



July 20, 2017

**Subject: Request for Information (RFI), Automated
Vehicle Location and Monitoring System**

Dear Sir/Madam:

The Washington Metropolitan Area Transit Authority (WMATA) is seeking prospective contractors that can provide an automated vehicle location and monitoring system.

Your response must be received by 10:00 AM on Wednesday, August 16, 2017 via email to crooths@wmata.com.

Please note that if you have any questions, technical or contractual, please email Cathy Rooths (crooths@wmata.com) no later than 10:00 AM on Tuesday, August 8, 2017. We will provide written answers by email to all of those who get a copy of the RFI.

For any administrative or general questions, you may call or email anytime.

Sincerely,

Kunj Behari
Contract Manager
Tel. 202-962-1516; email; kbehari@wmata.com

Enclosure:
Scope of Work

**Washington
Metropolitan Area
Transit Authority**

600 Fifth Street, NW
Washington, D.C. 20001
202/962-1234

*By Metrorail:
Judiciary Square-Red Line
Gallery Place-Chinatown
Red, Green and
Yellow Lines*

*A District of Columbia
Maryland and Virginia
Transit Partnership*

Washington Metropolitan Area Transit Authority

RFI FOR
AUTOMATED VEHICLE LOCATION AND MONITORING
SYSTEM

Washington Metropolitan Area Transit Authority RFI AUTOMATED VEHICLE LOCATION AND MONITORING SYSTEM

RFI Guidelines

Please note that this is for INFORMATIONAL and PLANNING purposes only and does not constitute a Request for Proposal (RFP). Responses to this RFI will not be accepted by WMATA to form a binding contract. WMATA will not pay for the information solicited nor recognize any costs associated with the submission of the RFI. The purpose of this RFI is to provide an opportunity for industry to enhance the success of any future procurement to meet this requirement. Any information obtained as a result of this RFI is intended to be used by the Authority on a non-attribution basis for program planning and acquisition strategy development.

Please be brief in your answers. If a particular answer; however, is best presented as an attachment you may do so.

WMATA's evaluation and possible selection of companies for further discussions is a business decision and will be based upon a composite of a company's response to the factors set forth under "Information Requested" below. In submitting a response to this RFI, companies agree that the WMATA will not provide its rationale for the selection or non-selection of a prospective business partner(s) for possible further discussions with the WMATA. However, all companies will receive an acknowledgement as to their selection for, or removal from, further consideration. Furthermore, in submitting a response to this RFI, companies agree that any selection or rejection of a business partner(s) by WMATA is final and indisputable.

Confidential Information

The information contained in this Request for Information (RFI) is confidential and proprietary to The Washington Metropolitan Area Transit Authority (WMATA). In accepting this RFI, vendors agree to the following conditions, under USA law:

1. Each party recognizes and agrees that the Confidential Information has been compiled, created and maintained by special effort and expense of the other party.
2. Each party recognizes and agrees that disclosing or disseminating Confidential Information to a third party will have a materially adverse effect on the other party and agrees not to disclose or disseminate the Confidential Information to any third party. Except as necessary to perform its obligations hereunder, each party shall not use, reproduce or draw upon the Confidential Information or circulate it within its own organization.

Washington Metropolitan Area Transit Authority RFI AUTOMATED VEHICLE LOCATION AND MONITORING SYSTEM

3. Each party shall provide notice to the other party of any demand made upon it under lawful process to disclose or provide the other party's Confidential Information. Such party agrees to co-operate with the other party if it elects to seek reasonable protective arrangements or oppose such disclosure, at the expense of the party that is seeking the protective arrangements or opposing the disclosure.
4. Any Confidential Information disclosed pursuant to such lawful process shall continue to be Confidential Information, the access to such Confidential Information shall be limited to those persons (i) only with a need to review such information for the purposes for which the disclosure was required, and (ii) who agree in writing to keep the Confidential Information confidential.

Project Introduction

WMATA seeks information on an automated vehicle location and monitoring system or "AVLMS" or telematics for its heavy equipment fleet. This ideal system would include integration of the hardware, software and provide training, and ongoing/annual technical support. The system provider must be able to supply all the necessary on-board components to equip rail bound flat cars and rail vehicles (prime movers) to a server-side data management system for receiving and managing data transmitted by the units, and a web application for displaying real-time vehicle data and replaying/analyzing archived data.

The system will be used as a tool to optimize fleet utilization, routing, preventive maintenance planning, coordination of emergency responses and assisting in customer service response requests.

Requirements

All AVLMS hardware, including both the Flatcar and Prime Mover, shall include all components necessary to install and get the system operational and have the following attributes:

1. Compatible with original equipment manufacturer (OEM) protocols with plug-and-play installation on a J1939 CAN protocol
2. Cellular connection: 3G-1xRTT for North America Only, 2-band
3. GPS: 2M CEP horizontal accuracy
4. 3 Axis accelerometer with Interrupt/wakeup capability that increase sample/update rates
5. Internal, real time clock
6. Be capable of various sample/update rates from .5 seconds to 10 minutes.
7. Have adjustable reporting frequency from 2 minutes to 5 minutes
8. Be capable of storing input information when vehicle is out of cellular coverage and uploading the information when it is regained.
9. Shall monitor connections and automatically issue an alert notification whenever the

Washington Metropolitan Area Transit Authority RFI

AUTOMATED VEHICLE LOCATION AND MONITORING SYSTEM

hardware is tampered with, disconnected, malfunctioning or inactive.

10. "Rugged" design, suitable for use in railroad environment; MIL-STD-202 or similar WMATA approved standard.

Solar AVLMS hardware for flatcars shall have the following attributes:

1. Have a form factor of 10" x 24" x 10" or less and weight of 2 pounds or less (excluding the solar Panel)
2. Have an internal battery capable of >24 hour runtime without sun
3. Have magnetic and hard mounting capabilities
4. Be self-contained, except for input connections to external sensors
5. Cellular and GPS antennas shall be internal to the unit
6. Have a minimum of 3, 0-28 volt analog input connections that are fully programmable
7. Shall be of a rugged design; components mounted on the vehicles exterior shall be IP 66 rated or greater.
8. Batteries shall be solar charged and capable of at least a 2000 cycle life (to 80% capacity)
9. Batteries shall be replaceable
10. Have the capability to add a secondary external battery

Externally powered AVLMS hardware for RMMs' shall have the following attributes:

1. Have a form factor of 8" x 12" x 5" or less and weight of 2 pounds or less
2. Be self-contained, except for external connections and modem if required
3. Cellular and GPS antennas shall be external to the unit
4. Operate on 0-32 volts (60 volt surge protection) with less than five amp power consumption (processes and Cellular only)
5. Have a minimum of 8, 0-28 volt analog input connections that are fully programmable.
6. Have a minimum of 2 outputs (.5 amp sink at 30 volts) that are fully programmable.
7. Have an interface for future expandability
8. Have a USB interface for programing and debugging
9. Interface directly with equipment engines over J1939 connection

Optional desired hardware attributes:

1. 2.4 GHz wireless Mesh sensor capability that can support at least 5 sensors
2. J1939 sensor support for additional CAN sensors
3. Be OTA programmable
4. Support video capture
5. Provide LAN interface and data service for Bluetooth and wireless devices (2.4 GHz network); specifically, android biased ELD applications.

Washington Metropolitan Area Transit Authority RFI AUTOMATED VEHICLE LOCATION AND MONITORING SYSTEM

Web application shall have the following attributes:

1. Shall be hosted on a secure server
2. Shall be able to monitor working hours/performance
3. Support multiple users
4. Support geo-fencing alerts
5. Have user configurable reports and alerts
6. Shall be able to display input data in a time plot style graph
7. Shall be able to display historical GPS location data overlaid on a map

Optional desired application attributes:

1. Ability to export raw data values
2. Support electronic driver logs (EDL)
3. Support electronic deficiency reporting by the vehicle operator

Washington Metropolitan Area Transit Authority RFI AUTOMATED VEHICLE LOCATION AND MONITORING SYSTEM

Instructions to Vendors

This is a Request for Information (RFI), not an order. No cost can be charged to WMATA for any reason. This document shall not be construed as a request or authorization to perform work at WMATA's expense. Any work performed by a vendor will be at the vendor's own discretion and expense. This RFI does not represent a commitment to purchase or lease. Submission of a response constitutes an acknowledgement that the vendor has read and agrees to be bound by such terms.

WMATA intends to submit a formal Request for Proposal (RFP) for the services described in this document prior to the end of 2017. There is no guarantee that WMATA will issue an RFP. If an RFP is issued, it will occur in the time frame described in this RFI. A RFP will be sent to vendors that demonstrate adequate capabilities in response to this RFI.

This is not a request for offers but only a request for information. A determination not to issue a solicitation based upon responses to this notice is solely within the discretion of the Washington Metropolitan Area Transit Authority (WMATA).

Point of Contact

All communication with WMATA must be directed to the single Point of Contact for this project, as follows:

Cathy Rooths – 202-962-2469, crooths@wmata.com

Submission of Responses

Metro is issuing this RFI to obtain recommendations from vendors or contractors.

At this time no price information needs to be provided in response to this RFI. However, vendors or contractors must submit details of their automated vehicle location and monitoring system. Provide details that the proposed system will comply with the minimum requirements listed. For vendors and contractors information, WMATA is planning to outfit 70 rail bound flat cars and 35 rail vehicles with AVLMS. The initial project phase will establish the foundation of the system. Future phases include monitoring equipment for WMATA's additional 200+ Roadway Maintenance Machines (RMM) which include Excavators, tie cranes, tie replacers, etc.

The information received in response to this Request for Information will be used by Metro to determine the next action steps to move forward. A response will not result in an award. Also, WMATA does not commit to any incurred cost in preparation of a response to this Request for Information.

Washington Metropolitan Area Transit Authority RFI AUTOMATED VEHICLE LOCATION AND MONITORING SYSTEM

This RFI remains the property of WMATA at all times, and must be returned by the vendor upon request. Vendors not submitting a response must immediately return all printed, graphic and electronic documentation to the point of contact.

All responses, once delivered, become the property of WMATA.

If you have questions, please e-mail them to crooths@wmata.com no later than close of business (10:00 AM), August 8, 2017.

Responses are due by 10:00 AM on Wednesday, August 16, 2017.