



Contract Administration  
219 North Main Street, Suite 105  
Barre, Vermont 05641  
<http://vtrans.vermont.gov/>

State of Vermont  
Agency of Transportation  
Finance & Administration  
[phone] 802-622-1285

December 7, 2020

Request for Information (RFI):

**Vermont Agency of Transportation (AOT) Improved Field Maintenance Voice and Data Communications and Dispatch Architecture**

Ladies and Gentlemen:

The Vermont Agency of Transportation (AOT), Highway Division, through Emergency Management releases this Request for Information (RFI) to gather input, obtain information and cost estimates in proceeding with responses for **Improved Field Maintenance Voice and Data Communications and Dispatch Architecture**. VTrans intends to evaluate the submissions by respondents to explore how they would meet their needs and understand the cost associated with proposed solutions.

**This is a Request for Information (RFI).** This RFI is issued solely for information and planning purposes – it does not constitute a Request for Proposal (RFP) or a promise to issue an RFP in the future. This request for information does not commit the State to contract for any services whatsoever. Respondents are advised that the State will not pay for any information or administrative costs incurred in response to this RFI. All costs associated with responding to this RFI will be solely at the interested party's expense. Not responding to this RFI does not preclude participation in any future RFI or RFP, if any is issued. If an RFP is released, it will be posted on the VTrans bid opportunities web site: <http://vtrans.vermont.gov/contract-admin/personal-services/current-rfps>. It is the responsibility of the potential proposer to monitor this site for additional information.

**Communications:** *Communication with VTrans personnel other than the listed contracts specialist regarding this RFI is prohibited and may result in the rejection of your response.* The only valid point of contact for questions about the selection process or outcome is the Contract Administration employee named as the Point of Contact in this RFI.

**Questions:** All questions related to this RFI shall be forwarded to **Doreen Carminati, AOT Administrative Services Manager III, in writing** by e-mail at [doreen.carminati@vermont.gov](mailto:doreen.carminati@vermont.gov). All such questions and requests shall be received **no later than Monday, January 4, 2021, prior to 2:00 P.M.** VTrans will not be bound by any oral communications. All questions or requests for clarification received will be documented and answered after this date.

**Addendum(s):** In the event that it becomes necessary to revise, modify, clarify, or otherwise alter this RFI, including VTrans' responses to questions and requests for clarification, such addendum(s) shall be posted to the VTrans Contract Administration website.

**IT IS THE RESPONDENT'S RESPONSIBILITY TO OBTAIN ANY RFI ADDENDUM(S) ISSUED.**

Addendum(s) will be posted on the VTrans Contract Administration website at:

<http://vtrans.vermont.gov/contract-admin/personal-services/current-rfps>

**Due Date and Time: Monday, January 18, 2021, prior to 2:00 P.M.**

Responses or unsolicited revisions submitted after the above specified due date and time will not be accepted.

**Required Subject Line for Electronic Submittal:**

RFI Response Vermont Agency of Transportation (AOT) Improved Field Maintenance Voice and Data Communications and Dispatch Architecture

**Electronic Submittal:**

All responses will be submitted electronically via an FTP site. In order to upload your response, you must obtain a user account. This account will be provided when Contract Administration receives your request via e-mail. Please submit your request for a user account by e-mailing the single point of contact listed above. Your subject should state "**FTP Account Proposal Submit Request for RFI Response Vermont Agency of Transportation (AOT) Improved Field Maintenance Voice and Data Communications and Dispatch Architecture**". You will then receive guidance on uploading your response. A user account will be provided by separate e-mail(s). Please submit your request as soon as possible and no later than four (4) business days before the RFI due date to ensure there is ample time to set up the user account(s).

When submitting your response(s) please use the following naming convention:

**RFIResponse\_ABConsulting\_AOTImprovedFieldMaintenanceVoiceAndDataCommunications**

**Reservation of Rights:** All responses become the property of AOT upon submission. The cost of preparing, submitting and presenting a response is the sole expense of the Respondent. AOT reserves the right to reject any and all responses received as a result of this solicitation, to negotiate with any qualified source, to waive any formality and any technicalities or to cancel this RFI in part or in its entirety if it is in the best interests of AOT. This solicitation of responses in no way obligates AOT to award a contract.

**Confidentiality:** All Responses received will become a matter of public record, and may be disclosed to the public in accordance with the Vermont Public Records Act, 1 V.S.A. § 315 et seq. If the response documents include material that is considered by the respondent to be proprietary and confidential under 1 V.S.A. § 315 et seq., the respondent shall submit a cover letter that clearly identifies each page or section of the response that it believes is proprietary and confidential. The respondent shall also provide in their cover letter a written explanation *for each marked section* explaining why such material should be considered exempt from public disclosure in the event of a public records request, pursuant to 1 V.S.A. § 317(c), including the prospective harm to the competitive position of the respondent if the identified material were to be released. Additionally, the contractor must include a redacted copy of its response for portions that are considered proprietary and confidential. Redactions must be limited so that the reviewer may understand the nature of the information being withheld. It is typically inappropriate to redact entire pages, or to redact the titles/captions of tables and figures. Under no circumstances can the entire response be marked confidential, and the State reserves the right to disqualify responses so marked.

### **Response Substantive Content:**

**Cover Letter.** All respondents or their authorized representative shall prepare and sign a cover letter. The first page of the vendor's RFI Response must be a cover page displaying at least the following:

- Response of RFI Title
- Vendor's Name
- Contact Person
- Email Address
- Telephone Number
- Address

### **Respondent Questionnaire:**

Using the attached fillable PDF questionnaire, please provide answers within the space allotted.

### **Price/Cost:**

We are asking for a total cost estimate (low and high estimates) according to the requirements of the Scope of Work. We understand that the cost figures provided are for planning purposes only and will not be binding in any way.

### **Additional Pages:**

Photos of Products and other visual content may be attached to the response. Please limit additional pages to twenty (20).

### **Review of Responses:**

The committee is comprised of VTrans employees from varying Departments and Bureaus and in some cases external Stakeholders. During the review process the committee may request that the above listed single point of contact initiate discussion(s) with respondent(s) for the purpose of clarification.

Sincerely,

Doreen L. Carminati  
AOT Administrative Services Manager

### **Enclosures:**

- Scope of Work (SOW)
- Respondent Questionnaire

# **Attachment A Scope of Work**

**November 4, 2020**

## **For Vermont Agency of Transportation (AOT) Improved Field Maintenance Voice and Data Communications and Dispatch Architecture**

### **PART I: INTRODUCTION**

Transportation agencies and other public safety organizations face an array of funding and technology choices with respect to methods and levels of communications. State, local, tribal, and territorial DOTs have invested heavily in Land Mobile Radio (LMR) communication systems to support their field staff during daily activities and incident response or emergencies. LMR communications continue to be the backbone of infrastructure protection, coordination, and emergency management. With the proper planning and design, those same communications systems may be able to acquire and provide information from field elements.

This RFI will assist AOT in the development of alternatives to address the current and future radio communications needs of AOT agency users to implement a comprehensive and unified system that corrects the deficiencies of the current systems with system enhancements in the following areas:

- Improved interoperability
- Replacement of aging equipment
- Adding data capability
- Adding encryption capability
- Increased reliability
- Adding channels
- Improved coverage
- Meet FCC requirements for refarming.

### **System Objectives**

AOT is inviting qualified vendors to submit responses to this RFI for supplying equipment and designing a state-of-the-art statewide radio system for two-way wireless communications. The system shall consist of radio base/repeater stations, desktop control stations, mobile and portable field units (and accessories), network controllers, automatic system diagnostics, upgrading existing consoles as necessary, site alarms, and interfacing with existing base/repeater/control stations during an interim transitional period. AOT places strong emphasis on ease of use, flexibility of user group programming, priority/shared channel use, excellent signal coverage, richness of the feature set, and high expectation of meeting not only today's needs, but also future needs for the next ten years.

The following Scope of Work (SOW) represents AOT's vision for its enhanced field communications architecture. The below SOW outlines AOT's general approach to these services and requirements for the program. This RFI is being solicited to receive expert best practice information pertaining to the items outlined below and industry specialists' recommendations.

The Vermont Agency of Transportation has a 9-150 MHz conventional radio system. The current radio system services 4 AOT regions (8 Districts and a Transportation Management Center) and provides legacy two-way push-to-talk (PTT) radio communications to department personnel for everyday operations but is also scaled to provide emergency communications in the case of a significant emergency.

The current legacy system has significant weaknesses and limitations and has become deficient in meeting the department's expanding needs for seamless statewide voice and data operability, interoperability, and intraoperability.

AOT is limited in communications infrastructure support and relies on other state agencies to provide connectivity from Site to Site, Region to Region, Traffic Management Center (TMC) to Region.

The scope of this Request for Information (RFI) will need to take into account existing site's, existing frequencies and/or available frequencies, backhaul microwave connectivity and existing systems, equipment or components that can be reused, upgraded or replaced.

## **PART II: SCOPE OF SERVICES TO BE PROVIDED**

This RFI is being released to solicit information for the alignment of the AOT Land Mobile Radio (LMR) system to a P25 digital standards-based statewide system. Responses should include products and/or services necessary that will migrate the AOT LMR system to seamless statewide P25-compliant operations.

Responses submitted to AOT by Responder must include the following broad functional considerations:

- A migration path that provides minimal disruption to the everyday and emergency operations of the AOT staff using and relying on the communications system
- The use of existing spectrum held by the AOT and recommendations on any efficiencies that could be realized and implemented
- Limitations in connectivity, building and tower leased space and non-commercial powered remote sites
- Anticipation of future-state cellular-broadband and LMR functional convergence
- Operability, interoperability, and intraoperability
- In-state system familiarization training

System solutions should:

- Be APCO project 25(P25) systems, equipment and components-compliant
- Clearly identify migration to P25 phase II
- Include Automated Vehicle Locator functionality to include plow-up, plow-down and velocity feeds
- Incorporate safety features such as man-down, lone worker, and panic buttons
- Ensure operability (within work groups), interoperability (between workgroups), and intraoperability (between agencies) with existing system
- Be portable so as to enable distributed work solutions

- Allow remote network and access control management
- Audit and report system performance and reporting
- Allow remote sensor monitoring and SNMP reporting
- Allow interface to current TMC P25 Capable consoles or provide alternate solution
- Use Ethernet TCP/IP connections between system components
- Use “off the shelf” industry standard system components
- Address fault-tolerance with multiple redundancies and fail-safes
- Tolerate environmental extremes, to include both AC and DC powered sites
- Have scalability to support expansion to additional locations or agencies
- Be designed for expandability and integration support for new technologies and external systems (i.e 4G and 5G cellular, satellite, etc.)
- Provide user friendly subscriber operation requiring little user intervention
- Provide the ability for a calling or hailing channel that all subscribers in the area will hear
- Provide the ability for simplex or car to car operation

Respondents are encouraged to provide pricing for all system components, infrastructure, existing hardware or subscriber upgrades and or replacements, installation, staging and training offered. Respondents are also asked to provide for an integrated solution or an integrated multi-vendor solution under one prime vendor.

To give context to the scope and scale of the request, current AOT Radio Architecture component information is provided:

- 6 Receiving Stations
- 12 Base Station Repeaters
- 18 Mountain Site Antennas
- 3 Dispatching Consoles
- 19 Tone Remotes
- 883 Mobile Radios
- 142 Portable Radios

**State of Vermont**  
**Contract Administration**  
Barre City Place  
219 North Main Street, Suite 105  
Barre VT 05641

*Agency of Transportation  
Finance & Administration*  
[phone] 802-622-1285  
[ttd] 800-253-0191  
**vtrans.vermont.gov**

**Respondent Questionnaire**

**Vermont Agency of Transportation (AOT ) Improved Field Maintenance Voice and Data Communications and Dispatch Architecture**

Based on the Scope of Work (SOW) and AOT's vision, please provide a summary of strengths, weakness and/or recommendations for each section below.

**Broad Functional Considerations:**

**Broad Functional Considerations (continued):**

**System Solutions:**

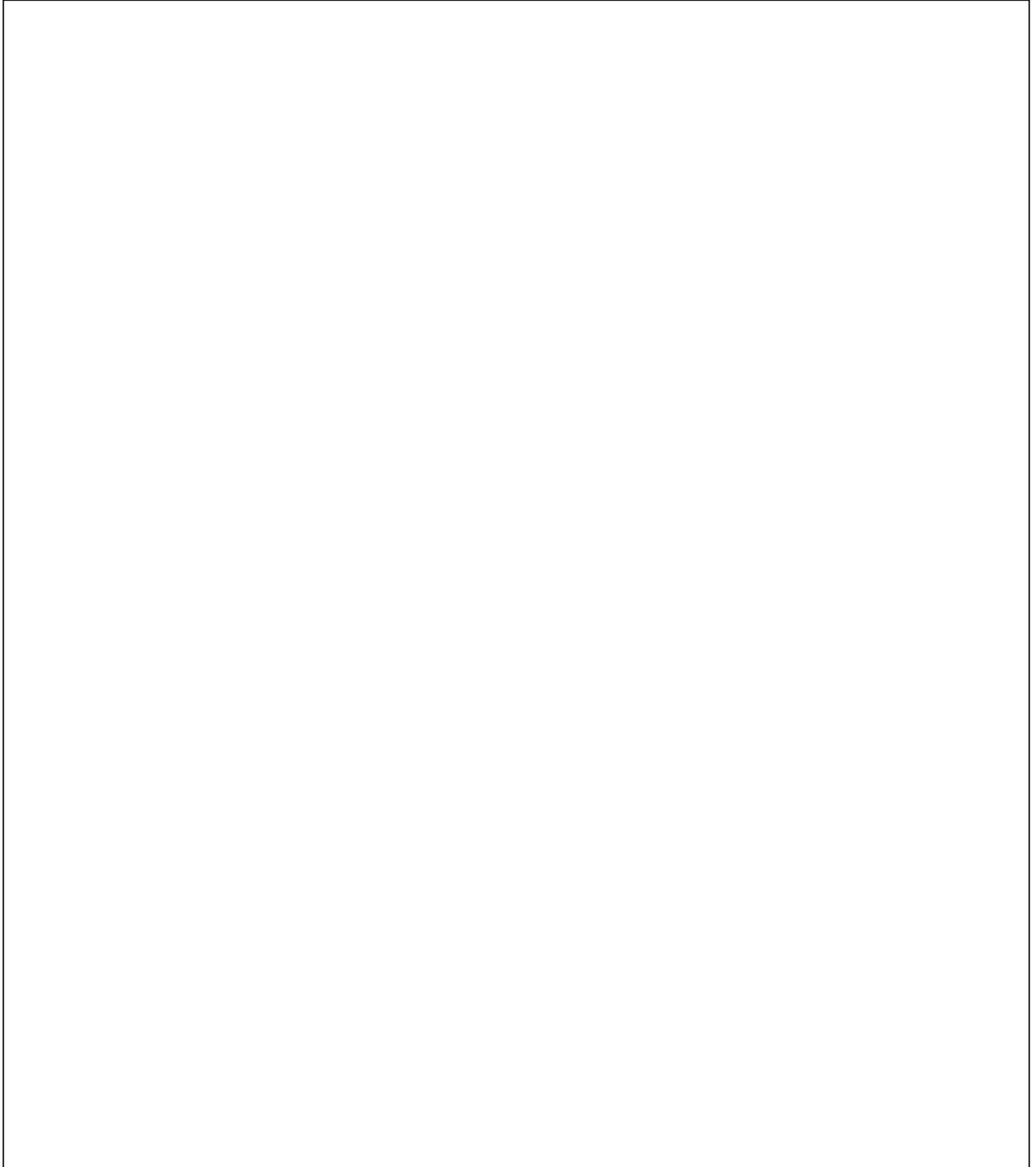
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**System Solutions (continued):**

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**Price/Cost:**

We are asking for a total cost estimate (low and high estimates) according to the requirements of the Scope of Work. We understand that the cost figures provided are for planning purposes only and will not be binding in any way.

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