

Functional Requirements for **Radiography/Fluoroscopy System**  
For **Minneapolis VA Healthcare System (Station 618)**  
Obligation Number **618-B49007**

*This document highlights the technical specifications and services being requested by this facility for consideration toward purchase of a system that includes both Radiographic and Fluoroscopic capabilities. Offerors under this proposal shall provide all equipment and accessories, installation services, training, and project management support.*

## **Technical Requirements:**

### **Generator Requirements:**

1. 80 kW, 3 phase generator
2. Radiographic kVp range is 40-150
3. Radiographic mA range 800 ma@ 100KVp
4. Fluoroscopy KVp range 40-110
5. Continuous and pulsed fluoroscopy ma modes.

### **Fluoroscopic Tube**

1. Pulsed/grid tube
2. Pulse rate- frames per seconds 1-30 fps
3. Selectable filtration
4. Provide small and large Focal Spot information

### **Fluoroscopic spot device/Imaging Tower**

1. Flat panel detector technology
2. Acquisition Matrix size 1024x1024
3. Acquisition bit depth 12
4. Automated image capture and save
5. Minimum spatial resolution 3 lp/mm
6. SID range from 30 to 40 inches (minimum)
7. Heat unit x-ray tubes – 350 kHU
8. Variable speed power assist controlled in all directions
9. Footswitch and tower control –
  - a. Controls both fluoroscopy and spot shots
  - b. Automatic shut off when footswitch or tower control released
10. Removable lead curtains also include counter weights for when curtains are not in use

### **Radiographic/Overhead tube Crane System**

1. Patient alignment system (laser alignment/positioning lights)
2. Table and upright auto tracking package
3. Integrated DICOM Structured dose reporting
4. Pre-programmed exposure settings located on tube or in control room
5. Ability to change between table top, upright Bucky and table Bucky from tube head
6. Provide small and large Focal Spot information

### **Control room Fluoroscopic/Radiographic control panel**

1. 19" control room LCD monitor (minimum)
2. Auto HIS/RIS refresh package
3. Computer hard drive 300 GB or greater

4. Quality Control tracking package
5. Operating System is Windows 7 or newer
6. Bar code reader
7. UPS for x-ray control/image memory
8. Ability to send images directly from the control panel. Not requiring a separate workstation.
9. Capture live video
10. Include DVD recorder

#### **Fixed Wall Detector Requirements:**

1. Detector size up to 17"x17"
2. Tilting Bucky
3. Height minimum – low enough to complete standing knee exams while patient is standing on the floor
4. Height maximum – high enough to complete AP C-spine exams while patient is standing on the floor
5. Auto Tracking
6. Ability to position detector in portrait or landscape mode.
7. Wall stand auto stitching package.

#### **In room Monitor Requirements:**

1. Remote control to orientate and manipulate images
2. One - 19" LCD (minimum)
3. Ceiling mounted
  - a. Provide option to switch to a pedestal – decision will be made after award but prior to delivery

#### **Removable Wireless Table Detector Requirements:**

1. Detector size – minimum 14"x17" with handle
2. Resolution – minimum 2.0 lp/mm
3. Detector charge will in Bucky/holder
4. Weight Limit (w/battery installed) – maximum 11 lbs.
5. Wireless (not tethered to the system/table)
6. Wireless – compatible with 802.11g
7. FIPS 140-2 compliant
8. Provide minimum patient weight (300lbs) for weight bearing examinations.
9. Provide full coverage warranty for a minimum of one year
10. Additional Battery for wireless detector
11. Charging station (*if required*)

#### **Table Requirements:**

1. Static – 500 lbs patient weight limit (minimum)
2. Dynamic – 300 lbs patient weight limit (minimum)
3. Width of table – 80 cm (minimum)
4. Ability to tilt 90 degrees in both directions /full tilt
5. Full articulation of the table
6. Auto centering option to exact middle while the table is vertical or horizontal positions
7. Table movement controls located table side.
8. Removable/adjustable patient handgrips.
9. Removable/adjustable footrest
10. Removable/adjustable shoulder rests
11. Removable/adjustable stirrups

## Warranty

1. Warranty – minimum 1 year

## Manuals:

1. The vendor shall provide two complete and unabridged sets of operator manuals, service manuals, electronic schematics, troubleshooting guides and parts lists for each piece of equipment purchased. Additionally any upgrades to these documents shall be provided at no additional cost. These manuals will include all components and subassemblies, including those not manufactured by the vendor. These manuals and documentation shall be identical to the ones supplied to the manufacturer's service representatives and shall contain the diagnostic codes, commands, and passwords utilized in maintenance, repair and calibration of the equipment.

## Training

1. Off site – Basic Clinical Training for three technologists to include tuition and travel
2. On-site – Clinical applications during GO LIVE - **Four days – 8 hours per day at a minimum**
3. Follow up applications training to be provided after technologists have hands-on experience with the system - no earlier than 6 months after installation - **Two days – 8 hours per day at a minimum**
4. Two Biomedical technician training- tuition and travel
5. Quick notes – or reference guides to be provided during on-site training
6. Same Clinical Applications trainer for each site who must be cleared through VISN 23 workgroup

## Information to be provided by each vendor:

1. Provide references for the clinical applications trainer that will be assigned to VISN 23.
2. Provide detail information about the length of the Biomedical Technical Training.
3. Provide the following information about the wireless detector:
  - a. maintenance requirements
  - b. battery life/charging requirements/run time
  - c. drop policy (during warranty and post warranty)
  - d. cleaning instructions for the wireless detector
4. Typical drawings (to include minimum room size requirements)
5. DICOM Conformance Statement
6. Completed Pre-procurement Assessment form (6550) and MDS<sup>2</sup> document
7. Information about your companies support structure during the warranty period (i.e. a listing of Field Service Engineer locations and availability, support 800 phone number(s), remote support, etc.)

## Trade-in

Option 1 – VA will retain any hard drives containing electronic personal health information (ePHI).

Manufacturer: Philips

Model: Eleva

S/N: 05 14 107

Acq. Year: 6/9/2005

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