

Boston VA Medical Center

3.0T MRI Functional Statement

2013**Objective**

This document highlights the technical specifications and services being requested by the Boston VAMC for consideration towards purchase of a 3.0T MRI Scanner. Offerors under this proposal shall provide all equipment and accessories, installation services, training, and project management support.

Project Management

If the MRI quoted by the Offeror does not fit the space previously designed by the VA hired architect the Offeror must provide a detailed description and quote for the architectural design changes (if necessary) need for the space. These changes include (but are not limited to) any shielding or space requirements which allow for the Offeror's magnet to properly function and fit.

Coordination during the construction phase of the project is required by the Offeror. The Project Manager, as identified by the Offeror, will be responsible for continuing ongoing communication and providing guidance to the General Contractor as needed.

Product delivery will be the responsibility of the Offeror. Working with the General Contractor and Boston VAMC project management, the Offeror will be responsible for coordinating and performing device installation.

Equipment Specifications

1. Magnet
 - a. 3.0T field strength
2. Gantry
 - a. Large bore opening >69cm
 - b. Specify bore depth
 - c. Provide FOV specifications
 - d. Identify slew rate
 - e. Provide details pertaining to technology which addresses noise cancellation for quieter scans
 - f. Explain RF channel technology
3. Table
 - a. Detachable
 - b. >499lb weight limit
 - c. Heavy duty wide patient restraints
 - d. Stepping capable
 - e. Identify number of coil connections available
4. Furniture

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- a. Control room desk
- b. Two operator office chairs
- 5. Hardware
 - a. R/F Shielding to allow full range of scanner use
 - b. Operators console with expanded memory
 - i. List capacity options
 - c. Post processing workstation with 3D capability
 - i. Identify images/sec reconstruction rates
 - d. Integrated music system for control and exam area
 - i. Offeror shall supply and install an integrated music system providing control room access to system controls, an iPod Dock, and speech communication for patient direction. Speakers are to be provided in the MRI suite, in the control room, and have a headphone jack on the patient table. MRI compatible headphones to be provided.
 - e. MRI Compatible Ventilator (Option)
 - f. MRI Compatible Wheelchair (Option)
 - g. MRI Compatible Medrad Patient Monitor
 - h. MRI Compatible Infusion Pump (option)
 - i. MRI Compatible Anesthesia Pump (option)
 - j. ECG monitor with system interface to MRI
 - k. Video camera system for monitoring inside exam room from control room
 - l. MRI Compatible Medrad Injector
 - m. Power Conditioning as required
 - i. Protection from electrical failures, emergency power tests, power peaks and drops, electrical storms and the like
 - ii. Prevent image quality degradation
 - n. System UPS
 - i. Protect the scanner in the event of power failure to allow for a proper shutdown
 - o. Workstation UPS for operators console
 - i. Protect the system's operating console from power failure and allow proper system shutdown
 - p. Cryogenics
 - i. Offeror shall provide and install all cryogenics
 - q. Phantom Kit
 - i. All required phantoms shall be included to all for calibration and performance verification. All system requirements and options identified in this Functional Statement which require a phantom must have that phantom provided in the offer.
 - r. Screening System (Option)
 - i. Detection system capable of scanning for materials affected by the magnetic field shall be provided. A built in screening system is preferred.
 - s. Safety/Warning Systems –
 - i. The offeror shall provide a safety system for magnet quenching and emergency shutdown. System shall include warning devices for low cryogenics, temperature

limits, and scan in progress. Indicators for cryogen level shall be provided. System shall include heat sensor shut off for room temperature problems. Describe items offered. An O² monitor in gantry room shall be provided.

6. Coils

- a. Head/Neck/Spine Array
- b. Torso
- c. Shoulder
- d. Foot/Ankle
- e. Knee - in vivo
- f. Extremity - in vivo
- g. Wrist
- h. fMRI Head Coil (option) – 32 Channel Head (Minimum)
- i. Cardiac (option)
- j. Breast (option)
- k. Carotid (option)
- l. Endorectal (option)

7. Software

- a. 3D processing software for all modality datasets
- b. MRA
- c. fMRI (option)
- d. Vascular
- e. Phase contrast MRI and Flow Analysis
- f. MR Elastography (option)
- g. Cardiac (option)
- h. Breast (option)
- i. Spectroscopy (option)

Training to be Provided

- 1. Four weeks of onsite training for technologist (option)
- 2. Two MRI Tech trainings at Offeror's training location to include travel and accommodations (option)
- 3. Four Physician trainings at Offeror's training location to include travel and accommodations (option)
- 4. Four additional Physician trainings at Offeror's training location specializing in cardiac MRI to include travel and accommodations. (option)
- 5. One Biomedical Engineer training at Offeror's training location to include travel and accommodations (option)

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Technical/Networking Capabilities

1. Must be on the VistA Imaging Approved DICOM Modality Interface List
2. Ability to interface with PACS and 3rd Party post processing workstations
 - a. Carestream PACS
 - b. Vitrea fX and Enterprise Solution
 - c. Siemens Leonardo
 - d. Philips Xcelera Cardiac PACS
 - e. GE Advantage

Warranty and Service

- VPN/Remote Access – The vendor shall provide, at no additional charge, any and all equipment service programs, such as remote diagnostics, during the warranty period. The vendor shall provide post-warranty remote diagnostic service program as an “Add Option” with the offer. The system shall provide Vendor Remote Diagnostics via VPN. Vendor shall utilize the VA national Site-to-Site VPN, or the vendor shall work with the Office of Cyber and Information Security and the Boston VAMC Information Security Officer to establish a Client-Based VPN.
- Service and Operator Manuals – The vendor shall provide the following documentation for the proposed system:
 - Two (2) copies of operator's instruction manuals per unit purchased
 - Two (2) copies of complete technical service manuals including detailed troubleshooting guides, necessary diagnostic software, service keys, schematic diagrams, and parts lists
 - Two (2) copies of a system manager's manual outlining back-up procedures, managing privilege group limits, routine tasks, etc.
- Warranty – The system and accessories shall be covered under the manufacturer's warranty, and shall include all parts and labor for one year following acceptance by the Boston VAMC. The manufacturer's factory-trained field service personnel shall perform installation and maintenance during the warranty period. The warranty period shall not begin until after Boston VAMC authorized personnel have accepted the products delivery, installation, and functionality.
- Extended Parts Warranty – The vendor shall extend the initial parts warranty to include year's two through years five (2-5) at no additional charge to the Boston VAMC.
- Hardware/Upgrades – The vendor shall supply software and upgrades to the equipment at no additional charge for the life of the equipment. These no charge upgrades shall include any circuit boards or other parts required if software is added to enhance existing capabilities; in the event that a new capability or parameter is added, this may involve a charge, but the software update (including labor and travel to install software updates) will be provided at no charge.

Evaluation Criteria

Offers will be considered with consideration of the factors identified below. No specific ranking order is provided with the list below.

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1. General system offering – functional capabilities, technical performance, and ability to seamlessly integrate/interface with the institution's existing equipment and software.
2. Training Plan
3. Anticipated reliability and serviceability
4. Past Performance
5. Human factors design – ease of use, intuitive operation, capabilities, and workflow efficiencies
6. Price
7. Implementation management and schedule

Variances - It is recognized that each vendor's product line may differ from these specifications. As such, vendors are free to propose variances from these specifications. It is required, however, that, whenever a variance from these specifications occurs, the proposed item meets or exceeds the specified characteristics or level of performance. The vendor shall identify each product line item that differs from the specifications.

Further Consideration

Offeror's are provided the opportunity, during the Market Research Phase only, to obtain further details from the Boston VAMC in order to better tailor the product quote. All requests for information derived from any Offeror will be shared with each Contracted vendor per the National Acquisition Center's supplied vendor list for this modality. Once the project has transitioned into the Solicitation Phase, all communications must go through Contracting and not the Boston VAMC's Clinical or Clinical Engineering Staff.