Equipment Specifications
Magnetic Resonance Imaging
VISN 9 Tennessee Valley Healthcare System
626-B90130

A. REQUIREMENT OVERVIEW

TVHS requires an additional Magnetic Resonance Imaging at the Nashville campus. The system will be used to evaluate orthopedic, vascular, and neurology exams for inpatient and outpatient Veterans.

Facility	Quantity
TVHS	1

B. TECHNICAL REQUIREMENTS

1.   Unit physical specifications

a. Magnetic field strength [T]	1.5T
b. Minimum bore width [cm]	70cm
c. Minimum field of view [cm]	55cm
d. Minimum slew rate [T/m/s]	200 T/m/s
e. Minimum number of channels	16
f. Minimum patient weight withstood [lb]	550 lbs
g. Number of tables required	1

2.   Additional specifications

☒	a.	Motion correction technology
☒	b.	Noise reduction technology
☒	c.	Power conditioning as recommended by vendor
☒	d.	Uninterruptible power supply
☒	e.	Vector ECG (VCG), Respiratory, and Peripheral Pulse grating/triggering
☒	f.	Advanced exam planning technology
☒	g.	Shielding ⦿ Active ◯ Passive
☒	h.	Patient-specific shimming
☒	i.	3D FSE-based sequence for isotropic resolution in all contrasts
☒	j.	Heavy duty wide patient restraints
☒	k.	Patient positioning and support aids
☒	l.	Integrated music system, to include the following: Control room controls

		Speech communication for patient direction Speakers in both the exam room and control room Headphone jack on patient table MRI-safe headphones
☒	m.	Video camera system for monitoring inside the exam room from the control room
☒	n.	MRI-compatible injector (Please specify all available MRI-compatible injector options.)
☒	o.	Cryogens (Vendors are expected to provide and install all cryogens.)
☒	p.	Chiller meeting or exceeding MRI needs
☒	q.	All phantoms required for proper calibration and performance verification (Vendors are expected to provide phantoms for all system requirements and options identified in this document that require phantoms.)
☒	r.	Power conditioning as recommended by vendor, to include the following: Protection from electrical failures, emergency power tests, power peaks and drops, electrical storms, etc. Prevention of image quality degradation
☒	s.	Uninterruptible power supply
☒	t.	Fixed solution for metal detection

3. Workstation Requirements

☒	a.	Minimum acquisition workstation monitor size [in]	20in
☒	b.	Minimum acquisition workstation hard drive space [TB]	1TB
☒	c.	Minimum number of processing/reading workstations	1
☒	d.	Minimum processing/reading workstation monitor size [in]	24in
☒	e.	Minimum processing/reading workstation hard drive space [TB]	1TB
☒	f.	Workstation UPS	
☒	g.	MRI-compatible patient monitor (including ECG)	

4. Coil Requirements

☒	a.	Torso
☒	b.	Knee
☒	c.	Shoulder
☒	d.	Head/neck/spine/array
☒	e.	Neuro vascular
☒	f.	Run-off
☒	g.	Foot/ankle

☒	h.	Wrist
☒	i.	Elbow
☒	j.	Cardiac
☒	k.	Prostate imaging
☒	l.	Functional MRI head
☒	m.	Carotid
☒	n.	Endorectal
☒	o.	Periphery vascular
☒	p.	Extremity, flexible
☒	q.	Transmit/receive
☒	r.	Adjustable neurovascular head

Each vendor is to respond with coils that meet the criteria listed above. Please include all other coils offered by your company in the optional section of the quotes.

5.   Table Requirements

☒	a.	Detachable
☒	b.	Adjustable height when table is attached and detached
☒	c.	Tabletop integrated coil design and ports

6.   Safety Requirements

☒	a.	Safety system for magnet quenching and emergency shutdown, to include the following: Alarms for low cryogen levels, temperature limits, scans in progress Indicators for cryogen levels Heat sensor shut-offs for room temperature problems Oxygen monitor in gantry room
☒	b.	Fire suppression system meeting NFPA standards and all applicable codes (the system must connect to the facility fire alarm system)

7.   Advanced Applications

☒	a.	Neuro
☒	b.	Ortho
☒	c.	Body
☒	d.	Muscular
☒	e.	Oncology
☒	f.	Vascular
☒	g.	MRA

Each vendor is to respond with advanced applications that meet the criteria listed above. Please include all other advanced applications offered by your company in the optional section of the quotes.

8.   Security/Connectivity Requirements

☒	a. OEM-supported operating system
☒	b. Latest DICOM print, store, commit, and modality worklist
☒	c. Encrypted hard drive
☒	d. PACS compatibility – McKesson

9.   Added Value

Specifications listed below are not required, but preferred. Vendors who do not include the below specifications in the submitted offer will not be docked or excluded from consideration. Specifications listed below will be evaluated based on added value.

☒	a. Additional year(s) of warranty
☒	b. Post-warranty remote diagnostic service program
☒	c. Version/platform long-range plan

C. TRAINING REQUIREMENTS

1.   Clinical Training

☒	a. On-site clinical applications training for 8 technologists during go-live
☒	b. On-site follow-up clinical applications training for 8 technologists once technologists have hands-on experience with the system
☒	c. Off-site clinical applications training for [2] technologists (to include tuition)
☒	d. Off-site clinical applications training for [2] physicians (to include tuition)
☒	e. Technologists who complete the clinical applications training shall receive continuing education credits (CMEs).
☒	f. Vendors shall be responsible for accommodating different personnel shifts for clinical applications training during go-live.

2.   Biomedical Technician Training

Please reference the "Instructions to Offers" section 2.8.g for further information about the type of information to provide by equipment type not by specific request. Please also reference the "Instructions to Offers" section 7.3.3. for response format.

Technical training information to include detailed information about the curriculum and length of the biomedical technical training required for each equipment type.

Although the NAC will not award this training along with the equipment, it is imperative that the customer is informed that this training is available. Vendors must demonstrate that they can provide any required off-site training, therefore off-site training should be quoted as an optional item. Off-site training will be purchased at the time of need via a modification (if the original order remains open) or via a separate order. No travel expenses for any VA employees will be included in any HTME equipment or training order.

D. SERVICE REQUIREMENTS

1. VPN/Remote Access – The vendor shall provide 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. The vendor shall either utilize the VA national site-to-site VPN or work with the Office of Cyber and Information Security and the VAMC Information Systems Security Officer to establish a client-based VPN.
2. Service and Operator Manuals – The vendor shall provide the following documentation for the proposed systems:
    a. Two (2) copies of operator instruction manuals (one (1) electronic and one (1) physical copy)
    b. Two (2) copies of a service manuals (one (1) electronic and one (1) physical copy)
       *Vendors can include the physical copy as a priced line item in their quote as applicable.
3. Minimum 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. This warranty must include PMs as required by the manufacturer. The manufacturer's factory-trained field service representatives shall perform installation and maintenance during the warranty period.

Vendors are encouraged to include any offerings for service, warranty, and training that may exceed the minimum requirements, to include information on their service support structure during and after the warranty period. Vendors who do not include any added value offerings for service, warranty, and training will not be docked or excluded from consideration. However, any such offerings will be evaluated based on added value.

E. OTHER INFORMATION/DOCUMENTATION REQUESTED

Please reference the "Instructions to Offers" section 2.8a-h for further information about the type of information to provide by equipment type not by specific request. Please also reference the "Instructions to Offers" section 7.3.3. for response format.

1. Completed pre-procurement assessment form (6550 Appendix A)
2. Completed Manufacture Disclosure Statement for Medical Device Security (MDS2) form
3. Federal Information Processing Standard (FIPS) 140-2 certification
4. Product brochures
5. Technical specification sheets, to include dimensions and weight of the system
6. Typical drawings (pdf version of the CAD drawings)
7. Technical training- Biomedical: information to include detailed information about the curriculum and length of the biomedical technical training required for each equipment type.

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8. Support information to include your company's support structure during and after the warranty period
    - On-line or telephonic applications support and availability (include third party coverage)
    - A listing of field service engineer locations and availability
    - A listing of part depots

F. TRADE-IN

| ☒ | a. VA has no trade-in units to offer. |

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