

## **Objective**

This document highlights the technical specifications and services being requested by Kansas City VAMC for consideration towards purchase of a 1.5T MRI Scanner. Vendors under this proposal shall provide all equipment and accessories, installation services, training, and project management support to work with both the internally hired Architect and General Contractor. Turnkey site prep is preferred as the project may require construction of a modular building to house the MRI scanner.

## **Project Management**

A VA hired Architect and/or VA Facility Management will be coordinating and performing the design work of a MRI suite. All vendors are expected to facilitate the design process by working with the Architect in providing guidance, medical equipment drawings, and any other information relevant to the required design for proper installation of the MRI scanner. Proper installation of MRI Scanner to include all shielding components is required. Describe your skylight offering that allows access to the MRI and future replacement.

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

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

## **Equipment Specifications**

Accessory items below may vary in quantities.

1. Magnet

<u>Facility</u>	<u>Field Strength</u>	<u>Modular Facility to house MRI</u>
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Kansas City VAMC	1.5T	Yes - modular facility needed
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2. Modular structure to include
  - a. Electrical outlets
  - b. Voice and data outlets
  - c. Plumbing (i.e. sink, etc.)
  - d. HVAC
  - e. Option for restroom in modular facility
3. Shielding
  - a. Passive Shielding
  - b. RF shielding to allow full range of scanner use
4. Scan Room
  - a. Describe coil storage options
5. Gantry
  - a. Large bore opening >69cm
  - b. Specify bore depth
  - c. Provide FOV specifications
  - d. Identify slew rate
  - e. Noise reduction features (provide details pertaining to technology which addresses noise cancellation for quieter scans)
  - f. Explain RF channel technology
  - g. Include technical data spec sheets
6. Table
  - a. Detachable (optional)
    - i. MRI compatible stretcher (optional)
  - b. >499lb weight limit
  - c. Heavy duty wide patient restraints
  - d. Stepping capable
  - e. Identify number and configuration of coil connections available
7. Control room equipment
  - a. Control room console, workstation, worktop, etc.
  - b. Two operator office chairs
8. Hardware
  - a. Describe post processing workstation with 3D capability that is proprietary to the MRI Scanner that is unavailable from Vital Images Vitrea 3D system.
    - i. Identify images/sec reconstruction rates
  - b. Integrated music system for control and exam area
    - i. Vendor 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.
  - c. MRI compatible ventilator (Option)
  - d. MRI compatible wheelchair (Option)
  - e. MRI compatible patient monitor (including ECG)
  - f. MRI compatible infusion pump (Option)
  - g. Video camera system for monitoring inside exam room from control room

- h. MRI compatible-injector (specify all available MRI compatible-injector options)
  - i. 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
  - j. System UPS
    - i. Protect the scanner in the event of power failure to allow for a proper shutdown
    - ii. UPS to handle power bumps up to 10 seconds
    - iii. Describe process for unit activation after power outage
  - k. Workstation UPS for operators console
    - i. Protect the system's operating console from power failure and allow proper system shutdown
  - l. Cryogenics
    - i. Vendor shall provide and install all cryogenics
  - m. 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.
  - n. Screening System (Option)
    - i. Provide fixed or mobile wand solution for metal detection.
  - o. Chiller to be provided meeting or exceeding MRI needs
  - p. Patient positioning and support aids
9. Safety/Warning Systems –
- a. The vendor 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 O<sup>2</sup> monitor in gantry room shall be provided.
  - b. Vendor shall install and certify the fire suppression system to meet NFPA standards and all applicable codes. The system must tie into the facilities fire alarm system.
10. Coils – Full parallel imaging capabilities. State channel specifications and options availability.
- a. Head/Neck/Spine/ Array
  - b. Torso
  - c. Shoulder
  - d. Foot/Ankle
  - e. Knee
  - f. Extremity, flexible
  - g. Wrist
  - h. Cardiac (option)
  - i. Breast (option)
  - j. fMRI Head Coil (option)
  - k. Carotid (option)
  - l. Neuro Vascular (option)
  - m. Endorectal (option)
  - n. Peripheral vascular (option)
  - o. Other available coil (option) – describe offerings
11. Software

- a. 3D processing software for all modality datasets
- b. MRA (magnetic resonance angiography)
- c. Vascular
  - i. Contrast vascular
  - ii. Non-contrast vascular
- d. Neuro
- e. Cardiovascular
- f. Muscular
- g. Oncology
- h. Phase contrast MRI and Flow Analysis
- i. Compliance with VA DICOM requirements and applicable IHE integration profiles
- j. Describe optional sequences for purchase
- k. Describe your motion correction techniques
- l. Describe your metal artifact reduction solution
- m. Parametric prostate imaging software
- n. Auto alignment functionality
- o. Respiratory gating
- p. Cardiac gating
- q. fMRI, DTI (option)
- r. MR Elastography (option)
- s. Cardiac (option)
- t. Breast (option)
- u. Spectroscopy (option)

### **Training to be provided**

1. Describe training for technologists and physicians.
2. Four weeks of onsite applications training for technologists, including on-site application training during go-live
3. Two MRI technologist trainings at vendors training location to include travel and accommodations (option)
4. Specify cost of a Physician trainings at the vendors training location to include travel and accommodations (option)
5. Describe post-warranty technologist and physician training packages that are offered.
6. Describe on-line or telephonic applications support and availability
7. Describe availabilities for advanced imaging training. For example, neuro, cardiac, breast, etc.
8. Biomedical Training Package - Include all prerequisite classes, equivalent to what your OEM field service representatives receive. This training is to be provided within 18 months of installation. All service manuals, schematics, diagrams, diagnostic software, other special tools and hardware keys equivalent to what their OEM field service reps have available to diagnose, troubleshoot, repair and maintain the equipment. Travel including airfare, hotel and government rate per diems shall be included.

## **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 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 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 VAMC authorized personnel have accepted the products delivery, installation, and functionality.

## **OTHER FEATURES**

- Other value added features included in the vendor's proposal will be considered but not limited to:
  - a. extended warranty
- - c. hardware/upgrades, additional training, performance improvement and process optimization consulting, etc.), will be considered.
  - d. Price improvements based on volume purchase will be considered.

## **Trade-In**

Kansas City VAMC – FOR REPLACEMENT MRI

Manufacturer: **GE MEDICAL SYSTEMS**

Model: SIGNA EXITE HDi

S/N: RR5621

Install Date: November 29, 2007

Coils:

M3087JB – 1.5T 8ch Neurovascular Array, Invivo

M3087JC – 1.5T 8ch CTL Array, GE

M3087JD – 1.5T 8ch Cardiac Coil, USAi

G3335LJ – 1.5T Head Coil

M1085AC – 1.5T Surface Coil, Extremity

M1085BE - 1.5T Body Flex Coil

M1085GR - 1.5T General purpose Flex Coil

M1087SD - 1.5T Shoulder Phased Array Coil

M1087HW - 1.5T High res Wrist coil

M1085E - 1.5T Quad Extremity Knee/Foot Coil