and recommendations, to include schedule, for the redesign, replacement or relocation of radio infrastructure. The current radio system **MUST** remain fully operational 24/7 throughout any recommendation for a design, renovation or construction process. The Town requires a cost-effective design that will provide a long-term solution to the Town's radio infrastructure, and operating needs.

Scope of Work & Qualifications:

The Scope for the project builds upon the information and concepts identified in this document.

- a) Objectives of the Project: The Town of Westwood seeks a qualified consultant to analyze the Town's existing municipal radio communications system and prepare a set of recommendations for improvements.
- b) It is the responsibility of the radio communication system study vendor to conduct a comprehensive analysis of the present system by compiling complaints of the parameters such as locations of communication dead spots within the Town, ease of

difficulty of operating dispatcher equipment, including radio, telephone, and logging devices, ease or difficulty of operating fleet radio equipment (officer-carried portables or mobile radios), inter-department radio (e.g., is it necessary for an ambulance to talk to a cruiser?), mutual aid radio (to surrounding towns) and other problem areas not listed.

c) The study will also include a propagation analysis of predicted RF signal levels that can be expected around the Town, both water tank transmitter to mobile (and portable) and mobile to water tank receiver. Drive-around testing with a radio can verify the predictions.

d) The data from this prediction and testing is then used to predict if and where voting sites and extra transmitters are required. Predicted sites are now compared to available Town-owned property to see if it is located close enough to the predicted sites, and what are the ramifications if there is no property in the area.

e) Once all the above is completed, the vendor shall design a system, recommend the proposed equipment, and determine what changes are necessary in existing FCC licensing, and present the proposal to the Town.

f) The vendor will also provide cost estimates for the recommended improvements.

The project shall consider all previous studies and reference documents. The reference documents include site information. Reference documents will not be posted publicly, but will be sent to bidders as requested. Bidders must send a request for access to reference documents to procurement@townhall.westwood.ma.us.

The project is divided into three (3) phases. The scope of services for each phase include:

Phase I: Program confirmation & refinement, study recommendations, refinement of a preferred option into Schematic Design, schedule update and cost estimate. The outcomes of Phase I will set the stage for Phases II and III.

Phase II: Concerns possible follow-on projects and includes Design Development, Construction Documents, Cost estimates, Schedule update, Permitting and Bidding

Phases III: Concerns possible follow-on projects and includes Construction Administration, project closeout and Commissioning

Funding for Phase I and II of the project is estimated to be not more than \$52,000. This number is not a cost estimate for any piece the project but provided merely for planning purposes.

Phase I

1. Feasibility Study

The Scope of Services required for this Detailed Study includes the following outline of work:

a) Investigation & Assessment

In the context of previous Westwood studies, the Contractor shall evaluate the constraints and opportunities of the existing radio infrastructure, update system requirements, investigate the current equipment, tower sites and buildings, investigate other potential sites for radio infrastructure, analyze code and permitting requirements to set the basis for the ultimate design. This will include:

- 1) Review existing information related to design and construction– Review information provided and relevant reference information. The town will provide the selected design team with digital copies of reference material and access to town files for further research as required.
- 2) Building and Site Investigations – conduct on site investigation of the existing town radio infrastructure and conduct interviews with the working group including:
 - Onsite investigations as needed to understand the deficiencies, constraints and opportunities,
 - Assessment of adequacy of site(s) to serve the requirements and additional usage needs of the Town (i.e. increased coverage, additional frequencies, interoperability) and general possible growth.
 - Prepare tower site plans sufficient for schematic designs from existing information,
 - Assessment of the current radio infrastructure and design,
 - Evaluation of the sites and radio equipment related to operational needs,
 - Assessment of adequacy of existing sites and equipment,
 - Assessment of reliability and redundancy to include information technology and networking, to include any interoperability channels serving the system
 - Analyze available geographical area to recommend improvements to the coverage area.
- 3) Code and permitting review – evaluate all code, and FCC related issues associated with the project. Outline the approval steps required to complete the permitting and licensing associated with the renovation, repair and /or reconstruction projects. Evaluate impact of code requirements on the decision to repair and renovate or demolish and construct new facilities.

b) Study Alternatives

Based upon the above investigations and evaluations the designer shall study design options and then prepare a “Preferred Design Solution” for the towns radio system. This shall include at a minimum a report/ presentation on the following:

1. Recommended design of the radio system,
2. Site improvements, and new locations if necessary,
3. Interim equipment, and options if needed,
4. Cost Estimates – construction and project cost update
5. Updated project schedule and work plan
6. Updated Permitting checklist and milestones

During this phase, the Contractor will make presentations to the Working Group, Town Administrator, and Public Safety representatives to evaluate the most cost effective, long term and feasible solutions.

Deliverables:

The Contractor shall provide interim assessments on a periodic basis. A final report in the form of a written submittal, including an executive summary of findings and prioritized strategies. This report is to be complete by May 1, 2023.

Project Timeline:

The Radio Infrastructure Study is scheduled to begin upon contract award and be completed by May 1, 2023.

Evaluation of Proposals:

It is the intent of the Town of Westwood to select the most qualified firm that meets the needs of the community. All responsive proposals that satisfy the proposal submission requirements and the minimum criteria will be evaluated and ranked on the comparative criteria as follows:

- Highly advantageous
- Advantageous
- Not Advantageous
- Unacceptable (does not meet the minimum criteria)

Minimum Evaluation Criteria:

Each proposal shall first be reviewed to determine whether the submitting contractor (1) satisfies the “Scope of Work/Qualifications;” (2) meets the outlined “Deliverables;” (3) adheres to “Project Timeline;” and (4) included all “Submission Requirements.”

A qualified Contractor will have experience conducting radio infrastructure studies for public safety and municipal agencies. If the qualified contractor is also a sales representative for a radio vendor, they must sell a minimum of 2 different types of radio vendors (e.g. Motorola + Kenwood or Kenwood + Harris, etc.).

In order to be eligible for selection, each Respondent must certify that it meets the following minimum requirements. Any Response that fails to include such certification in its response, demonstrating that these criteria have been met, may be rejected without further consideration.

Comparative Evaluation Criteria:

In addition to the minimum requirements set forth above, all Respondents must demonstrate that they have significant experience, knowledge and abilities with respect to public safety, municipal, and school radio systems. The Owner will evaluate Responses based on criteria that shall include, but not be limited to, the following:

- 1) Past performance of the Respondent, if any, with regard to public and private projects across the Commonwealth, as evidenced by:
 - a) Documented performance on previous projects, including the number of projects managed, project dollar value, number and percentage completed on time, number and dollar value of change orders, average number of projects per project manager per year, number of accidents and safety violations, dollar value of any safety fines, and number and outcome of any legal actions; and performance on previous net zero energy projects.
 - b) Satisfactory working relationship with designers, contractors, Owner, and local officials.
- 2) Thorough knowledge of the Federal Communications Commission, State and Federal laws pertaining to Fire and Police Department Communications, regulations related to Massachusetts Statewide Interoperability, and all other pertinent codes and regulations related to successful completion of the project.
- 3) Thorough knowledge of radio design, operations, and use.
- 4) Thorough knowledge of Communications Center operations, Emergency Management Services (EMS), and Federal Communications Commission regulations.
- 5) Management approach: Describe the Respondent's approach to providing the level and nature of services required as evidenced by proposed integrated project team staffing for the proposed Project; proposed project management systems; effective information management; and examples of problem-solving approaches to resolving issues that impact time and cost.
Key personnel: Provide an organizational chart that shows the interrelationship of key personnel to be provided by the Respondent for this project and that identifies the individuals and associated firms (if any) who will fill the roles of Project Director, Project Representative and any other key roles identified by the Respondent, including but not limited to roles in design review, estimating, cost and schedule control. The Project Director must be specifically designated.
- 6) Specifically describe the time commitment, experience and references for these key personnel including relevant experience in the supervision of construction of several projects that have been either successfully completed or in process that are similar in type, size, dollar value and complexity to the project being considered.

- 7) Capacity and skills: Identify existing employees by number and area of expertise (e.g. field supervision, cost estimating, schedule analysis, value engineering, constructability review, quality control and safety). Identify any services to be provided by sub-consultants.
- 8) Thorough knowledge and demonstrated experience with life cycle cost analysis, cost estimating and value engineering with actual examples of recommendations and associated benefits to Owners.
- 9) Thorough knowledge of, and experience working with municipal budgeting cycles.
- 10) Financial Stability: Provide current balance sheet and income statement as evidence of the Respondent's financial stability and capacity to support the proposed contract.

Each proposal will be evaluated based on the following:

	Highly advantageous	Advantageous	Not Advantageous	Unacceptable
<i>Experience of the Contractor</i>	Contractor has extensive experience working radio infrastructure studies, and has demonstrated understanding of public assessment processes.	Contractor has experience working radio infrastructure studies, and has demonstrated understanding of public assessment processes.	Contractor has limited experience working radio infrastructure studies.	Contractor has no experience working radio infrastructure studies.
<i>Quality of Sample Reports</i>	Sample reports demonstrate detailed data analysis, clear summarization and prioritized, specific recommendations. Communication is clear, direct and concise.	Sample reports demonstrate some data analysis, summarization and recommendations. Communication is clear.	Sample reports demonstrate little data analysis, limited summarization and few recommendations. Communication is somewhat clear.	Sample reports demonstrate little data analysis, no summarization and/or limited recommendations. Communication is unclear.
<i>Depth of Data Collection and Data Analysis</i>	Qualitative and quantitative data is collected through multiple varied sources and analyzed using standardized methodology, outlined in detail and explained to the viewer in	Qualitative and quantitative data is collected through multiple sources, analyzed using standardized methodology, outlined in some detail and explained to the viewer in clear	Qualitative and quantitative data is collected through a few sources, analyzed using unknown methodology, outlined and explained to the viewer.	Qualitative and/or quantitative data is not collected, or data analysis is faulty, or explanation of data is misleading or unclear.

	clear and comprehensive terms.	terms.		
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