

VA NEW ENGLAND HEALTHCARE SYSTEM

OBJECTIVE

This document highlights the requirements, technical specifications, and services being requested by the Department of Veterans Affairs (VA) Medical Center(s) listed below for consideration towards purchase of digital radiography; commonly referred to as a DR Room. The DR system will replace an existing radiography room. Offerors under this proposal shall provide all labor, material, parts, tools, software, project management and equipment necessary to furnish and install a fully functional digital radiography room in the following medical center(s).

- VA Connecticut Healthcare System's Newington Campus (2)
- VA Maine Healthcare System's Togus Medical Center

The implementation of this system may require construction, which should it be needed will occur through a separate purchase order and process. All offerors are expected to facilitate the design process by providing guidance, medical equipment drawings, and any other information relevant to the required design for proper installation of the system regardless of whether construction is part of this procurement.

DEFINITIONS

The following are definitions to terms used within this document.

TERM

Digital Imaging Plate

DEFINITION

For the purposes of this statement of work a digital imaging plate will be defined as a scintillation detector that converts transmitted patient information (X-ray) into a digital signal. This imaging plate transmits this digital image to the processing unit without the requirement of an adjunct "reader" and is erased and charged in place. This imaging plate may be wired (tethered) or wireless.

Vista

Veterans health Information Systems and Technology Architecture - is VA's award winning Health Information Technology system. It provides an integrated inpatient and outpatient electronic health record for VA patients, and administrative tools to help VA deliver the best quality medical care to Veterans. This serves as the VA's HIS/RIS.

PROJECT MANAGEMENT

This procurement may include turn-key construction to renovate and/or modify current space to meet needs of installing the specific type DR Room and ancillary equipment purchased. The specifications and requirements for construction will be unique to each facility and will be outlined in a separate statement of work.

MEDICAL EQUIPMENT TECHNICAL SPECIFICATIONS

The following technical specifications represent a minimum set of requirements for each DR room; to include both floor mount and overhead systems. Offerors must reply outlining specifically how they

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meet the requirements for both a floor mount and overhead system. Offerors must submit two (2) separate responses for the two (2) different types of DR rooms in a format that is easy to interpret by a common lay person.

- Hardware
 - Generator
 - High frequency generator with automatic dose rate control
 - 80kW or greater preferred
 - 50-140 kV or better
 - Tube crane/stand
 - Overhead tube with bucky tracking for the table and wall stand (option 1)
 - Floor mount tube with bucky tracking for table and wall stand (option 2)
 - Ability to lower tube to within 16" of the floor when used with the wall stand
 - Automatic tube crane, protocol based movement (option)
 - In room protocol adjustment via tube head or other in-room mounted system
 - Wall stand
 - Ability to lower imaging plate to within 16" of the floor
 - Ability to tilt the imaging surface at least 90°
 - Automated movement for long axis stitching (option)
 - Table Weight
 - 450lbs capacity or greater
 - Bariatric table (option)
 - Free floating manual table top
 - Motor driven table top movement in the X and Y axis at stated maximum weight capacity.
 - Ability to lower tabletop height to at least 18" from the floor at stated maximum weight capacity.
 - Detector Size
 - 16in X 16in field of view, high efficiency detector (s)
 - Spatial resolution 3.2 lp/mm or better
 - Pixel size $\leq 150\mu\text{m}$
- Software Solutions
 - Image Processing-
 - Rapid image display, < 5 seconds preferred.
 - Stitching – ability to stitch multiple long axis images with options for automated and manual process.
 - Bone suppression – ability to suppress overlaying bone such as ribs on chest images. (option)
 - Ability to apply multiple image processing algorithms both pre and post-acquisition to allow for soft tissue and/or bone enhancement.
 - Monitoring of Dosage- The system must be able to supply a technology that allows for monitoring and tracking of radiation dose provided to a patient; DICOM structured reporting is preferred.
 - Dose Reduction- The system must have systems in place to facilitate regular protocol optimization and reduced radiation dose to the patient.

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- Repeat rate – ability to track repeat / retake data to include such items as technologist (required unique identifier), reason for repeat, patient dose, exam type, etc. The data should be exportable to Excel or other databases for tracking, trending, and combining with data from other imaging sources within the facility.
- Security- Ability to protect sensitive patient data through the use of unique user authentication.
- Options:
 - Dual energy imaging
 - Linear tomography
 - Post processing image enhancement for, lines, soft tissue, etc.

EDUCATION/TRAINING TO BE PROVIDED

The following is a list of education and training options that each medical center may be interested in purchasing along with their scanner. Offerors are encouraged to list out their education and training options that can be provided.

- Clinical Education
 - At least one (1) week of onsite training for the technologist from each medical center with options for additional training (i.e. 2 weeks on-site to be used in the next 2-3 years). (*Option*)
 - On-going Clinical education for technologist(s) from each medical center via on-line, webinar, etc. (*Option*)
 - Clinical phone applications support for the technologist(s) from each medical center.
- Clinical or Biomedical Engineering Training- Biomedical Engineering training for one (1) Biomedical Engineering Support Specialists (technicians) from each medical center at Offeror's training location to include travel and accommodations with options for additional training. (*Option*)

GRAPHICS WORKSTATIONS AND ADVANCED SOFTWARE

As an option to the purchase, the Offeror's product should offer advanced graphics workstations and software. This should allow for features including, but not limited to stitching, bone suppression, soft tissue enhancement, etc.

NETWORKING CAPABILITIES

The Offeror's product must be able to meet the following network capabilities.

- Must be on the VistA Imaging Approved DICOM Modality Interfaces list. [VA DICOM Website](#)
- Must have the ability to interface with hospital Picture Archiving and Communication System (PACS) and third (3rd) party post-processing workstations, specifically Carestream's PACS product.

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The Offeror is required to submit the following documentation along with their proposal.

- A complete Manufacturer Disclosure Statement for Medical Device Security (MDS²) form. See attachment A.
- A complete VA Directive 6550 Pre-Procurement Assessment form. See attachment A.

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.

EVALUATION CRITERIA

Offerors will be evaluated on the following factors. There is no specific ranking for any factors listed.

- General System Offering (Functional Capabilities and Technical Performance as Outlined Above and Additional Features Listed)
- Radiation Dose Monitoring and Reduction Capability
- Training Plan (both Clinical and Technical)
- Anticipated Reliability and Serviceability
- Past Performances
- Human Factors Design (i.e. Ease of Use, Intuitive Operation, Capabilities, and Workflow Efficiencies)
- Implementation Management and Schedule
- Installation of the Scanner into the Current Space
- Price

It is understood that every Offeror's product(s) may differ from the specifications outlined in this document. As such, Offerors are encouraged to propose these variances. It is required that each Offeror clearly identify how they meet the specifications listed above. It is also required that, whenever a variance from these specifications occurs, the proposed item meets or exceeds the specified characteristics or level of performance. The Offeror shall also identify each product line item that differs from the specifications and list its associated cost.